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

Contract Number: 582-5-65591-0010

RECEIVED NTRD
11/9/05

Grantee: Eaton Corporation

Date Submitted: November 8, 2005

Report for the **Monthly** period:

Starting Date October 1, 2005 Ending Date October 31, 2005

Section I. Accomplishments

1. Accomplishment: Previous period's goal #1 (Continue vehicle durability test) – There was a component failure on the truck in the course of durability testing this month. See section II for details. It is important to note that this was a failure of a standard truck component and the HLA system operated without failure.

   Importance: The results of the durability test will give valuable insight into potential design modifications for the production intent design.

2. Accomplishment: Previous period's goal #2 (Continuing work on the hazard analysis and component FMEAs) – The transfer case FMEA and use/misuse FMEAs were completed and yielded many good insights on ways to improve the reliability and safety of the HLA system. The filter manifold FMEA was started. The hazard analysis is 95% complete.

   Importance: Tasks will help assure a product designed with high reliability and safety.

3. Accomplishment: Previous period's goal #3 (Add detail to the vehicle packaging study of the new system) – Some information was learned about possible ways to modify the truck so that the HLA system will fit better. The overall design of the open system is progressing well.

   Importance: Needed to ensure good functionality from a vehicle perspective.

4. Accomplishment: Six refuse trucks from a local refuse collection company were instrumented to record drive cycle data. Data was collected while the trucks drove their regular routes. Analysis and reduction of the data has begun.

   Importance: This data will help guide the system design to ensure it will meet customer expectations from a wide variety of customers.

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

1. SOW 2.1.3.1
2. SOW 2.1.3.1
3. SOW 2.1.4
4. SOW 2.1.1.2

Section II: Problems/Solutions

Problem(s) Identified	Internal parts of the rear axle of the durability test vehicle broke during testing. This failure will delay the testing until the parts are replaced.
Proposed Solution(s)	The failure is covered under the manufacturer's warrantee. The plan is to have the parts repaired and continue the testing. In the near term, the HLA system will be operated in a different mode that puts less stress on the truck. This will reduce the chance of another failure. The long term solution is to use a higher rated axle that is compatible with the HLA system.
Action(s) Conducted and Results	Anticipated completion date for the repairs is early November.

Section III. Goals and Issues for Succeeding Period:

Goals:

1. Repair the durability test vehicle and continue testing.
2. Continue work on the hazard analysis and component FMEAs.
3. Continue design work on the open system.
4. Acquire more drive cycle data and analyze the data already acquired.

Dennis Szulczewski Date: 11/8/05

Authorized Project Representative's Signature