

SAMPLE AND DATA DISTRIBUTION POLICY*

Distribution of Ocean Drilling Program (ODP) and Deep Sea Drilling Project (DSDP) samples and data is undertaken in order to (1) provide support to shipboard scientists in achieving the scientific objectives of their cruise and to support shore-based investigators who are preparing contributions to ODP reports, (2) provide individual investigators with materials to conduct detailed studies beyond the scope of ODP reports, (3) provide micropaleontological reference centers with samples for reference and comparison purposes, and (4) provide educators with samples for teaching purposes.

Funding for research activities must be secured by the investigator independently of requesting the samples or data.

The Ocean Drilling Program Curator is responsible for distributing samples and data and for preserving and conserving core material and data. The Curator, who may accept advice from chairmen of the appropriate JOIDES advisory panels, is responsible for enforcing the provisions of this Sample and Data Distribution Policy. He is responsible for maintaining a record of all samples and data that have been distributed, both on board ship and subsequently from the repositories and ODP databases, indicating the recipients and the nature of investigations proposed. This information is available to interested investigators on request.

Every sample distributed from the ship or from a repository is labeled with a standard identifier, which includes leg number, hole number, core, core type, and section numbers, and interval within the section from which the sample was removed. It is imperative that this standard identifier be associated with all data reported in the literature, and that residues of the sample remain labeled throughout their lives, so that later workers can relate the data to the cores.

Distribution of sample materials is made directly from the repositories (Lamont-Doherty Earth Observatory, Scripps Institution of Oceanography, Texas A&M University, and Universität Bremen, Federal Republic of Germany) by the Curator or his designated representative.

1. Distribution of Samples for Research Leading to Contributions to ODP Reports

Any investigator who wishes to contribute to the reports of a scheduled cruise may write to the Curator, Ocean Drilling Program, 1000 Discovery Drive, College Station, TX 77845-9547, U.S.A., in order to request samples from that cruise. Requests for a specific cruise must be received by the Curator at least TWO MONTHS in advance of the departure of that cruise, in order to allow time for review of the request in conjunction with other requests, so that a suitable shipboard sampling program can be assembled. The request should include a statement of the nature of the proposed research, the size and approximate number of samples required to complete the study, and any particular sampling technique or equipment that may be required. Requests will be reviewed by the Staff Representative and co-chief scientists of the cruise and by the Curator. Approval/disapproval will be based on the scientific requirements of the cruise as determined by the appropriate JOIDES advisory panel(s). The scope of a request must be such that samples can be processed, that proposed research can be completed, and that the paper can be written in time for submission to the relevant ODP cruise report.

Except for rare, specific instances involving ephemeral properties, the total volume of samples removed during a cruise-related sampling program will not exceed one-quarter of the volume of core recovered, and no interval will be depleted. One-half of all recovered materials will be retained in the archives in as pristine a condition as is practicable. Investigators requesting shipboard samples of igneous materials may receive a maximum of 100 igneous samples per cruise.

Because many sample requests are received for shipboard work and because the time of the shipboard party is at a premium, co-chief scientists are strongly urged to limit shipboard sampling to the minimum necessary to accomplish the cruise objectives. Shore-based investigators whose requests for cruise-related samples are approved should expect that they will receive the samples after the cores are returned to the repository, and should schedule research activities accordingly.

Co-chief scientists may invite investigators who are not cruise participants to perform special studies of selected core samples in direct support of shipboard activities. If this occurs, the names and addresses of these investigators and details of all samples loaned or distributed to them must be forwarded to the Curator, via the ODP Staff Representative to that cruise, immediately after the cruise. These investigators are expected to contribute to the cruise reports as though they had been cruise participants. All requirements of the Sample and Data Distribution Policy apply.

Publication of results is subject to the ODP Publications Policy.

2. Distribution of Samples for Research Leading to Publication Outside of the ODP Reports

A. Researchers who wish to use samples for studies beyond the scope of the ODP reports should obtain sample-request forms from the Curator, Ocean Drilling Program, 1000 Discovery Drive, College Station, TX 77845-9547, U.S.A., fax: 409-845-1303; e-mail: Curator@odp.tamu.edu. Requestors are required to specify the quantities and intervals of core required, to make a clear statement of the nature of the proposed research, to state the time that will be required to complete the work and to submit results for publication, and to specify funding status and the availability of equipment and space for the research.

Additionally, if the requestor has received samples from ODP or from DSDP previously, he/she will be required to account for the disposition of those samples by citing published works, five (5) copies of which must be sent to the Curator. If no report has been published, this requirement can be fulfilled by sending a brief (two- or three-page) report of the status of the research.

If the requestor has never before received samples from ODP or DSDP, he/she will be required to show that the samples will be used for responsible research. This requirement can be met by providing the Curator with a copy of the requestor's résumé and bibliography. If the requestor is a student working on a higher degree, he/she can meet this requirement by sending a copy of his/her dissertation or research proposal endorsed by the student's advisor.

Unused and residual samples should be returned and data should be sent to the Curator if the project has terminated. Paleontological materials may be returned either to the Curator at ODP or to one of the designated micropaleontological reference centers. If material is returned to a reference center, notify the Curator when it is sent.

Requests for samples from researchers in industrial laboratories will be honored in the same manner as those from academic organizations. Industrial investigators have the same obligations as other investigators to publish all significant results promptly in the open literature and to provide the Curator with copies of all reports published and of all data acquired in their research.

In order to ensure that all requests for highly desirable but limited samples can be considered together, approval of requests and distribution of samples will be delayed until twelve (12) months after completion of the cruise or two (2) months after official publication of the core descriptions, whichever occurs earlier. The only exceptions to this policy will be made for specific requests involving ephemeral properties. Requests for samples may be based on core descriptions published in ODP reports produced by the shipboard party, copies of which are on file at various institutions throughout the world. Copies of original core logs and data are kept on open file at ODP, and at the repositories at Lamont-Doherty Earth Observatory, Scripps Institution of Oceanography, and Universität Bremen.

B. Most investigations can be accomplished handily with sample volumes of 10 mL or less. Investigators must provide explicit justification of requests for larger sample sizes or for frequent intervals within a core. Requests that exceed reasonable size or frequency limits will require more time to process and are unlikely to be granted in their entirety.

*Revised December 1995.

Requests for samples from thin layers, from stratigraphically important boundaries, or from sections that are badly depleted or in unusually high demand may be delayed in order to coordinate requests from several investigators or while the Curator seeks advice from the community. Investigators who submit such requests may expect to receive suggestions for alternative sampling programs or for joining with a research consortium that will share the samples. In any event, such exceptional requests will require more time for processing than will more routine requests.

Investigators who wish to study ephemeral properties may request a waiver of the 12-month waiting period; however, such requests will be referred automatically to the relevant co-chiefs. If such a request is approved, the investigator will join the shore-based contributors to the shipboard science effort, and will incur the obligations thereof (see Section 1).

- C. Samples will not be provided until the requestor assures the Curator that funding for the proposed research is available or unnecessary. If a sample request is dependent in any way on proposed funding, the Curator is prepared to provide the proposed funding organization with information on the availability (or potential availability) of suitable samples.

- D. Investigators who receive samples incur the following obligations:

- (1) To publish significant results promptly; however, no contribution may be submitted for publication prior to 12 months following the termination of the relevant leg unless it is approved and authored by the entire shipboard party.

- (2) To acknowledge in all publications that the samples were supplied through the assistance of the international Ocean Drilling Program and others as appropriate.

- (3) To submit five (5) copies of reprints of all published works to the Curator, Ocean Drilling Program, 1000 Discovery Drive, College Station, TX 77845-9547, U.S.A. These reprints will be distributed to the repositories and to the ship. All reprints received will be logged in an on-line bibliographic database.

- (4) To submit all final analytical data obtained from the samples to the Data Librarian, Ocean Drilling Program, 1000 Discovery Drive, College Station, TX 77845-9547, U.S.A., as soon as they have been published. Please call the Data Librarian (409-845-2673) for information on acceptable data formats. Investigators should be aware that they may have other data obligations under the National Science Foundation's Ocean Science Data Policy or under relevant policies of other funding agencies which require submission of data to national data centers.

- (5) To return all unused or residual samples, in good condition and with a detailed explanation of any processing they may have undergone, upon termination of the proposed research. In particular, all thin sections and smear slides manufactured on board the vessel or in the repositories are to be returned to the Curator. Paleontological materials may be returned either to the Curator at ODP or to one of the designated micropaleontological reference centers.

Failure to honor these obligations will prejudice future applications for samples.

- E. Cores are available for examination by interested parties at the repositories. Investigators are welcome to visit the repositories in order to inspect cores and to specify sample locations when that is required for their research; however, time and space in the workrooms are limited, so advance appointments are required. Occasionally, the space may be fully booked several weeks in advance, so investigators are urged to call for appointments well ahead in order to avoid disappointment. Only the Curator or his delegate may actually remove samples from the cores.
- F. A reference library of thin sections, smear slides, and archive photographs is maintained in the repositories for the use of visiting investigators. All thin sections and smear slides produced on board the ship or in repositories belong to this library.

3. Distribution of Samples to Micropaleontological Reference Centers

As a separate and special category of repository activity, selected samples are distributed to micropaleontological reference centers, where the prepared material may be studied by visitors. Foraminifers, calcareous nannofossils, and diatoms can be viewed; radiolarians will be prepared in the future. The present centers are (1) U.S. East Coast: Lamont-Doherty Geological Observatory, Palisades, NY 10964 (Ms. Rusty Lotti; telephone: 914-365-8419; fax: 914-365-8154; e-mail: curator@lamont.ldeo.columbia.edu); (2) U.S. National Museum: Smithsonian Institution, Washington, DC 20560 (Dr. Brian Huber; telephone: 202-786-2658; fax: 202-786-2832; e-mail: mnhp007@si.edu); (3) U.S. Gulf Coast: Texas A&M University, Ocean Drilling Program, College Station, TX 77845-9547 (Dr. John Firth; telephone: 409-845-0507; fax: 409-845-0876; e-mail: john_firth@odp.tamu.edu); (4) U.S. West Coast: Scripps Institution of Oceanography, La Jolla, CA 92093-0220 (Dr. Annika Sanfilippo; telephone: 619-534-2049; fax: 619-534-0784; e-mail: annika@ucsd.edu); (5) Western Europe: Natural History Museum, Geology Department, CH-4001 Basel, Switzerland (Dr. Michael Knappertsbusch; telephone: 41-61-266-5564; fax: 41-61-266-5546); (6) Russia: Institute of the Lithosphere, Staromonetny Pereyok 22, Moscow 109180, Russia (Dr. Ivan Basov; telephone: 71-095-231-4836; fax: 71-095-233-5590; e-mail: basov@ilsan.igem.msk.su); (7) Japan: National Science Museum, Department of Geology, 3-23-1 Hyakunin-cho, Shinjuku-ku, Tokyo 169, Japan (Dr. Yoshihiro Tanimura; telephone: 81-3-5332-7165; fax: 81-3-3364-7104); (8) New Zealand: Institute of Geological and Nuclear Sciences, Ltd., 3rd Floor, State Insurance Building, Andrews Avenue, P.O. Box 30368, Lower Hutt, New Zealand (Dr. C. Percy Strong; telephone: 64-4-570-4808; fax: 64-4-569-5016; e-mail: p.strong@gns.cri.nz); (9) Subcenter: University of Nebraska, Department of Geology, Lincoln, NE 68588-0340 (Dr. David Watkins; telephone: 402-472-2648; fax: 402-472-4917; e-mail: dwatkins@unlinfo.unl.edu); (10) Subcenter Diatom Collection: California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118-4599 (Dr. Patrick Kociolek; telephone: 415-750-7277; fax: 415-750-7346; e-mail: pkociolek@cas.calacademy.org).

Further details concerning the micropaleontological reference centers are reported periodically in the *JOIDES Journal*.

4. Distribution of Samples for Educational Purposes

Samples may be available in limited quantities to college-level educators for teaching purposes. Interested educators should request application forms from the Curator, Ocean Drilling Program, 1000 Discovery Drive, College Station, TX 77845-9547, U.S.A. Requestors are required to specify preferred sample size and location, to make a very clear statement of the nature of the course work in which the samples will be used, to explain how the samples will be prepared and how they will be used in the classroom, to explain in detail why similar materials derived from outcrops or dredge hauls cannot be used (it is NOT acceptable to argue that it requires less effort for the requestor to obtain samples from ODP than to assemble them from other sources), and to certify that funds are available to prepare the materials for classroom use. In general, only samples of materials that are abundant in the collection and that are in little demand for research purposes should be requested for educational purposes. The Curator will not approve requests for materials that are limited in supply or for which demand (real or potential) is great, including most paleontological materials.

5. Distribution of Data

The Deep Sea Drilling Project and the Ocean Drilling Program have routinely captured much of the data generated on board ship and published in Program reports. Additionally, data supplied by investigators who have received samples are incorporated into the databases, so data sets that are larger than can be published are available to investigators. Magnetic, down-hole-logging, seismic-reflection, bathymetric, and other data collected by the drilling vessel become available for distribution to investigators at the same time as core samples.

Data gathered on ODP cruises are subject to the same distribution policies as samples. Investigators who request cruise data during a cruise or during the first 12 months thereafter must meet the same publishing obligations as for samples.

Survey data (seismic, magnetic, and 3.5 kHz) is an exception to the policy, as it will be provided to the ODP Site Survey Data bank as soon as possible after the cruise. The Data Bank will ensure that their customers honor the 12-month moratorium.

Requests for ODP and DSDP data should be addressed to the Data Librarian, Ocean Drilling Program, 1000 Discovery Drive, College Station, TX 77845-9547, U.S.A., fax: 409-845-4857; e-mail: database@odp.tamu.edu.

Many varieties of DSDP data are included in ODP databases. Information on sources of DSDP data is available from the ODP Data Librarian.

A charge will be made to recover material expenses greater than \$25.00 incurred in filling individual requests. If required, estimates of charges can be furnished before the work is performed.

6. Examples of Information to be Supplied by Researchers

The following represents excerpts from previously submitted sample-request forms. These should serve as examples for researchers to follow in completing their sample requests. For more information about completing the sample-request forms, please contact the ODP Curator (e-mail: curator@odp.tamu.edu).

Example A:

3. Purpose(s) of request: Please summarize the nature of the proposed research concisely in 5–7 lines. (This summary will be included in various official reports.) Provide a detailed description of the proposed research, including techniques of sample preparation and analysis, roles of individual investigators, etc., on an attached sheet. The detailed description of the project will be employed in reviewing the sample request and may be copied to other shipboard scientists.

The purpose of this request is to obtain samples of K/T impact deposits and volcanic tephra falls from the Caribbean Sea. Samples will be examined to determine the grain size, lithology, and mechanism of deposition. As a pilot study, samples are requested from each K/T boundary recovered during the leg and each of the macroscopic tephra layers. Grain size will be determined by wet sieving/Elzone counting, lithology by a combination of modal counting and electron microprobe analysis of glassy fragments, and particle morphology by automated image analysis. Results of the study should provide insights into the mechanisms of impact debris deposition and influx of volcanic ash from explosive eruptions in Central America.

5. Please describe the proposed core sampling program in sufficient detail so that those who carry it on board ship will understand your needs.

Samples are of K/T boundary impact deposits and volcanic ash layers. For units less than 5 cm in thickness, a single sample of 5 cm³ is requested from near the base of the unit. For units greater than 5 cm in thickness, samples of 10 cm³ are requested from the base, middle, and top of the unit. It is anticipated that the total number of samples will be less than 100.

Shipboard samples are limited to those people in support of papers for the *Proceedings*; other samples may be taken when 1 year has passed. Specify any other information that will be helpful in conducting your sampling program. Be aware that if the number of samples which you are requesting is large, sampling for you is likely to be deferred until the cores reach the repository (4 to 6 months following the cruise), so it is to your advantage to keep the total number of samples small.

Sample Program: Number of samples 3 per [] core
pilot study[x] [] section
follow-up [x] [] hole

Total number of samples you can analyze within 1 year: 100
Total number of samples or lithological units to be sampled on the ship: *K/T boundary impact deposits and volcanic ashes*
Sample Size (cubic centimeter): 5–10 cc

6. Please describe any **specialized** sampling or processing techniques that you plan to use. List any specialized supplies or equipment that you want to use during the cruise. Will you bring these items with you, or do you think they will be available from ODP?

Sampling of K/T boundary sequences should be undertaken with non-metallic instruments to avoid platinum group contamination.

Example B:

3. Purpose(s) of request: Please summarize the nature of the proposed research concisely in 5–7 lines. (This summary will be included in various official reports.) Provide a detailed description of the proposed research, including techniques, of sample preparation and analysis, roles of individual investigators, etc., on an attached sheet. The detailed description of the project will be employed in reviewing the sample request and may be copied to other shipboard scientists.

I propose to document paleoecological changes on the Cretaceous seafloor using variations in abundance of inoceramid remains as primary data. Related studies have provided global constraints on changes in benthic conditions in bathyal settings (e.g., MacLeod et al., in press). In conjunction with sedimentological (MacLeod and Orr, 1993) and geochemical data (e.g., Barrera, 1994; MacLeod and Huber, in review), these studies have led to an hypothesis regarding changes in Late Cretaceous deep ocean circulation. The hypothesis hinges on changes in tropical oceans; the samples requested will provide data for this critical, under-sampled, paleogeographic region.

4. What specific cruise-related research do you plan to accomplish? A specific manuscript title is to be agreed upon by you and the Co-Chiefs before the end of the cruise. Investigators who receive samples on board the ship during the first year post cruise are obligated to produce a publishable manuscript for the ODP *Scientific Results*. Note: Chemists, please provide an explicit list of each chemical analysis that you plan to accomplish shipboard.

I plan to document stratigraphic distribution and numeric abundance of inoceramid remains in Late Cretaceous sediments.

5. Please describe the proposed core sampling program in sufficient detail so that those who carry it on board ship will understand your needs.

To be most effective samples should provide even and complete temporal coverage of the intervals sampled. Appropriate sampling density is ~20 samples/substage; based on estimated sediment accumulation rates in the Prospectus, 3 samples/core would provide desired coverage. Samples should come from intervals of apparent pelagic or hemipelagic deposition. Samples clearly affected by significant reworking (either by bottom or turbidity currents) should be avoided. A sample volume of 5 cm³ is adequate for the proposed research.

Shipboard samples are limited to those people in support of papers for the *Proceedings*; other samples may be taken when 1 year has passed. Specify any other information that will be helpful in conducting your sampling program. Be aware that if the number of samples which you are requesting is large, sampling for you is likely to be deferred until the cores reach the repository (4 to 6 months following the cruise), so it is to your advantage to keep the total number of samples small.

Sample Program: Number of samples 3 per [x] core
pilot study[] [] section
follow-up[] [] hole

Total number of samples you can analyze within 1 year: 250
Total number of samples or lithological units to be sampled on the ship: *pelagic/hemipelagic units*
Sample Size (cubic centimeter): 5

Example C:

3. Purpose(s) of request: Please summarize the nature of the proposed research concisely in 5–7 lines. (This summary will be included in various official reports.) Provide a detailed description of the proposed research, including techniques, of sample preparation and analysis, roles of individual investigators, etc., on an attached sheet. The detailed description of the project will be employed in reviewing the sample request and may be copied to other shipboard scientists.

We plan to investigate the history of the deep water circulation and chemistry in the Caribbean Sea recorded by (1) planktonic and benthic $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ isotope value sand (2) carbonate dissolution

indices. We want to focus on the late Miocene to Pliocene time interval (8 to 2 Ma) in high resolution (i.e., 10-cm sample intervals (\cong 5000 ka) to study the relationship between the closing of the Panama Isthmus and Atlantic paleoceanography and the onset of the Northern Hemisphere glaciation. For this purpose the results of the Caribbean Sea will be compared to studies of the equatorial Atlantic (Leg 108, Leg 154) and the equatorial Pacific (Leg 130, Leg 138).

4. What specific cruise-related research do you plan to accomplish? A specific manuscript title is to be agreed upon by you and the Co-Chiefs before the end of the cruise. Investigators who receive samples on board the ship during the first year post cruise are obligated to produce a publishable manuscript for the ODP *Scientific Results*. Note: Chemists, please provide an explicit list of each chemical analysis that you plan to accomplish shipboard.

The Late Miocene to Pliocene Closure of the Panama Isthmus: Implication for Atlantic Deep Water Circulation and the Onset of Northern Hemisphere Glaciation.

5. Please describe the proposed core sampling program in sufficient detail so that those who carry it on board ship will understand your needs.

For the high-resolution studies, we intend to take about 7 samples/section (20-cm interval) with sample size of 10 cm in the proposed

Site S-5 (Columbia Basin). The depth range of sampling for the proposed time interval between 8 and 2 Ma depends on detailed bio- and paleomagnetic stratigraphy, which is usually available at the time of sampling aboard the JOIDES Resolution. For high-resolution purposes, a sample overlap and sharing with [Leg participant/researcher's name and affiliation] is planned.

Shipboard samples are limited to those people in support of papers for the *Proceedings*; other samples may be taken when 1 year has passed. Specify any other information that will be helpful in conducting your sampling program. Be aware that if the number of samples which you are requesting is large, sampling for you is likely to be deferred until the cores reach the repository. (4 to 6 months following the cruise), so it is to your advantage to keep the total number of samples small.

Sample Program: Number of samples 7 per ☐ core
pilot study ☐ ☐ section
follow-up ☐ ☐ hole

Total number of samples you can analyze within 1 year: 1000
Total number of samples or lithological units to be sampled on the ship: *KT boundary impact deposits and volcanic ashes*
Sample Size (cubic centimeter): 10 cc