

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

Contract Number: 58211111473264

Grantee: Alternative Motive Power Systems (AMPS)

Report for the Monthly period: December 2012 **Date Submitted:** January 10, 2013

Section I. Accomplishments

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

- All major components have been installed on locomotive with the exception of the batteries which will be installed and “commissioned” Thursday January 10, 2013. Long hood framework and roll-up doors have been installed. Battery rack has been installed. Wiring (high and low voltage) is continuing.
- Continued programming efforts and continued data acquisition programming. Programming will ensure proper communication between sub-systems and establish control over individual components for proper locomotive function. Data acquisition system (DAS) will provide very precise feedback. This empirical data will allow us to make minor programming changes to improve locomotive function and efficiency. DAS web portal development has begun
- Continued incorporation of component drawings into our Solid Works 2012 Locomotive Drawings.
- Axle generator is still being tested on a Railserve locomotive in Michigan with no problems and greatly improved signal over any units we could find for purchase. We have manufactured five additional units (four for the locomotive plus one spare). Incorporation of this new “AMPS designed and manufactured” axle generator will result in improved traction control and the elimination of “faults” due to poor signal quality.

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

- Task #3

Section II: Problems/Solutions

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

- None

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

- None

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

- 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

- Continued software development
- Continue axle generator durability testing
- Continue installation of cabling and wiring
- Continued development of web access for DAS
- Commissioning of all major systems on the locomotive with the exception of the gensets to ensure proper function and communication between all systems

Date: January 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.*