



OFFICE OF INSPECTOR GENERAL

Catalyst for Improving the Environment

Audit Report

Reported Outlays Under EPA Grant R828112-01 Health Effects Institute

Report No. 2005-4-00054

March 31, 2005

This audit report contains findings that describe problems the Office of Inspector General (OIG) has identified and corrective actions the OIG recommends. The report represents the opinion of the OIG, and findings contained in this report do not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

Report Contributors:

Keith Reichard
Richard Valliere
Clem Cantil

Abbreviations

CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
OIG	Office of Inspector General
OMB	Office of Management and Budget
Recipient	Health Effects Institute



At a Glance

Catalyst for Improving the Environment

Why We Did This Review

We conducted this examination to express an opinion on the reported outlays on the Federal Cash Transactions Reports, and determine whether the recipient was managing its EPA grant in accordance with applicable requirements.

Background

EPA awarded grant R828112-01 to the recipient on November 14, 2000. The agreement was authorized under section 103 of the Clean Air Act, as amended. This agreement provided \$18,750,000 to the recipient to identify and help the broader science community plan for new research in air toxics, accountability, and the health effects of emerging fuels and technologies.

For further information, contact our Office of Congressional and Public Liaison at (202) 566-2391.

To view the full report, click on the following link:

www.epa.gov/oig/reports/2005/20050331-2005-4-00054.pdf

Reported Outlays Under EPA Grant R828112-01 Health Effects Institute

What We Found

We questioned \$2,009,473 of reported outlays because the Health Effects Institute did not maintain the necessary documentation to fully support the reported costs, as required by Federal regulations. Employee time sheets did not specifically identify the EPA grant as a chargeable activity and were not used as the basis for charging labor and related costs to the grant. The recipient charged time for specific employees even though the employees might have worked on other non-grant activities. In addition, the recipient charged travel and other costs to the grant without determining the allocable benefit of such costs.

The Health Effects Institute did not agree with our conclusions. The Institute stated that it had only one final cost objective and all of its cost were allocable to the EPA grant. This position is inconsistent with the Institute's accounting records which identified two cost objectives, one for the EPA grant and one for industry. Besides the automotive industry, the Institute received funds from several other sources.

What We Recommend

We recommend that EPA (1) obtain sufficient documentation to support the outlays of \$2,009,473 in accordance with EPA regulations or disallow the costs from Federal grant participation; (2) place the recipient on a cost reimbursement payment basis and review the supporting documentation for all claims prior to payment until such time as the recipient can demonstrate that it has addressed its financial management weaknesses; and (3) ensure the recipient's indirect cost rate proposal includes information for identifying direct and indirect costs, and an explanation of how these costs are accounted for in the accounting system.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
INSPECTOR GENERAL

March 31, 2005

MEMORANDUM

SUBJECT: Reported Outlays Under EPA Grant R828112-01
Awarded to Health Effects Institute, Boston, MA
Report No. 2005-4-00054

FROM: Michael A. Rickey /s/ *Michael A. Rickey*
Director, Assistance Agreement Audits

TO: Richard Kuhlman
Director, Grants Administration Division

This is the final report to express an opinion on the outlays reported through December 31, 2003, by the Health Effects Institute under grant R828112-01. The grant was authorized under Section 103 of the Clean Air Act. Our opinion does not extend to the recipient's financial statements taken as a whole, nor does it extend to the quality or results of the funded research. In addition, our conclusions are qualified subject to EPA's acceptance of the work upon completion of the grant.

We have questioned over \$2 million because the recipient did not have sufficient documentation to support the allocation of these costs to the EPA grant in accordance with the terms and conditions of the grant. The report represents the opinion of the Office of Inspector General (OIG), and the findings contained in this report do not necessarily represent the final EPA position. The OIG has no objection to the release of this report to any member of the public upon request.

On November 23, 2004, we issued a draft report to the recipient for review and comment. The recipient did not agree with the reported findings. We have included the recipient's response to the draft report in Appendix B (we did not include the recipient's attachments but they are available upon request). The response is also summarized after each finding with our comments.

Action Required

In accordance with EPA Manual 2750, the action official is required to provide this office with a proposed management decision within 120 days of the date of this transmittal memorandum. The proposed management decision must address each finding and recommendation. Where you disagree with a finding or recommendation, please provide alternative actions and support or precedence for your position

If you have questions concerning this report, please contact Keith Reichard, at (312) 886-3045.

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Background

The U.S. Environmental Protection Agency (EPA) awarded grant R828112-01 to the recipient on November 14, 2000. The recipient is an independent nonprofit corporation chartered to conduct and evaluate research and testing related to the health effects of emissions from motor vehicles and other environmental pollutants. Its mission is to provide independent, unbiased, timely, and high quality scientific results of this research to the public and interested Government agencies.

To support the recipient's mission and its 5-year strategic plan, a number of organizations both in the United States and in Europe provide funding to support the recipient's research. These organizations include EPA, the motor vehicle industry, the California Air Resources Board, the European Commission, the German Automobile Manufacturers Association, the European Chemical Industry Council, the Chemical Manufacturers Association, and the American Petroleum Institute. The following table provides some basic information about the authorized project period and the funds awarded under the agreement covered by this audit.

Total Award	Recipient's Share	Federal Share	Project Period
\$18,750,000	\$0	\$18,750,000	04/01/2000 - 03/31/2005

The agreement was authorized under section 103 of the Clean Air Act, as amended. This agreement provides for the recipient to identify and help the broader science community plan for new research in air toxics, accountability, and the health effects of emerging fuels and technologies.

Although this grant does not have a cost-matching requirement, the recipient indicated that the automobile industry provided the recipient funding in an amount equal to the Government funding level.

To assist the reader in obtaining an understanding of the report, key terms are defined below:

Reported Outlays: Program expenses or disbursements claimed by the recipient on the Federal cash transaction report.

Questioned Outlays: Outlays that are (1) contrary to a provision of a law, regulation, agreement, or other documents governing the expenditure of funds, (2) not supported by adequate documentation, or (3) not approved by a responsible Agency official.

Independent Auditor's Report

We have examined the total outlays reported by the recipient through December 31, 2003 under the EPA grant R828112-01, as shown below:

Federal Cash Transaction Reports		
Date Submitted	Period Ending	Federal Share of Outlays Reported
01/11/01	12/31/00	\$1,500,903
07/12/01	06/30/01	\$3,710,458
01/15/02	12/31/01	\$1,995,199
07/15/02	06/30/02	\$293,440
01/15/03	12/31/02	\$3,509,473
07/15/03	06/30/03	\$0
03/03/04	12/31/03	\$1,000,000
Total		\$12,009,473

The recipient certified that the outlays reported on the *Federal Cash Transaction Reports*, Standard Form 272, were correct and for the purposes set forth in the agreement. The preparation and certification of the claim are the responsibility of the recipient. Our responsibility is to express an opinion on the reported outlays based on our examination.

Our examination was conducted in accordance with the *Government Auditing Standards* issued by the Comptroller General of the United States, and the attestation standards established for the United States by the American Institute of Certified Public Accountants. We examined, on a test basis, evidence supporting the reported outlays, and performed such other procedures as we considered necessary in the circumstances (see Appendix A for details). We believe that our examination provides a reasonable basis for our opinion. Our scope and conclusions are qualified because the work under the grant was not complete, and EPA has not yet accepted the research projects.

We questioned \$2,009,473 of the \$12,009,473 in outlays reported because the recipient did not maintain sufficient documentation to support the allocation of these costs to the EPA grant in accordance with the terms and conditions of the grant. The recipient also needs to improve some of its accounting practices to ensure compliance with Federal requirements.

In our opinion, because of the effects of the questioned outlays discussed in the preceding paragraph, the reported Federal outlays on the *Federal Cash Transaction Reports* do not present fairly, in all material respects, the allowable outlays incurred in accordance with the terms and conditions of the grant and applicable EPA regulations. Details of our audit are included in the *Schedule of Reported Outlays and Results of Audit for Grant R828112-01* and the *Report of Non-Compliance* that follows.

/s/ Keith Reichard for

Office of the Inspector General
U.S. Environmental Protection Agency
September 1, 2004

Schedule of Reported Outlays and Results of Audit for Grant R828112-01

Description	Reported Outlays	Questioned Outlays	Note
Payroll	\$1,138,677	\$1,138,677	1
Fringe Benefits	\$192,556	\$192,556	1
Travel	\$61,500	\$61,500	2
Other Costs	\$616,740	\$616,740	2
Research Contracts	\$10,000,000	\$0	3
Totals	\$12,009,473	\$2,009,473	

Note 1: We questioned payroll and fringe benefit outlays of \$1,138,677 and \$192,556, respectively. The recipient did not use employee time sheets to distribute labor costs to the grant, and the time sheets did not identify the EPA grant or specific grant activity as the final cost objective. As a result, we were unable to determine whether the reported outlays were allowable for Federal grant purposes.

Title 40 CFR 30.27 provide that non-profit organizations shall follow the provisions of OMB Circular A-122 for determining allowable costs. That Circular, Attachment B, subparagraphs 7.m (1) and (2), requires that:

...the distribution of salaries and wages to awards must be supported by personnel activity reports....Reports reflecting the distribution of activity of each employee must be maintained for all staff members (professionals and nonprofessionals) whose compensation is charged, in whole or in part, directly to awards....Reports maintained by non-profit organizations to satisfy these requirements must meet the following standards:

(a) the reports must reflect an after-the-fact determination of the actual activity of each employee. Budget estimates (i.e., estimates determined before the services are performed) do not qualify as support for charges to awards.

(b) Each report must account for the total activity for which employees are compensated and which is required in fulfillment of their obligations to the organization.

(c) The reports must be signed by the individual employee, or by a responsible supervisory official having firsthand knowledge of the activities performed by the employee, that the distribution of activity represents a reasonable estimate of the actual work performed by the employee during the periods covered by the reports.

(d) The reports must be prepared at least monthly and must coincide with one or more pay periods....

The recipient did not maintain sufficient documentation to distribute labor costs to the EPA grant. The recipient's employees documented their daily attendance and hours worked on biweekly time sheets. However, these time sheets were not used to distribute labor costs to the EPA grant, and did not identify the grant or specifically identified unique grant activity as a final cost objectives. The recipient's time sheets distributed time to a functional areas such as "study review" or "science publications." These functional areas were not specifically identified with the EPA grant.

Because the recipient used functional areas rather than the grant as a final cost objective and did not use the time sheets to distribute labor costs to the grant, the recipient selected six employees to charge to the grant. These six employees did not necessarily work full-time on the grant. For example, the recipient charged all the salary for the Director of Finance and Administration to the grant although she stated that she worked on other tasks unrelated to the grant.

OMB Circular A-122, Attachment A, provides that only allocable costs are allowable grant costs. Since the recipient did not maintain sufficient records to properly identify the actual labor costs incurred for the grant, the reported outlays are unallowable for Federal grant participation.

Recipient's Response

The recipient stated that it had only one final cost objective during the period audited, therefore, 100 percent of staff time was tied directly to that final cost objective. All costs, both direct and indirect, are allocable to that final cost objective. The recipient required all employees to fill out weekly or bi-weekly

time sheets. Those time sheets comply with OMB Circular A-122, Attachment B, (1) and are filled out after-the-fact, (2) record total activity, (3) are signed by the employee and approved by a supervisor and (4) are prepared at least monthly.

OIG's Comments

We disagree with the recipient that it had only one final cost objective during the audit period and that the time records met the requirements of OMB Circular A-122. The recipient received funding from both EPA and the auto industry, and established two final costs objectives in its accounting system for these two sources of funding. However, the recipient did not identify and allocate labor costs to these two cost objectives on its time sheets in accordance with OMB Circular A-122. The recipient received additional funding from the U.S. Agency for International Development, the William and Flora Hewlett Foundation, the California Air Resources Board, and other domestic and foreign organizations.

Further, employee time sheets were not used to distribute the labor charges to the final cost objectives. According to the OMB Circular, the distribution of salaries and wages to awards must be supported by personnel activity reports and reflect an after-the-fact determination of the activity of each employee. The recipient's time records and accounting practices did not meet these requirements.

Note 2: We questioned travel and other outlays of \$61,500 and \$616,740, because the recipient could not demonstrate that the outlays were allocable to the EPA grant. According to the recipient, outlays for travel and fees paid to various scientific review committees were split equally between the EPA grant and other non-Federal work. Similarly, 100 percent of the outlays for such items as telephones and photocopying were charged to the grant. The recipient does not have sufficient documentation to show that these practices meet the allocability requirements in OMB Circular A-122.

OMB Circular A-122, Attachment A, subparagraph 4 states that a cost is allocable to the grant in accordance with the relative benefits received and is treated consistently with other costs incurred for the same purpose in like circumstances. An allocable cost can be incurred specifically for the grant or incurred for the grant as well as other work. The recipient does not have documentation to show that the reported outlays for travel and other outlays were allocable to the EPA grant. Consequently, the reported outlays are not allowable for Federal participation.

Recipient's Response

The recipient states the questioned costs for scientific experts, their travel, and administrative expenses were expended only in support of the recipient's sole final cost objective - the EPA grant. The recipient stated that expenses such as telephone, photocopying, office supplies, computer technical support, insurance, audit, and utilities were charged to the grant. However, other expenses necessary to support the recipient's activities such as postage, rent, maintenance and printing, were charged to industry sponsors. Given this, and that the reasonableness, nature, or amount of such costs are not in question, the expense should be fully allowable.

OIG's Comments

We disagree that the recipient had only one final cost objective during the period of our audit. The recipient received funding from EPA and industry and established two final cost objectives in its accounting system. The recipient also received funding from other sources.

Since the recipient had more than one final cost objective, we were unable to determine if the costs charged to the EPA grant were allocable to the grant in accordance with the relative benefits received because the recipient did not have sufficient documentation to support distribution of costs. Costs are allocable to a final cost objective if the costs (1) are incurred specifically for the award, (2) benefits both the award and other work and can be distributed in reasonable proportion to the benefits received, and (3) is necessary to the overall operation of the organization, although a direct relationship to any particular cost objective cannot be shown. When an organization has multiple cost objectives, costs that can be specifically identified with the final cost objective should be charged direct to that final cost objective. If a direct relationship to any particular cost objective cannot be shown, and the costs are necessary and allowable, then the costs are generally allocated to the benefitting cost objective using an equitable allocation basis.

The recipient has not demonstrated that the reported outlays are allocable to the EPA grant in accordance with OMB Circular A-122. Accordingly, the travel and other costs charged to the grant are not allowable for Federal participation.

Note 3: The outlays for the research contracts are subject to EPA review and acceptance upon completion of the grant.

Recommendation 1

We recommend that EPA obtain sufficient documentation to support the outlays of \$2,009,473, in accordance with EPA regulations, or disallow the costs from Federal grant participation.

Report of Non-Compliance

Financial management practices did not meet all the requirements of 40 CFR 30.21 because the recipient did not (1) always maintain the source documentation needed to allocate the costs to the Federal grant, (2) identify the grant or specific grant activities as the final cost objective, and (3) develop written procedures for identifying direct and indirect costs.

Title 40 CFR 30.21 requires that the recipient have a system of procedures in place to provide for (1) accurate, current, and complete disclosure of the financial results; (2) records that identify adequately the source and application of funds for federally sponsored activities; (3) effective control over and accountability for all funds; (4) accounting records including cost accounting records that are supported by source documents; (5) written procedures for determining the reasonableness, allocability, and allowability of costs.

As discussed earlier in this report, the recipient did not maintain the documentation required to support the allocation of labor, fringe benefits, travel, and other costs to the EPA grant. The recipient charged labor costs to the grant for specific staff although the staff sometimes worked on non-grant activities. In addition, the recipient did not have the records to adequately identify the application of funds for federally sponsored activities because the recipient had not identified the grant or related tasks as a final cost objective. The lack of sufficient controls and accountability over the funds caused the recipient to report erroneous financial information resulting in questioning reported outlays of \$2,009,473.

The recipient has not developed written procedures for identifying direct and indirect costs, the basis for allocating such costs to projects. These written procedures would provide a consistent and verifiable basis for the treatment of direct and indirect costs and serve as the basis for preparing an indirect cost rate proposal. Since the recipient has not developed these procedures, the proposed indirect cost rate submitted for fiscal year 2002 is not sufficient to negotiate a indirect cost rate.

Recipient's Response

The recipient had only one final cost objective jointly funded by EPA and industry during the period audited. Thus, all expenses were incurred in support of and were allocable to that cost objective. Further, the recipient had in place a financial accounting system in which all expenses, including labor, were directly traceable from source documents, through the books and records to the grant and that the accounting system was compliant with Federal requirements. Within this full set of allocable costs, 50 percent were charged to EPA and 50 percent to industry. The fact that twice as much costs were incurred for grant activities than was claimed for Federal reimbursement means as a practical matter,

unless costs questioned amount to more than one-half of the total expenditures, there is no adverse impact to the Government.

The recipient acknowledges that it does not have fully written procedures for calculation of indirect costs and is prepared to immediately address this issue as part of the resolution of this audit.

OIG's Comments

We disagree that the recipient had only one final cost objective during the period of our audit. The recipient received equal funding from both EPA and the auto industry, and established two final costs objectives in its accounting system for these two sources of funding. In addition, as previously mentioned, the recipient also received funding from other entities. Under the recipient's supposition that there was only one final cost objective, all funding sources should have been allocated a proportional share of allowable costs. Therefore, EPA's share would have been less than 50 percent.

With respect to developing written accounting procedures, the recipient should develop a complete cost policy statement. This document should identify the bases for accumulating, and distributing allowable direct and indirect costs to cost objectives. The plan should also identify the allocation methods used to distribute costs to final cost objectives.

Recommendation 2

We recommend that EPA use the authority granted under 40 CFR 30.14 to place the recipient on a cost reimbursement payment basis and review the supporting documentation for all claims prior to payment until such time as the recipient can demonstrate that it has addressed its financial management weaknesses. At a minimum, the recipient must demonstrate that its accounting practices are consistent with 40 CFR 30.21 and must:

- a. Ensure that financial results are current, accurate, and complete.
- b. Include records that adequately identify source and application of funds for federally sponsored programs.
- c. Include cost accounting records that are supported by adequate source documentation.
- d. Include an adequate time distribution system that meets the requirements of OMB Circular A-122, Attachment B, paragraph 7. The system should account for total hours worked and leave taken, and identify the specific activities and final cost objectives that the employees work on during the pay period. It should also serve as the basis for charging labor costs to Federal grants.

Recommendation 3

We recommend that EPA ensure the recipient's indirect cost rate proposal includes information for identifying direct and indirect costs, and an explanation of how these costs are accounted for in the accounting system.

Scope and Methodology

We performed our examination in accordance with *Government Auditing Standards*, and the attestation standards established for the United States by the American Institute of Certified Public Accountants. We also followed the guidelines and procedures established in the *OIG Project Management Handbook* dated November 5, 2002.

We conducted this examination to express an opinion on the reported outlays on the Federal Cash Transactions Reports, and determine whether the recipient was managing its EPA grant in accordance with applicable requirements. To meet these objectives, we asked the following questions:

1. Is the recipient's financial management system adequate to account for grant funds in accordance Title 40 CFR 30.21?
2. Does the recipient maintain an adequate labor distribution system that conforms to requirements of OMB Circular A-122?
3. Does the recipient's procurement procedures for contractual services comply with Title 40 CFR 30.40 to 30.48?
4. Is the recipient properly drawing down grant funds in accordance with Title 40 CFR 30.22?
5. Is the recipient complying with its reporting requirements under Title 40 CFR 30.51 and 30.52?
6. Are the outlays reported under the grant adequately supported and eligible for reimbursement under the terms and conditions of the grant, OMB Circular A-122, and applicable regulations?

In conducting our examination, we reviewed the project files and obtained the necessary grant information for our examination. We interviewed EPA's grant specialist and project staff to determine whether any concerns needed to be addressed during our examination. We also interviewed the recipient's personnel to understand the accounting system and the applicable internal controls as they relate to the reported costs. We obtained and reviewed the single audit reports and an on-site report prepared by EPA to determine whether any reportable conditions and recommendations were addressed in those reports.

We reviewed management's internal controls and procedures specifically related to our objectives. Our examination included reviewing the recipient's compliance with OMB Circular A-122, Title 40 CFR Part 30, and the terms and conditions of the grant. We also examined the reported costs on a test basis to determine whether the costs were adequately supported and

eligible for reimbursement under the terms and conditions of the grant and Federal regulations. We conducted our field work from June 1, 2004, to September 1, 2004.

After understanding the recipient's financial management system, we reconciled the claimed outlays to the recipient's accounting records. Based on our judgment, we performed a review of contract costs reported by the recipient, which represents approximately 83 percent of the costs. We limited our review of the remaining outlays reported because the recipient claimed these costs on a predetermined allocation of budgeted items.

January 7, 2005

Mr. Keith Reichard
Mr. Richard Valliere
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Dear Mr. Reichard and Mr. Valliere:

Attached please find the response of the Health Effects Institute (HEI) to the November 23, 2004 Office of Inspector General Draft Report "*Health Effects Institute Reported Outlays Under EPA Grant R828112-01*" (assignment No. 2004-000963). The response provides comments on the factual accuracy of information in the draft report and includes supplemental documentation to support our position.

Thank you for the opportunity to provide these comments. As an institution that has worked for over 25 years to establish the organizational integrity necessary to ensure the credibility of our scientific results, and as frequent auditors in the scientific arena ourselves, we recognize the value of the audit process to ensure sound procedures. HEI was founded in 1980 by mutual agreement of EPA Administrator Douglas Costle and the Chairmen of the worldwide motor vehicle industry as a unique organization to provide credible science to inform and support federal regulations. Both sides agreed to support a specialized, independent Institute to provide a single common product that would be credible to all: *high quality and relevant science to understand the health effects of air pollution.*

Because funding is often seen as a source of bias in the conduct of research, HEI was jointly and equally funded by EPA and industry in pursuit of this common product. The "HEI Model" has succeeded, doubling the federal investment by leveraging private sector funds, and producing research that has been at the core of challenging national air quality regulations and that has been sought by EPA, the White House Science Office, the Office of Management and Budget, industry and many others.

We have prepared a comprehensive and point by point response to the Draft Report that: provides additional information to clarify several issues raised; respectfully differs with the Draft Report's findings in several key areas, and proposes constructive approaches throughout to further strengthen what we believe to be HEI's comprehensive and compliant financial management systems. Of the many points addressed in our response to the Draft Report several are most important:

-During the period audited, HEI had only one final cost objective (i.e. the grant) and all scientific and administrative expenses were incurred in support of and were allocable to that objective. During this time, HEI had only one final cost objective jointly funded by EPA and industry as the cornerstone of its operation encompassing a specific unified plan of research planning, selection, oversight, reanalysis peer review and related activities, *The Health Effects of Air Pollution Program*. This single unified plan of research was identified in the HEI *Strategic Plan 2000-2005*, incorporated both directly in the text of the grant application and in its entirety as an attachment, and approved and incorporated by reference in the Grant Agreement.

directly in the text of the grant application and in its entirety as an attachment, and approved and incorporated by reference in the Grant Agreement

-Given that all research planning, oversight, review and related administrative costs necessary to implement the *Health Effects of Air Pollution Program* were allocable to that cost objective, and that the reasonableness and nature of the costs questioned in the Draft Report are not at issue, those costs were, in our view, allowable. The detailed response also illustrates that with respect to segregation of costs between EPA and industry, twice as much cost was incurred for grant activities than was claimed for federal reimbursement. Thus, as a practical matter, unless questioned costs amount to more than one half of the total expenditure for the cost objective, which these clearly do not, there is no adverse impact on the federal government.

-HEI's financial management system specifically and accurately tracks all costs back to the one final cost objective. HEI had in place a financial accounting system in which all expenses, including individual employee after-the-fact and approved time sheets, are directly traceable from source documents, through the books and records of the Institute to the grant. This system has been the subject of extensive, independent audits over several years and by different firms and has been found to be in compliance with relevant federal regulations.

-In our response, HEI also responds specifically to the details of the questioned costs, the need for annual financial reports, and the correctness of its recent Indirect Cost Proposal We look forward to working with EPA and the Office of Inspector General to resolve any remaining questions in these areas.

Looking Ahead

In summary, we believe that all of the expenditures claimed are reimbursable under the grant and we document this in the submission that follows. At the same time we identify several areas going forward where HEI can further enhance its financial management procedures and look forward to reviewing those areas with the EPA OIG.

As we have indicated earlier, we would ask for the opportunity to meet with you at your earliest convenience to ensure that we can minimize any misunderstandings, answer all questions, and bring this audit to a mutually satisfactory conclusion. We stand ready to provide any additional explanations that you might require to support costs incurred and will continue to improve our financial management systems as necessary to maintain compliance with our regulatory responsibilities.

We look forward to working with EPA-OIG to resolve any outstanding administrative issues.

Sincerely



Daniel Greenbaum
President, Health Effects Institute

cc: Michael A. Rickey, EPA
Richard Kuhlman, EPA
Emmanuel Ekwo, EPA
Gail Robarge, EPA
Richard Celeste Chair, HEI Board of Directors

January 7, 2005

RESPONSE OF THE HEALTH EFFECTS INSTITUTE
To
Health Effects Institute Reported Outlays Under EPA Grant R828112-01
Draft Report of the Office of Inspector General
U.S. Environmental Protection Agency
(Draft Dated November 23, 2004)

I. INTRODUCTION.

The Health Effects Institute (“HEI”) is a not-for-profit research institute founded in 1980 by mutual agreement of EPA (through its Administrator, Douglas Costle) and major motor vehicle and truck engine manufacturing companies (through their respective chairmen), for the purpose of planning, implementing, and reporting on a program of original research on the health effects of emissions from motor vehicles and other sources in the environment (Tab 1). Both sides agreed to support a specialized, independent HEI to provide a single common product that would be credible to all: *high quality and relevant science to understand the health effects of air pollution*. A more detailed description of HEI is included in Appendix I (and related Tabs).

Because funding is often seen as a source of bias in the conduct of research, HEI was jointly and equally funded by EPA and industry in pursuit of this common product. The “HEI Model” has succeeded, doubling the federal investment by leveraging private sector funds, producing research that has been at the core of challenging national air quality regulations and that has been sought by EPA, the White House Science Office, the Office of Management and Budget, industry and many others.

As an institution that has worked for over 25 years to establish the organizational integrity necessary to ensure the credibility of our scientific results, and as frequent auditors in the scientific arena ourselves, we recognize the value of the audit process to ensure sound procedures. HEI has prepared a comprehensive and point by point response to the Draft Report of the U.S. EPA Office of Inspector General (EPA OIG) that: provides additional information to clarify several issues raised; respectfully differs with the Draft Report’s findings in several key areas, and proposes constructive approaches throughout to further strengthen what we believe to be HEI’s comprehensive and compliant financial management systems now and during the audited period. We look forward to working with the EPA OIG and EPA to resolve this audit in a mutually satisfactory way.

II. DETAILED RESPONSE TO DRAFT AUDIT REPORT.

FINANCIAL MANAGEMENT SYSTEM

Draft Report Finding: Inadequate Financial Management (Page 7)

The Draft Report (P. 7, Paragraph 2) states: “The recipient’s financial management system was inadequate to determine that reported outlays were allocable, and thus allowable under the EPA grant. The requirements of Title 40 CFR 30.27 provide that non-profit organizations shall follow the provisions of OMB Circular A-122 for determining allowable costs. To be allowable under the grant, the provisions of OMB Circular A-122, Attachment A, provide that costs must be allocable to the grant. A cost is allocable to a grant if it is treated consistently with other costs incurred for the same purpose in like circumstances and is incurred specifically for the grant.” Within this broader statement, the Draft Report finds that HEI’s Labor Distribution System did not accumulate employee time “by final cost objective.”

HEI Response

HEI had in place for all of the period audited by the EPA OIG a single final cost objective – the Health Effects of Air Pollution Program – that is funded jointly and equally by EPA and industry to produce a single common product: high quality and relevant science to understand the health effects of air pollution.

- A. That final cost objective was submitted to and approved by EPA in the Grant Application process and was incorporated by reference in the grant.*
- B. Given that all of HEI's scientific and administrative activity during the period audited supported only this one final cost objective, all of HEI's expenses were allocable to that final cost objective (i.e. the grant).*
- C. HEI also had in place during the period audited a financial management system which tracked all expenses to that single final cost objective.*

A. HEI's Final Cost Objective

It appears that many of the core findings in the Draft Report may have occurred either as a result of miscommunication on the part of HEI or of misunderstanding by EPA OIG of HEI's single final cost objective during the time period audited: the Health Effects of Air Pollution Program¹.

- 1. HEI Has a Single Final Cost Objective with Core Funding Jointly and Equally from EPA and Industry.*

As described and documented in the Introduction and Appendix I, core funds for HEI are provided, by longstanding agreement of HEI's sponsors in EPA and industry, jointly and equally by EPA and the motor vehicle industry².

To ensure that funding of any specific scientific research or report by HEI could not be viewed as having been funded solely by either EPA or the industry, the HEI Health Effects of Air Pollution Program was established as a *single final cost objective* encompassing a specific unified and comprehensive plan of scientific activities – including research planning, research and investigator selection and oversight, reanalysis, peer review, and other scientific activities.

The specific plan of activities for the grant period subject to this audit was identified in *HEI's Strategic Plan 2000-2005* (Tab 5).

- 2. HEI Submitted Its Single Final Cost Objective to EPA in the Grant Award Process, and EPA Approved It.*

HEI described this specific, unified, and comprehensive plan of scientific activities in the *HEI Strategic Plan 2000-2005* and submitted the plan to EPA as an attachment to and in the text of the Grant

¹ Although HEI had a single final cost objective during the period audited, and has had that same final cost objective since its inception, the name of that final cost objective has been revised over the years from The Health Effects of Motor Vehicle Emissions Program to the Health Effects of Air Pollution Program in recognition that all of the pollutants emitted from motor vehicles are emitted from other sources as well.

² The industry sponsors are the 28 companies that make or market motor vehicles or truck engines in the United States. Payments to HEI for the Health Effects of Air Pollution Program by the individual companies are based on their relative sales in the U.S. market and are made in expectation that a similar amount will be contributed by EPA.

Application for Grant R828112-01 (dated January 31, 2000 and revised final version dated August 7, 2000) (Tabs 14 and 15), and in each annual renewal application for the grant in 2001, 2002, 2003, and 2004 (Tabs 16, 17, 18, 19).

The plan was subjected to independent Peer Review organized by EPA's National Center for Environment Research, and was approved by EPA in its Grant Agreement dated November 14, 2000 (Tab 20). Specifically, the Grant Agreement incorporates, by reference, the full Grant Application, which describes the specific, unified, and comprehensive plan of scientific activities that make up the Health Effects of Air Pollution Program. The Grant Agreement describes the award as being "for the support of approved budget period effort described in application (including all application modifications) cited in the Project Title and description above, signed 01/31/2000 included herein by reference." (Tab 20)

In sum HEI's single final cost objective – the Health Effects of Air Pollution Program – is a unified and comprehensive set of scientific activities that (i) is funded by longstanding design jointly by EPA and industry in order to ensure the highest possible quality and acceptance of HEI scientific findings, and (ii) was explicitly submitted to and approved as the grant by EPA in the award process. HEI looks forward to working with the EPA OIG and EPA to clarify any miscommunications or misunderstandings about the HEI final cost objective.

B. Allocability of Costs

Total allowable and reimbursable costs consist of both allocable direct and indirect costs. The complete text of Circular A-122, General Principles, A.4.a is: "4. Allocable Costs. a. A cost is allocable to a particular final cost objective, such as a grant, contract, project, service, or other activity, in accordance with the relative benefits received. A cost is allocable to a Federal award if it is treated consistently with other costs incurred for the same purpose in like circumstances and if it: (1) Is incurred specifically for the award. (2) Benefits both the award and other work and can be distributed in reasonable proportion to the benefits received, or (3) Is necessary to the overall operation of the organization, although a direct relationship to any particular final cost objective cannot be shown." As described, above, during the period covered by the audit and Draft Report, HEI had only one final cost objective; therefore, all costs of the organization, whether direct or indirect, were allocable to the final cost objective (i.e. the grant).

Within this full set of allocable costs of the Health Effects of Air Pollution Program, 50% overall are charged to EPA, and 50% to industry. Although within this segregation of costs, certain costs are precluded from federal funding (in accordance with Circular A-122 Attachment B) the overall system thus assures that each side pays an equal share in support of the extensive benefits of the Health Effects of Air Pollution Program described in Appendix I. Indeed, EPA gains substantial benefit even from those expenses charged to industry: for example, although EPA funds a substantial part of the specific research activities conducted by HEI, the expenses for the publication and dissemination of the results of those research activities – an essential part of the Health Effects of Air Pollution Program – are charged to the industry. (Similarly, the industry reaps benefits from those components of the program for which the expenses are charged to EPA.)

Overall, the fact that twice as much cost was incurred for grant activities than was claimed for federal reimbursement means that as a practical matter, unless costs questioned amount to more than one-half of the total expenditures, there is no adverse impact to the government.

C. Financial Management System

Draft Report Finding: Adequacy of Financial Management System

The Draft Report states (P.7, paragraph 3): “In order to properly account for allowable costs, the recipient was required to maintain an adequate financial management system that complied with the provisions of Title 40 CFR 30.21. These provisions require that the recipient’s financial management system provide for: (1) accurate, current, and complete disclosure of the financial results; (2) records that identify adequately the source and application of funds for federally sponsored activities, (3) effective control over and accountability for all funds, and (4) accounting records including cost accounting records that are supported by source documents. As discussed in Notes 1 and 2 of the *Schedule of Reported Outlays and Results of Audit for Grant Number R828112-01* on pages 4 and 5, the recipient’s accounting system did not meet any of these four requirements.”

HEI Response:

HEI has had in place a financial accounting system in which all expenses are directly traceable from source documents through the books and records of the Institute to charges to the single HEI final cost objective – the Health Effects of Air Pollution Program (i.e. the grant). In total, this system, which is described in detail in Appendix II, meets or exceeds each of these requirements.

1. *Specifically, HEI’s accounting system is compliant with each of these requirements*

- (1) “Accurate, current and complete disclosure of the financial results of each federally-sponsored project or program in accordance with the reporting requirements set forth in 30.52.” (emphasis added). Appendix II describes the detailed system HEI has in place to fully meet these standards for the *only* “federally-sponsored project or program” that it had in place during the period audited.
- (2) “Records that identify adequately the source and application of funds for federally-sponsored activities.” Appendix II describes the specific accounting codes used in HEI’s Chart of Accounts to accomplish this.
- (3) “Effective control over and accountability for all funds, property and other assets.” Control and approval processes described in Appendix II.
- (4) “Accounting records including cost accounting records that are supported by source documentation.” These are described in detail in Appendix II.

2. *Further, all costs charged to EPA from among the full universe of allocable costs described above were submitted to and approved by EPA.*

These costs were set forth in HEI’s application to EPA for the full grant and in HEI’s submissions in connection with the annual reviews, and they were thus known to EPA and were approved by EPA (*see* Tab 15 (Revised Grant Application, Itemized Budget)). As described in Appendix II, these costs were tracked throughout the HEI accounting system and, as described below, subject to annual independent audit.

3. *Finally, this accounting system has been subjected to annual independent audits for both financial compliance, and compliance with Federal Regulation (in accordance with OMB Circular A-133).*

HEI’s financial management system has been the subject of annual financial and Circular A-133 single audits by HEI’s independent outside auditors, which, during the past decade, for example, have included two separate audit firms and a number of different individual auditors. As described in the audit statements, these audits included examining, on a test basis, evidence about the Institute’s compliance

with all applicable federal standards. These auditors have routinely selected a sample of financial transactions of their choosing and tracked them back through the HEI financial management system to the core final cost objective and the source of funds. (See Tabs 27 - 31 attached audit reports for fiscal years ending June 30, 2000 through 2004).

Each year, the HEI financial management system has received unqualified financial opinions from the financial audits, and the A-133 Single Audits have consistently found “no matters involving material weaknesses in the internal control over financial reporting and operation,” and that the “Institute complied, in all material respects, with the requirements referred to above that are applicable to each of its federal programs”(i.e. *Government Auditing Standards* and *OMB Circular A-133*). (See, for example, Tab 17; FY 2002 Audit, p. 15.)

In addition, in 2002 in an audit that covered some of the same time period audited by the EPA IG , EPA’s Office of Administration and Resources Management conducted a set of detailed independent tests of relevant financial transactions and was able to track detailed HEI expenditures charged to the grant from the financial management cost accounting records to the source documents. That audit found that “at the time of our review, HEI had in place rigorous internal management systems that in most cases far exceeded the general regulation requirements.” (Tab 32)

D. HEI’s Revised Financial Management System Subsequent to the Period Audited by the EPA OIG

Although the Health Effects of Air Pollution Program (i.e. the EPA grant) was the sole final cost objective of HEI during the entire period audited by the EPA OIG, one source of possible misunderstanding during the audit may have been the fact that changed circumstances subsequent to that period occasioned substantial revisions to HEI’s accounting system to ensure continued future compliance. These changes included entering into a cooperative agreement with the U.S. Agency for International Development (US-AID) for work on the Health Effects of Air Pollution in Asia and a 2002 audit of HEI’s financial management system by EPA’s Office of Administration and Resources Management (EPA OARM).

Beginning in HEI fiscal year 2003, HEI received funding from another federal agency, US-AID, for work on the health effects of air pollution in Asia. Consequently HEI had a second final cost objective.

Before any work was performed on the US-AID project, we were audited by the EPA OARM. As a result of discussions with the auditors, we agreed that, for future periods, we would need to allocate administrative costs between different federal final cost objectives by using an appropriately developed indirect cost rate. This agreement was referred to in their report; in our response, we committed to implement the agreement; and we submitted our Indirect Cost Proposal to EPA on March 13, 2003 (Tab 33).

In all budget submissions made to EPA subsequent to the initiation of the US-AID award and to the submission of the Indirect Cost Proposal, HEI has included only direct and indirect costs that are properly allocable to the EPA grant in accordance with all applicable requirements (e.g., Tab 18; 2003 submission). Thus, in order to ensure that scientific staff time spent on a different federally-funded objective was not charged to EPA, HEI began charging scientific salary expenses to the EPA grant only for those scientists who are assigned exclusively to work on EPA-funded activities and only for those hours recorded in their labor distribution records spent on the oversight and review of research. In addition, administrative salary and expenses are no longer charged directly to the grant but are recovered only through the Indirect Cost Rate.

This change may have contributed inadvertently to an important misreporting in the Draft Report concerning the work of the HEI Director of Administration and Finance. The Draft Report, at p. 5 states: “For example, the Director of Finance and Administration³ charged 100 percent of her labor charges to the EPA grant; *however, she told the OIG auditors that she worked on other tasks unrelated to the grant*” (emphasis added). In fact, for the time period audited by the EPA OIG, HEI had only one final cost objective – the Health Effects of Air Pollution Program – to which all HEI costs were allocable; and the Director of Administration and Finance did not work on any tasks unrelated to that final cost objective (i.e. the grant). After the initiation of the second final cost objective with funding from US-AID, the Director of Finance and Administration *did* work on tasks unrelated to the EPA grant and the Health Effects of Air Pollution Program. However, at that point her labor charges (and all other administrative expense) were no longer charged directly to the EPA grant, but only through HEI’s Indirect Cost Rate submitted in response to the EPA OARM audit.

QUESTIONED COSTS

Draft Report Finding: Questioned Costs

The Draft Report (P. 4-6) questions \$2, 009,473 of expenses charged to the grant. This includes a total of \$1,138,677 for salaries and \$192,556 for fringe benefits, as well as \$616,740 of Other Expenses and \$61,500 for Travel. The Draft Report states (P. 5) that “the recipient did not maintain a labor distribution system for recording and accumulating employees’ final time and effort by final cost objective,” and that the Personnel and Fringe expenses are “unallowable without adequate records to support that the costs were allocable to the EPA grant.” For the Other and Travel expenses it states that “the recipient has not demonstrated that the reported outlays for travel and other outlays were allocable to the EPA grant.”

HEI Response:

As indicated in the prior response, HEI had only one final cost objective during the time period audited by the EPA OIG. Therefore, all costs, both direct and indirect, are allocable to that final cost objective (i.e. the grant). In addition, HEI has maintained for many years an after-the-fact labor distribution system that tracks all employee time back to that single final cost objective in compliance with applicable federal requirements. Thus, since all costs were tracked appropriately and are allocable to the final cost objective (i.e. the grant), and neither the nature nor the amounts incurred and paid are at issue, these costs are allowable. More specific responses to the questioned costs are provided below for A. Personnel and Fringe, and B. Travel and Other Costs.

A. Personnel and Fringe

1. HEI Has a Labor Distribution System that Complies with All Applicable Requirements.

For many years, HEI has required employees to fill out weekly or bi-weekly time sheets. Those timesheets, as per Circular A-122, Attachment B, paragraph 7, (1) are filled out after-the-fact, (2) record total activity, (3) are signed by the employee and approved by a supervisor and (4) are prepared at least monthly (Tab 35: sample timesheet).

³ This quote is also inadvertently incorrect in another way – during the period audited by the EPA OIG, the position of Director of Finance and Administration was held by another person – Howard Garsh – who has since retired from HEI. He also worked 100% of his time on the implementation of the Health Effects of Air Pollution Program.

Since all time worked by employees for the period audited was for the same final cost objective, the Health Effects of Air Pollution Program, all charges recorded in those time sheets are allocable to that final cost objective (i.e. the grant). In addition, all employees who implement HEI's scientific program must track their time to specific scientific or administrative areas – e.g., “research planning and study selection”, “research management”, “study review” – in accordance with established written definitions of these terms and activities (Tab 34 Time tracking guidance). These functional areas are all sub-categories of activities carried out in support of the Health Effects of Air Pollution Program. This labor distribution and tracking system then ties directly to the programmatic categories in the audited financial statements (See Appendix II and, for example, Tab 29).

Each year, as part of our OMB Circular A-133 audit, a sample (of the auditors' choosing) of the payroll costs for employees charged to the EPA grant are traced from the timesheets to HEI's ADP journals to the general ledger. Those amounts are also traced from the general ledger back to the cash disbursement journals to the ADP journals, and are reconciled with the amounts charged to the EPA grant.

2. *All of the questioned Personnel and Fringe Costs (\$1,138,677 of salary and \$192,556 of fringe benefits) were expended in support of HEI's sole final cost objective, and therefore are allocable to that final cost objective (i.e. the grant), and allowable.*

In practice, when either a member of the HEI Scientific Staff or Administrative Staff spent time on either scientific or administrative matters under the Health Effects of Air Pollution Program, that time was recorded in the labor distribution system. Because, until very recently, the Health Effects of Air Pollution Program was the only final cost objective for all HEI activities, 100% of staff time was tied directly to that final cost objective (i.e. the grant).

Within those salary expenditures, *scientific staff salaries and fringe benefits* were charged to the grant for a subset of members of the HEI Scientific Staff. All members of the HEI Scientific Staff were involved – during the time audited in the Draft report, in research planning, selection and oversight of specific research projects, peer review of the reports of these projects, and/or writing of commentaries on the results solely in support of the Health Effects of Air Pollution Program.

For example, Dr. Maria Costantini, a Principal Scientist whose salary and fringe benefits were charged to the EPA Grant (and are part of the questioned costs), was assigned to work 100% of her time on a series of specific scientific projects within the Health Effects of Air Pollution Program (and all specifically described in HEI's EPA Grant Application), including managing a number of specific research projects in HEI's Particulate Matter Research Program, implementing and maintaining the Particulate Matter Research Activities website, researching and writing a monograph on the emerging fuel additive cerium, and other related activities. She recorded that activity on a series of after-the-fact labor distribution (time) sheets, which she signed and her supervisor, the Director of Science, approved (Tab 35: sample time sheets).

Similar summaries of activities and time tracking – illustrating the connection of all scientific staff work to the Health Effects of Air Pollution Program – are available for all HEI scientific employees whose salaries and fringe benefits are charged to the EPA grant (and included in the questioned costs).

Administrative salary and fringe expense was also charged to the grant for a subset of Administrative Staff members. During the time audited by the EPA OIG, all administrative staff

members were dedicated solely to administration of the Health Effects of Air Pollution Program. As such their time was fully allocable and reimbursable.⁴

In one specific example, the Draft Report states (at p. 5): “the Director of Finance and Administration charged 100 percent of her labor charges to the EPA grant.” That statement is not quite accurate, because during the time audited the position of Director of Finance and Administration was filled by another person who has since retired – Mr. Howard Garsh. He did, in fact, spend 100% of his time on activities related to implementation and administration of the sole HEI final cost objective – the Health Effects of Air Pollution Program. Those activities included development, implementation, and review and approval of payment for all research contracts with research institutions selected to conduct HEI-funded research on the health effects of air pollution; administration of personnel, salary, benefits, and other administrative systems for all HEI staff (all of whom were working to implement the Health Effects of Air Pollution program); oversight of all outside audits of HEI financial management systems, and other activities. Mr. Garsh’s activities were recorded on a series of after-the-fact labor distribution (time) sheets, which he signed and which his supervisor approved. (Tab 36: sample time sheets).

Similar summaries of activities and time tracking are available for all HEI administrative employees charged to the EPA grant (and included in the questioned costs).

In sum, HEI has had for many years an after-the-fact labor distribution system that complies with Circular A-122 and can track specific employees’ time back to their work on implementation of the HEI’s sole final cost objective, the Health Effects of Air Pollution Program, and are therefore fully allocable to that final cost objective (i.e. the grant). Given this, and that the reasonableness, nature or amount of such costs are not in question, the expenses are fully allowable.

B. Travel and Other Expenses

1. *\$381,209 for support of expert scientists engaged in HEI’s scientific committees and their related travel expense (i.e., \$319,709 of the \$616,740 for the professional time of HEI scientific committee members and \$61,500 for travel by those experts to and from meetings and site visits)*

The expenses to support HEI expert scientists (\$319,709 for professional services and \$61,500 for travel) were for scientific consulting services and associated travel by experts in medicine, toxicology, epidemiology, air chemistry, biostatistics, engineering, and other disciplines. These experts serve on HEI Committees (see the Introduction above) and in other expert capacities. These services were necessary to plan HEI research, to review and select specific research projects, to conduct peer review of the reports of those projects, and to write scientific commentaries on these and other related scientific results in the broader literature. The activities in which these experts engaged were explicitly described in the HEI grant application, and all of them supported and were allocable to the Health Effects of Air Pollution Program.

For example, during the period audited by the EPA OIG, HEI charged to EPA consulting expenses for Dr. Jonathan Samet, Chair of the Epidemiology Department at the Bloomberg School of

⁴ This was also in compliance with HEI’s independent audits. In the first Circular A-133 Single audit of HEI performed for the fiscal year ended June 30, 1992 the outside auditors at that time, Arthur Andersen, LLP, determined that, since HEI had only one federal financial assistance program, an indirect cost rate was not required. (Tab 26). This has continued to be the case until institution of an Indirect Cost Rate.

Public Health at Johns Hopkins University and a member of the HEI Research Committee. These expenses are among those questioned in the Draft Report. In his role for HEI, Dr. Samet participated in planning new research on diesel exhaust, air toxics, and accountability, participated in oversight of a number of current HEI studies of the health effects of particulate matter, and chaired two key panels of experts for HEI, who wrote major research planning monographs on accountability (or the measuring of the health impact of regulations) and exposure to emerging diesel technologies. All of these activities, including the two research planning activities, were explicitly identified in HEI's Strategic Plan and in its grant application to EPA as priority topics within the Health Effects of Air Pollution Program. As described above, all professional compensation also was charged to EPA only at approved federal rates for such compensation (Tabs 5 and 14).

Similar descriptions and documentation are available for all other experts who participated in HEI's Health Effects of Air Pollution Program and were among the questioned expenses charged to the EPA grant.

2. \$297,031 (the remainder of the questioned \$616,740) for a set of administrative expenses.

The remaining questioned amount is \$297,031 for administrative expenses. As described above, these expenses were all expended in support of the single HEI final cost objective, were all allocable to that final cost objective (i.e. the grant), were submitted and approved in the applications to EPA for the grant, and represent a subset of the administrative expenses necessary to support the scientific activities of HEI, including telephone, photocopying, office supplies, computer technical support, insurance, audit, and utilities. The remainder of the administrative expenses necessary to support HEI's activities, including other categories such as postage, rent, maintenance and printing, were charged to HEI's industrial sponsors, who also contributed to support of the Health Effects of Air Pollution Program.

In sum, the questioned costs for scientific experts, their travel, and administrative expenses were expended only in support of HEI's sole final cost objective, the Health Effects of Air Pollution Program, and are therefore fully allocable to that final cost objective (i.e. the grant). Given this, and that the reasonableness, nature or amount of such costs are not in question, the expenses are fully allowable.

ANNUAL FINANCIAL REPORTING

Draft Report Finding: Annual Financial Reports

The Draft Report (p. 8) states that HEI "did not submit any of its financial status reports as required by Title 40 CFR 30.52 (a)(1)(iii)."

HEI Response

The conditions of HEI's Grant Award, required the submission of one Financial Status Report (SF 269) at the end of the grant period (i.e., after 5 years); and 40 CFR 30.52 authorizes EPA to not require annual reports when the same information is already provided on other forms. HEI actually submitted the same information to EPA on a more frequent basis (every 6 months); HEI would of course be willing to provide annual reports should EPA determine they are also necessary.

The EPA Grant Agreement for this grant requires, at p. 4 (Tab 20), the submission of a final Financial Status Report (SF 269) to the EPA Financial Management Center in Las Vegas, Nevada "within 90 days after the end of the budget period," and does not require submission of annual Financial Status reports.

HEI has actually submitted the same information that would have been submitted on an annual Financial Status Report to EPA more frequently than each year (every six months) in the form of the Federal Cash Transaction Report (SF-272).(e.g. Tab 25) Thus, HEI has always provided the necessary information to track funds expended on the grant. These submissions are cited in the Draft Report at p. 2.

EPA's requirement for a final Financial Status Report, and not interim Financial Status Reports, is consistent with 40 C.F.R. § 30.52(a)(1)(i), which states: "EPA has the option of not requiring the SF-269 or SF-269A when the SF-270, Request for Advance or Reimbursement, or SF-272 Report of Federal Cash Transactions, is determined to provide adequate information to meet its needs, except that a final SF-269 or SF269A shall be required at the completion of the project when the SF-270 is used only for advances." The decision by EPA to require a report only at the end of the five-year cycle can readily be interpreted as EPA's exercising of the option provided in 40 C.F.R. § 30.52, given that EPA was aware that we were also required to submit the same information at six-month intervals.

Although submission of an annual form was not required by the grant, HEI made the extra effort – as indicated in the Draft Report – to inquire of the EPA Financial Management Center in Las Vegas whether we were required to submit these reports annually, and we were advised orally that a Financial Status Report should be filed only at the end of the grant period (five years).

INDIRECT COST RATE PROPOSAL

Draft Report Finding: Indirect Cost Rate Proposal

The Draft Report (p.9) states: "The recipient did submit an indirect cost rate allocation plan to EPA based on its fiscal year 2002 costs. However, the proposed direct and indirect labor costs used in the recipient's indirect cost allocation plan were based on unsupported estimates. The recipient's estimates were calculated based on interviews with employees who estimated the amount of time spent on direct and indirect activities. Further, the recipient has not developed written procedures for identifying direct and indirect costs, and the basis for allocating such costs to projects, as required by Title 40 CFR 30.21."

HEI Response:

The finding in the Draft Report appears to flow from a misinterpretation of Schedule B-2 of HEI's submitted Indirect Cost Proposal. As described above, HEI submitted its Indirect Cost Proposal in order to comply with all applicable federal requirements, and believes that, when the submission is fully explained, it provides an accurate presentation of these costs. HEI acknowledges, however, that it does not have fully written procedures for future calculation of indirect costs. Therefore, HEI is prepared to move immediately as a part of the resolution of this audit to address this.

As describe above, beginning in HEI fiscal year 2003, HEI for the first time received funding from another federal agency, US-AID, for work on the health effects of air pollution in Asia. Before any work was performed on the US-AID project, we were audited by the EPA Administration and Resources Management group. We discussed the new project with the auditors and agreed that, for future periods, we would need to allocate administrative costs between different federal final cost objectives. This agreement was identified in their report (Tab 32).

Subsequent to their visit, and at their suggestion, HEI engaged qualified outside accounting experts from the firm of Ernst and Young to prepare on its behalf an indirect cost rate proposal to EPA in order to be able to charge indirect costs between EPA and any other federally-funded final cost objectives. That proposal was submitted on March 12, 2003. (Tab 33)

Since HEI's major functions benefit from its indirect costs to approximately the same degree, it was possible to calculate an indirect cost rate using the Simplified Allocation Method, based on separating the organization's costs for the base period as either direct or indirect. Although allocation of salaries between direct and indirect costs based on budgeted amounts is discussed in EPA's guide, *Preparing Indirect Cost Rate Proposals for Grants and Contracts*, HEI *did not* use budgeted or estimated amounts, but rather, as described below, used actual recorded employee time.

The questioned Schedule B-2 *Headcount Allocation Ratios – Fiscal Year 2002* in the Indirect Cost Proposal presents the ratio of staff indirect and direct time for all of HEI's 20 employees. In contrast to the finding in the Draft Report at Page 9 that these labor "estimates were calculated based on interviews with employees who estimated the amount of time spent on direct and indirect activities" these estimates were based, with a few exceptions, on after-the-fact recorded allocations of employees time from the existing HEI labor distribution system described below.

- a. Note 1 in Schedule B-2 presents the "Recorded Allocations" from HEI FY02 Timesheets in the HEI Labor Distribution System.
- b. Note 2 in Schedule B-2 presents the "Estimated Allocations to be applied prospectively to the calculation of the Indirect Cost rate.
- c. As is evident from Schedule B-2, 15 of the 20 employee "Estimated Allocations" are identical to those in the "Recorded Allocations," an additional 3 of the 20 involved minor adjustments to reflect the fact that the employees had recorded no indirect time (an impossibility), and only two of the "Estimated Allocations" involved substantial adjustments, reflecting the fact that the work of those two employees had to be reconsidered in light of future application of an indirect cost rate.⁵
- d. Thus, with minor and justifiable exceptions, the employee allocations included in the Indirect Cost Proposal are based on actual recorded time distributions, and not on estimates based on employee interviews.

In all budget submissions made to EPA subsequent to the initiation of the US-AID award and to the submission of the indirect cost proposal (e.g. Tab 30), HEI has only included direct and indirect costs that can be allocated to the EPA grant in accordance with all applicable requirements and regulations.

- a) HEI's indirect cost proposal has now been received by EPA as a provisional indirect cost rate and is awaiting review. The application of this indirect cost rate is, of course, subject to audit in HEI's independent annual audit, based on actual implementation of the indirect cost rate.
- b) In submitting the proposal, HEI chose voluntarily to limit its indirect costs sought to 30 % (despite the fact that the proposal could support an indirect rate of 41.2%) in keeping with HEI's own policy of limiting recovery of indirect costs by its own research contractors to 30%.
- c) As a result of these actions, and in order to ensure that scientific staff time spent on other federally-funded objectives was not charged to EPA, HEI began charging scientific salary expenses to the EPA grant only for those scientists who are assigned exclusively to work on EPA-funded projects and only for those hours recorded in their labor distribution records spent on the oversight and review of research.

⁵ In contrast to the interpretation that might be applied to Footnote 2 of Schedule B-2, the adjustments were not given by the individual employees themselves but were a result of estimates provided to HEI's qualified indirect cost consultants by HEI senior employees in order to make these adjustments.

- d) In addition, administrative salary and expenses are no longer charged directly to the grant but are only recovered through the Indirect Cost Rate at 30% of Direct Costs.

Although HEI's Indirect Cost Proposal was submitted to EPA in compliance with all applicable regulations, we acknowledge that this process would benefit in future implementation from the development of detailed written procedures for assessing and revising the Indirect Cost Rate, and are prepared to work expeditiously to put those procedures into place.

III. CONCLUSION

HEI looks forward to working with EPA OIG and EPA to bring this audit to a mutually satisfactory resolution. HEI has diligently sought, over many years, to conduct its financial management in compliance with all relevant federal requirements. We also believe, however, that there are always areas where an organization such as HEI can reconsider and improve its financial management system, and as noted above we have already identified several such areas and are prepared to move forward on them immediately.

HEI has a proven track record of addressing audit findings expeditiously. In the case of the EPA OARM audit of 2002, HEI received the report of the audit on November 7, 2002; received a final approval of our Compliance Plan by December 27, 2002, and submitted the major item of that Plan - our indirect Cost Rate Proposal - to EPA on March 12, 2003.

The Draft Report recommends two sanctions that are not, in our view, supported by the facts of the HEI financial management system and, if implemented, would prevent HEI from continuing to produce high-quality science to inform air quality and public health decision-making.

First, given that, as described above, all questioned costs were tracked appropriately and are allocable to the final cost objective (i.e. the grant); and that their reasonableness, nature nor the amounts incurred and paid are at issue, these costs are allowable. Thus, recovery of the costs – as suggested in Recommendation One of the Draft Report - is not supportable and HEI would ask that it be withdrawn.

Second, given HEI's clear final cost objective (i.e. the grant) and its history of responding appropriately and expeditiously to audit findings, suspending the grant – as suggested in Recommendation Two - is a sanction we would suggest that has ramifications out of balance with the nature and extent of the questions under discussion in this audit. Suspension of the grant would require HEI to suspend research programs at several dozen universities and seriously impede HEI's ability to meet the time-sensitive deadlines sought by its sponsors for producing key pieces of air pollution and health research. HEI asks that Recommendation Two be withdrawn.

HEI is prepared to follow a rapid schedule to resolve any final issues identified in this audit and to produce the written procedures identified in the detailed response above. We stand ready to provide any additional explanations or documentation that you might require to support costs incurred and will continue to improve our financial management systems as necessary to maintain compliance with our regulatory responsibilities.

We look forward to working with EPA-OIG to resolve any outstanding administrative issues.

APPENDIX I

THE HEALTH EFFECTS INSTITUTE

The Health Effects Institute (“HEI”) is a not-for-profit research institute founded in 1980 by mutual agreement of EPA (through its Administrator, Douglas Costle) and major motor vehicle and truck engine manufacturing companies (through their respective chairmen), for the purpose of planning, implementing, and reporting on a program of original research on the health effects of emissions from motor vehicles and other sources in the environment. (Tab 1). This unique organization was created largely to alleviate ongoing conflict between EPA and the motor vehicle industry over the credibility of the science used to underpin environmental regulation. Rather than industry and EPA each funding research not credible to the other (or to other interested parties, including the Congress, public interest groups, and the press), the two sides agreed to support the establishment of a new, independent, and highly specialized institute that would receive equal funding from the industry and EPA to provide a *single common product* that would be credible to all: *high quality science relevant to understanding the health effects of motor vehicle emissions*.

Currently, the industry sponsors are the 28 companies that make or market motor vehicles or truck engines in the United States. Payments to HEI by the individual companies are divided based on their relative sales in the U.S. market and are made in expectation that a similar amount will be contributed by EPA.

A. HEI Is Structured for Quality and Independence.

HEI’s design was the result of extended negotiations between EPA and the industry to create an institution that is structured to ensure quality and independence in leadership and scientific activities, so as to provide results that would be credible to the often adversarial sponsors and to other stakeholders at the science-policy interface.

In response to the critical need for a leader of HEI with absolute integrity and national stature, the original sponsors selected Archibald Cox, the former Professor at Harvard Law School, Solicitor General of the United States, and Watergate Special Prosecutor as the founding Chairman of HEI’s Board. Professor Cox held that position for over twenty years until 2001, when he was succeeded by Richard Celeste, a Rhodes Scholar, former Governor of Ohio, Director of the Peace Corps and Ambassador to India, and currently President of Colorado College.

Beyond leadership, HEI is also uniquely structured among all science organizations to ensure independence and quality (Tab 2: HEI Bylaws):

- Because the sources of **funding** are a cause of real or perceived bias in the conduct of research, HEI was specifically designed to be funding-neutral, *i.e.*, with joint and equal core funding to be provided by EPA and the motor vehicle industry.
- HEI is led by an independent **Board of Directors** of stature whose members must be approved, in accordance with HEI’s Bylaws (Tab 2), by the Administrator of the EPA and by a majority of the motor vehicle sponsors (Tab 7: list of current members).
- The Board appoints and oversees two separate bodies of internationally renowned scientists who serve for specific terms and must meet specified eligibility requirements designed to ensure impartiality (Tab 2):

- The **HEI Research Committee** (Tab 8: list current members, with biographical summaries), which identifies research needs, competitively solicits, selects, and actively oversees HEI's program of original scientific research, which is entirely extramural (generally at university laboratories); and
- The **HEI Review Committee** (Tab 9: list of current members, with biographical summaries), an entirely separate body of scientists, whose responsibility is to provide independent peer review of reports of HEI-funded studies and to comment on, and provide scientific context for, such reports with a view to their consideration in connection with environmental regulation.

This uniquely funded and structured partnership has, for nearly 25 years, maintained the impartiality of the institution and its work and has been instrumental in leading to the widespread acceptance of HEI research results as the basis for informing regulatory decisions. Indeed, because of its joint funding, rigorous scientific standards, and carefully guarded impartiality, HEI has at times been seen as the only highly credible source of health science to inform contentious national air quality policy decisions.

B. HEI's Scientific Output Is Distinguished and Widely Sought.

To provide scientific studies that are relevant to the needs of EPA and the industry, HEI relies on the *HEI Strategic Plan for the Health Effects of Air Pollution*, which is the product of extensive discussions with EPA, industry and the larger scientific community. The 2000-2005 plan (Tab 5), submitted in conjunction with HEI's grant application to EPA and to the industry, has constituted the basis for HEI's scientific activities during the past five years.

HEI recently summarized its progress on implementing the HEI Strategic Plan 2000-2005 in its new final draft *Strategic Plan 2005-2010* (Tab 6). During 2000-2005, HEI initiated 59 studies of air pollution, health and exposure and published 59 Research Reports on HEI-funded studies. In addition, for the audience of environmental policy-makers, HEI issued 9 major documents concerning research needs and priorities, scientific methods, and science interpretation in priority areas outlined in the Strategic Plan. These topics cover some of the nation's most challenging and controversial environmental science-policy issues during the last 5 years, including:

- the health effects of Particulate Matter (PM), and other criteria pollutants in the context of evaluating new National Ambient Air Quality Standards;
- the carcinogenicity of diesel exhaust and air toxics in the context of new non-road vehicle rules and mobile source air toxics standards;
- the health effects of emerging technologies and fuels, such as manganese (a key ingredient in the fuel additive MMT) and MTBE added to gasoline; and
- establishment of a new program to assess the effectiveness of environmental regulations in improving public health (the "*Accountability Project*"), through a comprehensive audit-like research approach.

Specifically because of its unique EPA-industry funding model and established reputation for providing independent, high quality, and credible science, HEI has often been called on separately by EPA, Congress, the Executive Office of the President, the Office of Management and Budget ("OMB"),

industry, and others to lead scientific efforts relating to especially controversial public-policy issues. For example:

- o The White House Science Office and EPA called on HEI to lead an independent review of the health effects of inhaled MTBE and Ethanol in Fuel (Tab 10).
- o EPA, Congress, and industry called on HEI to conduct a landmark reanalysis of the key studies most at the core of the PM ambient air quality standards, the “*Harvard Six Cities*” and the “*American Cancer Society*” studies, which following the HEI reanalysis have been cited in key Regulatory Impact Analyses (e.g., Tab 11: Analysis of the Costs and Benefits of the EPA Heavy Duty Highway Diesel Rule).
- o OMB and EPA recently called on HEI to undertake a major multi-stakeholder national study to understand the health effects of Particulate Matter from different sources (Tab 4: exchange of OMB and EPA letters).

Beyond the sheer number of publications and major reports, the fact that HEI is jointly and equally funded by EPA and industry to produce a common body of science has, over the years, led to greater willingness of all interested parties to act on the results of HEI’s scientific studies than would have been the case with respect to scientific studies funded solely by one side. Indeed, due to HEI’s success, its organizational approach to the design and conduct of scientific research has been much studied and has become known as “the HEI Model” (e.g., Tab 3).

Taken together, the HEI Model of an independent institute, with joint financial support by EPA and industry to achieve a common goal, led by distinguished members of the scientific and policy communities, structured to ensure credibility and quality of results, and producing science that is highly relevant to the needs of policy-makers and other stakeholders has been highly successful. In the words of an independent Peer Review Panel for HEI’s January 2000 Grant Application: “HEI has grown to a level of high visibility and impact in the minds of decision makers in both government and industry” (Tab 12).

C. Learning from Audits.

As an organization that routinely conducts scientific audits of those we fund, HEI well appreciates and supports the value of the audit process. It has always been HEI’s policy to approach those we audit in a positive and constructive spirit, and to use audits as learning experiences for all. We have had almost universally positive responses from our many audited entities post audit; they often cite improvements in their technical procedures and overall quality as a result. (Tab 13).

HEI’s management and its Board of Directors have also viewed the periodic independent financial audits of its own operations as essential to ensuring the transparency and accountability of its financial management system to all of its sponsors, and have always welcomed those audits and any others that may occur, as opportunities to ensure that it is meeting applicable standards and to learn how we can enhance our procedures.

APPENDIX II

HEI'S FINANCIAL MANAGEMENT SYSTEM

HEI has had in place a financial accounting system in which all expenses are directly traceable from source documents through the books and records of the Institute to charges to the single HEI final cost objective – the Health Effects of Air Pollution Program – (i.e. the grant). In total, this system meets or exceeds all applicable requirements.

1. EPA Expenses are specifically Accounted for in the HEI Financial Management System as a Subset of all Costs Allocable to the Health Effects of Air Pollution Program.

Using the approved EPA budget as a guide, HEI coded the EPA costs for the Health Effects of Air Pollution Program in the general ledger by using a 2-digit ending, as follows (Tab 37: Chart of Accounts):

- 10 – EPA Salaries
- 11 – EPA Benefits
- 12 – EPA Travel
- 13 – EPA, Other
- 14 – EPA Research Contracts

In addition, the general ledger tracks all industry costs back to: 15 – Industry Costs. (The industry funding does not require the same level of accounting specificity. All use of industry funds is subject to audit, however; and all audited results are available to the industrial sponsors.)

Under the HEI financial management system, an invoice is received and approved by the individual who authorized the expense. Invoices are then coded with the proper general ledger account (according to the Chart of Accounts, Tab 37) by the accounting assistant. The coding is verified and approved by the Director of Finance and Administration.

Invoices are then entered into the MAS 90 Accounting System, through the Accounts Payable Invoice Register by using the approved general ledger code, and are further cost-coded as EPA Salary, Benefits, Travel, Other, or Research Contracts, or as industry expenses (Tab 38: printout from MAS 90).

The information from the Accounts Payable Invoice Register is transferred through the MAS 90 system to the general ledger.

The information from the Accounts Payable Invoice Register, including the cost-coding, is recorded in the Accounts Payable Check Register when the invoices are paid. The cost-coded amounts from the Accounts Payable Check Register are then compiled on a spreadsheet and are charged to the EPA grant.

Thus, all charges can be traced from the EPA grant request back through the Accounts Payable Check Register to the general ledger and to the source document to verify the charges. All amounts drawn from the EPA grant are also reconciled to the budget approved by EPA with the grant application. (Tabs 39 - 42).

2. An Additional HEI Financial Control System, Tailored to Processing of Payroll, Tracks All Payroll Expenses.

Timesheets for individual employees charged to the grant, as per Circular A-122, Attachment B, paragraph 7, (1) are filled out after-the-fact, (2) record total activity, (3) are signed by the employee and approved by a supervisor and (4) are prepared at least monthly (Tab 35: sample timesheet).

All time worked by employees for the period audited was for the same “final cost objective”, Health Effects of Air Pollution Program. All programmatic employees must track their time to specific scientific or administrative areas – *e.g.*, “research planning and study selection”, “research management”, “study review” – in accordance with established written definitions of these terms and activities. These functional areas are all sub-categories of activities carried out in support of the Health Effects of Air Pollution Program. This labor distribution and tracking system then ties directly to the programmatic categories in the audited financial statements (*e.g.* Tab 29).

Information recorded on the timesheets is processed by ADP, HEI’s payroll processing agent.

Salaries charged to the grant have codes different from those not charged to the grant. The amounts from the ADP journals are recorded in the general ledger, with separate accounts for EPA and industry charges.

In this manner, labor distribution charges are tracked – as they are in many companies and other organizations – through HEI’s payroll processing company (ADP) and directly into the general ledger.

Each year, as part of our OMB Circular A-133 audit, a sample (of the auditors’ choosing) of the payroll costs for employees charged to the EPA grant are traced from the timesheets to the ADP journals to the general ledger. Those amounts are also traced from the general ledger back to the cash disbursement journals to the ADP journals, and are reconciled with the amounts charged to the EPA grant.

List of Attachments for IG Response (Provided in Hard Copy-available from the OIG upon request)

HEI Background and description

- 1 Articles of Incorporation
- 2 Bylaws
- 3 Anderson Article (Bob)
- 4 Graham/Whitman Exchange of letters
- 5 HEI Strategic Plan 2000-2005
- 6 HEI Plan 2005-2010
- 7 List of Board Members
- 8 List of Research Committee Members
- 9 List of Review Committee Members
- 10 Review of MTBE and Ethanol in Fuel
- 11 Analysis of Costs and Benefits of EPA Heavy Duty Highway Diesel Rule
- 12 January 2000 Peer Review Panel
- 13 HEI QA/QC Audit Procedures

HEI EPA Grant Applications and Amendments

- 14 EPA Grant Application 2000-2005 Grant No. R828112-01
- 15 Revised 2000 -2005 Grant Application
- 16 Renewal 2001
- 17 Renewal 2002
- 18 Renewal 2003
- 19 Renewal 2004
- 20 EPA Grant Agreement
- 21 Amendment #1
- 22 Amendment #2
- 23 Amendment #3
- 24 Amendment #4
- 25 Federal Cash Transaction Report (Sample)

HEI Audits and responses

- 26 Audit Report 1992
- 27 Audit Report 2000
- 28 Audit Report 2001
- 29 Audit Report 2002
- 30 Audit Report 2003
- 31 Audit Report 2004
- 32 Letter from EPA OARM audit, HEI response, EPA OARM reply
- 33 Indirect Cost Rate Proposal

HEI Financial procedures

- 34 Guidance for payroll timetracking
- 35 sample timesheet (Maria Costantini)
- 36 sample timesheet (Howard Garsh)
- 37 Chart of Accounts
- 38 sample general ledger printout
- 39 sample Accounts Payable Invoice Register
- 40 sample Accounts Payable Check Register
- 41 sample travel expense invoice
- 42 grant drawdown spreadsheet

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