# How do geoscientists inform the public about unethical practice?

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# Protection of the public's health, safety, and welfare

### Responsibilities to: (among others)

The Public and Humankind All geoscientists have a professional responsibility to serve the public interest and welfare... Geoscientists should actively be concerned with the health and welfare... Public comments on scientific matters should be made with eare and precision, without unsubstantiated, exaggerated, or premature statements. AGI Guidelines for Ethical Professional Conduct, 2015

Other Geoscience Codes of Ethics contain similar provisions

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# How do we inform the public about unethical or incompetent practice?

- The answer: very poorly to we don't.
- There are several reasons for this answer:
  - Only some geoscience organizations have disciplinary procedures (and most geoscience organizations generally have no need for them).
  - Most disciplinary cases are settled by resignation prior to reaching findings and conclusions.
  - Jurisdictional limits—particularly with ASBOG licenses
  - There is no central registry or place to look up names of the unethical and incompetent (or of geoscientists in general).

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# Unethical and incompetent geoscience practice are rare

- 21 years of SEC experience
- Over 20 years of AIPG Ethics Committee experience
- A member of the Australasian Institute of Mining and Metallurgy's (AusIMM) Ethics Committee since 2007
- Very few cases involved individuals who would generally be viewed as geoscience professionals, but they do occur.

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# AusIMM's Herman Tso Case

6 June 2016 Herman Tso was expelled from AusIMM and his membership therein invalidated as from the date of admission for not having a relevant BS degree even though he claimed to have one along with various other educational qualifications.

- B. Eng., MSc, PhD, MBA, DBA, Chartered Civil & Mining Engineer
- AusIMM, IMMM (UK), CIM, Eur. Assoc. Geos. & Eng., Geol Assoc Canada, GSA, GSHK, FGSL, SPE, etc.

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# JORC Competent Person

- Tso's falsely obtained AusIMM membership qualified Tso to claim Competent Person status for writing JORC Code technical reports.
- Tso wrote mining reports for at least 15 Hong Kong Stock Exchange-listed companies.
- The dishonestly claimed qualifications deceived investors in the companies holding the properties on which Tso reported.

Honesty in the principal ethical principle.

Tso's reports were not competently prepared.

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## Tso and GSA

- Tso was a member of GSA from 2012 until at least earlier this year.
- GSA Bylaws, Article IV, Membership, Item 8: Suspensions Any fellowship, membership, or affiliation in the Society may be terminated or suspended by the Council, after a hearing or opportunity to be heard, for conduct deemed prejudicial to the interests of the Society. A Fellow, Member or Affiliate whose dues are in arrears for one (1) month will be automatically suspended and they shall not be entitled to the Society rights and privileges.
- GSA has no formal procedures for such a hearing.
- Tso's membership likely terminated through failure to pay dues.

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# AIPG's Craig Parkinson Case

- Formal charges of unethical and incompetent practice were brought against Craig L. Parkinson, a Certified Professional Geologist, in November 2014 following an investigation of 2 reports Parkinson wrote on an Idaho property touting the high silica purity and gold content.
- AIPG's Disciplinary Proceeding ended when Parkinson resigned in January 2015, thus terminating AIPG jurisdiction.
- Parkinson held 11 US state professional geologist licenses.
- AIPG informed all 11 of AIPG's Disciplinary action. Most didn't respond.

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# ASBOG Professional Licenses

- Professional licensing is left to the states.
- States deal with misconduct only when the property reported on is within the state, a jurisdictional limitation.
- This is why an ASBOG license is no longer recognized by Canadian securities regulators for purposes of authoring technical reports pursuant to NI 43-101 (for mining properties).
- Only 3 of the 11 states have taken or are taking action against AIPG's respondent. In some cases, Parkinson's license has lapsed with no explanation.

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# Arizona Board of Technical Registration's Parkinson Case

- Craig Parkinson had held an Arizona Professional Geologist's license that expired on June 30, 2004.
- In March 2010, Parkinson authored a report on a Maricopa County property that "failed to apply appropriate knowledge and skill in the practice of geology." The report had no PG seal.
- In August 2010, Parkinson authored a report on Yuma County property that "failed to apply appropriate knowledge and skill in the practice of geology." The report had no PG seal.
- In January 2016, Parkinson consented to the Arizona's Board of Technical Registration Letter of Reprimand and agreed to pay penalties.

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# SEC Enjoined Parkinson

- On 9/7/16, the SEC filed a complaint against Parkinson and others alleging securities fraud in the sale of securities in an Idaho silica property called Arco Hills.
- "Parkinson claimed in his reports that Arco Hills could mine 20 billion tons of high quality silica from its mining claims that could be sold for \$20 to \$30 per ton. Parkinson also represents in his reports the silica in Arco Hills' mining claims contains approximately 460 million ounces of gold within a value of \$805 billion."
- "Parkinson knew this statement was false and misleading as no assay samples had been submitted by him to any laboratory on behalf of Arco Hills."

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# SEC Case

- On 9/13/16, Parkinson consented to the entry of a permanent injunction in this case without admitting or denying the charges against him.
- This consent flips the burden of proof—Parkinson cannot deny the allegations.
- The AIPG action formed the technical basis for the SEC case.

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# USGS Energy Geochemistry Lab

- Office of Inspector General's report 2016-EAU-010, June 15, 2016
- Scientific misconduct and data manipulation by a mass spectrometer operator from 2008 through late 2014.
- An earlier incident began in 1996 and continued undiscovered until 2008.
- "The report of inquiry concluded that the laboratory had a 'chronic pattern of scientific misconduct' and that 'data produced by the Inorganic Section were intentionally manipulated by the line-chemist in charge.' The identified issues predominantly affected coal and water quality research and related assessments."

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## Consequences in OIG report

"The Inorganic Section's work has implications for Energy Resources Program's national and international coal and water quality assessments. Our review revealed that the impacts were far ranging, and included—

- publications that were retracted or delayed because of inaccurate information;
- potential damaged reputations of USGS and individual scientists;
- potential lost collaborations with outside organizations;
- diminished employee morale; and
- reduced public trust of USGS-generated information."

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# Going forward on this incident

- "USGS is assessing the full impact of the incident on its research and assessment projects, an undertaking that will take time to complete. In addition, the Bureau has been notifying the affected customers, journals, and other end users, a protracted process that remains incomplete. USGS is pursuing disciplinary actions for the responsible staff."
- "Although USGS closed its Inorganic Laboratory on February 25, 2016, it still has not informed its many stakeholders about the scientific integrity incident and how it may potentially have impacted them. Our one recommendation to USGS was to complete this notification process." (OIG report summary on website)

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# Disciplinary actions take time

Investigation and prosecution of geoscience professional misconduct takes time, far more than many would wish.

- Tso case began in early 2014, ended June 2016
- Parkinson
  - AIPG case late 2014
  - AZ 2016 action based on 2010 reports
  - SEC case September 2016
- USGS late 2014 to mid-June 2016 and still ongoing

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## **Overall observations**

- The number of actions compared with an organization's membership is very small and this frequency is similar among organizations.
- There is no one place that a member of the public can check for due diligence on a geoscientist.
- Some geoscientists generate many web hits, others don't. The CV or similar qualifications statement contained in a technical report is usually the best information a member of the public has.
- Can or should a central registry be established? By whom?

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