

Ameren Missouri
Response to Cardwell Data Request
MPSC Case No. EO-2011-0052
Application of Cardwell Lumber Inc. for Approval of a Change of Electrical
Supplier from Union Electric Company to Three Rivers Electric Cooperative

Data Request No.: Cardwell 01-003

Please state the date that AmerenUE, or its predecessor, erected the electrical facilities presently used to transmit electrical power to the facility location of 5927 Highway 50 West, Jefferson City, Missouri, 65109. Document Request 2: With respect to the records referenced in paragraph 13 of AmerenUE's Response to the Application herein, please provide copies of all such records of outages, lighting strike and line repair, relay problem and repair or replacement, momentary interruptions, voltage problem claim investigation, power quality monitor data recordings and interpretations thereof.

RESPONSE: (do not edit or delete this line or anything above this)

Prepared By: David L Hagan
Title: Supervising Engineer
Date: October 25, 2010



Ameren Missouri has no records as to the date facilities were originally constructed to transmit power to customers in the area of 5927 Highway 50 West, Jefferson City, Missouri.

The following documents are attached:

- Summary of actions, outages & momentaries affecting Cardwell Hardwood
- Record detail for each event on summary
- Copy of Ameren Missouri's power quality report to Cardwell Hardwood

Exhibit No. 17
Date 11/12/10 Reporter JMB
File No. EO-2011-0052

Cardwell Hardwoods
Ameren UE Power Quality Measurements
January, 2008
By Don Cobb

I installed a power quality monitor at the disconnect in the Boiler building on 01/03/2008 and removed it on 1/11/2008. I connected the monitor to record the phase to phase voltage and the line currents at the disconnect location which is approximately 15 feet from the control for the boiler. The nominal voltage is assumed at 480 volts three phase three wire. For a general power service with a nominal voltage of 480 volts the acceptable voltage is plus or minus 10% for a range of 432 to 528 volts phase to phase.

Your main complaint is that the boiler drops offline mostly in the mornings. I do not know what the protective settings are on your control and you would have to check with the person that sets the control. Hopefully with the recorded data your person setting the control can eliminate the problem as the voltage was within acceptable limits during the recording. If you can find out what is causing the control to trip(voltage or current limits or unbalance) then maybe a control setting just needs to be adjusted.

I have attached eight day graphs of both the amperage and the voltage from the monitor data. Graph 1 is of the Voltage and Graph 2 is of the Amperage. These graphs only show trends and do not provide much detail. Voltage ranged between 480 to 500 volts and averaged around 490 volts for the period.

I have also attached some one day graphs of the data that shows more detail as follows:

| | | | |
|---------|-------|------------|----------|
| Graph 3 | Volts | 01/04/2008 | Friday |
| Graph 4 | Amps | 01/04/2008 | Friday |
| Graph 5 | Volts | 01/06/2008 | Sunday |
| Graph 6 | Amps | 01/06/2008 | Sunday |
| Graph 7 | Volts | 01/10/2008 | Thursday |
| Graph 8 | Amps | 01/10/2008 | Thursday |

I also attached 6 hour graphs and 30 minute graphs to better show the boiler coming on and off.

| | | | |
|----------|-------|------------|---------|
| Graph 9 | Volts | 01/10/2008 | 6 hr. |
| Graph 10 | Amps | 01/10/2008 | 6 hr. |
| Graph 11 | Volts | 01/10/2008 | 30 min. |
| Graph 12 | Amps | 01/10/2008 | 30 min. |

If after you look at the graphs you have any questions about a specific point/time I can zoom in on the time and create a graph that show the data down to every minute.

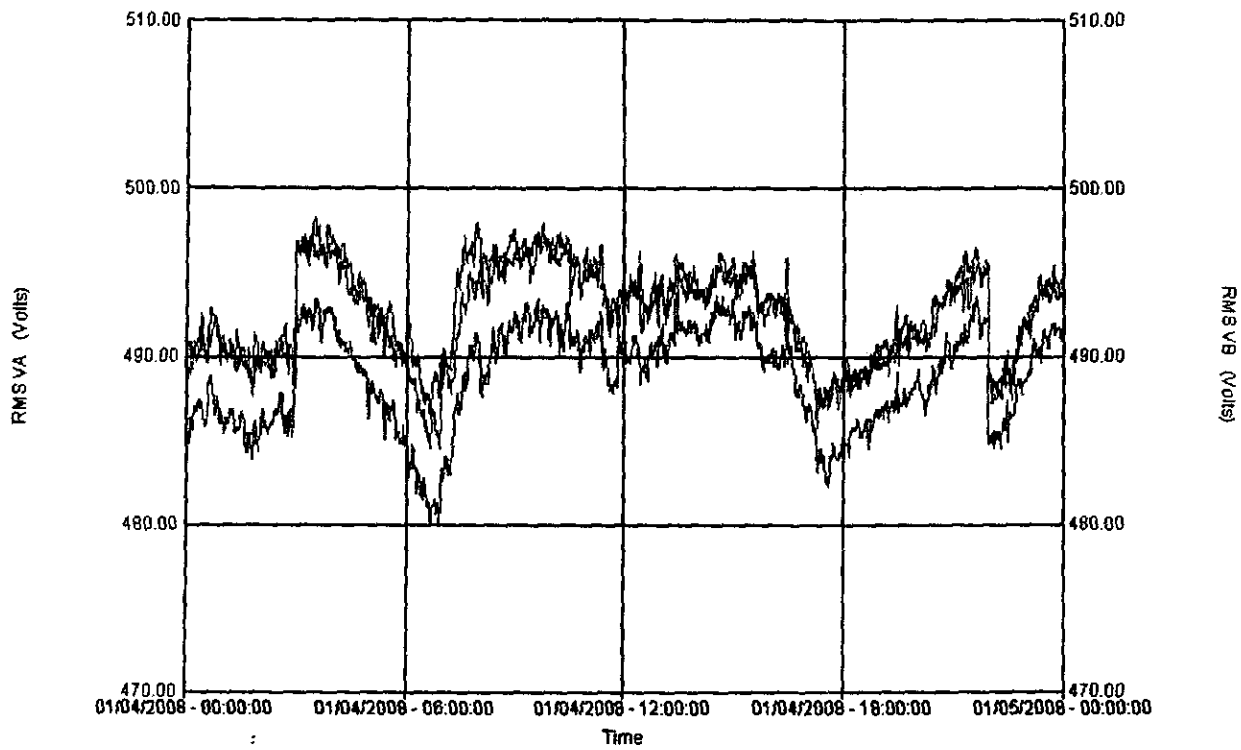
I hope that this has helped and if you have any questions please contact Don Cobb at 573-681-7515.

OmniPage Pro cannot load or scan this image.

A:\RECORDS\Junk\Scan 3\Exhibit 17.TIF

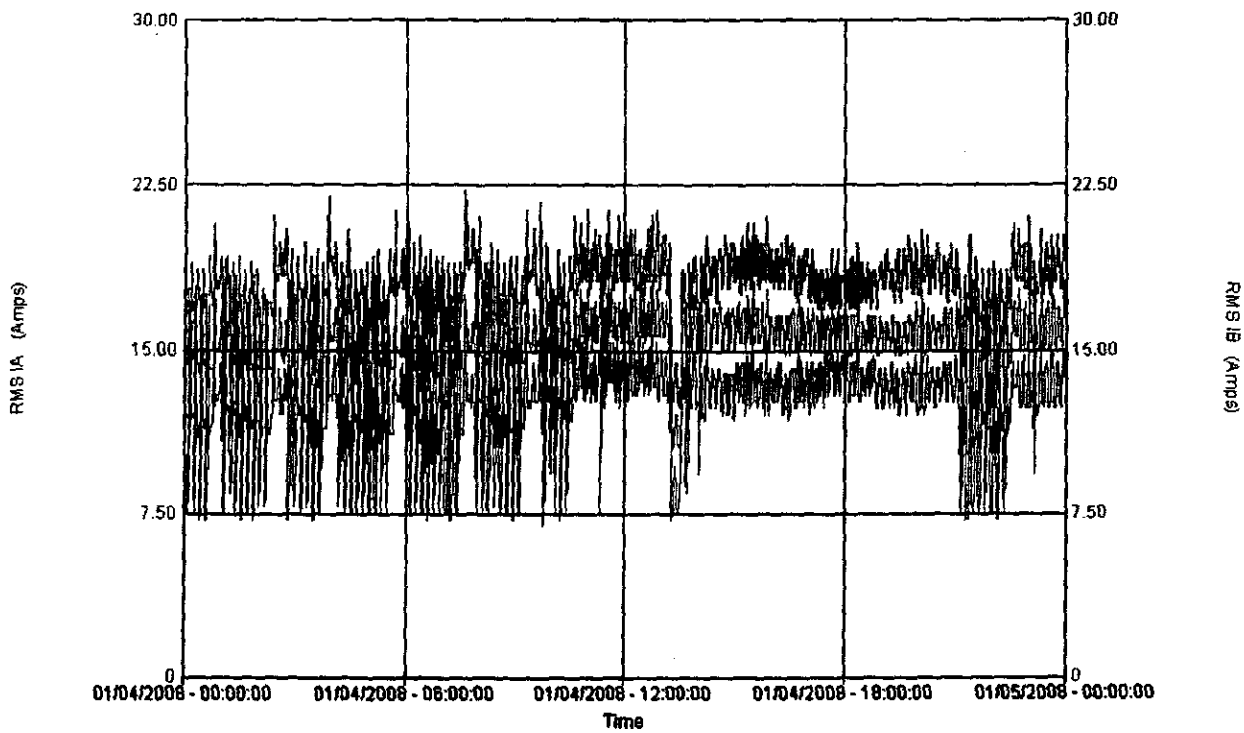
GRAPH 3

Cardwell Hardwoods Boiler



GRAPH 4

Cardwell Hardwoods Boiler

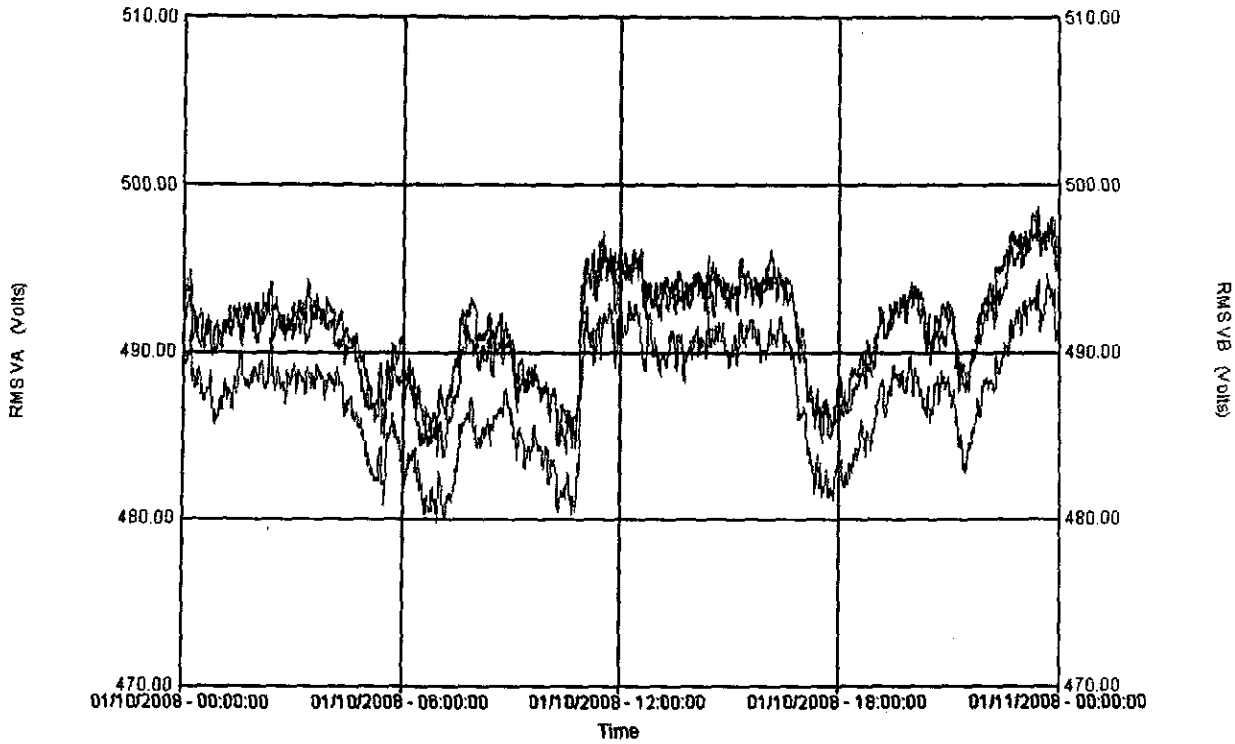


OmniPage Pro cannot load or scan this image.

A:\RECORDS\Junk\Scan 3\Exhibit 17.TIF

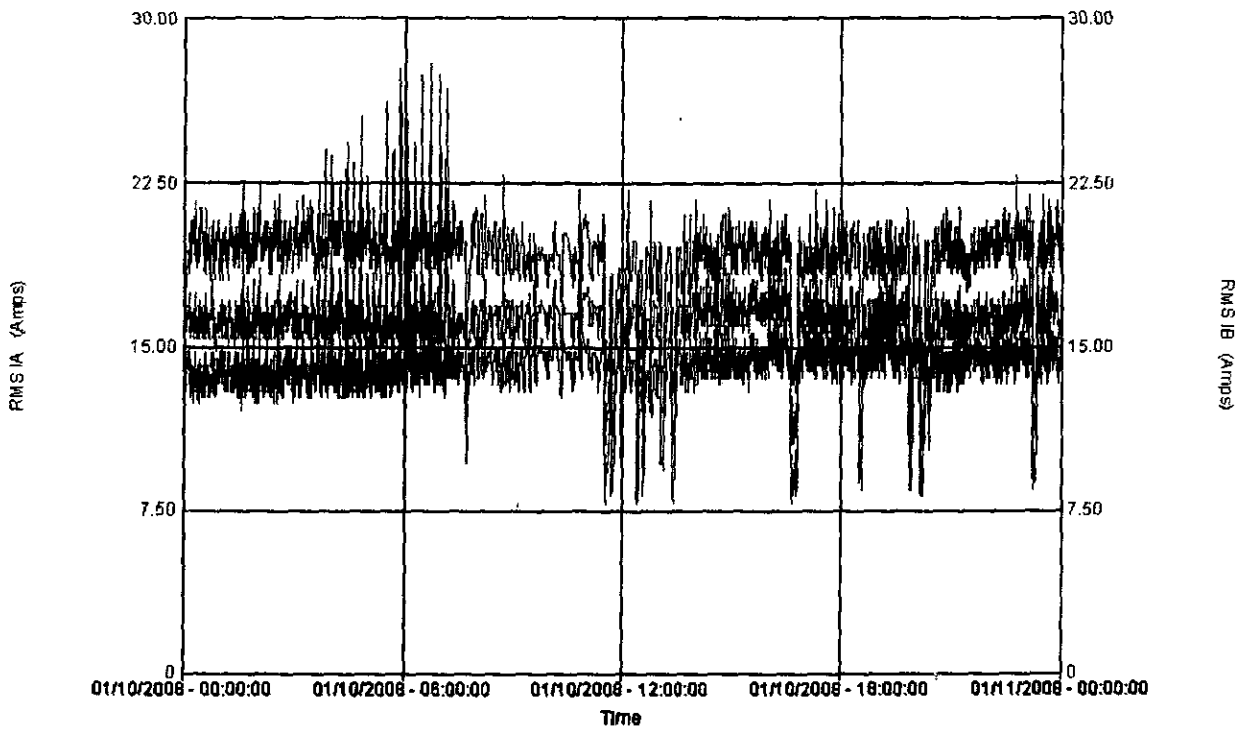
GRAPH 7

Cardwell Hardwoods Boiler



GRAPH 8

Cardwell Hardwoods Boiler

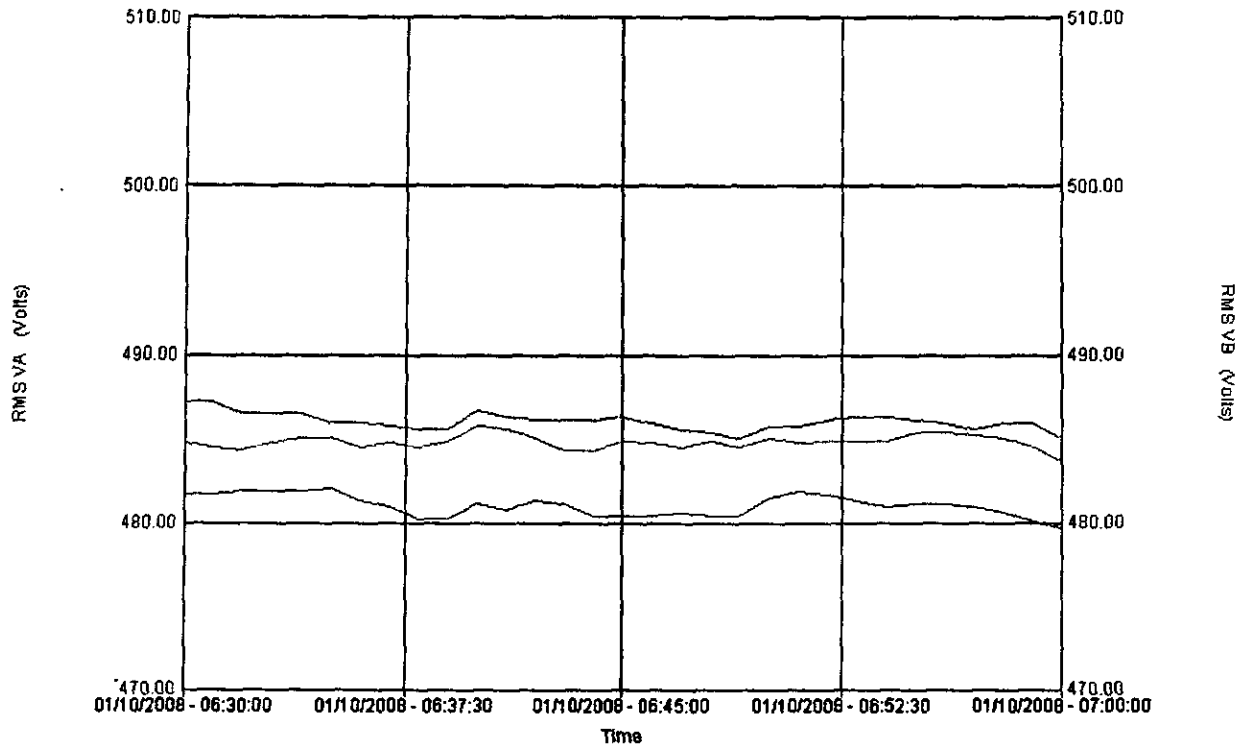


OmniPage Pro cannot load or scan this image.

A:\RECORDS\Junk\Scan 3\Exhibit 17.TIF

GRAPH 11

Cardwell Hardwoods Boiler



GRAPH 12

Cardwell Hardwoods Boiler

