

**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: January 2011 **Date Submitted:** February 10, 2012

Section I. Accomplishments

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

- Established supplier for light-emitting diode (LED), Federal Railroad Administration (FRA) compliant lighting. This affords better lighting and longer life expectancy for bulbs and improved overall locomotive efficiency.
- Continued programming efforts and continued data acquisition programming. Programming will insure proper communication between sub-systems and establish control over individual components for proper locomotive function. Data acquisition system will provide very precise feedback. This empirical data will allow us to make minor programming changes to improve locomotive function and efficiency.
- Batteries delivered to Penn State for testing the Odyssey P1800. Checking charge and discharge characteristics at temperature ranges from 100 degrees Fahrenheit to 10 degrees Fahrenheit; test results will allow us to insure maximum battery life. Test procedures refined and testing will be to temperatures of -10 degrees Fahrenheit. We will also be testing offerings from Axion Power and are attempting to purchase batteries from Corvus Energy for testing as well (at AMPS' expense). The impact of this procedure will assure that AMPS uses batteries at maximum efficiency to afford superior performance while maximizing life expectancy of the batteries.
- Requested final drawings from ATS on Traction Motor Rack
- Implementing component and component drawing acquisition per schedule.
- Beginning modification of cab, short hood, operator control stand, and 26-air system.

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

- a) No significant problems

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

- a) None

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

- Continued software development
- Development of improved axle generator for improved traction control
- AMPS will continue ordering required components

Date: February 10, 2012

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.*