



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL



Air Quality Objectives for the Baton Rouge Ozone Nonattainment Area Not Met Under EPA Agreement 2A-96694301 Awarded to the Railroad Research Foundation

Report No. 13-R-0297

June 20, 2013



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Report Contributors:

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Abbreviations

CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
KCS	Kansas City Southern Railway Company
OIG	Office of Inspector General
OMB	Office of Management and Budget
Recovery Act	American Recovery and Reinvestment Act of 2009

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At a Glance

Why We Did This Review

Emissions from diesel exhaust can lead to serious health conditions like asthma and allergies, and can worsen heart and lung disease, especially in vulnerable populations such as children and the elderly. These emissions can also damage plants, animals, crops, and water resources. Under the authority of the American Recovery and Reinvestment Act of 2009, the U.S. Environmental Protection Agency awarded almost \$3 million to the Railroad Research Foundation to reduce diesel emissions by repowering five locomotives in Baton Rouge, Louisiana, an ozone nonattainment area.

Our objective was to determine whether the Railroad Research Foundation used these funds to fulfill its obligations under the terms of the agreement and applicable laws and regulations.

This report addresses the following EPA Goal or Cross-Cutting Strategy:

- *Taking action on climate change and improving air quality.*

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

The full report is at:
www.epa.gov/oig/reports/2013/20130620-13-R-0297.pdf

Air Quality Objectives for the Baton Rouge Ozone Nonattainment Area Not Met Under EPA Agreement 2A-96694301 Awarded to the Railroad Research Foundation

What We Found

The Railroad Research Foundation has not complied with the requirements of cooperative agreement 2A-96694301. We identified the following noncompliance issues:

- The five repowered locomotives were not operating in the Baton Rouge area as originally proposed and expected by the EPA. As a result, the inhabitants in the Baton Rouge ozone nonattainment area were not receiving the benefits of the lower diesel emissions expected by the EPA when it approved the project.
- Costs of \$4,614 for various indirect activities under a service agreement were not allowable under federal cost principles and the terms of the agreement.
- Costs of \$16,512 for the foundation's indirect costs were not supported because the cooperative agreement did not authorize indirect costs for the entire project period.

Recommendations and Responses

We recommend that the regional administrator for Region 6:

1. Recover federal funds of \$2,904,578 unless the foundation provides a verifiable and enforceable remedy to reduce diesel emissions in the Baton Rouge ozone nonattainment area, as required by the cooperative agreement.

In the event that all federal funds are not recovered under the first recommendation, we recommend that the regional administrator for Region 6:

2. Recover the \$4,614 claimed for unallowable other costs.
3. Recover the excess indirect cost of \$16,512, or consider funding the foundation's indirect cost for the entire project period.

The foundation did not agree with the draft report's recommendation to repay all federal funds, and proposed a possible remedy to achieve compliance with the cooperative agreement. The foundation agreed with the unallowable salary cost but disagreed with the questioned indirect costs. EPA Region 6 agreed with our recommendations and will seek appropriate cost recoveries.



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

THE INSPECTOR GENERAL

June 20, 2013

MEMORANDUM

SUBJECT: Air Quality Objectives for the Baton Rouge Ozone Nonattainment Area Not Met Under EPA Agreement 2A-96694301 Awarded to the Railroad Research Foundation Report No. 13-R-0297

FROM: Arthur A. Elkins Jr.

A handwritten signature in black ink, appearing to read "Arthur A. Elkins Jr.", is written over the printed name.

TO: Ron Curry, Regional Administrator
Region 6

This is our final report on the subject audit of cooperative agreement 2A-96694301 awarded to the Railroad Research Foundation, Washington, D.C. We performed this site visit as part of our responsibility under the Recovery Act. This report contains findings on noncompliance with cooperative agreement terms and conditions and questions claimed costs as a result of this noncompliance.

This report represents the opinion of the OIG and does 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.

Action Required

In accordance with EPA Manual 2750, you are required to provide us your proposed management decision for resolution of the findings contained in this report before any formal resolution can be completed with the recipient. Your proposed decision is due in 120 days, or on October 18, 2013. To expedite the resolution process, please email an electronic version of your proposed management decision to adachi.robert@epa.gov.

Your response will be posted on the OIG's public website, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility requirements of Section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal. We have no objection to the further release of this report to the public. This report will be available at <http://www.epa.gov/oig>.

If you or your staff have any questions regarding this report, please contact Richard Eyermann, acting assistant inspector general for the Office of Audit, at (202) 566-0565 or eyermann.richard@epa.gov; or Robert Adachi, product line director, at (415) 947-4537 or adachi.robert@epa.gov.

Table of Contents

Chapters

1	Independent Attestation Report.....	1
2	Introduction	3
3	Expected Benefits Not Being Achieved	5
4	Financial Results.....	11
	Status of Recommendations and Potential Monetary Benefits.....	15

Appendices

A	Railroad Research Foundation Response to Draft Report	16
B	Region 6 Response to Draft Report.....	22
C	Distribution	24

Chapter 1

Independent Attestation Report

We have examined the Railroad Research Foundation's compliance with the terms and conditions of the cooperative agreement 2A-96694301 and the costs claimed on the Federal Financial Report, dated October 11, 2010. By accepting the funding provided through the cooperative agreement, the foundation has responsibility for complying with these requirements. Our responsibility is to express an opinion on the foundation's compliance based on our examination.

Our examination was conducted in accordance with generally accepted government auditing standards issued by the comptroller general of the United States and the attestation standards established by the American Institute of Certified Public Accountants. We examined, on a test basis, evidence supporting management's assertion and performed such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

We contacted various representatives from the U.S. Environmental Protection Agency's Region 6 to gather information on criteria relevant to the cooperative agreement; obtain an understanding of the proposed project; and gather information concerning the foundation's performance. Specifically, we performed the following steps:

- Reviewed the EPA's project and cooperative agreement files.
- Interviewed the EPA's personnel to obtain an understanding of the cooperative agreement.
- Reviewed the original and revised applications associated with the award of cooperative agreement 2A-96694301.
- Reviewed cooperative agreement 2A-96694301 and its modifications.
- Reviewed the foundation's original and revised work plans.
- Conducted interviews with EPA Region 6's associate director for Air Programs; EPA Region 6's Diesel Emission Reduction Act coordinator; and the grant management officer.

We made site visits to the foundation's office in Washington, D.C., and performed the following steps:

- Reviewed recipient cooperative agreement files and interviewed recipient personnel to gain an understanding of the accounting system, internal controls, costs reported under the cooperative agreement, and the work performed under the cooperative agreement.
- Selected November 2010 activity reports to review the operating locations of the repowered locomotives.

- On a test basis, reviewed costs reimbursed under the cooperative agreement to determine whether the costs met the applicable Code of Federal Regulations requirements under 40 CFR Parts 30 and 34, 2 CFR Parts 215 and 230, and the cooperative agreement.
- Obtained third party confirmation for the costs of the repower kits.
- Confirmed in-kind matching costs.
- Tested for compliance with Recovery Act requirements.

We also reviewed:

- The foundation's single audit reports for 2009 and 2010.
- A limited scope review of the foundation's administrative and financial management systems for managing the EPA's funds under cooperative agreement 2A-96694301.
- The foundation's actions to address the recommendations in the limited scope review.

Our examination disclosed the following noncompliances with cooperative agreement requirements:

- The five locomotives repowered with Recovery Act funds were not operating in the Baton Rouge, Louisiana, area as originally proposed and expected by the EPA.
- Costs of \$4,614 for various indirect activities under a service agreement and excess wages were not allowable under federal cost principles and the terms of the agreement.
- Costs of \$16,512 for the foundation's indirect costs were not supported because the cooperative agreement did not authorize indirect costs for the entire project period.

In our opinion, because of the noncompliance items described above, the foundation has not complied with the requirements of cooperative agreement 2A-96694301.



Robert K. Adachi
Director for Forensic Audits

Chapter 2

Introduction

Purpose

The EPA Office of Inspector General conducted this review to determine whether the Railroad Research Foundation complied with the requirements, terms and conditions of cooperative agreement 2A-96694301 and all related laws and regulations.

Background

The American Recovery and Reinvestment Act of 2009 appropriated \$300 million for Diesel Emission Reduction Act grants. The diesel emission program was created under Title VII, Subtitle G, of the Energy Policy Act of 2005. This act authorized the EPA to fund programs to achieve significant reductions in diesel emissions in terms of tons of pollution produced and diesel emission exposures, particularly from fleets operating in areas designated by the EPA as poor air quality areas.

On September 1, 2009, the EPA used Recovery Act funds to award cooperative agreement 2A-96694301 to the foundation under the National Clean Diesel Funding Assistance Program. This award authorized federal funds of \$2,927,496 to repower locomotives for the city of Baton Rouge, Louisiana, in accordance with the application, dated April 28, 2009, and all modifications and amendments. The total project costs were \$3,659,370, which included the authorized federal funds and the recipient share of \$731,874. The agreement was amended twice to extend the project period, and to allow indirect costs. The amended project period was September 1, 2009, to December 31, 2010.

On December 15, 2009, the foundation submitted a revised application in support of a modified work plan to change the locomotive model being repowered. This change was necessary due to technical issues with the model originally proposed. The substitute locomotive model did not change the expected lower emissions or the project's location. The EPA approved the change in the work plan on December 22, 2009, without amending the cooperative agreement.

The foundation is a Washington, D.C., based 501(c)(3) non-profit organization established to undertake research, development and educational projects devoted to sustaining the safety, security and efficiency of the railroad industry. The foundation provided proposal development services, program and project management, federal regulation compliance, financial and technical reporting, and federal agency interface for sponsored projects. The foundation has received federal funds from the U.S. Department of Transportation's Federal Railroad

Administration, the U.S. Department of Homeland Security, and the EPA. During the cooperative agreement's project period, the foundation had two employees. Subsequently, the foundation hired a senior program director as a third employee.

The foundation is closely aligned with the Association of American Railroads. The association is a 501(c)(6) trade organization committed to ensuring that freight railroads operate the safest and most efficient, cost-effective and environmentally sound freight transportation system in the world. Association members operate over a 140,000-mile network in North America, and include the major freight railroads in the United States, Canada and Mexico, as well as Amtrak. The association works with elected officials and leaders in Washington, D.C., on critical transportation and related issues related to the freight rail industry.

The foundation and the association were co-located, and the association provided financial, accounting, managerial and administrative support to the foundation. Based on the 2009 tax returns, 8 of 11 foundation officers and/or directors were compensated association officers. A management committee, which consisted of two association officers from the foundation's Board of Directors, actively managed foundation business and supervised foundation employees. In July 2012, the foundation entered into an agreement to obtain independent accounting services from an outside firm.

Chapter 3

Expected Benefits Not Being Achieved

The project's location and the reduction of health risks due to lower emissions were important criteria for funding this project for the Baton Rouge nonattainment area. However, the five locomotives repowered with Recovery Act funds under the cooperative agreement were not operating in the Baton Rouge area, as originally proposed in the application and as required by the cooperative agreement. As a result, the inhabitants in the Baton Rouge ozone nonattainment area were not receiving the benefits of the lower diesel emissions expected by the EPA when it approved the project. Emissions from diesel exhaust can:

- Lead to serious health conditions, such as asthma and allergies, and can worsen health and lung disease.
- Contribute to the production of smog, acid rain, and other adverse conditions that can damage plants, animals, crops, and water resources.

The five parishes that encompass the Baton Rouge nonattainment area—the only such designated area in Louisiana—has an estimated population of 739,013, or a little over 16 percent of the state's total population. Reducing diesel emissions and providing benefits to the population in proximity to the Baton Rouge railroad operations were important objectives when the EPA approved funding for this project. Since the repowered locomotives were not operating in the Baton Rouge area, reduced emissions that resulted were not improving the air quality and reducing health risks in the heavily populated Baton Rouge nonattainment area.

Project Area Stated In Cooperative Agreement and Application

The cooperative agreement states that the Railroad Research Foundation requested funds to repower locomotives in the city of Baton Rouge. The award was based on the April 28, 2009, application, including all modifications and amendments. The application clearly identified Baton Rouge as the area affected by the project. According to the application, the new engines would reduce NO_x (mono-nitrogen oxides) and particulate matter by 46 percent over the old engines, which would reduce human exposure to potentially harmful diesel emissions. Further, the application states:

... repowering these units to much cleaner Tier 2 levels, KCS [Kansas City Southern Railway Company] will dramatically extend the locomotive useful lives and maximize the environmental benefits to the surrounding communities for years to come.... The Baton Rouge area is currently designated as a serious nonattainment area for ozone.... There are residents in close

proximity to rail operations which would see an immediate improvement in the reduction of emissions.

The 1990 Clean Air Act Amendments recognized that reducing the precursor emissions that cause ozone – nitrogen oxides (NO_x) and volatile organic compounds – was the primary method for assuring permanent ozone reductions. Ground level ozone, the most pervasive urban air pollutant, has been linked to respiratory illnesses and other serious public health concerns, such as asthma and heart disease.

When breathed, particulate matter can accumulate in the respiratory system. Fine particulate matter is associated with such adverse health effects as heart and lung disease and increased respiratory disease, and symptoms such as asthma, decreased lung function, and even premature death. Also, particulate matter is a major cause of reduced visibility, and adversely impacts vegetation and ecosystems.

The EPA relied on the information in the application and scored the project's national programmatic priorities and regional significance high because of the benefits to the Baton Rouge area. Specifically, the EPA stated that the change from an unregulated standard to the Tier 2 standard would result in a huge reduction in emissions. Residents in the proximity of railroad operations in Baton Rouge would benefit greatly from the project. Further, NO_x reductions were important for the Baton Rouge nonattainment area; reducing uncontrolled sources would advance efforts to come into attainment for the .075 parts per million ozone standard. The EPA gave the project the maximum number of points for a high population density with poor air quality.

In November 2009, the foundation contacted the EPA to discuss the need to change the type of locomotive being repowered from the SD50 model to the GP40 model because of unforeseen technical problems. The EPA responded that in order to proceed under the current agreement, the foundation must meet two conditions:

1. The change from the SD50 model to the GP40 model must result in equivalent emission reductions to those stated in the original application.
2. The reductions realized are in the same geographic area (that is, the different model locomotives that will receive the new engines must operate in the same geographic area as stated in the application).

In December 2009, the foundation submitted a locomotive change justification to repower the GP40 locomotive. Included in the justification was a letter, dated November 18, 2009, from the Kansas City Southern Railway Company which affirmed that the substitute locomotives would operate in the same service as originally proposed: "switching and local service in the Baton Rouge, LA area."

The foundation also submitted a revised Application for Federal Assistance, SF-424. In block 14, the foundation identified "City of Baton Rouge, East Baton

Rouge Parish, LA” as the area affected by the project. The EPA approved the revised project on December 22, 2009.

Locomotives Not Operating in Non-Attainment Area

Based upon records provided by the foundation, the repowered locomotives were not being used in the nonattainment area specified in the application. We reviewed the Equipment Event Activity report for the month of November 2010 for each of the five repowered locomotives. These reports show the locomotives’ daily locations and movements during the month. According to the reports, none of the trains operated in the Baton Rouge area during the month of November 2010. All the locomotives were operating in Louisiana or Texas. The closest any of the GP40 locomotives traveled near Baton Rouge was about 100 miles; the furthest point from Baton Rouge was estimated at more than 400 miles. On February 27, 2012, the date that the November 2010 activity reports were printed for our review, two of the locomotives were in Mississippi, one was in Oklahoma, and one was in Bayou Pierre, Louisiana. The fifth locomotive was in Baton Rouge.

Despite clear language in both agreements, KCS did not believe that it was required to operate the repowered locomotives in the Baton Rouge area after the project period expired on December 31, 2010. This conclusion was based on a response to a hypothetical question that the railroad obtained from the National Clean Diesel Campaign Helpline in October 2010.

The cooperative agreement’s programmatic condition 12 states the following:

Recipient agrees that at the end of the project period the equipment acquired under this assistance agreement will be subject to the property disposition regulations at 40 CFR 30.34.... Specifically, the Recipient is instructed to continue to use the equipment purchased under this assistance agreement in the project or program for which it was acquired for the remainder of its useful life, whether or not the project or program continues to be supported by federal funds ... these disposition instructions are applicable to assistance agreement recipients and any other third-party recipients acquiring equipment under this award.

All the cooperative agreement’s terms and conditions were incorporated into the agreement between the foundation and KCS in exhibit A. Further, this agreement, executed in January 2010, stated that the railroad was familiar with the requirements and obligations of the cooperative agreement and would abide by all such requirements and obligations.

If KCS had questions regarding its obligations under the agreement with the foundation or the terms of the foundation’s cooperative agreement with the EPA,

it should have addressed those concerns directly with the foundation. The response from the National Clean Diesel Campaign Helpline does not change the requirements of the foundation's agreement with the railroad¹ or the EPA's cooperative agreement with the foundation. Consequently, the railroad is still obligated to operate the repowered locomotives in the Baton Rouge area for the useful life of the locomotive engines.

Environmental and Related Health Benefits Not Being Realized

Baton Rouge was one of 12 sites in the United States that measured concentrations above the 2008 ozone standard in the 2006-2008 time period.² Because the locomotives were not operating in the area as originally proposed, the environmental and related human health benefits expected in Baton Rouge from lower emissions were not being realized.

Emissions from diesel exhaust can lead to serious health conditions such as asthma and allergies, and can worsen heart and lung disease, especially for vulnerable populations such as children and the elderly. Diesel engines emit particulate matter (soot), nitrogen oxides which contribute to the production of ground-level ozone (smog) and acid rain, hydrocarbons, air toxics, and black carbon. As previously noted, ground level ozone and particulate matter cause serious human respiratory problems. Additionally, these emissions can damage plants, animals, crops and water resources.

At the time the EPA awarded the cooperative agreement, the Baton Rouge area was classified as a "moderate" 8-hour ozone nonattainment area based on the 1997 standard.³ In 2012, the EPA designated the Baton Rouge area as a nonattainment area for the 2008 national ambient air quality standards for ozone.⁴ The Baton Rouge nonattainment area, which includes five parishes—East Baton Rouge (including the city of Baton Rouge), West Baton Rouge, Iberville, Ascension, and Livingston—was the only designated nonattainment area in the state of Louisiana. The estimated population for these five parishes was 739,013, or a little over 16 percent of the state's total population.⁵

Reducing diesel emissions in a nonattainment area and providing benefits to the population in proximity to railroad operations in Baton Rouge were important objectives when the EPA approved funding for this project. This importance was clearly emphasized when the EPA informed the foundation that it could substitute a different locomotive model, provided the emission reductions remained the same as originally proposed, and the substitute locomotives operated in the same

¹ Article 10 in the agreement between the foundation and the KCS states that changes or alterations to the agreement are not binding unless such changes are in writing and signed by both parties.

² *Our Nation's Air, Status and Trends Through 2008*, EPA-454-R-09-002, February 2010.

³ 73 Fed. Reg. 15087-15092 (March 21, 2008).

⁴ 77 Fed. Reg. 30088, 30125 (May 21, 2012).

⁵ U.S. Census Bureau 2011 estimate.

geographic location as originally proposed. Since the repowered locomotives were not operating in the Baton Rouge area, the reduced emissions resulting from this project were not improving the air quality and reducing health risks in the heavily populated Baton Rouge nonattainment area.

After discussions with the foundation regarding this issue, KCS provided a letter, dated May 12, 2012, stating “repowered locomotives are based in Baton Rouge and are used for pick-up and delivery service in the Baton Rouge area and the surrounding communities we serve.” The locomotives would remain so for the 10-year estimated life of the new engines. However, the locomotives would need to move to Shreveport, Louisiana, for periodic maintenance. The foundation also offered to monitor the engine locations for future years.

The location and use of the repowered locomotives described in the May 12, 2012, letter is different than earlier representations. The original application, dated April 28, 2009, stated that the project would maintain the ability to provide switching and local pickup and delivery services. Further, the application stated that residents in close proximity to the rail operations in the greater Baton Rouge area would see an immediate improvement in the reduction of emissions. The application seems clear—the repowered locomotives would operate in the greater Baton Rouge area performing switching and local services, and the public benefiting from the project would be those close to rail operations.

Also, the revised application, dated December 15, 2009, clearly identifies the city of Baton Rouge, East Baton Rouge Parish, Louisiana, as the project location. In the letter accompanying the revised application and work plan, the railroad confirmed that it would use the repowered locomotives for “switching and local service in the Baton Rouge, LA area.”

The description used in the May 12, 2012, letter is different than the original and revised applications. The repowered locomotives would be “based” in Baton Rouge, and used for pickup and delivery services in the Baton Rouge area and surrounding communities. There is no mention of switching activities. Further, the letter’s description of the area of operations—“the Baton Rouge area and surrounding communities”—is not necessarily the same as the city of Baton Rouge, Louisiana; the Baton Rouge area; or the city of Baton Rouge, East Baton Rouge Parish, Louisiana used in the applications for federal assistance.

Recommendations

We recommend that the regional administrator for Region 6:

1. Recover federal funds of \$2,904,578 unless the foundation provides a verifiable and enforceable remedy to reduce diesel emissions in the Baton Rouge ozone nonattainment area, as required by the cooperative agreement.

Railroad Research Foundation Response

The foundation disagreed with the recommendation because it believes the terms of the cooperative agreement have been complied with in part and it remains possible to comply with the terms in the future. The foundation believes the cooperative agreement's expected program benefits can still be realized. The foundation stated that, since becoming aware in May 2012 that the repowered locomotives were sometimes operating outside the Baton Rouge area, the foundation has taken corrective action with KCS to ensure that the locomotives are operating in the Baton Rouge area. However, there is some confusion over what locations are within the Baton Rouge area for the purpose of the cooperative agreement.

Subject to clarification of the operating location, the foundation stated the railroad will operate the locomotives in the defined area going forward through 2019 and possibly beyond, thereby achieving the expected environmental and related human health benefits. Rather than recover the full assistance amount of \$2.9 million, the foundation believes that it would be more consistent with the goals of the program to work out an arrangement that would result in full compliance with the terms of the cooperative agreement. The foundation believes that it would be useful to discuss details of the proposed remedy with the EPA in order to achieve full benefits of the cooperative agreement. The proposed remedy would include operation of the repowered locomotives within the defined area for the remainder of the locomotives' useful lives and the possible addition of time to account for any periods of past noncompliance.

Region 6 Response

Region 6 agreed with the proposed recommendation. Region 6 said it will take into consideration any foundation provisions for quantifiable and enforceable measures that would ensure the reduction of diesel emissions in the Baton Rouge area when deciding cost recovery.

OIG Response

The foundation acknowledged that, contrary to the requirements of the cooperative agreement, the repowered locomotives operated outside the Baton Rouge area at times until May 2012. Since that time, the foundation stated that the locomotives have operated within the Baton Rouge area and would continue to do so with some clarification. Since the foundation proposed a possible remedy to achieve compliance and the region indicated a willingness to consider such a proposal, we believe that direct discussions between the region and the foundation would provide the best opportunity of achieving the intended environmental and human health benefits. We have revised our recommendation accordingly.

Chapter 4 Financial Results

The Railroad Research Foundation submitted a revised final Federal Financial Report on October 11, 2011, and claimed federal funds of \$2,904,578, and a recipient’s matching share of \$731,874. Pursuant to an agreement with the foundation, KCS funded the required match by partially paying for the GP40 repower kits for the five locomotives included under the cooperative agreement. The confirmed cost for the five repower kits was \$4,103,615, of which KCS paid \$1,266,119. The balance of the kit cost—\$2,837,496—was paid with federal funds.

We reviewed the claimed costs and identified unallowable costs of \$4,614, and unsupported costs of \$16,512. The results of our examination are detailed in table 1 and the accompanying notes.

Table 1: Schedule of costs claimed and questioned

Category	Claimed	Questioned Costs		Notes
		Unallowable	Unsupported	
Salaries	\$21,830			
Fringe	6,279			1
Travel	2,054			
Contractual:				
KCS	2,837,496			
Maximus	4,739			2
Less prior questioned costs for Maximus	(2,292)			2
Other	11,304	\$4,614		3a, b
Indirect costs	23,168		\$16,512	4
Federal share	2,904,578	\$4,614	\$16,512	
Matching	731,874			
Total project costs	\$3,636,452			

Source: OIG analysis.

Note 1. Fringe Benefits

The foundation invoiced \$6,279 for fringe benefits. This amount is more than the \$3,611 reported on the final Federal Financial Report, dated October 11, 2011. Since the amount invoiced was less than amount budgeted by the EPA and less than the amount derived using the negotiated rate agreement, we did not question any costs.

Note 2. Prior Question Costs

The foundation claimed \$4,739 for interim grant and contract management services under a consulting agreement with Maximus. An EPA administrative and financial monitoring report, dated July 2011, questioned \$2,292 because the hourly rate paid to consultants exceeded the maximum allowable under EPA regulations. The foundation repaid the questioned amount on August 2011.

Note 3. Other Costs - Association of American Railroads

The foundation claimed \$11,304 for accounting, legal and grants management services provided by the Association of American Railroads under a service agreement as follows:

Table 2: Other costs claimed

	Claimed	Unallowable	Note
Salaries	\$6,125	\$830	a
Indirect costs	3,784	3,784	b
Travel	1,395	0	
Totals	\$11,304	\$4,614	

Source: OIG analysis.

Since the two organizations were under common control, the agreement did not meet the EPA's procurement standards at 40 CFR § 30.42 and 30.43. However, association employees did provide necessary services under the cooperative agreement. Direct salaries and travel costs charged to the agreement were supported by adequate documentation. Therefore, direct salaries and travel costs for association employees met federal cost principles and, except for the excess costs discussed in note 3a, are allowable.

- a. The foundation claimed \$830 for two association employees whose effective hourly labor rates exceeded the maximum allowed for consultants under the cooperative agreement. Section 25 of the cooperative agreement's administrative conditions limited compensation to the maximum daily rate for Level IV of the Executive Schedule. This requirement is also contained in EPA's regulations at 40 CFR § 30.27(b). This limitation applies because the foundation did not follow the EPA's procurement standards when obtaining the association services. The questioned cost is the difference between the amounts claimed for the two employees and the amounts allowed.
- b. The foundation claimed \$3,784 for fringe benefits, occupancy, the president's office, and administration based on various percentage rates applied to direct salaries. These rates were not supported by an indirect cost rate agreement with a federal agency. Title 2 CFR Part 230 – Cost Principles for Non-Profit Organizations (Office of Management and Budget Circular A-122), Appendix A, General Principles, A.2.g, states that a cost must be adequately

documented to be allowable. Since the association's indirect cost rates were not supported by a federal rate agreement, the costs are not adequately supported and do not meet general principles for allowable costs. In addition, paragraph 4 of the cooperative agreement's administrative conditions states that management fees or similar charges in excess of direct costs and approved indirect cost rates are not allowable. Accordingly, costs of \$3,784 based on unsupported indirect cost rates are not allowable.

Note 4. Indirect Costs

The foundation claimed indirect costs of \$23,168 (\$22,345 indirect costs and \$823 occupancy costs). On invoice numbers 0001 through 0007, for costs incurred from August 17, 2009 through June 27, 2010, the foundation included fringe benefits and occupancy as part of the claimed salary costs. Beginning with invoice number 0008, salary, fringe benefits and indirect costs were identified separately.

On April 12, 2011, the EPA amended the cooperative agreement to authorize an indirect rate of 150 percent applied to direct salaries and wages for the period beginning July 1, 2010, through December 31, 2010, which was the last 6 months of the project period. According to the agreement's amended budget, the estimated indirect cost for the last 6 months of the project period was \$41,853.

Based on this amendment, the maximum allowable indirect cost was \$6,656. The allowable amount was determined by multiplying the direct salaries of \$4,437 for the last 6 months of the project by the authorized rate of 150 percent. The difference between the amount claimed and the amount allowed is \$16,512. This amount is not allowable because of the limited time period specified in the amended agreement. However, the total indirect cost claimed—\$23,168—is less than the budgeted amount of \$41,853, and only 106 percent of the total direct salaries.

Recommendations

In the event that all federal funds are not recovered under recommendation 1, we recommend that the regional administrator for Region 6:

2. Recover the \$4,614 claimed for unallowable other costs.
3. Recover the excess indirect cost of \$16,512, or consider funding the foundation's indirect costs for the entire project period.

Railroad Research Foundation Response

The foundation agreed to repay the \$830 claimed for the two association employees in excess of the maximum daily rates allowed. However, the foundation disagreed

with the recommendations to recover indirect costs for the foundation and the association.

The foundation did not agree that the association's indirect cost required a federally approved indirect cost rate agreement to be allowable under OMB Circular A-122, as long as the costs are reasonable, adequately documented, and treated consistently with other costs incurred for the same purpose in like circumstances. Regarding the foundation's indirect costs, the foundation stated that it had a federally negotiated indirect cost rate agreement applicable to the cooperative agreement period of performance. The foundation believes that when the EPA modified the agreement to authorize indirect costs, it should have authorized the costs for the entire project period, and not just the last 6 months.

Region 6 Response

The region agreed with the recommendations to recover \$4,614 and \$16,512, respectively.

OIG Comments

We disagree with the foundation's statement that indirect costs charged by the association are allowable because indirect costs do not require a federally approved rate agreement to be allowable under OMB Circular A-122. As noted in the foundation's response, an allowable cost must be adequately documented. For indirect costs, 2 CFR Part 230 – Cost Principles for Non-Profit Organizations (OMB Circular A-122), Appendix A, General Principles, E.1.f, defines an indirect cost proposal as documentation prepared by an organization to substantiate its claim for the reimbursement of indirect costs. This proposal provides the basis for the review and negotiation leading to the establishment of an organization's indirect cost rate. Paragraph E.2.g states that the results of each negotiation shall be formalized in a written agreement between the cognizant agency and the non-profit organization. Since this required documentation was not provided, the association's indirect costs were not adequately documented.

With regard to the foundation's indirect costs, we reviewed the October 27, 2010 approved indirect cost negotiated agreement covering the final rates for calendar years 2008 and 2009 and provisional rates for 2010. The foundation's response included the October 16, 2012 approved indirect cost negotiated agreement (see appendix A) that provides the final rates for calendar years 2010 and 2011. We did not question the \$16,512 because of the lack of a negotiated indirect cost agreement but because the cooperative agreement only authorized reimbursement of indirect costs for the period July 1, 2010, through December 31, 2010. Therefore, indirect costs incurred and claimed outside the cooperative agreement's authorized period are not eligible for reimbursement under the agreement and must be repaid unless the EPA modifies the cooperative agreement.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date	Claimed Amount	Agreed-To Amount
1	9	Recover federal funds of \$2,904,578 unless the foundation provides a verifiable and enforceable remedy to reduce diesel emissions in the Baton Rouge ozone nonattainment area, as required by the cooperative agreement.	U	Regional Administrator, Region 6		\$2,905	
2	13	In the event that all federal funds are not recovered under recommendation 1, recover the \$4,614 claimed for unallowable other costs.	U	Regional Administrator, Region 6		\$5	
3	13	In the event that all federal funds are not recovered under recommendation 1, recover the excess indirect cost of \$16,512, or consider funding the foundation's indirect costs for the entire project period.	U	Regional Administrator, Region 6		\$17	

- 1 O = recommendation is open with agreed-to corrective actions pending
 C = recommendation is closed with all agreed-to actions completed
 U = recommendation is unresolved with resolution efforts in progress

Railroad Research Foundation Response to Draft Report

April 9, 2013

John Trefry, OIG
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 2421T
Washington, DC 20460

Re: Response to Examination of Costs and Compliance – Cooperative Agreement 2A-96694301
Awarded to the Railroad Research Foundation, Project No. OA-FY12-0198

Dear Mr. Trefry:

The Railroad Research Foundation (RRF) appreciates the opportunity to respond to the U.S. Environmental Protection Agency Office of Inspector General's draft report of February 25, 2013, entitled Examination of Costs and Compliance – Cooperative Agreement 2A-96694301 (EPA-OIG Project No. OA-FY12-0198) awarded to the Railroad Research Foundation (Draft Report). The Draft Report states that the RRF did not comply with the above-referenced Cooperative Agreement, primarily because the five locomotives repowered with funds granted under the Cooperative Agreement were not operated in the Baton Rouge, Louisiana area. The Draft Report recommends that EPA seek to recover \$2,904,758, the full amount funded under the Cooperative Agreement. As further explained below, the RRF disagrees with the recommended remedy because (1) to date, the terms of the Cooperative Agreement have been complied with in part; and (2) it remains possible for RRF to comply fully with the terms of the Cooperative Agreement and for the benefits of the program under which the grant was awarded to be fully realized. RRF has been and is committed to full compliance in the future and has complied with all the terms and conditions under this award since RRF was first made aware of an issue with the location of the repowered locomotives and took corrective action with its subrecipient, KCSR, since May of 2012.

In September, 2009, EPA funded 80% of the total project cost and made an award to the RRF of \$2,927,496 under the National Clean Diesel Funding Assistance Program. The additional 20% of project cost included a recipient contribution of \$731,847. The funds awarded were to be used to repower five diesel locomotives. The purpose of the program was to reduce diesel emissions and improve air quality by operating locomotives which are more fuel efficient, meet more stringent air emission requirements, and include automatic engine start-stop systems. In December, 2009, a changed work plan was approved for the purpose of substituting a different locomotive model for the model proposed in the original application. The award also was amended twice to allow indirect costs and to extend the project period.

In January, 2010, RRF entered into a subcontract with the Kansas City Southern Railway Company (KCSR), which owns and operates the locomotives that were to be repowered. Under the subcontract between KCSR and RRF, KCSR received funding in the amount of \$2,837,496, and was to comply with all the applicable terms of the Cooperative Agreement and applicable federal regulations.

The relevant documents reference the project location as the Baton Rouge, Louisiana area. The Draft Report further states that the repowered locomotives “were not operating in the Baton Rouge, Louisiana area, as originally proposed in the application and as required by the cooperative agreement” and that, therefore, “the environmental and related human health benefits expected in Baton Rouge from lower emissions were not being realized.” The Draft Report takes the position that KCS was, and remains, “obligated to operate the repowered locomotives in the Baton Rouge area for the useful life of the locomotive engines.” RRF acknowledges that since the locomotives were repowered, they have operated outside of the Baton Rouge area at times. However, they have also operated within that area for part of the time. Specifically, since May 2012, KCS has advised RRF that the locomotives have been operated in locations that fall within the Baton Rouge area. (RRF can provide further detail on the post-May 2012 operations if necessary). Moreover, there is some confusion over what locations in KCS’s area of operations are within the Baton Rouge area for the purpose of the Cooperative Agreement.

The useful life of the locomotives will extend into the future for many more years. Subject to discussion regarding clarification to the Cooperative Agreement with respect to the area in which the locomotives are to be operated, RRF and KCS are willing to commit that, other than for required maintenance, which will occur at a different location, the locomotives will be operated in the defined area going forward for the remainder of their useful lives, which is currently expected to end in 2019. Additionally, if the locomotives are rebuilt such that their useful lives extend past 2019, RRF and KCS are willing to continue to operate the locomotives in the defined area beyond that time to the extent necessary to make up for any time prior to May, 2012 when the locomotives were not being operated in the defined area. If the locomotives are operated in the defined area going forward, as proposed, much of the expected environmental and related human health benefits from lower emissions will, in fact, be achieved. Thus, inasmuch as the full period of performance has not run, and it remains possible to comply with the provisions of the Cooperative Agreement, thereby achieving its purpose, it is not appropriate for EPA to seek to recover the full grant amount of over \$2.9 million. RRF believes that rather than recommend EPA take such an action, it would be more consistent with the goals of the program to work out an arrangement that would result in full compliance with the terms of the Cooperative Agreement. Among matters that should be clarified under such an arrangement is agreement about what locations constitute the defined area to assure compliance going forward.

The RRF believes that in order to work out the details of its proposed remedy—operation of the repowered locomotives within the defined area for the remainder of the locomotives’ useful lives, with possible additional time to account for any periods of past noncompliance—it would be useful to discuss this matter directly with EPA in order to determine how best to achieve the full benefits of the program.

This discussion would include agreement on a definition of the area where the locomotives are to be operated so there will be no confusion over where the locomotives are to be operated going forward.

The Draft Report also found that certain RRF indirect costs charged to the project were not allowable in three areas.

1. The Draft Report recommends recovery of \$16,512 in indirect costs because the Cooperative Agreement did not authorize indirect costs for the entire project period, noting that an amendment authorizing an indirect rate of 150% applied only to the last six months of the project period, July 1, 2010 through December 31, 2010. Thus, the Draft Report recommends disallowing indirect costs for the prior period. RRF takes issue with this recommendation. The RRF had received a negotiated agreement issued by the Federal Railroad Administration (the cognizant agency) dated October 27, 2010, and a provisional rate was issued for the period 01/01/2010 to 12/31/2010 (a copy is attached). This agreement allows an IDC rate of 216.8% even though RRF has charged only 150%. This agreement constitutes authorization of indirect costs for RRF and should have been applied to the Cooperative Agreement with EPA during the entire period of the project. RRF, in fact, incurred indirect costs for the entire project period and the amendment with EPA should have covered the entire period, not just the last six months. RRF is requesting a retro-active amendment to the EPA Cooperative Agreement to cover the entire period. Disallowance of all but the last 6 months of IDC recovery would represent a significant loss to RRF in cost recovery. OIG acknowledges this unfairness by recommending as an alternative to recovery of the \$16,512 that EPA “consider funding the Foundation’s indirect cost for the entire project period.” Therefore, RRF respectfully requests that OIG withdraw its recommendation that EPA seek to recover the \$16,512 in indirect cost.

2. EPA regulation 40 CFR 30.27(b), limits the maximum daily salary rate paid to subcontractors to the Level IV of the Executive Schedule. In accordance with this regulation the OIG has determined \$830 of salary paid for two employees of the Association of American Railroads (AAR), which provided services as part of the project, to have exceeded the maximum allowed rate for consultants under the Cooperative Agreement. Though the services rendered were determined to be allowable under procurement standards 40 CFR 30.42 and 30.43, this limitation applies. The RRF has requested that AAR reimburse \$830 to RRF which would be repaid to the EPA for this questioned costs.

3. The AAR charged RRF, and RRF claimed \$3,784 for the AAR’s indirect cost. However, OIG found that the AAR’s indirect cost rates were not supported by a federal rate agreement, and therefore do not meet general principles for allowable costs.

RRF disagrees with this finding. The indirect costs charged as a percentage of direct salary, which the Draft Report has already determined to be supported by adequate documentation and to meet federal cost principles, do not require a federal approved indirect cost rate agreement to meet the criteria to be treated as allowable costs as defined under OMB Circular A-122, Cost Principles for Not for Profit Organizations. Based on guidance contained in OMB Circular A-122, for a cost to be allowable it must be reasonable, adequately documented and treated consistently with other costs incurred for the same purpose in like circumstances. RRF has reviewed the AAR’s methodology of identifying and developing an indirect cost methodology

charged on the basis of direct labor hours incurred. RRF believes indirect costs charged against direct labor hours incurred were reasonable, adequately supported and documented and were treated consistently with other costs incurred for the same purpose, and therefore were properly claimed. Further, the AAR's expenditures of federal funding is below the \$300,000 threshold required for federal audits as set by OMB Circular A-133, Audits of State, Local Government and Non Profit Organizations, Subpart B, paragraph .200b, and further supports that the AAR is within the federal regulations in terms of requirements for supporting costs.

To discuss further or for more information, you may contact me at 202-639-2118 or by email at jmarsh@railroadresearch.org.

Best Regards,

Jeffrey D. Marsh
Vice President, Treasurer and Director

Cc: Edward Hamberger, President Board of Directors
Robert VanderClute, Vice President and Director
Sharon Stewart Cole, PhD., Sr. Program Director
Dan Sapphire, Legal Counsel

Attachment

NON-PROFIT ORGANIZATION
INDIRECT COST NEGOTIATED AGREEMENT

Name:

Date: October 16, 2012

Railroad Research Foundation
 425 3rd Street, SW, Suite 910
 Washington, DC 20024

Filing Ref: This agreement replaces the agreement dated March 19,2012

The indirect cost rate(s) contained herein is for use in grants and contracts with the U. S. Department of Transportation and other Federal agencies, subject to the limitations contained in Section II of this agreement:

SECTION I: RATES

Overhead Rate

<u>Type</u>	<u>Effective Period</u>		<u>*Rate</u>	<u>Location</u>	<u>Applicable to</u>
	<u>From</u>	<u>To</u>			
Final	01/01/2008	12/31/2008	455.60%	All	All Programs
Final	01/01/2009	12/31/2009	216.80%	All	All Programs
Final	01/01/2010	12/31/2010	201.97%	All	All Programs
Final	01/01/2011	12/31/2011	238.11%	All	All Programs

***Base: Total direct salaries and wages, including fringe benefits.**

Fringe Benefit Rate

<u>Type</u>	<u>Effective Period</u>		<u>*Rate</u>	<u>Location</u>	<u>Applicable to</u>
	<u>From</u>	<u>To</u>			
Final	01/01/2008	12/31/2008	30.47%	All	All Programs
Final	01/01/2009	12/31/2009	35.24%	All	All Programs
Final	01/01/2010	12/31/2010	32.21%	All	All Programs
Final	01/01/2011	12/31/2011	27.37%	All	All Programs

***Base: Total direct salaries and wages**

SECTION II: GENERAL

- A. LIMITATIONS:** Use of the rate(s) contained in this agreement is subject to any statutory or administrative limitations and is applicable to a given grant or contract only to the extent that funds are available. Acceptance of the rate(s) agreed to herein is predicated on this conditions:
(1) that no costs other than those incurred by the grantee/contractor were included in its indirect cost pool as finally accepted and that such costs are legal obligations of the grantee/contractor and allowable under the governing cost principles; (2) that the same costs that have been treated as indirect costs are not claimed as direct costs; (3) that similar types of costs have been accorded consistent accounting treatment; and (4) that the information provided by the grantee/contractor which was used as a basis for acceptance of the rate(s) agreed to herein is not subsequently found to be materially incomplete or inaccurate.
- B. ACCOUNTING CHANGES:** The rate(s) contained in this agreement are based on the accounting system in effect at the time the proposal was prepared and the agreement was negotiated. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this rate(s) require the prior approval of the office responsible for negotiating the rate(s) on behalf of the Government. Such changes include but are not limited to changes in the charging of a particular type of costs from indirect to direct. Failure to obtain such approval may result in subsequent cost disallowances.
- C. REIMBURSEMENT:** Indirect cost reimbursement on all awards will be determined based upon the indirect cost rates established for the fiscal period in which the applicable direct expenditures are incurred.
- D. NOTIFICATION TO FEDERAL AGENCIES:** Copies of this document may be provided to other Federal offices as a means of notifying them of the agreement contained herein.
- E. SPECIAL REMARKS:** Federal programs currently reimbursing indirect costs to this organization by means other than the rate(s) cited in this agreement should be credited for such costs and the applicable rate cited herein applies to the appropriate base to identify the proper amount of indirect cost allocated to the program.

US Department of Transportation
Federal Railroad Administration

/s/ Rebecca Pennington
Signature: Rebecca Pennington
Chief Financial Officer
Office of Railroad Financial Management

Date: November 7, 2012

Negotiated By: Jennifer Capps
(202) 493-0112

Railroad Research Foundation

/s/ Sharon Cole
Signature: Sharon Stewart Cole, PhD
Sr. Program Director

/s/ Jeffery D. Marsh
Name and Title: Jeffery D. Marsh
Vice President and Treasurer

Date: October 18, 2012

Region 6 Response to Draft Report



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202 – 2733

Office of the Regional Administrator

April 5, 2013

MEMORANDUM

SUBJECT: Response to Office of Inspector General Draft Report-Examination of Costs and Compliance – Cooperative Agreement 2A-96694301 Awarded to the Railroad Research Foundation dated February 25, 2013

FROM: Ron Curry
Regional Administrator, Region 6

TO: Robert K. Adachi, Jr
Director of Forensic Audits
Office of the Inspector General

Thank you for the opportunity to respond to the issues and recommendations in the subject audit report. Following is a summary of the agency's overall position, along with its position on each of the report recommendations. We have provided high-level intended corrective actions and estimated completion dates to the extent we can for those report recommendations with which the agency agrees.

AGENCY'S OVERALL POSITION

Region 6 agrees with the Office of the Inspector General's recommendations. Additionally, reducing diesel emissions for the Baton Rouge nonattainment area and providing benefits to the population in proximity to railroad operations were important considerations when approving funding of the project. If the Railroad Research Foundation (RRF) were to provide quantifiable and enforceable measures to ensure the fulfillment of the grant requirements whereby the subsequent emissions reductions would benefit the Baton Rouge nonattainment area, Region 6 would be willing to consider the measures offered by RRF in deciding whether all or a portion of the federal share in recommendation 1 will be recovered.

AGENCY'S RESPONSE TO REPORT RECOMMENDATIONS

No.	Recommendation	High-Level Intended Correction Action(s)	Estimated Completion
1	Recover the federal share of \$2,904,758	Region 6 will disallow and recover the federal share in accordance with 40 CFR 30 unless RRF can ensure grant is fulfilled by operating in the Baton Rouge area.	6 months after final report
In the event that all federal funds are not recovered under Recommendation 1, Region 6 will			
2	Recover the \$4,614 claimed for unallowable other costs	Region 6 will disallow and recover the federal share in accordance with 40 CFR 30.62.	6 months after final report
3	Recover the excess indirect cost of \$16,512, or consider funding the Foundation's indirect cost for the entire project period	Region 6 will disallow and recover the federal share in accordance with 40 CFR 30.62.	6 months after final report

CONTACT INFORMATION

If you have any questions regarding this response, please contact Thomas Diggs, Associate Director of the Air Programs Branch, Multimedia Planning and Permitting Division at (214) 665-3102 or Gloria Vaughn of his staff at 214-665-7535.

cc: Michael Rickey, Office of the Inspector General
John Trefry, Office of the Inspector General

bcc: David Garcia, Acting Director, Multimedia Permitting
Thomas Diggs, Associate Director, Air Programs
Mary Stanton, Air State and Tribal Operations
Ashley Williams, Air State and Tribal Operations
Missy Milbeck, Comptroller
Susan Jenkins, Audit Liaison
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and Resources Management
Deputy Regional Administrator, Region 6
Director, Office of External Affairs, Region 6
Office of the Regional Comptroller, Region 6
Director, Multimedia Planning and Permitting Division, Region 6
Associate Director for Air, Region 6
Audit Follow-Up Coordinator, Region 6
President, Railroad Research Foundation