



National Science Foundation

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Office of Inspector General

MEMORANDUM

DATE: SEP 27 2007

TO: Mary F. Santonastasso, Director
Division of Institution and Award Support

FROM: *Deborah H. Cureton*
Deborah H. Cureton
Associate Inspector General for Audit

SUBJECT: NSF OIG Audit Report No. OIG-07-1-018,
Post Award Accounting System Audit of Bermuda Institute of Ocean Sciences

In response to NSF's request for audit support, we contracted with the Defense Contract Audit Agency (DCAA), Tampa Bay Branch Office, to perform two audits of the Bermuda Institute of Ocean Sciences¹ (BIOS). DCAA has completed the first of those audits. The attached DCAA audit report, dated May 24, 2007, was a review of the adequacy of BIOS' accounting system. Upon completion, the remaining audit report will be issued that will report results of the auditor's review of claimed costs and other matters.

Under four NSF awards, BIOS provided equipment and ship operations for two vessels, the *Weatherbird II*, which was subsequently sold; and the *Atlantic Explorer*, a newly-acquired research vessel. BIOS also performed the research award *Times Series Studies* in the Atlantic Ocean.

The objectives of the accounting system audit were to:

- Determine whether BIOS' accounting system is adequate for accumulating costs under government contracts and awards in compliance with award terms and conditions and federal requirements, and
- Determine whether the billing procedures are adequate for the preparation of cost reimbursement claims, i.e., interim public vouchers and progress payments.

The audit was performed in accordance with Generally Accepted Government Auditing Standards. The DCAA audit report and BIOS' response are attached to this memorandum.

¹ Bermuda Institute of Ocean Sciences is the former Bermuda Biological Station for Research or BBSR.

Summary of the Results of the Audit

BIOS is required to adjust its accounting records at year-end to reflect actual indirect costs and the application of final negotiated indirect rates for each of its federally funded contracts and awards to comply with OMB Circular A-122, Attachment A, Paragraph E.2.f.

The DCAA auditors expressed an opinion on BIOS' accounting system and found that it was inadequate in part for accumulating and billing costs under its Government contracts and awards. BIOS does not routinely adjust its accounting records to reflect actual indirect costs on its federally funded contracts and awards.

Specifically, BIOS did not use the NSF negotiated final rates or the institution's actual indirect rates to close its accounting records on its NSF or other federal awards. Instead, BIOS uses rates submitted in its award proposal budgets as a basis to bill indirect costs on its federal awards.

BIOS explained that the reason it charges budgeted rates rather than actual indirect rates on its federal awards is because this practice is required by NSF's Grant Policy Manual. Since NSF is BIOS' cognizant oversight agency, BIOS applied this same practice on all its federal awards.

Therefore, while BIOS is accurately billing NSF on its awards, BIOS is potentially over or under billing its other federal awards for indirect expenses. Further, even on its NSF awards, BIOS should adjust its accounting records at year-end to reflect actual indirect rates and record the difference between actual and budgeted indirect costs as an unallowable cost in order to properly reflect the shortfall that BIOS is experiencing in the recovery of its indirect costs. When BIOS' records do not reflect its actual indirect costs, the true total cost of the research is not captured or recovered from the federal agency, where allowed. In light of the institution's under-recovery of indirect costs and the additional debt that BIOS has taken on in recent years to cover acquisition and building programs, OIG suggests that NSF monitor the financial statements of BIOS closely in the future.

We are providing a copy of this memorandum to the Geosciences Directorate/ Division of Ocean Sciences (GEO/OCE). The responsibility for audit resolution rests with DIAS. Accordingly, we ask that no action be taken concerning the report's findings without first consulting DIAS at (703) 292-8230.

OIG Oversight of Audit

To fulfill our responsibilities under Generally Accepted 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 Generally Accepted Government Auditing Standards and Office of Management and Budget Circulars; and
- Coordinated issuance of the audit report.

DCAA is responsible for the attached auditor's report on BIOS University and the conclusions expressed in the report. The NSF OIG does not express any opinion on BIOS's accounting system 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 Sherrye McGregor at (703) 292-5003 or Jannifer Jenkins at (703) 292-4996.

Attachment: DCAA Audit Report No. 1271-2007F17740001, Bermuda Institute of Ocean Sciences, Inc. Report on Post Award Accounting System, May 24, 2007

cc: Karen Tiplady, Director, Division of Grants and Agreements
Julie D. Morris, Division Director, GEO/OCE
Linda Goad, GEO/OCE



DEFENSE CONTRACT AUDIT AGENCY
AUDIT REPORT NO. 1271-2007F17740001



May 24, 2007

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SUBJECT: Report on Post Award Accounting System Audit

REFERENCES: Relevant Dates: See Page 9
DCAA Chron No.: 7-9012

CONTRACTOR: Bermuda Institute of Ocean Sciences, Inc.
Formerly Bermuda Biological Station for Research, Inc.
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REPORT RELEASE RESTRICTIONS: See Page 10

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SUBJECT OF AUDIT

As you requested on August 11, 2006, authorization to proceed dated September 1, 2006, received on October 27, 2006, we examined Bermuda Institute of Ocean Sciences, Inc. (BIOS) formerly Bermuda Biological Station for Research, Inc. (BBSR)'s accounting system as of April 10, 2007 to determine whether it is adequate for accumulating costs under Government contracts and whether the billing procedures are adequate for the preparation of cost reimbursement claims, i.e., interim public vouchers and progress payments.

BIOS is responsible for establishing and maintaining an adequate accounting system for accumulating and billing costs under Government contracts. Our responsibility is to express an opinion on the adequacy of the accounting system based on our examination.

EXECUTIVE SUMMARY

In our opinion, the contractor's accounting system is inadequate in part. Our examination disclosed a significant deficiency in BIOS' accounting system that could result in misstated costs.

SIGNIFICANT ISSUE:

- complying with the requirements of the Office of Management and Budget (OMB) Circular A-122, Attachment A, Paragraph E.2.f; the contractor is not applying its finalized indirect rates to actual direct costs consistently, nor is the contractor adjusting previously billed costs based on year-end actual indirect rates.

BIOS did not concur with the significant deficiency cited.

SCOPE OF AUDIT

We conducted our examination in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the data and records examined are free of material misstatement. An examination includes:

- obtaining an understanding of internal control for accumulating and billing costs under Government contracts;
- examining, on a test basis, evidence supporting the amounts and disclosures in the data and records evaluated;
- assessing the accounting principles used and significant estimates made by the contractor; and
- evaluating the overall data and records presentation.



We evaluated the accounting system using the applicable requirements contained in:

- Federal Acquisition Regulation (FAR);
- OMB Circular A-122, Cost Principles for Non-Profit Organizations; and
- NSF Cooperative Agreement Financial & Administrative Terms and Conditions (FATC).

The contractor claims exemption under 48 CFR 9903.201-1(b)(7) from the practices required by the Cost Accounting Standards Board rules and regulations because the company's contracts and subcontracts are executed and performed entirely outside the United States, its territories, and its possessions.

Our examination included an evaluation to determine if the accounting system provides for the following procedures:

- direct and indirect costs are appropriately identified, accumulated, and reported;
- unallowable costs are appropriately identified and segregated;
- indirect costs are allocated equitably and consistently to contracts and other cost objectives;
- direct and indirect labor costs are identified to intermediate or final cost objectives by the timekeeping system and charged to appropriate cost objectives by the labor distribution system;
- indirect billing rates are acceptable to the contracting officer or contract auditor in accordance with FAR 42.704;
- cost information for billings is based on currently posted accounting data;
- subcontractor and vendor costs are paid in accordance with subcontract and invoice terms and conditions and ordinarily paid prior to the contractor's next payment request to the Government; and
- contract billings are reviewed by management to assure compliance with contract terms and provisions, e.g., frequency of billings, special withholding provisions, contract unallowables, etc.

Our examination was performed from December 4, 2006 to April 10, 2007.

We believe that our examination provides a reasonable basis for our opinion. Our examination did not include tests to determine whether internal control is in operation or operating effectively. Because of inherent limitations in any internal control, misstatements due to error or fraud may occur and not be detected. Also, accounting system internal control is subject to the risk that the internal control may become inadequate because of changes in conditions.

RESULTS OF AUDIT

In our opinion, BIOS' accounting system is inadequate in part for accumulating and billing costs under Government contracts. Our examination disclosed a significant deficiency in the design or operation of the accounting system. In our judgment, this deficiency could

adversely affect the organization's ability to record, process, summarize, and report costs in a manner that is consistent with applicable Government contract laws and regulations. This condition is detailed in the "Statement of Condition and Recommendation" on page 4 and summarized below:

The contractor's accounting system is deficient in:

- complying with the requirements of the Office of Management and Budget (OMB) Circular A-122, Attachment A, Paragraph E.2.f; the contractor is not applying its finalized indirect rates to actual direct costs consistently, nor is the contractor adjusting previously billed costs based on year-end actual indirect rates.

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

We discussed the results of our examination with the contractor's representatives, [REDACTED] and [REDACTED], in an exit conference held on May 7, 2007. We provided a draft copy of the "Results of Audit" and "Statement of Condition and Recommendation" to the contractor's representative at the exit conference, and requested a formal written response to our audit findings for incorporation into our report.

The contractor's representatives did not concur with the significant deficiency cited. BIOS' written response dated May 10, 2007, addresses the significant issue impacting our opinion. BIOS alleged that by using the proposals' budgets indirect rates they are complying with the NSF Grant Policy Manual (GPM). However, BIOS is a non-profit organization and must comply with the all the requirement of the OMB Circular. BIOS is not using the indirect rates included in their finalized non-profit rates agreement for billing or booking indirect costs. As a result, the contractor and the Government can not accurately forecast if planned funding for the awards is adequate. The complete text of the contractor's response appears as an Appendix included on page 11 of this report.

STATEMENT OF CONDITION AND RECOMMENDATION

Billing System Deficiencies in Preparation, Application, and Adjustment of Billing Rates

1. Condition:

The contractor uses indirect rates included in budgets provided to the National Science Foundation (NSF) during awards negotiations for billings and to calculate booked incurred cost on cost type awards. We reviewed BIOS' non-profit rate agreement dated October 7, 2005, which includes finalized indirect rates from fiscal year (FY) 1999 through FY 2004, and maximum provisional rates for FYs 2005 and 2006. The non-profit rate agreement includes two indirect rates categories (i) resident science, and (ii) ship operations. During years with finalized indirect rates, the contractor did not use the agreement's rates for billings to the Government, monitor awards' ceilings, or total incurred costs. During years with maximum provisional rates, the contractor did not adjust billed indirect rates to reflect actual year-end allowable indirect expenses/rates.

We judgmentally selected four cost reimbursable awards for testing, NSF awards Nos. [REDACTED] and [REDACTED]. On a test basis, we traced cost reimbursements per Federal Cash Transaction Report (FCTR) SF-272, for the quarter ended September 30, 2006, to NSF billings made electronically via NSF's FastLane Cash Request System, and to the BIOS' accounting books and records. We reconciled total booked costs to NSF cumulative billings. Total booked and billed costs represent actual direct costs incurred loaded with indirect rates included in the supporting budgets provided to NSF at the time of awards negotiations. The direct costs were not loaded with the finalized rate agreement rates or actual year-end allowable indirect rates, as summarized below:

<u>Award No.</u>	<u>Period of Performance</u>	<u>Description</u>	<u>Indirect Rate Category</u>	<u>Note</u>
[REDACTED]	3/1/02 – 2/28/05	Weatherbird II	Ship Operations	1
[REDACTED]	9/1/03 – 8/31/07	Atlantic Time Series Studies	Resident Science	2, 4
[REDACTED]	8/1/04 – 7/31/06	Shipboard Scientific Equipment	N/A	3
[REDACTED]	3/1/05 – 2/28/07	Atlantic Explorer	Ship Operations	1, 4

- (1) Cumulative billed costs are actual direct costs loaded with indirect rates included in yearly budgets submitted to NSF at the time of funding negotiations. Indirect rates included in finalized rate non-profit rate agreement were not utilized to monitor cumulative billings or booked incurred costs.
- (2) Cumulative billed costs are actual direct costs loaded with indirect rates included in initial award bid to NSF.
- (3) In accordance with award terms, we did not identify indirect costs associated with this project in NSF billings or booked costs.



- (4) During FYs 2005 and 2006, indirect rates have not been finalized. However, the contractor has not updated its billings or booked costs with actual year-end allowable indirect expenses/rates.

We evaluated the cost impact of this deficiency and determined that BIOS has not over billed the Government since the booked and billed indirect rates are lower than (i) the rates included in NSF non-profit rate agreement during FY 2002 through FY 2004, and (ii) actual FY 2005 indirect rates.

2. Recommendation:

For years with finalized indirect rates, we recommend that the contractor use rates contained in its non-profit indirect rate agreements and adjust contractual incurred costs and billings to the Government. If indirect rates have not been finalized, we recommend that the contractor adjust the awards' booked costs and cumulative billings in its records with year-end actual indirect rates less unallowable costs.

The contractor's system must include procedures to establish indirect billing rates in accordance with the Office of Management and Budget (OMB) Circular A-122, Attachment A, Paragraph E.2.f. Specifically, at the end of each fiscal year, the contractor should calculate actual indirect rates with unallowable costs removed and compare these rates to the rates used for billings to determine if indirect billed rates should be adjusted. The rates should not exceed the maximum provisional billing rates. If there is a significant difference, billings should be adjusted to reflect either the additional amount due the contractor or credit applied to the Government.

The contractor could potentially over or under bill indirect expenses each fiscal year, by not utilizing finalized indirect rates, and not adjusting prior billings with actual allowable year-end rates (if rates have not been finalized). As a result, the contractor and the Government cannot accurately forecast if planned funding for the award is adequate.

3. Contractor's Reaction:

In its response, dated May 10, 2007, included as an Appendix to the report (see Page 11), the contractor disagreed with our results of audit and identified condition. The contractor did not accept our recommendations with respect to the adjustment of indirect rates as prescribed in the OMB Circular A-122, Attachment A, Paragraph E.2.f.

The contractor alleged that they are complying with the OMB Circular, NSF Grant Policy Manual (GPM) Section 635, and NSF letter dated August 21, 2006 which documents their most recent negotiations.

4. Auditor's Response:

The contractor acknowledged that they are billing and booking indirect rates included in budgets submitted to NSF, and therefore, not using finalized indirect rates included in their non-profit indirect rates agreement. Moreover, the contractor acknowledged that they are not adjusting the booked costs with year-end allowable indirect rates during years that indirect rates have not been finalized. The contractor is a non-profit organization and must comply with the requirement of the OMB Circular. Consequently, we reiterate our prior recommendation.

We recommend performing a follow up review in approximately 90 days to determine if the contractor has implemented a corrective action to our identified condition.

CONTRACTOR ORGANIZATION AND SYSTEMS

1. Organization:

The Bermuda Institute of Ocean Sciences, Inc. (BIOS) formerly Bermuda Biological Station for Research, Inc. (BBSR) was founded in 1903 by scientists as a station for research in biology and zoology. BBSR was incorporated in New York in 1926 as a U.S. not-for-profit organization and by 1932 its present location was opened in Ferry Reach, St. George's, Bermuda. BBSR changed its name to Bermuda Institute of Ocean Sciences, Inc. (BIOS) on April 4, 2007 to reflect the change of the research station into an institute focused on the study of marine and atmospheric systems. BIOS' sales for its fiscal year ending December 31, 2006 were approximately \$13.3 million, of which approximately 36 percent were from the Federal Government.

2. Accounting System:

In our opinion, BIOS' accounting system is inadequate in part for accumulating and billing costs under Government contracts because the contractor is not applying indirect rates consistently, nor adjusting previously billed cost based on year-end actual indirect expenses/rates.

BIOS' accounting period is from January 1st to December 31st. BIOS maintains an accounting system on the accrual basis in accordance with generally accepted accounting principles. BIOS' accounting system is posted on a current basis. Appropriate adjusting entries are made at the end of each month and at year end. BIOS' prepares financial statements on an annual basis. The annual financial statements are audited by O'Connor Davies Munns & Dobbins, LLP.

BIOS maintains a job cost accounting system which is fully integrated in the overall accounting system, wherein grants are assigned individual project numbers and direct costs are identified and charged to those numbers. Indirect costs are identified and accumulated under individual departments, which in turn are identified to the various indirect cost pools. Indirect expenses are grouped in indirect pools. The following schedule describes BIOS indirect cost pools and related allocation bases, and the type of effort normally charged direct and indirect:

Indirect Cost Pools and Allocation Bases

<u>Indirect Cost Pool</u>	<u>Allocation Base</u>
Resident Science	Total direct costs excluding capital expenditures in excess of \$10,000 each, individual subcontract costs in excess of \$25,000 and participant support costs.
Ship Operations	Total direct costs excluding dry dock overhauls and participant support costs.

DCAA PERSONNEL

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RELEVANT DATES

Request for Audit: Office of Inspector General, National Science Foundation (NSF),
Dated August 11, 2006

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/s/
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AUDIT REPORT DISTRIBUTION AND RESTRICTIONS

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RESTRICTIONS

[REDACTED]

[REDACTED]



BIOS

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May 10, 2007

VIA FACSIMILE

Mary Ann Yenchus, Supervisory Auditor
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Dear Ms. Yenchus:

BIOS is a not-for-profit organization, incorporated in the state of New York in 1926 and exempt from income taxes under section 501(c) (3) of the IRC. As such, we are subject to OMB circular A-122 for Cost Principles (A122). Additionally our cognizant agency is the National Science foundation (NSF). As such, NSF is responsible for negotiating and approving indirect cost rates (ICR) for BIOS. As an integral part of this responsibility, NSF requires its grantees to comply with the NSF Grant Policy Manual (GPM). The GPM supplements A122 providing specific guidance to grantees in many areas including cost monitoring. The Draft Results of Audit (Audit) references A122, Attachment A, Paragraph E.2.f which states, "Provisional and final rates shall be negotiated where neither predetermined nor fixed rates are appropriate."

BIOS annually submits to NSF its computation of Indirect Cost Rates (ICR). The NSF letter dated August 21, 2006 documents the most recent negotiations. In that letter is the requirement, "Should your organization submit a grant proposal requesting a lower indirect cost rate than the approved maximum provisional rate, the lower indirect cost rate submitted in the proposal budget will be the maximum provisional rate applicable to the grant award." This requirement is a reiteration of GPM #635.

The deficiency noted in the Audit is in part paraphrased as BIOS does not comply with A122, Attachment A, Paragraph E.2.f. BIOS does submit rates to NSF annually and has done so consistently during the period under audit. To state that we do not comply with this paragraph is not accurate.

BIOS is an independent US non-profit marine research and educational institute founded in 1903. Gifts are US tax-deductible.

The deficiency goes on to say, "the contractor is not applying its finalized indirect rates to actual direct costs consistently". BIOS consistently follows the policy prescribed by NSF in GPM #635 and in the rate letter. It is BIOS policy to load the ICR that is the lesser of the provisional rate, the final rate, or the grant award rate. This complies with GPM #635; therefore, the representation that we do not comply is not accurate.

The deficiency ends with, "nor is the contractor adjusting previously billed costs based on year-end actual indirect rates". This comment is inappropriate considering the cites above in the GPM and the rate letter. Those cites contradict this aspect of the audit finding. We comply with the requirements of NSF as stated in the GPM. To find fault with our practices then means that you find fault with the GPM.

Sincerely,

