

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 – 65591 – 0008

Grantee: Rotec Design, Ltd

Date Submitted: Jan. 10, 2006

Report for the **Monthly** period: Ending December 31, 2005

Starting Date: Jun. 22, 2005

(Notice to Proceed date)

Ending Date: Aug. 31, 2006

(Per Amendment #1)

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

1. Continued design analysis and CFD modeling to determine basic design parameters, general configuration, and unit specification estimates for the FreedomAir system.
2. "Testing Protocol – Scope of Work" with US EPA and RTI (Research Triangle Institute) finalized and returned by RTI to incorporating specific project details (i.e., testing modes, fuels, etc.).
3. R. M. Rutherford traveled to Austin Texas (2nd visit):
 - To follow-up with (RCIC) to explore possible capital funding via ETF for manufacturing and job creation activities in Texas.
 - Application for RCIC funding completed and submitted Dec 21, 2006.
4. Brightline Media finalized recommended Marketing / Advertising materials for launch of commercialization efforts.
5. 2nd projects engine for design and research shipped and received at Rotec.
6. Preliminary scope of engineering work forwarded to Orbital.

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

- Task 2: Determination of emission reduction objectives. Initial engine modeling to estimate refine reduction potential. Minimum targets confirmed at 60% reductions in both NOx and PM vs. baseline engine.
- Task 3: Construction of FreedomAir system. Initial design of components prior to prototype manufacturing.
- Meet TCEQ / NTRD general guidelines vis-à-vis the commercialization of the emission reduction system as soon as possible and pursue additional economic benefits to the State of Texas.

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>None – to date</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>N/A</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>N/A</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 engine-modeling analysis to refine basic design parameters, system packaging constraints, general configuration, location, and initial size and unit specification estimates for the FreedomAir system.
2. Continue system layout and design activities.
3. Submit US EPA and RTI "Testing Protocol – Scope of Work" specific project details (i.e., engine model, usage, family, etc.) to California Air Resources Board (CARB) to incorporate any unique CARB testing requirements necessary to obtain "Verification" in California.
4. Continue discussions with potential Texas component / prototype suppliers to confirm continued interest in the project and obtain detailed requirements to develop "RFQ" packages.
5. Continue discussions with Orbital re: engineering support. Finalize initial quotation / costs for project support



Date: Jan 10, 2005

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.*