#### **National Science Foundation**



4201 Wilson Boulevard Arlington, Virginia 22230

Office of Inspector General

#### **MEMORANDUM**

DATE: September 30, 2011

TO: Jeffery Lupis, Division Director

Division of Acquisition and Cooperative Support (DACS)

FROM: Dr. Brett M. Baker /s/

Assistant Inspector General for Audit

SUBJECT: NSF OIG Audit Report No. OIG-11-1-024, Review of Associated Universities,

Inc.'s Accounting System and Executive Compensation

We contracted with the Defense Contract Audit Agency (DCAA), Chesapeake Bay Branch Office, to perform a comprehensive internal control review of Associated Universities, Inc. (AUI). This is the third part of this audit<sup>1</sup>, wherein DCAA reviewed the adequacy of AUI's accounting system and executive compensation.

#### **Background**

AUI manages astronomical observatories for NSF and is the management organization for the National Radio Astronomy Observatory (NRAO), which is one of NSF's Federally Funded Research and Development Centers (FFRDC). AUI manages research facilities in Green Bank, WV (site of the Green Bank telescope) and in Socorro, NM (site of the Very Large Array and Expanded Very Large Array). AUI also manages the Atacama Large Millimeter Array (ALMA) which is still under construction in Chile. NSF awarded Cooperative Agreement AST-0956545 to AUI, effective from November 15, 2009 through September 30, 2015, for the management and operations of the NRAO. NSF projected it would award about \$458 million of funds to AUI for the management and operations of the National Radio Astronomy Observatory (NRAO) for FYs 2010-2015. We requested an internal control audit of AUI to determine whether AUI has systems in place to ensure compliance with federal regulations and proper stewardship over NSF funds.

The objectives of this specific audit were to determine the adequacy of Associated Universities, Inc.'s (AUI) accounting system, including cost allocation recovery, the reasonableness of the awardees' highest paid executives, and for determining if the weaknesses addressed in NSF's

<sup>&</sup>lt;sup>1</sup> The first part of the audit was transmitted under NSF OIG Audit Report No. OIG-10-1-013, *Evaluation of the Adequacy of Associated Universities Inc.'s Short and Long Range Planning Processes*, dated September 30, 2010. The second part of the audit was transmitted under NSF OIG Audit Report No. OIG-11-1-016, *Evaluation of AUI's Internal Control over Property, Procurement and Travel*, dated March 31, 2011.

2007 Total Business System Recovery (TBSR) report have been properly addressed and corrected. DCAA's audit report is included as an attachment to this memo. DCAA's findings are summarized below.

DCAA determined that, except for the conditions noted below, AUI's accounting system is adequate for accumulating and billing costs under Government awards. In addition, AUI's executive compensation is reasonable in accordance with the federal regulations, and the weaknesses addressed in NSF's TBSR report have been properly addressed and corrected. The exceptions are:

- 1. AUI does not maintain a "final" version of its policies and procedures concerning its Indirect Cost and Common Cost Recovery Rates.
- 2. AUI does not properly apply fixed rates to compute its carry forwards in accordance with federal requirements.
- 3. AUI excludes voluntary unallowable costs incurred by NRAO from the base and charges it to AUI when computing the indirect cost rate.
- 4. AUI did not disclose its full practice of allocating common costs to the Alma Project when describing the cost allocation method.
- 5. AUI's accounting system does not adequately identify the source and application of funds for federally-sponsored activities. As a result, the system does not allow for a timely reconciliation of its quarterly SF 272's to the cumulative costs incurred on various awards. Without being able to reconcile cost accounting data to the SF 272's, the auditor is unable to determine the accuracy of the costs reported to NSF or if there are any cost overruns.

DCAA made several recommendations to address the deficiencies identified in AUI's accounting system and we recommend that the NSF Director of DACS address and resolve each of DCAA's recommendations. AUI agreed with all the auditor's recommendations, and stated that it will 1) revise its accounting and indirect cost policies and procedures; 2) make any necessary corrections to its carry forward indirect cost rate adjustments for FY 2007, FY 2008, and FY 2009 in its FY 2009, FY 2010 and FY 2011 Indirect Cost Rate Proposals; and 3) correct any errors in claimed costs submitted to NSF, once it reconciles and verifies total reported expenditures. AUI's response is described after the findings and recommendations in DCAA's report and is included in its entirety in Attachment A.

Please coordinate with our office during the six month resolution period, as specified by OMB Circular A-50, to develop a mutually agreeable resolution of the audit findings. Also, the findings should not be closed until NSF determines that all recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

We are providing a copy of this memorandum to the NSF AUI Program Director. The responsibility for audit resolution rests with DACS. Accordingly, we ask that no action be taken concerning the report's findings without first consulting DACS at (703) 292-8242.

#### **OIG Oversight of Audit**

To fulfill our responsibilities under Government Auditing Standards, the Office of Inspector General:

- Reviewed DCAA's approach and planning of the audit;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with DCAA and OIG management to discuss audit progress, findings and recommendations;
- Reviewed the audit report prepared by DCAA to ensure compliance with Government Auditing Standards and Office of Management and Budget Circulars; and
- Coordinated issuance of the audit report.

DCAA is responsible for the attached audit report on AUI and the conclusions expressed in the report. The NSF OIG does not express any opinion on AUI's internal controls over its accounting system and executive compensation or the conclusions presented in DCAA's audit report.

We thank you and your staff for the assistance extended to us during the audit. If you have any questions about this report, please contact David Willems at (703) 292-4979 or Jannifer Jenkins at (703) 292-4996.

Attachments: DCAA Report No. 6171-2010J17900008, dated September 29, 2011

cc: Martha Rubenstein, CFO and Director BFA
Mary Santonastasso, Division Director, DIAS
Vernon Pankonin, Program Director, MPS/AST
Clifford Gabriel, Senior Advisor, OD

# Defense Contract Audit Agency



# United States Department of Defense



28 September 2011

Independent Audit of Associated Universities, Incorporated Review of Accounting System and Executive Compensation

# AUDIT REPORT NO. 6171-2010J17900008





# **DEFENSE CONTRACT AUDIT AGENCY**

**PREPARED FOR:** National Science Foundation

Office of the Inspector General ATTN: Mr. David Willems

Audit Manager

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**REFERENCES:** Relevant Dates: See Page 9

**AWARDEE:** Associated Universities, Inc.

Appendixes

1400 16th Street NW, Suite 730 Washington, DC 20036-2252

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#### SUBJECT OF AUDIT

As requested by you on August 13, 2009 and as discussed subsequently with your office, we reviewed the adequacy of Associated Universities, Inc.'s (AUI) accounting system, including cost allocation recovery, the reasonableness of the awardees' highest paid executives, and for determining if the weaknesses addressed in the Total Business System Recovery (TBSR) report have been properly addressed and corrected.

AUI is responsible for establishing and maintaining written policies and procedures on their accounting system. In addition, the cost data and supporting documentation are the responsibility of AUI. Our responsibility is to express an opinion on the adequacy of the accounting system and determining whether the awardees' compensation paid to its executives is reasonable.

#### **SCOPE OF AUDIT**

We conducted our examination in accordance with generally accepted government auditing standards, except DCAA does not currently have an external opinion on its quality control system as required by GAGAS 3.55. The most recent external quality control review opinion expired on August 26, 2009. GAGAS require that we obtain a sufficient understanding of internal controls to plan our examination and determine the nature, timing, and extent of tests to be performed. An examination of the awardees' accounting system includes:

- Obtaining an understanding of the awardees' accounting system to determine whether the awardee adequately accumulates and segregates costs;
- Obtaining an understanding of the awardees' cost allocation recovery;
- Determining whether the awardees' billing system is adequate to receive advance payments;
- Determining the reasonableness of the awardees' highest-paid executives; and
- Determining the need for technical assistance.

We evaluated the adequacy of the accounting system, including cost allocation recovery, and reasonableness of executive compensation using the applicable requirements contained in:

- 2 CFR Part 230 Cost Principles for Non-Profit Organizations (OMB Circular A-122):
- 2 CFR Part 215 Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations (OMB Circular A-110);
- National Science Foundation Grant Policy Manual; and
- Cooperative Agreement terms and conditions.

The scope of our examination reflects our assessment of control risk and includes audit tests designed to provide a reasonable basis for our opinion.

Because of inherent limitations in any internal control, misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal control over the property and procurement process to future periods are subject to the risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

#### **RESULTS OF AUDIT**

In our opinion, except for the conditions noted below, AUI's accounting system is adequate for accumulating and billing costs under Government awards. In addition, AUI's executive compensation is reasonable in accordance with the cost principles in 2 CFR Part 230, Cost Principles for Non-Profit Organizations, and the weaknesses addressed in the Total Business System Recovery (TBSR) report have been properly addressed and corrected.

Our examination was limited to determining whether AUI's accounting system is adequate for accumulating and billing costs under Government contracts. We did not perform a comprehensive examination of the awardees' overall accounting system and its related internal control. Accordingly, we express no opinion on AUI's system of internal control taken as a whole.

We discussed the results of audit with

, in an exit

conference held on September 22, 2011. We provided a draft copy of the Statement of Conditions and Recommendations to the awardees' representatives at the exit conference. The complete text of the awardees' response appears as Appendix 1.

#### STATEMENT OF CONDITIONS AND RECOMMENDATIONS

#### 11-01 – Cost Recovery Policies and Procedures

Condition: The awardee does not maintain a "final" version of its policies and procedures relative to its Indirect Cost and Common Cost Recovery Rates. The copy that we were provided was in draft form dated April 25, 2008. Therefore, we cannot consider this to be the official policy and procedure for the organization.

Recommendation: We recommend that the awardee finalize its policies and procedures and date the version so that we know what period it relates to and that it is the most current, accurate, and complete description of its indirect cost rates.

Awardees' Response: AUI will finalize a comprehensive AUI/NRAO "Cost Allocation Policies and Procedures," to include all cost allocation methodologies, by December 31, 2011.

Auditor's Reaction: Based on the awardees' response, we will follow up to determine if the Policies and Procedures have been finalized by the date established if requested by NSF.

#### 11-02 - Application of Fixed Rate

Condition: The awardee does not properly apply fixed rates in accordance with the definition cited in 2 CFR, Part 230, Appendix A, Section E(1)(c) to computes its carry forwards.

An example of the current computation using the awardee's 2007 "Indirect Cost Rate Final" is:

FY 07				
ATCTUAL MTDC	FIXED RATE @	FINAL RATE @	OVER/(UNDER)	
BASE				

The current process used by the awardee is incorrect because it incorporates a combination of methods for applying indirect cost rates when determining carry forwards. As a result, it could impact awards in future periods by possibly overcharging the government if not corrected. Under 2 CFR, Part 230, Appendix A, Section E(1)(c), "Negotiation and Approval of Indirect Cost Rates" the indirect cost rate types defined and established for reimbursement should either be provisional; final; predetermined; or fixed with carry forwards; and must be properly applied to the benefiting base. Also, the definition of a fixed rate is "an indirect cost rate which has the same characteristics as a predetermined rate, except that the difference between the estimated costs and the actual costs for the period covered by the rate is carried forward as an adjustment to the rate computation of a subsequent period".

The computation based on the fixed rate definition above should be:

FY 07					
ACTUAL MTDC	FIXED RATE @	INDIRECT COST	OVER/(UNDER)		
BASE	1.44%	BOOKED			

Note the difference in the two calculations for the under recovery which is \$306,270 (\$387,800 - \$81,530). That's because in this example we are only applying the fixed rate approved for that year (2007) per the negotiation agreement, which is the proper computation. It is improper to use two different rates when computing carry-forwards as shown in the first example.

Recommendation: We recommend that the awardee use the proper application of the fixed rate based on the definition as included in Under 2 CFR, Part 230, Appendix A, Section E(1)(c).

Awardees' Response: AUI recognizes that it may have combined two methodologies for calculating the over/ (under) recovery and will recalculate carry forward adjustments in FY2007, FY2008 and FY2009 utilizing the fixed with carry forward methodology recommended by DCAA.

Auditor's Reaction: DCAA does not recommend a methodology for calculating carry forwards, however; we cited 2 CFR, Part 230, Appendix A, Section E(1)(c) which identifies the proper application of the fixed rate.

#### 11-03 - Unallowable Costs Included in Allocation Base

Condition: The awardee excludes voluntary unallowable costs incurred by NRAO from the base and charges it to AUI when computing the indirect cost rate. Types of unallowable costs incurred by NRAO and identified by the awardee were some meetings, conferences and miscellaneous. As a result of the exclusion, these costs would not receive its fair share of indirect costs and other awards will be absorbing a greater share of the indirect costs. As discussed in 2 CFR 230, Appendix A, Section B(3), "... even though these costs are unallowable for purposes of computing charges to Federal awards, they nonetheless must be treated as direct costs for purposes of determining indirect cost rates and be allocated their share of the organization's indirect costs".

Recommendation: We recommend that the awardee properly calculate it's indirect cost rate by including voluntary unallowable costs relative to the cost objectives in the base for computing the rate and receiving its fair share of indirect costs in accordance with 2 CFR 230, Appendix A, Section B(3).

Awardees' Response: AUI will include voluntary unallowable costs relative to the cost objectives in the direct cost base for computing its Indirect Cost Rate, in accordance with 2 CFR 230, Appendix A, Section B (3).

Auditor's Reaction: In the future, upon request by NSF, we will follow up to determine if the awardee has included voluntary unallowable costs in the base for computing the Indirect Cost Rate.

#### 11-04 - Allocation of Common Costs to the ALMA Project

Condition: The awardee did not disclose its full practice of allocating common costs to the Alma Project when describing the cost allocation method.

When describing the Common Cost Recovery in the policies and procedures, it is identified as administrative and management costs pertaining to NRAO that are allocated to non-

NSF awards based on a Predetermined Common Cost Recovery rate. However; it does not inform us that prior to establishing the Common Cost Recovery Rate, there is common costs that are allocated to the Alma Project using a direct method based on percentages established using full time equivalents (FTE's) and square footage. Without disclosing an adequate description of the indirect cost rate structure, we would be unable to determine if the costs are equitably allocated and billed to the benefiting awards in accordance with 2 CFR Part 215.21 (b)(6), "Written procedures for determining the reasonableness, allocability and allowability of costs in accordance with the provisions of the applicable Federal Cost Principles and the terms and conditions of the award".

Recommendation: We recommend that the awardee properly document and disclose the detail of all cost allocations and its elements per 2 CFR Part 215.21 (b)(6) to allow a person with no knowledge of the organization to gain an understanding of the procedures and to establish if it is reasonable and equitable.

Awardees' Response: AUI will properly document and provide the detail of all cost allocation methodologies per 2 CFR Part 215.21 (b) (6) in the final AUI/NRAO "Cost Allocation Policies and Procedures."

Auditor's Reaction: In the future, upon request by NSF, we will follow up to determine if the awardee has properly documented its allocation methodologies.

#### 11-05 - Reconciliation of Cumulative Costs Incurred on Billings

Condition: The awardees' accounting system does not adequately identify the source and application of funds for federally-sponsored activities. As a result, the system does not allow for a timely reconciliation of its quarterly SF 272's to the cumulative costs incurred on various awards. While the awardees' accounting system has the ability to produce cumulative cost reports, there are variances or differences between what is recorded in the accounting system itself and what is reported on the quarterly SF 272's to the National Science Foundation.

According to the awardee, the differences require detailed reconciliations of quarterly general ledger data, which was not available in time during our review. While we verified the awardees' reconciliation for several of its awards, we were not able to review the awardees' two largest and oldest awards. These reconciliations were not provided in a timely manner to be included in the results of this audit. As a result, we were unable to reconcile cumulative funds reported on the quarterly billings for AST 0226933 and AST 024577 to cost accounting data. Without being able to reconcile cost accounting data to the SF 272's, we are unable to determine the accuracy of the costs reported to NSF or if there are any cost overruns.

Recommendation: We recommend that the awardee ensure that its reconciliation procedures are in accordance with 2 CFR Part 215.21(b)(2), which states that a recipient's financial management system provides for "Records that identify adequately the source and application of funds for federally-sponsored activities." This includes performing reconciliations of the cost incurred in its accounting system to the amounts that will be reported on the financial

reports to NSF for each award. The reconciliations should provide a detailed explanation of any differences between what is recorded and what is reported on the billings to NSF.

Awardees' Response: The current reconciliation process for reported quarterly expenditures will be expanded to include a reconciliation of reported cumulative inception to date expenditures. Any variance in reported inception to date expenditures will be corrected and a detailed explanation provided.

Auditor's Reaction: In the future, upon request by NSF, we will follow up to determine if the awardee has expanded its reconciliations as stated in the response

#### AWARDEE ORGANIZATION AND SYSTEMS

#### 1. Organization

Associated Universities, Incorporated (AUI) is a not-for-profit organization that was established in 1946 as an educational institution dedicated to research, development, and education in the physical, biological and engineering services. AUI is the Management organization for National Radio Astronomy Observatory (a Federally Funded Research and Development Center) which operates and manages astronomical observatories located in Chile; Greenbank, West Virginia; and Socorro, New Mexico. AUI, in addition to managing NRAO, also manages the support and construction of the Atacama Large Millimeter Array (ALMA) in Chile. AUI's responsibilities include appointing the Observatory Director and other hiring decisions; reviewing ongoing programs and budgets; as well as overseeing any new projects or proposals. AUI is governed by a Board of Trustees, which performs many functions, including electing Corporate Officers who serve the Board in carrying out the everyday business of AUI. For the fiscal year ending September 30, 2009, AUI generated approximately \$147 million in operating revenue from NSF (National Science Foundation).

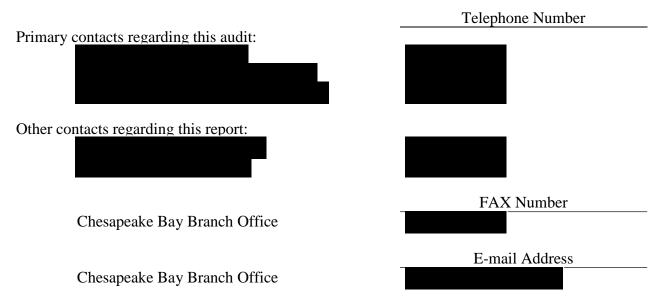
The most recently awarded NSF cooperative agreement (AST-0956545), effective from November 15, 2009 through September 30, 2015, is applicable for the management and operations of the NRAO. NSF's funding projection to AUI for FY's 2010 – 2015 is approximately \$458 million.

#### 2. Accounting System

Costs are allocated and managed under Scientific Program Orders (SPO's). The awardee maintains a job cost accounting system wherein contracts are assigned individual project numbers that are used to accumulate associated direct costs. The awardee utilizes JD Edward's software for its accounting system. NRAO's unallowable costs are not recorded in NRAO's general ledger. Instead, these costs are charged directly to AUI's books and records to an unallowable account code. Employees use an Electronic Timekeeping (ETK) system for inputting time and processing payroll. Claims for reimbursement are submitted weekly by authorized employees using the government directed FastLane software program.



#### **DCAA PERSONNEL**



General information on audit matters is available at http://www.dcaa.mil/.

#### **RELEVANT DATES**

Audit Request Date: August 13, 2009

#### **AUDIT REPORT AUTHORIZED BY:**

/Signed/ Ronald T. Craig Terry Craig Branch Manager DCAA Chesapeake Bay Branch Office

#### **AUDIT REPORT DISTRIBUTION**

#### **DISTRIBUTION**

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September 27, 2011

#### AUI Management Response to DCAA Internal Controls Audit

#### **Indirect Rates and Accounting System**

#### Indirect Rates Review

#### Indirect Pates Overall

Condition: The contractor does not maintain a "final" version of its policies and procedures relative to its Indirect Cost and Common Cost Recovery Rates. The copy that we were provided was in draft form dated April 25, 2008. Therefore, we cannot consider this to be the official policy and procedure for the organization.

**Recommendation:** We recommend that the contractor finalize its policies and procedures and date the version so that we know what period it relates to and that it is the most current, accurate, and complete description of its indirect cost rates.

AUI Management Response: AUI acknowledges that it provided a "draft" version of the AUI/NRAO policies and procedures related to its Indirect Cost and Common Cost Recovery Rates to DCAA. AUI will finalize a comprehensive AUI/NRAO "Cost Allocation Policies and Procedures," to include all cost allocation methodologies, by December 31, 2011.

#### Indirect Cost Rate (IDC) - Fixed Rate

1. Condition: The contractor does not properly apply fixed rates in accordance with the definition cited in 2 CFR, Part 230, Appendix A, Section E(1)(c) to computes its carry forwards.

An example of the current computation using the contractor's 2007 "Indirect Cost Rate Final" is:

FY 07						
ACTUAL MTDC	FIXED RATE @	FINAL RATE @	OVER/(UNDER)			
BASE	1.44%	1.77%				

The current process used by the contractor is incorrect because it incorporates a combination of methods for applying indirect cost rates when determining carry forwards. As a result, it could impact awards in future periods by possibly overcharging the government if not corrected. Under 2 CFR, Part 230, Appendix A, Section E(1)(c), "Negotiation and Approval of Indirect Cost Rates" the indirect cost rate types defined and established for reimbursement should either be provisional; final; predetermined; or fixed with carry forwards; and must be properly applied to the benefiting base. Also, the definition of a fixed rate is "an indirect cost rate which has the same characteristics as a predetermined rate, except that the difference between the estimated costs and the actual costs for the period covered by the rate is carried forward as an adjustment to the rate computation of a subsequent period".

The computation based on the fixed rate definition above should be:

	FY 07					
	ACTUAL MTDC	FIXED RATE @	INDIRECT COST	OVER/(UNDER)		
	BASE	1.44%	BOOKED			
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Note the difference in the two calculations for the under recovery which is \$306,270. That's because in this example we are only applying the fixed rate approved that year (2007) per the negotiation agreement which is the proper computation. It is improper to use two different rates when computing carry forwards as shown in the first example.

Recommendation: We recommend that the contractor use the proper application of the fixed rate based on the definition as included in Under 2 CFR, Part 230, Appendix A, Section E(1)(c).

AUI Management Response: AUI received a Fixed Indirect Cost Rate with Carry Forward Agreement from NSF in November 2005. The most current approved AUI Indirect Cost Rate Agreement with NSF was for the years ended September 30, 2007 and September 30, 2008. AUI submitted "Provisional" Fixed with Carry Forward Rate proposals for FY2009, FY2010, and FY2011 to NSF for approval. The carry-forward adjustments included in these proposals reflected the over/ (under) recovery of indirect costs based on the variance of the provisional and final indirect rate applied to the modified total direct cost base (MTDC). The carry-forward adjustments were applied to the provisional indirect cost rate calculation two years hence. For example, the FY2007 carry forward adjustment was included in the FY2009 Indirect Cost Rate proposal.

AUI recognizes that it may have combined two methodologies for calculating the over/ (under) recovery and will recalculate carry forward adjustments in FY2007, FY2008 and FY2009 utilizing the fixed with carry forward methodology recommended by DCAA. AUI will make any necessary corrections to the carry forward adjustments (FY2007, FY2008, and FY2009) in the FY2009, FY2010, and FY2011 Indirect Cost Rate proposals. Additionally, AUI will meet with NSF to discuss the appropriate methodology to use to calculate its FY2012 Indirect Cost Rate.

2. Condition: The contractor excludes voluntary unallowable costs incurred by NRAO from the base and charges it to AUI when computing the indirect cost rate. Types of unallowable costs incurred by NRAO and identified by the contractor were some meetings, conferences and miscellaneous. As a result of the exclusion, these costs would not receive its fair share of

indirect costs and other awards will be absorbing a greater share of the indirect costs. As discussed in 2 CFR 230, Appendix A, Section B(3), "... even though these costs are unallowable for purposes of computing charges to Federal awards, they nonetheless must be treated as direct costs for purposes of determining indirect cost rates and be allocated their share of the organization's indirect costs".

**Recommendation:** We recommend that the contractor properly calculate it's indirect cost rate by including voluntary unallowable costs relative to the cost objectives in the base for computing the rate and receiving its fair share of indirect costs in accordance with 2 CFR 230, Appendix A, Section B(3).

AUI Management Response: AUI will include voluntary unallowable costs relative to the cost objectives in the direct cost base for computing its Indirect Cost Rate, in accordance with 2 CFR 230, Appendix A, Section B (3).

#### Allocation of Common Cost to the ALMA Project

**Condition:** The contractor did not disclose its full practice of allocating common costs to the ALMA Project when describing the cost allocation method.

When describing the Common Cost Recovery in the policies and procedures, it is identified as administrative and management costs pertaining to NRAO that are allocated to non-NSF awards based on a Predetermined Common Cost Recovery rate. However, it does not inform us that prior to establishing the Common Cost Recovery Rate, there is common costs that are allocated to the Alma Project using a direct method based on percentages established using full time equivalents (FTE's) and square footage. Without disclosing an adequate description of the indirect cost rate structure, we would be unable to determine if the costs are equitably allocated and billed to the benefiting awards in accordance with 2 CFR Part 215.21 (b)(6), "Written procedures for determining the reasonableness, allocability and allowability of costs in accordance with the provisions of the applicable Federal Cost Principles and the terms and conditions of the award".

**Recommendation:** We recommend that the contractor properly document and disclose the detail of all cost allocations and its elements per 2 CFR Part 215.21 (b)(6) to allow a person with no knowledge of the organization to gain an understanding of the procedures and to establish if it is reasonable and equitable.

AUI Management Response: AUI will properly document and provide the detail of all cost allocation methodologies per 2 CFR Part 215.21 (b) (6) in the final AUI/NRAO "Cost Allocation Policies and Procedures."

#### Accounting System Review

Condition: The contractor's accounting system does not adequately identify the source and application of funds for federally-sponsored activities. As a result, the system does not allow for a timely reconciliation of its quarterly SF 272's to the cumulative costs incurred on various awards. While the contractor's accounting system has the ability to produce cumulative cost reports, there are variances or differences between what is recorded in the accounting system itself and what is reported on the quarterly SF 272's to the National Science Foundation. According to the contractor, the differences require

detailed reconciliations of quarterly general ledger data, which was not available in time during our review. While we verified the contractor's reconciliation for several of its awards, we were not able to review the contractor's two largest and oldest awards. These reconciliations were not provided in a timely manner to be included in the results of this audit. As a result, we were unable to reconcile cumulative funds reported on the quarterly billings for AST 0226933 and AST 024577 to cost accounting data. Without being able to reconcile cost accounting data to the SF 272's, we are unable to determine the accuracy of the costs reported to NSF or if there are any cost overruns.

Recommendation: We recommend that the contractor ensure that its reconciliation procedures are in accordance with 2 CFR Part 215.21(b)(2), which states that a recipient's financial management system provides for "Records that identify adequately the source and application of funds for federally-sponsored activities." This includes performing reconciliations of the cost incurred in its accounting system to the amounts that will be reported on the financial reports to NSF for each award. The reconciliations should provide a detailed explanation of any differences between what is recorded and what is reported on the billings to NSF.

AUI Management Response: The AUI/NRAO JD Edwards Financial System adequately identifies and records expenditures at both the project level and the category (account) level through assigned Business Units (BU's) and object accounts. Historically, reporting for non-construction projects was on a monthly and fiscal year-to-date period which did not include cumulative inception to date expenditures from prior fiscal years. However, quarterly expenditures were reported on the previous Federal Cash Transactions Report (FCTR) and the current Federal Financial Report (FFR) was reconciled to the detailed general ledger reports by project.

AUI/NRAO developed reports to include cumulative inception to date expenditures for all projects and is verifying total reported expenditures to the underlying general ledger detail for each fiscal year. The current reconciliation process for reported quarterly expenditures will be expanded to include a reconciliation of reported cumulative inception to date expenditures. Any variance in reported inception to date expenditures will be corrected and a detailed explanation provided.

