

NTRD Program Disclaimers

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**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: June 2, 2006

Summary Report for the period:

Starting Date January 1, 2006 Ending Date May 31, 2006

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

- Installation on Waste Management trucks 408779 and 408692 completed on 4/27/06 (see attached photos). Installation was provided by CCA (Combustion Components Associates), through a local contractor. (task 2.1.1.2)
- Two 55 gallon (approximate) drums of urea provided to Waste Management for refilling urea tanks in trucks 408779 and 408692. Hand pump was provided for dispensing. (task 2.1.1.5)
- Coordinated with local CCA (Combustion Components Associates) representative to check and refill urea tanks (on trucks 408779 and 408692) as needed, which is ongoing. (task 2.1.1.5)
- Preliminary learn mode mapping implemented using 12 hour commercial duty cycle on truck 408692. (tasks 2.1.1.3 & 2.1.1.4)
- Maps (NOx table and Space Velocity table) developed on truck 408692 uploaded to truck 408779. (tasks 2.1.1.3 & 2.1.1.4)
- Preliminary validation completed on truck 408692(see attached plots). (tasks 2.1.1.3 & 2.1.1.4)
- The average NOx reduction measured during preliminary validation, when the Elim-NOx system is in operation, was 77%. (task 2.1.1.1)
- CCA personnel had formal meeting with EPA on 5/25/06 to discuss project status and provide preliminary validation results. (task 2.2.1)
- Following the recent meeting with EPA, CCA is in the process of creating a statement of work with RTI, EPA-OTAC, and SwRI. (task 2.2.2)

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

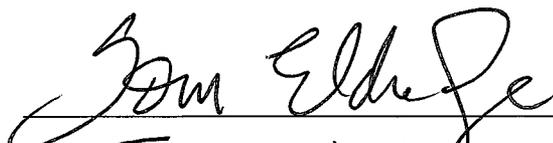
Related task# from the activity list is included in parenthesis above.

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>	<ol style="list-style-type: none"> 1) <i>As a result of preliminary learn mode mapping and validation, we found that it will be necessary to maintain higher exhaust gas temperatures in order to increase injection on-time.</i> 2) <i>Inability to schedule truck availability with Waste Management has prevented implementing the learn mode mapping using the truck drive cycle (as proposed to EPA).</i> 3) <i>As a result of the learn mode mapping using the truck drive cycle not being complete, the 1000 hour durability test cannot begin.</i> 4) <i>CCA has not been paid for invoice #12956, dated 10/06/05, and need to follow up with TCEQ for resolution.</i>
<p>Proposed Solution(s)</p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p>	<ol style="list-style-type: none"> 1) <i>In order to maintain higher exhaust gas temperatures and increase injection on-time, we found that it will be necessary to insulate the exhaust pipe between the injector and the catalyst.</i> 2) <i>Completion of the learn mode mapping using the truck drive cycle is planned for completion in June 2006. Appropriate scheduling of CCA and Waste Management resources to accomplish this task is in progress.</i> 3) <i>We estimate that the 1000 hour durability test will begin 7/1/06, which will require a contract extension between 3 to 6 months.</i>
<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>	

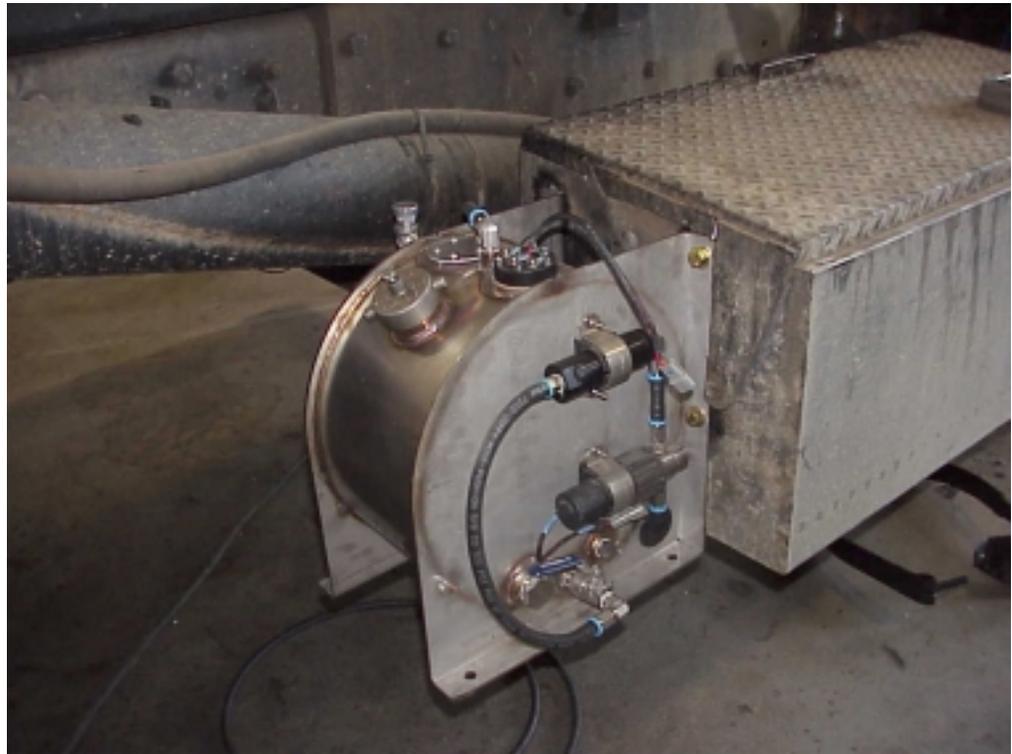
Section III. Goals and Issues for Succeeding Period: *(Please provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen)*

- *Insulate the exhaust pipe between the injector and the catalyst in order to maintain higher exhaust gas temperatures and increase injection on-time. This corrective action should be taken before conducting learn mode mapping using the truck drive cycle.*
- *Completion of the learn mode mapping using the truck drive cycle is planned for June 2006.*
- *Begin the 1000 hour durability cycle on trucks 408779 and 408692, estimated to begin 7/1/06*
- *Resolve payment issues for our contract, particularly regarding CCA invoice #12956, dated 10/06/05.*


Tom Eldredge

Date: 6/2/2006

Installation Pictures



Tank and Fluid Components



Injector Mounting

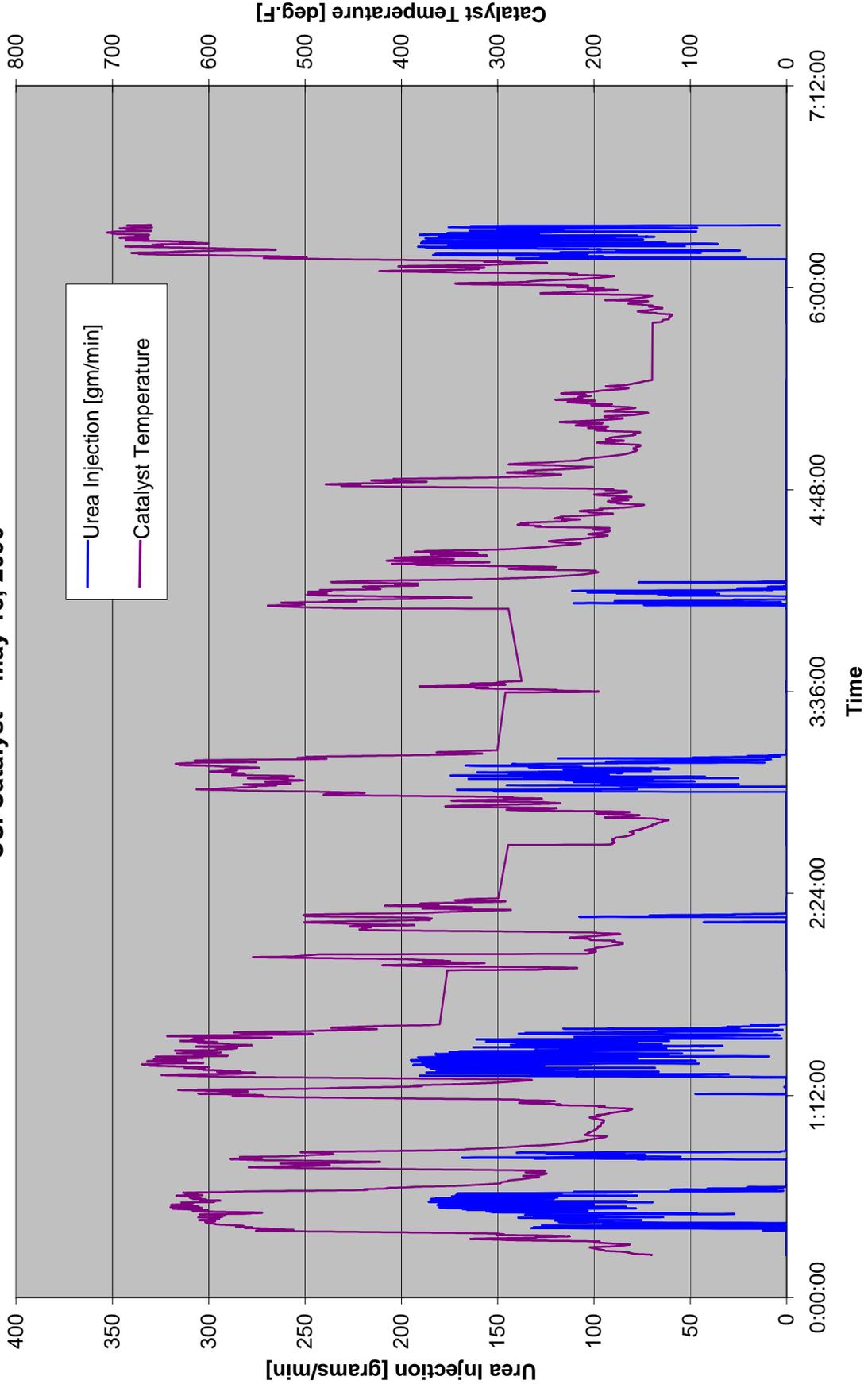
Installation Pictures



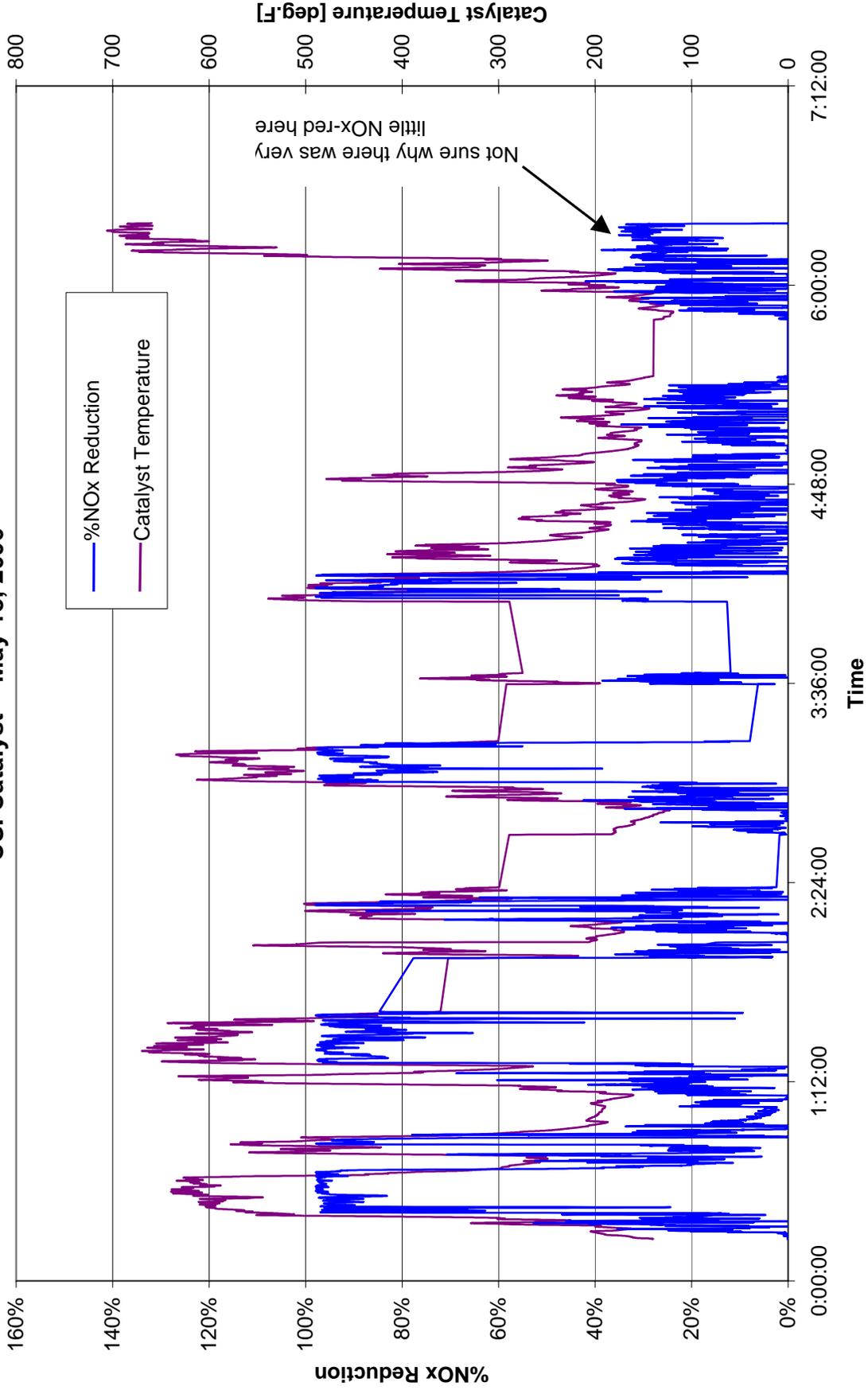
Catalyst Mounting



**TCEQ Durability Validation Data for Truck 408692
CSI Catalyst -- May 18, 2006**



TCEQ Durability Validation Data for Truck 408692 CSI Catalyst -- May 18, 2006



TCEQ Durability Validation Data for Truck 408692 CSI Catalyst -- May 18, 2006

