

NTRD Program Disclaimers

1. Disclaimer of Endorsement:

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**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: May 17, 2005

Report for the **Monthly** period:

Starting Date April 1, 2005 Ending Date April 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 (Write initial test plan) – An initial test plan was completed in April. This test plan was used to improve the accuracy of the overall program schedule
Importance: The test plan will allow more accurate scheduling and cost estimating of efforts to qualify the product for production
2. Accomplishment: Previous period's goal #2 (Complete FMEAs for the system, and valves) – Progress was made on the system FMEA, it is now 80% complete. Overall, system and component FMEA's are approximately 70% complete. FMEA work will continue during the next month.
Importance: This document is helpful in product design and used heavily to create a product qualification test plan
3. Accomplishment: Previous period's goal #3 (Continue vehicle durability test) – The vehicle durability test will resume in May
Importance: The results of the durability test will give valuable insight into necessary design modifications for the production intent design.
4. Accomplishment: Previous period's goal #4 (Hold a design review and order parts) – A design review was held for the HLA system and major components. The pump/motor major casting designs are finished and are going through final checking. The design for a filter manifold, which attaches directly to the pump/motor, was also finished.
Importance: Necessary to decrease weight/cost and properly fit in vehicle
5. Accomplishment: A successful project workshop was held to identify and quantify various project tasks and risks through the start of production. These tasks and risks were used to improve the accuracy of the schedule.
Importance: Necessary input for good project management
6. Accomplishment: Many documents were prepared for the upcoming project gate review. These documents include: project plans, updated business plan, service support plan, application review, preliminary production test plan, product specification, marketing plan, and preliminary cost quote summaries.
Importance: These documents summarize and record important information necessary for successful commercialization of the HLA system.

Implementation Grants Section

Texas Commission on Environmental Quality

7. Accomplishment: The "Voice of the Customer" information gathered during the previous month was organized and translated into design requirements at conceptual and detailed levels. The resulting document is called a "House of Quality".

Importance: This information is used to generate the product specification.

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

1. SOW 2.1.4.1
2. SOW 2.1.3.1
3. SOW 2.1.3.1
4. SOW 2.1.4.2
5. SOW 2.1.4.1.2
6. SOW 2.1.4.1.2
7. SOW 2.1.1

Section II: Problems/Solutions

<p>Problem(s) Identified</p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p>	
<p>Proposed Solution(s)</p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p>	

<p>Action(s) Conducted and Results</p> <p><i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i></p>	
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ICEQ-NTRD

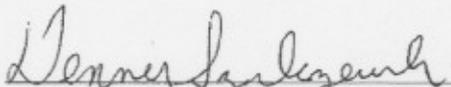
Section III Goals and Issues for Succeeding Period: *(Please provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen)*

GOALS:

1. Complete the FMEA for the system.
2. Continue vehicle durability test.
3. Complete the drawings for the long lead-time items and order them.

Section IV. Commercialization Progress:

Eaton is participating in NextEnergy's Hydraulic Hybrid Working Group (HHWG). This group addresses industry-wide challenges such as emissions certification/validation, standards development, and promotion of hydraulic hybrids across many markets. Eaton's HLA system remains the leading hybrid hydraulic technology in the marketplace and is poised to be first to market. Participation in the HHWG helps Eaton play a leadership role in establishing industry guidelines that ensure the commercial acceptance and success of hydraulic hybrids.


Authorized Project Representative's Signature

Date: 5/17/05

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*