

NTRD Program Disclaimers

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

Contract Number: 592-5-70807-0004

Grantee: Baytech Corporation

Date Submitted: 14 August 2006

Report for the **Monthly** period:

Starting Date: 1 July 2006

Ending Date: 31 July 2006

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

- 1) Baytech made final preparations for 6.0L engine dynamometer testing at Southwest Research Institute. This included finalizing the propane and CNG engine calibrations to be used for testing, and shipping of tools and equipment to SwRI.
- 2) Beacon Automotive, San Antonio, removed the 6.0L engine from the GMC 2500HD pickup truck provided by Beacon Automotive (identical to the development vehicle used by Baytech) and transported the engine to SwRI.
- 3) The engine was installed on the dynamometer; several sets of exhaust systems (including catalytic converters) provided by Baytech were cut/re-welded to fit the dynamometer apparatus and were drilled/tapped for thermocouple fittings to measure catalyst and exhaust temperatures during testing.
- 4) A series of dynamometer tests were conducted on the propane and CNG fueled 6.0L engine to map the engine torque and HP. Practice HD Transient tests were run to achieve test statistics validation. Emission data was collected during HOT Transient tests that met our low NOx emission targets. Baytech made adjustments to the engine calibration to determine sensitivity of air-to-fuel control parameters.
- 5) Formal HD Transient Test Procedures test protocols required by EPA and CARB for heavy duty engine emissions certification were conducted for propane and CNG fuels.
- 6) The 6.0L engine was removed from the engine dynamometer by SwRI, and re-installed by Beacon Automotive in the GM 2500HD pickup truck.
- 8) Baytech prepared the emissions certification application to EPA for both propane and CNG versions of the 6.0L Heavy Duty engine, based upon the data obtained from the formal HD Transient Test Procedures tests. The application will be submitted in early August.
- 9) Baytech worked on the Task 1 report.

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

The work described in item 1) above is related to Tasks 1 and Task 3 of the Scope of Work.
The work described in items 2), 3), 4), 5), 6), and 7) are related to Task 3 of the Scope of Work.

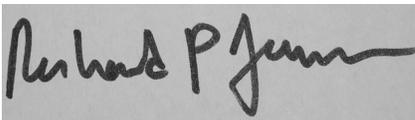
The work described in item 8) is related to Task 2 of the Scope of Work.
The work described in item 9) is related to Task 1 of the Scope of Work.

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>None anticipated.</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>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)*

- 1) Baytech will finalize the EPA emissions certification application for the 6.0L propane and CNG heavy duty engines and submit to EPA in early August.
- 2) Baytech will prepare the California Air Resources Board (CARB) emissions certification application for the 6.0L propane and CNG heavy duty engines and submit to CARB in mid-August.
- 3) Baytech will complete the Task 1 report and submit to TCEQ in mid-August.



Date: 8/14/06

Authorized Project Representative's Signature