

## **NTRD Program Disclaimers**

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

Contract Number: 582-5-70807-0006

Grantee: Railroad Commission of Texas

Date Submitted: April 10, 2006

Report for the **Monthly** period:

Starting Date: March 1, 2006

Ending Date: March 31, 2006

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

1. Engine Control Systems, Ltd. (ECS, formerly Lubrizol) has forwarded to CARB its plan for testing of the TermiNOx system on the GM 4.3-liter V6 engine. CARB has made some changes and requested some modifications in the test plan. CARB has not approved the test plan yet. When the plan is approved we will request approval of the testing agreement with ECS.
2. NETT Technologies has notified the Railroad Commission that they have sent their testing plan to CARB and have received informal approval. NETT is working on the durability test procedure. Their plan follows that of ECS, in that they will remove an existing catalyst and O<sub>2</sub> sensor after the unit has accumulated 2,500 hours of service. Then both the new system and the aged system will be placed on an engine and the transient test will be run.
3. Motive Ventures of Boerne, Texas has contacted the Railroad Commission and asked if they can join the testing program.
4. Carnot Emission Services of San Antonio, Texas, has reviewed and approved the test protocols and is prepared to begin testing when CARB has formally approved ECS's and NETT's test plans.

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

Task I. Select partners

2.1.1 Select retrofit fuel systems

2.1.5 Submit names of verification partners and copies of the agreements

Task 2. Initiate CARB verification process

2.3.1 Select testing laboratory

Section II: Problems/Solutions

<p><b>Problem(s) Identified</b></p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p>	<p><i>The partners for the testing have been selected: ECS and NETT. Both are almost ready to proceed with the testing pending CARB approval.</i></p>
<p><b>Proposed Solution(s)</b></p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p>	<p><i>AFRED is working with NETT management to include their systems in the RRC/NTRD testing program. NETT has been asked to furnish the necessary documentation for the CARB verification process. NETT still needs to put 2,500 hours on a system for durability testing.</i></p>
<p><b>Action(s) Conducted and Results</b></p> <p><i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i></p>	<p><i>ECS has received CARB approval of their retrofit fuel system for 4-cylinder engines and has submitted its test plan for the V6 engine to CARB. Carnot has reviewed the ECS/RRC test protocol and is prepared to initiate testing. CARB will finish reviewing the testing plan soon.</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)*

1. *By submission of this report, we are requesting TCEQ's written approval to proceed with testing at Carnot Emission Services.*
2. *Receive CARB approval of ECS's testing plan for the GM 4.3L program; secure TCEQ approval to proceed.*
3. *Receive CARB approval of NETT's testing plan for the GM 4.3L program; secure TCEQ approval to proceed.*
4. *Schedule test cell time; implement testing of one or both fuel systems on the GM 4.3L engine.*
5. *Contact Motive Ventures.*



Date: April 10, 2006

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Authorized Project Representative's Signature

**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.*