**Data Management Plan**

***Data generation, storage, and formats:***

Data will be collected by personnel from the PIs' research groups as described in the proposal. Data generated will include chemical composition of particulate samples. Field data acquired using in situ sensors will be saved to the memory of those sensors or associated field computers as it is collected. Field notes will be recorded in Rite-in-the-Rain notebooks, and these notebooks will be stored in the PIs' labs. These notes will be scanned and digitally stored and archived in the same manner as the field data. Laboratory analytical data will initially be recorded on the instruments used for those analyses or on associated laboratory computers as it is collected. Calibration verifications will be stored and archived in the same manner as the data. The field and laboratory data will be transferred to desktop computer hard drives in the office for longer-term storage after this project.

Field and laboratory data products will take the form of computer files, generally consisting of tab- or comma-delimited values with appropriate header information and accompanying metadata. Metadata will consist of, at a minimum, a plain text file noting the date(s), time(s), location(s), instrumentation, personnel, procedure of data collection, and important quality assurance information such as instrument precision and accuracy, calibration date, or other notes on data quality/uncertainty. Derived data and results generated by analyses within programs such as MATLAB, Excel, and R will be stored in plain text formats to ease the data portability. Quality control will be performed on the data produced.

This project will not involve the acquisition of either animal or human subject data.

***Backup and archiving:***

The office computers and hard drives mentioned above will be connected to a secure, daily, automatic backup program or service (e.g., CrashPlan, administered by University of Texas at Austin IT staff and stored in University servers and in the cloud). External hard drives containing duplicate data and results will also be maintained offline via manual backup. At the same time, PIs will work with Biological and Chemical Oceanography Data Management Office (BCO-DMO) to archive the data, making them publically available.

***Data sharing:***

Results of the work will be shared principally through open-access peer-reviewed publications. When appropriate and not included in the main manuscript, data and results will be published as online supplements to the peer-reviewed publications.

The process and results of the project will be shared with the public via the multiple methods of achieving broader impacts described in the proposal. The PIs have shared data through publications, project web sites, and outreach activities in the past and are fully prepared to do so in a timely manner for the proposed project.

Further details about and copies of data and methods will be made available upon request at the end of the project period, unless pending publication, in which case the details will be released concurrent with publication.