

NTRD Program Disclaimers

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**Texas Commission on Environmental Quality
New Technology Research & Development (NTRD) Program
Monthly Project Status Report
GTI Project # 20484**

Contract Number: 582-5-70807-0001

Grantee: Gas Technology Institute

Date Submitted: February 10, 2006

Report for the Monthly period: January 2006

Starting Date: January 1, 2006

Ending Date: January 31, 2006

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

Accomplishment	Importance to the Project
GTI continues to negotiate project agreements with federal and local organizations for joint participation in the deployment of the fueling station and the fuel cell vehicle.	Identifying a suitable deployment site is important during this phase of the project in order to properly scale the hydrogen station supply capability and to configure a hydrogen-fueled vehicle that can be incorporated into the host site's daily operations. This process continues from last month.
GTI has received proposals from vehicle providers for both shuttle bus and cargo van configurations for the fuel cell vehicle.	The choice of a vehicle provider is important in order to correctly configure a vehicle to match the station site host's operational requirements and to fit within project budget and timing constraints. This process continues from last month and includes the potential contribution of funding from a federal agency to supplement TCEQ vehicle funding.
GTI and Greenfield are have determined to use the PDC compression system for the fueling station configuration.	This is a decision that has been pending evaluation of two alternative compression systems using performance and availability criteria.
GTI continues with fabrication and testing of the Steam Methane Reformer (SMR) hydrogen generation system	The hydrogen generation system is the key technology at the heart of the integrated hydrogen station. It converts pipeline-quality natural gas to "reformat" that is then purified to a hydrogen gas stream. This process continues from last month's report.

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

Accomplishment	Grant Activity
Host site negotiations for station deployment	Task 1, Article 2.1.2 in the Project S.O.W.
Vehicle proposal evaluations	Task 2
Compression system evaluation	Task 1
SMR fabrication and testing	Task 1, Article 2.1.1.1 in the Project S.O.W.

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>1) Eventual deployment site identification will significantly influence the configuration of the fuel cell vehicle. The vehicle should be designed to fit with the eventual host site's operations. Two options on the vehicle include a 15-20 passenger shuttle vehicle or a cargo van.</p> <p>This issue continues from last month's report.</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>Two alternative vehicle configurations are now being considered. Both systems will require supplemental funding from federal agencies. The funding availability will be the determining factor in which vehicle is selected for inclusion in this project.</p>

Action(s) Conducted and Results

(Please describe the action(s) taken to resolve the problem(s) and its effect)

- 1) GTI is reviewing two alternative technical solutions for the vehicle portion of the project:
 - a. Modifying an existing vehicle as a fuel cell “plug-in hybrid” that is supplied by the deployment site host, or
 - b. Identifying supplemental funding from a new (TBD) project participant to purchase a fuel cell powered vehicle from an OEM.

Progress toward gaining supplemental vehicle funding is being made. Participation from a federal agency is likely.

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)*

- Agree on most likely deployment location and begin on-site permitting, gas supply, and operating groundwork.
- Continue to work on supplemental vehicle funding.
- Identify and resolve major decisions on hydrogen station dispensing configuration.
- Continue the fabrication and testing of the hydrogen generation system.



Date: 2-10-2006

Authorized Project Representative's Signature

**J. Brian Weeks, Associate Director,
Hydrogen Energy Systems
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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.*