NTRD Program Disclaimers

1. Disclaimer of Endorsement:

The posting herein of progress reports and final reports provided to TCEQ by its NTRD Grant Agreement recipients does not necessarily constitute or imply an endorsement, recommendation, or favoring by TCEQ or the State of Texas. The views and opinions expressed in said reports do not necessarily state or reflect those of TCEQ or the State of Texas, and shall not be used for advertising or product endorsement purposes.

2. Disclaimer of Liability:

The posting herein of progress reports and final reports provided to TCEQ by its NTRD Grant Agreement recipients does not constitute by TCEQ or the State of Texas the making of any warranty, express or implied, including the warranties of merchantability and fitness for a particular purpose, and such entities do not assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information,apparatus, product, or process disclosed, or represent that its use would not infringe privately owned rights.

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

Contract Number: 582-5-65591-0010

Grantee: Eaton Corporation

Date Submitted: September 10, 2005

Report for the **Monthly** period:

Starting Date August 1, 2005 Ending Date August 30, 2005

Section I. **Accomplishments** (*Please Provide a bulleted list of project accomplishments as well as a description of their importance to the project.)*

1. Accomplishment: Previous period's goal #1 (Define primary path for new system architecture) – The new system architecture has been chosen. All design effort from this point will be focused on developing this approach.
   Importance: Many detailed design decisions will propagate from this structure.

2. Accomplishment: Previous period's goal #2 (Resume durability testing hardware) – The vehicle durability test was resumed.
   Importance: The results of the durability test will give valuable insight into necessary design modifications for the production intent design.

3. Accomplishment: Previous period's goal #3 (Complete the System FMEA and Hazard Analysis) The system FMEA was completed and put under revision control. The hazard analysis also made progress; it is now about 40% complete.
   Importance: Tasks will help assure a product designed with high reliability.

4. Accomplishment: 95% of all the drawings are now complete.
   Importance: Fundamental design work of the system components.

Indicate which part of the Scope of Work, the above accomplishments are related to:

1. SOW 2.1.3.1
2. SOW 2.1.3.1
3. SOW 2.1.1.1
4. SOW 2.1.4

Section II: Problems/Solutions

Problem(s) Identified *(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)*	
Proposed Solution(s) *(Please report any possible solution(s) to the problem(s) that were considered/encountered)*	
Action(s) Conducted and Results *(Please describe the action(s) taken to resolve the problem(s) and its effect)*	

Section III. **Goals and Issues for Succeeding Period**: *(Please 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)*

GOALS:

1. Continue vehicle durability test.
2. Continue work on the hazard analysis and component FMEAs.
3. Finish detailed drawings for prototype parts.
4. Begin physical layout of new system architecture

Section IV. **Commercialization Progress:**

A program has been initiated to gather additional real world duty cycle data from a wide variety of sources. GPS transponders will be used to gather data about the vehicle speed, number of stops per day, etc. of refuse trucks in normal operation. This data can then be used to verify the system hardware and control algorithm options and to optimize the system performance for specific applications.

Eaton has been invited to send a speaker to the first hybrid truck symposium sponsored by the Canadian government (Transport Canada). This event will be held in Vancouver, BC in late October. Representatives from the refuse fleets of a number of major Canadian cities will attend as will a number of major commercial refuse haulers.

Dennis Szulczewski

Authorized Project Representative's Signature

Date: 9/13/05

NOTE: *Please attach any additional information that you feel should be a part of your report or that may be required to meet the deliverables requirement for tasks completed during this reporting period.*