



Hybrid 240 ton Off Highway Haul Truck: Quarterly Technical Status Report 19
DOE/AL68080-TSR19

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This nineteenth quarterly status report for the Hybrid Off Highway Vehicle (OHV) project, DOE Award DE-FC04-02AL68080 presents the project status at the end of June 2007, and covers activities in the nineteenth project quarter, April 2007 – June 2007.

Project Management

The hybrid locomotive project and commercial product testing at the Komatsu Proving Grounds has delayed the project. A no-cost extension has been filed with support from DOE Headquarters with a planned project completion of December 31, 2007. A review has been scheduled for Erie in July to review hybrid project status and the Proving Grounds demonstration will be held at a date to be determined.

Technical Status

Full-scale Test Setup

The full-scale test setup in Erie, PA had several components removed for use on the hybrid locomotive demonstration. Following the completion of the hybrid locomotive demonstration at the end of May, the OHV team rebuilt the test set up and is near completion. The Building 50 test setup will be operational next quarter with 4 batteries installed.

Truck Integration

The wheels/tires and dump body for the truck have been removed and installed on a 240-ton DC truck for product testing. The parts will be returned to the hybrid team in July.

Battery chargers from the Proving Grounds were repurposed for the hybrid locomotive demonstration. Replacements have been received and will be installed at the Proving Grounds in July.

Control software has been further developed during the down time of the vehicle. Testing of the software will be carried out on the Building 50 test setup and installed in the truck upon return to the Proving Grounds.

The GET team also worked on understanding fuel measurement and instrumentation. Such hardware and data collection is being discussed and designed and will be installed on the truck upon return to the Proving Grounds, next quarter.

Truck Testing

No truck testing has occurred this period as the wheels/tires have been in used for DC truck testing.

Vehicle modeling

The vehicle model has been improved and subsystem validation has begun. Various scripts have been put in place to automate the process of comparing simulation data to test data in preparation for the large amount of data that will be collected next quarter. Also, more concise truck and battery pack definitions were developed to allow experimentation of alternative configurations in anticipation of commercialization design support. The data collection from upcoming tests will allow more complete validation of the model subsystems and establish confidence levels for the predictive capability of the modeling tool.