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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: May 10, 2006

Report for the Monthly period: April 2006

Starting Date: April 1, 2006 Ending Date: April 30, 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 is in the final site selection process. A major Texas University partner, and major federal government agency are likely participants in the eventual deployment of this technology.	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 is negotiating a vehicle supply agreement for a fuel cell bus that can be operated by a transit agency in Texas.	The choice of a bus as the targeted vehicle technology should meet and/or exceed the original project goals, as it will provide on-road testing experience and the potential for greater outreach than earlier options being considered. GTI has located a promising vehicle technology partner and is now finalizing an agreement to bring a fuel cell bus to Texas as part of this project.
GTI and GreenField are in the design and engineering phase of the integrated hydrogen fueling system	The integrated fueling system, consisting of the fuel steam methane reformer, hydrogen purification system, compressor, storage, and dispenser components represents the first such system that will be ready for field deployment.
GTI continues with design and engineering 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 "reformate" 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
Integrated fueling station engineering and design	Task 1
SMR design, fabrication and testing	Task 1, Article 2.1.1.1 in the Project S.O.W.

Section II: Problems/Solutions

Problem(s) Identified (*Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)*	1) GTI reviewed 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 new project participant(s) to purchase a fuel cell powered vehicle from an OEM. 2) It is probable that the vehicle portion of the project will necessitate a time extension This issue continues from last month's report.
Proposed Solution(s) *(Please report any possible solution(s) to the problem(s) that were considered/encountered)*	GTI is discussing supplemental funding with a number of interested participants, including state agencies from other states as well as federal agencies. A multi-party letter of intent is being discussed that will allow Texas to utilize a fuel cell bus at a major transit agency in Texas as a result of this project. Once GTI has a completed proposal from all the funding contributors for the fuel cell bus, GTI will propose a new timeline for the vehicle portion of this project.

Action(s) Conducted and Results *(Please describe the action(s) taken to resolve the problem(s) and its effect)*	GTI is pursuing a combination solution of both (a) and (b) mentioned above. An “almost-new” fuel cell bus has been identified that requires upgrading at a cost that exceeds the allowable project funds. GTI has a preliminary agreement in place with a transit agency in Central Texas to operate the fuel cell bus. GTI is making progress toward gaining supplemental vehicle funding from a partner group that includes entities in other states. Participation from a federal agency is also likely. The notification for federal funding will be in August, 2006.

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.
- Finalize design and preliminary engineering for SMR and for integrated station (will continue for at least two more months)
- Continue the fabrication and testing of the hydrogen generation system.

_____ Date: 5-10-2006

Authorized Project Representative's Signature

J. Brian Weeks, Associate Director,
Hydrogen Energy Systems
Gas Technology Institute

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.*