LDEO Data Management Plan

This Data Management Plan (DMP) is in conformity to the NSF policy on the dissemination and sharing of research results as described in the Grant Proposal Guide (GPG) Chapter II.C.2.j.

Compliance with Data Policy
The data generated during this project will be submitted to the NSF-OCE supported BCO-DMO system as a contribution to the GEOTRACES database. It is a part of the US GEOTRACES data policy to submit the generated data to BCO-DMO. It will be BCO-DMO responsibility to link US GEOTRACES data to the international GEOTRACES data management system hosted at the British Oceanographic Data Center in the UK. The international GEOTRACES data policy is modeled after the US NSF policy and will be implemented to the extent possible by peer pressure, even in cases where the policies of other nations do not require that data be made publicly available.

Pre-Cruise Planning
Planning for the Peru-Tahiti section began during several discussions of the US GEOTRACES Scientific Steering Committee. A cruise management proposal was submitted by cruise leaders (Jim Moffett, Chris German, Greg Cutter) to NSF on 15 Feb. 2011 and subsequently funded. That proposal provides for the collection of water samples to be used in the work proposed here. It also establishes a preliminary data management system set up by the SIO-ODF group, who will be supporting the cruise. The SIO-ODF group will create a master spreadsheet that links every measurement planned for samples to be collected using the Niskin rosette to the metadata concerning sample collection. We will enter all of our data into a copy of that spreadsheet to ensure that the agreed sample IDs and collection meta data are linked to our data.

Further cruise planning occurred at a science planning workshop held in La Jolla in September 2011. A final cruise planning meeting will held for funded PIs at a yet to be determined date, probably in Winter 2013. Detailed plans for station locations, instrument deployment, water sampling strategy and water sample allocation will be developed at that meeting.

Most of our samples will be collected using the SIO-ODF rosette equipped with 30-liter Niskin bottles. We anticipate that other groups will be funded to collect particulate material by in situ filtration and aerosols that they will provide us with subsamples of these materials for analysis (see letters of support attached in supplementary material). We also anticipate collecting subsamples from the mono-corer system that will be used in this cruise to collect core-top sediment samples at each station. Leopoldo Pena has extensive experience with this sediment sampling system and used it with great success in a previous international cruise led by the Netherlands.

During the Cruise
The chief scientists will maintain a cruise log and prepare a cruise report. Our sampling protocols will follow those described in two GEOTRACES intercalibration papers (van de Flierdt and Pahnke in press 2012, and Pahnke et al. in revision 2012, both Limnology and Oceanography). Our sampling methods will follow the procedures in these papers and we will reference them accordingly.

Post-cruise
We will process all of our samples after the cruise and back in our laboratory at LDEO. The analytical protocols that we will follow are also described in the two GEOTRACES intercalibration papers (van de Flierdt and Pahnke in press 2012, and Pahnke et al. in revision 2012). Therefore we will also reference these publications to document our methods.

As quality control measures we will share chemical reagents and samples with other groups (see attached letter from R. Sherrell and C. German) to ensure good sample reproducibility between the different laboratories involved. In addition we will routinely measure sample standards and check for procedural blanks to ensure the internal consistency of our results.

In compliance with US GEOTRACES policy our results will be submitted to the Biological and Chemical Oceanography Data Management Office (BCO-DMO) and the data sets will be available online from the BCO-DMO data system (http://bco-dmo.org/data/).