

NTRD Program Disclaimers

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

Contract Number: 582-5-655-91-0007

Grantee: Converter Technology Inc

Date Submitted: July 8, 2005

Report for the **Monthly** period:

Starting Date June 1, 2005

Ending Date June 30, 2005

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

- Responded to CARB's second round of questions regarding the handling of soot as a hazardous waste.
- Conducted 5 modes of EGR mapping on the CAT 3406 engine. Most NOx reductions hovered around 70%.
- Completed a report on the potential emission reduction of CTI's technology for Texas SIP.
- Continued design and testing of incineration/separation work on converter to cope with EGR increased particulate emission.

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

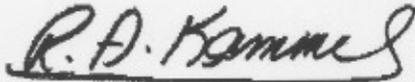
1. Task #2 Potential Emission Reduction Compliance with SIP- Done
2. Task #3 Design of EGR System for CAT 3406 , finalize hardware
3. Task #4 Construction of converter EGR system design, in progress
4. Task #5 EGR mapping for 50-60% NOx reduction, first portion done
5. Task #6 EGR Mapping for 60-70% NOx reduction, first portion done
6. Task #9 Verification program with EPA/CARB

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>The only problem that was encountered last period during EGR mapping is the new level of PM emission as a result of aggressive EGR injection. There is close to a 3-fold increase in PM, HC and CO emissions</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>The particulate converter must have a very high soot collection efficiency, upward of 95% to obtain 85% particulate reduction efficiency with EGR. Converter design is being upgraded to enhance filtration efficiency through the use of passive centrifuge and incinerator.</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>Work began on testing the converter with centrifugal separator (effective on agglomerated particulates). Work is continued through the month of July to have a full particulate converter assembled and tested, to proceed with the construction of the remaining converters starting August, 2005.</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. Conduct independent emission tests for PM only at Lotus Testing Lab in Ann Arbor, Michigan (still awaiting permission from CARB to proceed)
2. Finish the remaining EGR mapping for the CAT 3406 for 50-70% NOx reduction.
3. Start EGR mapping for the International 7.3L diesel engine.
4. Meet with CARB in July to streamline our process and to have good understanding relating to the details of lab emission testing.



Date: 7/6/2005

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.*