

NTRD Program Disclaimers

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

Contract Number: __582-5-70807-0011 ____

Grantee: __Rolling Frito Lay Sales, LP_____

Date Submitted: __November 8, 2006_____

Report for the **Monthly** period:

Starting Date __10/01/06_____ Ending Date __10/31/06__

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

- **Project Management**
 - A proposed fourth contract amendment has been submitted but not yet formally approved. The Frito-Lay project team is going forward with the assumption that the amendment will be approved as-is.
 - There have been some recent changes to the project schedule and testing arrangements. Since the International/Eaton truck will be arriving much later than expected, it has been decided that the Azure Dynamics truck will go ahead through testing independent of the other truck in the study. The project schedule has been updated to reflect the latest test design, and has been communicated to Clean Air Technology and Southwest Research for planning purposes. TCEQ will be contacted once a better picture of the options available for accelerated truck delivery is available.

- **Vehicle Construction** –
 - **Azure Dynamics** – The Azure Dynamics truck has arrived on-site at the Frito-Lay Fleet Service Center in Ft Worth, Texas. The vehicle will undergo preparation for testing including addition of Frito-Lay standard and special hybrid decals.
 - **Eaton/International** – The International/Eaton truck team continues to struggle with software bugs that are preventing the engine from running well enough for drive train tuning. At this point, the engine will require a full recalibration. Delivery of the existing vehicle at Frito-Lay is now estimated to be mid-February. Other options are being explored to accelerate truck delivery, including substitution of an equivalent existing truck or alternate hybrid transmission. Delivery of the truck in February will seriously jeopardize the ability to gather sufficient data to satisfy the contract with TCEQ. Conference calls are held almost daily at this point to assess the situation and risk to the project as a whole.
 - **General** – Proofs of the special hybrid decals have been approved and the decal packages are complete. Shipping of the decals is expected on November 8, with installation on the Azure truck shortly after they arrive.

- **Testing/Data Acquisition**

Testing Protocol & Project Management – Lopez Garcia Group

A revised testing routine has been developed whereby the trucks will not run in a regular delivery route each day. In order to get more data in a shorter time frame, the on-road testing will be conducted “offline” of daily delivery operation. The trucks will run actual routes taken by Frito-Lay’s normal delivery trucks, but with a ballast load of weight to simulate cargo.

The previous approach of using water and draining part of it requires additional time to fill and drain. In addition, although clean water would be used, there is risk in terms of the appearance of draining fluids from the vehicle into an available storm drain. This practice may raise concern from passersby and require explanation from the drivers. Sand or other static weights equivalent to half of the cargo weight is recommended at this point to simulate a live delivery load.

Using the offline testing method, up to 4 routes may be run each 10-hour day versus one in typical operation. There is still the option of running the trucks under this plan around the clock to gather data on various routes faster.

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

The above activities are directly related to Article 2, Scope of Work, Task 1: Development and Delivery of Hybrid Vehicles, specifically sections 2.1.1, 2.1.2, and 2.1.3.

Section II: Problems/Solutions

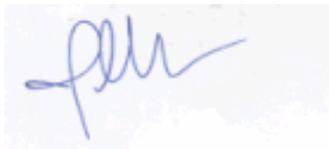
<p>Problem(s) Identified</p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p>	<p><i>The International/Eaton hybrid truck suffers from software bugs that prevent the engine from running sufficiently to tune the hybrid drivetrain.</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>1) <i>Entire recalibration of engine – 6 weeks, then 6 weeks of tuning.</i></p> <p>2) <i>Replace with alternate truck</i></p> <p>3) <i>Replace Eaton hybrid drive unit with alternate unit that is more off-the-shelf to accelerate delivery.</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>	<p><i>Daily conference calls and discussions are being conducted to assess the options and mitigate risk to the schedule and performance of the testing required of the contract. No clear path as of right now to best chance of success. A decision on the path to follow is expected by 11/10.</i></p>

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)*

1. *Continue vehicle construction activities with International/Eaton. Decision on a path to proceed by 11/10.*
2. *Finalize testing design with “offline” test scheme.*

Implementation Grants Section

3. *Continue to work with the local FL team to identify routes within Frito-Lay delivery system for the on-road testing and other details related to readying the trucks and team for testing.*



Date: November 8, 2006

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.*