

**NATIONAL SCIENCE FOUNDATION**  
4201 Wilson Boulevard  
ARLINGTON, VIRGINIA 22230



**OFFICE OF  
INSPECTOR GENERAL**

**MEMORANDUM**

Date: September 30, 2011

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

Karen Tiplady, Director  
Division of Grants and Agreements

From: Dr. Brett M. Baker /s/  
Assistant Inspector General for Audit

Subject: Audit Report No. OIG-11-1-023  
Field Museum of Natural History

This memo transmits Withum Smith and Brown's audit of NSF Award Numbers DEB-9978119, DEB-0919333, and ANT-0838925 awarded to the Field Museum of Natural History. The audit determines the allowability of NSF-funded costs claimed from September 15, 1999 to September 30, 2010, totaling approximately \$862,055 and \$179,205 in claimed cost share for the awards.

Except for the \$123,663 of questioned NSF funded costs, the auditors determined that the costs claimed by the Field Museum under award numbers DEB-9978119, DEB-0919333, and ANT-0838925 and are allowable, allocable and reasonable for the NSF awards and appear fairly stated; compliant with laws, regulations and award terms; properly accounted for and segregated. Additionally, the auditors found that the Field Museum had properly segregated the NSF ARRA funds awarded for DEB-091933 and ANT-0838925 in its accounting system and submitted accurate and timely quarterly reports.

The auditors questioned \$123,663 of claimed costs on award number DEB-9978119 because Field Museum did not comply with either NSF's or its own policies, when it claimed these costs that it had not yet incurred. Further, the NSF appropriation supporting the NSF grant expired prior to Field Museum paying for the claimed costs. The auditors also noted that Field Museum did not adequately track and monitor costs by NSF budget category for award number DEB-9978119. Also, as an other matter, the auditors determined that Field Museum's system to record and track equipment purchased with federal funds could be strengthened to ensure adequate safeguards to prevent loss, damage or theft.

The Field Museum's response, dated September 13, 2011, disagreed with the conclusions of the findings. The Field Museum's response is described after the findings and recommendations 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 copies of this memorandum to the Assistant Director, Directorate for Biological Sciences within the Office of the Assistant Director; and, the Deputy Division Director of Environmental Biology (BIO/DEB). The responsibility for audit resolution rests with the Division of Institution and Award Support, Cost Analysis and Audit Resolution Branch (CAAR). Accordingly, we ask that no action be taken concerning the report's findings without first consulting CAAR at 703-292-8244.

#### OIG Oversight of Audit

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

- Reviewed Withum Smith and Brown approach and planning of the audit;
- Evaluated the qualifications and independence of the auditors;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with Withum Smith and Brown and NSF officials, as necessary, to discuss audit progress, findings, and recommendations;
- Reviewed the audit report, prepared by Withum Smith and Brown to ensure compliance with Government Auditing Standards; and
- Coordinated issuance of the audit report.

Withum Smith and Brown is responsible for the attached auditor's report on the Field Museum and the conclusions expressed in the report. We do not express any opinion on the Schedules of Award Costs, internal control, or conclusions on compliance with laws and regulations.

We thank your staff for the assistance that was extended to our auditors during this audit. If you have any questions regarding this report, please contact Jannifer Jenkins at 703-292-4996.

Attachment

cc: John C. Wingfield, Assistant Director, BIO/OAD  
Penelope Firth, Deputy Division Director, BIO/DEB

**Field Museum of Natural History  
c/o The Board of Trustees of the Field Museum of Natural History  
Chicago, IL 60605**



**Financial Audit of Financial Schedules and  
Independent Auditors' Reports on  
National Science Foundation Award Numbers**

**DEB-9978119  
DEB-0919333  
ANT-0838925**

**September 15, 1999 to September 30, 2010**

## EXECUTIVE SUMMARY

## Executive Summary

The National Science Foundation (“NSF”) Office of the Inspector General (“OIG”) engaged WithumSmith+Brown to conduct the audit of \$862,055 in costs claimed and \$179,205 in cost sharing claimed as reported on the September 30, 2010 Federal Cash Transactions Reports (“FCTR/FFR”) and cost sharing report submitted to NSF by Field Museum of Natural History (“Field Museum”) for award numbers DEB-9978119, DEB-0919333, and ANT-0838925.

The Field Museum was incorporated in the State of Illinois on September 16, 1893 as the “Columbian Museum of Chicago.” The Field Museums’ purpose is the “accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating art, archaeology, science and history. The Field Museum was founded to house the biological anthropological collections assembled for the World’s Columbian Exposition of 1893. These objects form the core of the Field Museum’s collections which have grown through world-wide expeditions, exchange, purchase, and gifts to more than twenty million specimens. The collections form the foundation of the Field Museum’s exhibition, research and education programs, which are further informed by a world-class natural history library of more than 250,000 volumes. As of September 2010, the Field Museum had thirty-nine (39) active awards totaling \$13.4 million.

The Field Museum was selected for audit because of the multiple small NSF awards managed for which the Field Museum must ensure compliance with NSF and federal grant requirements at any given time. Furthermore, the addition of the American Reinvestment and Recovery Act of 2009 (“ARRA”) awards to the Museum’s NSF portfolio added to the compliance requirements to which the Museum must adhere.

The objectives of our audit engagement were to: (1) determine whether Field Museum’s Schedules of Award Costs (Schedules A-1 to A-3) present fairly, in all material respects, the costs claimed on the FCTR/FFR – Federal Share of Net Disbursements and if the costs claimed including cost sharing, are in conformity with Federal and NSF award terms and conditions; (2) identify and report instances on noncompliance with laws, regulations, and the provisions of the award agreement(s) and weaknesses in the Field Museum’s internal controls over compliance and financial reporting that could have a direct and material effect on the Schedules of Award Costs and the Field Museum’s ability to properly administer, account for, and manage its NSF ARRA and non-ARRA awards; (3) determine and report whether the Field Museum properly accounts for and segregates its ARRA funded awards from its non-ARRA funded awards in its accounting system; (4) determine and report whether the Museum provides accurate and timely ARRA quarterly reporting under ARRA for NSF Awards DEB-091933 and ANT-0838925; and (5) follow-up and report on recommendations identified in the Museum’s FY 2006-2009 OMB Circular A-133 reports.

Except for the \$123,663 (14% of total claimed costs) of questioned NSF funded costs, we determined that the costs claimed by the Field Museum under award numbers DEB-9978119, DEB-0919333, and ANT-0838925 and are allowable, allocable and reasonable for the NSF awards and appeared fairly stated, compliant with laws, regulations and award terms, properly accounted for and segregated. Additionally, our review found that the Field Museum had properly segregated the NSF ARRA funds awarded for DEB-091933 and ANT-0838925 in its accounting system and submitted accurate and timely quarterly reports.

We questioned \$123,663 of claimed costs on award number DEB-9978119 because the Field Museum expended funds after the period of availability of the funds had expired. For award number DEB-9978119, the original funding expired and was financially cancelled by NSF on September 30, 2005. NSF informed the Field Museum that it was acceptable to report encumbrances on the June 30, 2005 FCTR/FFR. In response to the NSF guidance, the Field Museum claimed \$231,781 costs for the period beginning April 1, 2005 and ending June 30, 2005, which included current period expenses and \$153,361 that had not yet been incurred. As a result, the Field Museum claimed on its June 30 FCTR/FFR costs in advance of actually incurring the expenses in order to avoid losing the funds that would expire on September 30, 2005. A review of the costs after the closing date of the FCTR/FFR found that \$67,829 was expended prior to the cancellation of the NSF appropriation and \$123,663 [REDACTED] plus related indirect costs of [REDACTED] was expended through December of 2006, after the cancellation of the NSF appropriation and funds were not available for expenditure.

We also noted a compliance and internal control deficiency in the accounting and reporting of NSF costs. Specifically, the Field Museum did not adequately track/monitor costs by NSF budget category for award

number DEB-9978119. The lack of a one-to-one relationship between Field Museum general ledger accounts and NSF budget line items made it difficult to monitor budget to actual costs per the NSF award budget without maintaining subsidiary records at the transaction level. For example, our review of the closed grant DEB-9978119 budget to actual expenditures noted: 1) \$50,545 was a subcontract cost improperly recorded under consultant services; 2) \$22,885 in stipends improperly recorded under dues, fees and meetings; 3) \$12,000 in contracted services improperly recorded as compensation; and 4) \$9,000 in permanent equipment improperly recorded as materials and supplies. Subsidiary records were maintained; however, had the record been sufficient to effectively monitor the grant budget to actual costs, these accounting errors would have been caught by the Field Museum and the subsidiary record would have been corrected.

To address these compliance and internal control deficiencies, we recommend that the NSF's Director of the Division of Institution and Award Support (DIAS) address and resolve the following recommendations made to the Field Museum: (1) establish and implement proper policies and procedures that will prevent future claims for costs not yet incurred and claims charged against expired funds; (2) return the \$123,663 in claimed costs, because these costs were incurred after the expiration of the appropriation when NSF no longer had legal access to the funds; and (3) establish and implement proper policies and procedures that will ensure the proper tracking of expenses by NSF budget line items to help ensure that claimed costs are properly charged and the program objectives are being appropriately addressed.

The Field Museum responded to the draft report on September 22, 2011. In its response, Field Museum management disagreed with the conclusions of the findings. Per Field Museum management, the guidance provided by NSF was misleading, and had the guidance been clearly communicated, extraordinary measures would have been pursued to successfully achieve the project goals. Additionally, Field Museum believes that it was the responsibility of NSF, as the grantor and their cognizant Federal agency, to provide adequate notice of the lapsing appropriation and accurate guidance for responding to the circumstance. Additionally, per Field Museum management, after implementing improvements to the general ledger code structure in 2004 and a financial software upgrade in 2009, the Field Museum does adequately monitor costs by NSF budget category. Management conceded that prior to the 2004 general ledger improvement, there was not a one-to-one relationship between the general ledger accounts and the NSF award budgets; however, the budget categories were tracked by the principal investigators/fund administrators on an excel spreadsheet.

The findings and recommendations remain as stated because the Field Museum was informed that the money would lapse as of September 30, 2005 and the appropriation would be financially closed. Additionally, the Field Museum does not have an adequate understanding of the availability period of federal funding and has not developed policies and procedures that will ensure lapsed funds are handled properly in the future. Furthermore, the budget to actual spreadsheet provided for review did not address the necessary budget reclassifications noted in the finding.

The findings in this report should not be closed until NSF has determined that all the recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

For a complete discussion of audit findings, refer to the Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Schedules Performed in Accordance with *Government Auditing Standards*.

# FIELD MUSEUM OF NATURAL HISTORY

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## ACRONYMS

ARRA	American Reinvestment and Recovery Act of 2009
CFR	Code of Federal Regulation
DIAS	Division of Institution and Award Support
FCTR/FFR	Federal Cash Transactions Report/Federal Financial Report
Field Museum	Field Museum of Natural History
FY	Fiscal Year
GL	General Ledger
MTDC	Modified Total Direct Costs
NSF	National Science Foundation
OIG	Office of Inspector General
OMB	Office of Management and Budget
PI	Principal Investigator
U.S.C.	United States Code

## INTRODUCTION

## BACKGROUND

An audit was performed on \$862,055 in costs claimed and \$179,205 in cost sharing claimed on the Federal Cash Transactions Reports ("FCTR/FFR") and cost sharing reports submitted to NSF by Field Museum of Natural History ("Field Museum") for National Science Foundation ("NSF") award numbers DEB-9978119, DEB-0919333, and ANT-0838925 for the period September 15, 1999 to September 30, 2010. Field Museum, as a Federal awardee, is required to follow the cost principles specified in 2 CFR Part 230 (OMB Circular A-122), *Cost Principles for Non-Profit Organizations* and Federal administrative requirements contained in 2 CFR Part 215 (OMB Circular A-110), *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*.

The Field Museum was incorporated in the State of Illinois on September 16, 1893 as the "Columbian Museum of Chicago." The Field Museums' purpose was the "accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating art, archaeology, science and history." In 1905, the Museum's name was changed to Field Museum of Natural History to honor the Museum's first major benefactor, Marshall Field, and to better reflect its focus on the natural sciences. The Field Museum was founded to house the biological anthropological collections assembled for the World's Columbian Exposition of 1893. These objects form the core of the Field Museum's collections which have grown through world-wide expeditions, exchange, purchase, and gifts to more than twenty million specimens. The collections form the foundation of the Field Museum's exhibition, research and education programs, which are further informed by a world-class natural history library of more than 250,000 volumes.

Additionally, the Field Museum is an educational institution that offers multiple opportunities for both informal and more structured public learning. Exhibits remain the primary means of informal education, but throughout its history, the Field Museum has supplemented this approach with innovative educational programs. The Harris Loan Program, begun in 1912, provides educational outreach to children, bringing artifacts, specimens, and audiovisual materials, and activity kits to Chicago area schools. Curatorial and scientific staff are maintained in the departments of Anthropology, Biology, Geology and Zoology. Each department conducts basic research in the fields of systematic biology and anthropology and also has responsibility for collections management, and collaboration in public programs. Since its founding, the Field Museum has been an international leader in evolutionary biology, paleontology, archaeology, and ethnography. The Field Museum operates on a calendar year (January – December).

Cost categories, approved budget, and claimed costs for the three (3) awards under audit were as follows:

Cost Categories	Total Budget	Budgeted Costs		
		DEB-9978119	DEB-0919333	ANT-0838925
Salaries and wages	\$			
Fringe benefits				
Equipment				
Travel				
Participant support				
Materials and supplies				
Publication costs				
Consultant services				
Subcontracts				
Other direct costs				
Indirect costs				
Total	\$			
Cost sharing	\$ 179,205	\$ 179,205	\$ -	\$ -

Cost Categories	Total Claimed	Claimed Costs through September 30, 2010		
		DEB-9978119	DEB-0919333	ANT-0838925
Salaries and wages				
Fringe benefits				
Equipment				
Travel				
Participant support				
Materials and supplies				
Publication costs				
Consultant services				
Subcontracts				
Other direct costs				
Indirect costs				
Total				
Cost sharing	\$ 179,205	\$ 179,205	\$ -	\$ -

Descriptions of the NSF awards we audited are as follows:

- Award DEB-9978119 – Bivalves – Research, Training, Electronic Dissemination of Data.* NSF awarded DEB-9978119 to the Field Museum for the period September 15, 1999 to August 31, 2008 in the amount of \$778,880, with a cost sharing requirement of \$179,205. In a joint program, involving biologists and laboratories from the around the world, the biologists combined their expertise to train a new generation of bivalve workers and to significantly to advance the systematics of the group. The research concentrated on the marine family Veneridae, a group of bivalves with more than 500 living species that form a key component in the world's clam fisheries. The project trained students at the graduate and postdoctoral levels and involved a wide range of approaches and techniques ranging from field collecting and comparative anatomical studies to deoxyribonucleic acid sequencing. Other educational efforts targeted undergraduate trainees and various audiences that could be reached through web publications and Field Museum programming. Promoting bivalve research worldwide was an important goal of this project. To make information about the species and associated data available to specialists and non-specialists alike, various bivalve databases, images, and keys were developed for electronic web dissemination.

The award was for an initial five-year period intended to terminate on August 31, 2004. The award was subsequently amended three times to extend the termination date to August 31, 2008. The original award was for the amount of \$749,634; however, a subsequent amendment increased the grant to \$778,880 and a cost sharing requirement of \$179,205.

We conducted our audit of this award for the period September 15, 1999 to August 31, 2008. Cumulative disbursements for grant number DEB-9978119 reported to NSF for the audit period were \$778,880. Field Museum also claimed \$179,205 of cost sharing to NSF for the audit period. Cost sharing required for the award period was \$179,205.

- Award DEB-0919333 – Phylogeny, Revisionary Taxonomy & the Fossil Record of Asiloid Flies.* NSF awarded DEB-0919333 to Field Museum for the period August 1, 2009 to July 31, 2012 in the amount of \$382,628. This award is funded under American Recovery and Reinvestment Act of 2009 (ARRA). This project deals with the species diversity, biogeography, and evolutionary relationships of three families of true flies (Diptera): Aplocheridae, Asilidae, and Mydidae. The focus of this project is those species which are restricted to the arid environments in the southern Hemisphere and western North America, areas that are part of global biodiversity hotspots. This project will help to understand the diversification of these flies during the Cretaceous period coinciding with the diversification of flowering plants. In addition to scientific journals, the Investigators will publish their results online on the project web-site and in the *Encyclopedia of Life*, both of which are openly accessible. Tools will be developed and made available online to allow future scientists to identify species of all three families. Four undergraduate students will be trained in the taxonomy of true flies and molecular laboratory techniques. A graduate student

from Brazil will spend part of her dissertation studies at the Field Museum of Natural History working on taxonomic and phylogenetic projects on an entirely New World group of mydas flies.

The ARRA award was for a three-year period intended to terminate on July 31, 2012. The award was for the amount of \$382,628.

We conducted our audit of this award for the period August 1, 2009 to September 30, 2010. Cumulative disbursements for grant number DEB-0919333 reported to NSF through September 30, 2010 were \$77,043. Field Museum was not required to obtain cost sharing for this award.

- *Award ANT-0838925 – New Research on the Mesozoic Vertebrate Faunas of the Beardmore Glacier Region, Antarctica.* NSF awarded ANT-0838925 to Field Museum for the period September 1, 2009 to August 31, 2012 in the amount of \$212,791. This award is funded under ARRA. This project continues research on Triassic and Jurassic faunas from the Beardmore Glacier region of Antarctica. Funds will be used to conduct a field season in Antarctica, prepare and study new materials recovered, continue preparation and study of dinosaur material collected from Mt. Kirkpatrick during the 2003-2004 Antarctic field season, and place these fossils in a refined stratigraphic and temporal framework.

The ARRA award was for a three-year period intended to terminate on August 31, 2012. The award was for the amount of \$212,791.

We conducted our audit of this award for the period September 1, 2009 to September 30, 2010. Cumulative disbursements for grant number ANT-0838925 reported to NSF through September 30, 2010 were \$6,132. Field Museum was not required to obtain cost sharing for this award.

## **AUDIT OBJECTIVES, SCOPE AND METHODOLOGY**

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### Objectives:

The objectives of our audit engagement were to:

1. Determine whether Field Museum's Schedules of Award Costs (Schedules A-1 to A-3) present fairly, in all material respects, the costs claimed on the FCTR/FFR – Federal Share of Net Disbursements and if the costs claimed including cost sharing, are in conformity with Federal and NSF award terms and conditions.
2. Identify and report instances on noncompliance with laws, regulations, and the provisions of the award agreement(s) and weaknesses in the Field Museum's internal controls over compliance and financial reposting that could have a direct and material effect on the Schedules of Award Costs and the Field Museum's ability to properly administer, account for, and manage its NSF ARRA and non-ARRA awards.
3. Determine and report whether the Field Museum properly accounts for and segregates its ARRA funded awards from its non-ARRA funded awards in its accounting system.
4. Determine and report whether the Museum provides accurate and timely ARRA quarterly reporting under ARRA for NSF Awards DEB-091933 and ANT-0838925.
5. Follow-up and report on recommendations identified in the Museum's FY 2006-2009 OMB Circular A-133 reports.

Scope and Methodology:

WithumSmith+Brown, under contract with the NSF OIG, audited NSF Award Nos. DEB-9978119, DEB-0919333 and ANT-0838925 through the period September 15, 1999 to September 30, 2010. 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 (2007 Revision)* issued by the Comptroller General of the United States; and the guidance provided in the *National Science Foundation OIG Financial Audit Guide* (August 2007) as applicable.

Those standards and the *National Science Foundation OIG Financial Audit Guide* require that we plan and perform the audit to obtain reasonable assurance about whether the amounts claimed to the National Science Foundation as presented in the Schedules of Award Costs (Schedules A-1 to A-3), are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Schedules of Award Costs (Schedules A-1 to A-3). An audit also includes assessing the accounting principles used and significant estimates made by the Field Museum, as well as evaluating the overall financial schedules' presentation. We believe that our audit provides a reasonable basis for our opinion.

The audit included a review of grant documents, financial and programmatic reports submitted to NSF and data available from the Field Museum. The audit also included a review of the quarterly financial reports submitted, with supporting documentation and interviews conducted with various employees at the Field Museum.

**INTERNAL CONTROLS AND COMPLIANCE**



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**REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING  
 AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT  
 OF FINANCIAL SCHEDULES PERFORMED IN ACCORDANCE  
 WITH GOVERNMENT AUDITING STANDARDS**

We have audited costs claimed as presented in the Schedules of Award Costs (Schedules A-1 through A-3), which summarize financial reports submitted by the Field Museum of Natural History (“Field Museum”) to the National Science Foundation (“NSF”) for the awards listed below and claimed cost sharing for award No. DEB-9978119 and have issued our report thereon dated September 22, 2011.

<u>Award Number</u>	<u>Award Period</u>	<u>Audit Period</u>
DEB-9978119	09/15/99 to 08/31/08	09/15/99 to 08/31/08
DEB-0919333	08/01/09 to 07/31/12	08/01/09 to 09/30/10
ANT-0838925	09/01/09 to 08/31/12	09/01/09 to 09/30/10

We conducted our audit of the Schedules of Award Costs as presented in Schedules A-1 through A-3 in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in the *Government Auditing Standards* (2007 Revision), issued by the Comptroller General of the United States; and the *National Science Foundation OIG Financial Audit Guide*, August 2007, as applicable.

**INTERNAL CONTROL OVER FINANCIAL REPORTING**

In planning and performing our audit of the Schedules of Award Costs (Schedules A-1 to A-3) for the period September 15, 1999 through September 30, 2010, we considered Field Museum’s internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial schedules, but not for the purpose of expressing an opinion on the effectiveness of the Field Museum’s internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the Field Museum’s internal control over financial reporting.

Our consideration of the internal control over financial reporting was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over financial reporting that might be significant deficiencies or material weaknesses and therefore, there can be no assurance that all deficiencies, significant deficiencies, or material weaknesses have been identified. However, as described below in the findings and recommendations on internal control over financial



reporting, we identified a deficiency in internal control over financial reporting that we consider to be material weaknesses and another deficiency that we consider to be a significant deficiency.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the Field Museum's financial schedules will not be prevented, or detected and corrected on a timely basis. We consider the deficiency described in the findings and recommendations to be a material weakness. [Finding 1]

A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. We consider the deficiency described in the findings and recommendations to be a significant deficiency. [Finding 2]

## **COMPLIANCE AND OTHER MATTERS**

As part of obtaining reasonable assurance about whether Field Museum's financial schedules are free of material misstatement, we performed tests of Field Museum's compliance with certain provisions of applicable laws, regulations, and NSF award terms and conditions, noncompliance with which could have a direct and material effect on the determination of the financial schedule amounts. However, providing an opinion on compliance with these provisions is not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests of compliance disclosed instances of noncompliance that are required to be reported under *Government Auditing Standards* and the *National Science Foundation OIG Financial Audit Guide*; and are described in Findings 1 through 2, in the following pages.

Field Museum's response to each of the findings identified in our audit are described after the findings and recommendations and is included in its entirety in Attachment A. We did not audit Field Museum's response and, accordingly, we express no opinion on it.

This report is intended solely for the information and use of Field Museum's management, NSF, Field Museum's cognizant Federal agency, the Office of Management and Budget, and the Congress of the United States of America and is not intended to be, and should not be used, by anyone other than these specified parties.

## **FINDINGS AND RECOMMENDATIONS**

### ***Finding #1. Costs Charged to an Expired Appropriation***

The Field Museum claimed costs that were not yet incurred to prevent losing funding that was due to expire and be do-obligated by NSF thereby reducing total grant funding by the expired amount. Grant Number DEB-9978119, Amendment Number 000 was funded by Appropriation Number 0199. The appropriation commenced in Fiscal Year 1999 and lapsed on September 30, 2005. Consequently, the appropriation had to be financially cancelled by NSF on that date as mandated by 31 United States Code (U.S.C.) §1552(a) and was no longer available to NSF to support the grant project.

NSF's Division of Financial Management sent an email to the Field Museum stating that the grant award funded by the Fiscal Year (FY) 1999 appropriation would lapse on September 30, 2005. NSF informed the Field Museum that NSF would "financially close all awards funded with 1999 appropriations" and requested that appropriate individuals be alerted to the situation. NSF stated that it was acceptable to report encumbrances as costs on the FCTR/FFR when an award is due to be financially closed and requested, if possible, that the Field Museum report final expenditures on the June 30, 2005 FCTR/FFR. However, per the Division of Financial Management, NSF fully expected the awardee to report only those expenses that would be incurred and posted to the accounting system by September 30<sup>th</sup>. Special accounting policies or practices for expiring awards could not be implemented.



Although not normal policy or procedure, the Field Museum claimed costs on grant number DEB-9978119 in response to NSF's guidance that were not yet incurred to prevent losing funding that was due to expire. On the June 30, 2005 FCTR/FFR, the Field Museum claimed \$231,781 costs for the period beginning April 1, 2005 and ending June 30, 2005, which included current period expenses and \$153,361 that had not yet been incurred. As a result, the Field Museum claimed on its June 30 FCTR/FFR costs in advance of actually incurring the expenses in order to avoid losing the funds that would expire on September 30, 2005.

However, the Field Museum continued to incur costs after the funding was cancelled and no longer available to NSF for expenditure. A review of the costs after the closing date of the FCTR/FFR found that \$67,829 was expended prior to the cancellation of the NSF appropriation and \$123,663 [REDACTED] plus related indirect costs of [REDACTED] was expended through December of 2006, after the cancellation of the NSF appropriation.

31 U.S.C. § 1502 states, the balance of an appropriation or fund limited for obligation to a definite period is available only for payment of expenses properly incurred during the period of availability or completed contracts properly made within that period of availability and obligated consistent with section 1501 of this title. However, the appropriation of funds is not available for expenditure for a period beyond the period otherwise authorized by law.

Additionally, per 31 U.S.C. § 1552, on September 30th of the 5th fiscal year after the period of availability for obligation of a fixed appropriation account ends, the account shall be closed and any remaining balance (whether obligated or unobligated) in the account shall be canceled and thereafter shall not be available for obligation or expenditure for any purpose.

Finally, per the Field Museum, *Grant Policy and Procedure*, the Field Museum Grants Management uses current grant expenditure data from the financial system to prepare accurate and complete financial reports for periodic submission to the grantor for all Federal grants...and submits Federal financial reports using **current data** from the financial system. Except for the June 30, 2005 FCTR/FFR report, we found no other errors in the quarterly FCTR/FFR reports submitted during our audit period.

Thus, the Field Museum violated applicable federal appropriation laws, which prohibit charging an appropriation after September 30<sup>th</sup> of the 5<sup>th</sup> Fiscal Year after its period of availability for obligation ends. The Field Museum also did not comply with generally accepted accounting principles and its own procedures that indicate that only expenses incurred by the end of the reporting period can be claimed on the FCTR/FFR. This reporting had no impact on the Field Museum's financial statements since no entry was recorded in their accounting records until the expenses were incurred.

*Recommendation #1:*

We recommend that the NSF's Director of the Division of Institution and Accounting Support (DIAS) request the Field Museum:

- (1) return the \$123,663 in claimed costs, because these costs were incurred after the expiration of the appropriation when NSF no longer had access to the funds; and
- (2) establish and implement proper policies and procedures that will prevent future claims for costs not yet incurred and claims charged against expired funds.

*Awardee Comments*

The Field Museum disagreed with the conclusion of this finding. Per Field Museum management, the guidance provided by NSF was misleading, and had the guidance been clearly communicated, extraordinary measures would have been pursued to successfully achieve the project goals. Additionally, Field Museum management believes that it was the responsibility of NSF, as the grantor and their cognizant Federal agency, to provide adequate notice of the lapsing appropriation and accurate guidance for responding to the circumstance.



### *Auditor Response*

The Field Museum was informed that the money would lapse as of September 30, 2005 and the appropriation would be financially closed. Therefore, to avoid a similar situation in the future, the Field Museum needs to understand the availability period of federal funding and develop policies and procedures that will prevent this situation in the future. Accordingly, our finding and recommendation remain as previously stated.

### ***Finding #2. Insufficient Tracking System by Budget Category***

Our review of the accounting and reporting of NSF costs revealed that the Field Museum does not adequately track/monitor costs by NSF budget category. Because there is not a one-to-one relationship between Field Museum general ledger accounts and NSF budget line items, it is difficult to monitor budget to actual costs per the NSF award budget without maintaining subsidiary records at the transaction level. For example, our review of the closed grant DEB-9978119 budget to actual expenditures noted: 1) \$50,545 was a subcontract cost improperly recorded under consultant services; 2) \$22,885 in stipends improperly recorded under dues, fees and meetings; 3) \$12,000 in contracted services improperly recorded as compensation; and 4) \$9,000 in permanent equipment improperly recorded as materials and supplies.

Accordingly, had the Field Museum effectively monitored their grant budget to actual costs, these accounting errors would have been caught. Without a clear relationship between the approved NSF budget and actual program costs there is the increased risk that funds may not be spent in accordance with program objectives. Furthermore, since Modified Total Direct Costs (MTDC), used in calculating indirect costs, represents total direct costs minus participant support, equipment and subcontract costs, indirect costs may be improperly calculated.

OMB Circular A-110, Subpart C, Section 21(b)(1)(2) and (3) requires accurate disclosure of the financial results, records that identify adequately the source and application of funds and effective control over and accountability for all funds.

Field Museum personnel did not adequately supplement the standard accounting system with subsidiary award records designed to properly facilitate accounting and tracking NSF costs by NSF approved budget categories which resulted in grant accounting errors.

### *Recommendation #2:*

We recommend that the NSF's Director of the DIAS request the Field Museum establish and implement proper policies and procedures that will ensure the proper tracking of expenses by NSF budget line items to help ensure indirect costs are properly charged and the program objectives are being appropriately addressed.

### *Awardee Comments*

The Field Museum disagreed with the conclusions stated in this finding. Per Field Museum management, after implementing improvements to the general ledger code structure in 2004 and a financial software upgrade in 2009, the Field Museum does adequately monitor costs by NSF budget category. Management conceded that prior to the 2004 general ledger improvement, there was not a one-to-one relationship between the general ledger accounts and the NSF award budgets; however, the budget categories were tracked by the principal investigators/fund administrators on an excel spreadsheet.

### *Auditor Response*

A review of the budget to actual document maintained by the principal investigators/fund administrators showed that all the reclassifications noted in this finding were necessary in order to assess costs by budget line item and to properly calculate the indirect costs charged to the project. Therefore, this finding and recommendation remain as previously stated.



## OTHER MATTERS

### ***Physical Inventory Policies and Procedures Could be Strengthened***

As of September 2010, the Field Museum had thirty-nine (39) active NSF awards totaling \$13.4 million and budgeted equipment totaling \$1.4 million. Although the grants selected for audit had limited budgets for equipment, the possibility for error is increased due to the large number of NSF awards active at the Field Museum.

We noted the system in place to record and track equipment purchased with federal funds could be strengthened to ensure adequate safeguards to prevent loss, damage or theft. Per the Field Museum, on an annual or biennial basis, the Grants Compliance staff populates a spreadsheet (by department) with current purchases from the general ledger account 563 Equipment Purchases > \$5,000. The spreadsheet, the Field Museums' equipment record, contains prior year data and is updated with current year purchase details from the general ledger. The updated spreadsheet is provided to the Principal Investigator and/or authorized fund administrators to conduct a physical inventory of equipment purchased over a five year period and to update the details (i.e. Description, Manufacturer, Model, Serial Number, Location, Condition, etc.) required by OMB Circular A-110. Therefore, the individuals responsible for purchasing and custody of the equipment also verify the existence of the equipment.

Currently, the Grants Compliance office does not perform an ***independent physical verification*** of the information returned from the departments, but rather relies on the Principal Investigator and/or authorized fund administrators to fill that function. The Field Museum contends that OMB Circular A-110 does not designate an individual or group that should be tasked with the physical verification nor does it require an independent physical verification or sampling to ensure adequate safeguards. Additionally, asserts that it is reasonable to task the principal investigators and authorized fund administrators to conduct the physical inventory. Per the Field Museum, Principal Investigators and/or authorized fund administrators are adequate because the layperson working in an administrative office of the Field Museum would not be able to readily identify the item of equipment. In addition, the updated spreadsheet is subsequently reviewed by the Grants Compliance Director immediately following the physical inventory and also reviewed by Single Audit Act auditors every two years. The Field Museum should revise the system to ensure adequate safeguards so that the individuals responsible for purchasing and custody of the equipment are not responsible for verifying the existence of the equipment. NSF should follow-up during audit resolution to determine if this issue has been adequately addressed.

*Withum Smith & Brown, PC*  
September 22, 2011

**FINANCIAL SCHEDULES AND SUPPLEMENTAL  
INFORMATION**



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**INDEPENDENT AUDITORS’ REPORT ON FINANCIAL SCHEDULES**

We have audited costs claimed by the Field Museum of Natural History (Field Museum) to the National Science Foundation (NSF) on the Federal Cash Transactions Reports (FCTR/FFRs) for the NSF awards listed below. In addition, we audited the amount of cost sharing claimed on award number DEB-9978119. The FCTR/FFRs, as presented in the Schedules of Award Costs (Schedules A-1 through A-3) are the responsibility of Field Museum’s management. Our responsibility is to express an opinion on the Schedules of Award Costs (Schedules A-1 through A-3) based on our audit.

<u>Award Number</u>	<u>Award Period</u>	<u>Audit Period</u>
DEB-9978119	09/15/99 to 08/31/08	09/15/99 to 08/31/08
DEB-0919333	08/01/09 to 07/31/12	08/01/09 to 09/30/10
ANT-0838925	09/01/09 to 08/31/12	09/01/09 to 09/30/10

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 the *Government Auditing Standards* (2007 Revision) issued by the Comptroller General of the United States; and guidance provided in the *National Science Foundation OIG Financial Audit Guide*, August 2007, as applicable. These standards and the guidance provided by the *National Science Foundation OIG Financial Audit Guide* require that we plan and perform the audit to obtain reasonable assurance about whether the amounts claimed to NSF as presented in the Schedules of Award Costs (Schedules A-1 through A-3), are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Schedules of Award Costs (Schedules A-1 through A-3). An audit also includes assessing the accounting principles used and significant estimates made by Field Museum’s management, as well as evaluating overall financial schedule presentation. We believe that our audit provides a reasonable basis for our opinion.

The accompanying financial schedules were prepared to comply with the requirements of the *National Science Foundation OIG Financial Audit Guide* as described in the Notes to the Schedules, and are not intended to be a complete presentation of Field Museum’s financial position in conformity with accounting principles generally accepted in the United States of America.

The Schedules of Questioned Costs (Schedule B) explains the \$123,663 (14 percent of total claimed costs) of NSF funded costs for award number DEB-9978119 that we questioned for allowability. These questioned costs include subcontract, stipend, consultant, travel, publication, computer, material, and supply costs that were necessary to complete the project, but had not been incurred prior to the cancellation of the NSF appropriation; and the applicable indirect costs.



Questioned costs are: (1) costs for which there is documentation that the recorded costs were expended in violation of the laws, regulations or specific award conditions; (2) costs that require additional support by the awardee; or (3) costs that require interpretation of allowability by NSF's Division of Institution and Award Support. The final determination as to whether such costs are allowable will be made by NSF. The ultimate outcome of this determination cannot presently be determined. Accordingly, no adjustment has been made to costs claimed for any potential disallowance by NSF.

In our opinion, except for \$123,663 of questioned NSF funded costs, the Schedules of Award Costs (Schedules A-1 through A-3) referred to above present fairly, in all material respects, costs claimed on the FCTR/FFRs and cost sharing claimed for the period September 15, 1999 to September 30, 2010, in conformity with the provisions of the *National Science Foundation OIG Financial Audit Guide*, *NSF Grant Policy Manual*, the terms and conditions of the NSF awards, and on the basis of accounting described in the Notes to the Financial Schedules which is a comprehensive basis of accounting other than generally accepted accounting principles. These schedules 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 accordance with *Government Auditing Standards* and the provisions of the *National Science Foundation OIG Financial Audit Guide*, we have also issued a report dated September 22, 2011, on our consideration of Field Museum's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, the NSF award agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and the *National Science Foundation OIG Financial Audit Guide* and should be considered in assessing the results of our audit.

Our audit was performed for the purpose of forming an opinion on the Schedules of Award Costs (Schedules A-1 to A-3) taken as a whole. The accompanying Summary Schedule of Awards Audited and Audit Results (Schedule C) is presented for the purpose of additional analysis, as required by *the National Science Foundation OIG Audit Guide*. Such information has been subjected to the auditing procedures applied in the audit of the Schedules of Award Costs, and, in our opinion, except for the \$123,663 of questioned NSF funded costs, is fairly stated, in all material respects, in relation to the basic Schedules of Award Costs.

This report is intended solely for the information and use of the Field Museum's management, NSF, Field Museum's cognizant Federal agency, the Office of Management and Budget, and the Congress of the United States of America and is not intended to be, and should not be used, by anyone other than these specified parties.

A handwritten signature in blue ink that reads "Witham Smith + Brown, PC". The signature is written in a cursive, flowing style.

September 22, 2011

Field Museum of Natural History  
National Science Foundation Award Number DEB-9978119  
Schedule of Award Costs  
September 15, 1999 to August 31, 2008  
Final

Schedule A-1

Cost Category	Approved Budget	(A) Claimed Costs	(D) Adjustments and Reclassifications	Claimed Costs After Adjustments and Reclassifications	Questioned Costs	Schedule Reference
Direct costs:						
Salaries and wages						
Fringe benefits						
Equipment						
Travel						B-1, Note 1
Participant support						B-1, Note 1
Other						
Other direct costs:						
Materials and supplies						B-1, Note 1
Publication costs						B-1, Note 1
Consultant services						B-1, Note 1
Computer services						
Subcontracts						B-1, Note 1
Other						B-1, Note 1
Total direct costs						B-1, Note 1
Indirect costs						B-1, Note 2
Total	\$ 778,880	\$ 778,880	\$ -	\$ 778,880	\$ (123,663)	B-1
Cost sharing	\$ 179,205	\$ 179,205 (C)	\$ -	\$ 179,205	\$ -	

- (A) The total representing NSF funded costs claimed agreed with the expenditures reported on the FCTR/FFR– Federal Share of Net Disbursements as of the quarter ended September 30, 2008.
- (B) Field Museum claimed indirect costs to NSF based on applying a [redacted] rate against claimed onsite MTDC and [redacted] rate claimed against offsite MTDC for all fiscal years in the audit period.
- (C) The Field Museum claimed \$179,205 of cost sharing.
- (D) We have reclassified costs to record the costs in the appropriate NSF budget category. The costs were included in the Field Museum's claim. Salaries and wages reclassification totaled \$7,115 (\$22,885 stipend - \$30,000 consultant) and Consultant Services reclassification totaled \$20,545 (\$50,445 subcontract - \$30,000 compensation).

Field Museum of Natural History  
National Science Foundation Award Number DEB-0919333  
Schedule of Award Costs  
August 1, 2009 to September 30, 2010  
Interim

<u>Cost Category</u>	<u>Approved Budget</u>	<u>(A) Claimed Costs</u>	<u>Adjustments and Reclassifications</u>	<u>Claimed Costs After Adjustments and Reclassifications</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct costs:						
Salaries and wages						
Fringe benefits						
Equipment						
Travel						
Participant support						
Other						
Other direct costs:						
Materials and supplies						
Publication costs						
Consultant services						
Computer services						
Subcontracts						
Other						
Total direct costs						
Indirect costs						
Total	<u>\$ 382,628</u>	<u>\$ 77,043</u>	<u>                    </u>	<u>\$ 77,043</u>	<u>                    </u>	
Cost sharing	<u>\$ -</u>	<u>\$ -</u>	<u>                    </u>	<u>\$ -</u>	<u>                    </u>	

(A) The total representing NSF funded costs claimed agreed with the expenditures reported on the FCTR/FFR – Federal Share of Net Disbursements as of the quarter ended September 30, 2010.

(B) Field Museum claimed indirect costs to NSF based on applying a [redacted] rate against claimed MTDC for all fiscal years in the audit period.

Field Museum of Natural History  
National Science Foundation Award Number ANT-0838925  
Schedule of Award Costs  
September 1, 2009 to September 30, 2010  
Interim

Schedule A-3

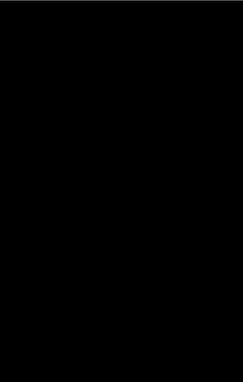
<u>Cost Category</u>	<u>Approved Budget</u>	<u>(A) Claimed Costs</u>	<u>Adjustments and Reclassifications</u>	<u>Claimed Costs After Adjustments and</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct costs:						
Salaries and wages						
Fringe benefits						
Equipment						
Travel						
Participant support						
Other						
Other direct costs:						
Materials and supplies						
Publication costs						
Consultant services						
Computer services						
Subcontracts						
Other						
Total direct costs						
Indirect costs						
Total	<u>\$ 212,791</u>	<u>\$ 6,132</u>	<u></u>	<u>\$ 6,132</u>	<u></u>	
Cost sharing	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	

(A) The total representing NSF funded costs claimed agreed with the expenditures reported on the FCTR/FFR – Federal Share of Net Disbursements as of the quarter ended September 30, 2010.

Field Museum of Natural History  
National Science Foundation Award Number DEB-9978119  
Schedules of Questioned Costs  
September 15, 1999 to September 30, 2010

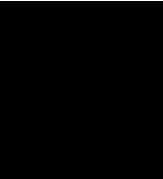
**Note B-1**

On the June 30, 2005 FCTR/FFR, the Field Museum claimed quarterly costs of \$231,781, which included current period expenses and \$153,361 that had not yet been incurred. Details of the expenditures indicated that \$67,829 of the costs were expended prior to the cancellation of the appropriation; however, the remaining \$85,532 was expended subsequent to September 30, 2005. The funds appropriation lapsed on September 30, 2005 and had to be financially closed by NSF. As a result, \$85,532 in total direct costs are questioned as noted below.

<u>Cost Category</u>	<u>Amount</u>	<u>Reference</u>	
Direct costs:			
Travel		Note B-1	
Participant support		Note B-1	
Other direct costs:			
Materials and supplies		Note B-1	
Publication costs		Note B-1	
Consultant services		Note B-1	
Subcontracts		Note B-1	
Other		Note B-1	
Total direct costs			
Indirect costs			Note B-2
Total	<u>\$ (123,663)</u>		
Cost sharing	<u>\$ -</u>		

**Note B-2**

As a result of costs questioned in Note B-1, we have also questioned indirect costs claimed by the Field Museum as follows:

Total Direct Costs:	\$ (85,532)
<i>Minus:</i>	
Participant Support:	
Subcontracts:	
Modified Total Direct Costs:	
Indirect Cost Rate:	
Auditor Calculated Indirect Costs:	<u>\$</u>

Field Museum of Natural History  
National Science Foundation  
Summary Schedule of Awards Audited and Audit Results  
September 15, 1999 to September 30, 2010

Schedule C

Summary of Awards Audited:

<u>Award Number</u>	<u>Award Period</u>	<u>Audit Period</u>
DEB-9978119	09/15/99 to 08/31/08	09/15/99 to 08/31/08
DEB-0919333	08/01/09 to 07/31/12	08/01/09 to 09/30/10
ANT-0838925	09/01/09 to 08/31/12	09/01/09 to 09/30/10

Summary of Questioned and Unresolved Costs:

<u>Award Number</u>	<u>Award Budget</u>	<u>Claimed Costs</u>	<u>Questioned Costs</u>	<u>Questioned Cost Share</u>	<u>Unresolved Costs</u>	<u>Unsupported Costs</u>
DEB-9978119	\$ 778,880	\$ [REDACTED]	\$ 123,663	\$ -	\$ -	\$ 123,663
DEB-0919333	\$ 328,628	\$ [REDACTED]	\$ -	\$ -	\$ -	\$ -
ANT-0838925	\$ 212,791	\$ [REDACTED]	\$ -	\$ -	\$ -	\$ -

Summary of Non-Compliance and Internal Control Findings:

<u>Condition</u>	<u>Non-Compliance or Internal Control?</u>	<u>Material, Significant, or Other?</u>	<u>Amount of NSF Questioned Costs Affected</u>	<u>Amount of NSF Questioned Cost Share Affected</u>	<u>Amount of Claimed/ Incurred Costs Affected</u>
Costs Charged to an Expired Appropriation	Non-Compliance and Internal Control	Material	\$ 123,663	\$ -	\$ 123,663
Insufficient Tracking System by Budget Category	Non-Compliance and Internal Control	Significant	\$ -	\$ -	\$ -
Inadequate Physical Inventory Policies and Procedures	Non-Compliance and Internal Control	Other	\$ -	\$ -	\$ -

The accompanying Notes to Financial Schedules are an integral part of this schedule

**Field Museum of Natural History  
National Science Foundation  
Notes to the Financial Schedules  
September 15, 1999 to September 30, 2010**

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**1. Summary of significant accounting policies:**

**Accounting basis**

The accompanying financial schedules have been prepared in conformity with NSF instructions which are based on a comprehensive basis of accounting other than generally accepted accounting principles. Schedules A-1 to A-3 have been prepared by the Field Museum from the FCTR/FFR reports submitted to NSF and the Field Museum's accounting records. The basis of accounting utilized in preparation of these reports differs from accounting principles generally accepted in the United States of America. The following information summarizes these differences:

**Financial statements**

A statement of financial position and a statement of cash flows are not required by the National Science Foundation, Office of Inspector General.

**Equity**

Under the terms of the awards, all funds not expended according to the award agreement and budget at the end of the award period are to be returned to NSF. Therefore, the awardee does not maintain any equity in the award and any excess cash received from NSF over final expenditures is due back to NSF.

**Equipment**

Equipment is charged to expense in the period during which it is purchased instead of being recognized as an asset and depreciated over its useful life. As a result, the expenses reflected in the schedule of award costs include the cost of equipment purchased during the period rather than a provision for depreciation.

Except for awards with nonstandard terms and conditions, title to equipment under NSF awards vests in the recipient, for use in the project or program for which it was acquired, as long as it is needed. The recipient may not encumber the property without approval of the federal awarding agency, but may use the equipment for its other federally sponsored activities, when it is no longer needed for the original project.

**Inventory**

Minor materials and supplies are charged to expense during the period of purchase. As a result, no inventory is recognized for these items in the financial schedules.

**Income taxes**

The Field Museum is exempt from income taxation under the provisions of Section 501(c)(3) of the Internal Revenue Code and a comparable State of Illinois statute. However, the Museum does have a nominal tax expense due to business activities unrelated to its exempt mission, such as specific items sold in the Museum's stores.

The departure from generally accepted accounting policies allows NSF to properly monitor and track actual expenditures incurred by the Grantee. The departure does not constitute a material weakness in internal controls.

**2. NSF cost sharing and matching:**

The following represents the cost share requirement and actual cost share as of September 30, 2010:

<u>Award Number</u>	<u>Cost Share Required</u>	<u>Cost Share Claimed</u>	<u>Over/(Under)</u>
DEB-9978119	\$ 179,205	\$ 179,205	\$ 0

**3. Indirect cost rates:**

<u>Award Number</u>	<u>Indirect Cost Rate</u>	<u>Base</u>
DEB-9978119	[REDACTED]	MTDC represent total direct costs minus participant support, equipment and subcontract costs. (Subcontract costs capped at \$25,000.)
DEB-9978119		
DEB-0919333		
ANT-0838925		

**4. Subsequent Events**

Subsequent events related to Award Numbers DEB-9978119, DEB-0919333 and ANT-0838925 occurring after the audit period dates have been evaluated through September 22, 2011, which is the date the financial statements were available to be issued. Based upon this evaluation, the Field Museum has determined that no significant events occurred which require disclosure in the audit report.

**ATTACHMENTS**



Response by Field Museum of Natural History to the

Financial Audit of Financial Schedules and Independent Auditors' Reports on National Science Foundation Award Numbers DEB-9978119, DEB-0919333 and ANT-0838925

September 15, 1999 to September 30, 2010

*Response to Finding #1. Costs Charged to an Expired Appropriation*

The Field Museum of Natural History (Museum) management disagrees with the conclusions stated in finding number 1. The finding imputes a violation of federal appropriation laws to the Museum when in fact the Museum acted in a manner consistent with the National Science Foundation (NSF) guidance received when it reported encumbered funds as costs on its June 2005 FCTR/FFR. If not for misleading guidance provided by NSF, the Museum would not have pursued extraordinary measures, with the understanding costs were within the period of availability, in order to successfully achieve project goals for award number DEB-9978119.

The findings charge the Museum with unjustifiably incurring costs against an appropriation after September 30<sup>th</sup> of the fifth fiscal year after its period of availability for obligation ended while ignoring that the Museum had no previous experience with awards subject to lapsed appropriation. Museum management does not agree that Federal standards require the Museum to demonstrate knowledge of, or experience interpreting, federal appropriation laws.

It was the responsibility of the grantor, NSF, also the Museum's cognizant Federal agency, to provide the Museum with adequate notice of a lapsing appropriation and accurate guidance for responding to an uncommon set of circumstances. The NSF informed the Museum via email on July 11, 2005 that award number DEB-9978119 was subject to a lapsed appropriation.

The July 11, 2005 email<sup>1</sup> (see footnote for full text) from NSF on the subject of the lapsed appropriation stated in relevant part: "It is acceptable to report encumbrances as

**Awardees' Comments to Report**

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costs on the FCTR when a [*sic*] award is due to be financially closed.” The NSF clearly instructed Field Museum in this email that it was acceptable to encumber funds subject to the lapsed appropriation and to report the encumbered costs on the final FCTR in advance of the lapse.

As a result of this guidance, the Field Museum encumbered costs and then reported the encumbrances as advised on the June 2005 FCTR/FFR with a deadline of August 15, 2005 - a mere 34 days after receiving NSF’s formal notice of the lapsing appropriation.

Field Museum received this same guidance twice from NSF: via the July 11, 2005 email and a day or so earlier when NSF initially contacted Field Museum by telephone to announce the lapsed appropriation. Virginia Hall, who was assigned to Illinois organizations, in NSF’s Cash Management and External Accounting branch within the Office of Budget, Finance and Award Management (BFA) called to notify and guide the Museum. Ms. Hall stated that Field Museum could take action to encumber funds and report the encumbered funds as costs on the FCTR report in advance of the lapsing appropriation.

Although the July 11, 2005 email did not define the term “encumbrances” nor specify how the Museum should proceed in order to report encumbrances as costs, in the September 21, 2011 report NSF provides a new and distinct standard. The finding states, “However, per the Division of Financial Management, NSF fully expected the awardee to report only those expenses that would be incurred and posted to the accounting system by September 30<sup>th</sup>. Special accounting policies or practices for expiring awards could not be implemented.”

If the July 11, 2005 email providing guidance to the Museum had been as lucid in its instruction as is the NSF Division of Financial Management statement in the finding, then the Museum would never have reported encumbered costs. The Museum did not initiate the possibility of encumbering costs on its own; the concept that costs subject to lapse might be encumbered was part of the guidance presented to the Museum by NSF in the July 11, 2005 email. Rather than stating, “It is acceptable to report encumbrances as costs on the FCTR...” the email should have used the contemporary language provided by the NSF Division of Financial Management in this finding.

In the absence of this 2011 restatement of the NSF guidance, the Museum encumbered costs in a manner consistent with the generally-accepted definition. The accounting term 'encumbrance' is generally accepted to mean a commitment or obligation incurred by issuance of a purchase order or contract for goods or services. An encumbrance is not recognized as an expenditure as the items to be procured have not been received or paid for.

The Museum acted in a manner consistent with the guidance received from its own designated cognizant Federal agency as it responded to this unforeseen circumstance with minimal time to reflect or act. Management disagrees that it should have intuitively

**Awardees' Comments to Report**

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moved beyond the NSF guidance actually received, and instead should have been aware of and should have applied federal appropriation laws.

Management asserts that the Museum has already established and implemented proper policies and procedures that prevent costs from being incurred outside of an award's period of availability. Management attempts to be as knowledgeable as possible regarding federal grants laws and regulations, however, in this highly unusual circumstance, and in the absence of knowledge of or experience with lapsed appropriations, the Museum relied in good faith on the NSF guidance as stated to define how it should approach the period of availability.

It bears mention again that NSF gave the Museum just over 30 days notice when it charged the Museum with bringing to an immediate close the initial \$749,634 of a complex grant project, ongoing since August 1999 for which original project funds were remaining of \$231,781 and under which the associated proposed work was in progress and anticipated to continue for several years to come.

Critical project goals were planned but not yet achieved. A supplemental award from NSF of \$29,246 had recently been received on December 3, 2004 which ensured the continuation of award number DEB-9978119 through August 2005 and, in fact, the project continued through August 2008. The Museum had no reason to anticipate, prior to July 2005, that the award would end prematurely. Contemporaneously, the Museum submitted a no-cost extension request to NSF to extend the award through August 2006. The no-cost extension was approved by NSF on July 18, 2005.

Since 2006, award number DEB-9978119 has been subjected to an annual Division of Financial Management review under the NSF Monitoring Plan. Each year's review involved testing of the FCTR/FFR reports and the 2006 review specifically involved testing of expense transactions from the lapsed appropriation period. These audits were conducted by auditors under contract to and acting on behalf of NSF. In 2006, the Museum provided additional information to support the encumbered costs as reported, yet neither auditors nor the NSF Division of Financial Management ever contacted the Museum to suggest it had misinterpreted NSF guidance or otherwise charged costs to an expired appropriation as per this finding.

Management disagrees with the two-part recommendation.

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*Response to Finding #2. Insufficient Tracking System by Budget Category*

Museum management disagrees with the conclusions stated in finding number 2 and insists that the Museum, after it implemented voluntary improvements to the Museum's general ledger code structure in 2003-2004 and a financial software upgrade in 2009, does adequately track/monitor costs by NSF budget category.

**Awardees' Comments to Report**

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The Museum's enhancements to its general ledger code structure occurred four years into award number DEB-9978119. The finding cited four accounting errors related to DEB-9978119 and attributed these to the Museum's inability to effectively monitor its grant budget to actual costs. In fact, two of those costs cited in the finding as accounting errors were correctly classified. The subcontract and permanent equipment costs were applied accurately to the correct general ledger codes in existence at the time the expenses occurred in March 2003 and November 2001 respectively. Award number DEB-9978119 operated under a more narrow set of general ledger codes until the Museum's improvements to the general ledger code structure were implemented in January 2004.

Had the Museum's enhancements to the general ledger code structure been in place at the beginning of the award in 1999, the \$50,545 Subcontract cost would have been applied to the Museum's general ledger code 560 – Subcontracts and the \$9,000 Permanent Equipment cost would have been applied to the Museum's general ledger code 563 – Permanent Equipment.

Management concedes that prior to these improvements implemented in 2004 there was not a one-to-one relationship between the Museum general ledger accounts and the NSF award budget. Prior to 2004, the Museum general ledger codes that corresponded directly with NSF budget categories were these: Salaries and Wages - 501, Fringe Benefits - 505, Travel - 527, Indirect costs- 511 and Other Direct Costs: Materials and Supplies – 532.

During 2003 and 2004, Management recognized the need to enhance the Museum's general ledger code structure to assure its records "identify adequately the source and application of funds" to comply with the Federal standard in OMB Circular A-110, Subpart C, Section 21(b)(1)(2). Not only did this enhancement improve the Museum's ability to track actual costs by NSF approved budget categories, it facilitated the Museum's segregation of direct expenses in order to properly calculate Modified Total Direct Costs (MTDC) for the purposes of accurately assessing indirect costs to individual grants as well as for its annual indirect cost rate proposal to NSF.

The Museum added the following general ledger codes and communicated these changes to the general ledger code structure to museum-wide staff in a January 8, 2004 memorandum. Newly created general ledger codes were: Subcontract - 560, Participant Support - 555, and Permanent Equipment (greater than \$5,000) – 563. These changes to the general ledger code structure resulted in the segregation of actual costs by these NSF approved budget categories and improved control over and accountability for all funds.

Post January 2004, the Museum had expanded its general ledger code structure to the point where a one-to-one relationship between its general ledger code and the NSF budget category existed for **all of the NSF budget categories except** for budget category G. Other Direct Costs.

The NSF Other Direct Costs budget category is a broad budget category which is comprised of six distinct lines of cost. While the Museum assigned a specific general ledger code to two of these six lines: Materials and Supplies – 532 and Subcontracts –

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560, it had not assigned a specific general ledger code to the remaining four budget lines: Publication Costs/Dissemination Costs, Consultant Services, Computer Services and Other. These remaining four budget lines are not as narrowly defined as the ones to which the Museum assigned distinct general ledger codes. It is apparent by the title and structure of the overall category "Other Direct Costs" that NSF deliberately assembled six disparate budget items under a single header.

Additionally, the Museum made the following improvements and implemented the following policies and procedures designed to facilitate accounting and tracking of costs by NSF budget categories.

Effective in January 2009, Management upgraded the Museum's financial software to one designed and implemented with features which allowed the input of grant budgets into the software to enhance the oversight of budget to actual costs. Previous software did not allow the input of a grant budget and therefore did not offer a ready comparison to budget v. actual costs. Now, grant budgets reside and are maintained in the software.

Grant budgets are input at the beginning of a grant, after consultation with the principal investigator and the authorized fund administrators during Field Museum's grant set up meetings which precede the financial availability of grant funds for expenditure. General ledger codes are established to correspond to NSF budget categories and are assigned a general ledger code which represents as closely as possible a one-to-one relationship between the code and a budget line as previously outlined. Only those general ledger codes which correspond to NSF budget categories as identified during grant set-up are opened in the financial software and a budget for each general ledger code is entered into the financial software.

Throughout the life of a grant, budgets are updated when approved budget modifications are received from a Federal agency. Accurate budgets reside in the software allowing for a comparison of budget v. actual costs via a generated report.

Field Museum principal investigators and authorized fund administrators exercise control over the grant budget, select the appropriate general ledger code and submit purchasing paperwork to expend grant funds in accordance with the approved grant budget. Principal investigators track the approved budget and record expenditures, typically in Excel spreadsheets, when purchasing paperwork is submitted. Principal investigators and authorized fund administrators also monitor expenditures by NSF budget category by reviewing budget reports generated and compare budget v. actual expenditures.

Again, the finding reported four instances where costs were identified as improperly recorded. As stated previously, all four of these instances involved grant number DEB-9978119. The period of availability for DEB-9978119 extended from September 1999 through August 2008. A detailed explanation for each cost is presented below:

1. \$50,545 was a subcontract cost improperly recorded under consultant services

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The \$50,545 subcontract cost dated March 2003 was properly applied to the Museum's general ledger code 544 – Other outside services. This cost was applied before the general ledger code 560 for subcontract costs was created and announced in the January 2004 memorandum. This subcontract expenditure was correctly applied in March 2003 to general ledger code 544 - Other Outside Services under the control and general ledger code categories in existence at the time, therefore, no accounting error occurred in this instance.

2. \$22,885 in stipends improperly recorded under dues, fees and meetings

The \$22,885 is comprised of two separate charges of \$10,660.37 incurred in October 2003 and \$12,224.82 incurred in December 2005.

The Museum's payment approval form for \$10,660.37 was originally coded for application to the Stipend general ledger code – 513 on the payment approval form by the principal investigator/fund administrator, but the general ledger code was changed in error before input into the financial software to the Dues, Fees and Meetings code – 522.

The Museum's payment approval form for \$12,224.82 references a purchase order on which the account string was correctly coded for application to the Stipend general ledger code – 513 by the principal investigator/fund administrator. When the purchase order was entered into the software, the general ledger code was changed in error to the Dues, Fees and Meetings code – 522.

These appear to be data entry errors. However, principal investigators/fund administrators input actual costs into their tracking sheets using the general ledger code which they selected for the cost contemporaneous with the submission of paperwork to expend funds. They maintain a ready comparison of costs correctly identified against the NSF budget line items.

3. \$12,000 in contracted services improperly recorded as compensation.

The \$12,000 is comprised of four separate charges of \$3,000 incurred in July, August and November 2005 and July 2006. The Museum's four payment approval forms submitted were originally coded for application to the Compensation to Individuals general ledger code – 504 on the payment approval forms by the principal investigator/fund administrator, but the general ledger code was changed in error before input into the financial software to the Other Outside (contractor) Services code – 544.

Once again, these appear to be data entry errors. However, principal investigators/fund administrators input actual costs into their tracking sheets using the general ledger code which they selected for the cost contemporaneous with the submission of paperwork to expend funds. They maintain a ready comparison of costs correctly identified against the NSF budget line items.

4. \$9,000 in permanent equipment improperly recorded as materials and supplies.

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The \$9,000 permanent equipment cost dated November 2001 was properly applied to the Museum's general ledger code 532 – Materials and Supplies. This cost was applied before the general ledger code 563 for permanent equipment costs was created and announced in the January 2004 memorandum. This subcontract expenditure was correctly applied in November 2001 to general ledger code 532 – Materials and Supplies under the control and general ledger code categories in existence at the time, therefore, no accounting error occurred in this instance.

The Museum made great strides in facilitating the tracking and accounting of grants costs between September 1, 1999 and September 30, 2010. A one-to-one relationship between its general ledger code and the NSF budget category exists for all of the NSF budget categories except four of the six budget lines under NSF budget category G. Other Direct Costs.

The Grant Policy Manual NSF 95-26, 322(a) which applied to award DEB-9978119 allows the Museum flexibility in utilizing the NSF budget to best achieve project goals when it authorizes the Museum to move funds between direct cost budget categories at the Museum's own discretion (except for certain categories that require prior approval, e.g. Participant support). It states, "If required in furtherance of the project, the grantee is authorized to transfer funds from one budget category to another for allowable expenditures. Exhibit III-1, however, highlights certain budget changes which may require NSF prior approval." The current standard, as presented in the NSF Award and Administration Guide applicable to the Museum's more recent awards also tested in this report, has not changed significantly from the standard quoted above.

Management asserts that improved policies and procedures in place on September 30, 2010 are adequate to meet the NSF standard quoted above and to ensure the accurate tracking of actual costs versus NSF budget line items so as to ensure that program objectives are being appropriately addressed.

Regarding indirect costs, the September 21, 2011 report does not state that the Museum improperly calculated or made errors in its calculation of indirect costs. The Museum asserts that its current policies and procedures are adequate to ensure that indirect costs are properly charged.

Management disagrees with the recommendation.

*Comments regarding Other Matters, Physical Inventory Policies and Procedures Could be Strengthened*

The OMB Circular A-110 does not designate an individual or group within an organization who is tasked with the physical inventory nor does it require an independent physical verification or sampling of the physical inventory itself to ensure adequate safeguards are in place.

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Management disagrees with the comment and asserts it is reasonable to task Principal Investigators and authorized fund administrators who have full authority to conduct the grant project and expend grant funds to conduct the physical inventory of equipment in the context of the other controls employed by the Museum to safeguard its equipment as outlined below.

It is critical to realize that much of the equipment purchased for research is specialized to such a degree that a layperson working in an administrative office of the Museum would not be able to readily identify the item of equipment by sight or ascertain its condition. In many cases, several components are arranged together to comprise a whole item of permanent equipment. In these cases, it would be impractical and costly to disassemble the equipment in order for a layperson to locate a serial number to verify the identity of an item of equipment. The Principal Investigator and authorized fund administrators are trained in the use of the equipment, are most familiar with the project, the current utilization of, and the ongoing need for the equipment and can assess its condition.

Furthermore, equipment at the \$5,000 cost threshold is typically not portable and generally of a size that minimizes the risk it could be removed from the building without authorization.

The Grants Compliance office provides checks and balances when it verifies that the physical inventory was conducted and reviews the updated equipment record (which is presented in the form of a spreadsheet). The Grants Compliance office identifies any inconsistencies in the equipment record and then communicates with the Principal investigator and/or Fund administrator to resolve each inconsistency.

In addition, the Field Museum has other controls in place to insure adequate safeguards to prevent loss, damage, or theft of the equipment. There are security guards located at each entrance of the building. All museum staff and volunteers are issued Field Museum photo ID cards. The ID cards are programmed by the security systems team to allow staff members' free access to pre-determined card-reader controlled areas of the building. IDs may be programmed to allow access during certain times of the day, and may be set to expire on a specific date. Specific keys are issued at the request and approval of department managers / directors. However, before keys are issued, the staff member must sign for the keys and their identification is verified. When a staff member's employment ends, his or her ID is retrieved and deleted from the access system.

Keys to other more critical areas are maintained in various electronic key boxes located in non-public areas of the museum. These keys are not to be removed from the premises. Access to key boxes is restricted to authorized personnel only. Authorized staff members are issued a code that will enable them to access the key box. Any set of keys removed will be electronically linked to the authorized staff member. If the staff member fails to return the keys by the end of the day, an email alert will be generated to the security systems team, the security systems manager, and security director regarding the status of the keys. Security systems will immediately follow up with the staff member to retrieve

## Awardees' Comments to Report

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the keys. When a staff member's employment ends, all keys issued must be turned in prior to leaving the institution.

Any staff or non-staff person who wishes to remove any items from the museum should have in his/her possession a "Field Museum Door Pass." This pass should be used for personal property, museum equipment, and library books. There should be a description of the item, an "Approved" stamp, and a signature of the department head or approved proxy. Protection Services officers stationed at all doors have been instructed to deny exit to anyone who is not in possession of a properly approved pass. The pass will be surrendered to the DPS officer and a copy of the pass will be returned to the authorizing department the next business day.

Management believes that controls present at different levels of the organization are properly designed to prevent or detect the potential misappropriation of assets on a timely basis and are consistent with the property management system requirements in OMB Circular A-110.



<sup>1</sup> Complete text of the National Science Foundation lapsed appropriation notification email to Field Museum dated July 11, 2005.



Institution Name	Institution ID
Field Museum of Natural History	4002275000

All National Science Foundation (NSF) awards funded by Fiscal Year 1999 Federal appropriations will lapse on September 30, 2005. In late September, we will financially close (deobligate all unobligated balances) all awards funded with 1999 appropriations.

The following award(s) to your organization are funded by FY 1999 appropriations: 9978119

In 1990, the US Congress enacted legislation (§1405(a) of Public Law 101-510 amended 31 USC §§1551-1557) to require that all Federal agencies financially close fixed year appropriation accounts and cancel any remaining balances by September 30th of the 5th year after the period of

**Awardees' Comments to Report**

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availability began. The federal fiscal year, not the effective date of the award, determine when the appropriation will lapse.

Please alert the appropriate principle investigator's (or project director) department of this situation. It is acceptable to report encumbrances as costs on the FCTR when a award is due to be financially closed. If possible, please report final expenditures on the June 30, 2005 FCTR. If necessary, we can create a preliminary September FCTR for you in late August to report final cost on the above awards. We must have final expenditure figures by September 15, 2005. NSF will not accept additional costs against this award on the September 30, 2005 FCTR.

Please contact me if you need additional information.

Michael (Mike) Howe  
Head, Institution Ledger Section  
Division of Financial Management  
National Science Foundation

Ph: 703-292-8285  
Fax: 703-292-9005  
E-mail: [mhowe@nsf.gov](mailto:mhowe@nsf.gov)

**Follow-up of Prior Audit Findings**

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The Field Museum has not been audited by NSF, but the programs have been audited under OMB Circular A-133. The A-133 Single Audit covering grant awards FY's 2007, 2008 and 2009 did not identify any finding related to NSF or any other awards. The financial statement audit of the Field Museum for FY 2008 did note that the Field Museum was lacking an enterprise-wide risk assessment program that identified fraud and other risk factors. During the audit, we found that the Field Museum did address the issue which was subsequently cleared by the auditors.

**Exit Conference**

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An exit conference was held on August 12, 2011 via teleconference. Preliminary findings and recommendations were discussed with those in attendance. The Field Museum was informed that the preliminary findings and recommendations were subject to final review by NSF and the report may include additional findings, recommendations, and/or omit certain items discussed.

*Attendees:*

[REDACTED]

Billy McCain, Audit Manager, National Science Foundation  
Nga T. Vo, Audit Manager, National Science Foundation

[REDACTED]

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