

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

Contract Number: 582-11-13469-2019

Grantee: QuantLogic Corporation

Report for the Monthly period: November 1, 2011 to December 9, 2011 **Date Submitted:** December 10, 2011

Section I. Accomplishments

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

Task 1: Procure Components within 3 months:

- 90% completion of the task.
- All components for engine setup have been procured. The remaining 10% of the procurement refers to retrofits and will require more precise configuration such as dimensions for retrofit and results from the combustion and emission testing. It is more efficient to accomplish them at the stage after the emission reductions development and before the vehicle retrofit stage.
- Specifications for dual-loop exhaust gas recirculation (EGR) components have been finished. The major components for the combustion and emissions development for the retrofit kit were procured.

Task 2: Set up engine retrofit and engine control systems within 6 months:

- 90% completion of the task.
- Completed engine and control system setup on stock engine control unit (ECU).
- Engine was successfully started on stock ECU.
- Installed instrumentation for monitoring major engine operation parameters.
- Continue effort of debugging on functionality of rapid prototyping control system.
- The remaining 10% of engine retrofit and engine control system setup will be the focus in December along with engine steady state testing and tuning.

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 1: Procure Components within 3 months:
 - a) Finalize the specifications for and procure all test components needed for the completion of the project, and
 - b) Procure all test components needed to complete the project.
- Task 2: Set up engine retrofit and engine control systems within 6 months.
 - a) Set up the engine, dual loop EGR retrofit, and engine control systems in the laboratory in preparation for testing.
 - b) Install instrumentation for monitoring all major engine operation parameters
 - c) Set up the engine control system for fueling control, dual loop EGR control, and boost control.

Section II: Problems/Solutions

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

- a) Due to holidays, the progress in December is expected to be less than a normal month,

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

- a) The overall schedules are expected to meet key milestones by adjusting work after holiday.

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

- a) None.

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

- Calibrate dyno and emissions measurement system.
- Complete debugging of rapid control system.
- Start steady state emissions calibration.

Date: 12/10/2011

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.*