

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: __January 5, 2006_____

Report for the **Monthly** period:

Starting Date __01/01/06_____ Ending Date __01/31/06____

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

- **Updated Integrated Project Timeline** – The projected timeline has been continuously updated to reflect progress against objectives. All portions of the project are moving ahead according to the schedule at this point, for an April 2006 vehicle delivery.
- **Vehicle Construction** –
 - **Azure Dynamics** – Vehicle design, procurement, and construction activities are progressing according to schedule. The Azure Dynamics vehicle will be converted to hybrid drive power in Azure's Vancouver, BC headquarters versus the Boston area facility to provide a better product and more complete testing prior to release and delivery. Some paperwork was required to be put in place to allow for temporary export of the vehicle and re-importation at a later date. The project review has been rescheduled for early March to gauge progress on the vehicle, inspect build quality, and to further review the design and installation approach.
 - **Eaton/International** – The proposed change to the scope of work to reflect International being the vehicle integrator versus Eaton has been approved and by TCEQ. Progress is being made on the legal language surrounding the purchasing documentation and contract between Frito-Lay and International, and final agreement is close at hand. The project continues to move ahead at International for a truck delivery in April 2006.
- **Testing/Data Acquisition**
 - **LopezGarcia Group**
 - **Emissions Instrumentation** – A proposed contract Scope of Work change describing use of the Clean Air Technologies emissions sensing equipment versus the Sensors, Inc. devices has been drafted and sent to TCEQ for consideration. Leasing the Clean Air Technologies system (lease) versus purchase of the Sensors, Inc. equipment offers a lower total project cost at comparable or better functionality and accuracy. The Sensors Inc. cost has increased approximately 20% in the time period between project proposal and budget approval and actual need-to-purchase date, thus putting the entire project budget in jeopardy.
 - **Testing Protocol** – No Change in status. A draft of the testing protocol to be used has been reviewed undergone 1st round revision. The testing protocol document describes the testing regime that the hybrid and baseline trucks will be subjected to for both the laboratory (dynamometer) and real-world delivery operation. This protocol must be reviewed and approved by TCEQ prior to initiation of vehicle testing. In preparation for that step, a review has been scheduled for February at the National Renewable Energy Lab's (NREL) Heavy Hybrid Program center in Golden, Co. This meeting was initially planned for mid-December, but has been delayed due to project resource availability at Frito-Lay. The current project schedule can support this move. Following that review, NREL's input will be incorporated into the protocol document, and it is expected that the project team will submit the proposal to TCEQ by Mid-March.

- o Drive-Cycle Analysis –Drive cycle analysis is substantially complete. Time versus speed data was gathered from existing Frito-Lay delivery operations using GPS technology. The data was analyzed to obtain a number of industry-accepted measures to characterize speed and driving behavior. The next step is to match the data up to established drive cycles and determine the appropriate cycle or combination of cycles to use during dynamometer testing at the vehicle builders and Southwest Research Institute.

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>No specific problems identified at this point.</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><i>n/a.</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>	

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 fabrication activities with each supplier. Ensure each supplier is staying on task with project scope and timeline.*
2. *A formal Purchase Order needs to be issued to International once the purchasing agreement paperwork is in place (terms and conditions, final contract, etc.)*
3. *Obtain final proposal for emissions monitoring equipment and get purchasing documents and contract in place for the system. A proposed Scope of Work change has been submitted.*
4. *Finalize proposed testing protocol with environmental consultants and National Renewable Energy Lab (NREL). The proposed testing protocol will be reviewed at the NREL’s Heavy Hybrid program center, and learnings and input from that review will be incorporated into the proposal by mid-March.*
5. *Finalize data analysis on current vehicle drive cycles and match up with established standard drive cycles used for dynamometer testing hybrid vehicles. This activity is expected to be complete by the end of February.*



Date: February 08, 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.*