

**Statement of
Mr. William J. Werkheiser
Deputy Director
U.S. Geological Survey
before the
House Natural Resources
Oversight and Investigations Subcommittee
“Examining Decades of Data Manipulation at the United States Geological Survey”**

December 6, 2016

Chairman Gohmert, Ranking Member Dingell and members of the Committee, thank you for the opportunity to testify today.

The U.S. Geological Survey (USGS) is the Nation’s largest water, Earth, and biological science and civilian mapping agency, and the science agency for the Department of the Interior. For over one hundred years, USGS has published unbiased science for use by decision-makers, the Department of the Interior and other Federal agencies, consumers and industry, and the general public. Our reputation for scientific integrity is central to everything we do.

In October 2014 the USGS identified a potential incident of scientific misconduct at the Inorganic Section of the Energy Geochemistry Laboratory in Lakewood, Colorado. This laboratory provided chemical analysis of samples submitted by both USGS researchers and scientists outside of USGS. The misconduct centered on improper adjustments made to calibration and standardization curves of an inductively coupled plasma mass spectrometer, which typically was used to determine the concentrations of a wide range of heavy metals in coal and water samples.

Local managers immediately stopped all work in the Inorganic Section and initiated an internal investigation. We also promptly reported the possibility of scientific misconduct to the Department of the Interior’s Office of the Inspector General (OIG) in November 2014. The USGS Office of Science Quality and Integrity (OSQI) performed a preliminary review in March 2015 to investigate the incident. At the conclusion of that review, in accordance with USGS and Department of the Interior policy, the USGS convened a Scientific Integrity Review Panel (SIRP) in June 2015 to investigate the incident. Following its investigation, the SIRP concluded that a chemist repeatedly falsified data by making improper adjustments to calibration and standardization curves and that this manipulation qualified as scientific misconduct. This closely resembled a similar incident at the Inorganic Section that had occurred from 1996-2008.

Following the recommendations of the SIRP, the USGS closed down the Inorganic Section of the Energy Geochemistry Laboratory, effective March 1, 2016. All of the employees implicated in either of the scientific integrity incidents are no longer employed by the USGS.

The USGS posted public notice¹ of this incident, and has since acted on the sole recommendation from the June 2016 OIG Report², which was to notify stakeholders about the scientific integrity

¹ <http://energy.usgs.gov/GeochemistryGeophysics/GeochemistryLaboratories/GeochemistryLaboratoriesNotice.aspx>

incident. The USGS contacted customers of the Inorganic Lab and carefully reviewed work products that could have made use of manipulated data from the lab. The USGS continues to evaluate the potential impacts stemming from this latest incident, but to date we have not identified any policy or management decisions affected by the manipulated data.

Any failure of scientific integrity is a serious matter. The USGS has taken and is continuing to take significant steps to enhance data quality assurance and quality control procedures. The Energy Resources Program (ERP) is developing a comprehensive, rigorous and externally vetted Quality Management System (QMS) to replace current procedures, pursuant to a May 2015 OIG Report³. The QMS will ensure data quality through transparency of operation, periodic external review, and the addition of extensive quality assurance and quality control practices that are the foundation of international and national laboratory standards for competence and quality⁴. Additionally, the ERP is hiring a permanent QMS Manager, who will report directly to headquarters under the ERP Coordinator to avoid any potential conflict of interest, as well as two Laboratory Quality Assurance Specialists who will oversee data quality in USGS Energy Science Centers in Reston, Virginia, and Lakewood, Colorado. The QMS Manager has been hired, and will start work this month. This more robust QMS will place ERP management in direct coordination with data quality managers, thus ensuring that any future data quality problems are identified quickly and dealt with immediately.

In addition, the USGS has created a Strategic Lab Committee to ensure that its laboratory assets are managed to best support the science mission of the USGS. This committee will assess laboratory assets that represent significant investments in personnel, facilities, equipment and operations across USGS mission areas and regions, and will also provide advice regularly on the strategic and tactical development of those assets. The USGS is also consulting with independent entities regarding assessments of the Bureau's laboratory programs, data quality assurance and quality control procedures.

In our 137 year history, the USGS has built a strong reputation on providing consistent, quality scientific information critical to the Nation. Our science has helped protect communities in the path of lava flows and prevented a catastrophic rupture along the Alaska pipeline. Our scientists have elucidated the geochemical processes behind mercury contamination, uncovered the mysteries of white-nose syndrome in North American bats, and investigated avian influenza in American poultry farms. Just a few weeks ago, we released an assessment that identified 20 billion barrels of technically recoverable oil resources remaining in the Wolfcamp Shale formation in the Permian Basin of west Texas. The societal value of these studies is why we are committed to upholding the longstanding USGS reputation for scientific quality and integrity. We will continue to address the issues which led to misconduct at this USGS lab, and will make all changes necessary to prevent such a thing from happening again.

Throughout these incidents, we have been open and transparent about our activities. We have also worked with congressional staff to provide briefings, documents and other relevant

² <https://www.doi.gov/sites/doi.gov/files/2016EAU010Public.pdf>

³ <https://www.doi.gov/sites/doi.gov/files/CREVGSV00032014PUBLIC.pdf>

⁴ International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) 17025, "General requirements for the competence of testing and calibration laboratories" and, The NELAC Institute (TNI), the national standard for laboratory accreditation.

information as quickly as possible. We appreciate the opportunity to provide this information, and look forward to continuing to do so.

Thank you again for the opportunity to testify today. I will be happy to answer any questions you might have.