SECTION J: DATA MANAGEMENT PLAN

Dissemination of project data between team members. Project team meetings will be held bimonthly to discuss on-going research and provide opportunities for integrative discussions. At these meetings, each team member will first give a 5-minute synopsis of their progress, expected deliverables, and timeline. In addition, one of the team members (PI, undergraduate students, graduate student, or postdoctoral fellow) will give a formal presentation to describe and discuss their results and their context in the project at each of these meeting, such that everyone will present at least once each semester. To avoid problems associated with e-mailing large datasets and to preserve backup datasets, a Sharepoint database will be setup on Georgia Tech servers. All team members will be provided with secure access to the server through virtual private network technology.

Dissemination of project information to the larger scientific community: Dedicated website. Graduate students, undergraduate students, and the postdoctoral fellow will collectively create and maintain a web site linked to the School of Earth and Atmospheric Sciences and the new Ocean Science and Engineering (OSE) Graduate Program at Georgia Tech. The site will be designed to inform the general public and larger scientific community about our CO project, including a Tweeter news feed, and descriptions of research and personnel that will be updated on a monthly basis, and an activities page that will list events of interest to the public. The website will not only provide the project team members practical experience in modes of communication that are integral components of research and educational activities, it will also inform the public and the larger scientific community about the importance of OA in marine sediments, thereby functioning as a recruiting tool. Institutional support from the Georgia Tech Office of Information Technology (OIT) is available to assist in website design. Project information will also be disseminated to the scientific and stakeholder community involved in OA research via the Ocean Acidification Information Exchange (OAIE) program, which is essentially a social network of OA scientists and stakeholders to share information and resources, engage in online discussions, and build well-informed communities. Finally, project results will also be presented at national and international meetings and will be submitted as research manuscripts to peer-reviewed journals.

Dissemination of samples and geochemical datasets to the scientific community. The proposed research will generate a variety of field samples, including water column, sediments, pore waters, and overlying waters collected either with benthic landers or multi-coring devices. These samples will be archived and preserved for further analyses and made available to the scientific community upon request according to the Division of Ocean Sciences' sample and data sharing policy. The proposed research will include sediment incubations that will be conducted in duplicate under rigorously controlled conditions along with unamended controls. The proposed research will also generate detailed geochemical data from field measurements, field samples, and sediment incubations. These data will be obtained either through in situ electrochemical measurements or external sampling for ancillary chemical analyses. Electrochemical data will include analytical checks using dissolved oxygen measurements in external standards, manganese calibrations before and after use, and surveys of baseline quality during the measurements. Data from electrodes that do not satisfy these criteria will be discarded. Quality of sampling procedures will be tested by prepping blanks and standards as real samples and checking for eventual contaminations or losses. Data obtained will also be submitted to a rigorous quality control procedure before, during, and after their acquisition. Conventional geochemical measurements will include calibrations before and after the measurements to check for analytical consistency as well as quality control checks (measurements of accuracy) using certified reference materials when possible, external standards run as unknown samples, and blanks for contamination controls. In addition, calibration curves, minimum detection limits, and precision will be compared between series of measurements to ensure the data are obtained in a consistent fashion. Geochemical data that pass these rigorous quality tests will be stored on Georgia Tech ITAR-compliant cloud storage space (GT Dropbox services) and made available to the scientific community upon request according to the Division of Ocean Sciences' sample and data sharing policy. In addition, the

data collected by the shipboard data collection system, including sea surface, meteorological, ADCP, and CTD rosette data will be will be submitted to the Biological and Chemical Oceanography Data Management Office (BCO-DMO) and Rolling Deck to Repository (R2R) database immediately after each cruise. The geochemical data will also be submitted to the BCODMO repository within two years after collection. Finally, publications will be deposited in the NSF Public Access Repository (NSF – PAR) per NSF requirement.