Scientific Integrity Policy Accomplishments in the Regions and Offices
Fiscal Year 2015

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) 2015, several new initiatives were introduced to demonstrate EPA's commitment to evidence, objectivity and the quality of scientific information.

As in FY 2014, the FY 2015 OCFO technical guidance highlighted controls over scientific integrity, including implementation of the Scientific Integrity Policy. An updated scientific integrity checklist was created for every national program and regional office to complete for the FY 2015 Federal Managers Financial Integrity Act (FMFIA) assurance letters to the Administrator.

Results of Agency Outreach

A number of regions used the outreach materials provided by the scientific integrity program to encourage a culture of scientific integrity and create local working groups.

Region 4's Deputy Scientific Integrity Official (DScIO) emailed the scientific integrity outreach flyer to Region 4's senior management (Regional Administrator, Deputy Regional Administrator, Division Directors and Deputy Division Directors). The DScIO also placed the flyer on Region 4's intranet site for a seven-week period.

Region 5 reviewed and updated existing Scientific Integrity policies, processes, and training material in 2015. The Region posted the flyers and posters in high traffic locations on every floor.

Region 7's LAN Bulletin board announcements featured EPA's Scientific Integrity Policy in January 2015.

Region 8's Scientific Integrity workgroup was formed in June 2013 and has identified short- and long-term action items associated with the following five scientific integrity goals: Documenting and Resolving Scientific Disagreements; Release/Dissemination of Scientific Information (clearance procedures); Scientific Uncertainty; Professional Development (includes technical training); and Peer Review. The Region is also moving forward with the creation of a Science Council to be modeled after a very successful Council established in Region 1in 1991. The Council's vision is one where EPA management and staff recognize the need for and are fully committed to incorporating scientific and technical excellence into the decision making process. The Region 8 Science Council was to be fully operational by December 2015.

Transparency

At EPA, promoting a culture of scientific integrity is closely linked to transparency.

The Office of Chemical Safety and Pollution Prevention's (OCSPP) Office of Pollution Prevention and Toxics (OPPT) has implemented several initiatives associated with its Enhanced Chemicals Management Program, including a Declassification Project that works with industry submitters to remove Confidential Business Information (CBI) claims made for health and safety data submissions. OPPT is also implementing electronic reporting for regulatory submissions and the office has been upgrading the IT environment to ensure that it meets the Agency's Enterprise Architecture and Security procedures.

Ensuring and Supporting Robust Science

The Office of Solid Waste and Emergency Response (OSWER) (since renamed Office of Land and Emergency Management) has utilized the principles of scientific integrity (objectivity, clarity, reproducibility and utility) in their work throughout FY15 as evidenced in OSWER's 2014 End of Year Accomplishments report: http://www2.epa.gov/aboutepa/oswer-fy-2014-end-year-accomplishments-report-executive-summary. OSWER is also issuing a memorandum that highlights the value of differing scientific opinions, and reminds staff to contact the Deputy Scientific Integrity Official, or designated staff, if they have any questions. It also includes reminders on some best practices for communicating scientific information to the public, and encourages staff to pursue professional development opportunities.

The Office of Water's (OW) Office of Wetlands, Oceans, and Watersheds (OWOW) provided the 2016 Section 303(d) and 305(b) Integrated Reporting guidance to States and EPA with updated information on the use of scientific data and information to accurately assess the water quality status of our nation's waters, including waters impaired by nutrients and nonpoint source pollution.

Clearance Procedures

Clearance procedures increase transparency in the release of research results, ensuring timely review and discouraging unreasonable delays. They also ensure that scientific products are reviewed by the appropriate supervisors and technical managers before being released to the public. OW's Office of Science and Technology (OST) developed and implemented a process for clearing documents for publication.

Quality Assurance

A variety of mechanisms work to ensure the quality and integrity of EPA scientific products. Quality Management Programs (QMPs) play a large role in the quality assurance of scientific information. Collectively, these programs contribute to a culture that emphasizes the validity of scientific information.

The Office of Enforcement and Compliance Assurance's (OECA) National Enforcement Investigations Center (NEIC) updated its Ethics Policy and Quality Policy to incorporate

references to the Agency's Scientific Integrity Policy. Personnel also completed the annual EPA on-line ethics training. NEIC also was assessed by two accreditation bodies (ANSI/ASQ National Accreditation Board, ANAB, and the National Voluntary Laboratory Accreditation Program, NVLAP), and maintained accreditation by both organizations. Laboratory accreditation is highly regarded both nationally and internationally as a reliable indicator of technical competence and scientific integrity. The scope of NEIC's accreditations includes forensic field and laboratory operations that support the Agency's civil and criminal enforcement programs. Finally, NEIC conducted an internal audit to assess conformity to ISO/IEC 17025 and supplemental forensic requirements. Nonconformities were identified and corrective action plans were being implemented as of June 2015.

OECA's Office of Criminal Enforcement, Forensics and Training (OCEFT) Professional Integrity and Quality Assurance unit (PIQA) successfully completed a gap analysis to evaluate OCEFT's progress in implementing the new EPA Office of Environmental Information (OEI) Quality Assurance (QA) Field Activities Procedure. The gap analysis was conducted by EPA Region 4 personnel with support from a contractor. The office is improving several existing quality management system processes and updating controlled documents to conform to the EPA/OEI QA Field Activities Procedure requirements. OCEFT also completed a new policy and procedure for requesting and obtaining forensic field and laboratory support for criminal investigations. The policy will be approved by the OCEFT Director, published on the on-line library, and training will be provided for all affected OCEFT personnel.

OW's Office of Ground Water and Drinking Water (OGWDW) FY15 Quality Assurance Annual Report and Work Plan includes, for example, the Radiochemistry Laboratory Certification for South Carolina and the Review of Supplementary Quality Assurance Project Plans for Work Assignments that supplement generic contract level Quality Assurance Project Plans.

OW's Office of Wetlands, Oceans, and Watersheds (OWOW) implemented Quality Assurance Project Plans for both contract and Agency work, for example, the State/EPA National Aquatic Resource Surveys (NARS).

The Office of Air and Radiation's (OAR) Office of Radiation and Indoor Air (ORIA) has integrated scientific integrity into its regular quality assurance trainings, and the Office of Air Quality Planning and Standards (OAQPS) revised its Quality Management Plan to include a section summarizing pre-dissemination review guidelines.

Region 3's Air Protection Division (APD) conducted on-site meetings with all eight State and Local agencies on air quality monitoring issues. Much of the focus was on data quality submitted to EPA. APD identified numerous monitoring QA/QC concerns and worked with the science liaisons to correct discrepancies so that the data can be used for regulatory decisions.

In Region 6's Source Water Protection Branch, the Water Quality Protection Division had lead roles in updating the national guidance for Sanitary Surveys and Induced Seismicity.

In Region 6, the Multimedia Planning and Permitting Division (MPPD) staff developed a groundwater model for an Air Force Base fuel spill in New Mexico. This model was peer reviewed by EPA and external groundwater experts and now serves as the base model to identify remediation options. The staff develop air modeling protocols, similar to a Quality Assurance Project Plan, with the states and applicants to ensure that modeling is conducted based on EPA's regulations, guidance and best practices. MPPD also actively participates in workgroups to develop and review guidance and regulations including proposed revisions to 40 CFR 51 Appendix W – Guideline on Air Quality Models.

Training

Completion of scientific integrity and ethics training modules is an important aspect of promoting a culture of scientific integrity at EPA.

OECA's NEIC personnel completed the annual EPA on-line ethics training.

In OAR, all appropriate personnel took the annual scientific integrity training. In addition, ORIA's Radiation Analytical Laboratory and Field Operations Center both continue to provide annual Ethics and Data Integrity training as well as regular quality assurance training for all staff. Laboratory personnel in the Office of Transportation and Air Quality (OTAQ) complete a Code of Professional Practice attestation each year, which addresses many topics related to scientific integrity.

In Region 5, a refresher training on Scientific Integrity, Peer Review and Information Quality Guidelines for staff and managers was held in March 2015.

Region 6's Houston Laboratory staff continue to take the annual laboratory ethics training, which covers a wide variety of scientific ethics situations and principles, mostly laboratory focused. It also includes a discussion of the EPA Principles of Scientific Integrity and the Scientific Integrity Policy.

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.

OCSPP-OPPT created a website and outreach to stakeholders on the Toxic Substances Control Act (TSCA) Work Plan of chemicals and the assessment process and schedule. The Office also maintains its highly acclaimed ChemView website, which makes chemical health and ecological hazard and safety documents and data accessible in integrated formats for use by decision makers.

The Communications team in OCSPP-OPP is responsible for public outreach and they have a process in place to ensure that a scientist gets to review any changes to their work before it is publicly released.

OAR strives to make scientific data available in other ways. Many of OAR's publications are available through the Technology Transfer Network at www.epa.gov/ttn.

OAR's Office of Atmospheric Programs (OAP) maintains EPA's Climate Change Indicators in the United States and provides public access to this peer-reviewed set of indicators and information through the OAP website, which also houses other scientific information and data.

Region 8's Superfund sites make their documents associated with the results of the remedial investigation, feasibility study, proposed plan, human health and ecological risk assessments available to the public. For example, the Draft site-wide Human Health Risk Assessment (December 2014) and site-wide Baseline Ecological Risk Assessment for Asbestos (January 2015) are available to the public on Region 8's internet website.

Peer Review and FACs

Scientific integrity ensures the quality of scientific and technical products by promoting adherence to proper scientific procedures. In FY2015, EPA continued its efforts to promote peer review as an essential component of quality scientific research products.

Peer Review

ORD continued its efforts to ensure the quality of its scientific and technical products by adhering to the requirements of the Agency's Peer Review Handbook. ORD has a network of peer review coordinators who provide advice on implementing the Peer Review Handbook requirements and coordinate peer review activities within their respective organizations. A final check on peer review procedures is accomplished by requiring that all scientific and technical products be cleared prior to external release using ORD's Clearance Procedures, managed via the Scientific and Technical Information Clearance System (STICS).

OCSPP-OPP ensures that all scientific work products (non-Influential Scientific Information (ISI) and Highly Influential Scientific Assessments (HISA)) undergo either secondary expert review or OPP internal peer review. These reviews are documented and quality assurance staff audit the process.

OAR conducts significant external, independent peer review, frequently using the Agency's Science Advisory Board (SAB) and Clean Air Act Science Advisory Committee (CAASAC), among others. The Office of Air Quality, Planning and Standards (OAQPS) has established peer review coordinators, who help staff determine the level of peer review appropriate for their scientific documents, including classification as ISI or HISA. All scientific products are entered into the Science Inventory.

The Office of Environmental Information (OEI) conducted two peer reviews of a Chemical Hazard Assessment in FY2015; OEI has a system in place to ensure the appropriate peer reviews are conducted and status updates are routinely provided to the Agency Science Activities database.

Region 3's Hazardous Site Cleanup Division (HSCD) has established a peer review process to review all remedial investigations and provide feedback at an early stage of the feasibility study. In addition, HSCD has established a team of staff and managers to review TCE Vapor Intrusion sites to ensure consistent decision making.

FACs

ORD ensures that the management of the Board of Scientific Counselors (BOSC), a federal advisory committee, strictly adheres to all Federal Advisory Committee Act requirements and the Scientific Integrity Policy. Nominations are sought in an open, transparent manner, including through the Federal Register and professional organizations. Members are selected based on their expertise, knowledge and contribution to the relevant area, while also providing a balanced and diverse committee. Members are appointed as Special Government Employees. Reports produced by the BOSC are recognized as products of the Committee and are not revised by ORD.

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 may include online courses, webinars, in-person workshops or conferences. EPA provides several professional development opportunities for employees and encourages their participation in professional societies.

ORD is emphasizing the importance of peer reviewed publications by Agency scientists through a variety of approaches in performance reviews: 1) instituting a process by which peer-reviewed publications are carefully monitored; 2) recognizing those who have published, 3) creating a poster that recognizes recent articles and authors; 4) instituting an award program for paper of the year; and 5) making publication an explicit element of Branch Chief Performance Appraisal and Recognition System (PARS) agreements.

OW's OWOW supports staff scientists to attend professional conferences where they can learn as well as give presentations on their own work.

OAR continues to encourage and support the professional development of its scientific staff by encouraging the presentation of scientific research at professional conferences, collaboration with other researchers both within and outside the agency, preparing peer-reviewed journal articles, and working with the communications staff to disseminate scientific information of value to the public. Engineers in OTAQ are active in the Society of Automotive Engineers (SAE)

and contribute to the development of international ASTM standards. OAQPS staff continue to gain recognition by publishing scientific papers in high quality scientific journals, including Environmental Health Perspectives, Environmental Science and Technology, American Journal of Epidemiology, and Risk Analysis. Publication is also recognized in evaluations of staff performance. Each division in OAQPS has a structure in place for reviewing scientific articles and presentations authored or co-authored by OAQPS staff.