

NTRD Program Disclaimers

1. Disclaimer of Endorsement:

The posting herein of progress reports and final reports provided to TCEQ by its NTRD Grant Agreement recipients does not necessarily constitute or imply an endorsement, recommendation, or favoring by TCEQ or the State of Texas. The views and opinions expressed in said reports do not necessarily state or reflect those of TCEQ or the State of Texas, and shall not be used for advertising or product endorsement purposes.

2. Disclaimer of Liability:

The posting herein of progress reports and final reports provided to TCEQ by its NTRD Grant Agreement recipients does not constitute by TCEQ or the State of Texas the making of any warranty, express or implied, including the warranties of merchantability and fitness for a particular purpose, and such entities do not assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represent that its use would not infringe privately owned rights.

**Texas Commission on Environmental Quality
New Technology Research & Development (NTRD) Program
Monthly Project Status Report**

Contract Number: 582-5-70807-0022

Grantee: Combustion Components Associates

Date Submitted: _____ September 13, 2006 _____

Report for the **Monthly** period: August 2006

Starting Date: August 1, 2006 Ending Date: August 31, 2006

Section I. Accomplishments (*Please provide a bulleted list of project accomplishments as well as a description of their importance to the project.*)

August 8 – 10, 2006: Validation of system operation on Waste Management Trucks 408779 and 408692. This provided data to the functioning of the system and first hand data to the actual amount of NOx reduction in an on road vehicle over actual duty cycle. Charts and data in attached reports.

Truck 408779 currently has logged 902 in use hours and 407 hours with fully loaded engine mapping towards the EPA 1000 hour durability requirement.

Truck 408692 required some servicing and final mapping. Accordingly it has logged 189 hours towards the EPA durability requirement.

August 17, 2006 Applied and successfully received Grant Extension from TCEQ.

August 22, 2006 Customer visit in Dallas, Texas and meeting with TCEQ, Kate Williams and Morris Brown, to review Grant Extension application, reimbursement status and program schedule and direction.

Indicate which part of the Grant Activities as defined in the grant agreement, the above accomplishments are related to:

August 8 – 10, 2006:

Section 3: Grant Activities

Article 2: Scope of Work

Task 2: "De-greening" and "Aging" requirements of the EPA/ETV verification program of the Mobile Diesel SCR System (ELIM-NOx).

2.1.1 The performing party will data log and evaluate the duty cycle and estimate system efficiency once installed on Waste Management Trucks.

August 22, 2006

Section 3: Grant Activities

Article 2: Scope of Work

Task 3: Program management and reporting

Section II: Problems/Solutions

<p>Problem(s) Identified</p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p>	<p><i>Truck 408692 was reporting electrical problems with the truck operation and required the ELI-NOx system to be disconnected for periods of time until the problem could be resolved. As of August 8-10, 2006 visit the problem had been resolved, the system re-commissioned and put into continuous service. This has delayed the logging for some time on the secondary system. This has not delayed the aging of the primary system on truck 408779.</i></p>
<p>Proposed Solution(s)</p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p>	<p><i>Examination of the truck systems as well as the ELIM-NOx system was performed to determine root cause of the vehicle's problems.</i></p>
<p>Action(s) Conducted and Results</p> <p><i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i></p>	<p><i>Working with Waste Management, the problem was found to be an electrical connection under the dash board of the truck. This was corrected and tested for functionality. The ELIM-NOx system was checked for all connections, programming and functionality to confirm status. All was found to be in operating shape and not affected by the electrical short in the vehicle. As a precaution, the system was re-commissioned and the clock restarted toward the durability requirement.</i></p>

Section III. Goals and Issues for Succeeding Period: *(Please provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen)*

Perform another validation of both Waste Management trucks as well as full system inspection.

Set up contract with Southwest Research and RTI for the formal ETV testing schedule.

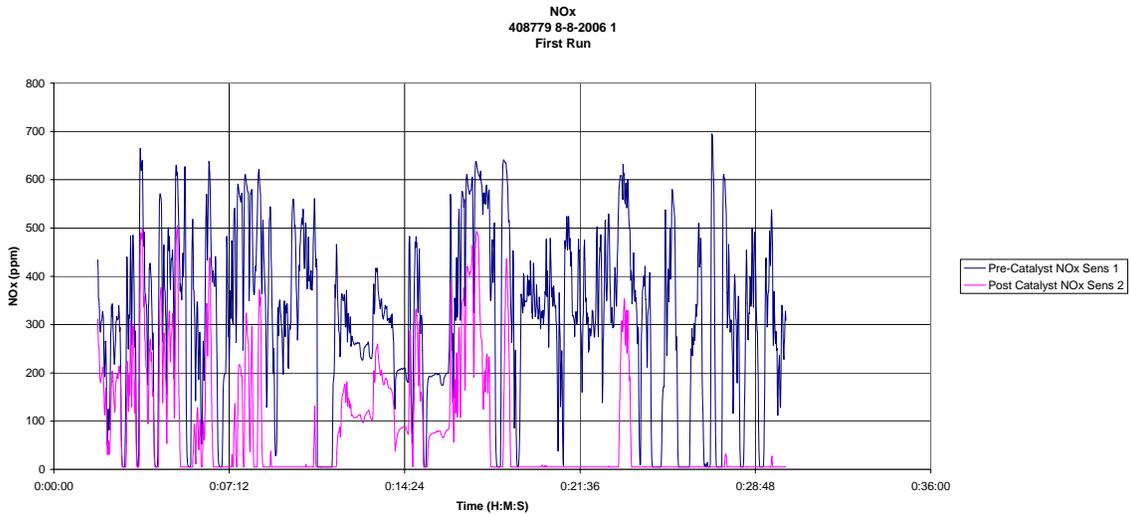
A handwritten signature in black ink, appearing to be 'P. J. Reba', written in a cursive style.

 Peter J Reba
Authorized Project Representative's Signature

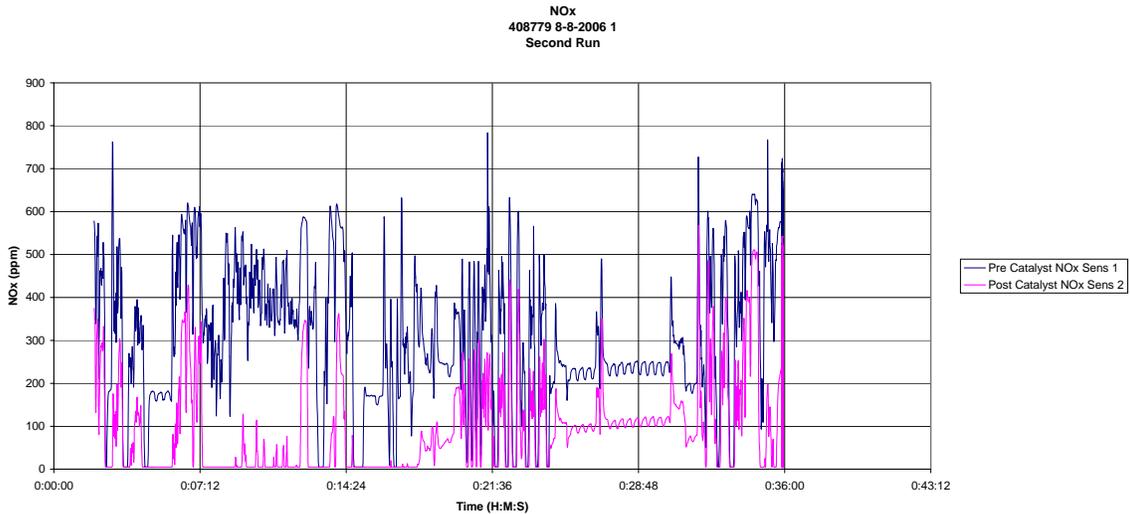
Date: September 13, 2006

NOTE: Please attach any additional information that you feel should be a part of your report or that may be required to meet the deliverable requirements for tasks completed during this reporting period.

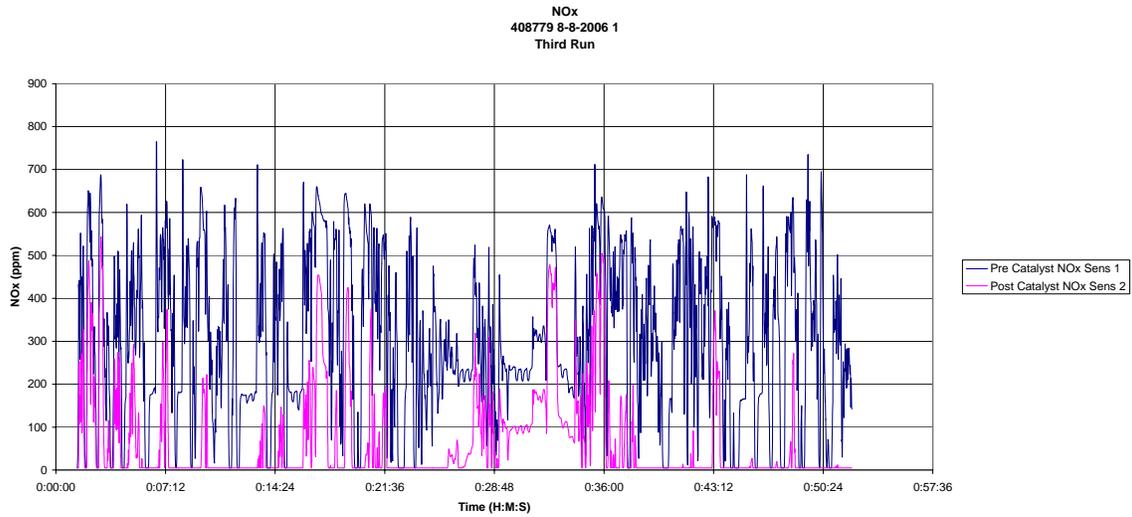
Waste Management Truck
408779
August Validation



Percent NOx Reduction: 74.3%



Percent NOx Reduction: 72.1%



Percent NOx Reduction: 78.5%

Validation of truck 408779 included three runs. Each run consisted of the vehicle leaving Waste Management with an empty dumpster on board, a leg with no dumpster and the final leg with a full dumpster on board. This encompasses a wide range of engine load given the different total weight conditions. Variation in Percent NOx Reduction can be attributed to the different weight of the dumpsters, both full and empty as well as the distance traveled under each condition.