

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

Contract Number: 582-11-13469-2019
Grantee: QuantLogic Corporation (Quantlogic)
Report for the Monthly period: March 1, 2013 to April 10, 2013
Date Submitted: April 10, 2013

Section I. Accomplishments

Provide a bulleted list of project accomplishments as well as a description of their importance to the project.

Task 5: Transient Emissions Tuning and Testing

- Task 5 is 72% completed by end of March 2013.
- Conducted multiple transient emissions federal test procedures (FTP) test cycles for the baseline and the retrofitted system. The control parameters were tuned to achieve the project goal of 50% NO_x reduction without fuel penalty compared with baseline engine configuration. Figure 1 and Figure 2 show the cycle speed and torque traces of the FTP tests conducted.

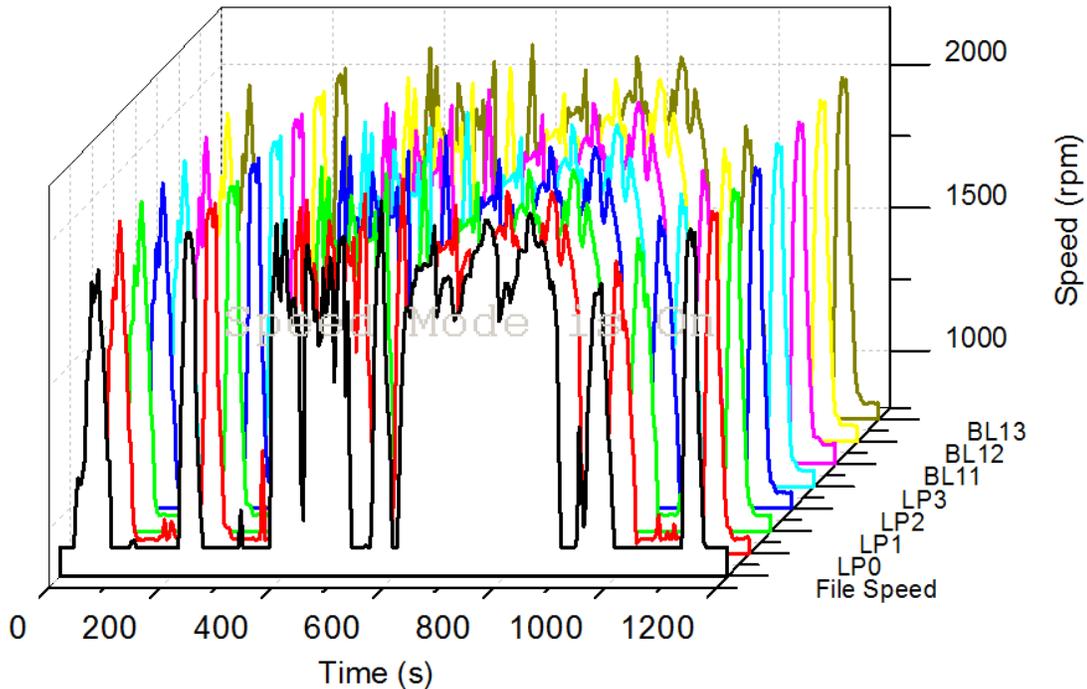


Figure 1. Illustration of speed profiles for multiple EPA FTP test cycles for the retrofit system and baseline

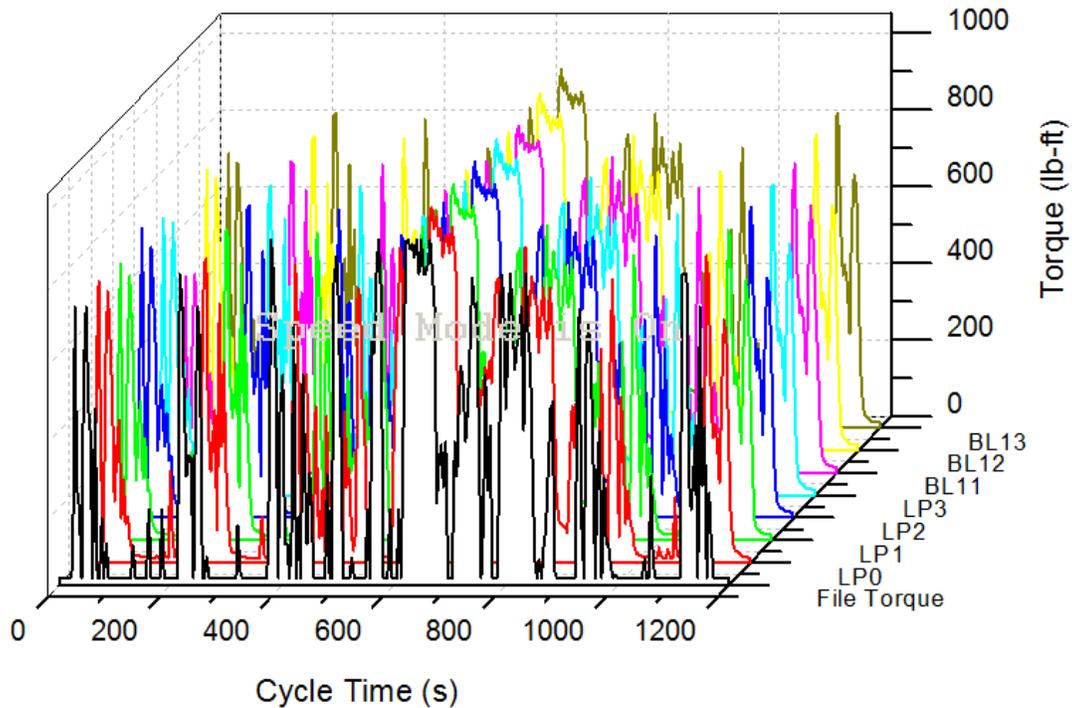


Figure 2. Illustration torque profiles of multiple EPA FTP test cycles for the retrofit system and baseline

- During the test, no error codes appeared by monitoring with the Navistar diagnosis software "ServiceMaxx".
- Transient emissions testing results of the baseline engine and retrofitted system showed near 50% NO_x emissions reduction without any fuel penalty over transient FTP cycles. Final results will be provided in the next monthly report and Task 5 milestone report.

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

- The authorized tasks are related to:

“Task 5: Transient Emissions Tuning and Testing

2.5.2 Task Statement: The PERFORMING PARTY will finalize the engine control parameters to achieve targeted emissions goal and emissions test the retrofitted engine.

2.5.3 Transient Emissions Testing

2.5.2.1. The PERFORMING PARTY will emissions test the dual loop EGR retrofitted engine on an engine dynamometer at the Houston Advanced Research Center’s engine lab over the EPA Heavy-duty FTP test cycle.”

Section II: Problems/Solutions

Problem(s) Identified: Report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project

- a) Task 5 needs be completed on time according to the revised schedule.

Proposed Solution(s): Report any possible solution(s) to the problem(s) that were considered/encountered

- a) Not at this time.

Action(s) Conducted and Results: Describe the action(s) taken to resolve the problem(s) and its effect

- a) Increased effort to meet the new timeline. Task 5 was completed on time according to the revised schedule.

Section III. Goals and Issues for Succeeding Period:

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.

Evaluate target vehicle configuration and start Task 6 of vehicle retrofit.

Date: 4/10/2013

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.*