DATA MANAGEMENT PLAN
1. Types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project
This project will generate primarily laboratory analytical and field data.
2. Standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies);
We will follow best practices for recording and archiving laboratory data. All results of laboratory and field experiments and analyses will be stored electronically, including the raw data from analysis, both on the equipment – the Tekran instruments and ICP-MS have internal data storage capacity or linked laptops - and on a UConn lab data storage folder (Dropbox). The radioisotope data generated will be stored in a similar manner at U Miami. Cruise underway and ancillary information obtained after the cruise will be similarly backed up in multiple locations. Where instruments generate paper data output, this will also be stored for five years. These data will include quality assurance information such as blanks, calibration curves, replicates and related data. For mercury, Mason's research group participates regularly in national or international intercalibration exercises, such as the GEOTRACERS Intercalibration exercises, and participated in a recent intercalibration by Lars-Eric Heimbürger in France (June 2017). Overall, all data will be backed up on computers as well as on Dropbox, flash drives, and/or external hard drives, to ensure redundancy and protection of data integrity. These various storage media are kept in multiple locations and will be properly labeled to ensure clarity.
3. Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;
We have no specific privacy, confidentiality, security or intellectual property concerns relevant to this project. The raw data from the laboratory and field experiments are not normally posted on websites in order to avoid issues of inaccuracy since these have not yet been peer-reviewed. However, data will be available to all legitimate colleagues and institutions upon request, as we have done in the past, once they have been properly evaluated using our internal quality assurance (QA) procedures. Once the data is published in the peer-reviewed literature, then the data will be made available publically. These published data are readily accessible by means of databases that mine the published literature, and we intend to continue that policy. Published papers will thoroughly describe all experimental protocols and conditions. Because the PIs believe in openness, transparency, and reproducibility of the scientific process, they intend to share any primary data and relevant samples with colleagues at other institutions, upon reasonable request and as possible, and also will comply with any regulations from NSF. This project will not generate data that will impact upon national security nor does the PI produce data that will infringe upon the personal privacy and confidentiality of any individual.
4. Policies and provisions for re-use, re-distribution, and the production of derivatives
We have no current plans for re-use, re-distribution or the production of derivatives.
5. Plans for archiving data, samples, and other research products, and for preservation of access to them.
All data will be archived, including analyzed data, standard operating procedures and data analysis methods, to ensure access to these materials regardless of the presence of key personnel for 3+ years after the project is complete. Secondary data generated through data manipulation and extrapolation will also be stored at a central location (e.g. the labgroup Dropbox folder). The University of Connecticut is in the initial stages of developing a university-wide data management facility and this will be used when completed. When field and lab data have undergone QA processing, and within two years of data collection or before the end of the project, the data will be reported and archived, without any restriction on access, to the BCO-DMO (Biological and Chemical Oceanography Data Management Office) database, and will comply with their recommendations with regard to data formatting and metadata generation in all instances. A copy of the metadata and a pointer to the primary archive will also be deposited with the Arctic Data center, as required by the policies of Arctic Sciences program.