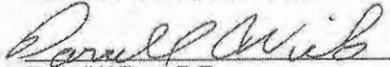


## TEST VERIFICATION AND AUTHENTICATION

This TEST was witnessed and verified by (4) people on site, who all visually saw the results in person. In no way, was any of the resulting data altered or forged and the results are as they were seen on the test equipment used, which is outlined at the beginning of this Case Study.

By signing below, you are in 100% agreement that the results of this TEST are exactly as what you have witnessed and all data contained herein is real and 100% correct and true.

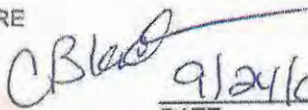
Each person signing below should do so in the presence of a NOTARY PUBLIC who will verify that each of the people below are the actual people signing this document.

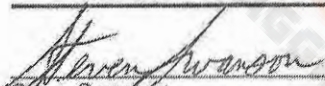
  
\_\_\_\_\_  
Darrell Wilson P.E.  
Vice President of Engineering  
VBlox Corporation

September 27, 2008  
DATE

NOTARY PUBLIC SEAL AND SIGNATURE



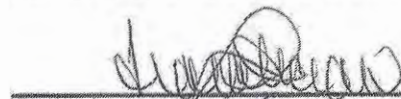
  
\_\_\_\_\_  
9/24/08  
DATE

  
\_\_\_\_\_  
Steve Swanson  
Project Engineer / Utility Specialist  
Total Energy Concepts, Inc.

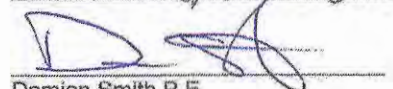
Sept 25, 2008  
DATE

NOTARY PUBLIC SEAL AND SIGNATURE



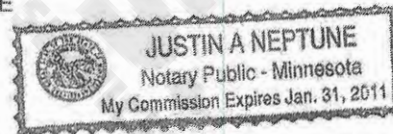
  
\_\_\_\_\_  
Damian Smith P.E.  
Vice President / Chief Engineer  
Total Energy Concepts, Inc.

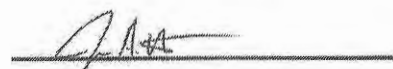
September 25, 2008  
DATE

  
\_\_\_\_\_  
Damian Smith P.E.  
Vice President / Chief Engineer  
Total Energy Concepts, Inc.


9/29/08  
DATE

NOTARY PUBLIC SEAL AND SIGNATURE



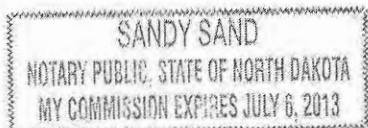
  
\_\_\_\_\_  
Paul Deichert  
Senior Energy Specialist  
Total Energy Concepts, Inc.

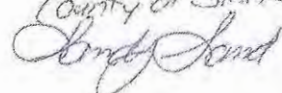
9/29/08  
DATE

  
\_\_\_\_\_  
Paul Deichert  
Senior Energy Specialist  
Total Energy Concepts, Inc.

9/30/08  
DATE

NOTARY PUBLIC SEAL AND SIGNATURE



9-30-08  
DATE  
County of Stark  


## SUMMARY AND RESULTS

PRE-CONDITION AVERAGE KW LOAD	167.3 KW
POST-CONDITION AVERAGE KW LOAD	150.3 KW
<b>% REDUCTION IN KW LOAD</b>	<b><u>10.2 %</u></b>
PRE-CONDITION AVERAGE AMP LOAD	1,008.3 AMPS
POST-CONDITION AVERAGE AMP LOAD	560.3 AMPS
<b>% REDUCTION IN AMP LOAD</b>	<b><u>44.4 %</u></b>
PRE-CONDITION AVERAGE POWER FACTOR	59.3%
POST-CONDITION AVERAGE POWER FACTOR	96.0%
<b>% INCREASE IN POWER FACTOR</b>	<b><u>38.2%</u></b>
PRE-CONDITION AVERAGE FUEL CONSUMPTION	32.0 GALLONS
POST-CONDITION AVERAGE FUEL CONSUMPTION	21.5 GALLONS
<b>% REDUCTION IN FUEL CONSUMPTION</b>	<b><u>32.8%</u></b>

This TEST clearly shows the effectiveness of a properly applied Power Factor Correction System in a facility in regards to energy savings. The TEST not only yielded an actual KW savings, but also resulted in a substantial FUEL CONSUMPTION savings due to the reduced energy requirement by the CAT Diesel Generator.

## CARBON EMISSION REDUCTION

One Gallon of Diesel Fuel Burned equals approximately 22.384 pounds of CO2 emissions released into the atmosphere. The results of this TEST yield a 32.8% reduction in FUEL CONSUMPTION, which means this site will reduce the CO2 emissions from 11,460.6 pounds per day to 7,700.00 pounds per day.

# R BEE CRUSHING



a division of **PetroWest**

Tel: 780-942-2434  
Fax: 780-942-2857  
Email: info@rbeecrushing.ca

Box 1110, Gibbons, Alberta, T0A 1N0

## Power Vault Fuel Savings Report 2014

Fuel used down by 12% over all

Fuel usage by generators down 22%

Generator down time reduced by 15% reduced amp fluctuation

Able to reduce generator fleet from 2 1MW to 1 1.5MW

2015 will see another 15% by switching to a single unit (another \$700,000-1 mil savings)

Dollars saved on fuel 2014 (\$1,280,000)

Production increase due to stabilized power 5%

We have seen a 6 month return on our initial investment. The Cap cost was replaced on the last one by an RPO from AES which frees up more room for other Cap expenditures.

Recommendation: Going forward we will be looking at a service contract with AES for service and cleaning ie general maintenance on a bi annual basis.

Kind Regards,

David Howells

A handwritten signature in black ink, appearing to read 'David Howells', written over a faint, large watermark that says 'AES AGGREGATE ELECTRICAL SERVICES'.