Washington, D.C.

Financial and Compliance Audit of Indirect Costs
For the Years Ended
December 31, 2000 and 2001

M.D. Oppenheim & Company, P.C. Certified Public Accountants 8403 Colesville Road, Suite 340 Silver Spring, Maryland 20910-3367

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#### Acronyms

<u>Acronym</u> <u>Explanation of Acronym</u>

ACS American Chemical Society

AICPA American Institute of Certified Public Accountants

BOD Board of Directors

CAS Chemical Abstracts Service

CMP Central Management Pool

DAE Division Administrative Expenses

DGA Division of Grants and Agreements

DIAS Division of Institution and Award Support

FCTR Federal Cash Transactions Report

MTDC Modified Total Direct Costs

NSF National Science Foundation

OIG Office of Inspector General

OMB Office of Management and Budget

PAR Personal Activity Report

WMP Washington Management Pool

# SECTION I INTRODUCTION AND AUDIT RESULTS

#### SECTION I -INTRODUCTION AND AUDIT RESULTS

#### **BACKGROUND**

The American Chemical Society (ACS) is a not-for-profit, tax-exempt organization established with the objective of encouraging the advancement of chemistry; promoting research in chemical science and industry; increasing and diffusing chemical knowledge; and promoting scientific interests and inquiry through its meetings, reports, papers, and publications.

ACS receives approximately \$331 million of annual revenues, mainly from advertising, membership dues, registration fees, and electronic and printed services. Of the \$331 million in annual revenues, federal financial assistance approximates \$797,000. The National Science Foundation (NSF) is the cognizant federal audit agency for ACS's indirect cost rates and provided approximately 50 percent of the federal financial assistance to ACS during the two-year period of our audit.

#### **OBJECTIVES AND SCOPE OF AUDIT**

At the request of the NSF, M. D. Oppenheim & Company, P.C. conducted a financial and compliance audit of the indirect cost proposals prepared by ACS for the years ended December 31, 2000 and 2001 to determine final indirect cost rates for those years. During the audit period, there was one active NSF award (\$1.1 million awarded) with indirect costs included in the award budget utilizing a maximum provisional rate. At the time this award was made, NSF had negotiated with ACS a 42 percent maximum provisional rate. However, the award letter further limited indirect costs to a proposed budgeted rate of 12.84 percent. ACS incurred \$303,625 on this award during the two-year period ended December 31, 2001, \$23,954 of which was claimed indirect costs. Our audit objectives were: (1) to determine whether ACS complied with federal requirements in computing its indirect cost proposals; (2) determine whether ACS over or under-recovered indirect costs on each NSF award active during the audit period, based on audit-determined indirect cost rates, and (3) to evaluate the adequacy of ACS's internal controls to administer, account for, and monitor indirect cost charges to federal awards. To accomplish the objectives of the audit, we:

• Conducted an on-site audit survey with sufficient observations, interviews, and examinations of documents to make an initial determination whether the maximum provisional rates were based on allowable indirect costs and whether controls to

<sup>&</sup>lt;sup>1</sup> ACS's Publications Division published a wide range of scientific journals, periodicals, and books. ACS's Chemical Abstracts Service Division abstracts and indexes chemistry-related research and provides access to the resulting databases through both electronic and hard copy formats.

<sup>&</sup>lt;sup>2</sup> ACS had eight other active NSF awards with a total value \$1 million and claimed \$152,553 of direct costs on these eight awards during the two-year period ended December 31, 2001, but didn't claim any indirect costs. Three of these awards had a fixed dollar amount of indirect costs in lieu of applying the approved maximum provisional rate and NSF did not fund indirect costs for the remaining five NSF awards.

administer, account for, and monitor indirect costs are adequate to ensure compliance with federal cost principles and administrative requirements.

- Prepared an audit planning document for OIG review and approval. The planning document included a description of ACS's organizational structure and the process used to administer, account for, and monitor indirect cost charges to federally sponsored awards. As part of the planning process, we performed an assessment of audit risk and obtained an understanding of ACS's control environment.
- Prepared an internal control audit planning document for OIG review and approval. The internal control planning document included the proposed audit programs/procedures for testing the significant internal controls necessary to accurately administer, account for, and charge indirect cost charges to federally sponsored awards. As part of the internal control process, we assessed the areas of control environment, risk assessment, information and communication, monitoring and control activities.
- Prepared a substantive audit testing planning document for OIG review and approval. The substantive planning document included the preliminary results of the internal control phase of the audit, including any findings and recommendations and the proposed audit program, which included the tests on compliance with applicable laws and regulations and substantive testing procedures to be applied to the indirect cost pools and the direct cost base.
- Performed testing procedures so as to determine whether the indirect cost proposals and the resultant indirect cost rates comply with OMB Circulars A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals and Other Nonprofit Organizations*, and A-122, *Cost Principles for Non-Profit Organizations*.

We conducted our audit in accordance with AICPA auditing standards generally accepted in the United States of America, Comptroller General's *Government Auditing Standards* and included tests of the accounting records and other auditing procedures that we considered necessary to fully address the audit objectives.

#### **SUMMARY OF AUDIT RESULTS**

We identified deficiencies in ACS's calculation of its proposed indirect cost rates for calendar years 2000 and 2001. The total audit adjustments and eliminations necessary to correct inaccuracies in the rate calculations are \$178,075 in total reductions to the indirect cost pools and \$4,754,709 in total additions to the direct cost bases for the two-year period. Our recommended adjustments resulted in a slight decrease in recommended indirect cost rates:

Calendar	Proposed	Recommended
<u>Year</u>	Rate	<u>Rate</u>
2000		48.74%
2001		50.30%

As the cognizant federal audit agency for indirect costs, NSF is responsible for negotiating and approving ACS' indirect cost rates for all federal agencies. On March 13, 2000, NSF approved a maximum provisional rate of 42 percent that began on January 1, 2000, until amended. NSF has not approved a new indirect cost rate subsequent to this agreement. Our audit adjustments could potentially impact ACS's other federal awards with the Department of Energy, Environmental Protection Agency and National Aeronautics and Space Administration.<sup>3</sup>

During the two-year audit period, ACS had one active NSF award with a maximum provisional indirect cost rate. The award letter for this award stated that the amount granted included an indirect cost allowance at a maximum provisional rate of 12.84 percent. Therefore, we used this rate to calculate maximum allowable indirect costs for this award. See Schedule A on page 19 for Schedule of Over/(Under) Recovered Indirect Costs. As a result of ACS utilizing a billing rate less than the maximum provisional indirect cost rate included in the award letter, ACS has not over-charged indirect costs on its NSF award active during these two years.

We also believe that the deficiencies and internal control weaknesses cited in our report could affect the reliability of ACS cost information that NSF would use to establish future ACS indirect cost rates. We found the following instances of noncompliance and internal control deficiencies in ACS' procedures to administer, account for, and monitor its indirect cost rates.

#### **Material Non-Compliance**

OMB Circular A-122 requires direct costs be allocated a portion of the organization's indirect costs even though some direct costs are unallowable for purposes of computing charges to federal awards. However, ACS incorrectly excluded unallowable food and catering costs from the direct cost bases, which resulted in ACS overstating it's proposed indirect cost rates. These unallowable costs totaled \$2,415,477 and \$2,339,232 for 2000 and 2001,

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<sup>&</sup>lt;sup>3</sup> ACS charged \$131,046 in indirect costs to other federal awards during fiscal years 2000 and 2001.

respectively. The incorrect exclusions occurred because the ACS staff believed that costs identified as unallowable should be excluded from the direct cost bases.

#### **Immaterial Non-Compliance**

OMB Circular A-110 requires that accounting records be supported by source documentation, however ACS could not locate travel expense reports, hotel and transportation receipts, or other detailed source documentation to support senior management's travel costs included in the indirect cost pools. As a result, adjustments were made to reduce indirect costs: \$68,563 out of \$213,524 audited for 2000 and \$109,512 out of \$375,918 audited for 2001. This occurred because ACS senior management were not aware of the federal requirements to obtain and maintain source documentation (receipts) for their travel expenses charged to federal awards as indirect costs.

#### **Internal Control Weakness**

OMB Circular A-122 requires that actual labor charges be supported by personnel activity reports for employees who work on more than one activity. However, ACS did not require its employees to record actual hours worked on activities and instead only uses a system to record employee time and attendance. ACS claimed that the reconciliation of personnel activity reports to the general ledger was excessively time consuming and costly, and so implemented an unwritten policy to use consultants for performance of direct labor as deemed necessary on future federal awards. We confirmed that ACS did not charge direct labor on federal awards and did not charge any employees time between indirect and direct activities during the two-year audit period. Nonetheless, the current time allocation system at ACS is not adequate as demonstrated by the fact that we found nine instances where ACS allocated employees' time between several direct (non-federal) cost centers without use of a personnel activity report or other written time allocation plan.

To address the compliance deficiencies and internal control weakness, we recommend that the Directors of NSF's Division of Institution and Award Support (DIAS) and the Division of Grants and Agreements (DGA) require that ACS develop and implement written policies and procedures that address: (1) development of direct cost bases in accordance with OMB requirements, especially the requirement that unallowable costs be included in the direct cost bases so indirect costs are correctly allocated to direct activities; (2) the adequacy and retention of original supporting documentation for all travel costs charged directly or indirectly to federal awards; and (3) the lack of time and effort by ensuring that ACS will not propose or charge direct labor, or allocate indirect labor charges for employees whose time are split between direct and indirect activities, to any federal awards until such time that its labor accounting system meets the requirements of OMB Circular A-122. In addition, we recommend that DIAS and DGA formalize the understanding with ACS that labor costs are not proposed or charged for future NSF awards until ACS implements a timekeeping system that satisfies the requirements as set out by OMB.

#### **Summary of Auditee's Response**

With respect to developing its direct costs bases in compliance with OMB Circular A-122, ACS concurs with the finding and has indicated it will revise its written policies and procedures to address the requirement that unallowable costs be included in the direct cost bases so indirect costs are correctly allocated to direct activities.

With respect to ensuring that its travel accounting records are supported by source documentation, ACS indicated it has travel policies and procedures that require that all travel costs are appropriately documented, especially for senior management. In late 2000 it implemented a document imaging system and believes the documentation supporting the travel costs questioned were inadvertently destroyed during the implementation process.

With respect to its lack of an adequate accounting system, ACS concurs with the audit's recommendations and agrees to document its policies and procedures to neither propose nor charge direct or indirect labor to any federal awards. ACS also agrees to formalize the understanding it has with NSF that ACS will not propose or charge labor costs to future NSF awards until such time as the ACS and NSF decide otherwise, and ACS' labor accounting system meets the requirements of OMB Circular A-122. However, ACS claims that it does use PARs to support cost sharing agreements with the federal government but is does not reconcile these PARs to the general ledger because of it's decision not to charge any labor directly to federal awards. ACS indicated it plans to upgrade its labor system in 2005 to enable it to track actual time spent by staff on particular projects or grants.

#### **Summary of Auditor's Response to Auditee's Response**

We agree with the plans forwarded by ACS to address the recommendations made in this report, with the exception of their policy of claiming labor costs as cost sharing on federal awards without an adequate personnel system that reconciles the PARs to actual salary costs in the general ledger. OMB Circular A-122, attachment B, part 8, *Compensation for personal services*, section m.4, requires that "salaries and wages of employees used in meeting cost sharing or matching requirements on awards must be supported in the same manner as salaries and wages claimed for reimbursement from awarding agencies."

#### **EXIT CONFERENCE**

An exit conference was held on April 3, 2003 at the Auditee's office located at 1155 Sixteenth Street, N.W., Washington, District of Columbia. The findings on compliance and internal control along with the adjustments, eliminations and exclusions related to the indirect cost proposals were discussed by the following individuals.

For American Chemical Society:
For M.D. Oppenheim & Company, P.C.:

# SECTION II FINDINGS AND RECOMMENDATIONS

National Science Foundation Office of Inspector General 4201 Wilson Boulevard Arlington, Virginia 22230

### INDEPENDENT AUDITORS' REPORT ON COMPLIANCE AND INTERNAL CONTROL

We have audited the summary schedule of over/(under) recovered indirect costs (Schedule A) and the schedules of indirect/direct costs (B-1 and B-2) which summarize the indirect cost proposals prepared by the American Chemical Society for the years ended December 31, 2000 and 2001, and have issued our report thereon dated April 3, 2003. We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States and the *National Science Foundation Audit Guide* (September 1996).

#### Compliance

As part of obtaining reasonable assurance about whether the American Chemical Society's financial schedules are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and policies, noncompliance with which could have a direct and material effect on the determination of the financial schedules amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed instances of noncompliance, as reported in the accompanying Findings and Recommendations on Compliance and the adjustments and eliminations noted in Schedules C-1 and C-2, that are required to be reported under *Government Auditing Standards* and the *National Science Foundation Audit Guide*.

#### Internal Control Over Financial Reporting

In planning and performing our audit, we considered the American Chemical Society's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial schedules and not to provide assurance on the internal control over financial reporting. However, we noted a matter involving internal control over financial reporting and its operation that we consider to be a reportable condition. Reportable conditions involve matters coming to our attention relating to

#### National Science Foundation Office of Inspector General

significant deficiencies in the design or operation of the internal control over financial reporting that, in our judgment, could adversely affect the American Chemical Society's ability to record, process, summarize and report financial data consistent with the assertions of management in the financial schedules. The reportable condition noted is described in the accompanying Finding and Recommendation on Internal Control.

A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements in amounts that would be material in relation to the financial schedules being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control that might be reportable conditions and, accordingly, would not necessarily disclose all reportable conditions that are also considered to be material weaknesses. However, we do not consider the reportable condition described in finding 1 to be a material weakness.

This report is intended solely for the information and use of the American Chemical Society and the National Science Foundation and is not intended to be and should not be used by anyone other than these specified parties.

M.D. Spenkein & Company, P.C.

April 3, 2003

Findings and Recommendations on Compliance For the years ended December 31, 2000 and 2001

#### Material Deficiency

#### 1. Unallowable Costs Excluded From Direct Cost Bases

OMB Circular A-122, states that unallowable costs should be treated as direct costs for purposes of determining indirect cost rates and be allocated their share of the organization's indirect costs if they represent activities which: (1) include the salaries of personnel, (2) occupy space, and (3) benefit from the organization's indirect costs. While ACS correctly excluded the following unallocable or unallowable food and catering costs from the indirect cost pools, ACS did not include these costs in the direct cost bases so they could be allocated their fair share of indirect costs:

Fiscal Year	Food and Catering
2000	\$ 2,415,477
2001	2,339,232
Total	<u>\$ 4,754,709</u>

We believe that food and catering costs at ACS derive a benefit from the organization's indirect costs. The food and catering attract their fair share of space occupancy and utilities costs at on-site functions, as well as costs for administrative and fiscal support necessary to procure and pay for these goods and services. Therefore, in accordance with OMB Circular A-122, these costs should be treated as direct costs and be included in the direct cost bases for the purposes of calculating indirect cost rates.

ACS made the decision to exclude 100 percent of its food and catering costs from its indirect cost pools because it determined that it was not cost effective to segregate unallowable costs (e.g. alcohol) from this account. This decision led to exclusion of all food and catering costs related to organizational functions from the indirect cost calculations. In addition, ACS staff believed that costs identified as unallowable in the indirect cost pools should also be excluded from the direct cost bases. The staff did not understand that when unallowable costs are identified an analysis should be done to determine if these costs derive a benefit from the organization's indirect costs, and if they do, then to ensure the unallowable items are included in the direct cost bases.

As a result, the direct cost bases were understated by \$4.7 million over two years. The impact of this understatement on the proposed indirect cost rates for fiscal years 2000 and 2001 were overstatements of 1.90 percent and 1.68 percent, respectively.

#### Recommendation

We recommend that the Directors of NSF's DIAS and DGA require that ACS develop written policies and procedures for developing its direct cost bases in accordance with OMB Circular A-122 requirements, especially the requirement that unallowable costs be included in the direct cost bases so indirect costs are correctly allocated to direct activities.

#### **Auditee's Response**

The ACS agrees to revise its written policies and procedures for developing it direct cost bases in accordance with the requirements of OMB Circular A-122. It will include food and catering costs in its direct cost bases and will continue to do so going forward. The ACS's indirect cost rate proposal for 2003, which was submitted to the National Science Foundation on September 1, 2004, complies with this agreement

#### **Auditors' Response to Auditee's Response**

ACS's proposed actions address the weaknesses noted. We recommend that the Director's of NSF's DGA and DACS require that ACS provide NSF with documentation that its policies and procedures have been revised and implemented.

#### <u>Immaterial Deficiency</u>

#### 2. <u>Lack of Adequate Supporting Documentation for Management Travel</u>

OMB Circular A-110 requires that accounting records be supported by source documentation. ACS could not locate travel expense reports, hotel and transportation receipts or other detailed source documentation to support costs for some senior management travel included in the indirect cost pools. Adjustments totaling \$68,563 (out of \$213,524 audited) and \$109,512 (out of \$375,918 audited) were made to reduce the indirect cost rates for FY 2000 and FY 2001, respectively.

ACS senior management was not aware of the federal requirement to obtain and maintain source documentation (receipts) for travel expenses charged to federal awards as indirect costs. In addition, senior management did not always adhere to the ACS travel policy, which requires that employees submit itemized travel vouchers with original receipts.

There was no material impact to the indirect cost rates for the two years audited. However, as the cognizant federal agency for ACS, NSF needs to be aware of potential future impact on indirect costs rates of inadequate supporting documentation of indirect travel expenses.

#### **Recommendation**

We recommend that the Directors of NSF's DIAS and DGA direct ACS to develop and implement policies and procedures to ensure all indirect travel costs charged to the government, especially for senior management, are documented in accordance with the requirements of OMB Circular A-110.

#### **Auditee's Response**

Late in 2000, the ACS modernized its operations by instituting a document imaging system. The ACS acknowledges that, as a result of issues associated with the implementation it failed to image some of its expense vouchers, which were destroyed before this issue was discovered. The problems encountered with the move to document imaging were resolved and quality control procedures were implemented.

The ACS currently has, and did have during the period under audit, policies and procedures in place to ensure *all* travel costs are appropriately documented. This holds true whether the travel costs are for indirect or direct purposes or are for senior management or staff. The ACS agrees to continue to follow these policies and procedures to ensure continued compliance with OMB Circular A-110.

#### **Auditors' Response to Auditee's Response**

The finding addresses the issue that senior management did not always adhere to the ACS travel policy and not whether a policy existed at the time of the audit. In addition, 96

per cent (\$66,110) of the travel costs questioned in 2000 were incurred between March and August of that year, and 100 per cent (\$109,563) of the travel costs questioned in 2001 were incurred between March and September of that year. This raises doubt that the lack of adequate documentation was due to the implementation of the new document imaging system late in 2000. Travel policies and new systems cannot ensure these costs will be adequately supported if senior management does not submit travel receipts in compliance with its own policies and in compliance with federal standards. Therefore, we reiterate the need for ACS to implement policies and procedures that ensure all indirect travel costs charged to the government, especially for senior management, are documented in accordance with the requirements of OMB Circular A-110.

Finding and Recommendation on Internal Control For the Years ended December 31, 2000 and 2001

#### Reportable Condition

#### 1. <u>Inadequate Timekeeping System for Federal Awards</u>

According to OMB Circular A-122, Attachment B, Paragraph 7(m)(2), Personnel Activity Reports (PARs) that reflect the distribution of the activities must be maintained for each employee (both professionals and nonprofessionals) whose compensation is charged, in whole or in part, directly to federal awards. In addition, these PARs must be maintained to support the allocation of indirect costs when employees work on two or more activities or functions (e.g., an employee engaged part-time in an indirect cost activity and part-time in a direct cost function). These PARs must meet the following standards: (a) the reports must reflect an after-the-fact determination of the actual activity of each employee (budget estimates do not qualify as support for charges to awards); (b) each report must account for the total activity for which employees are compensated; (c) the reports must be signed by the individual employee or a responsible supervisory official having first hand knowledge of the activities performed by the employee; and (d) the reports must be prepared at least monthly and coincide with one or more pay periods.

ACS currently does not have a personnel accounting system for charging labor to activities including federal awards. Instead, ACS uses a payroll exception reporting system to record employee time and attendance. A payroll exception reporting system is a system that only records employees' use of leave (i.e. annual, sick, or holiday) on timecards instead of actual hours worked per day. Auditors, who prepared the ACS 1997 Single Audit report, found that this timekeeping system was not adequate for tracking actual activity charged to federal awards. The organization responded by implementing a two-tier timekeeping system requiring charges to federal awards be supported by PARs each pay period. However, ACS stopped using this system once it was decided the process of reconciling the PARs to the general ledger was excessively time consuming and costly. Therefore, in FY 2000, ACS informally decided to use consultants to perform any direct labor deemed necessary on future federal awards.

During the scope of our audit (fiscal years 2000 and 2001), we confirmed that ACS did not charge direct labor to any federal awards and did not charge any employees time between indirect and direct activities during the two-year audit period. However, we found that ACS arbitrarily allocated nine employees' time between more than one direct (nonfederal) cost center. Most employees are charged 100 percent to specific activities or programs. The time allocation appeared to be determined by the employees' supervisor without the use of PARs or a written, documented allocation plan. This further demonstrates the inadequacy of ACS's time charging system.

Because federal awards are a small part of the ACS organization, management decided to not change its entire timekeeping system to address the unique timekeeping requirements related to its federal awards. It should be also be noted that most NSF awards made to ACS do not include any direct labor costs, for example in 2000 only one out of the

four active awards had direct labor awarded. This equated to only nine percent of the total amount awarded was allocated as direct labor and related fringe benefit costs. Nonetheless, because ACS does not have a written policy restricting its staff to charge direct labor to federal awards, the possibility exists that ACS could in the future inadvertently charge labor to NSF or other federal awards.

#### Recommendation

We recommend that the Directors of NSF's DIAS and DGA require:

- 1. ACS to develop written policies and procedures that help ensure ACS will not propose or charge direct labor to any federal awards until such time that its labor accounting system meets the requirements of OMB Circular A-122;
- 2. ACS to develop written policies and procedures that help ensure ACS will not propose or charge to indirect cost pools any employees time that is allocated between indirect and direct activities until such time that its labor accounting system meets the requirements of OMB Circular A-122; and
- 3. Formalize the understanding between NSF and ACS that will not propose or charge labor costs to future NSF awards until ACS implements an acceptable timekeeping system. In addition, we recommend that NSF inform other federal agencies of ACS timekeeping deficiency.

#### **Auditee's Response**

In response to recommendations 1 and 2, ACS agrees to document its policies and procedures to neither propose nor charge direct or indirect labor to any federal awards. It also agrees to formalize the understanding it has with NSF that ACS will not propose or charge labor costs to future NSF awards until such time as the ACS and NSF decide otherwise and ACS' labor accounting system meets the requirements of OMB Circular A-122.

Additionally, in its response to recommendation 1, the ACS response indicated that while it does not charge direct labor to the federal government, it does use PARs to support cost sharing agreements it has with the government. These PARs are not reconciled to actual salaries in its general ledger because ACS views these costs as a contribution to its NSF awards.

In response to recommendation 3, the ACS acknowledged that its current personnel accounting system does not have the capability of tracking actual hours charged to activities in compliance with OMB Circular A-122. The ACS plans to upgrade its labor system in 2005 to enable it to track actual time spent by staff on particular projects or grants.

#### **Auditors' Response to Auditee's Response**

ACS' proposed actions address the weaknesses noted except for its policy to continue to use PARs to support cost sharing agreements with the federal government. The use of PARs for any costs claimed in support of federal awards must be supported by the personnel accounting system, whether for direct or indirect labor or labor contributed to an award as cost sharing. ACS' view that cost sharing is a contribution to the government does not exempt documentation supporting these costs from meeting federal standards. Specifically, OMB Circular A-122, attachment B, part 8, *Compensation for Personnel Services* specifies, in part, that "salaries and wages of employees used in meeting cost sharing or matching requirements on awards must be supported in the same manner as salaries and wages claimed for reimbursement from awarding agencies."

We recommend that the Director's of NSF's DIAS and DGA require that ACS provide NSF with documentation that its policies and procedures have been revised and implemented. In addition, ACS needs to ensure that labor contributed to federal awards as cost sharing is supported by its personnel accounting system.

# SECTION III FINANCIAL SCHEDULES

National Science Foundation Office of Inspector General 4201 Wilson Boulevard Arlington, Virginia 22230

#### **INDEPENDENT AUDITORS' REPORT**

We audited the indirect cost proposals submitted by the American Chemical Society that were applicable to the National Science Foundation and other federal awards for the years ended December 31, 2000 and 2001. These indirect cost proposals, as presented in the schedules of indirect/direct costs (Schedules B-1 and B-2) and the summary schedule of over/(under) recovered indirect costs (Schedule A), are the responsibility of the American Chemical Society's management. Our responsibility is to express an opinion on Schedules A, B-1, and B-2 based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America, *Government Auditing Standards* issued by the Comptroller General of the United States, and the *National Science Foundation Audit Guide* (September 1996). Those standards and the *National Science Foundation Audit Guide* require that we plan and perform the audit to obtain reasonable assurance about whether the financial schedules are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial schedules. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial schedule presentation. We believe our audit provides a reasonable basis for our opinion.

The accompanying financial schedules were prepared for the purpose of complying with the requirements of the *National Science Foundation Audit Guide* as described in Note 1, and are not intended to be a complete presentation of financial position in conformity with accounting principles generally accepted in the United States of America.

In our opinion, the financial schedules referred to above present fairly, in all material respects, the indirect cost proposals (Schedules B-1 and B-2) and the resultant over/(under) recovered indirect costs (Schedule A) for the years ended December 31, 2000 and 2001, in conformity with the *National Science Foundation Audit Guide*, *NSF Grant Policy Manual*, and on the basis of accounting described in Note 1.

#### National Science Foundation Office of Inspector General

In accordance with *Government Auditing Standards*, we have also issued our report dated April 3, 2003 on our consideration of the American Chemical Society's internal control over financial reporting and on our tests of its compliance with laws and regulations. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be read in conjunction with this report in considering the results of our audit.

Schedules C-1 and C-2 contain indirect costs in the amount of that are reductions to the indirect costs proposed and that are additions to the direct costs proposed for the years ended December 31, 2000 and 2001. The National Science Foundation will make the final determination, as to whether such costs are allowable or unallowable. The ultimate outcome of this determination cannot presently be determined.

This report is intended solely for the information and use of the American Chemical Society and the National Science Foundation and is not intended to be and should not be used by anyone other than these specified parties.

M.D. Oppenheim & Company, P.C.

April 3, 2003

#### **AMERICAN CHEMICAL**

#### Schedule of Over or (Under) Recovered Indirect Costs on National Science For the years ended December 31, 2001

								Indirect Costs					
					Indirect (	Cost Rate				Allowed	Over/(Under)	Over/(Under)	
		Indirect Cost Approve	d in Award		Proposed	/Audited				(Approved	Recovered	Recovered	
NSF Award				Year	Proposed	Audited	Schedule	Claimed to		Rate	Per Audited	Per Allowed	Comment/
Number	Award Period	Cost Method	Rate (A)	Ended	Rate	Rate	Reference	NSF	Per Audit	x MTDC)	Rate	Rate	Notes
DUE-0053250	09/01/00 - 08/31/02	Max Provisional	12.84%	12/31/00		48.73%	B-1a	\$ -	\$ 27,051	7,128	\$ (27,051	\$ (7,128)	)
		Max Provisional	12.84%	12/31/01		50.29%	B-2a	23,594	92,513	\$ 23,620	(68,919	(26)	
							Subtotal	23,594	\$ 119,564	\$ 30,748	\$ (95,970	\$ (7,154)	) (B)
INT-9711279	06/01/97 - 12/31/01	Fixed Dollar		12/31/00			B-1a	-0-	-0-	-0-	-0-	-0-	
		Fixed Dollar		12/31/01			B-2a	-0-	-0-	-0-	-0-	-0-	
							Subtotal	-0-	-0-	-0-	-0-	-0-	(C)
DUE-9752102	09/01/97 - 08/31/00	Fixed Dollar		12/31/00			B-1a	-0-	-0-	-0-	-0-	-0-	(D)
							Total	\$ 23,594	\$ 119,564	\$ 30,748	\$ (95,970)	\$ (7,154)	

#### Comments/Not

MTDC = Modified Total Direct Costs. (Total direct program costs less equipment, participant support costs and subcontract

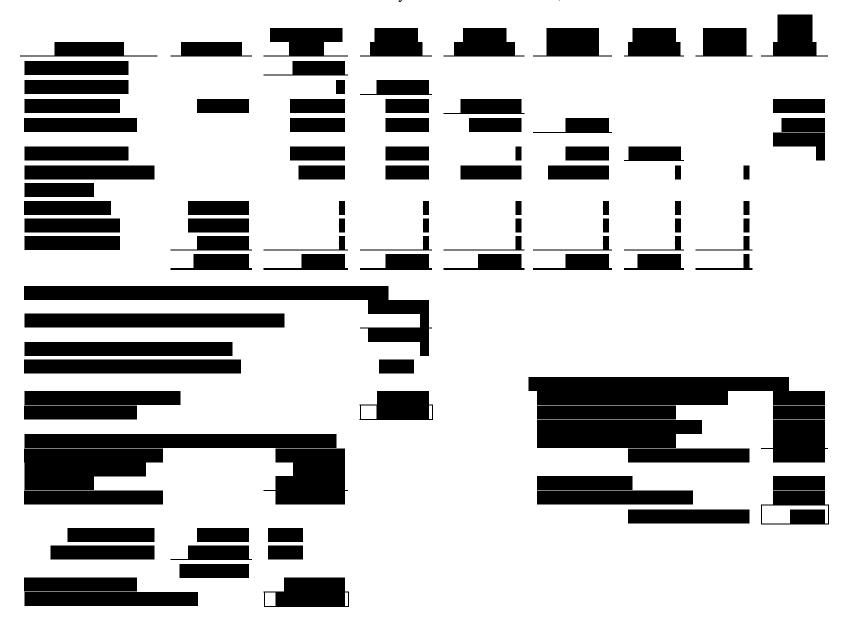
<sup>(</sup>Â) Maximum provisional rate subject to downward adjustment

<sup>(</sup>B) Indirect costs claimed based upon application of a 12.84% rate specified in the budget. It is subject to downward adjustment

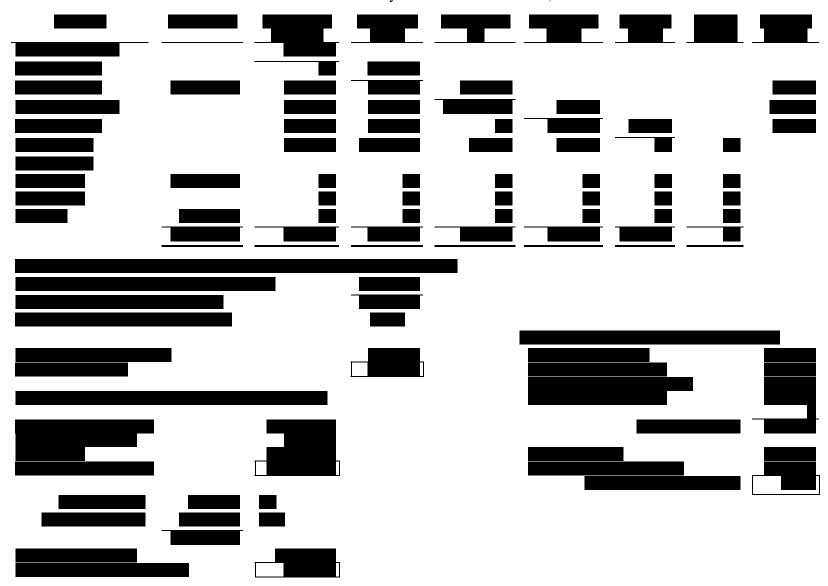
<sup>(</sup>C) Fixed dollar amount of \$3,000 for indirect costs in lieu of an indirect cost rate calculation. Total amount claimed 1997-

<sup>(</sup>D) Fixed dollar amount of \$61,586 for indirect costs in lieu of an indirect cost rate calculation. Total amount claimed

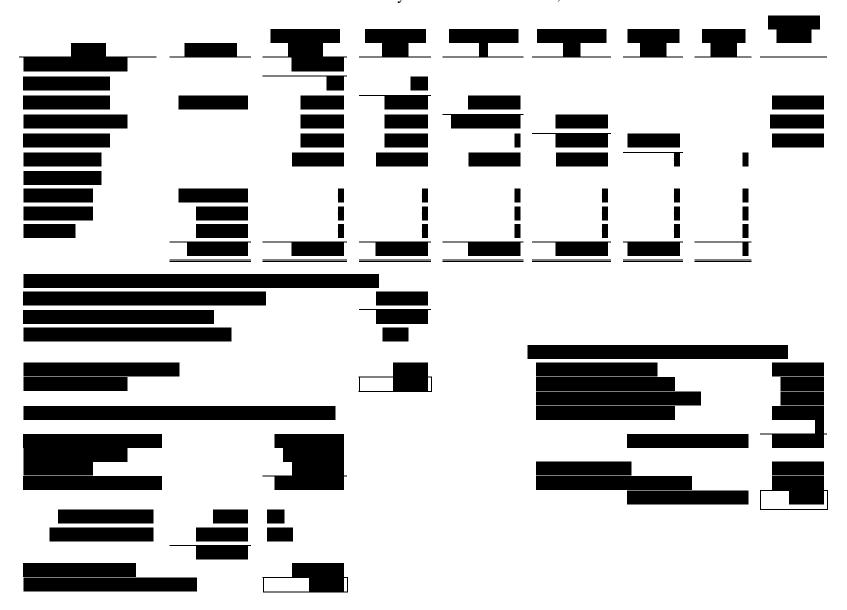
#### Schedule of Proposed Indirect Cost Rate Calculation For the year ended December 31, 2000



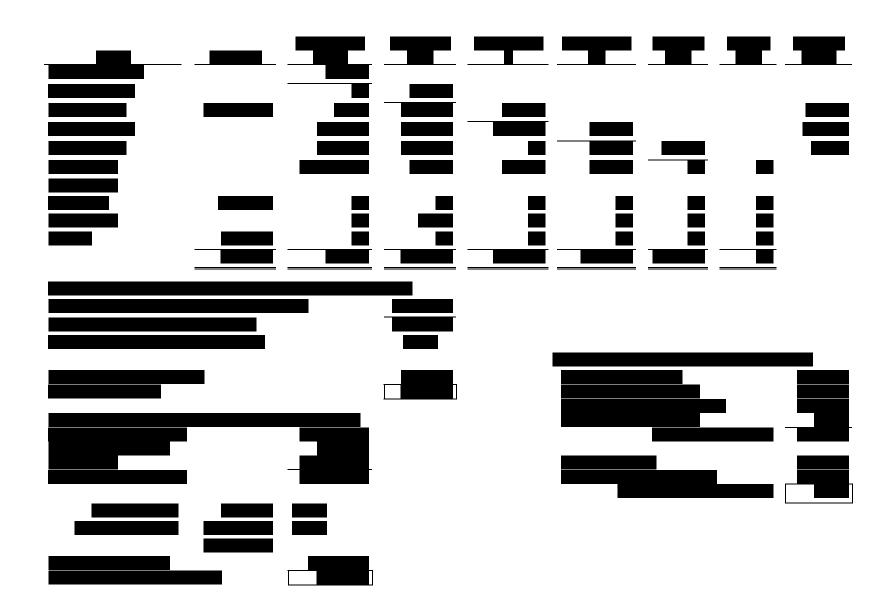
Schedule of OIG Recommended Indirect Cost Rate Calculation For the year ended December 31, 2000



#### Schedule of Proposed Indirect Cost Rate Calculation For the year ended December 31, 2001



#### Schedule of OIG Recommended Indirect Cost Rate Calculation For the year ended December 31, 2001



Schedule of Auditors' Adjustments and Eliminations For the years ended December 31, 2000 and 2001

The amounts as proposed by ACS in their indirect cost proposals for the years ended December 31, 2000 and 2001 (Schedules B-1 and B-2) required adjustments and eliminations to the indirect cost or direct cost pools. These adjustments and/or eliminations are presented in Schedules B-1 and B-2. On the following pages in Schedules C-1 and C-2 these adjustments and/or eliminations are detailed. Presented below is a brief summary of the type of adjustment and/or elimination along with the relevant criteria.

#### Adjustment and/or Elimination

#### Criteria

documentation (e.g. travel expenses reports, hotel and transportation receipts) to support senior management's travel costs included in the indirect cost pools.

AGU did not provide adequate source OMB Circular A-110, Subpart C, paragraph 21 (b) (7) requires accounting records be supported by source documentation.

Unallocable or unallowable food and catering costs were removed from both the indirect pools and direct cost bases. Food and catering costs attract their fair share of space occupancy, utilities, and administrative expenses and should be treated as direct costs in the direct cost bases.

OMB Circular A-122. Attachment A. Section B, paragraph 3 states that unallowable costs should be treated as direct costs for purposes of determining indirect cost rates and be allocated their fair share organizations' indirect costs if they represent activities which: (1) include the salaries of personnel, (2) occupy space, and (3) benefit from the organization's indirect costs.

Schedule of Auditors' Adjustments and Eliminations – Indirect Costs For the years ended December 31, 2000 and 2001

Adjustment and Elimination Explanation	(A) CMP	Total
2000 Inadequate source documentation for travel costs.		
2001 Inadequate source documentation for travel costs.		
Total		

(A) Adjustments to WMP and Education Division based on allocation of CMP indirect costs.

Schedule of Auditors' Adjustments and Eliminations – Direct Costs For the years ended December 31, 2000 and 2001

Adjustment and Elimination Explanation	(A) CMP	Education Division	Total
2000 Food and catering costs were erroneously excluded from the direct cost bases.			
Food and catering costs were erroneously excluded from the direct cost bases.			
Total			

(A) Adjustments to WMP direct costs based on adjustment to CMP direct cost base.

#### Notes to Financial Schedules For the years ended December 31, 2000 and 2001

#### 1. Summary of Significant Accounting Policies:

The accompanying financial schedules have been prepared in conformity with NSF instructions. Schedules B-1 and B-2 have been prepared from the indirect cost proposals prepared by the American Chemical Society, and Schedule A has been prepared based upon the results of the audit of Schedules B-1 and B-2. The schedules do not present the complete financial position of the American Chemical Society. In accordance with NSF instructions, there are no schedules of financial position, statement of activities or statement of cash flows.

#### 2. Income Taxes:

The American Chemical Society is a private nonprofit corporation, incorporated under the laws of the Commonwealth of Massachusetts. The American Chemical Society is exempt from income taxes under Section 501(c)(3) of the Internal Revenue Code.

# SECTION IV SUPPLEMENTARY INFORMATION

National Science Foundation Office of Inspector General 4201 Wilson Boulevard Arlington, Virginia 22230

#### INDEPENDENT AUDITORS' REPORT ON SUPPLEMENTARY INFORMATION

Our report on our audit of the schedule of over/(under) recovered indirect costs and schedules of indirect and direct costs (the basic financial schedules) of The American Chemical Society for the years ended December 31, 2000 and 2001, appears in Schedules A and Schedules B-1 and B-2. The audit was made for the purpose of forming an opinion on the basic financial schedules taken as a whole. The supplementary information presented in Schedules D-1 to D-3 and Schedule E are presented for purposes of supplementary analysis and are not a required part of the basic financial schedules. The supplementary information has not been subjected to the auditing procedures applied in the audit of the basic financial schedules and, accordingly, we express no opinion on them.

M.D. Oppenheim & Company, P.C.

April 3, 2003

#### National Science Foundation Award Number DUE-0053250 Awarded To

#### American Chemical Society

Detailed Schedule of Over/(Under) Recovered Indirect Costs For the Period September 1, 2000 to December 31, 2001 (A) Interim

(Unaudited)

Cost Category	1.	2/31/00	12	2/31/01	
Personnel costs	\$		\$		
Fringe Benefits					
Travel/Domestic					
Material and Supplies					
Equipment					
Consultants					
Subcontracts		<u>-</u> _			
Honoraria					
Travel Non Society Staff					
Meals & Entertainment					
Other Expenses					_
Total direct costs Exclusions: Participant support  Modified total direct cost base  Final audited indirect cost rate		48.73%		50.30%	(B)
Calculated allowable indirect costs					
Less: Adjustment for indirect costs in excess of the maximum provision rate of 12.84% of MTDC					
Indirect costs as adjusted					
Claimed indirect costs (C)					(B)
Over/(under) recovered indirect costs	\$	(7,128)	\$	(26)	

- (A) The award period is September 1, 2000 to August 31, 2002.
- (B) The total direct costs plus the claimed indirect costs agrees with the cumulative net disbursements reported on the FCTR as of the year ended 12/31/01.
- (C) Indirect costs were claimed based upon the application of the rate specified in the budget. It is a maximum provisional rate of 12.84% which is subject to downward adjustment only.

#### National Science Foundation Award Number INT-9711279 Awarded To

#### American Chemical Society

Detailed Schedule of Over/(Under) Recovered Indirect Costs For the Period of January 1, 2000 to December 31, 2001 (A) Final (Unaudited)

	Year Ended			
Cost Category	12/31/00	<del>_</del>		
Personnel costs	\$	\$		
Fringe Benefits			-	
Travel/Domestic			1	
Material and Supplies			•	
Equipment				
Subcontracts			_	
Travel Foreign				
Travel Non Society Staff				
Research & Travel Grants				
Meals & Entertainment				
Fellowships & Scholarships				
Other Expenses			<u> </u>	
			1	
Total direct costs			(B)	
Exclusions:				
Subcontracts				
Participant support costs				
Modified total direct cost base				
Final audited indirect cost rate (C)				
Calculated allowable indirect costs			(5)	
Claimed indirect costs			(B)	
Over/(under) recovered indirect costs				
Over/(under) recovered muneet costs				

- (A) The award period is June 1, 1997 to December 31, 2001.
- (B) The total direct costs plus the claimed indirect costs agrees with the cumulative net disbursements reported on the FCTR as of the years ended 12/31/00 and 12/31/01.
- (C) The grant has a fixed dollar amount of \$3,000 for indirect costs in lieu of an indirect cost rate calculation. One thousand dollars was claimed in each year 1997-1999. No amounts were claimed in 2000 and 2001.

#### National Science Foundation Award Number DUE-9752102 Awarded To

#### American Chemical Society

#### Detailed Schedule of Over/(Under) Recovered Indirect Costs For the Period January 1, 2000 to August 31, 2000 (A) Final

(Unaudited)

	Period Ended	
Cost Category	8/31/00	
Personnel costs	\$	
Fringe Benefits		
Travel/Domestic		
Material and Supplies		
Equipment		
Subcontracts		
Travel Non Society Staff		
Meals & Entertainment		
Other Expenses		
Total direct costs		(B)
Exclusions:		
Subcontracts		
Equipment		
17.1	-	
Modified total direct cost base		
Final audited indirect cost rate (C)		
Calculated allowable indirect costs		
Claimed indirect costs		(B)
	 	(2)
Over/(under) recovered indirect costs		
over (under) recovered indirect costs		

- (A) The award period is September 1, 1997 to August 31, 2000.
- (B) The total direct costs plus the claimed indirect costs agrees with the cumulative et disbursements reported on the FCTR as of the year ended 12/31/00.
- (C) The granthas a fixeddollar amount of \$61,586 for indirect costs in lieuof an indirect cost rate calculation. Total allowable indirect costs were claimed in 1998 and 1999.

# AMERICAN CHEMICAL SOCIETY Listing of NSF Awards Active During Audit Period Not Affected by Indirect Cost Audit (Unaudited)

There were 6 active NSF awards during the years ended December 31, 2000 and 2001 that did not include indirect costs incurred or billed to NSF on an FCTR. These grants had no indirect costs budgeted/approved.

NSF Award Number	ACS Award Reference	Award Period
CTS-0121728	60490	07/01/01 - 12/31/01
INT-0117084	91728	09/01/01 - 08/31/03
INT-0107764 <sup>4</sup>	91729	06/01/01 - 05/31/02
CHE-9820819	91735	03/15/99 - 08/31/00
INT-0072933	91736	06/01/00 - 05/31/01
CHE-0127333	91906	09/01/01 - 08/31/02

<sup>&</sup>lt;sup>4</sup> In lieu of indirect costs, NSF has authorized administrative fee of \$50 per participant for this award. The total administrative fee authorized by NSF was \$200. As of December 31, 2001, ACS has not billed administrative fee on this award to NSF.

### **SECTION V**

### **AWARDEE'S RESPONSE**



#### American Chemical Society

OFFICE OF THE TREASURER

1155 SIXTEENTH STREET, N.W. WASHINGTON, D.C. 20036 Phone (202) 872-4415 Fax (202) 872-4604

September 23, 2004

M.D. Oppenheim & Company, P.C. 8403 Colesville Road, Suite 340 Silver Spring, MD 20910-3367

Dear M.D. Oppenheim & Company, P.C.,

ACS has received your draft audit report, dated August 20, 2004, on the financial and compliance audit you conducted on the indirect cost proposals of the American Chemical Society for the years ended December 31, 2000 and 2001.

During this period, there was one active NSF award (\$1.1 million awarded, \$303,625 incurred during the 2 year period) with indirect costs included in the award budget. Total indirect costs claimed during the two-year period were \$23,954, utilizing the maximum indirect cost rate of 12.84% allowed by the grant. Therefore, though the financial audit resulted in an adjustment of our proposed indirect cost rates from to 48.74% in 2000, and from to 50.30% in 2001, there was no impact on the amount charged to the NSF for indirect costs. Accordingly, there was no downward adjustment to the maximum recoverable amount of \$23,954 claimed by ACS as indirect costs.

Enclosed are the ACS responses to your draft audit report. We have provided a separate written response to each finding, as requested in your report.

Please feel free to contact me or	to discuss
this further.	
Sincerely,	

## American Chemical Society Response to Findings and Recommendations on Financial and Compliance Audit of National Science Foundation Indirect Costs

For the Years Ended December 31, 2000 and 20001

### Compliance Finding 2: Immaterial Deficiency <u>Lack of Adequate Supporting Documentation for Management Travel</u>

#### Recommendation

M.D. Oppenheim & Company, P.C. recommends that the Director's of NSF's DIAS and DGA direct ACS to develop and implement policies and procedures to ensure all indirect travel costs charged to the government, especially for senior management, are documented in accordance with the requirements of OMB Circular A-110.

#### Response

M.D. Oppenheim & Company recommends that the ACS develop and implement policies and procedures to ensure all indirect cost charges to the government, especially for senior management, are documented in accordance with the requirements of OMB Circular A-110. They also state that senior management was not aware of the requirements to obtain and maintain source documentation for travel expenses charged to federal awards as indirect costs. The ACS is aware of the federal requirements to obtain and maintain source documentation for travel charged as indirect costs. In addition, the ACS believes that it is a good business practice for internal control and other purposes, to obtain and maintain source documentation for all financial transactions, not just those for travel.

The ACS currently has, and did have during the period under audit policies and procedures in place to ensure *all* travel costs are appropriately documented. This holds true whether the travel costs are for indirect or direct purposes or are for senior management or staff. The ACS's policies for travel related expenses state that the ACS will reimburse the ordinary, necessary, and reasonable travel expenses incurred by employees while conducting business for the ACS if all of the following have occurred:

- Expenses are properly itemized on an ACS travel expense voucher or corporate credit card travel expense voucher,
- > Expenses are properly documented by attaching original receipts for expenses incurred to expense vouchers, and
- > Expense voucher forms are properly approved, dated, and signed by an authorized signer for the activity to be charged.

Late in 2000, the ACS modernized its operations by instituting document imaging. The ACS acknowledges that, as a result of issues associated with the

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## American Chemical Society Response to Findings and Recommendations on Financial and Compliance Audit of National Science Foundation Indirect Costs

#### For the Years Ended December 31, 2000 and 20001

implementation, it failed to image some of its expense vouchers, which were destroyed before this issue was discovered. The problems encountered with the move to document imaging were resolved and quality control procedures were implemented. The ACS now generates a list of all voucher numbers processed by its accounts payable system and compares that list, on a monthly basis, to the voucher numbers processed by its document imaging system. Discrepancies are immediately rectified before the original documents are destroyed.

As such, the ACS's travel policies and procedures currently require all indirect travel costs charged to the government, especially for senior management, to be documented in accordance with the requirements of OMB Circular A-110. The ACS agrees to continue to follow these policies and procedures to ensure continued compliance with OMB Circular A-110.

### Internal Control Finding 1: Reportable Condition Inadequate Timekeeping System for Federal Awards

#### Recommendations

M.D. Oppenheim & Company, P.C. recommends that the Directors of NSF's DIAS and DGA require:

- ACS to develop written policies and procedures that help ensure ACS will
  not propose or charge direct labor to any federal awards until such time
  that its labor accounting system meets the requirements of OMB Circular
  A-122.
- ACS to develop written policies and procedures that help ensure ACS will not propose or charge to indirect cost pools any employees time that is allocated between indirect and direct activities until such time that its labor accounting system meets the requirements of OMB Circular A-122; and
- ACS to formalize the understanding between NSF and ACS that ACS will
  not propose or charge labor costs to future NSF awards until ACS
  implements an acceptable timekeeping system. In addition, M.D.
  Oppenheim & Company recommends that NSF inform other Federal
  agencies of ACS's timekeeping deficiency.

#### Response to Recommendation 1

As reported by M.D. Oppenheim & Company, ACS did not charge direct labor to any federal awards during fiscal years 2000 and 2001. However, as required by OMB Circular A-122, the ACS continues to use Personnel Activity Reports

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# American Chemical Society Response to Findings and Recommendations on Financial and Compliance Audit of National Science Foundation Indirect Costs For the Years Ended December 31, 2000 and 20001

(PARs) to support cost sharing agreements it has with the federal government. The PARs are not reconciled to actual salaries recorded in its general ledger, however, since ACS no longer charges salaries to its government grants. Since there are no salaries recorded in the general ledger, no reconciliation is necessary. The decision to discontinue charging labor to government awards was not made because reconciling the PARs were time consuming and costly, as reported by M.D.Oppenheirm & Company, but rather because the ACS views salaries, that are legitimately allowable under OMB Circular A-122, as its contribution to its NSF awards. In addition, the ACS uses consultants to perform functions it does not have the expertise for, not as a substitute for internal labor, as suggested in the audit report. All labor costs for consultants are appropriately disclosed in its grant proposals with NSF. The proposals document who will perform the functions needed to carry out the grant and why. The ACS used consultants in this manner during the period covered by this audit and continues to do so today in accordance with its agreements with NSF.

The current policy of ACS is to not charge direct or indirect labor to federal awards. The ACS agrees, however, that the documentation of this policy is limited. Therefore, ACS will document its policies and procedures to explicitly state that it will neither propose nor charge direct or indirect labor to any federal award. It also agrees to formalize the understanding it has with NSF that the ACS will not propose or charge labor costs to future NSF awards until such time as the ACS and NSF decide otherwise and the ACS's labor accounting system meets the requirements of OMB Circular A-122.

#### Response to Recommendation 2

As noted in the Oppenheim & Company report, the ACS did not charge any employees time between indirect and direct activities during the two-year audit period. The ACS does, however, allocate direct labor between some of its non-government grant activities. These direct labor allocations are only made within a division, not between divisions, such as between Education and Membership. Education salaries stay within Education. When an individual's salary benefits more than one activity, the ACS carefully considers the level of effort required to do each task and allocates his/her salary based upon that assessment. The ACS does not make these decisions arbitrarily, as stated in the M.D. Oppenheim & Company's report; rather the allocation reflects the division director's, and his/her managers', expert assessment of the level of effort required by each activity. While this methodology is not as precise as using actual hours spent on each activity, the ACS is confident the allocation closely approximates the same result.

In summary, although the ACS's current policy does not allow it to allocate employees time between indirect and direct activities, it does allow the ACS to allocate time between non-government activities within a division. Although, this

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## American Chemical Society Response to Findings and Recommendations on Financial and Compliance Audit of National Science Foundation Indirect Costs

#### For the Years Ended December 31, 2000 and 20001

is ACS's current policy, ACS agrees that the documentation supporting this policy is limited. Therefore, ACS agrees to document its policies and procedures to neither propose nor charge direct or indirect labor to any federal awards. It also agrees to formalize the understanding it has with NSF that the ACS will not propose or charge labor costs to future NSF awards until such time as the ACS and NSF decide otherwise and the ACS's labor accounting system meets the requirements of OMB Circular A-122.

#### Response to Recommendation 3

As Oppenheim & Company notes in their audit report, the ACS does not have a personnel accounting system for charging labor to activities, including federal awards. Instead, ACS uses a payroll exception reporting system to record employee time and attendance. The ACS acknowledges that its current system does not have the capability of tracking actual hours charged to activities where an employee's time is spent on more than one activity and therefore does not meet the requirements of OMB Circular A-110.

The ACS believes that tracking labor for time spent on activities is a good practice. Given that it is a good practice, the ACS will be upgrading its labor system in 2005. The upgrade will give the ACS the capability to track actual time spent by staff on particular projects or grants. At this time, the ACS will review its policies and procedures regarding labor allocations. This review will include consideration of the requirements of OMB Circular A-122 and documentation thereof.

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