Detailed Response to Recommendations
November 3, 2010

Arctic Sciences Committee of Visitors

ARC COV Recommendation 1:
To proactively reduce dwell time … a) process the obvious declines as soon as possible after panels; simply processing the obvious declines two weeks earlier would result in ~60% of proposals being cleared within six months; b) for the period 2009-2012, track these dwell time metrics at the end of each specific solicitation to evaluate whether the issue is being adequately dealt with; and c) consider whether moving back to 2 target deadlines per year instead of 1 would significantly affect dwell time without other negative impacts.

OPP Response: The earlier drift toward increasing dwell times noted by the COV has now been reversed. In 2009 the average time for a decision was 9.2 months, with 52 % taking longer than 9 months. In 2010 the average dwell time was reduced by more than two months to 7.2 with 10 % requiring more 9 months. These dwell times reflect the information in the EIS database which measures the dwell between proposal submission and Division Director concurrence on the recommendation. In the Arctic Division it is standard practice to notify the proposer of a pending recommendation quickly after a recommendation has been developed, which usually occurs several weeks before the Division Director concurrence. The Division Director will continue to monitor dwell time metrics as part of a continuous improvement effort.

ARC COV Recommendation 2:
Consider evaluating the RSL program on a longer timeframe (e.g., 5-6 years) than the standard three year window used for COV reviews of science programs. Such a short, recent window for review fails to capture much of the work of the logistics program for individual projects and hampers adequate review.

OPP Response: The Division Director will investigate this possibility in the context of overall NSF policy requiring more frequent reviews. One underlying issue is the relevance of the standard COV questions to the RSL program. Three additional questions were added to the RSL COV template to explore the performance of the RSL program, but they were prepared only months before the COV itself and thus the data to fully answer the questions were not fully available. We will work with the Advisory Committee over the coming year to develop the RSL-related questions for the next review and will then collect data that will help address performance.

ARC COV Recommendation 3:
Make the bulk of the content in the Review Analysis available to PIs (with reviewers' names excised). These documents are much richer with respect to the decision making process and review weighting components that are often missing from the panel summary. Providing Review Analysis or similar document to PI in case of declines will help avoid the common practice of misinterpreting the overall significance or weight of individual review and panel comments in the final decision. Having more complete analysis would allow resubmission to be targeted more effectively where the most benefit to the science could result most easily.

The COVs concern with this recommendation is that POs might feel constrained in preparing Review Analyses for public consumption, and their quality and informativeness would correspondingly decline. This would defeat the purpose of the recommendation. The COV review panel also does not want to increase the already heavy workload of the POs. An alternative is to formally encourage POs to rely heavily on their Review Analyses in communicating the results of panel deliberations to PIs (e.g., by "cutting & pasting" sections of the Review Analysis into the email notifications).

OPP Response: The Division Director has discussed this recommendation in detail with Program Officers, and appreciates the underlying desire of the proposer to know how the reviews, which often vary from review to review, led to a particular funding/decline decision. We agree that the letter advising the proposer of the decision should accomplish that goal.

We note that the COV reviewed proposals from multiple competitions and it may not have been clear when proposals were being handled according to the Arctic Division's standard or when a different standard was being applied, such as those used in cross-Foundation competitions. The Division will ensure that for 2011 and afterwards, the correspondence in the electronic jacket will contain the post-decision correspondence and that it will be clearly labeled. We suggest that the next COV review the Review Analyses and this correspondence to see if the Division has met the goal that proposers are clearly informed about the critical factors that went into decisions.

ARC COV Recommendation 4:
Whenever possible, obtain at least three ad hoc reviews in addition to a panel evaluation, thereby minimizing the use of panel only reviews. The COV's opinion was that ad hoc reviews in combination with panel review led to the best science being funded and to the best and clearest documentation of those funding decisions.

OPP Response: For its own competitions, the Division uses ad hoc reviews, typically soliciting six or more and receiving at least three, and panel. However, in order to get a more thorough review in panel of those proposals that fared relatively well in the ad hoc review, the Division is considering taking to panel only those proposals that, in the view of the POs, stand a chance of award. The tendency of the POs will be to be inclusive. For NSF-wide or other cross-divisional competitions, the Agency-wide management team may decide to create a management plan that only calls for panel review. This is the predominant approach used for large multi-Directorate competitions now at NSF.

ARC COV Recommendation 5:
The program should assure that the postdoctoral funding competition is regularized, and that the Program Officers effectively use this mechanism to facilitate the transition of underrepresented investigators from the status of trainees to senior investigators.

OPP Response: OPP agrees and plans to continue support for the Polar Post Doc program. On the issue of using the program to attract and develop researchers from underrepresented communities in science, we note anecdotally that, as Dr. Kerttula did at the spring Advisory Committee meeting, the relatively low numbers of minority PhD graduates are quite often hired directly into tenure track

positions rather than taking post-doctoral positions. That said, we agree that greater efforts can be made by OPP to make the post-doctoral opportunities known outside the current Polar-focus communication paths, e.g., SACNAS, AFN. This summer OPP hosted two Native American interns, one undergraduate and one graduate, in part to begin to better communicate with underrepresented communities.

Antarctic Sciences Committee of Visitors

ANT COV Recommendation 1:
Evaluate current program director workloads and add staff as justified.

OPP Response: OPP was pleased to see that the COVs universally commended OPP staff for the work they accomplished and the quality of the work. We certainly agree with the COVs' concerns over workload. The Agency is addressing this issue by collecting workload data and developing methods to forecast and justify requests for additional resources and we hope there will be relief soon.

ANT COV Recommendation 2:
Ensure data sets from past, current and future ANT projects are in the public domain and are readily accessible.

OPP Response: OPP, with the assistance of its Advisory Committee, has long had strong data policies. We continue to require compliance with NSF and OPP data policies and, for Antarctic projects, compliance with Antarctic Treaty data requirements. These policies are currently being revised to require proposers to include data management plans in their proposals. We expect this evolution in the policy will improve the quality and accessibility of NSF-funded data sets.

ANT COV Recommendation 3:
In collaboration with other mission-oriented Federal agencies, ensure key long-term observations in Antarctica are continued and are adequately supported.

OPP Response: OPP recognizes the value of long-term data sets. The need for continued support is carefully and periodically reviewed within the context of the affected research programs and research priorities so as to be sure that the continued investment is serving the best interests of the research community. When continued support, based on external merit review, is not indicated, OPP engages with the mission agencies regarding the possibility of having them take responsibility for the function. This was done with the UV monitoring activity following completion of NSF-supported observations over a complete solar cycle. NOAA indicated an interest in taking over observations at South Pole and McMurdo and a transition plan has been developed. The instrument in Ushuaia has been donated to Argentina's CONICET which has agreed to continue making UV observations widely available. NASA and the Smithsonian take responsibility for meteorites following collection with NSF sponsorship, and until recently USGS has been a partner in the ice core lab.

ANT COV Recommendation 4:

Implement rigorous strategic planning processes to set short-, mid-, and long-term objectives for infrastructure and science support in Antarctica.

OPP Response: OPP agrees, and is working to improve its strategic planning processes on several fronts. AIL and ANT held a joint retreat in which improvements to our process for planning and allocation of logistical support were discussed. These discussions led directly to changes that improved our planning process. For example, in parallel with budget negotiations we now routinely document a summary of logistical support that is explicitly reviewed and approved by the PI, the Antarctic support contractor, and the AIL and ANT Program Officers. This removes ambiguity in support that had existed in past practices and provides a critical baseline for project implementation. Improving our processes for short-term allocation of resources is a critical step needed to set the stage for discussions of longer range, and strategic, resource planning. The Advisory Committee is assisting OPP with developing an overarching strategy. Finally, the National Research Council will shortly convene a panel to identify science drivers for Antarctic research that are expected to be important over the next 20 years, setting the stage for a Blue Ribbon Panel to determine the logistics and infrastructure needed to support that science.

ANT COV Recommendation 5:
Aggressively explore and exploit international collaborations to expand research opportunities for U.S. investigators in Antarctica.

OPP Response: OPP agrees. The Office has a long history of working with international partners to facilitate research opportunities that would otherwise be very difficult or impossible. Our policy is to share costs on a quid pro quo basis with other nations. Considerable efforts on our part led to International Polar Year collaborations with scientists in 27 other countries. Over the longer term, the Cape Roberts and ANDRILL geological drilling projects conducted jointly with New Zealand, Germany, Italy, and the United Kingdom have recovered important paleoclimate records over the last 15 years. Other examples include a partnership with France to cooperate in ice core drill technology and the ongoing partnership for the Concordiasi project. Our most recent agreement with the Ministry for Higher Education and Research of the French Republic provides opportunities for French and U.S. scientists to collaborate on polar terrestrial ecological research. While these collaborations are important opportunities for U.S. scientists, it is important to balance these expanded opportunities for U.S. scientists against the demands these collaborations may place on U.S. resources.

Antarctic Infrastructure & Logistics Committee of Visitors

AIL COV Recommendation 1:
OPP should consider support for community workshops on the development of access capabilities to new remote field sites of great scientific interest.

AIL COV Recommendation 2:
OPP long-term logistics planning should allow for recurring logistical challenges, for example work in remote areas requiring services such as ice coring, ship-based helicopter operations, and

helicopter support in remote or mountainous areas. The expectation of such programs should be built into the planning for resource allocation.

OPP Response: OPP agrees with the necessity for long-term planning to meet logistical challenges. Workshops sponsored by OPP in the past have been particularly useful for planning purposes. For instance, workshops led to proposals that justified an investment in a helicopter-supported field camp that is being implemented this year to benefit many single investigator/small group projects, and a workshop on traversing earlier this year is likely to lead to new opportunities for research. Ongoing discussions surrounding the IcePod MRI project should also expand science opportunities while making shorter decision times possible. Nevertheless, we recognize that there are further improvements needed to shorten the time from development of scientific ideas to execution of the field work. AIL/ANT will jointly explore options for addressing these needs. The upcoming USAP Review, coupled with the strategic planning effort, will identify scientific objectives that will inform the infrastructure and logistics needed to support future scientific drivers while balancing those objectives with the available resources.

AIL COV Recommendation 3:
OPP should continue to proactively explore collaborations with international Antarctic Program operators that may provide greater access to remote areas of the Southern Ocean and Antarctic margin and interior for U.S. scientists.

OPP Response: OPP agrees with the recommendation. International partnerships, or collaborations between national Antarctic programs to assist one another have facilitated many science projects in the past (ANDRILL, CONCORDIASI, LARISSA, AGAP, PoleNet, CTAM Helicopter Camp, etc.) that would have been difficult or impossible for a single nation to undertake. Of particular note is the formal agreement OPP developed with the Swedish Polar Research Secretariat that made *Oden* available to U.S. scientists in the Southern Ocean. We will continue to develop international partnerships with other national Antarctic program operators for greater access to remote regions of Antarctica and the Southern Ocean. We would note that our efforts to encourage and facilitate international partnerships helped result in collaborations with scientists in 27 other countries during the 2007-2009 International Polar Year.

AIL COV Recommendation 4:
OPP should consider improvements in coordination and reporting of marine projects support and integration with the rest of the OPP program, possibly via restructuring of staff responsibilities. There is also a need for OPP and the Advisory Committee to review and track progress toward safeguarding ship support for polar marine projects, and to evaluate the current organizational structure of the program and consider strategic options to better meet future requirements. For example, such an evaluation might examine the feasibility of redirection of project-specific science support funding into ANT in order that ANT may more closely manage its science support requirements.

OPP Response: OPP agrees with the need to ensure mid- and long-term access to ships for polar marine research. The Antarctic support contractor is preparing to issue a Request for Proposal for a vessel to replace the *Nathaniel B. Palmer* when her current charter ends in 2012. We anticipate that a follow-on charter would be in effect for 10 years. OPP is also beginning planning for a Polar

Research Vessel, working with the UNOLS Project Office to solicit community input on science drivers and requirements. This material will be used by the National Research Council panel and a Blue Ribbon Panel considering, respectively, Antarctic science drivers and logistics requirements for the next two decades.

AIL COV Recommendation 5:
OPP should examine its staffing with respect to overall responsibilities. Some funded positions remain open even in the face of massive workloads for the present staff, for example the Antarctic Research Integration and Support position for long-range planning within the science side of OPP. Marine projects support staffing is another area of COV concern, especially given the challenges of upcoming ship replacement/contract renewal, and COV observations that marine project support is not documented or supported via planning by AIL at the same level as are activities at McMurdo, South Pole, and Palmer Station.

OPP Response: Staffing issues continue to present challenges. OPP has advertised twice for candidates to fill the Antarctic Research Integration and Support position and is now re-examining the issue. Meanwhile the AIL and ANT Division Directors have worked together to better address planning for support of Southern Ocean research, as indicated in our response to Recommendation 4.