

## **NTRD Program Disclaimers**

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

Contract Number: 585-5-70807-M026

Grantee: GTAT California, LLC

Date Submitted: July 12, 2005

Report for the **Monthly** period:

Starting Date June 1, 2005

Ending Date June 30, 2005

Received

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

The following were accomplished during the reporting period.

- Install, instrument and MAP the Cummins M11-350 diesel engine with Tiled reference fuel in the heavy-duty transient testing engine dynamometer test cell
- Flush fuel system and operate test engine on the reference fuel for 25 hours over a representative duty cycle to stabilize emissions
- MAP engine again with the Tiled reference fuel and use this MAP for all subsequent testing

*Note: In accordance with the TCEQ requirements a new engine MAP, preceded by a warm up transient cycle, will be measured each day and each time a fuel is changed, but all of the emission tests will be conducted with the original MAP established in this Task No. 3. Since this is an equivalency test with an additive treated candidate fuel the TCEQ "alternative 4" will be used for all of the emission comparison testing. (RR CCC RR)*

- With the Tiled reference fuel conduct triplicate hot-start FTP transient emission test cycle and examine data to determine if all emissions are within 10% of their mean values and if not within 10% conduct two more tests (total of five) to represent the average values
- On the second day repeat Task No. 4
- Begin up to 72 hours of engine operation with the Viscon treated candidate fuel to stabilize emissions and optimize the Viscon effect on exhaust emissions
- With the Viscon treated candidate fuel conduct triplicate hot start transient cycle test protocols and examine the data to be sure the emissions are within 10% of the mean. If not within 10% conduct two more transient tests

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- Repeat Task No. 7
- Repeat Task No. 7 and use the average of all three triplicate tests with the Viscon treated candidate fuel for comparison to the average of six reference fuel tests
- With no additional engine operation using the reference fuel conduct duplicate sets of triplicate hot-start FTP transient emission test cycles

Completing the items above will, upon TCEQ's receipt of the test results from Olson Engineering, provide the TCEQ with sufficient information to evaluate Viscon's Tiled equivalency capabilities. The separately funded Biodiesel testing has begun. We anticipate the complete test results report will be submitted from Olson Engineering to the TCEQ in the mid July timeframe.

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

Task 2.

Section II: Problems/Solutions

Problem(s) Identified <i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i>	None
Proposed Solution(s) <i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i>	Not Applicable
Action(s) Conducted and Results <i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i>	Not Applicable

**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) Completion of the separately-funded Biodiesel tests
- 2) Submission of the test results from Olson Engineering to the TCEQ

PATRICK A. PORTER

*Patrick A. Porter*

Authorized Project Representative's Signature

Date: 12 July 2005

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