

NTRD Program Disclaimers

1. Disclaimer of Endorsement:

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

Contract Number: 582-5-65591-0004

Grantee: Power Research Inc.

Date Submitted: 07-13-2005

Report for the **Monthly** period:

Starting Date 06-01-2005

Ending Date 06-30-2005

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

- Reviewed the EPA Diesel available at Southwest Research Institute, to select the reference fuel for the PRI testing at Southwest Research Institute.
- An EPA Diesel was selected, under the direction of Michael Starr of Southwest Research Institute.
- The Certificate of Analysis for the EPA Diesel reference fuel was received from Southwest Research Institute and forwarded to Morris Brown for approval as the test fuel.
- Morris Brown signed-off on the Certificate of Analysis/ASTM Spec for the test fuel.
- This sign-off was submitted to Southwest Research Institute
- The PRI-D additive to be used in the test was driven by Power Research Inc. to Southwest Research Institute from Houston. The cost of this travel will be compiled and submitted in the August report. The travel charges have not been submitted at this time by the PRI driver. \$105 is the expected cost.

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

The selection of the reference fuel and the approval of same.

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>None. The only possible problem is a scheduling delay by Southwest Research Institute for availability of the test cell.</i></p> <p><i>As soon as the cell is available, we are ready to mix the PRI into the fuel and start the test.</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>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><i>We are in communication with Michael Starr and await his que to start the test.</i></p>
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U.C. of m 54.7h*

DATE OF SHIPMENT
05/09/2005CUSTOMER PO NO.
5446350SALES ORDER NO.
6073827

TRAILER NO. 987

MFG. DATE: 11-2004
SHELF LIFE: UNDETERMINED**CERTIFICATE OF ANALYSIS**

DIESEL .05 LS CERT FUEL (#2)
LOT 4KP05201

TESTS	RESULTS	SPECIFICATIONS	METHOD
Specific Gravity, 60/60	0.8436	0.8398 - 0.8654	ASTM D-4052
API Gravity	36.28	32 - 36	ASTM D-1250
Corrosion, 50°C, 3 hrs	1A	3 Max	ASTM D-130
Sulfur, ppm	346.9	300 - 500	ASTM D-5453
Flash Point, °F	148.8	130 Min	ASTM D-93
Pour Point, °F	-15	0 Max	ASTM D-97
Cloud Point, °F	-2	10 Max	ASTM D-2500
Viscosity, cs 40°C	2.53	2.2 - 3.2	ASTM D-445
Carbon wt%	86.76	Report	ASTM D-3343
Hydrogen wt%	13.20	Report	ASTM D-3343
Carbon Density (gm/gal)	2770	2750 - 2800	Calculated
Net Heat of Combustion BTU/LB	18455	Report	ASTM D-3338
Particulate Matter, mg/l	0.6	15 Max	ASTM D-2276
Cetane Index	47.6	46 - 48	ASTM D-976
Cetane Number	46.4	48 - 48	ASTM D-613
DISTILLATION, °F			ASTM D-86
IBP	358.0	340 - 400	
5%	369.8		
10%	409.8	400 - 460	
20%	437.5		
30%	459.3		
40%	479.8		
50%	498.7	470 - 540	
60%	517.3		
70%	536.5		
80%	559.8		
90%	590.0	560 - 630	
95%	620.1		
EP	645.8	610 - 690	
Loss	0.3		
Residue	1.0		
HYDROCARBON TYPE, VOL%			ASTM D-1319
Aromatics	29.4	28 - 31	
Olefins	1.2	Report	
Saturates	69.4	Report	
SFC Aromatics, wt%	31.59	Report	
Polynuclear Aromatics, wt%	7.40	Report	

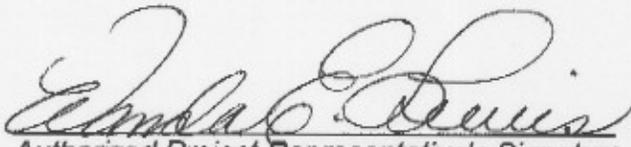
D. G. Doerr, dtgD.G. Doerr
Fuels Unit Team LeaderEJN: teh
05/09/05

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)*

Our goal is to test as soon as possible.

We hope for a very positive outcome showing the hoped-for emissions reduction.

We want to complete all the testing and final report as quickly as possible.


Authorized Project Representative's Signature

Date: 07-13-2005

TCEQ- NTRD

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.*