

American Geophysical Union

Washington, D.C.

Financial and Compliance Audit of

Indirect Costs

For the Year Ended

December 31, 2002

And

Incurred Costs on 27 Awards

From October 1, 1996

to December 31, 2003

**National Science Foundation
Office of the Inspector General**

September 12, 2005

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ACRONYMS

AGU	American Geophysical Union
FCTR	Federal Cash Transactions Report
FY	Fiscal Year
G/L	General Ledger
HR	Human Resources
MOU	Memorandum of Understanding
NSF	National Science Foundation
GC-1	NSF's Grant General Conditions
OIG	NSF Office of the Inspector General
OMB	U.S. Office of Management and Budget
START	SysTem for Analysis, Research, and Training

SECTION I

INTRODUCTION

Introduction

Background

The American Geophysical Union (AGU), founded in 1919 by the National Research Council,¹ is a nonprofit scientific organization of more than 41,000 geophysicists from 130 countries, whose activities focus on atmospheric, ocean, solid-Earth, hydrologic, and space sciences. For the one-year period ending December 31, 2002, AGU had \$28.9 million of total expenditures, of which \$1.6 million was funded by Federal grants and contracts. NSF grants represented \$1.5 million, or 95 percent, of these Federal grants and contracts. From October 1, 1996 through December 31, 2003, AGU claimed \$7.6 million on NSF awards of which \$6.1 million was for the SysTem for Analysis, Research and Training (START) program.

Although AGU is legally responsible for management of NSF funds provided to START, the START program receives programmatic guidance from three groups of the International Council of Scientific Unions,² namely the International Geosphere-Biosphere Programme³, the International Human Dimensions Programme on global environmental change, and the World Climate Research Programme. START's mission is to create and support regional networks of scientists and infrastructure in developing areas of the world, especially in Asia and Africa.⁴ According to a Memorandum of Understanding (MOU) between AGU and START, AGU is fiscally responsible for administratively supporting the START program and START's staff members are also AGU employees. All NSF funds in support of the START program were awarded to AGU.

Because NSF provides the predominant amount of Federal funding to AGU, it is the cognizant agency for negotiating and approving AGU's indirect cost rates on behalf of all Federal agencies. The NSF Cost Analysis and Audit Resolution Branch requested the Office of the Inspector General (OIG) conduct an audit of AGU's FY 2002 indirect cost rate proposal to determine the actual rate for that year and to facilitate negotiation of future indirect cost rates. AGU's current indirect cost rate for Federal awards, effective January 1, 2000 until amended, is a predetermined rate of 38.58 percent. However, in its FY 2002 proposal AGU revised its indirect cost methodology, at the suggestion of NSF, resulting in a separate indirect cost rates for each of AGU's three major functions: Publications, Meetings, and Outreach.

¹ The National Academy of Science (NAS) organized the Research Council in 1916 to realize NAS's mission of furthering knowledge and providing advice to the Government by fostering its association with other science and technology organizations.

² The International Council of Scientific Unions, located in Paris France, is a French not-for-profit organization comprised of 130 scientific bodies and unions supported by member dues.

³ NSF OIG previously audited the International Geosphere-Biosphere Programme and reported the results in Audit Report No. 03-2014, dated September 30, 2003.

⁴ In 2003 START received \$5 million of funding, of which NSF provided \$1.6 million (33 percent) through AGU. Other sources of funding included private foundations and foreign governmental organizations, such as the Norwegian Agency for Development Cooperation and the Netherlands Ministry of Foreign Affairs.

Objectives, Scope, and Methodology

We conducted an audit of AGU's FY 2002 indirect cost rate proposal to assist NSF in negotiating future indirect cost rates and in determining whether AGU had a reliable methodology and processes for developing future indirect cost rate proposals. Our audit objectives were to determine whether AGU complied with Federal requirements regarding allowability, allocability, and reasonableness in computing its indirect cost proposal and to evaluate the adequacy of AGU's internal controls to administer, account for, and monitor indirect cost charges to Federal awards. We also reviewed AGU's grants management practices and selected areas of cost on 27 NSF awards covering the period from October 1, 1996 to December 31, 2003, to determine whether AGU had adequate controls to administer, account for, and monitor costs in accordance with Federal cost principles and administrative requirements. Specifically, our audit focused on the areas of participant support, subawards, travel, other direct costs, and cost sharing because these areas were identified as high-risk areas during the survey.

Our audit of the direct costs consisted of reconciling amounts claimed on the Federal Cash Transactions Reports (FCTRs) submitted to NSF with the expenses in AGU's general ledger, reviewing AGU's policies and procedures, interviewing key personnel at AGU and NSF, and testing transactions for allowability under Federal grant requirements. We also reviewed AGU's indirect cost proposal to determine if it complied with Federal and NSF requirements. We were on site from October 1, 2003 to October 17, 2003 and from February 4, 2004 to March 5, 2004.

We conducted the audit in accordance with the Comptroller General's *Government Auditing Standards* and included such tests of accounting records and other auditing procedures that we considered necessary to address the review objectives.

Exit Conference

An exit conference was conducted July 12, 2004. We discussed our adjustments to the indirect cost proposals and the internal control and compliance weaknesses we identified. The following participated in the conference:

For the American Geophysical Union:

[REDACTED]

For the NSF Office of the Inspector General

[REDACTED]

SECTION II

FINDINGS AND RECOMMENDATIONS

SUMMARY OF AUDIT RESULTS

We audited AGU's grants management practices and selected areas of cost on 27 NSF awards covering the period from October 1, 1996 to December 31, 2003. Specifically, our audit focused on the areas of participant support, subawards, travel, other direct costs, and cost sharing. AGU claimed \$7.6 million of direct costs on these awards during this period of time, consisting mainly of salaries, participant support, and subaward costs. We found that AGU needs to improve its management control structures. In particular, AGU charged excess rent, spent participant support funds on other cost areas without NSF approval, did not meet cost-sharing requirements, and claimed costs for amounts greater than reported in its general ledger. As a result of these issues, AGU claimed \$198,548 of unallowable costs. We also noted a significant internal control deficiency. Specifically, AGU inappropriately added accounting functions to the Human Resources department, increasing the risk that payroll error or fraud could occur and not be detected. In addition, we found that AGU did not adequately monitor its subawards, administer travel, manage fixed assets, and provide control of purchases. If AGU does not address these issues, there is increased risk that AGU could claim additional unallowable costs on existing and future NSF awards.

Additionally, at the request of NSF we audited AGU's 2002 proposed indirect cost rates to assist NSF in negotiating future indirect cost rates. Our audit found that AGU correctly computed its indirect cost rates in most respects. However, AGU incorrectly included \$233,757 of unallowable costs in the indirect cost pools and mistakenly excluded \$73,268 of direct costs from the direct cost bases, thus overstating the three proposed indirect cost rates by 0.91 to 1.45 percentage points. No questioned costs resulted from the lower, audit-recommended rates, because AGU had an approved predetermined rate in place, which does not allow for retroactive adjustments.⁵

These issues occurred because AGU's policies and procedures were outdated, not being followed, or otherwise did not ensure NSF grants were managed in compliance with OMB regulations and the terms and conditions of the grants. In addition, AGU staff did not adequately understand the requirements for the administration of Federal and NSF awards. AGU did not place priority on developing and implementing policies and procedures for internal controls or on training its staff in Federal administrative requirements and cost principles and NSF grant conditions.

Summary of Auditee's Response

In response to the draft audit report,⁶ AGU agreed with most of our internal control recommendations; and of the \$203,342 of questioned costs in the draft report, it agreed with \$44,832. However, AGU, disagreed that \$149,441 was excess rent, because on the award

⁵ Because AGU changed its accounting system in FY 2002 to use three different indirect cost rates instead of a single rate, comparisons between the three audit-determined rates and the existing single predetermined rate would not be relevant.

⁶ A copy of AGU's response to the draft audit report is included as Section IV of this report.

where it charged the rental costs,⁷ it limited its indirect costs to five percent of direct costs, and thus overall recovered significantly less than its allowable indirect costs. In addition, AGU disagreed with \$9,070 of the questioned participant support costs because it felt it had NSF permission to spend these funds for other purposes.

Summary of Auditors' Comments

Federal rules do not support AGU's position that it is entitled to the excess rent. We agree that charging fair market value rent plus five percent indirect costs on Award No. GEO-9901551 resulted in less indirect costs overall on this award than the Government would have paid had AGU charged actual rental costs plus its allowable indirect costs. However, applicable cost principles state that an organization can only charge actual rental costs to a related party; and we believe that AGU did charge the rental costs to a related party. Additionally, it was not clear that AGU had NSF's permission to spend all of the questioned participant support costs, because one of the documents AGU cited as evidence was an NSF Program Officer's written approval for a no-cost extension on the applicable award; but the approval did not explicitly permit shifting budgeted participant support costs to other cost categories.

Unallowable Costs on NSF Awards

Non-profit corporations that receive Federal grant funds should only claim costs that are allowable, allocable, and reasonable as defined in OMB Circular A-122 - *Cost Principles for Non-Profit Organizations*, and have financial and administrative systems in place that meet the requirements listed in OMB Circular A-110 - *Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations*. Specifically, OMB Circular A-110 requires that recipients' financial management systems provide for accurate, current, and complete disclosure of each Federally sponsored program and have accounting records supported by source documentation. Organizations that receive NSF funds should also follow NSF's *Grant General Conditions* (GC-1). For example, the GC-1 directs that participant support funds may not be spent on other cost areas without prior approval from NSF.

Overall, we found that AGU properly segregated unallowable costs; however, there were a few instances when AGU claimed award costs that were not allowable as defined in A-122 or were contrary to the requirements of NSF's GC-1. Specifically, AGU:

- Claimed \$149,441 of excessive rent costs;
- Spent participant support funds of \$24,734 on other cost categories without required prior approval from NSF;
- Purchased items valued at \$9,728 for employees' personal use;
- Claimed \$6,372 of costs greater than reported in its general ledger; and

⁷ AGU charged the rental costs on award No. GEO-9901551.

- Did not satisfy any of its cost-sharing commitment of \$9,341 on a closed NSF award, and was at risk of not meeting its cost-sharing commitment of \$14,757 on one open NSF award.

Rental Charges

OMB Circular A-122 states that rental costs under less than arms-length leases are allowable only up to the amount that would be allowed had title to the property vested in the organization paying the rent. The MOU between START and AGU clearly showed that these two entities were related parties. Therefore, any rental costs charged by AGU for START to occupy AGU facilities, should have been limited to the actual costs AGU incurred and paid for this space. However, over a four-year period, AGU charged rent at the same costs per square foot to the START group as to other non-related lessees in the building and this rate was greater than the actual costs per square foot. As a result, we questioned \$149,441 of the total claimed rental costs, consisting of \$142,325 of direct costs and \$7,116 of associated indirect costs. AGU claimed this overcharge on NSF award GEO-9901551.⁸

Participant Support Funds Spent on Other Cost Areas

According to NSF's GC-1, Article 2, grantees are required to obtain prior written approval from responsible NSF program officers to reallocate funds intended for participant or trainee support. Furthermore, several award letters from NSF to AGU explicitly stated AGU could not spend funds provided for participant support on other categories of expense without the prior written approval of the responsible NSF program officer. We reviewed 21 closed awards that included approved budgeted participant support funds totaling \$1,888,491 and found that AGU spent some of these funds on other cost categories without obtaining the required approval from NSF. Specifically, AGU correctly claimed participant support costs of \$742,519 on 14 awards, but we questioned \$ 24,734 on eight NSF awards because participant support funds were spent on other cost categories without approval from NSF. In addition to the questioned direct costs, we questioned \$172 of associated indirect costs.⁹

Additionally, because AGU did not separately track participant support costs as part of its accounting system, it risks spending participant support funds on other cost categories on three open NSF awards without prior NSF approval. Specifically, AGU had over \$200,000 of participant support funds remaining unspent on these awards but only about \$400,000 of total funds remaining to meet the other award requirements. Because AGU incorrectly spent participant support funds on other cost areas on other awards, AGU needs to ensure that it does not spend the participant support funds on other cost categories on the three open awards without NSF's prior approval.¹⁰

⁸ See Appendix A-5, notes 3 and 4 of *Notes to Explain Questioned Costs*. Per the MOU of September 19, 1994 between AGU and START, indirect costs on START awards were capped at five percent (.05* 142,325 =7,116).

⁹ See Appendix A, *Notes to Explain Questioned Costs*, numbers 1 and 4.

¹⁰ See Appendix A, *Notes to Explain Questioned Costs*, number 1.

Goods or Services for Personal Use

OMB Circular A-122 states that only costs of subscriptions to business, professional, and technical periodicals are allowable. In addition, costs of goods or services for the personal use of the organization's employees are unallowable. However, our audit found that AGU claimed costs of general circulation newspapers and magazines, canteen costs, and bottled water directly on NSF award GEO-9901551. As a result, we questioned the total claimed direct costs of \$9,265 and the \$463 of associated indirect costs.¹¹

Claimed Award Amounts Different from General Ledger Amounts

OMB Circular A-110 requires that all costs claimed on Federal awards be supported by adequate documentation. We tested all 27 awards to determine if the claimed amounts to NSF were supported by the recorded amounts in AGU's general ledger and found that AGU claimed \$6,372 more than it recorded on two of the awards. Accordingly, we questioned this reported difference.¹²

Cost-Sharing Procedures

OMB Circular A-110 states that cost sharing must be verifiable from the recipient's records. This requirement is also included in NSF's GC-1. AGU had total cost-sharing requirements of \$230,541 on five NSF awards. However, with one exception,¹³ AGU's accounting system did not track cost sharing by award, nor did AGU have any formal policy or procedure in place to ensure cost-sharing requirements were met. As a result, AGU did not provide any of the required \$9,341 of cost sharing on one closed NSF award (DUE-9612954), and has not yet contributed any of the required \$14,757 of cost sharing on open NSF award (EAR-0105317).¹⁴ Because AGU did not meet its cost-sharing requirement on the closed award, we are questioning \$8,101, which represents the impact to NSF for paying more than its expected share of project costs on the award.¹⁵ In addition, because AGU does not keep track of cost-sharing requirements and has not yet contributed cost sharing on the open NSF award, we identified \$14,757 of cost sharing to be at risk of not being met.

Internal Control Weaknesses

Our assessment of AGU's internal controls found that AGU had some procedures in place to oversee its Federal awards. However, we identified one significant internal control weakness related to segregation of duties and several other important grants management and monitoring practices that AGU needs to improve in order for its financial management

¹¹ See Appendix A-5, and *Notes to Explain Questioned Costs*, numbers 3 and 4. The applicable indirect cost rate on these direct costs was five percent.

¹² See Appendices A-3 and A-8.

¹³ AGU tracked cost sharing on ATM-0242473 by setting up separate project codes for the NSF-funded and cost-sharing portions of this award.

¹⁴ See Appendix A, note 5, of *Notes to Explain Questioned Costs*.

¹⁵ See Appendix A-3.

system to meet the requirements of OMB Circular A-110 and A-122. Each is discussed below.

Segregation of Personnel and Accounting Functions

OMB Circular A-110 requires all recipients of Federal funds to have adequate internal controls for managing these funds. Segregation of duties is a basic internal accounting control that enables organizations to prevent or detect irregularities or errors in the ordinary course of business. In particular, the Committee of Sponsoring Organizations (COSO) of the Treadway Commission specifies the common practice of segregating three categories of duties, namely:¹⁶

- Authorization of expenditures,
- Custody of assets, and
- Record keeping

However, AGU combined in the Human Resources (HR) department the personnel functions of adding new employees to the payroll system with the accounting functions of processing payroll and issuing checks. In addition, the Accounting department was not able to perform independent monthly reconciliations of the payroll transactions with its accounting records because the HR department only provided payroll information to the Accounting department in summary form, once a year at the end of the year. Therefore, locating in one department the authority to add new employees and their salary level to the payroll with the accounting function to record payroll disbursements, combined with the lack of monthly independent reconciliations of payroll transactions with accounting records, increased the risk that errors or payroll fraud could go undetected. For example, HR could theoretically add a fictitious employee, establish a salary rate and pay that employee without the Accounting department detecting the fraud. Based on these internal control weaknesses, we increased our testing to verify that all employees being paid within the organization were legitimate. We did not find any fictitious employees; however, relying solely on the goodwill of one's employees is not a substitute for having an adequate system of checks and balances that reduces the risk of such errors or fraud. AGU's A-133 auditors also reported this control weakness in its most recent FY 2004 management letter report.

¹⁶ The Committee of Sponsoring Organizations of the Treadway Commission, *Enterprise Risk Management – Integrated Framework, Executive Summary*, September 2004, p. 63.

Subaward Management

AGU claimed \$1.5 million on 50 subawards under two NSF awards (GEO-0203288 and OCE-9911055), which equates to an average subaward value of \$33,000. These subawards were part of the START program and constituted over 99 percent of the total subaward costs claimed by AGU and were primarily to assist in the establishment of regional research networks in Asia and Africa. OMB and NSF procedures specify that grant recipients are responsible for managing and monitoring the programmatic and administrative performance of their subrecipients.¹⁷ However, AGU did not have adequate START subaward agreements and did not ensure the START subawards were monitored in accordance with Federal regulations.

Inadequate Subaward Agreements

NSF's GC-1 specifies that primary grantees should flow down Federal cost principles to their subrecipients. In addition, AGU had a requirement in its policies and procedures that subrecipients should file monthly financial statements, and that subrecipient employees responsible for program compliance should receive training in administrative and programmatic compliance requirements. However, the START subaward agreements did not contain a requirement for subrecipients to follow the Federal cost principles,¹⁸ and none of these subaward agreements required subrecipients to file monthly financial statements, or receive training in grants administration.

Monitoring Subrecipients

The compliance supplement to OMB Circular A-133¹⁹ specifies the responsibilities of grantees for monitoring their subrecipients. For example, the circular advises grantees to monitor their subrecipients by reviewing financial and performance reports provided by the subrecipients, performing site visits at the subrecipients to review financial and programmatic records and observe operations, and maintaining regular contacts with them. AGU's policies²⁰ did incorporate all of these methods for subaward monitoring. In addition, START's initial subaward agreements required that all subrecipients provide a "Final Financial Report" that "must include a list of expenditures...and actual receipts (or copies)."

However, we found that AGU did not require the START staff to follow the AGU policies and procedures for monitoring subawards and there were no START-

¹⁷ OMB Circular A-110, Subpart C, section .51 a. and NSF's GC-1, article 8 a 3.

¹⁸ AGU employees working on the START program did not change the subaward agreement even after an amendment was issued for NSF award GEO-0203288 (Amendment Two of Award No. GEO-0203288), which instructed AGU to flow down OMB cost principles for non-profit entities to the START subrecipients as noted in NSF's GC-1.

¹⁹ OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*, Appendix B: *March 2003 Compliance Supplement*

²⁰ *Policies Pertaining to Federal Awards*, pp. 4-6.

specific policies for subaward monitoring. In our review of seven START subawards, which equated to \$209,839 of the \$1.5 million of claimed subaward costs, we found that the subrecipients did provide final reports identifying how the funds were spent, as required by the subaward agreements; but only three out of the seven provided vouchers and receipts to support the claimed costs. START staff said they reviewed subrecipients' financial reports, but they did not document the results of the reviews; and it was not clear what review steps they performed. For example, it was not apparent if staff reviewed costs for allowability. In addition, although AGU employees in the START program did conduct some programmatic site visits of the subrecipients, they did not assess the adequacy of their financial management systems during those visits or provide adequate guidance on allowability of costs.

The subawards were made to small organizations in developing areas of the world, making oversight difficult. However, these types of foreign subawards also increased the risk that NSF may be paying unallowable costs. This risk was further increased by the fact that cash advances of 80 to 90 percent of the total subaward value were provided to the subrecipients. Although AGU revised the language for START subaward agreements in 2003; and the revisions did clarify what supporting documentation was required from subawardees,²¹ AGU still did not flow down the Federal cost principles to START subawardees.

AGU can improve its subaward monitoring by ensuring that all subawards, especially the START subawards, include the Federal cost principles in the subaward agreements, and by:

- Enforcing its requirement of monthly financial reports or at least establishing and implementing a requirement for periodic reports;
- Enforcing the requirement that subrecipients provide actual receipts with their submitted financial reports (for example, travel vouchers with supporting documentation such as copies of airline tickets, and hotel and meal receipts), which would enable AGU to determine whether claimed costs are allowable according to Federal regulations;
- Developing and implementing policies and procedures to review the documentation provided for adequacy and allowability,
- Ensuring that subrecipients have training in grants management, and
- Conducting periodic site visits, or obtaining audits of the subrecipients, as necessary, to assess whether their financial and administrative systems and controls are adequate to ensure NSF funds are spent in accordance with Federal requirements.

²¹ The *Terms of Agreement* appended to START subawards in 2003 required the subrecipients to provide one of the following in support of the costs claimed: 1) Receipts and airline ticket stubs for project-related travel, or 2) An audit report on financial accounts, if available, or 3) A signed certification from the PI of the financial statement, if the PI prepared it, or 4) If the financial statement is prepared by someone else in the institution, that person must certify it.

Travel Procedures

OMB Circular A-110 requires that Federal grantees exercise effective control over all funds and provide adequate supporting documentation for all claimed costs. Pre-approval of travel provides effective control by ensuring the travel is for authorized grant purposes and the types of expenses and amount of funds are allowable and reasonable. However, AGU did not approve travel orders or have procedures to review requests for travel cost reimbursements, thus increasing the risk that NSF would pay unreasonable and unallowable costs. AGU's Director of Finance told us that the Accounting department had a "rule of thumb" that all expenses over \$25 needed a receipt, but this guidance was not in AGU's policies and procedures or indicated on the travel reimbursement forms. Without clear requirements specified by AGU management, AGU did not obtain documentary support for travel costs and therefore had little or no assurance that the almost \$1.7 million of claimed travel costs were allowable, reasonable, and allocable.

Management of Fixed Assets

OMB Circular A-110 requires awardees to conduct a physical inventory of equipment purchased with Federal funds and to reconcile the results with inventory records at least once every two years. In addition, AGU's *Purchasing Guidelines* state that all fixed assets should be on the asset inventory list, individual assets valued at over \$1,000 should be capitalized, and the Facilities Department should update inventory records as items are received. However, we found that AGU had not conducted a physical inventory or reconciled its inventory with accounting records in almost 10 years. In order to verify the accuracy of the fixed asset listing, we selected a sample of 42 assets with a total book value of \$437,909, from the total of 5,258 assets with a listed book value of \$2 million on AGU's fixed asset list. None of the items selected for review were purchased with NSF funds. Nevertheless, AGU could not locate nine items, with a listed value of \$47,203, or 11 percent of the total value of the sample.

In addition, contrary to AGU's policy, assets purchased with NSF funds were not added to the fixed asset listing. This occurred because START staff did not use asset-tracking forms for equipment purchases. Specifically, we found that AGU purchased nine assets for the START program, totaling \$19,540, that met AGU's \$1,000 threshold for fixed assets, but none of these were capitalized or listed on AGU's inventory records. As a result of not conducting bi-annual physical inventories or including assets purchased with NSF funds on the inventory list, AGU had inaccurate and incomplete inventory records, reducing NSF's assurance that AGU adequately safeguarded its fixed assets. Further, the replacement of items that are lost or stolen could result in an increase to the indirect cost rates.

Purchasing Controls

OMB Circular A-110 requires that recipients' financial management systems provide effective control over and accountability for all funds, property, and other assets. AGU's *Purchasing Guidelines* did provide for effective control in some respects; for example, they required that purchases of goods and services be supported by purchase orders. However,

AGU did not always enforce this policy. In addition, the guidelines were many years out of date, and did not include any policies and procedures for purchases on credit accounts.²² We found that the START program personnel did not use purchase orders or ensure assets purchased with NSF funds were added to the inventory list, resulting in purchases of almost \$20,000 of equipment and computers with NSF funds without receiving the required approval of the AGU Director of Information Services or Administration Manager. Additionally, other AGU managers were either not aware of or following the purchasing guidelines. For example, one manager had an open account with an office supply warehouse and made purchases without any purchase orders. If AGU does not enforce the procurement policies or keep them up to date, there is an increased risk of unauthorized purchases and of unreasonable, unallowable, or unallocable charges to NSF.

Indirect Cost Proposal Methodology

Our audit found that, for the most part, AGU correctly calculated its FY 2002 indirect cost rates. However, AGU needs to improve its understanding of OMB Circular A-110 and the cost principles in OMB Circular A-122, specifically those sections that require supporting all claimed costs with documentation, segregating unallowable costs, identifying unreasonable costs, classifying costs correctly as either direct or indirect costs, and offsetting expenses with related revenues. As a result of this inadequate understanding, AGU included \$233,757 of unallowable costs in its indirect cost pools, and understated its direct cost base by \$73,268, thereby causing AGU's proposed three indirect cost rates for publications, meetings, and outreach to be overstated by 1.15 percent, 0.91 percent, and 1.45 percent respectively. These issues are discussed below, and in more detail in Appendices B-1 through B-4 to this report.

Unsupported Costs (\$86,195)

OMB Circular A-110 requires that recipients of Federal funds have financial management systems that provide accounting records supported by source documentation. Because of inadequate source documentation, we recommended eliminating \$86,195 of costs included in the indirect cost pools:

- \$68,412 of expenses were supported only by credit card statements, which did not provide sufficient details on the items purchased to determine if the costs were allowable, allocable, and reasonable for NSF's awards;²³
- \$17,783 of expenses allocated to the Publications division, Outreach division, and Administrative Allocation indirect cost pools were eliminated because AGU could not provide sufficient supporting documentation that these costs benefited NSF.²⁴

²² The purchasing policies were typewritten and we were unable to determine how old they were.

²³ See Appendix B, *Notes to Explain Adjustments*, note 2.

²⁴ See Appendix B, *Notes to Explain Adjustments*, number 9.

Unallowable Costs (\$34,205)

OMB Circular A-122 designates costs such as alcohol, donations to other organizations, entertainment, and membership dues to other organizations without prior approval from the cognizant agency, as unallowable. In addition, the circular also requires consistent treatment of incurred costs. AGU erroneously included \$34,205 of such unallowable costs in its indirect cost pool:

- \$15,485 of alcoholic beverages,
- \$10,500 of donations to other organizations,
- \$5,235 of holiday party expenses, which we consider entertainment costs,
- \$1,850 of membership dues for a civic organization, for which AGU did not obtain the required prior approval from NSF, and
- \$1,135 of floral costs that AGU failed to exclude when it excluded other similar floral costs.

Excessive and Unreasonable Costs (\$24,469)

To be claimed as an allowable cost on a Federal award, direct and indirect costs must be reasonable. OMB Circular A-122 defines reasonable costs as those that do not exceed what a prudent person would incur under the prevailing circumstances at the time. In cases where unreasonable costs are claimed, AGU can choose to pay for them; however, they should be excluded from indirect costs charged to the Federal awards. We found that AGU included \$24,469 of excessive and unreasonable costs in its indirect cost pools, as follows:

- \$14,452 of excessive group meal costs, including \$12,933 paid to cater a dinner at AGU's fall 2002 meeting,²⁵
- \$9,236 of local lodging costs incurred by AGU employees while not in travel status, including \$5,440 paid for eight employees for lodging at a conference facility located within AGU's local commuting area,²⁶
- \$630 of claimed lodging costs significantly in excess of the allowable Federal per diem rate. For example, an AGU employee claimed \$223 per night in a city where the Federal per diem for lodging was \$91 a night, without any justification for claiming the higher rate,
- \$151 of unreasonable local meal costs incurred by AGU employees, such as lunches for employees attending training classes in the local commuting area.

Misclassified Costs (\$73,268)

According to OMB Circular A-122, expenses of activities performed primarily as a service to members, clients, or the public must be treated as direct costs when significant and necessary to the organization's mission, and thus receive their fair share of indirect

²⁵The catered meal cost \$81.81 per person and we questioned \$9,271 of these costs as excessive. Also, we removed unallowable alcohol costs of \$3,622 that were claimed by AGU as part of the same event. See Appendix B, *Notes to Explain Adjustments*, number 4 a.

²⁶ See *NSF Travel*, "What is local travel?" at <http://www.inside.nsf.gov/travel/local.htm>.

costs.²⁷ AGU erroneously charged \$70,575 of expenses to AGU’s Society Activities division’s indirect cost pool instead of the direct cost base. These expenses included costs of services to members and services that supported AGU’s mission and therefore should not be allocated to the Federal Government through the indirect cost rates. AGU also incorrectly charged \$2,693 of fellowship costs to the indirect cost pool when they should also have been included in the direct cost base because they did not benefit the entire organization.

Expenses Not Credited With Offsetting Revenues (\$15,620)

OMB Circular A-122 states that credits are reductions of expenditures that offset or reduce expenses allocable to awards, and that credits received by an organization related to allowable costs shall be used to offset charges to the Federal Government.²⁸ AGU correctly included costs of employees’ fitness club memberships in the indirect cost pool but did not offset the claimed expenses with \$15,620 that was deducted from employees’ payroll to pay for some of the costs of these memberships.

As a result of the compliance deficiencies above, AGU overstated its FY 2002 indirect cost pools by \$233,757 and understated its direct cost bases by \$73,268. Consequently, as shown below, AGU’s proposed rates in the three divisions were from 0.91 percentage points to 1.45 percentage points higher than the audited rates. No questioned costs resulted from the lower, audit-recommended rates, because AGU had an approved predetermined rate in place, which does not allow for retroactive adjustments.²⁹

Division	Proposed Rate	Recommended Rate	Difference
Publications Division	36.44%	35.29%	1.15%
Meetings Division	29.13	28.22	0.91
Outreach Division	39.09	37.64	1.45
Administrative Allocation	21.21	20.33	0.88

²⁷ OMB Circular A-122, Attachment A, section B 4.

²⁸ OMB Circular A-122, Attachment A, section A 5 a.

²⁹ The effective dates for AGU’s approved predetermined indirect cost rate was from 1/1/2000 until amended. However, in FY 2002 AGU changed to a system with three indirect cost rates, making a comparison between the three audit-determined rates and the single predetermined rate unfeasible.

Adequate Internal Controls Not a Priority

These deficiencies occurred because AGU lacked an adequate administrative and financial management control structure to manage large Federal awards. The financial structure in place was informal in nature, trusting more in the integrity of the personnel than in strong and current internal control processes and procedures. AGU did not place a priority on having or implementing current, accurate, and complete policies and procedures or on training its staff in Federal administrative requirements and cost principles as evidenced by the following:

Segregation of Duties

AGU outsourced its payroll function until October 2000, when it decided to do its own payroll, since it had recently installed a new accounting system. At the time the function was brought back in, AGU decided to add these payroll functions to the HR department. AGU management did not seem concerned that payroll functions needed to be kept separate from HR functions. Additionally, AGU management did not have the Accounting department conduct independent monthly reconciliations because it felt it was sufficient if HR provided summary payroll data once a year at the end of the year and because it trusted HR to handle both functions. Following the 2003 OMB Circular A-133 audit, the independent audit firm raised this issue in a management letter to AGU; but as of the end of our audit in December 2003, AGU chose not to follow the audit firm's recommendation to institute monthly independent reconciliations because of the concern that sensitive payroll data would not remain confidential if anyone outside of HR had access to the salary information.

NSF Awards For the START Program

AGU did not have formal policies and procedures in place for NSF awards supporting the START program because AGU's Executive Director had a long-standing relationship with the Director of the START Program and thought an informal delegation of fiscal and administrative responsibilities to the AGU employees in the START program was sufficient to ensure adequate oversight of the NSF awards. However, personnel in the START program lacked an adequate understanding of Federal and NSF financial requirements. The informality between AGU and START led to questioned costs and inadequate subaward management. Specifically, regarding START subaward management, the START staff did not flow down the Federal cost principles because they felt the requirements in their agreements were sufficient, did not include the monthly reporting requirement in the subaward agreements because they deemed it too onerous, or require subrecipients to get grant training because they felt it was not cost effective.

Training in Federal Requirements

AGU's staff lacked adequate training in Federal administrative requirements and cost principles. Our audit found that AGU's staff was not aware that several NSF awards had cost-sharing requirements and that Principal Investigators had shifted budgeted

participant support costs to other cost categories without prior approval from NSF. In addition, we noted that AGU's accounting system did not allow for actual costs to be readily compared to budgeted costs by NSF budget category thereby making it difficult to detect if budgeted costs were shifted improperly between categories.

Policies and Procedures

AGU management did not adequately stress the importance of establishing, maintaining, and implementing policies and procedures and keeping them current. Specifically:

- Policies and procedures did not require travelers to have travel orders, did not define when or what type of supporting documentation was required for reimbursement of travel expenses, and did not establish criteria to help ensure only reasonable travel costs were charged to Federal awards.
- Policies and procedures for property management were only in draft form and its provisions requiring physical inventories every two years or updating of inventory listings for missing or obsolete items had not been implemented.
- Procurement procedures did not address purchasing equipment via a revolving credit account or credit card, which led to items being procured without required purchase orders, contrary to AGU's purchasing guidelines.
- START staff was not required to follow AGU's purchasing guidelines, resulting in assets being purchased but not being added to the inventory list.

Recommendations

To address the internal control weaknesses and compliance deficiencies in AGUs preparation of indirect cost rate proposals and management of Federal funds, we recommend that NSF's Division of Institution and Award Support and Division of Grants and Agreements require AGU to:

- 1) Reimburse NSF for the questioned costs of \$198,548, which includes \$8,101 of NSF's excess share of project costs and \$7,751 of indirect costs associated with the questioned direct costs.

AGU Response

AGU accepts \$44,832 of \$203,342 questioned costs in the draft report, but disagrees with the remaining \$158,510, as follows:

- \$149,441 of excess direct and associated indirect rent costs charged to START, for which AGU makes these arguments: 1) AGU believes that START is not a related party and is allowed to charge for use of its space above actual costs. The only relationship between AGU and START is the MOU and common scientific interests; 2) AGU did not charge their full indirect rate and only charged five percent indirect costs on START awards, and therefore should be allowed to charge market-price rent; and 3) There is a substantial cost savings to the Government from AGU charging fair market value rent plus five percent indirect costs on START awards in lieu of charging the full indirect cost rate.
- AGU received written permission from the cognizant NSF program officer to use the \$4,274 of participant support funds on EAR-9911107 for a fellowship.
- AGU recorded in the general ledger \$4,796 of participant support costs for graduate-student travel on ATM-0322531.

Auditors' Comments

Although AGU and START remain independent entities, we believe that the MOU dated September 19, 1994 established an agency relationship between them and thus clearly shows that AGU and START are related parties: "AGU will provide administrative support services for the International START Secretariat" and "the staff of the International START Secretariat shall be treated in a manner equivalent to other AGU staff." OMB Circular A-122 states that rental costs under less than arms-length leases are allowable only up to the amount that would be allowed had title to the property vested in the organization paying the rent. It does not make an allowance for AGU charging less than the allowed overhead costs. Therefore, we reaffirm our recommendation.

The documentation provided as support for AGU's claim that it had permission to reallocate participant support costs of \$4,274 on EAR-9911107, was an approval for a no-cost extension and did not specifically permit the reallocation of participant support funds. Therefore, we reaffirm our recommendation.

We accept the additional clarification provide by AGU regarding the questioned participant support costs of \$4,796 on ATM-0139033, and have removed these questioned costs accordingly.

- 2) Segregate the personnel activities from payroll and check-writing functions, or at a minimum, ensure timely reconciliations by providing detailed payroll information monthly to the Accounting department or some other independent entity.

AGU Response

Although AGU does not agree with our recommendation to segregate payroll and check-writing functions, it agrees with our alternative recommendation to ensure timely reconciliations by providing detailed payroll information each month to the Accounting department, and states that the Accounting department is currently reconciling the payroll account monthly.

Auditors' Comments

AGU's comment is responsive, however, we believe segregating the functions of human resources from payroll and check-writing activities is still the optimal solution. Therefore, we reaffirm our recommendation.

- 3) Revise and implement policies and procedures for management of subawards to ensure subrecipients, particularly those for START awards, follow Federal cost principles and provide actual receipts for claimed costs.

AGU Response

AGU has agreed with our recommendations regarding subawards.

Auditor's Comments

No further comment is necessary.

- 4) Develop and implement policies and procedures that ensure required cost sharing is tracked and met and that budgeted participant support costs are not shifted without prior NSF approval.

AGU Response

AGU states that it is currently implementing measures to ensure that the existing policy regarding the tracking of cost sharing is being implemented and that it has established a separate account number for participant support costs incurred under Federal awards so that it can track budgeted and actual participant support costs within the accounting system.

Auditors' Comments

No further comment is necessary.

- 5) Revise and implement the policies and procedures for administering travel, managing inventory, and procuring equipment in accordance with Federal requirements.

AGU Response

AGU states that it is currently working on policies and procedures for travel, inventory, and procurement to address the findings in this audit report.

Auditors' Comments

No further comment is necessary.

- 6) Train all staff involved in grants management or accounting in Federal administrative grant requirements and cost principles on a continuing and periodic basis.

AGU Response

AGU is implementing this recommendation.

Auditors' Comments

No further response is necessary.

- 7) Revise its proposed indirect cost rates based on the audit results.

AGU Response

AGU proposes to withdraw its FY 2002 indirect cost proposal. Instead, it plans to submit a new proposal with 2004 financial information, using the simplified method for a single unified rate. In addition, AGU strongly disagrees with our position that the costs associated with Committee on International Participation should be treated as direct costs instead of indirect costs, as it states that the costs are mostly administrative support. AGU also disagrees with the exclusion of \$68,449 of expenses supported only by credit card bill as it states that all of these expenses are recorded with detailed receipts when available.

Auditors' Comments

Regarding AGU's plan to submit a new proposal using FY 2004 financial information, AGU is eligible to use the simplified method for a single unified rate as defined by OMB Circular A-122, which states that the simplified allocation method may be used where the level of Federal awards to an organization is relatively small. As for the comment that it would like to withdraw its 2002 proposal, which means that the predetermined rate of 38.58 percent would continue in effect until AGU and NSF negotiate a new indirect cost rate, this course of action should be addressed during audit resolution with the NSF Division of Institution and Award Support.

With respect to AGU's comments on Committee on International Participation, we disagree with AGU's position that the Committee on International Participation should be treated as indirect costs rather than as direct costs. AGU states that it is mostly administrative support, which contradicts AGU's classification of this committee in its website, which states that this committee under the program category instead of the administrative category. Therefore, we continue to assert that this committee's costs should be treated as direct costs instead of indirect costs.

Regarding AGU's comments on exclusion of \$68,449 of indirect expenses supported only by credit card bills, we disagree with AGU's position because AGU did not provide detailed receipts supporting a majority of the expenses on credit card statements during the fieldwork. In cases when AGU provided detailed receipts (i.e. receipt from vendors) for a few of the expenses recorded on the credit card statements, we did not question those expenses in our report.

- 8) Obtain a corrective action plan from AGU addressing each report recommendation and perform an on-site visit promptly to verify that the corrective actions have been taken and are effective to correct the control deficiencies.

AGU Response and Auditor's Comments

OIG management added this recommendation after the issuance of the official draft report; thus AGU did not have a chance to comment on it.

SECTION III
FINANCIAL SCHEDULES

Summary Schedule of National Science Foundation Award Costs for
American Geophysical Union

For the Period October 1, 1996 through September 30, 2003
Final

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Ref
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
Total Direct Costs	8,915,721	7,722,729	176,324	
Indirect Costs	579,476	435,872	7,751	
Totals	9,495,197	8,158,601	184,075	
Difference between Claimed Costs and Recorded Costs		(499,746)	6,372	
Total Costs per FCTR		7,658,855 *	*	
Total Questioned Incurred Costs			\$190,447	
Cost Sharing	\$ 230,541		\$ 8,101	
Total Questioned Costs			<u>\$198,548</u>	<u>A-2</u>

* Agrees with cumulative net disbursements reported on the FCTRs for the quarter ended December 31, 2003.

National Science Foundation Grants
Awarded to
American Geophysical Union

Summary of Awards With Questioned Costs

Award Number	Amount Awarded	Claimed Costs per FCTR	Questioned Costs	Appendix
DUE-9614954	\$ 93,551	\$92,223	\$ 19,024	A-3
OCE-9729933	1,074,681	1,065,979	3,620	A-4
GEO-9901551	3,493,062	3,244,186	159,169	A-5
ATM-9908640	7,000	7,000	6,650	A-6
EAR-9911107	23,919	23,919	4,274	A-7
ATM-0089582	495,706	242,894	4,160	A-8
ATM-0118057	15,000	10,583	32	A-9
OCE-0129558	20,000	19,660	334	A-10
ATM-0139033	18,000	924	924	A-11
ATM-0322531	8,200	5,155	361	A-12
	<u>\$5,249,119</u>	<u>\$4,712,523</u>	<u>\$198,548</u>	

National Science Foundation Award Number DUE-9614954
Awarded to
American Geophysical Union

Schedule of Award Costs
For the Period October 1, 1996 through September 30, 2000
Final

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Reference to Notes
Total Direct Costs	\$81,016	\$77,477	\$ 8,711	
Indirect Costs	12,535	12,534	0	
Totals	\$93,551	\$90,011	\$ 8,711	
Claimed Costs in Excess of Recorded Costs		2,212	2,212	2
Total Costs per FCTR		\$92,223 *		
Total Questioned Incurred Costs			\$10,923	
Cost Sharing	\$ 9,341	\$ 0	\$ 8,101	5
Total Questioned Costs			<u>\$ 19,024</u>	

* Agrees with cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number OCE-9729933
 Awarded to
 American Geophysical Union

Schedule of Award Costs
 For the Period September 15, 1997 through May 31, 2001
 Final

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Recorded Costs</u>	<u>Questioned Costs</u>	<u>Reference to Notes</u>
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Direct Costs	\$1,021,125	\$1,024,103	\$ 3,448	
Indirect Costs	53,556	50,880	172	4
Totals	\$1,074,681	\$1,074,983	\$ 3,620	
Recorded Costs in Excess of Claimed Costs		(9,004)		
Total Costs per FCTR		<u>\$1,065,979</u>		*

* Agrees with cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number GEO-9901551
 Awarded to
 American Geophysical Union

Schedule of Award Costs
 For the Period April 15, 1999 through December 31, 2003
 Interim

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Reference to Notes
Total Direct Costs	3,296,327	\$3,396,571	\$151,590	
Indirect Costs	196,735	154,483	7,579	4
Subtotal	\$3,493,062	\$3,551,054	\$159,169	
Recorded Costs in Excess of Claimed Costs		(306,868)		
Total Costs per FCTR		<u>\$3,244,186</u>		*

* Agrees with cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number ATM-9908640
 Awarded to
 American Geophysical Union

Schedule of Award Costs
 For the Period July 1, 1999 through June 30, 2000
 Final

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Reference to Notes
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Direct Costs	\$6,650	\$55,580	\$ 6,650	
Indirect Costs	350	350	0	**
Totals	\$7,000	\$55,950	\$ 6,650	
Recorded Costs in Excess of Claimed Costs		(48,930)		
Total Costs per FCTR		\$ 7,000		*

* Agrees with cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003.

** Indirect costs were not questioned as the amount was fixed and not a percentage of the total direct costs.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number EAR-9911107
 Awarded to
 American Geophysical Union

Schedule of Award Costs
 For the Period December 15, 1999 through November 30, 2001
 Final

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Recorded Costs</u>	<u>Questioned Costs</u>	<u>Reference to Notes</u>
[Redacted]	[Redacted]	[Redacted]	[Redacted]	
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
Total Direct Costs	\$19,945	\$20,368	\$ 4,274	
Indirect Costs	3,974	3,987	0	
Totals	\$23,919	\$24,355	\$ 4,274	
Recorded Costs in Excess of Claimed Costs		(436)		
Total Costs per FCTR		\$23,919 *		

* Agrees with cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number ATM-0089582
Awarded to
American Geophysical Union

Schedule of Award Costs
For the Period September 15, 2000 through December 31, 2003
Interim

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Reference to Notes
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
Total Direct Costs	\$461,723	\$222,420	\$ 0	
Indirect Costs	33,983	16,314	0	
Totals	\$495,706	\$238,734	\$ 0	
Claimed Costs in Excess of Recorded Costs		4,160	4,160	2
Total Costs per FCTR		\$242,894 *		
Total Questioned Costs			\$ 4,160	

* Agrees with cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number OCE-0129558
 Awarded to
 American Geophysical Union

Schedule of Award Costs
 For the Period October 1, 1996 through September 30, 2000
 Final

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Reference to Notes
Total Direct Costs	\$19,356	\$19,030	\$ 334	
Indirect Costs	644	628	0	
Total Costs	<u>\$20,000</u>	<u>\$19,658</u>	<u>\$ 334</u>	

* There is an insignificant difference of -\$2 between the cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003 and AGU's records.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number ATM-0139033
 Awarded to
 American Geophysical Union

Schedule of Award Costs
 For the Period February 1, 2002 through January 31, 2003
 Final

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Reference to Notes
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Direct Costs	\$18,000	\$ 932	\$ 924	
Indirect Costs	0	0	0	
Totals	\$18,000	\$ 932	\$ 924	
Recorded Costs in Excess of Claimed Costs		(8)		
Total Costs per FCTR		<u>\$ 924</u> *		

* Agrees with cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

National Science Foundation Award Number ATM-0322531
 Awarded to
 American Geophysical Union

Schedule of Award Costs
 For the Period May 15, 2003 through October 31, 2003
 Final

Cost Category	Approved Budget	Recorded Costs	Questioned Costs	Reference to Notes
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Direct Costs	\$8,000	\$5,157	\$ 361	
Indirect Costs	200	0	0	
Total Costs	\$8,200	\$5,157	* \$361	

* There is an insignificant difference of \$2 between the cumulative net disbursements reported on the FCTR for the quarter ended December 31, 2003 and AGU's records.

Note: The accompanying notes to explain questioned costs are integral part of this financial schedule.

Notes to Explain Questioned Costs

1. Participant Support Costs - \$24,734. We questioned \$24,734 of participant support funds on eight awards because AGU reallocated funds intended for participant support category to other categories without obtaining required approval from NSF. According to NSF’s Grant General Conditions (GC-1), Article 2, grantees are required to obtain written prior approval from the cognizant NSF Program Officers to reallocate funds intended for participant or trainee support costs. In addition, award (and amendment) letters for several awards explicitly stated that funds provided for participant support should not be diverted by the grantee to other categories of expense without the prior written approval of the cognizant NSF Program Officer. The calculations of the questioned costs for these eight expired awards are as follows:

Award Number	Budgeted Participant Support	Claimed Participant Support	Difference	Unspent Award Funds ³⁰	Questioned Costs
DUE-9614954	\$ 50,000	\$ 37,749	\$12,251	\$ (3,540)	\$ 8,711
OCE-9729933	868,625	856,173	12,452	(9,004)	3,448
ATM-9908640	6,650	0	6,650	0	6,650
EAR-9911107	10,800	6,090	4,710	(436)	4,274
ATM-0118057	15,000	10,551	4,449	(4,417)	32
OCE-0129558	19,356	18,680	676	(342)	334
ATM-0139033	18,000	0	18,000	(17,076)	924
ATM-0322531	8,000	0	8,000	(3,043)	361
			Total Questioned Costs		<u>\$24,734</u>

In addition to these eight expired awards, we identified three active awards in which AGU is at risk of violating GC-1’s requirement of obtaining written prior approval from cognizant NSF Program Officers to divert funds intended for participant support to other cost categories. We did not question \$203,510 of unspent participant support costs on these three awards because AGU still has time to rectify the situation. The calculations of three awards identified as at-risk funding are:

³⁰ In some cases AGU claimed less than the total award budget, and so some of the budgeted participant support costs were not spent on other cost areas. For example, although the total budgeted amount for NSF award ATM-0139033 was \$18,000, all of which was for participant support costs, AGU only claimed \$924 before the award was financially closed, therefore we limited the questioned costs to that amount.

<u>Award Number</u>	<u>Amount Awarded</u>	<u>Amount Claimed³¹</u>	<u>Budgeted Participant Support</u>	<u>Claimed Participant Support</u>	<u>Difference</u>
ATM-0089582	\$495,706	\$242,894	\$373,633	\$201,659	\$171,974
EAR-0105317	71,890	6,994	31,040	2,304	28,736
ATM-0242473	<u>104,976</u>	<u>26,845</u>	2,800	0	2,800
	\$672,572	\$266,486	Total At-Risk Funding		<u>\$203,510</u>

The eight expired awards with questioned costs and three active awards identified as at-risk funding occurred primarily because AGU does not formally compare the budgeted and actual award expenditures by NSF budget categories on a regular basis. In addition, AGU does not have a special category in its accounting system for participant support expenses that would make the comparison more efficient. This is significant because \$2.2 million (or almost 25 percent) of \$9.5 million awarded by NSF on 27 awards that we audited were allocated to the participant support category. In addition, NSF typically does not allow grantees to claim indirect costs on participant support category, which could happen if these costs are not adequately identified in the accounting system.

- 2. Costs Claimed in Excess of Recorded Costs - \$6,372.** We questioned \$6,372 because AGU claimed costs that were not recorded in the general ledgers for two awards as required by OMB Circular A-110. AGU was not able to support \$6,372 of expenditures it claimed on FCTRs as of December 31, 2003 for two awards with its accounting records. The calculations of questioned costs for these two awards are as follows:

<u>Award Number</u>	<u>Claimed Costs</u>	<u>Recorded Costs</u>	<u>Questioned Costs</u>
DUE-9614954	\$ 92,223	\$ 90,011	\$2,212
ATM-0089582	242,894	238,734	4,160
			<u>\$6,372</u>

AGU does not record indirect costs in the general ledgers for its awards. Instead, AGU manually records the total direct costs from its general ledgers in a separate spreadsheet and manually calculates indirect costs for each award on a quarterly basis prior to filing FCTRs. The expenditures reported on FCTRs come from these spreadsheets. While AGU management does not know the exact cause of the differences between claimed costs and recorded costs for these two awards, it believes that human error may have contributed to the differences.

³¹ Amount claimed by AGU on Federal Cash Transactions Reports of December 31, 2003. The total funds remaining to meet the \$203,510 difference between budgeted and claimed participant support is \$406,086 (\$672,572-\$266,486 = \$406,086.)

3. Other Direct Costs. OMB Circular A-122, Attachment B, ¶ 46 c states that rental costs under less than arms-length leases are allowable only up to the amount that would be allowed had title to the property vested in this organization. OMB Circular A-122, Attachment B ¶ 18 states that costs of goods or services for the personal use of the organization’s employees are unallowable. OMB Circular A-122, Attachment B, ¶ 30 b states that costs of subscriptions to business, professional, and technical periodicals are allowable, thus by implication general circulation newspapers and magazines are not allowable. We questioned \$151,590 of other direct costs on Award Number GEO-9901551, as follows:

Cost	Questioned Amount	Reason
Rent	\$142,325 ³²	AGU charged NSF for unallowable rent costs for the START program
Canteen costs	\$6,273	Goods for employees’ personal use
Spring Water	\$1,111	Goods for employees’ personal use
NY Times, Economist, Washington Post	\$1,881	General-circulation newspapers and magazines expenses are not allowable
TOTAL	\$151,590	

4. Indirect Costs. We questioned \$7,751 of indirect costs associated with questioned direct costs on two awards. Specifically, we applied the five percent indirect cost rate agreed to in the award letter to the \$3,448 of questioned costs on award OCE-9729933, resulting in questioned indirect costs of \$172. In addition, we applied the five percent rate to the questioned costs of \$151,590 on award GEO-9901551, resulting in the remaining questioned indirect costs of \$7,579.³³

³² The calculation of the direct rent overcharge is as follows.

RENT	YEAR					TOTAL
	1999	2000	2001	2002	2003	
Actual	████████	████████	████████	████████	████████	
Actual cost/sq. foot	16.52	17.56	19.17	19.12	18.51	
Billed (includes CPI adjustment)/sq ft	27.58	27.91	27.91	27.91	28.93	
Overcharge/sq feet	11.06	10.35	8.74	8.79	10.42	
Overcharge (\$)	\$ 34,105					
Total Overcharge	\$ 24,158	\$ 31,931	\$ 26,949	\$ 27,128	\$ 32,159	\$ 142,325
	8.5 mo*					
TOTAL Square Feet	████████					
START square feet	████████					

*Note: For 1999 AGU overcharged START for only 8.5 months because the audited award became effective 4 15 99.

³³ 5% *\$151,590 = \$7,579.

5. Cost Sharing. OMB Circular A-110, Subpart C, section .23 (a) states that cost sharing shall be verifiable, not used for any other Federal program, necessary and reasonable for the efficient accomplishment of program objectives, allowable under the applicable cost principles, not paid by the Federal Government under another award, and provided for in the approved budget. AGU did not provide the required cost sharing on NSF Award DUE-9614954. The amount of required cost sharing on the award was \$9,341. The total NSF excess contribution on this award, which AGU should repay, was \$8,101. The calculation is as follows:

NSF Award DUE-9616954

Maximum percentage of NSF funding to total project costs (original NSF share/anticipated total project costs)	91%	
Total project costs (NSF and claimed cost sharing)	\$92,223	
Less: Questioned Cost	<u>(2,212)</u>	
Accepted project cost base	\$90,011	
Maximum NSF share percentage	91%	
Maximum NSF required share accepted project costs	\$81,910	
Actual NSF accepted costs	\$90,011	
Less: Maximum NSF required share	<u>(81,910)</u>	
Excess Federal (NSF) Contributions		\$8,101

In addition, AGU is at risk of not meeting its cost-sharing requirement of \$14,757 on an open NSF award, Award Number EAR-0105317, and having questioned cost-sharing costs of \$14,757.

Appendix B-1

American Geophysical Union
Schedule of Indirect Costs
For the year ended December 31, 2002

Publications Division

Cost Category	Proposed Costs	Adjustments	Recommended Costs	Reference To Notes
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Indirect Costs	\$2,192,790	\$(38,095)	\$2,154,695	
Direct Cost Base	\$14,400,078 (A)		\$14,400,078	
Division Overhead Rate	15.23%		14.96%	
Gen. & Admin. Rate ³⁴	21.21%		20.33%	
Publications Division Rate	36.44%		35.29%	

(A) The amounts agree with the indirect cost rate proposal submitted by the American Geophysical Union (AGU). The total costs before auditors' adjustments and eliminations agree with AGU's books of account.

Note: The accompanying notes to explain adjustments and eliminations are an integral part of this financial schedule.

³⁴ See Schedule B-4 for General & Administrative Rates.

American Geophysical Union
Schedule of Indirect Costs
For the year ended December 31, 2002

Meetings Division

Cost Category	Proposed Costs	Adjustments	Recommended Costs	Reference To Notes
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Indirect Costs	\$267,193	\$(1,179)	\$266,014	
Direct Cost Base	\$3,373,178 (A)		\$3,373,178 (A)	
Division Overhead Rate	7.92%		7.89%	
Gen. & Admin. Rate ³⁵	21.21%		20.33%	
Meetings Division Rate	29.13%		28.22%	

(B) The amounts agree with the indirect cost rate proposal submitted by the American Geophysical Union (AGU). The total costs before auditors' adjustments and eliminations agree with AGU's books of account.

Note: The accompanying notes to explain adjustments and eliminations are an integral part of this financial schedule.

³⁵ See Schedule B-4 for General & Administrative Rates.

American Geophysical Union
Schedule of Indirect Costs
For the year ended December 31, 2002

Outreach Division

Cost Category	Proposed Costs	Adjustments	Recommended Costs	Reference To Notes
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Indirect Costs	\$199,386	\$(5,877)	\$193,509	
Direct Cost Base	\$1,114,921 (A)	\$2,693	\$1,117,614 (A)	7
Division Overhead Rate	17.88%		17.31%	
Gen. & Admin. Rate ³⁶	21.21%		20.33%	
Outreach Division Rate	39.09%		37.64%	

(C) The amounts agree with the indirect cost rate proposal submitted by the American Geophysical Union (AGU). The total costs before auditors' adjustments and eliminations agree with AGU's books of account.

Note: The accompanying notes to explain adjustments and eliminations are an integral part of this financial schedule.

³⁶ See Schedule B-4 for General & Administrative Rates.

American Geophysical Union
Schedule of Indirect Costs
For the year ended December 31, 2002

General & Administrative Allocation

Cost Category	Proposed Costs	Adjustments	Recommended Costs	Reference To Notes
Total Indirect Costs	\$4,902,338	\$(188,606)	\$4,713,732	
Direct Cost Base	\$23,111,331 (A)	\$70,575	\$23,181,906 (A)	1
Allocation Rate	21.21%		20.33%	

(D) The amounts agree with the indirect cost rate proposal submitted by the American Geophysical Union (AGU). The total costs before auditors' adjustments and eliminations agree with AGU's books of account.

Note: The accompanying notes to explain adjustments and eliminations are integral part of this financial schedule.

Notes to Explain Adjustments

1. Misclassification of Society Activities' Functions as Indirect Costs - \$70,575. We removed \$70,575 of expenses related to Society Activities' functions allocated to the Administrative Allocation indirect cost pool. The three programs within Society Activities that should be allocated to the direct cost base instead of indirect cost pool are: Sections (\$24,692), Committee on International Participation (\$39,421), and International Liaison (\$6,462).

According to OMB Circular A-122, direct costs are those that can be identified specifically with a particular final cost objective such as a particular award, project, service, or other direct activity of an organization. In addition, this circular states that the costs of activities performed primarily as a service to members, clients, or the general public when significant and necessary to the organization's mission must be treated as direct costs whether or not allowable, and be allocated an equitable share of indirect costs. Some examples of these activities include:

Sections' functions - \$24,692: AGU allocated \$24,692 related to Sections' functions as indirect costs. The expenses allocated to the Sections' functions are for maintaining the infrastructure of Sections so that they can provide services to AGU in terms of providing scientific advice, organizing volunteers to perform tasks, organizing meetings, etc. In addition, the Sections' functions are part of membership services. It should be noted that AGU allocated expenses related to the Technical Committee (also known as Focus Group) as direct costs. This committee has similar function and expenses as Sections, including support for volunteers. Therefore, we believe that the expenses related to Sections should be treated as direct costs instead of indirect costs.

Committee on International Participation (CIP) - \$39,421: AGU allocated \$39,421 related to the Committee on International Participation's functions as indirect costs. This administrative group was charged with the responsibility of ensuring that scientists around the world are served by AGU on as equal basis as possible. Expenses allocated to this group were related to the activities and general projects that include management of the Berkner grants/fellowships, the Lend-a-Hand program, and organizing convocations of regional/national societies. We believe that expenses related to this group should be treated as direct costs instead of indirect costs because it appears that the activities did not benefit the organization as a whole.

International Liaison - \$6,462: AGU allocated \$6,462 related to International Liaison's functions as indirect costs. The expenses allocated to this function were related to administrative support for the U.S. National Committee of IUGG. We do not believe that the expenses related to this function should be treated as indirect costs because it appears that the activities of this group did not benefit the organization as a whole.

The distribution of the Society Activities' functions by cost category that should be treated as direct costs are as follows:

Cost Category	Total	Sections	Committee on International Participation	International Liaison
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	\$70,575	\$24,692	\$39,421	\$6,462

Reallocating the expenses related to Society Activities' functions from the Administrative Allocation indirect cost pool to direct cost base would reduce the indirect cost rates by 0.37 percent for each division.

2. Inadequate Support for Credit Card Transactions - \$68,412. We removed \$68,412 of charges from two indirect cost pools, namely the Publications division and Administrative Allocation, because AGU relied on credit card statements as a source of support instead of retaining vendors' invoices and receipts. OMB Circular A-110 requires grantees to maintain a financial management system that provides for accounting records including cost accounting records that are supported by source documentation. OMB Circular A-122 also requires that costs be adequately documented. Without adequate source documentation, we could not readily determine whether the costs allocated to the indirect cost pools were allowable under OMB Circular A-122. The credit card transactions were allocated to the following categories:

Cost Category	Administrative Allocation	Publications Division	Total
Travel	\$52,085	\$14,909	\$66,994
Other Personnel Costs	1,063	0	1,063
Services & Supplies	255	0	255
Equipment	100	0	100
	<u>\$53,503</u>	<u>\$14,909</u>	<u>\$68,412</u>

In addition to lack of adequate supporting documentation for credit card transactions, we found instances where unallowable and/or unreasonable costs may have been charged to the indirect cost pools. Potential unallowable and/or unreasonable costs include:

- a. AGU charged \$55,155 of travel costs, most of which were for airfare, to the indirect cost pools (\$40,247 to the Administrative Allocation pool and \$14,908³⁷)

³⁷ The difference between this number and the number in the table above is due to rounding.

to the Publications division pool). Without boarding passes or receipts from airlines we could not determine the class of the accommodations and whether they were allowable according to OMB Circular A-122.

- b. AGU allocated \$5,324 of credit card charges (10 transactions) to the Administrative Allocation indirect cost pool. For example, on six transactions an AGU employee incurred \$2,628 of charges for lodging without hotel receipts.³⁸ For an additional \$2,696 (four transactions) the credit card statements did not even specify number of nights.³⁹ Without supporting receipts from hotels, we were not able to confirm the actual overcharges because the credit card statements may have included taxes, meals, and possibly unallowable charges such as alcoholic beverages.
- c. AGU allocated \$2,942 of credit card charges (21 transactions) to the Administrative Allocation indirect cost pool as travel costs for meals at various restaurants but did not provide adequate supporting documentation. The meal charges appeared to be excessive; but without detailed receipts from the restaurants, we could not determine whether any of the costs were allowable. We did note that 16 of these transactions included exclusions for unallowable alcoholic beverages. The exclusions were manually performed at the bottom of the credit card statement when received in the mail, which is usually about a month after the charge; but without receipts from restaurants, we could not determine whether the exclusions were correctly calculated.
- d. AGU allocated \$1,297 of credit card charges (4 transactions) to the Administrative Allocation indirect cost pool as travel costs even though it was for meal charges at local restaurants, which are not allowable since the employees were not on official travel status. In addition, it appears that these meal charges were excessive and unreasonable.
- e. AGU allocated \$350 of other personnel costs to the Administrative Allocation indirect cost pool for membership dues at United Airlines' Red Carpet Club and Six Continents Club in the United Kingdom, which are not allowable under OMB Circular A-122. These clubs are considered as social clubs in airports and are not necessary for AGU operations.
- f. AGU allocated \$136 of credit card charges (three transactions) to the Administrative Allocation indirect cost pool as books and magazine subscriptions. Examples of purchases include subscriptions to the *Wall Street*

³⁸ In addition, these charges appeared to be excessive compared to the Federal Government's per diem rates for maximum lodging costs per night. Of the \$2,628 included in the administrative cost pool, the per diem costs were \$1,293 and thus the employee incurred \$1,335 in excessive lodging costs on the six transactions (\$2,628-\$1,293=\$1,335).

³⁹ Thus, in this case we were not able to determine the excess amount over per diem that AGU included in the pool.

Journal and the Wine Spectator. The purchases appear to be either unrelated to AGU's core mission or personal in nature.

- g. AGU allocated \$3,208 of credit card charges (31 transactions) to the Administrative Allocation indirect cost pools for travel (\$2,276), other personnel costs (\$713), services and supplies (\$119), and equipment (\$100) for various purchases without adequate supporting documentation. The employee(s) in question were not informed by AGU that credit card statements are not adequate as supporting documentation. It also appears that the employees responsible for approving the transactions did not think they could enforce this on their superiors.

Elimination of \$68,412 from the indirect cost pools will reduce the Publications division rate by 0.34 percent and the Meetings division, Outreach division, and Administrative Allocation rates by 0.23 percent each.

3. Unallowable Alcoholic Beverages - \$15,485. We removed \$15,485 of unallowable alcoholic beverages included in the Publications division, Meetings division, and Administrative Allocation indirect cost pools. OMB Circular A-122, Attachment B, Paragraph 2 stated that the costs of alcoholic beverages are unallowable.

AGU typically excludes alcoholic beverages from the indirect cost pools in its indirect cost proposal by recording these costs under two accounts [REDACTED]. AGU subsequently excluded \$7,609 of these unallowable alcoholic beverage purchases from the indirect cost pools in the proposal. However, AGU forgot to exclude \$15,485 of similar expenses from the indirect cost pools in the proposal because of insufficient oversight. Exclusion of the \$15,485 would reduce the Administrative Allocation rate by 0.05 percent, the Publications division rate by 0.07 percent, the Meetings division rate by 0.08 percent, and the Outreach division rate by 0.04 percent.

4. Excessive and Unreasonable Group Meal Costs - \$14,452. We removed \$14,452 of excessive and unreasonable group luncheon and dinner expenses allocated to the Publications division and Administrative Allocation indirect cost pools. OMB Circular A-122 states that costs must be reasonable for the performance of the award and be allocable to it. However, we found that:

- a. AGU included \$12,933 of excessive and unreasonable meal costs in its Publications indirect cost pool for a dinner catered by the California Culinary Academy at the 2002 Fall Meeting in San Francisco. The invoice from the caterer showed that the \$15,933 dinner for 150 included \$3,662 of unallowable alcoholic beverages, which we excluded from the indirect cost pool. We also excluded an additional \$9,271 because we believe that \$81.81⁴⁰ per person for a dinner (excluding alcoholic beverages) was excessive and unreasonable and should not have been included in an indirect cost pool that may be applied to

⁴⁰ \$15,933/150= \$106.22 per person, less \$24.41 for alcoholic beverages = \$81.81.

Federal awards. We used the General Services Administration (GSA) rates as the basis for reasonableness. The GSA per diem for San Francisco in fiscal year 2002 for meals and incidental expenses was \$46 per day of which \$18 was allocated for dinner. Based on this guideline, we estimated that \$20 per person was a reasonable dinner cost. Therefore, we allowed \$3,000 (\$20 per person x 150 attendees) and excluded the remaining \$12,933 as excessive and unreasonable group dinner expenses.

- b. AGU included \$712 of excessive and unreasonable costs in the Publication divisions indirect cost pool for a Publications Committee dinner in Washington, D.C in September 2002. For the 15-person dinner, AGU included a total of \$1,012 in the pool, thus equating to a per-person charge of \$67, which was unreasonable for inclusion in an indirect cost pool that might be applied to Federal awards. Using the GSA per diem rate for Washington D.C. for dinner of \$18 as our basis for reasonableness, we computed an allowable cost of \$300 (\$20 per person x 15), and excluded the \$712 (\$1,012-\$300) claimed in excess of this amount as unreasonable.
- c. AGU included \$694 of excessive and unreasonable charges in the Administrative Allocation indirect cost pool for a Budget and Finance Committee dinner, for which AGU added \$854 to the pool. The documentation provided did not show the exact number of attendees; however, according to AGU's website, this committee had eight members. Assuming all eight members attended the event, that would equate to a per person charge of \$107, which was unreasonable for inclusion in an indirect cost pool that might be applied to Federal awards. Using the GSA per diem rate of \$18 for dinners in Washington D.C. as our basis for reasonableness, we computed an allowable cost of \$160 (\$20 per person x 8). As a result, we excluded the \$694 (\$854-\$160) claimed in excess of this amount as unreasonable.
- d. AGU allocated \$113 for a "celebration luncheon" at a local restaurant for six employees upon completion of the fiscal year 2001 audit to the Administrative Allocation indirect cost pool. Because AGU does not have a written policy allowing celebratory luncheons, we do not believe that the cost of this luncheon should be allocated to Federal Government grants.

While AGU has a policy that limits meal costs for employees on travel status, AGU does not apply similar policy to group luncheons or dinners held locally. Excluding these expenses from the Administrative Allocation indirect cost pool would have no effect on the indirect cost rates. However, exclusion of similar charges from the Publications division indirect cost pool would reduce its rate by 0.10 percent.

5. Other Personnel Costs - \$21,990. We removed \$21,990 of other personnel costs allocated to the Administrative Allocation (\$21,145) and Outreach division (\$845) indirect cost pools for failure to credit employees' payments to fitness club membership,

excessive and unreasonable holiday party expenses, and unnecessary floral arrangement expenses, as follows:

- a. Credit for Fitness Club Membership - \$15,620. AGU incurred and allocated \$44,516 in membership fees for employees' participation at a local fitness club to the Administrative Allocation indirect cost pool, but did not reduce the amount with the \$15,620 it collected from employees' paychecks to partially offset the membership fees. OMB Circular A-122 requires that applicable credits that offset or reduce expense items should be credited to the Federal Government either as a cost reduction or cash refunds, as appropriate. This occurred because the paycheck deductions were not recorded as AGU expenses and the Human Resources department, responsible for the payroll records, did not have any accounting personnel. Crediting employees' paycheck deductions to the Administrative Allocation indirect cost pool would reduce the indirect cost rates for each division by 0.07 percent.
- b. Holiday Party - \$5,235. We removed \$5,235 of holiday party expenses, which AGU claimed as Other Personnel Costs to the Administrative Allocation indirect cost pool as unallowable entertainment costs. Excluding these entertainment costs from the Administrative Allocation pool would reduce each division's rates by 0.02 percent.
- c. Floral Arrangement Costs - \$1,135. We removed \$1,135 of floral arrangement costs that AGU included in its Outreach division (\$845) and Administrative Allocation (\$290) indirect cost pools because AGU did not consistently treat these costs as required by OMB Circular A-122. Specifically, we found that AGU excluded \$532 of floral arrangements purchases from the indirect cost pools. Accordingly, we believe AGU should also exclude \$1,135 of floral arrangement costs that it included in the indirect cost pools. AGU management concurred that the failure to remove these purchases from the indirect cost pools was an oversight. We believe this may have occurred because AGU did not have a formal written policies and procedures on the development of indirect cost proposals. Excluding the purchases of floral arrangements from the Administrative Allocation indirect cost pool would have no effect on the indirect cost rates. However, the Outreach division indirect cost rate would be reduced by 0.07 percent.

6. Travel & Official - \$10,017. We removed \$10,017 of travel-related expenses allocated to the Publications division (\$2,614), Meetings division (\$353), and Administrative Allocation (\$7,050) indirect cost pools for the following reasons:

- a. Local Lodging Costs by AGU Employees. AGU incurred \$9,236 of lodging costs at local hotels for its employees and allocated these costs as travel costs to the Publications division, Meetings division and Administrative Allocation indirect cost pools. We removed these costs in total because the employees were not on official travel status and OMB Circular A-122 states that local travel costs

should not include entitlements of per diem and lodging costs. There were several instances during FY 2002 when AGU employees stayed at local hotels during various meetings. The instances of local lodging costs include:

- AGU included \$5,440 of lodging costs for eight employees to participate in AGU's Leadership Conference in Leesburg, Virginia during May 2002. We do not believe that lodging costs for its employees at this conference is reasonable because Leesburg is part of Loudoun County, which is included in NSF's definition of local commuting area.
- AGU included \$1,863 of hotel costs for four employees to participate in the 2002 Spring Meeting at Washington, D.C.
- AGU included \$950 of lodging costs for employees to participate in various meetings in Washington, D.C. between August and November 2002.
- AGU included \$800 of lodging costs for four employees to participate in a March 2002 meeting in Washington, D.C. in preparation of the 2002 Spring Meeting.
- AGU included \$183 of lodging costs for an employee to participate in the Meeting Committee's May 2002 meeting in Washington, D.C.

It is AGU's policy to allow its employees to incur local lodging costs during meetings with approvals from their supervisors if their participation requires they spend more than certain hours a day on site. However, we do not believe that it is reasonable to charge local lodging costs as indirect costs to the Federal Government. Removing these local lodging costs from the indirect cost pools would reduce the indirect cost rates for Publications division by 0.05 percent, Meetings division by 0.04 percent, and Outreach division and Administrative Allocation by 0.03 percent each.

- b. Excessive Lodging Costs - \$630. AGU incurred \$630 of lodging expenses that we believe to be excessive and unreasonable when compared to the Federal Government's official per diem rates.⁴¹ In the first instance, an employee spent three nights in San Antonio for a training session in April 2002 at a rate of \$223 per night while the Federal Government's per diem rate for that city during fiscal year 2002 was \$91 per night. In the second instance, an employee spent two nights in Philadelphia for a roundtable meeting in September 2002 at a rate of \$235 per night while the Federal Government's per diem rate at that time for that city was \$118 per night. Excessive lodging costs occurred because AGU did not have travel policies that outline the maximum lodging rates that could be charged

⁴¹ The calculation of the \$630 excess is as follows:
San Antonio: $\$223 - \$91 = \$132$. $\$132 * 3 = \396 .
Philadelphia: $\$235 - \$118 = \$117$. $\$117 * 2 = \234 .
Excess: $\$396 + \$234 = \$630$.

to Federal awards. Excluding these excessive lodging costs from the indirect cost pools would not have any effect on the indirect cost rates.

- c. Meals from Local Restaurants - \$151. AGU included \$151 of unallowable meals from local restaurants while employees attended training classes locally in the Washington, D.C. area. OMB Circular A-122 states that local travel costs do not include the entitlements of per diem and lodging costs. This occurred because AGU's travel policies allow meal costs at local restaurants while on training, even if it is being held locally. Excluding these local meal costs from the indirect cost pools would not have any effect on the indirect cost rates, however we note that it is important for AGU to realize the difference between local and out of town travel.

7. Grants & Contributions - \$13,193. We removed \$13,193 of grants and contributions expenses allocated to the Outreach division and Administrative Allocation indirect cost pools for the following reasons:

- a. Unallowable donations - \$10,500. OMB Circular A-122 states that contributions and donation by the organization to others are unallowable; therefore, we removed \$10,500 of unallowable donations included in the Administrative Allocation indirect cost pool. Specifically, AGU donated \$10,000 to the Greater Washington Society of American Executives' Association Leadership Foundation and \$500 to the American Society of Association Executives' Association Advance America Fund. In both instances, AGU's check request form indicated that the payments were for donations. Removal of unallowable donations from the Administrative Allocation indirect cost pool will reduce the indirect cost rates by 0.04 percent.
- b. Misclassification of Fellowship as Indirect Costs - \$2,693. We removed \$2,693 of claimed indirect costs for a fellowship grant that we believe should have been classified as direct costs. OMB Circular A-122 states that costs that can be identified with a particular final cost objective should be a direct cost. AGU awarded a fellowship grant to the University of Delaware's Graduate College of Marine Studies for support of a high school science teacher working at a research laboratory during summer of 2002. This grant does not benefit the organization as a whole and therefore should be classified as a direct cost and included in the direct cost base. This occurred because the Outreach division management's accounting unit incorrectly accounted for the payment. Reallocating this fellowship grant from the Outreach division indirect cost pool to the Outreach division direct cost base would reduce the indirect cost rate by 0.05 percent.

8. Dues - \$1,850. AGU allocated \$1,850 of dues expenses to its Administrative Allocation indirect cost pool without prior approval from its cognizant Federal agency (NSF) as required by OMB Circular A-122. Specifically, AGU included \$1,850 of corporate membership dues for the Greater Washington Board of Trade, a civic organization as part of the regional chamber of commerce for the District of Columbia,

Northern Virginia, and Suburban Maryland. This type of cost is allowable under OMB Circular A-122, but AGU did not obtain prior approval from NSF to include membership dues for a civic organization in the indirect cost proposal. Removing the unauthorized membership dues would reduce the indirect cost rates for each division by 0.01 percent.

9. Unsupported Costs - \$17,783. We removed \$17,783 of unsupported expenses allocated to the Publications division, Outreach division, and Administrative Allocation indirect cost pools because AGU could not provide sufficient supporting documentation as required by OMB Circulars A-110 and A-122. For example:

- a. In the indirect cost proposal, AGU claimed that the Outreach division incurred \$3,713 in other personnel costs while it could support only \$1,374 in its accounting records, a difference of \$2,339.
- b. AGU was not able to provide supporting documentation for four payments to vendors totaling \$13,334 recorded in the accounting records.
- c. Although AGU provided expense reports submitted by four employees totaling \$1,307, it could not provide receipts to support the expenses included in the reports.
- d. AGU could not support \$605 of claimed travel costs for the 2002 Spring Meeting in Washington, D.C. that was allocated to the Administrative Allocation indirect cost pool.
- e. AGU used a monthly credit card statement to support \$198 allocated as travel costs to the Administrative Allocation indirect cost pool. The credit card statement showed that the \$198 of the charges consisted of purchases from bakeries, grocery stores, and local restaurants.

Without adequate supporting documentation from vendors, we could not determine whether the claimed costs were allocable to the indirect cost pools, allowable according to OMB Circular A-122, and reasonable. Specifically, a credit card statement is not adequate supporting documentation because it does not provide descriptions of the items purchased. Removal of \$17,783 in unsupported costs from the indirect cost pools will reduce the indirect cost rates by 0.08 percent for the Publications division, 0.05 percent for the Meetings division, 0.26 for the Outreach division, and 0.05 for the Administrative Allocation.

SECTION IV

AGU RESPONSE



August 17, 2005

[REDACTED]
National Science Foundation
4201 Wilson Boulevard
Suite 1135
Arlington, Virginia 22230

[REDACTED]:
As per your request, I have attached a copy of AGU's response to NSF's draft report on the *Financial and Compliance Audit of Indirect Costs for the Year Ended December 31, 2002 and Incurred Costs on 27 Awards from October 1, 1996 to December 31, 2003*, which was faxed to you on Friday, August 12, 2005.

If you have any questions or require additional, please contact [REDACTED].
[REDACTED]

Sincerely,
[REDACTED]
[REDACTED]

enclosure

AUG 19 2005

AGU response to the draft Report of the Spring 2004 audit by NSF of AGU's FY 2002 indirect cost proposal and of incurred costs from 1 October 1996 - 31 December 2003.

This Report in its earliest form pointed out important errors in our accounting for expenditures and weaknesses in our grant management practices. We appreciated having these human and procedural errors brought to our attention and began immediately to use this information to improve our overall performance and to effect positive change in our procedures and systems.

In this response we have been asked to address the findings and recommendations in Section II of the Report. Detailed comments follow in the order that the issues are presented in the Report; first we summarize our view.

The more than \$200,000 of unallowable costs on awards is overstated by at least a factor of four above what is reasonable. Before disallowing it fair consideration should be given to how the approximately \$150,000 of excess rental charges arose and at the reduced cost to the government that bore those rental costs in lieu of a more substantial indirect cost charge, and to the START activity in terms of available funds for program.

We do not accept that it is inappropriate to have payroll responsibility combined with other human resource activities. Adequate controls are possible without taking that step. One control we use is the review of performance versus budget throughout the year by all managers who are responsible for projects to which compensation is charged. That review makes fraud and errors difficult to obscure. Nevertheless, in payroll and in the other areas in which weak procedures and lack of knowledge are noted as a concern we are taking steps to strengthen the situation.

Lastly in this summary we **note** that the FY2002 indirect cost proposal that you audited was comprised of **3** different rates instead of the single rate currently in effect. While AGU does distribute its indirect costs from four separate pools, it is not, and never was our intent to ask for approval of anything but a single rate for our organization. Separate rates would be very difficult to manage fairly because the projects we undertake with grant support frequently cut across the functional structure that serves the bulk of our activity well. We request that the current rate remain in effect until NSF has an opportunity to review a 2004 proposal based on the guidelines suggested by the audit.

Unallowable Costs on NSF Awards

Rental Charges

There are three separate reasons, each of which, in our view, alone fully supports the current rental arrangement with START and its continuation into the future.

1. The arrangement was **negotiated** at arms length prior to any contemplation of the

current arrangement through which the NSF portion of START's budget became the legal responsibility of AGU. START and AGU remain completely independent organizations, START operating under the International Council for Science in Paris and AGU a US, 501(c)(3), scientific society. We are associated only by an arrangement for AGU to provide specific services under an MOU and common scientific interests and objectives.

2. The 5% indirect cost rate was understood by NSF program officers, START and AGU to be important to achieving START's objectives and was recognized, with the rental arrangement, as being *in toto* substantially less than usual indirect cost rates.

3. This arrangement is to the government's benefit because AGU is relieving the burden of maintaining the START Secretariat to the extent that normal indirect costs are forgone. In the figures before us the proposed take back of "excessive rent costs" is about \$150,000 over the 4 years examined. The indirect costs accorded to AGU in that period at 5% were also about \$150,000. At 35% of direct cost the indirect cost would have been >\$1,000,000. Some noticeable fraction of \$200,000 per year accrues to the benefit of the government because of this arrangement. In addition, the low rate enhances the START image abroad making it more effective and better reflects true operating costs and START as an independent entity.

The Report also fails to take into account that the rental charges were listed in the budgetary explanation included in the proposal to the NSF GEO-9901551; peer-reviewed and subsequently approved by the cognizant NSF program officer and in the grant awarded by NSF.

Only about 1/3 of START revenue formally flows through AGU. To characterize START as related to AGU could have a detrimental effect on START's ability to perform its function worldwide. AGU views START as a valued partner that is pursuing common goals. AGU serves only as an administrative agent for START with respect to matters selected by START.

It would be unfair to AGU and potentially damaging to START to precipitously alter this relationship and to ask for the return of a portion of the pittance that has been paid in place of higher indirect costs.

Participant Support Funds Spent on Other Cost Areas

DUE-9614954 Spheres of Influence

At this date AGU cannot document participant support costs for the questioned amount, and, therefore, accepts responsibility for the \$8,711 indicated in the Report.

OCE-9729933 START

In December 2000, payments for preparation of data and models in support of a workshop were charged to OCE-9729933. A portion of those costs should have been charged to a private grant. AGU accepts responsibility for the \$3,448 in questioned costs.

ATM-9908640 Chapman Conference Water Vapor Climate System

Five students were supported under this award to participate in the Chapman Conference as noted in the final report to NSF. AGU is in the process of retrieving records that document participant support expenses under this award. We expect to show that no funds are due NSF.

EAR-9911107 Science Teacher and Research Scientist Workshop

Following the December 1999 workshop, the grant had \$8,352 remaining. AGU requested and received permission via email from [REDACTED], cognizant NSF program official, to use the remaining funds to provide a STaRS Fellowship to a teacher during the summer of 2001. The teacher selected was [REDACTED], a high school chemistry teacher from Delaware, who performed research under the direction of Professor [REDACTED] of the University of Delaware. AGU considers the funds properly spent under the terms of the grant.

ATM-0118057 Chapman Conference Atmospheric Absorption and

OCE-0129558 Chapman Conference Volcanism

These were accounting errors of \$366 for which we accept full responsibility.

ATM-0139033 Chapman Conference Volcanism (Greece)

This was an accounting error of \$924 for which we accept full responsibility.

ATM-0322531 Chapman Conference Physical Modeling of Inner Magnetosphere

AGU recorded \$4,797 in participant support costs through 2003 under Grants & Contributions natural category in the general ledger. Those funds supported documented travel expenses for graduate students as noted in the final report to NSF, and should have been recorded under the Travel & Official natural category to be consistent with our standard practice for participant support costs. However, we erroneously recorded \$360 of Compensation & Benefits under the grant and accepts responsibility for that amount.

Goods or Services for Personal Use

This practice was changed while the audit was in progress and such charges and now paid out of discretionary non-US funds available to the START Secretariat.

Claimed Award Amount Different from General Ledger Amounts

DUE-9614954 Spheres of Influence

AGU accepts responsibility for this error of \$2,212.

ATM-0089582 Earth Systems History II

This grant is still open and the error of \$4,160 will be corrected in a forthcoming FCTR.

Cost-Sharing Procedures

DUE-9612954 Spheres of Influence

We are confident that our cost-sharing obligation was met; however, we cannot provide documentation of that, and, therefore, must accept responsibility for the questioned \$8,101 identified in the Report.

EAR-0105317

AGU is documenting cost-sharing expenses for this open NSF award. Since the award is not closed no judgement should be made yet.

AGU introduced an improved policy for tracking expenses for grants requiring cost sharing in 2002.

Internal Control Weaknesses

Segregation of Personnel and Accounting Functions

We remain unconvinced that the only way to achieve adequate internal control in the payroll area is to assign payroll to accounting rather than leave it in Human Resources. Reconciliation of the payroll account is done monthly now, it has always been policy to do so. Other management reviews, such as of review of payroll data by management and office-wide management review of budget versus compensation, supplement these to assure that errors and fraud are avoided. We are re-examining the procedures to ensure that they continue to be most effective in that regard.

Sub-award Management

As a result of the deficiency identified in the NSF audit, AGU will flow down Federal cost principles to grant subrecipients in all cases. In addition, AGU will, to the extent practicable, require periodic financial reports from sub-recipients, request and review documentation of costs reported in the financial reports, and make available information and materials that will assist subrecipients in understanding and following the cost principles. We also are reviewing policies with regard to advancement of funds for sub-awards and plan to document procedures to be performed in connection with what site visits are possible.

Travel Procedures

AGU's travel reimbursement policies have been updated and are spelled out explicitly on the travel reimbursement forms provided to those incurring travel-related costs under NSF awards. Requests for reimbursement on the forms are reviewed for allowability and reasonableness by at least three people at AGU before funds are reimbursed, and that practice will continue. However, to address some of the concerns addressed in the Report and for ease in processing and reduced risk of error, a per diem basis, at the suggestion of the NSF auditors, will be used for

travel under NSF awards despite the fact that we believe that will result in higher cost to the government than the previous system.

Management of Fixed Assets

A complete inventory is underway and is being reconciled with the fixed asset records as it proceeds. Other policies and practices are also being reviewed.

Purchasing Controls

These procedures are to be reviewed and strengthened; however, at present there is good *ex post facto* review through the system that requires every payment to be signed by either the Executive Director or his Deputy. That has been standard practice unfailingly for at least 40 years and means that most mistakes only occur once and there can be little fraud if any.

Indirect Cost Proposal Methodology

We think some of the adjustments in this section are just rubbish, many are debatable and a few of the comments and adjustments are appropriate. Because this whole section deals with moving a very small percentage from indirect to direct cost we decided to change our practices and directly charge several of the types of items that were questioned rather than hassle about them on an ongoing basis.

We do take exception to the implication that the activities of our Committee on International Participation are not critical to the whole organization and are more analogous to a program. A worldwide community is at the heart of being scientifically effective and special attention has to be given to getting others involved with the US and vice versa. On principle we do not plan to shift that one to the direct category. You might note that it is mostly the administrative support of these activities that is included in indirect costs. Items like travel grants are paid from endowed funds

Unsupported Costs

Unallowable Costs

We continue to take exception to what appears to be the arbitrary exclusion of \$68,449 of expenses reported to have been supported only by credit card bill. Essentially all of these expenses are recorded with detailed receipts when available and contemporaneous notes on the receipts as required.

Excessive and Unreasonable Costs

Our definitions of this category are different from yours; however, we will put them into direct

costs in future rather than fight about it. We must try to keep things simple enough to be able to continue to accept government grants and that means keeping accounting exceptions to a minimum.

Misclassified Costs

Expenses not Credited with Offsetting Revenues

We recognize these errors and accept responsibility for them.

Adequate Internal Controls Not a Priority

Segregation of Duties

We are reviewing accounting, financial, and reporting functions within AGU in order to identify ways to improve efficiency and effectiveness and to strengthen internal controls.

Training in Federal Requirements

In response to the NSF audit, several AGU staff members underwent training in Federal cost principles (OMB Circular A-122) and administrative requirements for grants (OMB Circular A-110). Policies and procedures have been developed for cost-sharing and for the quarterly review of grant expenses. The Accounting Department is establishing a separate account number for participant support costs incurred under federal awards so that budget and actual expenses can be tracked more closely within the AGU accounting system.

Recommendations

- 1) We take great exception to the findings and the recommendation in this area and request that at the very minimum the current approach to the cost recovery by AGU for START activities be accepted for the past, present and continuing activity related to that organization.

We also feel that a more careful look needs to be made before the precise value of questioned direct costs is acceptable.

- 2) Monthly reconciliations of the payroll bank account are being done and we will be strengthening of other methods for ensuring internal control. We do not plan to separate the payroll function from the HR department nor risk the compromise of any individual's privacy by spreading salary and wage information further than is absolutely necessary.
- 3) Procedures for sub-awards will continue to be upgraded to the extent possible given the circumstances of the award and the funds available. Some steps have already been taken.

- 4) Measures to ensure the existing policy regarding the tracking of cost sharing is being implemented. We believe the current policy is sound.

Participant support costs are not shifted without approval; the problem lies in the absence of a specific account for tracking such expenditures and we have rectified that problem.

- 5) We are working on the policies and procedures in all of these areas.
- 6) Training of staff on Federal requirements has begun and will continue on a regular basis.
- 7) We propose to withdraw the proposal based on 2002 information because it will not serve the interests of the government or of AGU well. It is too complex to use and is based on a year of transition. We would like to submit a new proposal based on 2004 financial information that requests a single unified rate. We propose to use the standards suggested in this Report in preparing that request.