Scientific Integrity

FY 2016

Annual Report

EPA

2016 Annual Report on Scientific Integrity

This Annual Report chronicles the implementation of EPA's Scientific Integrity Policy in fiscal year (FY) 2016. Since February of 2012, EPA's Scientific Integrity Policy has provided both a vision and a roadmap for ensuring scientific integrity at the Agency. The Policy describes the components of a culture of scientific integrity and offers a framework for ensuring Agency-wide participation in that culture. Although scientific integrity is treated as a single issue in the Policy, maintaining scientific integrity requires investment and collaboration from many parts of EPA. This year, instead of publishing a bound report, the scientific integrity activities of FY 2016 are reported online.

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Scientific Integrity at EPA in FY 2016 – Highlights

In FY 2016, the Scientific Integrity Committee implemented numerous scientific integrity initiatives across the Agency. This year, whiteboard training videos were created and shown during Scientific Integrity Training to over 3,500 employees, with more to come in FY 2017. The half-hour training familiarizes employees and others with the EPA Scientific Integrity Policy.

The Scientific Integrity Best Practices for Designating Authorship was released, which lists the criteria for attributing credit and accountability to individuals and groups who contribute to EPA work products that designate authorship. This best practices document can be used as a tool to prevent and/or resolve authorship issues.

The Scientific Integrity Committee distributed an Agency-wide survey as part of a broader effort to formally evaluate the Scientific Integrity Policy and also to assess the current culture of scientific integrity within EPA.

During FY 2016, EPA programs and regional offices made significant strides to enhance the culture of scientific integrity at EPA. They distributed outreach materials, conducted and received training, and developed and updated QA procedures. They also pushed for public release of data sets and developed dashboards to help users explore the data to increase transparency within the Agency.

New in 2016

In FY 2016, the Scientific Integrity Official, with the help of the Scientific Integrity Committee, developed the following new products that further promote adherence to the Scientific Integrity Policy.

Training

Scientific Integrity Whiteboard Training

In FY2016, the Scientific Integrity Program deployed a new training program focused on increasing the awareness and understanding of the EPA Scientific Integrity Policy and demonstrating how scientific integrity enhances the Agency's work. The training was intended for employees who spend at least 25% of their time conducting, utilizing, communicating, or supervising science.

The Scientific Integrity Whiteboard Video Training consists of in-person workshops, conducted by designated trainers for each program and regional office. These trainers received instruction on how to conduct sessions from the Scientific Integrity Official (ScIO). The sessions were comprised of a short presentation providing context and background information about the Policy, and two short whiteboard animated videos – the first providing an introduction to scientific integrity at EPA and the second providing a case study of how to prevent a potential lapse of scientific integrity. This was followed by a group discussion, allowing participants to ask questions. Supplemental materials for the training were provided, including a curriculum guide and frequently asked questions and answers for trainers as well as an informational handout for participants.

Over 3,400 employees participated in the Whiteboard Video Training in FY 2016. The training initiative extended through November 30, 2016, and is estimated to have reached over 5,000 employees across the Agency.

Training Evaluation

EPA received a bronze Telly Award for the introductory whiteboard video, "Scientific Integrity at EPA," in the category for online video training. The innovative whiteboard video format used in our training this year has been well-received by employees across the Agency. The Scientific Integrity Program also developed a survey to quantitatively evaluate the effectiveness of the training. By September of 2016, the survey was sent to the first approximately 2000 recipients of the training and asked trainees their opinions on the course and tested their knowledge. Preliminary results showed positive responses to the training.

New Employee On-Boarding Training

Starting in January 2017, all new EPA employees are required to take on-line scientific integrity training. The training consists of a video showing the Scientific Integrity Official conducting a training session that features the introductory whiteboard video and discussion, followed by a short quiz. Showing this training to new employees will help them to establish a personal commitment to scientific integrity, which will contribute to the overall culture of scientific integrity at EPA.

Best Practices for Designating Authorship

Authorship disputes were a major theme in the allegations of a loss of scientific integrity received by the Scientific Integrity Official in recent years. Authorship is an important part of scientific integrity, as it provides transparency into the origins of a scientific product. Without knowing who was involved in the product, it is difficult to validate the merit of the work. Recognition as an author can also be an essential measure of job performance and necessary for career advancement.

To promote transparency regarding authorship issues, the Scientific Integrity Program developed *Best Practices for Designating Authorship* to provide information for EPA employees, contractors, and grantees. To qualify as an author, one must make a substantial intellectual contribution, write or provide editorial revisions with critical intellectual content, and approve the final version with the understanding that authorship comes with accountability for the work.

Authorship is a reward and a responsibility and should be talked about early and often. It is the hope of the Scientific Integrity Program that this best practices document will help to prevent and resolve authorship disputes and issues and enhance the culture of scientific integrity at EPA.

Survey on Scientific Integrity at EPA

In FY 2016, a survey was administered to all EPA employees as part of a broader effort to formally evaluate the Scientific Integrity Policy and the significance of the Agency's scientific integrity efforts. The goals of the survey included: establishing a baseline of EPA employees' experiences and awareness of scientific integrity issues regarding their scientific research and scientific products; establishing a baseline of EPA employees' awareness and understanding of EPA's Scientific Integrity Policy and associated procedures and policies; and providing information for the Scientific Integrity Committee and Scientific Integrity Official on potential ways to improve the implementation, content, and impact of the Scientific Integrity Policy.

The survey questionnaire featured 29 questions designed to measure employees' experience with scientific integrity at EPA, as well as their awareness and familiarity with the Policy. Participants were automatically directed to one of two forms based on their

response to the first question, which asked them to report the amount of time spent conducting, utilizing, communicating, or managing science. Using skip logic, participants who reported that they spend less than 25% (total) on the listed activities were directed to a short-form version of the survey, which included only 15 of the 29 questions. Participants indicating that they spend a total of 25% or more of their time conducting, utilizing, communicating, or managing science were directed to the long-form version, which consisted of all 29 questions, organized into the following broad categories:

1. Awareness and Understanding of EPA's Scientific Integrity Policy and Procedures
2. Whistleblower Protections
3. Culture of Scientific Integrity at EPA
4. Release of Scientific Information to the Public
5. Professional Development
6. Peer Review
7. Demographics
8. Final Comments

The survey was sent to 14,903 EPA employees from November 16, 2015, to January 19, 2016. A total of 5,763 employees, representing all program offices and regions, submitted responses. Of these, 1,970 (just over one third) were directed to the short-form version, while 3,793 took the long-form version.

Respondents of the long-form survey included employees from all programs, offices, and regions. Participants represented a variety of General Schedule (GS) grade levels from GS-9 and lower to GS-15. The largest group was GS-13 (44.7%), followed by 18.3% of employees identified as GS-14 grade level, and 15.5% as GS-15 grade level. The Scientific Integrity Program is analyzing the survey results.

Scientific Integrity Committee Retreat

In June 2016, the Scientific Integrity Committee held a retreat to discuss the role of the Committee and also outreach, visibility, and training on scientific integrity. During the retreat, Dr. Stanley Meiburg, then Acting Deputy Administrator, expressed his appreciation for Dr. Grifo's and the Committee members' commitment to scientific integrity at EPA. He reinforced the importance of scientific integrity as a core value of the Agency. He said that the objective is to follow the law, follow the science, be transparent, and work collaboratively. Following science is a signature of EPA, and Agency managers must do all that they can to create an atmosphere where scientists feel supported in doing their work.

Accomplishments in the EPA Regions and Offices 2016

In this section, EPA regions and programs highlight their accomplishments in promoting a culture of scientific integrity by increasing transparency, supporting robust science, and encouraging professional development for employees.

Promoting a Culture of Scientific Integrity

A culture of scientific integrity promotes the quality, collection, processing, and communication of scientific information. Many quality assurance systems are already in place to ensure the integrity of the scientific research process. In fiscal year (FY) 2016, several new initiatives were introduced to demonstrate EPA's commitment to evidence, objectivity, and the quality of scientific information.

Training

- Across the Agency, regions and offices have been conducting in-person scientific integrity training sessions.

Data Management

- Office of Wetlands, Oceans, and Watersheds (OWOW) is using Success Stories to describe the achievements of the Clean Water Act Section 319 program. Invested in improving the data management and interface of the Section 319 Grants Reporting and Tracking System (GRTS) and moving toward building Section 319 success stories within the GRTS system (vs. manually), which will improve efficiency and reduce errors.
- Region 3's Air Protection Division (APD) developed and completed beta testing of the Air Data Spreadsheet tool that imports and formats data downloaded from the Air Quality System (AQS) 504 report. Currently, monitoring staff manually processes the downloaded data into the format needed. This tool will reduce the time needed to manually process the data.

Clearance Procedures

- The Office of Science Coordination and Policy (OSCP) facilitated the development of a systematic review framework for the entire Office of Chemical Safety and Pollution Prevention (OCSPP).
- The Office of Research and Development (ORD)/National Exposure Research Laboratory (NERL) is developing revised guidance relating to implementing the clearance process (including guidance on the role of internal and external peer review) to ensure scientific and/ or technical work products follow current

requirements and ensure high quality and sound science is being used and released by the laboratory.

- The Office of Water's (OW's) Office of Science and Technology developed a form for clearing journal articles, technical posters, and presentations, and this clearance form is available for use by other OW offices. Scientists can use this form to track the progress of clearance and detect delays if they exist.

Quality Assurance

- OSCP developed and implemented performance-based validation approaches for high throughput testing and screening of chemicals for endocrine bioactivity.
- Office of Pollution Prevention and Toxics (OPPT) provided the new Chemical Safety Advisory Committee with an overview of risk assessment practices and methodologies in April 2016, and had a Toxic Substances Control Act (TSCA) Work Plan Chemical Risk Assessment developed and peer reviewed by the committee in May 2016.
- OPPT's Risk Assessment Division (RAD) conducted a QA (Quality Assurance) Audit in the 2nd quarter of FY 2016, thereby complying with the OPPT-wide Quality Management Plan (QMP) and completing a corrective action identified in a 2014 Office of Inspector General report regarding the division's compliance with OPPT's QMP.
- NERL added three new Quality Assurance Managers (QAMs) in FY15/16. The new QA staff were trained in QA processes during daily conference calls and, to calibrate with the existing members of the NERL QA Team, during a QA Training conference in Research Triangle Park (RTP), NC.
- OW prepared a Quality Assurance Project Plan (QAPP) for the Liquid Chromatography-Mass Spectrometry (LC-MS) Toolkit. The LC/MS Toolkit QAPP provides information regarding quality assurance (QA)/quality control (QC) activities that were performed prior to and during data collection, assessment, and reporting. The QAPP also provides information regarding QA/QC that will be applied in support of preparing the Toolkit for publication.
- Region 2 is advertising and filling a position entitled Region 2 Scientific Integrity Manager, whose duties will include Regional QA Manager duties and Peer Review Coordinator duties.
- Region 3's Chesapeake Bay Program Partnership, with support from the Chesapeake Bay Program Office, applied its Protocol for the Development, Review, and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model to direct the work of over 20 different Best Management Practices (BMP) expert panels. This involved the work of hundreds of recognized experts from around the six-state watershed and across the country. EPA

reviewed and approved the first set of state-specific BMP verification program quality assurance (QA) plans for each of the six watershed states and the District of Columbia, based on the expectation that all of the thousands of practices submitted annually for pollutant load reduction credit would be verified starting in 2018.

- Office of Environmental Information (OEI) conducted a Quality System Assessment of Region 3, and the Air Protection Division was cited as having best practices in place for managing the QA aspect of the air monitoring program.
- Region 3's Hazardous Site Cleanup Division (HSCD) Divisional Quality Management Plan (QMP) was finalized and uploaded to the Regional Quality Webpage; the plan is in effect for five years.
- Region 4's Water Protection Division completed the drafting of an update to the Water Efficiency Guidelines (WEGs) to reflect changes in auditing tools and quantitative methods used for water supply optimization and assessment, after submitting the previous version for peer review.
- Region 8 established a Science Council of management and staff to promote scientific and technical excellence in the decision-making process.
- Region 8 Field Operations has implemented a field quality management system that incorporates all ten QA "Field Activities Procedure" (QAFAP) requirements into programs that are involved in field activities.
- Region 8 established a Field Activities Implementation Team (FIT) to strengthen integration of the QAFAP standards into field activities that are conducted by EPA Region 8 personnel. The FIT team conducted internal audits of Region 8.
- Region 10 implemented a reorganization to address areas of improvement that arose from 300 comments submitted by Region 10 staff and management. One significant change coming out of this effort was to strengthen the Region's science office.

Release of Information to the Public

EPA encourages the transparency of Agency activities through communications tools such as online blogs, newsletters, news releases, and official publications. EPA also maintains several online databases to provide open access to Agency information. Special user interfaces allow the public to navigate EPA databases easily. Online tools such as dashboards and calculators allow users to access a variety of datasets, input their own data, and model personalized scenarios.

- The Office of Land and Emergency Management (OLEM) provided maintenance and provision of the leading technical clearinghouse of information for site cleanup (the Hazardous Waste Cleanup Information or CLUIN website). The clearinghouse tops two million visits per year and is the platform for 120+ live Internet seminars each year, reaching approximately 20,000 participants annually.

- ORD Office of Science Information Management (OSIM) worked with other ORD Assessable Units (AUs) to develop and review an ORD Scientific Data Management policy to craft a useful process to promote the transparency of and easy access to ORD's scientific data used in published articles and documents, and an accompanying guidance web site for use by ORD researchers and managers.
- ORD National Center for Computational Toxicology (NCCT) continued to provide full access to all of the generated chemical data, models, and software packages on the EPA Computational Toxicology Data download website.

Peer Review and Federal Advisory Committees

Scientific Integrity ensures the quality of scientific and technical products by promoting adherence to proper scientific procedures. In FY 2016, EPA continued its efforts to promote peer review as an essential component of quality scientific research products.

- OAR scientific products are subjected to appropriate peer review performed by qualified experts and established entities, including the EPA Science Advisory Board (SAB) and the Clean Air Scientific Advisory Committee (CASAC). A number of significant OAR scientific products have gone through both SAB and CASAC review this past year, including the scientific analyses underpinning both the particulate matter (PM) and Nitrogen Dioxide (NO_2) and Sulfur Dioxide (SO_2) secondary National Ambient Air Quality Standards (NAAQS).

Professional Development

EPA encourages professional development activities so that EPA's scientists and engineers can maintain their expertise, be active members of their scientific communities, and become leaders in their fields. Training activities include online courses, webinars, in-person workshops, and conferences. EPA provides numerous professional development opportunities for employees and encourages their participation in professional societies.

- OAR hosted two large conferences, including the 3rd Vehicle Technology Showcase and the biennial National Monitoring Conference.
- OLEM advanced training opportunities related to scientific and technical information to Superfund staff and project managers on capabilities of waste management technologies and best practices (online and classroom).
- OLEM's delivery of the National Association of Remedial Project Managers (NARPM) national training event provided over 50 courses and opportunities for project managers and technical staff to interact and share information on new technologies.
- OW held a Certification Officer Online Training Course for Cryptosporidium on Jan 13- Feb 6, 2015 for attendees from States and Regions.
- Region 3's Air Protection Division hosted the Integrated Compliance Information System (ICIS)-Air/High Priority Violators (HPV) Training.

- Region 5 developed new training to complement the Agency's introductory Field Operations course. All R5 field staff were trained.
- Region 6's Houston Laboratory staff continue to give the annual laboratory ethics training, which includes discussion of the EPA Scientific Integrity Policy.
- Regions 8, 9, 10, Office of Air Quality Planning and Standards (OAQPS) and ORD's air scientists led the efforts in developing an internal EPA, virtual Western Regions Air Research Workshop.

Allegations of a Loss of Scientific Integrity 2016

EPA had received 106 allegations of a loss of scientific integrity since the Scientific Integrity Policy was published in February 2012 and through September 30, 2016.

The Agency received 22 allegations in fiscal year 2016. This represents a decrease from the 37 that we received in FY2015.

Allegations may be made in two ways: formally (where the person submitting the allegation is identified) or informally (where the person submitting the allegation prefers to not reveal their identity). Of the 22 allegations that were received in FY2016, twelve were made informally and ten were made formally. For comparison, 55% were informal in FY2016; 81% were informal in FY2015.

Of the twelve informal reports received in FY2016, one came from outside the Agency, seven came from EPA offices and programs, two came from regional offices, and two were anonymous EPA submissions. Of the ten formal allegations in FY2016, three came from outside the Agency, five from EPA offices and programs, and two from regional offices. Of note, there was also a decrease in internal allegations in FY 2016 (18), compared to FY2015 (32).

The allegations received in FY2016 related to several topics regarding scientific integrity. Eight concerned suppression or delay of release of a scientific report or information; seven were interference with science by a manager; one concerned scientific methods; two were scientific misconduct; two were conflicts of interest; one was a differing scientific opinion; and one was about data quality.

While there were eight allegations regarding authorship and attribution in FY2015, there were none in 2016. The elimination of authorship disputes could possibly be due to the release of "Scientific Integrity: Best Practices for Designating Authorship" in 2016, available at Authorship Best Practices.

Summary of Adjudicated Allegations

Eight allegations were adjudicated in FY2016. Four were substantiated, and four dismissed. Three adjudicated allegations concerned authorship disputes; four involved delayed

release/suppression of scientific information; and one concerned scientific misconduct. Summaries of the disposition of these allegations are below.

Adjudicated in FY 2016:

1. Allegation Regarding Authorship Criteria for US EPA Employee Who Made Substantial Contributions to an Article/Abstract of a Non-US EPA Researcher:

An inquiry was received about the criteria for determining if a US EPA employee is entitled to authorship when US EPA work is used in and/or the US EPA employee is asked to comment on an article/abstract developed by a researcher outside of the Agency.

Summary: The Scientific Integrity Official and the Scientific Integrity Committee developed a "Best Practices for Designating Authorship" document to provide a set of objective criteria and general standards to resolve authorship issues. The document is available at Authorship Best Practices. The Scientific Integrity Official shared this document with the inquirer and provided advice.

2. Allegation Regarding Authorship Criteria for Non-federal Colleague Contributions to US EPA Documents:

An inquiry was received about criteria for authorship for non-federal colleagues that provide technical or scientific advice and substantive input to a US EPA authored document, but not involving a grant or contract.

Summary: The Scientific Integrity Official and the Scientific Integrity Committee developed a "Best Practices for Designating Authorship" document to provide a set of objective criteria and general standards to resolve authorship issues. The document is available at Authorship Best Practices. The Scientific Integrity Official shared this document with the inquirer and provided advice.

3. Allegation Regarding Authorship Dispute:

A scientist alleged that US EPA scientists were excluded from the authorship list of a journal article and from the abstract/poster for a scientific conference in which they had contributed. In addition, it was alleged that colleagues of the scientist were prohibited from including the scientist as an author on a presentation, to which the scientist contributed, at a professional meeting.

Summary: The Scientific Integrity Review Panel found the allegations to be substantiated and recommended that authorship designation be corrected and that the scientist's office adopt written clearance procedures consistent with the "Best Practices for Designating Authorship" document, available at Authorship Best Practices.

4. Allegation of Interference with Science by a Manager:

A scientist accused his/her supervisors of preventing the scientist from working on a topic within the scope of his/her work unit.

Summary: The allegation was dismissed. At US EPA, supervisors may determine what type of work is necessary for employees to fulfill the Agency's mission.

5. Allegation of Interference with Science by a Manager:

A scientist accused his/her supervisor of reviewing a portion of a manuscript as harassment. The review was prompted by a colleague who had reported manipulated and/or misrepresented research data or results to management.

Summary: The supervisor initiated an investigation, which found no evidence of manipulated and/or misrepresented research data or results. The scientist and the supervisor resolved the issue, and the allegation was dismissed.

6. Allegation of Interference with Science by Manager:

A scientist was denied his/her request to make a division-wide presentation about the scientist's career at EPA.

Summary: The allegation was dismissed. The supervisor and employee reached a compromise, and the employee gave a presentation that was not under the auspices of the division.

7. Allegation of Scientific Misconduct/Laboratory Sabotage:

A researcher at an academic institution with a US EPA assistance agreement was investigating an alleged case of laboratory sabotage and requested information regarding any further US EPA requirements for the investigation in addition to fulfilling their institutional requirements.

Summary: The researcher was directed to Federal Policy on Research Misconduct (EPA Order 3120.5), which specifies procedures for addressing research misconduct for all federally funded and federally conducted research.

8. Allegation that the EPA Media Policy Restricts Media Access to US EPA Scientists:

A US EPA employee spoke to media without indicating that he/she was speaking in a personal capacity and not as a US EPA employee. Management issued a suspension for failing to notify them prior to the employee speaking with the media. The employee alleged a scientific integrity violation for suppressing information.

Summary: The allegation was dismissed. The failure to notify the employee's management was not found to be a scientific integrity issue.

Additional Allegations Adjudicated in FY2015:

1. Allegation of Interference with Science by a Manager:

US EPA scientists asked a manager to request relevant studies from a manufacturer for a risk assessment. Management blocked the request and reassigned the staff.

Summary: The office asked for and received the studies five years later and incorporated the information into the risk assessment. The Scientific Integrity Official also provided training for the office on scientific integrity. The allegation was substantiated.

2. Allegation of Self-Plagiarism:

A manager asked to review a document in which it was alleged an employee had self-plagiarized.

Summary: This allegation was substantiated. The employee was counseled. Self-plagiarism is addressed in "Best Practices for Designating Authorship" available at Authorship Best Practices.

3. Concern Regarding the Lack of a Systematic Review Process for IRIS:

A chemical trade association expressed concern about the lack of a systematic review process for available studies by the IRIS program.

Summary: The allegation was not found to be a scientific integrity issue but rather a difference in scientific judgement. The IRIS program has implemented a process for systematic review in its assessments, in accordance with recommendations by the National Research Council.

Additional Allegations Adjudicated in FY2014:

1. Concern about a Loss of Scientific Integrity Due to Staff Reductions:

A scientist expressed concern that staff reductions were leading to a loss of scientific integrity.

Summary: The reorganization of the subject office addressed the issue.

2. Allegation Regarding Suppression of Scientific Report:

An employee expressed a concern that a request from an Agency counselor that a journal article submission be delayed during rule-making negotiations was a suppression of science and a violation of scientific integrity.

Summary: The allegation was substantiated. The journal article has been published.

3. Allegation regarding US EPA Policy on FAC Members' Ability to Speak with the Media and Public:

Several NGOs sent a letter to the US EPA Administrator to express their concern that a recent memorandum regarding the policy on communication between members of FACs and parties outside of EPA is a violation of the Agency's Scientific Integrity Policy.

Summary: A clarification to the policy was issued that states that the EPA policy only applies to FAC members regarding the work for which they were appointed to do.

Outreach and Training in 2016

Scientific integrity outreach is key to implementing the Scientific Integrity Policy. In fiscal year (FY) 2016, outreach included presentations at regional offices and laboratories, development of outreach materials, participation in conferences and other events, and organization of stakeholder meetings. These outreach activities are detailed in this section.

Outreach

Scientific integrity outreach is key to implementing the Scientific Integrity Policy. In FY 2016, the Scientific Integrity Official (ScIO) participated in a cumulative 48 trainings and presentations, reaching 2305 internal participants and 1410 external participants, for a combined total of 3715 people reached. Internally, the ScIO presented to the Regional Science and Technology (RS&T) Directors, Office of Air and Radiation (OAR) in Ann Arbor, Region 1, Region 2, Office of Research and Development (ORD) Managers, National Center for Environmental Assessment (NCEA), Office of Chemical Safety and Pollution Prevention (OCSPP), Office of Water (OW), and at the Annual Meeting on Scientific Integrity. Furthermore, the Scientific Integrity Program Lead administered 15 training workshops for 674 Region 4 employees and spoke at a Region 4 senior luncheon. The ScIO also gave presentations to 11 external audiences, including: the Science Advisory Board (SAB), Smith College, the Conference on World Affairs, the Office of Science and Technology Policy (OSTP), the National Science Foundation (NSF), and other external stakeholders.

The scientific integrity program also developed outreach materials to distribute across the Agency, including:

- Scientific Integrity: Best Practices for Designating Authorship (a booklet detailing authorship best practices)
- Best Practices for Designating Authorship: Essential Concepts (a tri-Fold detailing the most important of the authorship best practices)
- Best Practices for Designating Authorship Bookmarks
- Authorship Frequently Asked Questions (FAQs)
- Authorship FAQs for Managers
- Annual Report on Scientific Integrity – Fiscal Year 2015
- Internet Webpages on Scientific Integrity
- Intranet Webpages for Scientific Integrity

Meeting Summaries

EPA Annual Scientific Integrity 2016 Non-Governmental Organizations and Regulated Industry Stakeholder Meeting

Chair: Dr. Francesca Grifo, Scientific Integrity Official
May 5, 2016

Welcome and Introduction

Dr. Francesca Grifo (the Scientific Integrity Official or ScIO) opened the meeting and conducted the roll call. Participants included seven members of the Scientific Integrity Community, 10 EPA employees, fellows, and contractors, and 16 representatives from stakeholders, including: Society of Environmental Journalists, American Chemistry Council, CropLife America, ExxonMobil, Society of Professional Journalists, Union of Concerned Scientists, Environmental Defense Fund, Open Government Partnership, Monsanto Company, Olin Corporation, Public Employees for Environmental Responsibility, and FMC Corporation.

Dr. Grifo welcomed the participants to EPA's Annual Scientific Integrity Stakeholder Meeting. She introduced Dr. Thomas Burke, EPA Science Advisor.

Remarks from the Science Advisor

Dr. Burke welcomed the meeting participants and expounded on the importance of scientific integrity at EPA. Dr. Burke recognized the efforts of Dr. Grifo, who chairs the Scientific Integrity Committee and has led a cross-Agency training program on EPA's Scientific Integrity Policy to ensure that scientific integrity is engrained in EPA's culture.

Policies, Resources, Training, and Updates

Dr. Grifo provided an overview of the policies and resources related to scientific integrity that have been compiled on the EPA Scientific Integrity Intranet site. She spoke about the scientific integrity whiteboard video and PowerPoint training program that was initiated in March, and she showed the introductory whiteboard video to the participants.

In response to a question about how many people the training will reach, Dr. Grifo stated that an exact estimate has not been made but they could number in the thousands. Dr. Grifo noted that, as of February 2016, the Scientific Integrity Office received 97 allegations (37 active, 42 resolved, 11 with the status of being unable to proceed, and 7 reassigned). Dr. Grifo also discussed the development of authorship best practices. The best practices will include authorship criteria, common authorship abuses, and information about plagiarism

and self-plagiarism. The scientific integrity survey was returned by 5,763 respondents. Many of the questions called for responses in essay format, which require a long time to analyze.

Dr. Grifo responded to questions about developing a Differing Scientific Opinions (DSO) Policy, indicating that the process will be as transparent as possible and enjoys full support from EPA's Office of Inspector General.

Stakeholder Concerns

In response to stakeholder concerns, Dr. Grifo made the following points about the DSO Policy:

- The DSO process will serve to help resolve disagreements that are not resolved under the Action Development Process.
- Protections for individuals who might suffer retaliation for expressing a DSO are under discussion with EPA's Office of General Counsel.
- The DSO Policy will be transparent about protections against retaliation or negative consequences for those with differing views.
- Written clarification regarding the applicability of the Whistleblower Protection Act of 1989 is being sought from the U.S. Office of Special Counsel.
- The Agency will consider providing an opportunity for public comment on the policy, but possible delays this might engender are a concern. A less formal external review is another option.

With regard to the Scientific Integrity Policy, Dr. Grifo made the following points in response to stakeholder questions:

- The Scientific Integrity Policy applies to Agency science (i.e., data and the conclusions drawn from data), not policy (i.e., what the science means or how it is used).
- Whether the policy applies to social and political science is an issue that Dr. Grifo will discuss with her staff.
- The policy addresses concerns about restrictions on media contact. If specific allegations are brought about restricted access to media, they will be investigated.
- The process of reporting an allegation of loss of scientific integrity can be started in multiple ways, including in writing, via email or by telephone to Dr. Grifo or one of the Deputy Scientific Integrity Officials, as well as anonymously via the OIG hotline. Many times the issue can be resolved through meetings of the concerned parties without invoking the allegation process.

- Each year, information about adjudicated allegations is published in redacted format in the annual report. All identifying details that might result in the identification of the involved parties are removed.
- Confidentiality agreements are being developed to encourage EPA staff to come forward with allegations.
- The policy applies to full-time employees, grantees and collaborators. Language is being developed that will require all grantees to certify that they have read and will abide by EPA's Scientific Integrity Policy. It will be implemented in a phased approach. Implementing the requirement for contractors will require a regulatory change.

Dr. Grifo provided the following responses about the Agency Framework for Clearance Procedures for Scientific Products:

- The Clearance Framework is separate from the DSO Policy.
- The Agency will consider providing an opportunity for public comment on the framework, but possible delays this might engender are a concern. A less formal external review is another option.

In response to a question, Dr. Grifo indicated that the Data Access Plan will be released soon but no specific release date has been established. The Office of Research and Development is in the forefront of transparency efforts at the Agency, but developing an Agency-wide plan has proved to be a challenging task.

A question was asked about the format in which survey results will be available. Dr. Grifo replied that aggregated responses will be provided. A presentation in PowerPoint will be prepared describing the results of the survey when the analysis is complete.

A participant asked whether certain parts of the Agency have higher rates of allegations than others. Dr. Grifo answered that the only patterns observed have been that larger parts of EPA have more allegations than smaller parts.

In response to a participant's question, Dr. Grifo described the training process. Trainings have taken place across the country in almost all of EPA's laboratories and offices. Dr. Grifo typically meets with senior managers, middle managers and all hands, as well as holds office hours. The trainings have succeeded in encouraging people to come forward with their scientific integrity concerns.

Annual Conversation with the Scientific Integrity Official and the EPA Community

Chair: Francesca Grifo, Ph.D., Scientific Integrity Official

June 2, 2016

Participants

Over 50 participants attended online or in person and represented several EPA program offices and regions.

Scientific Integrity at the EPA: Annual Update

Dr. Francesca Grifo (the Scientific Integrity Official or ScIO) opened the meeting, explaining that the webinar serves as the annual update regarding scientific integrity at EPA. She highlighted the importance of scientific integrity and how the Agency addresses scientific integrity and misconduct. She noted that she is negotiating with the Office of Inspector General (OIG) regarding whether the Scientific Integrity Program should take the lead on plagiarism cases, which fall under scientific misconduct and have been under the purview of the OIG. Dr. Grifo also noted the new intranet page for Scientific Integrity and the whiteboard training videos released in FY 2016. Furthermore, Dr. Grifo updated the attendees on allegations and the near-completion of the Authorship Best Practices document. Dr. Grifo spent time discussing the Agency-wide survey with a phenomenal 38.8% response rate. She also listed the many outreach materials that have been developed and the work being done on the Agency's Differing Scientific Opinions Policy.

Question and Answer Period

- A participant asked, from a labor and employee relations standpoint, how the Scientific Integrity Committee partners with other groups regarding authorship issues. Dr. Grifo responded that she had partnered with the participant's office in the past. Following a discussion with the office about the specific issue, Dr. Grifo generally drafts a memorandum with her recommendations.
- A participant asked whether the new authorship best practices indicated that all Agency documents should include authorship. Dr. Grifo responded that this is not the case. The best practices do not create new authorship opportunities; rather, they help Agency personnel determine appropriate authorship for documents that have traditionally listed authors.
- A participant asked whether the Scientific Integrity Committee interacted with unions regarding the authorship best practices. Dr. Grifo stated that because the best practices are not considered guidance or required, unions had not been consulted. The goal is for all Agency best practices to be consistent, predictable and transparent; uniformity is not a goal.

- A participant asked about the consistency of regional science papers with Office of Research and Development science papers. Will the clearance procedures include this topic? Dr. Grifo noted that this issue is about scientific consistency across all areas of the Agency. Sometimes research will differ, and the best practices address this via a recommendation for advanced notification. Researchers are encouraged to communicate with other colleagues across EPA who are performing similar research well before a study is completed. Unambiguous, consistent and transparent clearance procedures will make it difficult for these issues to be lost during the clearance process, which in turn will decrease delays and the appearance of suppression.
- A participant asked whether any of the allegations are from subject experts who think that they have been circumvented (i.e., not consulted). Dr. Grifo indicated that some of the allegations are of this type. The goal is to discuss the problem with those involved to determine how the issue manifested.
- A participant asked whether the Office of the Administrator would establish a clearance policy and procedure; she noted that EPA's most controversial reports often seem to be cleared through this office. Dr. Grifo responded that two members of the Scientific Integrity Committee represent this office, which will be included in the same way that all other Agency offices are being included in the process.
- A participant asked how the differing scientific opinions issue will be incorporated into various Agency policies. Dr. Grifo responded that the few instances of this that she has dealt with involve regulatory decisions, and ultimately, the scientists just want to ensure that their opinions are considered and not ignored. Transparency is critical, and considering differing opinions fosters public trust in Agency science.
- A participant asked how vindictive actions (e.g., retaliation) are addressed. Dr. Grifo explained that each situation is different, but the ultimate goal is for staff members to come forward and express differing scientific opinions without fear of reprisal. Retaliation occurs but infrequently. Retaliation as a result of whistle blowing is covered under the Whistleblower Protection Act of 1989 and addressed by the Office of Inspector General and EPA's Whistleblower Ombudsman. Other types of retaliation are discussed on a case-by-case basis.

The meeting was adjourned.