

## Response to Issues Raised by COV

### 1. Section I.1: "Are the review methods appropriate?"

*Comment: In general the use of review methods is deemed appropriate. The COV compliments the section, in particular, on the rigor and timeliness of the reviews that were conducted for the NCAR Wyoming Supercomputer Center (NWSC). For observing facilities, such as CHILL, the merits of a site visit as part of the proposal review process should be considered.*

#### **Response:**

#### FY 2012:

In general we agree. The decision to conduct a site visit is made by the cognizant Program Officer based on many factors including the maturity of the facility and its prior performance. It should also be noted that the Program Officer does make occasional visits to the facility both at its home base and in the field. No site visit was made to the CSU-CHILL before the current cooperative agreement, but others have been conducted as part of the review process of prior cooperative agreements. The entire suite of radar facilities is undergoing an extensive evaluation by NFS. We would anticipate that site visits will be part of that process.

### 2. Section I.5: "Does the documentation in the jacket provide the rationale for the award/decline decision?"

*Comment: While most jacket documentation is clear, the jacket documentation for the A10 project, including a decline of one relevant proposal, was somewhat confusing. Based upon discussions with the program officer, the COV notes that the A10 proposal began as a response to the mid-size infrastructure competition in 2007-8. This competition included preproposals and invited full proposals, with an ultimate success rate of about 15%. Moreover, the A10 review process was protracted due to issues regarding availability of funds and the need to obtain interagency agreements, and, therefore, the consideration of this proposal extended over the time periods considered by two COVs. The current COV deems this process appropriate.*

#### **Response:**

#### FY 2012:

We agree that the documentation could have been clearer. Several factors contributed to the complexity of this action including: the Section and specifically the Section Head initially having a conflict with the proposal. This resulted in the review of the proposal being handled by a Program Officer outside of AGS. The evaluation was stretched over several years while negotiations were conducted with DoD to see if an aircraft could be obtained. It is also important to note that

this aircraft is not an NSF owned aircraft, but rather DOD owned. The negotiations for acquisition and use of the A-10 occurred between the President of the Naval Post Graduate School and the Office of the Secretary of the Air Force. For lengthy and complex review procedures, the Section will endeavor in the future to incorporate a timeline and overview of the review process in the review analysis.

**3. Section I.7: “Additional comments on the quality and effectiveness of the program’s use of merit review process”**

*Comment: For the NWSC proposal, there is clear documentation of actions the PIs will take in response to concerns raised in reviews. In other cases (CHILL and A10), while we understand from program officers that the PIs were responsive to the reviews, this is not clearly documented.*

**Response:**

FY 2012: The Section will endeavor to be more explicit in the documentation. It should be noted that issues raised in the reviews of both the CSU-CHILL and the A-10 were considered in the development of the cooperative agreements and subsequent actions by the Section. For example, the reviewer suggestion of a community-wide workshop on issues related to the optimal suite of meteorological research radars will be carried out by NFS in the Fall of 2012. During the review process of the CSU-CHILL proposal, however, details of the workshop were not yet developed, so little could be said at that time.

**4. Section II.1: “Did the program make use of reviewers having appropriate expertise and/or qualifications?”**

*Comment: In general the COV believes the program managers do an excellent job in obtaining reviews from a technically appropriate and diverse pool of reviewers. In the case of SOARS, while reviews were sought from a broad community, the COV notes that the reviews obtained were all from people closely associated with geosciences education and diversity. While the COV believe broader reviewer input for this program would be useful, it appreciates the difficulty of obtaining such input.*

**Response:**

FY 2012: The program will continue to seek and obtain reviewers from a broad and diverse community. The program manager agrees with the COV that the reviews obtained were those associated with geosciences education and diversity. In the future, efforts will be made to obtain reviewers outside the geosciences. This will be a challenge since reviewers like to be familiar with the subject and its relation to their discipline.

**5. Section II.2: “Did the program recognize and resolve conflicts of interest when appropriate?”**

*Comment: (1) While not formally a conflict of interest, the COV notes that a potential future user of an observing facility could have a vested interest in the outcome of the review and recommends that the section be alert to this as a potential source of bias.*

*(2) More generally, the COV feels that the standard NSF jacket documentation does not allow us to address this question fully.*

**Response:**

FY 2012:

(1) We are aware of the potential bias of having users of facilities as reviewers. However, we deem it important to have the perspective of former and potential users as part, not all, of the review process. The facilities are a service to the community and it is important for NSF to obtain the viewpoint of those who receive the service as part of the review.

(2) I discussed this issue with the COV Chair. The point here is that the COV has no information as to who might have been rejected as a reviewer (i.e. never even asked) due to a COI. Adding such documentation would have to be a Foundation wide requirement and it would be open-ended and, in my opinion, not very feasible and the value gained would be small compared to the additional burden.

**6. Section III.1: “Management of the program.”**

*Comment:*

*(1) NFS management of NCAR and the observing facilities is greatly enhanced by the effective engagement of science discipline program officers, especially those in the Atmospheric Section (AS). The involvement of these programs is especially important for NCAR's annual planning and budgeting processes. The COV suggests that UNIDATA and SOARS would benefit from similar involvement.*

**Response (1):**

FY 2012:

It should be noted that the funding instrument for support of NCAR is a cooperative agreement between NSF and UCAR. By their nature, cooperative agreements require greater involvement of NSF in the direction of the project. The NSF role in the management of NCAR, therefore, is more substantial than with a grant and, as noted by the COV, the science Program Officers play an

important role in that effort. While previous awards to UNIDATA were via cooperative agreements, the current funding instruments for both UNIDATA and the SOARS are grants. While NFS has oversight of these efforts, there is no significant formal involvement of NSF Program Officers in management of UNIDATA and SOARS. Of course, the cognizant Program Officer is engaged with both projects and attends meetings that have strategic implications (e.g. for UNIDATA the User's and Policy Committees). The cognizant Program Officer informs other AGS program directors about meetings and issues that might be relevant to their research programs or for items for which they might have specific expertise.

*Comment:*

*(2) The review of UCAR/NCAR was a key management activity in the period covered by this COV. The COV considers the site-visit format for these reviews appropriate and applauds the Section on its selection of members of the site-visit team (SVT). While the COV agrees that NCAR lab directors should continue to provide responses to SVT reports, we suggest that the NCAR director also provide responses.*

**Response (2):**

FY 2012:

While the Laboratory Directors provided the response, all of these were cleared by NCAR management and, therefore, NCAR management was involved in formulating the responses. Also, NCAR management was involved in the responses to the UCAR Management review, which deals directly with overarching Center issues. It should be noted that responses and actions resulting from the reviews are an ongoing process and most actions that require changes to the center are done under the direct guidance of the NCAR Director.

*Comment:*

*(3) Given that the NCAR laboratories provide services to the community, the COV suggests that user surveys should be a routine part of NFS reviews of NCAR.*

**Response (3):**

FY 2012:

NCAR currently conducts several types of user surveys that range from EOL surveying participants after each field campaign to a UCAR survey on UCAR programs, including NCAR, that is executed about once every four years. NFS is generally informed of these surveys and the results. The existing surveys were not used uniformly in the recently completed review of UCAR/NCAR and we will endeavor to make sure they are better utilized during the next review. It

should be noted that some surveys are used by AGS staff on an ongoing basis. NFS staff and relevant program officers fully participate in the field campaign debriefs and these debriefs are used as a tool for continual improvements.

*Comment:*

*(4) The COV recognizes the unavoidable tension at NCAR between the competing demands of excellent scientific research and service to the community in the provision and maintenance of observing facilities and community models. We believe the review process should explicitly address the balance between these functions, in terms of the national role of NCAR and the morale of NCAR scientists.*

**Response (4):**

FY 2012:

The issue of allocation of resources across all aspects of NCAR was a topic of the UCAR management review. This balance is also addressed each year during the annual budget discussions between AGS and UCAR/NCAR management. We are aware that if facilities are protected to the extent that the science programs suffer, the morale of the scientific staff will suffer. This is a difficult issue and one that we take very seriously.

*Comment:*

*(5) The SVT reports on NCAR laboratories provide generally favorable reviews of their activities. In some cases, however, the SVT and the program officer noted potentially serious issues. In such cases, it is not clear to the COV what the follow-up activities have been; these should be considered by our successors. Where such issues arise, as per the comment above, it seems reasonable that the NCAR director should be involved.*

**Response (5):**

FY 2012:

Follow-up actions to the SVTs are an ongoing process. Some reactions were almost immediate (e.g. scheduling of workshops on issues of climate and chemistry instrumentation needs, both of which were recently conducted), while others are still in progress. About one year after the reviews (just after the COV was completed), NFS asked NCAR for an update on the status of issues raised in the review. NFS recently received this update and is pursuing resolving any outstanding issues. As noted above, the NCAR Director approves all responses and updates and, as appropriate, he is involved in resolution of outstanding issues.

**7. Section III.2: “Responsiveness of the program to emerging research and education opportunities”**

*Comment:*

*The COV considers community workshops to be useful tools for setting future directions for the suite of observing facilities. Because such workshops often have significant and lasting outcomes, it is important that the attendees represent a broad cross-section of stakeholders. For example, the upcoming (fall 2012) NSF radar-facilities workshop will influence critical decisions regarding the future of NSF radars. It is, therefore, important that the attendees go beyond the direct users of these facilities to include scientists taking diverse approaches, such as modeling and theory, and working in diverse science areas (e.g. climate and hydrology).*

**Response:**

FY 2012:

The workshop will be open to any interested attendees and it has been widely advertised. We agree that diversity (in all aspects) is important and we will endeavor to accomplish that goal both with the attendees as well as with speakers, break-out chairs and reporters.

**8. Section III.4: “Responsiveness of program to previous COV comments and recommendations”**

*Comment:*

*At the same time, the previous COV suggested that observing facility cooperative agreements be regularly competed. While the complexities of conducting such competitions are acknowledged, this COV believes there may be virtue in holding open competitions for meeting some of the community’s observational needs. Whether or not such competitions are useful or appropriate must necessarily be decided on a case-by-case basis.*

**Response:**

FY 2012:

We agree that the appropriateness of any competition must be on a case-by-case basis. For example, some of the AGS national facilities are not owned by NSF (e.g. Wyoming King Air, CIRPAS Twin Otter and A-10), so if AGS wishes to retain those specific facilities, then we must deal with that specific organization. However, as the award to each facility nears expiration, NFS evaluates not only the continuing need for such a facility as a national resource, but also the issue of whether the incumbent facility is the best or only facility that could satisfy community needs. NFS typically relies on community advice to help guide such

decisions. For example, the radar community workshop to be held in the Fall of 2012, will influence the development of plans by AGS to satisfy community research radar needs in the near and intermediate future and will likely inform decisions about whether or not to compete expiring cooperative agreements for radar facilities.

**9. Section IV: "Portfolio Review"**

*Comment:*

*As the NFS portfolio comprises NCAR, two other UCAR programs, and a suite of observing facilities, many of the above questions are not applicable. In regard to the geographical distribution of activities, the strength and success of NCAR leads to a natural concentration of atmospheric sciences activity along the Front Range. In recompeting key facilities, NFS should be mindful of community concerns that atmospheric science research resources are over-concentrated in this region.*

**Response:**

FY 2012:

While we understand the concern, as noted above, AGS is not the owner of some of these facilities and, therefore, cannot move them at will. We also believe it is more important that the locations of the deployments of the facilities be geographically (and, therefore, scientifically) diverse, rather than their home bases be geographically diverse. Our stance would be that geographical diversity, while being a consideration, would be of secondary importance compared to how well matched the facility is to community needs and as to the likelihood the facility manager will be successful in running a community facility.

**10. Other Topics: Question 4: "Please provide comments on any other issues the COV feels are relevant."**

*Comment:*

*(1) The COV notes that the DOW sets an apparent precedent, in investing a national facility in a private entity. The COV encourages NFS to give this careful consideration*

**Response:**

FY 2012:

We agree with the COV's caution. When the award was first made NSF was concerned as to whether a small, private, non-profit had both the financial stability and resources to perform as a national facility. The awardee institution underwent extra scrutiny by the Division of Grants and Agreements and its performance was monitored closely by the cognizant Program Officer. Overall,

to date we believe that the performance of the awardee has been more than adequate. We agree, however, that awards of this sort to small, private companies warrant special care and oversight.

**Comment:**

*(2) Much of the NFS portfolio comprises activities that serve broad user communities. Regularly conducted surveys of these communities could prove valuable for reviewing and managing these facilities and activities.*

**Response:**

FY 2012:

We asked NCAR/UCAR to provide a brief description of all periodic community surveys that they perform (attached). These range from post deployment surveys for all observational facilities (including non-NCAR) to once every four year community surveys by UCAR. All of these are used by NCAR and the other facilities for their and NFS management purposes. Some user surveys also were incorporated into the NCAR Laboratory reviews, but in an uneven manner. NFS will investigate incorporating these surveys into the NCAR/UCAR review process in a more formal and consistent way.

Attachment