Data Management Plan

The GEOTRACES Program has devoted extensive thought to program data management and has a standing committee devoted to this issue. See http://www.geotraces.org/science/data-management and http://www.bodc.ac.uk/geotraces/data/policy/ for details. Our participation in the GEOTRACES data management framework is mandatory.

As part of our participation in the GEOTRACES North Atlantic Zonal Section, East Pacific Zonal Section, and Arctic Section, we submitted some basic metadata on our sampling prior to the cruise to a person assigned to organize data management for the cruises. We expect to continue this participation for the Pacific Meridional Transect. We will also comply with standard NSF policy on placing our final data within a data repository. In a sense, we are lucky that the GEOTRACES emphasis on data management relieves us of some of the "stress" associated with this.

Our lab will be obtaining water samples (250-mL trace element samples) that will be labeled aboard ship with a GEOTRACES sample number. For methane analysis, a GEOTRACES sample number will also be assigned. The data that we will be obtaining from these samples are the various trace element and methane concentrations described in this proposal. Within the PI's lab, data will be saved in Excel spreadsheets which will also contain either basic metadata or notes/links to where those metadata are (e.g., lab notebooks or other documents). Other important metadata are contained in analytical instrument log books, which are preserved in the PI's analytical facilities.

When the data are finalized, this information will be provided to GEOTRACES in their requested format. The GEOTRACES program will take care of archiving the data and delivery to an appropriate data repository. For past cruises, this has meant delivery by us of our data to the Biological and Chemical Oceanography Data Management Office at Woods Hole (bco-dmo.org) which ultimately submits the data to the British Oceanographic Data Centre (bodc.ac.uk) which serves as the ultimate repository for GEOTRACES data. So far we have submitted three data sets to BCO-DMO from past cruises (http://www.bco-dmo.org/; datasets 3827, 3831, 647909, 648030, 648753, and 651138). An intercalibration report for our data also gets submitted to the GEOTRACES Standards and Intercalibration Committee which has so far accepted our NAZT Ba, Ga, and REE data along with our EPZT Cu, Mn, Mo, Ni, and V data. These data should therefore be included in the 2017 Intermediate Data Product (IDP), scheduled for public release during the 2017 Goldschmidt Conference. Previously, our NAZT Ga and Ba data were included in the 2014 IDP. (If, for some reason, the usual GEOTRACES data archiving does not happen, the PI will assume responsibility for delivery of final data to NODC.)

Unused sample water from our samples is archived by our lab in a clean, secure storage facility so that samples can be re-analyzed or shared in the future. Note that because there will be so many demands for trace element clean water samples during this cruise, we are holding our sample volumes to a minimum. Thus, we do not expect to be able to share any significant quantities of our samples. We expect our analytical data to be available to the community by the end of the project period. We also expect to publish our results, including any methodological developments, in a timely manner so as to make the information available to the community.