



Timed Interval Sampling Monitoring & Verification Report

for

Jamestown School District
Jefferson Middle School
Jamestown, NY

November 19, 2009

Prepared by:
John D. Knapp
President



POWER CONDITIONING AND ENERGY SAVINGS

TIS Report

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To

**Jamestown School District
Jamestown, NY**

For

Jefferson Middle School

Prepared by

Power Shaver, Energy Savings Systems

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Executive Summary and Conclusions

In May of 2009, Jamestown School District purchased and installed a USES[®] Shunt Efficiency System, manufactured by USES[®] Mfg Inc. The purpose of the USES[®] System is to reduce the overall demand and consumption of power and improve overall power quality. A total of five (5) USES[®] Model CMES-3D-480 Power Conditioners were installed within the Jefferson Middle School main service entrance and a subpanel.

In accordance with the annual cost reduction offered to Jefferson Middle School, the USES[®] System was evaluated to determine the average power conditioning results, power demand reductions and resultant monetary savings and return on investment (ROI). Power Shaver used Timed Interval Sampling (TIS) methods to determine the USES[®] System performance, and the results of the TIS testing from October 26, 2009 are presented herein. TIS analytical techniques conform to the International Performance Monitoring and Verification Protocols (IPMVP) as established by the U. S. Department of Energy as a mechanism to evaluate the performance of Energy Conservation Measures.

The installation of the USES[®] Shunt Efficiency System at the Jefferson Middle School in Jamestown, NY has significantly improved power quality and resulted in a substantial decrease in electrical demand. The USES[®] System reduced the demand for electricity by approximately **12.6 kWh and 20 kVa** in the early morning and **25.9 kWh and 34.6 kVa** in the afternoon with only 4 USES[®] units activated with an average of **6.25 kW and 8.65 kVa** per unit, when minimum cooling began. These results lead to an extrapolated reduction of **32 kWh and 43.25 kVa** per hour with 5 USES[®] units activated. Power Shaver will use the **32 kW** afternoon reductions as a low average. These reductions will result in a minimum **\$17,183.61** per year reduction and a Return on Investment (ROI) of **24 months**. These cost reductions do not account for the larger expected reductions in the cooling or heating seasons.

The performance of the USES[®] Shunt Efficiency System at Jefferson Middle School has proven to be consistent with all of the estimated power quality improvements as outlined in Power Shavers stated performance. The USES[®] System performance was inconsistent between the two test periods, as the performance of the USES[®] system was at minimum during the fall morning and afternoon sampling periods as there was minimal to no cooling or heating taking place.

The data tables, graphs and billing assessments presented in this report clearly show the beneficial results provided by the USES[®] System. All power quality data was averaged to take into account short term load variations and to determine the average levels of power quality when the USES[®] System was activated and de-activated. All of the data tables presented in this report are from the TIS testing and evaluation conducted on October 26, 2009. Additional power quality improvements also realized by the installation of the USES[®] System are discussed later in this report.

The resultant average real power demand reductions during the more representative afternoon TIS testing were used to calculate the net annual effect of the USES[®] System in terms of actual savings and return on investment (ROI). It is important to note that the afternoon TIS testing only included the four USES[®] CMES 3D 480 units installed in the main electric room as the fifth unit is installed at a distant subpanel and Power Shaver lacked the personnel available in the morning TIS testing to activate and deactivate the fifth USES[®] unit in the afternoon TIS session in the manner that is necessary for the sampling. The average reduction of watts during the afternoon sampling was 25,924 watts with four USES[®] CMES 3D 480 units yielding a per unit reduction of 6,481 watts per USES[®] units. Power Shaver extrapolates the average 6,481 watt reduction and multiplies it by the five USES CMES 3D 480 units actually installed in the facility for a total watt reduction of 32,000 watts or 32 kWh per hour.

Concerning the TIS date, representing the fall season of the year or the “mean season” where there is for a short period of time very little cooling or heating taking place. It is difficult to get a true representation of the average USES[®] system performance. Power Shaver finds the assessment of the 32 kW reductions in the afternoon TIS period to be more representative of a low average of annual use and is considered by Power Shaver to be the lowest energy use of the cooling season because it incorporates only one of the many A/C units cycling on for a short time. The late spring, summer and early fall will be at least this load.

As you see from the dynamic nature of the USES[®] technology the performance during the peak cooling season at this facility is much greater and larger kWh reductions have been realized, verifying the actual performance in the past five months of energy use and cost reductions according to the power company.

Power Shaver Energy Saving Systems is pleased with the sampling results of the USES[®] system installed in Jefferson Middle School. Over the past five months of billing verifications we have seen between a 17% to 29% reduction in kWh consumption and a 10% to 24% reduction in cost to operate including the reduction of reactive demand penalties. This fact coupled with the Timed Interval Sampling results verifies the dynamic effectiveness of the USES technology, increased power quality, reduced demand, cost and consumption of energies while providing protection for your facility. Power Shaver looks forward to assisting Jamestown School District in their desire to reduce energy consumption in an Eco friendly green manner.

The USES[®] System provides excellent power quality improvements coupled with a short Return on Investment (ROI). For any questions or comments on this report, please contact John D. Knapp, CEO/President of Power Shaver, Energy Savings Systems at (888) 9-POWER-5, or via email at john@powershaver.com.

Summary of Power Quality Improvements

Analysis of the TIS testing results from October 26, 2009 demonstrate that the USES[®] System has resulted in substantial improvements in overall power quality. The following power quality improvements are realized by the USES[®] System:

- Real Power Demand (kW) – **Real Power demand was reduced by an extrapolated 32 KW** at low load operational levels with 4 of the USES[®] Model CMES-3D-480 Power Conditioners activated. Each USES[®] unit was individually tested and found to be operational and contributing to the overall power quality improvements as presented to Jamestown School District in April 2009. The afternoon results are used in the ROI and savings calculations because they are more representative of low average circuit load conditions.
- Power Factor – Under full load (afternoon TIS testing), the Power Factor improved from 95.4% to .999% and occasionally leading when the USES[®] System was activated.
- Voltage – Voltage improved by an average of 1.84 volts across each phase (VAB, VBC, VCA).
- Amperage – Under low load, the circuit Amperage was reduced by about 26.3 amps on each phase.
- Reactive Power – Under low load, the reactive power was reduced from 99.6 kVar to 11.9 kVar leading when the USES[®] System was activated. The average reactive power reduction was 84.2 kVar.
- Apparent Power – Apparent power was reduced from 336 kVa to 300 kVa when USES[®] System was activated. The average apparent power reduction was 34.6 kVa.

Savings and ROI Calculations

Evaluation of the USES[®] System installed at Jefferson Middle School show a range of demand reductions when the USES[®] System is activated. During the TIS testing in the afternoon, when the Demand was low, the average real power demand reduction was 32 kW or 6.25 kW per unit. The total conservative annual reduction of real power consumed is 32 kW x 8760 hours per year = 280,320 kWh.

Assuming that the present cost of power of \$0.0613/kWh will increase in 2010 to \$0.0713/kWh and by \$0.01/kWh each year thereafter, ROI savings are shown on the following pro-forma:

Year	COP	kWh/yr SVGS	SVGS/yr	
1	\$0.0613	280,320	\$17,184	
2	\$0.0713	280,320	\$19,987	
3	\$0.0813	280,320	\$22,790	
4	\$0.0913	280,320	\$25,593	
5	\$0.1013	280,320	\$28,396	Years 1-5
6	\$0.1113	280,320	\$31,200	\$113,950
7	\$0.1213	280,320	\$34,003	
8	\$0.1313	280,320	\$36,806	
9	\$0.1413	280,320	\$39,609	
10	\$0.1513	280,320	\$42,412	Years 6-10
11	\$0.1613	280,320	\$45,216	\$184,030
12	\$0.1713	280,320	\$48,019	
13	\$0.1813	280,320	\$50,822	
14	\$0.1913	280,320	\$53,625	
15	\$0.2013	280,320	\$56,428	Years 11-15
Total		4,204,800	\$552,090	\$254,110

- **Actual ROI = 24 Months**
- **Year 1 savings = \$17,183.61**
- **Purchase Cost, excluding installation costs = \$34,350**
- **Total Savings over 15 years = \$552,090 - \$34,350 = \$517,740**

USES[®] Power Quality Benefits

The installation of the USES[®] System at the Jefferson Middle School has resulted in measurable and verifiable power quality improvements, as well as other benefits which cannot be measured. A discussion of the power quality improvements resulting from the USES[®] System is presented below:

Real Power Demand - The USES[®] System reduces real power demand in two principal ways: through amperage reductions on the circuit, which reduce “Copper Losses”, and through the reduction of Total Harmonic Distortion (THD) in the amperage and voltage supplied to operating loads, which improves motor efficiency. The amount of real power demand reduction associated with the USES[®] System exceeds that of comparable power factor correction capacitor (PFCC) equipment because of the reduced THD in addition to the improvement in power factor.

Power Factor – Power Factor is the ratio of real power to apparent power. Because the USES System reduces both real power demand and apparent power demand, the power factor is improved and approaches unity, or 100%. Because the USES System does not create RLC resonance, any leading Power Factor will have no effect on the performance or reliability of the equipment.

Reactive Power, Apparent Power and Amperage – The USES[®] System reduces the reactive power on the circuit in a manner which does not create RLC resonance. Each USES[®] Model CMES-3D-480 power conditioner reduces reactive power by 21-23 kVar. A reduction in reactive power results in a corresponding decrease in the apparent power on the circuit. This, in turn, results in a decrease in the amount of amperage on the circuit, which results in a decrease in real power demand as a result of reduced “Copper Losses” on the circuit. Copper losses manifest themselves as heat in motors and conductors and can reduce the useful life of motors, transformers and sensitive electronic equipment. The reduction in reactive power on the circuit also acts to “stiffen” the circuit by reducing overall circuit impedance. A “stiff” circuit will reduce the creation of voltage total harmonic distortion as a result of current harmonics.

Voltage Improvement - By improving voltage across each of the three phases (VAB, VBC, VCA), circuit amperage is further reduced and motors will run cooler and last longer. Increased voltage will also lessen the likelihood of equipment tripping off due to utility voltage sags. Fluctuations in voltage are dampened by the coupling of the three phases of power supplied, which will lessen any likelihood of equipment tripping problems associated with voltage fluctuations.

Harmonics – The USES[®] System reduces the Total Harmonic Distortion (THD) of the amperage and voltage on the circuit by passing all power generated within the USES[®] System through 60 Hz band-pass Filters. Because the USES System is connected to the electrical circuit in parallel, some THD will continue to pass on to the operational loads. However, because a significant portion of the power supplied to the load is “choked” to 60 Hz, total THD supplied to the load is reduced. This action significantly reduces the THD in the voltage and current provide to the operating

motors, thus increasing motor efficiency. Problems associated with circuit harmonics include:

- Excessive Neutral Currents, where voltage harmonics result in additional current on the circuit neutral conductor, resulting in additional heat, possible overloading and the need to install additional neutral conductors.
- Overheated transformers, where harmonics generated on the secondary side of a delta-wye transformer will circulate on the primary side of the transformer. Some types of transformer losses, such as skin losses and eddy currents will increase by the square of the harmonic order.
- Overheated solenoid coils and lighting ballasts.
- Positive, negative and zero sequence voltages on motors and generators, where certain harmonic frequencies will try to rotate the motor forward or backward, or simply heat up the motor.
- Incorrect reading power meters, especially disc type watt-hour meters and averaging type current meters.
- Failure of electronic equipment, including nuisance tripping and overload.
- Nuisance tripping of circuit protection devices including false tripping of relays and failure of UPS devices to properly transfer.
- Blown fuses and overheated power factor correction capacitors due to the cumulative effects of harmonic THD and RLC resonance.

Spike and Surge Protection - Inherent in the USES[®] System, but not measured, is the ability to provide superior spike and surge suppression capabilities. A surge is any voltage increase lasting 3 or more nanoseconds. A spike is any voltage increase lasting less than 3 nanoseconds. The USES[®] device detects any surges or spikes traveling along one of the active phases and shunts it to the other two phases. From there, the transformer/choke sets within the USES[®] device attenuate the surge/spike through the action of the “chokes”, which use capacitors and inductors to resist the change in voltage and associated change in current, and flatten out the waveform. The surge/spike is recycled as usable power for the circuit. Because no USES[®] “Wye” units were specified for this application, the USES[®] System will not protect the circuit against ground fault transients or lightning strikes which can enter the circuit through the neutral conductor.

Timed Interval Sampling (TIS) Techniques

Timed Interval Sampling (TIS) techniques are used to determine actual performance of the USES[®] System. In order to ensure the accuracy, transparency and repeatability of the TIS evaluation, Power Shaver Energy Saving Systems has developed TIS methods which adhere to the International Performance Measurement & Verification Protocols (IPMVP). The IPMVP, endorsed by the U.S. Department of Energy, provides an overview of the best practice techniques available for verifying the results of energy savings projects.

Timed Interval Sampling is a statistical method of energy measurement with regard to electrical consumption, measured as average wattage demand reductions over a short span of time. It is used in facilities with dynamic electrical loads where energy use is a function of manufacturing, environmental loads, and related equipment. TIS techniques are utilized to minimize the high degree of variables present when measuring energy consumption. These variables often include: weather conditions, facility operational techniques, and load variations.

When the USES[®] System is being evaluated, it is alternately activated and deactivated at timed intervals such as 1, 5 or 15 minutes, to compare the average demand of real power by the loads in the facility under equal conditions. All samples are recorded and averaged in each respective operating condition (on vs. off), in order to demonstrate the effects that the USES[®] System has on the circuit when activated and deactivated. Power Shaver Energy Saving Systems used an Amprobe DM-II Pro[®] Multi-meter and Data Logger to perform TIS metering and recording. This “True RMS” meter meets the standards of the National Institute of Standards and Technology and the IPMVP.

Evaluation of USES[®] System performance was made through analysis of the data recorded from the TIS testing. The Amprobe DM-II Pro[®] Multi-meter was connected at a point at or near the main breaker for main service entrance buss bars in order to measure overall circuit power quality and average energy savings. The USES[®] System was activated and deactivated for intervals of fifteen minutes during the morning test period, and 15 minutes during the afternoon testing period to measure the changes in overall power quality in each operating condition. A separate test of the cumulative effect of the USES[®] power conditioners was also conducted to confirm that each of the units is operating properly. The differences between conditioned and unconditioned power quality was determined and averaged to demonstrate the overall effect that the USES[®] System has on the circuit.

- All recorded data was evaluated and averaged in the following manner to determine the overall average performance of the USES[®] System: The average power quality for each full interval was calculated and compared to the next interval before and after each transition from on to off, and off to on. For the morning test, the average power quality was determined by comparing the fifteen (15) minute intervals. During the afternoon testing, average power quality was determined by comparing fifteen (15) minute intervals.

- Each instantaneous change in power quality was determined by comparing the last one-second with the USES[®] System on to the first one-second with the USES[®] System off, and vice-versa.
- The average power quality was calculated 15-seconds before and after each transition from on to off, and off to on.
- The average power quality was calculated 30-seconds before and after each transition from on to off, and off to on.
- The average power quality was calculated 45-seconds before and after each transition from on to off, and off to on.
- The average power quality was calculated 60-seconds before and after each transition from on to off, and off to on.
- All representative transitional changes are averaged to derive the overall average performance of the USES[®] System.

This report shows all differences in electrical performance with the USES[®] System activated and deactivated including:

- Real Power demand reductions (Watts)
- Voltage improvements across each phase (Urms)
- Amperage reductions across each phase (Urms)
- Reactive Power reductions (VAR)
- Apparent Power reductions (VA)
- Power Factor improvement (%)

Graphs and Data Tables

Through evaluation of the Amprobe DM-II Pro[®] Power Quality Analyzer and Data Logger recordings collected on October 26, 2009, we have prepared a series of graphs and data tables to show the effect of the USES[®] System. The following graphs are presented below, showing all changes to power quality when the USES[®] System is activated or de-activated:

- Graph 1 – Real Power (Watts) AM/PM – These graphs shows real power in watts during the October 26th morning and afternoon TIS testing.
- Graph 2 – Apparent Power (VA) AM/PM - These graphs show the effects on Apparent Power when the USES system is turned ON and OFF during the October 26th morning and afternoon TIS testing.
- Graph 3 – Reactive (VAR) AM/PM – These graphs show the effects on Reactive Power when the USES system is turned ON and OFF during the October 26th morning and afternoon TIS testing.
- Graph 4 – Power Factor AM/PM – These graphs show Power Factor as a decimal point during the October 26th morning and afternoon TIS testing.
- Graph 5 – Current (Amps) 3 Phase AM/PM – These graphs show the effects on current when the USES system is turned ON and OFF during the October 26 morning and afternoon TIS testing.
- Graph 6 – Voltage (Volts) 3 Phase AM/PM – These graphs show the effects on Voltage when the USES system is turned ON and OFF during the October 26th morning and afternoon TIS testing.

The following data tables are presented to show the average observed performance of the USES[®] System during the October 26, 2009 TIS testing. Please note that during the TIS testing, each USES[®] unit was tested individually to ensure performance and evaluate circuit.

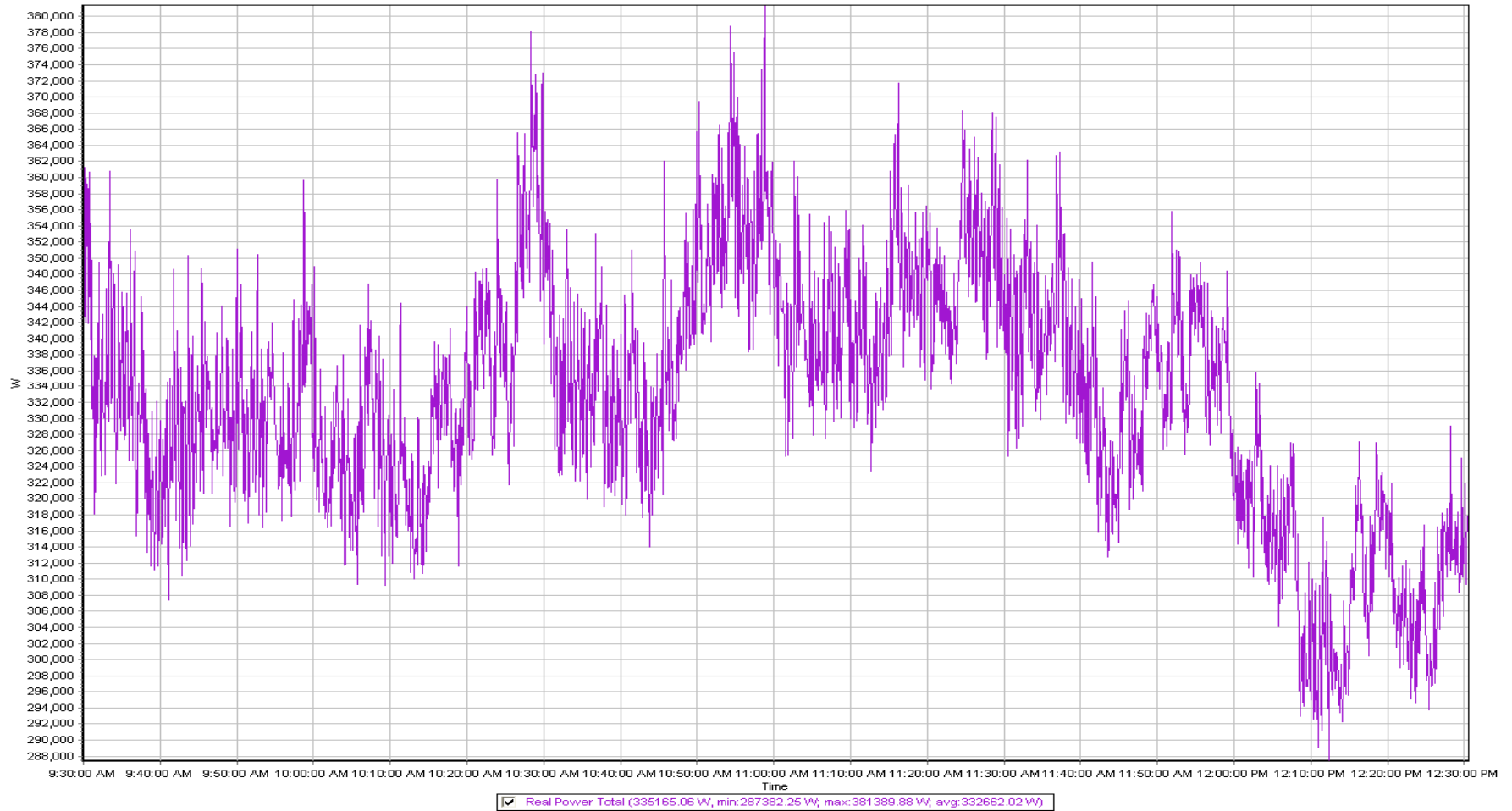
- Table 1 – Real Power (Watts) AM/PM - from the October 26th morning and afternoon TIS testing.
- Table 2 – Apparent Power (VA) AM/PM - from the October 26th morning and afternoon TIS testing.
- Table 3 – Reactive Power (VAR) AM/PM - from the October 26th morning and afternoon TIS testing.
- Table 4 – Power Factor AM/PM - from the October 26th morning and afternoon TIS testing.
- Table 5 – Current (Amps) AM/PM - from the October 26th morning and afternoon TIS testing.
- Table 6 – Voltage (Volts) AM/PM – from the October 26th morning and afternoon TIS testing.

All Data Tables and Graphs, together with all raw data are included.

Graph 1a

Jamestown Whole System - Real Power 10.26.09

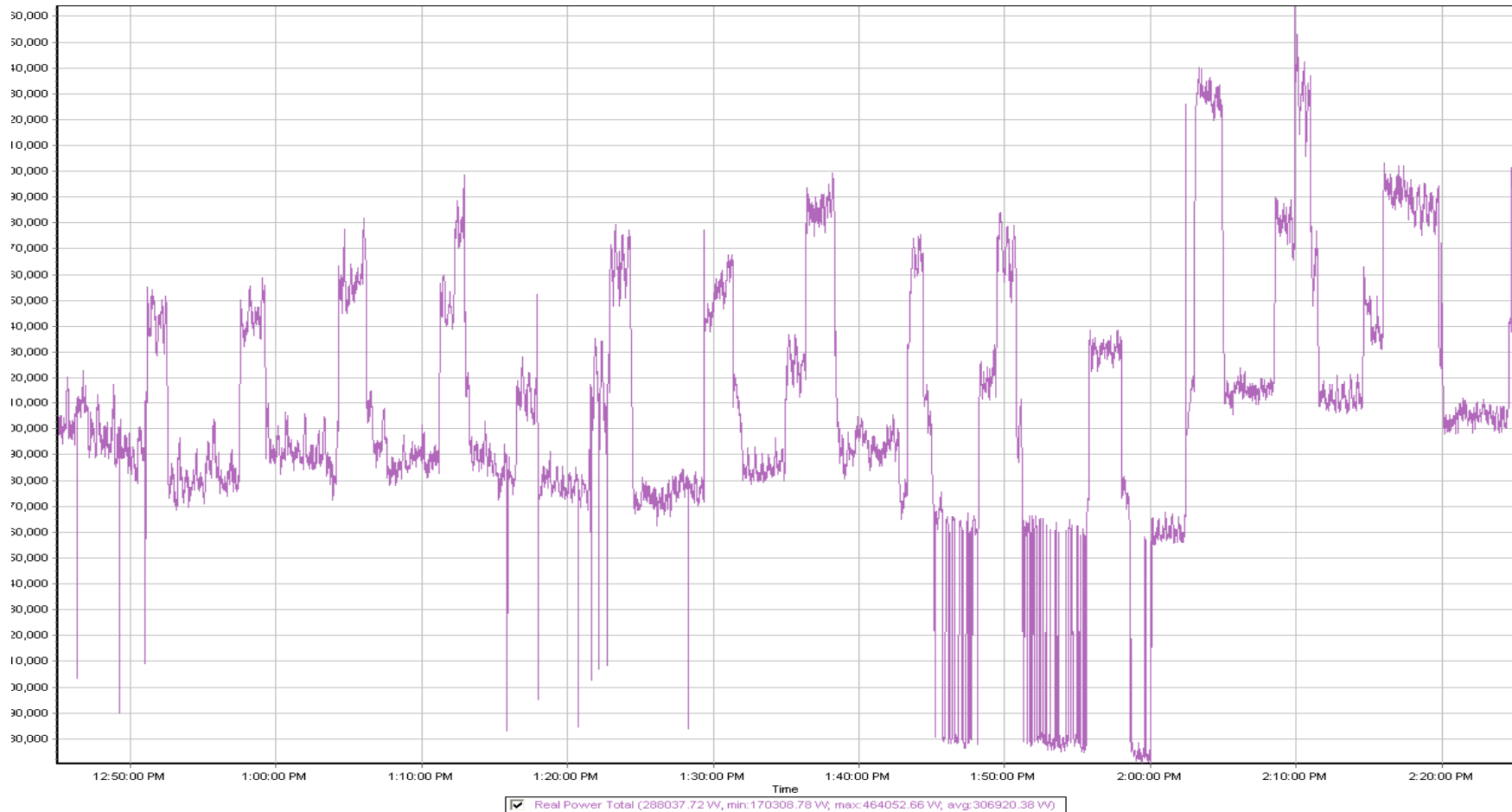
10/26/2009 9:29:59 AM - 10/26/2009 12:30:39 PM



Graph 1a above shows the Real Power Demand in watts on October 26th between 9:30 AM and 12:30 PM. With 5 USES[®] Model CMES-3D-480 power conditioners operating, the real power demand is reduced an average of **12,619 watts**.

Graph 1b

Jamestown - 4 Units - Real Power 10.26.09
10/26/2009 12:45:01 PM - 10/26/2009 2:25:02 PM



Graph 1b above shows the Real Power Demand in watts on October 26th between 12:45 PM and 2:25 PM. With 4 USES[®] Model CMES-3D-480 power conditioners operating, the real power demand is reduced an average of **25,924 watts**.

Table 1a

Real Power Demand (Watts)											
Intervals				Full Interval		Instant Change Transition	15 Sec Change Transition	30 Sec Change Transition	45 Sec Change Transition	60 Sec Change Transition	
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On						Difference On to Off
9:29:59am	9:44:49am	on	331324.68								
9:44:50am	9:59:49am	off		331464.94		140.26	-3662.72	-561.41	-9710.59	6047.81	1713.44
9:59:50am	10:14:49am	on	324158.02		7306.92		6703.5	8810.47	4593.44	-6039	5716.22
10:14:50am	10:29:49am	off		339917.18		15759.16	-1893.5	12175.5	9228.19	11385	11838.57
10:29:50am	10:44:49am	on	333525.92		6391.26		33596.4	19064.59	18212.12	26934.68	21926.31
10:44:50am	10:59:49am	off		349365.62		15839.70	-9566.72	-9033.06	-17544.81	23931.53	-6365.25
10:59:50am	11:14:49am	on	340402.94		8962.68		10889.18	6489.93	16517.46	1443.59	9441.81
11:14:50am	11:29:54am	off		349126.49		8723.55	-7667.87	3695.09	10858.06	14061.59	6198.9
11:29:55am	11:44:54am	on	336774.96		12351.53		-4844.22	5084.78	17825.22	-10476.9	9705.88
11:44:55am	11:59:49am	off		336269.73		-505.23	9570.75	18982.28	20291.34	17711.37	21849.22
11:59:50am	12:14:54pm	on	310266.01		26003.72		7945	8443.38	11142.44	12141.97	9418.22
12:14:55pm	12:29:59pm	off		310300.12		34.11	10626.54	17615.32	11853.35	15467.35	20303.94
Average - System Off			336074.01								
Average - System On			329408.76								
Difference			6665.26								
Transition Avg - on to off						6665.26	10098.65	13117.05	13057.74	14767.44	12380.81
Transition Avg - off to on					12203.22		14783.52	9578.63	13658.14	13506.75	11241.69
Average - All Transitions			12619.04								

Table 1a above shows analysis of the wattage data of 5 USES[®] CMES 3D 480 units collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the morning of October 26th. Each interval is 15 minutes in duration. At the completion of the test period, each unit was tested individually. Shaded cells are not included in the average performance calculations because load changes unrelated to the performance of the USES[®] system occurred during the averaging period. Because of a cyclical load change every 6-10 minutes, full interval comparisons are not used to quantify reductions in real power demand.

Table 1b

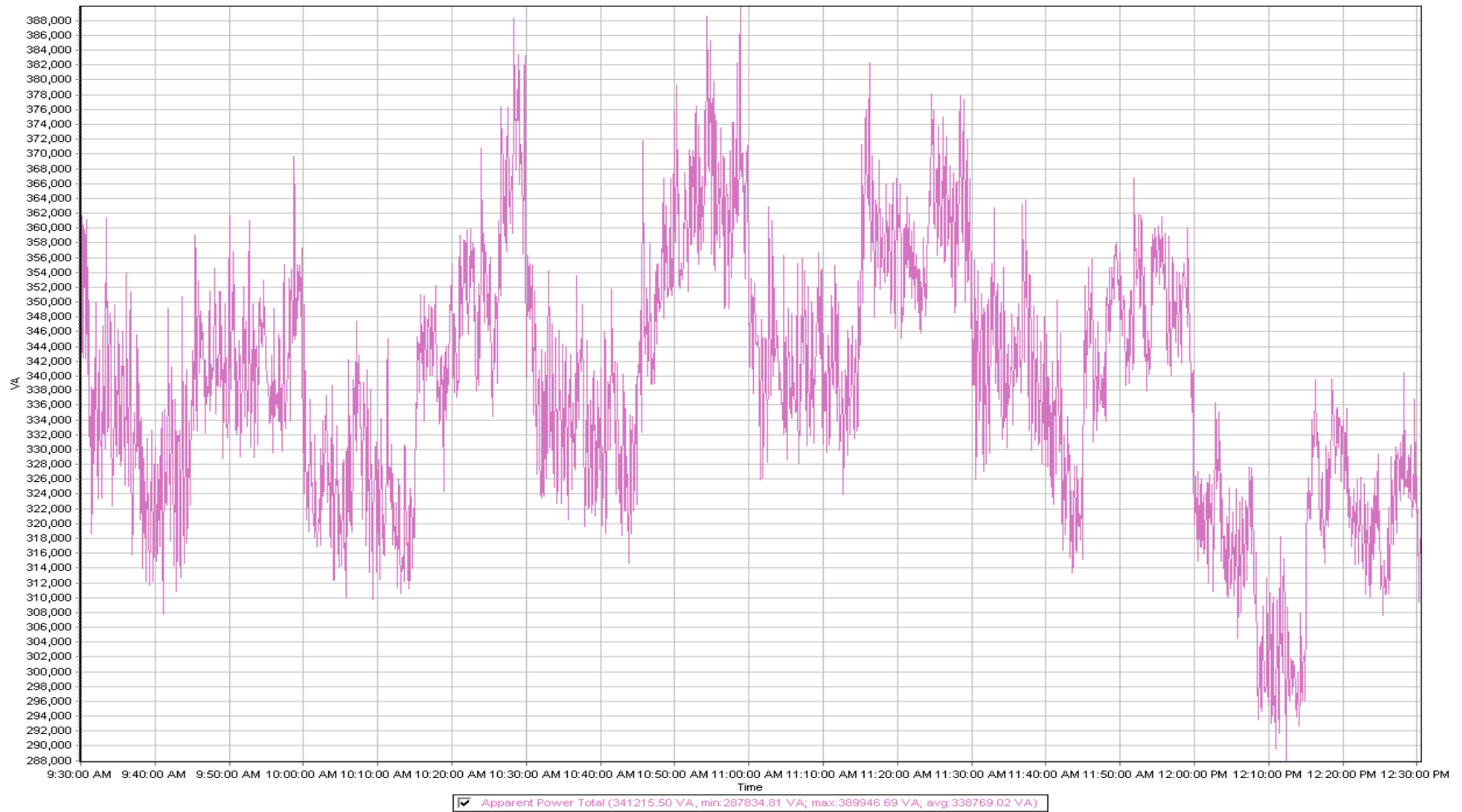
Real Power Demand (Watts)										
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition
12:45:01pm	1:00:00pm	on	301402.78							
1:00:01pm	1:15:02pm	off		307869.43		6466.65	988.69	-5852.94	1853.94	2885.78
1:15:03pm	1:30:08pm	on	295493.61		12375.82		5640.13	16166.16	8601.57	14187.63
1:30:09pm	1:45:03pm	off		317706.27		22212.66	3866.97	1735.88	-3976.15	7639
1:45:04pm	2:00:01pm	on	257073.52		60632.75		6979.38	12402.47	5391.28	97819.58
2:00:02pm	2:15:00pm	off		337665.64		80592.12	85537.92	81419.05	89411.67	82774.34
2:15:01pm	2:25:01pm	on	343760.88		-6095.24		2477	13915.78	-2456.78	12446.53
Average - System Off			321080.45							
Average - System On			299432.70							
Difference			21647.75							
Transition Avg - on to off						36423.81	30131.19	41577.47	45632.81	31099.71
Transition Avg - off to on					22304.44		5032.17	14161.47	6996.43	41484.58
Average - All Transitions			25924.49							

Table 1b above shows analysis of the wattage data collected of 4 USES CMES 3D 480 units by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the afternoon of October 26th. Each interval is 15 minutes in duration. At the completion of the test period, each unit was tested individually. Shaded cells are not included in the average performance calculations because load changes unrelated to the performance of the USES[®] system occurred during the averaging period. Because of a cyclical load change every 6-10 minutes, full interval comparisons are not used to quantify reductions in real power demand.

Graph 2a

Jamestown Whole System - Apparent Power 10.26.09

10/26/2009 9:29:59 AM - 10/26/2009 12:30:39 PM

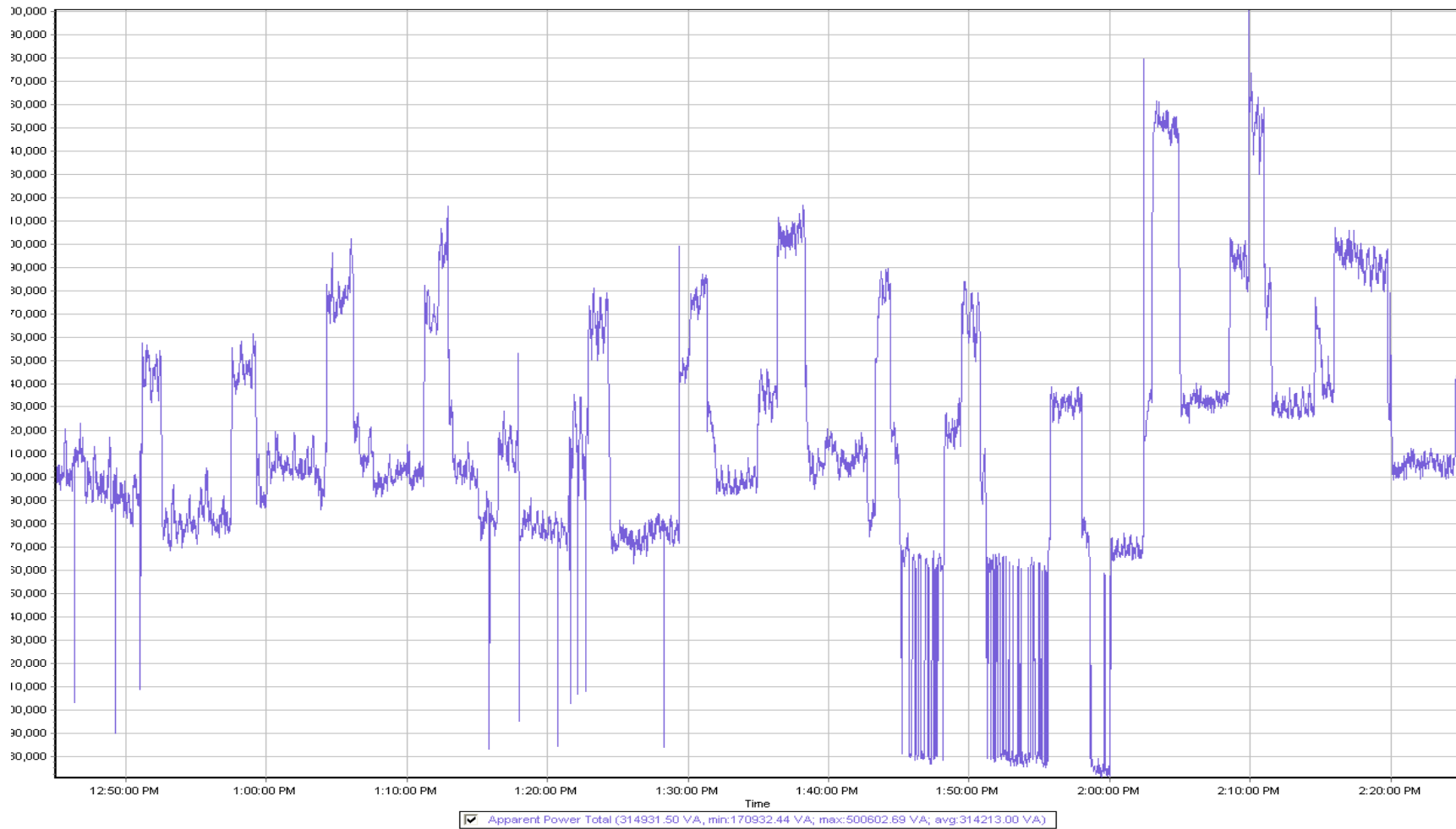


Graph 2a above shows the Apparent Power in VA during the morning testing on October 26th between 9:30 AM and 12:30 PM. With 5 USES[®] Model CMES-3D-480 power conditioners operating, the apparent power is reduced an average of **20 KVA**.

Graph 2b

Jamestown - 4 Units - Apparent Power 10.26.09

10/26/2009 12:45:01 PM - 10/26/2009 2:25:02 PM



Graph 2b above shows the Apparent Power in VA during the testing on October 26th between 12:45 PM and 2:25 PM. With 4 USES[®] Model CMES-3D-480 power conditioners operating, the apparent power is reduced an average of **34.6 KVA**.

Table 2a

Apparent Power (VA)											
Intervals				Full Interval		Instant Change Transition	15 Sec Change Transition	30 Sec Change Transition	45 Sec Change Transition	60 Sec Change Transition	
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On						Difference On to Off
9:29:59am 9:44:49am		on	331798.09								
9:44:50am 9:59:49am		off		342869.93		11071.84	6788.32	9852.22	1118.69	16186.82	
9:59:50am 10:14:49am		on	324731.05		18138.88		17675.22	19791.31	15599.75	4976.94	
10:14:50am 10:29:49am		off		351613.24		26882.19	9933.00	23209.37	20517.44	22519.84	
10:29:50am 10:44:49am		on	334159.20		17454.04		43494.18	28839.22	28043.06	36731.12	
10:44:50am 10:59:49am		off		360008.14		25848.94	1220.34	1681.46	-6484.29	33002.25	
10:59:50am 11:14:49am		on	341144.14		325894.00		19891.22	15425.09	25530.31	10352.94	
11:14:50am 11:29:54am		off		359915.05		325800.91	3800.87	14411.09	21360.72	24535.90	
11:29:55am 11:44:54am		on	337362.75		22552.30		5566.94	15538.00	28292.47	-63.63	
11:44:55am 11:59:49am		off		348435.44		11072.69	21128.34	30199.00	31475.37	28733.40	
11:59:50am 12:14:54pm		on	310825.62		37609.82		19505.66	20003.07	22790.91	23841.03	
12:14:55pm 12:29:59pm		off		323764.83		12939.21	23489.72	30099.37	24535.28	27761.59	
Average - System Off			347767.77								
Average - System On			330003.48								
Difference			17764.30								
Transition Avg - On to Off						68935.96	11060.10	18242.09	19801.50	25456.63	
Transition Avg - Off to On					84329.81		21226.64	19919.34	24051.30	18975.51	
Average - All Transitions			20071.69								

Table 2a above shows analysis of the Apparent Power data of 5 USES[®] CMES 3D 480 units collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the morning of October 26th between 9:30 am and 12:30 pm. The morning test data shows a reduction of apparent power of about **20 KVA**.

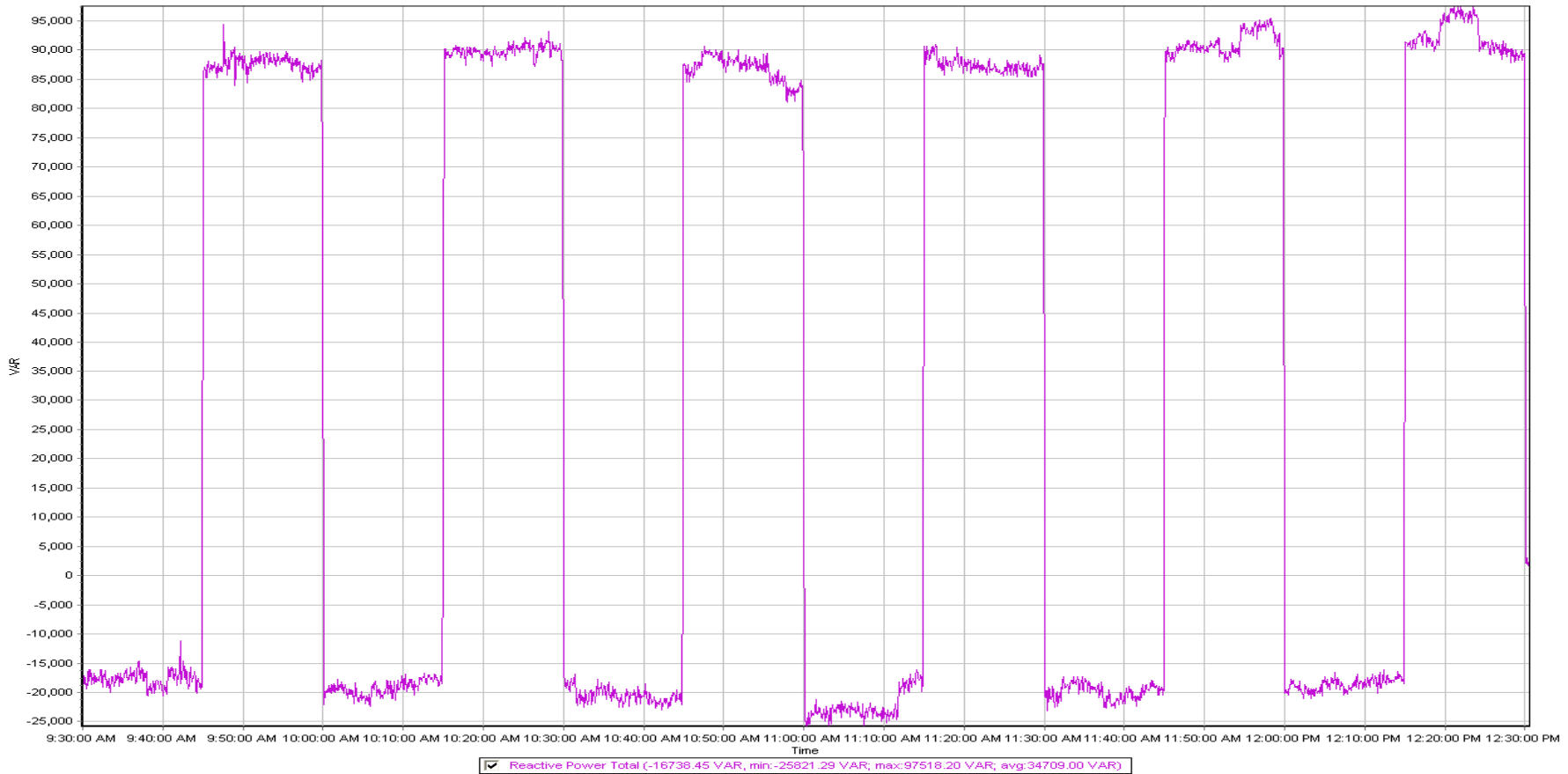
Table 2b

Apparent Power (VA)										
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec
Interval Time Frame	Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition	Change At Transition
12:45:01pm 1:00:00pm	on	302070.07								
1:00:01pm 1:15:02pm	off		322940.57		20870.50	8632.28	8769.50	15859.65	16884.90	21472.72
1:15:03pm 1:30:08pm	on	295848.79		27091.78		17481.47	28909.94	21348.57	26932.19	19004.10
1:30:09pm 1:45:03pm	off		331778.88		35930.09	22281.69	20373.94	14945.75	25638.91	25373.78
1:45:04pm 2:00:01pm	on	257719.52		74059.36		15569.94	21081.66	14074.32	106208.60	20384.25
2:00:02pm 2:15:00pm	off		354261.43		96541.91	93276.69	89615.72	97028.78	90907.72	94449.56
2:15:01pm 2:25:01pm	on	345773.73		8487.70		16988.31	28465.15	12145.72	26989.87	-40690.03
Average - System Off		336326.96								
Average - System On		300353.03								
Difference		35973.93								
Transition Avg - On to Off					51114.17	41396.89	39586.39	42611.39	44477.18	47098.69
Transition Avg - Off to On				36546.28		16679.91	26152.25	15856.20	53376.89	19694.18
Average - All Transitions		34693.00								

Table 2b above shows analysis of the Apparent Power data of 4 USES[®] CMES 3D 480 units collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the afternoon of October 26th between 12:45 pm and 2:25 pm. The afternoon test data shows a reduction of apparent power of about 34.6 KVA.

Graph 3a

Jamestown Whole System - Reactive Power 10.26.09
10/26/2009 9:29:59 AM - 10/26/2009 12:30:39 PM

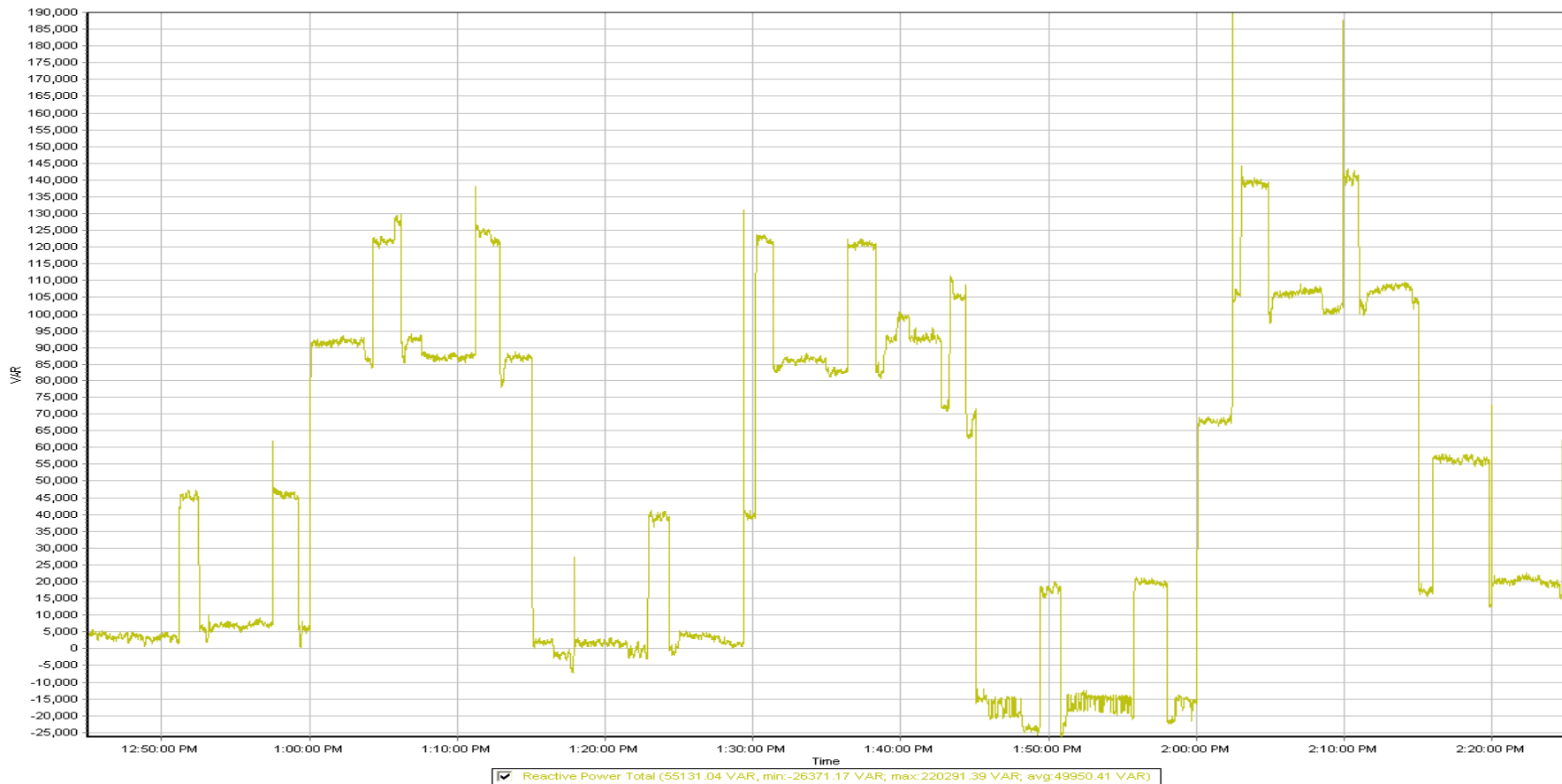


Graph 3a above shows the Reactive Power in KVAR during the morning testing on October 26th between 9:30 AM and 12:30 PM. With 5 USES[®] Model CMES-3D-480 power conditioners operating, the reactive power is reduced an average of **107 KVAR**.

Graph 3b

Jamestown - 4 Units - Reactive Power 10.26.09

10/26/2009 12:45:01 PM - 10/26/2009 2:25:02 PM



Graph 3b above shows the Reactive Power in KVAR during the testing on October 26th between 12:45 PM and 2:25 PM. With 4 USES[®] Model CMES-3D-480 power conditioners operating, the reactive power is reduced an average of **84 KVAR**.

Table 3a

Reactive Power (VAR)										
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition
9:29:59am	9:44:49am	on	-17668.26							
9:44:50am	9:59:49am	off		87649.80		105318.06	105065.36	105310.03	105773.66	105024.82
9:59:50am	10:14:49am	on	-19252.55		106902.35		108184.05	107970.59	107677.07	107827.01
10:14:50am	10:29:49am	off		89868.11		109120.66	108229.06	107106.38	107706.53	107395.25
10:29:50am	10:44:49am	on	-20523.94		110392.05		104729.59	107497.40	106452.86	106881.25
10:44:50am	10:59:49am	off		86789.78		107313.72	108868.47	108655.90	108861.64	105897.12
10:59:50am	11:14:49am	on	-22377.31		109167.09		107678.34	108783.10	107327.48	109323.57
11:14:50am	11:29:54am	off		87424.07		109801.38	109052.15	107543.32	107564.26	107840.89
11:29:55am	11:44:54am	on	-19865.23		107289.30		108322.11	107313.28	106701.08	108452.00
11:44:55am	11:59:49am	off		91228.89		111094.12	108609.98	108570.22	108616.18	107649.65
11:59:50am	12:14:54pm	on	-18630.85		109859.74		110541.15	110540.94	108998.24	108086.50
12:14:55pm	12:29:59pm	off		92317.56		110948.41	108398.55	108065.01	107940.64	107078.55
Average - System Off			89213.04							
Average - System On			-19719.69							
Difference			108932.73							
Transition Avg - On to Off						108932.73	108037.26	107541.81	107743.82	106814.38
Transition Avg - Off to On					108722.11		107891.05	108421.06	107431.35	108114.07
Average - All Transitions			107717.45							

Table 3a above shows analysis of the Reactive Power data of 5 USES[®] CMES 3D 480 units collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the morning of October 26th between 9:30 am and 12:30 pm. The morning test data shows a reduction of reactive power of about **107 KVAR**.

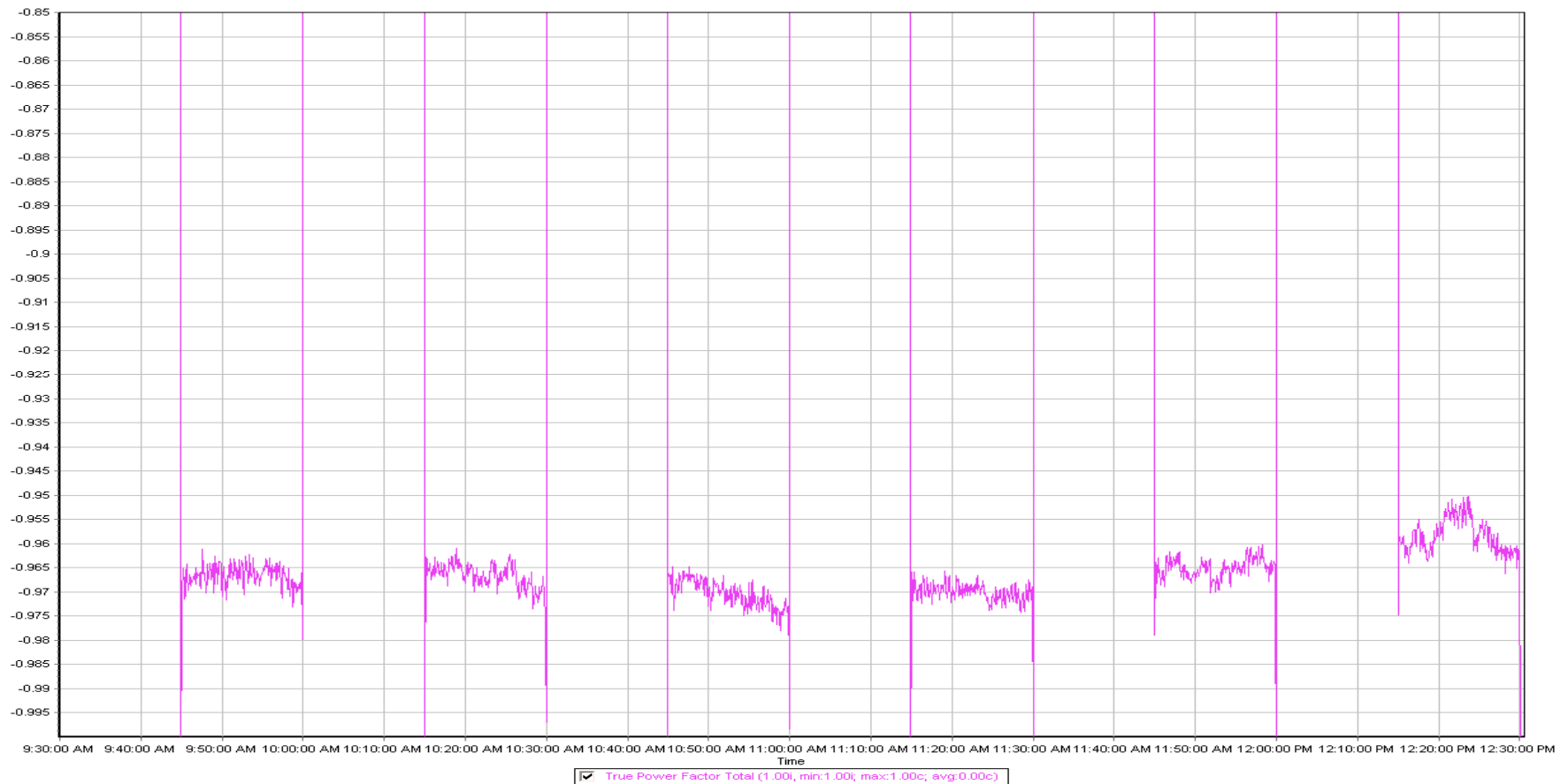
Table 3b

Reactive Power (VAR)											
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec	
Interval Time Frame	Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition	Change At Transition	
12:45:01pm 1:00:00pm	on	13384.37									
1:00:01pm 1:15:02pm	off		97276.40		83892.03	61888.28	86944.26	86130.31	86266.87	86217.33	
1:15:03pm 1:30:08pm	on	7066.92		90209.48		64110.19	84431.46	84787.28	84511.66	84834.46	
1:30:09pm 1:45:03pm	off		95138.58		88071.66	84141.03	84468.66	84361.45	83480.01	82965.77	
1:45:04pm 2:00:01pm	on	-8879.16		104017.74		87973.52	86290.44	86413.59	87418.16	92499.27	
2:00:02pm 2:15:00pm	off		106611.58		115490.74	83468.63	84745.09	83464.38	84675.54	84749.84	
2:15:01pm 2:25:01pm	on	34400.69		72210.89		85648.04	86693.40	87429.99	86535.65	46647.68	
Average - System Off		99675.52									
Average - System On		11493.21									
Difference		88182.32									
Transition Avg - On to Off					95818.14	76499.31	85386.00	84652.05	84807.47	84644.31	
Transition Avg - Off to On				88812.70		79243.92	85805.10	86210.29	86155.16	88666.87	
Average - All Transitions		84207.05									

Table 3b above shows analysis of the Reactive Power data of 4 USES[®] CMES 3D 480 units collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the afternoon of October 26th between 12:45 pm and 2:25 pm. The afternoon test data shows a reduction of reactive power of about **84 KVAR**.

Graph 4a

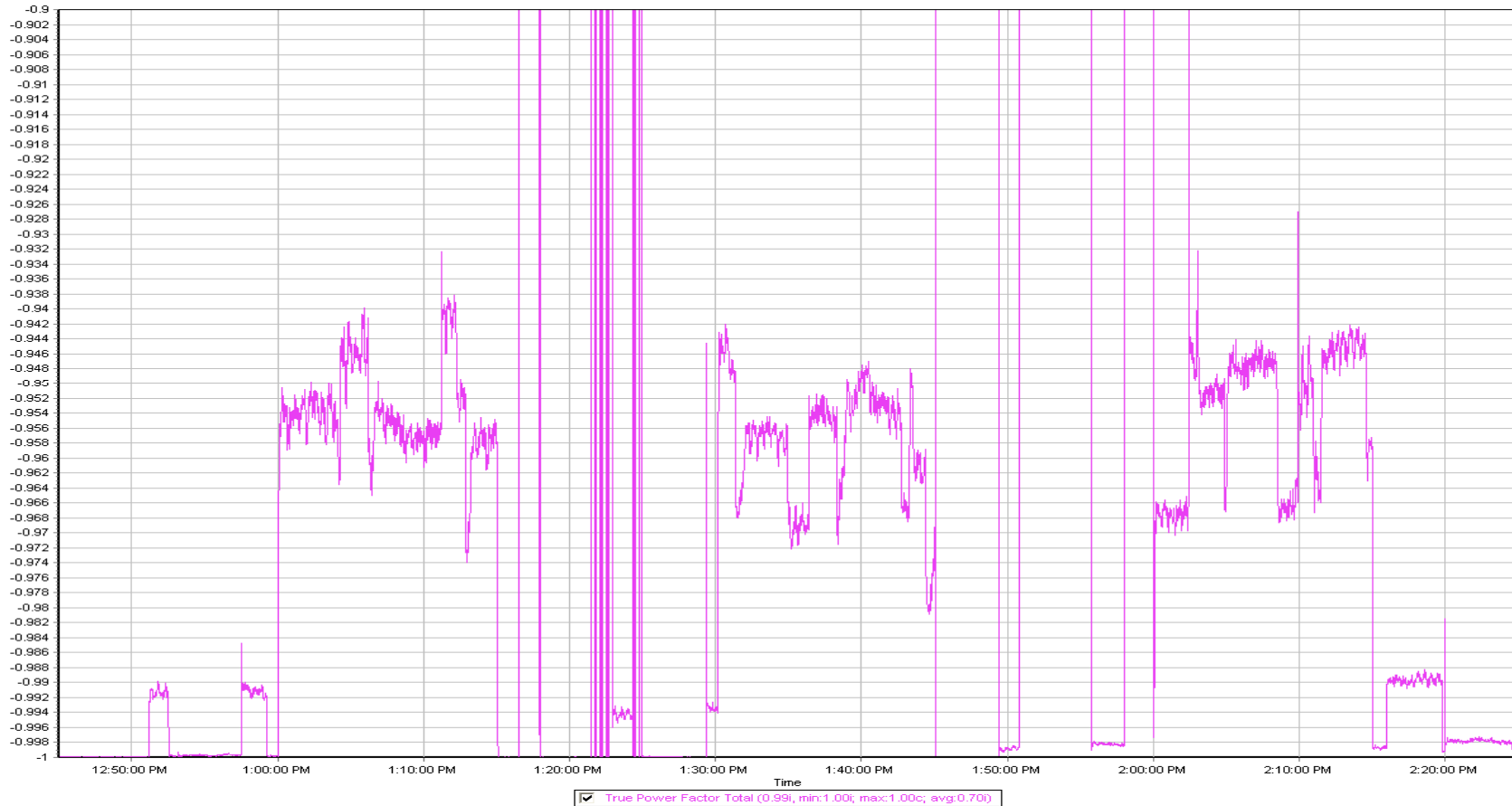
Jamestown Whole System - Power Factor (1) 10.26.09
10/26/2009 9:29:59 AM - 10/26/2009 12:30:39 PM



Graph 4a above shows the Power Factor in decimals during the morning testing on October 26th between 9:30 AM and 12:30 PM. With 5 USES[®] Model CMES-3D-480 power conditioners operating, the power factor is increased from **96.5% to 100%** while slightly leading because of low demand.

Graph 4b

Jamestown - 4 Units - Power Factor 10.26.09
10/26/2009 12:45:01 PM - 10/26/2009 2:25:02 PM



Graph 4b above shows the Power Factor in decimals during the testing on October 26th between 12:45 PM and 2:25 PM. With 4 USES[®] Model CMES-3D-480 power conditioners operating, the power factor is increased from **95.5% to 99.9%** while occasionally leading.

Table 4a

Power Factor										
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition
9:29:59am	9:44:49am	on	1.000							
9:44:50am	9:59:49am	off		0.965		0.035	0.030	0.030	0.030	0.030
9:59:50am	10:14:49am	on	1.000		0.035		0.030	0.030	0.030	0.030
10:14:50am	10:29:49am	off		0.965		0.035	0.040	0.030	0.030	0.030
10:29:50am	10:44:49am	on	1.000		0.035		0.030	0.030	0.030	0.030
10:44:50am	10:59:49am	off		0.970		0.030	0.030	0.030	0.040	0.030
10:59:50am	11:14:49am	on	1.000		0.030		0.030	0.030	0.030	0.030
11:14:50am	11:29:54am	off		0.970		0.030	0.030	0.030	0.030	0.030
11:29:55am	11:44:54am	on	1.000		0.030		0.030	0.030	0.030	0.030
11:44:55am	11:59:49am	off		0.965		0.035	0.040	0.030	0.030	0.030
11:59:50am	12:14:54pm	on	1.000		0.035		0.040	0.040	0.040	0.040
12:14:55pm	12:29:59pm	off		0.955		0.045	0.040	0.040	0.040	0.040
Average - System Off			0.965							
Average - System On			1.000							
Difference			-0.035							
Transition Avg - On to Off						0.035	0.035	0.032	0.033	0.032
Transition Avg - Off to On					0.033		0.032	0.032	0.032	0.032
Average - All Transitions			0.032							

Table 4a above shows analysis of the Power Factor data of 5 USES CMES 3D 480 units collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the morning of October 26th between 9:30 am and 12:30 pm. The morning test data shows power factor up from **96.5% to 100%** while slightly leading.

Table 4b

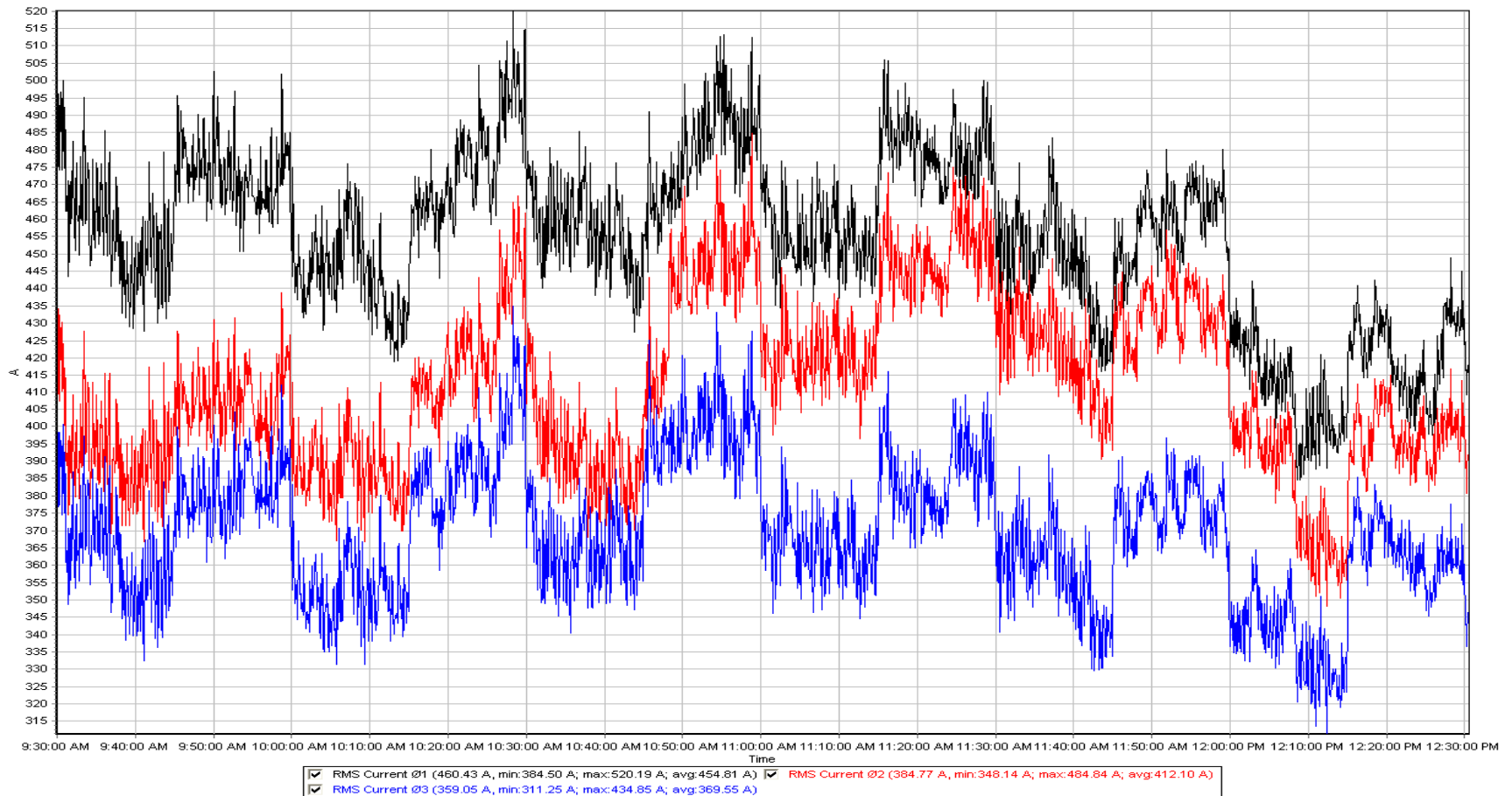
Power Factor										
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition
12:45:01pm	1:00:00pm	on	0.998							
1:00:01pm	1:15:02pm	off		0.954		0.044	0.030	0.050	0.050	0.040
1:15:03pm	1:30:08pm	on	0.999		0.045		0.040	0.040	0.040	0.040
1:30:09pm	1:45:03pm	off		0.957		0.042	0.040	0.050	0.050	0.040
1:45:04pm	2:00:01pm	on	0.999		0.042		0.030	0.030	0.030	0.030
2:00:02pm	2:15:00pm	off		0.955		0.044	0.030	0.030	0.030	0.030
2:15:01pm	2:25:01pm	on	0.996		0.041		0.040	0.040	0.040	0.030
Average - System Off			0.955							
Average - System On			0.998							
Difference			0.043							
Transition Avg - On to Off						0.043	0.033	0.043	0.043	0.040
Transition Avg - Off to On					0.043		0.037	0.037	0.037	0.033
Average - All Transitions			0.038							

Table 4b above shows analysis of the Power Factor data of 4 USES[®] CMES 3D 480 units collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the afternoon of October 26th between 12:45 pm and 2:25 pm. The afternoon test data shows a power factor up from **95.5% to 99.9%**, while occasionally leading.

Graph 5a

Jamestown Whole System - RMS Current 10.26.09

10/26/2009 9:29:59 AM - 10/26/2009 12:30:39 PM

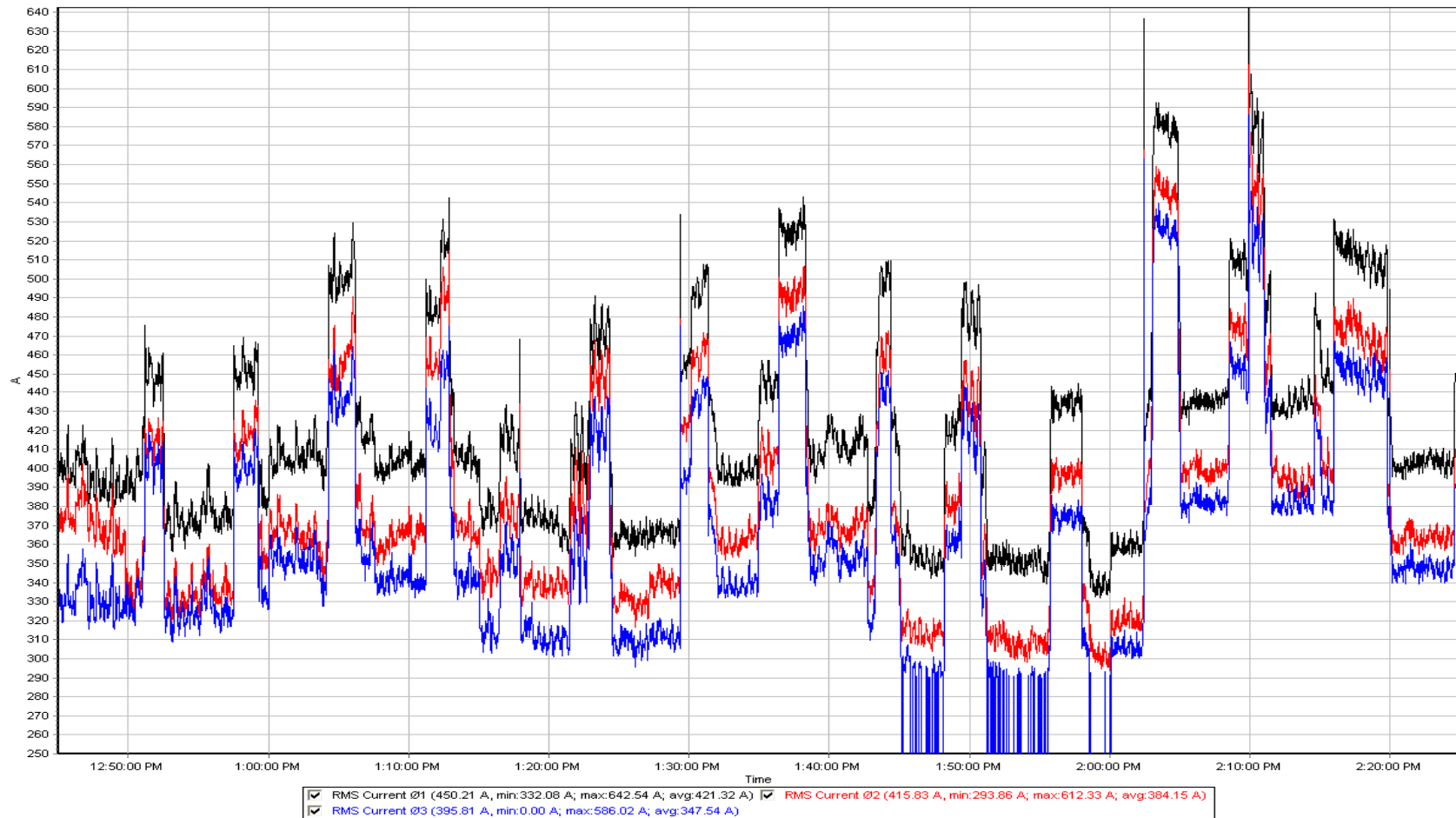


Graph 5a above shows the Current in Amps during the morning testing on October 26th between 9:30 AM and 12:30 PM. With 5 USES[®] Model CMES-3D-480 power conditioners operating, the current is reduced by **26.35 amps**.

Graph 5b

Jamestown - 4 Units - RMS Current 10.26.09

10/26/2009 12:45:01 PM - 10/26/2009 2:25:02 PM



Graph 5b above shows the Current in Amps during the testing on October 26th between 12:45 PM and 2:25 PM. With 4 USES[®] Model CMES-3D-480 power conditioners operating, the current is reduced by **24.68 amps**.

Table 5a

RMS Current (Amps)											
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec	
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition	Change At Transition
9:29:59am	9:44:49am	on	404.69								
9:44:50am	9:59:49am	off		421.38		16.69	11.09	14.86	4.49	22.48	17.45
9:59:50am	10:14:49am	on	394.38		27.00		23.65	26.75	21.71	8.87	23.10
10:14:50am	10:29:49am	off		429.47		35.09	14.35	30.38	26.91	29.46	29.91
10:29:50am	10:44:49am	on	404.62		24.85		55.28	37.95	36.74	46.85	41.19
10:44:50am	10:59:49am	off		439.51		34.89	4.26	4.86	-4.67	43.25	8.41
10:59:50am	11:14:49am	on	413.32		26.19		27.13	21.89	34.16	16.26	25.64
11:14:50am	11:29:54am	off		438.52		25.20	7.75	20.50	28.94	32.71	23.83
11:29:55am	11:44:54am	on	408.23		30.29		9.62	21.38	36.29	2.75	26.97
11:44:55am	11:59:49am	off		422.78		14.55	28.10	38.49	40.01	37.02	41.65
11:59:50am	12:14:54pm	on	376.45		46.33		25.33	25.35	28.84	30.07	26.84
12:14:55pm	12:29:59pm	off		394.24		17.79	30.45	38.21	31.52	35.20	41.54
Average - System Off			424.32								
Average - System On			400.28								
Difference			24.03								
Transition Avg - On to Off						24.04	16.00	24.55	26.37	33.35	27.13
Transition Avg - Off to On					30.93		28.20	26.66	31.55	20.96	28.75
Average - All Transitions			26.35								

Table 5a above shows analysis of the Current collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the morning of October 26th between 9:30 am and 12:30 pm. The morning test data of 5 USES[®] CMES 3D 480 units shows a reduction of current by **26.35 Amps**.

Table 5b

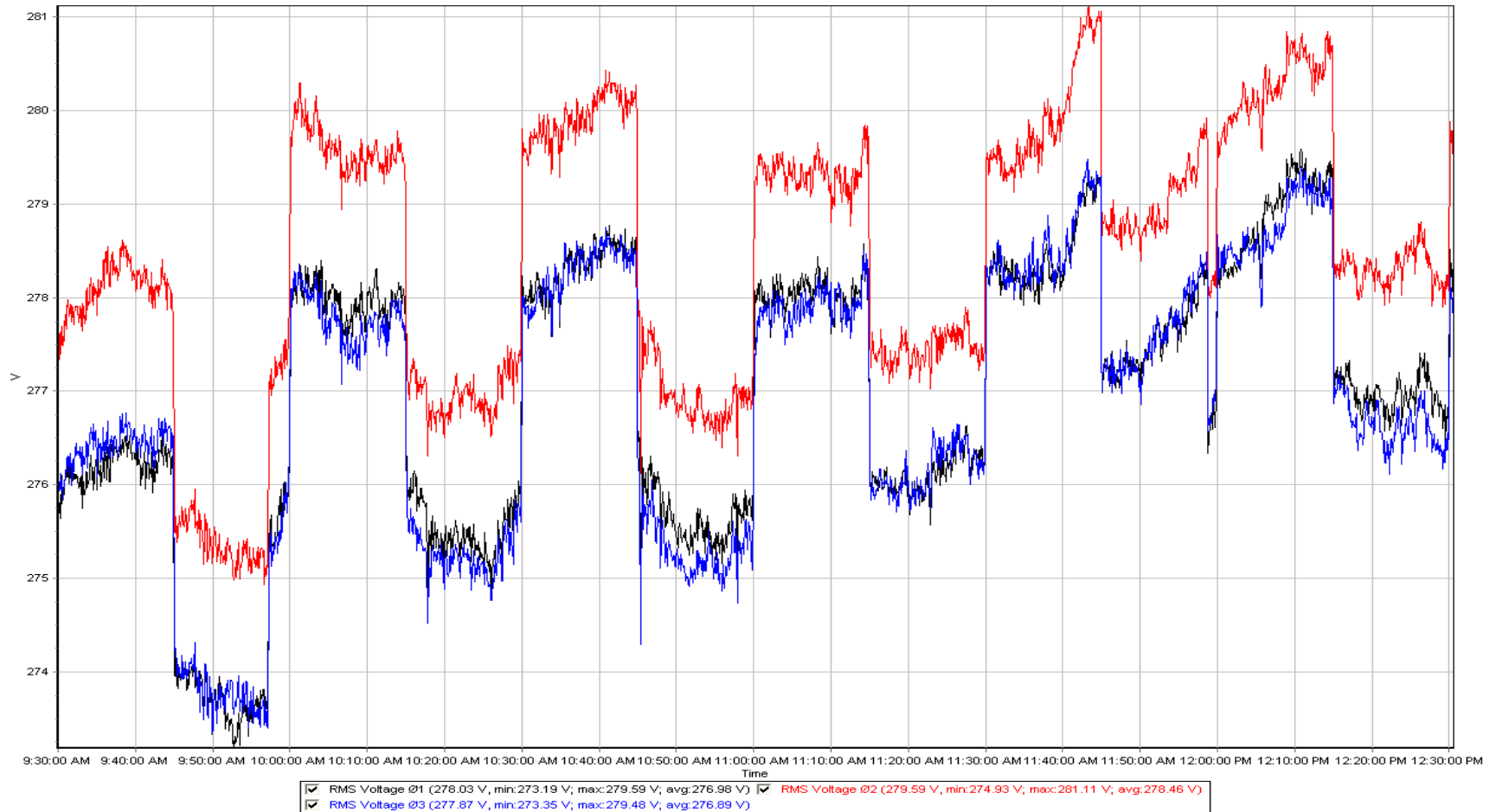
RMS Current (Amps)										
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec
Interval Time Frame	Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition	Change At Transition
12:45:01pm 1:00:00pm	on	369.96								
1:00:01pm 1:15:02pm	off		396.99		27.03	11.75	12.51	21.00	22.25	27.85
1:15:03pm 1:30:08pm	on	362.66		34.33		22.26	36.50	27.81	33.98	24.84
1:30:09pm 1:45:03pm	off		407.32		44.66	30.13	27.82	21.25	34.53	34.64
1:45:04pm 2:00:01pm	on	349.67		57.65		20.15	26.88	18.89	34.38	26.15
2:00:02pm 2:15:00pm	off		432.02		82.35	17.96	13.69	22.43	14.96	19.22
2:15:01pm 2:25:01pm	on	420.21		11.81		23.00	36.53	16.95	34.74	-47.77
Average - System Off		412.11								
Average - System On		375.63								
Difference		36.49								
Transition Avg - On to Off					51.35	19.95	18.01	21.56	23.91	27.24
Transition Avg - Off to On				34.60		21.80	33.30	21.22	34.37	25.50
Average - All Transitions		24.68								

Table 5b above shows analysis of the Current data collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the afternoon of October 26th between 12:45 pm and 2:25 pm. The afternoon test data of 4 USES[®] CMES 3D 480 units shows a reduction of current by **24.68 Amps**.

Graph 6a

Jamestown Whole System - RMS Voltage 10.26.09

10/26/2009 9:29:59 AM - 10/26/2009 12:30:39 PM

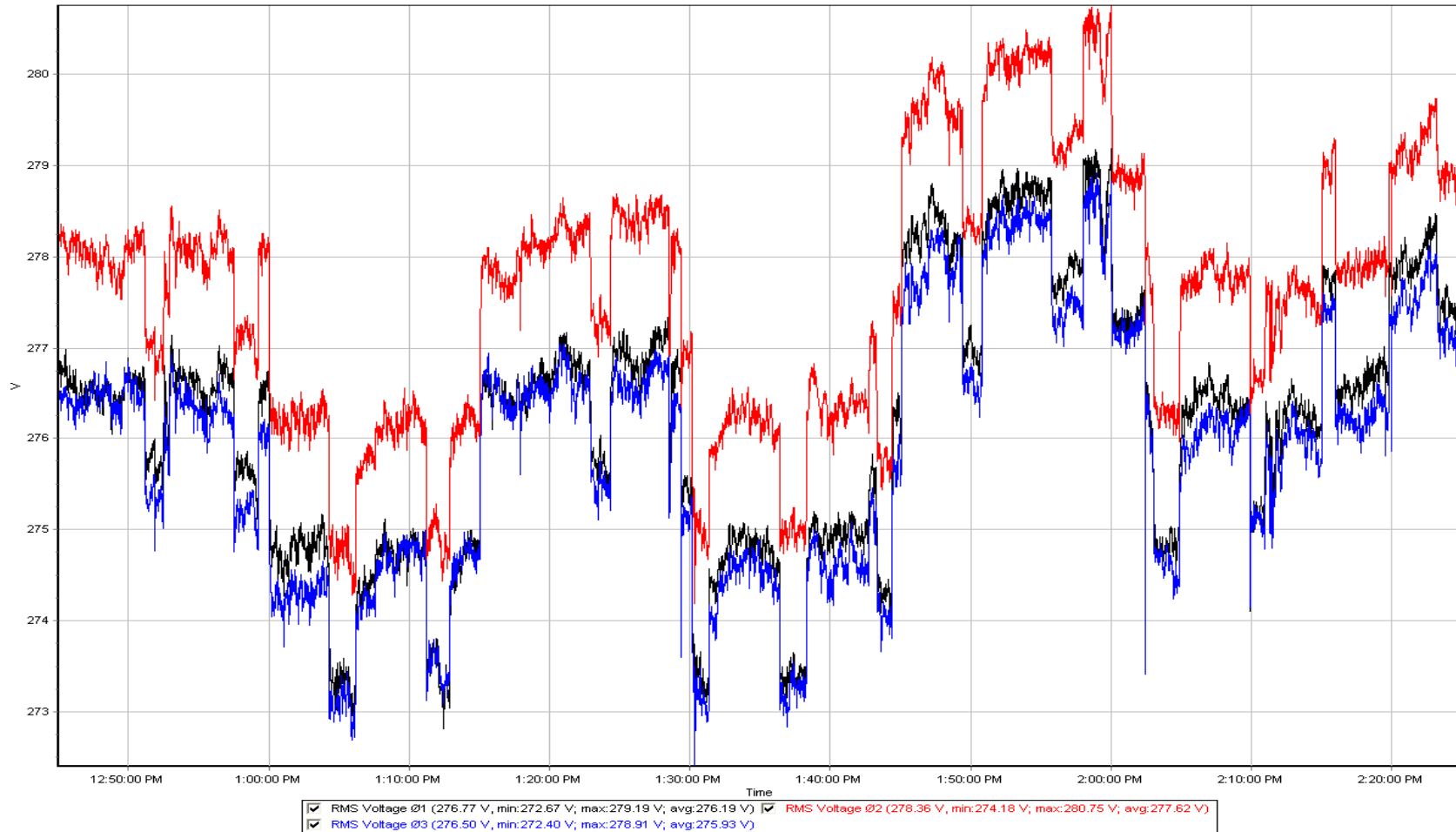


Graph 6a above shows the Voltage in Volts during the morning testing on October 26th between 9:30 AM and 12:30 PM. With 5 USES[®] Model CMES-3D-480 power conditioners operating, the voltage is increased by **1.96 volts per phase**.

Graph 6b

Jamestown - 4 Units - RMS Voltage 10.26.09\

10/26/2009 12:45:01 PM - 10/26/2009 2:25:02 PM



Graph 6b above shows the Voltage in Volts during the testing on October 26th between 12:45 PM and 2:25 PM. With 4 USES[®] Model CMES-3D-480 power conditioners operating, the voltage is increased by **1.84 volts per phase**.

Table 6a

RMS Voltage (Volts)											
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec	
Interval Time Frame		Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition	Change At Transition
9:29:59am	9:44:49am	on	276.90								
9:44:50am	9:59:49am	off		274.62		2.28	1.93	2.01	2.08	2.04	1.91
9:59:50am	10:14:49am	on	278.46		3.84		2.05	2.20	2.29	2.08	2.29
10:14:50am	10:29:49am	off		275.91		2.55	2.09	2.20	2.00	2.11	1.99
10:29:50am	10:44:49am	on	278.84		2.93		2.41	2.23	2.21	2.08	2.15
10:44:50am	10:59:49am	off		275.97		2.87	2.05	2.19	2.32	2.77	2.51
10:59:50am	11:14:49am	on	278.43		2.46		2.20	2.35	2.54	2.51	2.49
11:14:50am	11:29:54am	off		276.57		1.86	2.15	2.31	2.35	2.37	2.29
11:29:55am	11:44:54am	on	278.98		2.41		2.07	1.97	1.98	2.02	2.18
11:44:55am	11:59:49am	off		277.98		1.00	2.35	2.11	2.10	2.23	2.29
11:59:50am	12:14:54pm	on	279.32		1.34		1.61	1.25	1.54	1.51	1.39
12:14:55pm	12:29:59pm	off		277.31		2.01	0.05	0.15	0.14	0.22	0.09
Average - System Off		276.39	x 1.73	478.99							
Average - System On		278.49	x 1.73	482.62							
Difference				3.63063							
Transition Avg - On to Off						2.10	1.77	1.83	1.83	1.96	1.85
Transition Avg - Off to On					2.60		2.07	2.00	2.11	2.04	2.10
Average - All Transitions		1.96	x 1.73	3.38859							

Table 6a above shows analysis of the Voltage collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the morning of October 26th between 9:30 am and 12:30 pm. The morning test data of 5 USES[®] CMES 3D 480 units shows an increase of voltage by **1.96 Volts per phase**.

Table 6b

RMS Voltage (Volts)										
Intervals				Full Interval		Instant	15 Sec	30 Sec	45 Sec	60 Sec
Interval Time Frame	Status	System On Average	System Off Average	Difference Off to On	Difference On to Off	Change At Transition	Change At Transition	Change At Transition	Change At Transition	Change At Transition
12:45:01pm 1:00:00pm	on	276.79								
1:00:01pm 1:15:02pm	off		274.80		1.99	1.19	1.86	1.86	1.87	1.97
1:15:03pm 1:30:08pm	on	276.99		2.19		1.08	2.00	2.11	1.87	1.93
1:30:09pm 1:45:03pm	off		274.98		2.01	1.93	2.00	2.07	2.25	2.43
1:45:04pm 2:00:01pm	on	278.65		3.67		1.76	1.87	2.04	2.13	2.13
2:00:02pm 2:15:00pm	off		276.59		2.06	1.67	1.61	1.73	1.57	1.60
2:15:01pm 2:25:01pm	on	277.62		1.03		1.60	1.72	1.61	1.74	0.42
Average - System Off	275.46	x 1.73	477.37							
Average - System On	277.51	x 1.73	480.93							
Difference			3.56							
Transition Avg - On to Off					2.02	1.60	1.82	1.89	1.90	2.00
Transition Avg - Off to On				2.30		1.48	1.86	1.92	1.91	2.03
Average - All Transitions	1.84	x 1.73	3.19045							

Table 6b above shows analysis of the Voltage data collected by the Amprobe DM-II Pro Multi-Meter and Data-Logger during TIS testing during the afternoon of October 26th between 12:45 pm and 2:25 pm. The afternoon test data of 4 USES[®] CMES 3D 480 units shows an increase of voltage by **1.84 volts per phase**.



Exhibit "6"

Jamestown Public Schools
Jefferson MS/Administration - 195 Martin Rd Jamestown
Twelve Month Billing Analysis
BPU - 024-1668-04

<u>Billing Month</u>	<u>Service Days</u>	<u>Monthly Billed kWh</u>	(A) <u>Monthly KWH Cost</u>	<u>Cost Per kWh</u>	<u>KWH Per Day</u>	<u>Billed Demand (kW)</u>	(B) <u>Billed Demand kW Cost</u>	<u>Cost Per kW</u>	(C) <u>Basic Service Charges</u>	<u>KVARS</u>	(D) <u>Fuel Adjustment Per KWH & Reactive Demand</u>	(A)+(B)+(C)+(D) <u>Total Monthly Electric Bill</u>
2008												
December	30	178,240	\$5,336.51	0.02994	5,941	478.40	\$2,176.72	\$4.55	\$160.00	126.400	\$2,964.13	\$10,637.36
November	31	166,560	\$4,986.81	0.02994	5,373	497.60	\$2,264.08	\$4.55	\$160.00	214.400	\$2,541.97	\$9,952.86
October	30	162,240	\$4,857.47	0.02994	5,408	481.60	\$2,191.28	\$4.55	\$160.00	200.000	\$2,212.65	\$9,421.40
September	31	181,120	\$5,422.73	0.02994	5,843	548.80	\$2,497.04	\$4.55	\$160.00	268.80	\$2,463.73	\$10,543.50
August	31	178,560	\$5,346.09	0.02994	5,760	470.40	\$2,140.32	\$4.55	\$160.00	256.000	\$3,907.89	\$11,554.30
July	30	160,000	\$4,790.40	0.02994	5,333	432.00	\$1,965.60	\$4.55	\$160.00	224.000	\$3,137.60	\$10,053.60
June	31	249,440	\$7,468.23	0.02994	8,046	531.20	\$2,416.96	\$4.55	\$160.00	262.400	\$5,873.26	\$15,918.45
May	30	208,960	\$6,256.26	0.02994	6,965	486.40	\$2,213.12	\$4.55	\$160.00	196.800	\$3,142.02	\$11,771.40
April	31	210,720	\$6,308.96	\$0.03	6,797	436.80	\$1,987.44	\$4.55	\$160.00	190.400	\$4,104.72	\$12,561.12
March	29	220,960	\$6,615.54	0.02994	7,619	440.00	\$2,002.00	\$4.55	\$160.00	124.800	\$4,635.74	\$13,413.28
February	31	259,680	\$7,774.82	0.02994	8,377	462.40	\$2,103.92	\$4.55	\$160.00	118.400	\$5,583.12	\$15,621.86
January	31	204,480	\$6,122.13	0.02994	6,596	406.40	\$1,849.12	\$4.55	\$160.00	113.600	\$4,040.52	\$12,171.77
Total	366	2,380,960	\$71,285.95				\$25,807.60		\$1,920.00		\$44,607.35	\$143,620.90



July 22, 2009

Jefferson Middle School
Jamestown, NY

Attn: Ray Fashano

First complete evaluation billing period for Power Shaver Energy Saving System

Billing Period: 05/28/09 to 06/28/09
Reductions compared to same period 2008
kWh: -112,480 = -45% reduction
kW: -25.6 = -5% reduction
kVarh: -112 = -43% reduction
Cost: -\$7,512.54 = -47.2% reduction
Cost per kWh: 0.06137c - .00244c compared to 2008
Average Temperature: 61.34 degree in 2009, -4.6% compared to 2008

Jefferson Middle School shows a significant reduction in kWh, demand and kVarh compared to 2008. The weather did cause the mechanical equipment to run fewer hours and I believe other control processes may have contributed to the reduction. It is also my understanding that June 2008 was a start up month for the new facility and was not controlled well yet.

From past experience and stated capabilities of our energy saving units, of the \$6,883.00 reductions for this month over last year, I estimate that approximately 10% to 17% attributed to the Power Shaver System depending on actual run time of the facility. Future use evaluations will reveal significant annual average reductions.

Sincerely,

John Knapp

Power Shaver



August 24, 2009

Jefferson Middle School
Jamestown, New York

Attn: Ray Fashano

Second complete evaluation billing period for Power Shaver Energy Saving System

Billing period: 6-28-09 to 7-28-09
Reductions compared to same period 2008

kWh:	-33,080	=	-20.7%
kW:	-8	=	-3.5%
rkVarh:	-116	=	-52%
Cost:	-\$1,625.60	=	-16.4%
Cost per kWh:	0.06640	=	+ 0.00357 compared to 2008
Average temperature:	63.1 degrees in 09,	=	- 4.36 compared to 2008

Jefferson Middle School is continuing to yield reductions in use and cost compared to last July that is a more average representation of their use even with a slight increase in cost. The weather was cooler on average this year because of 9 days that crept just over 70 degrees last year

Thank you

John Knapp

Power Shaver



October 1, 2009

Jefferson Middle School
Jamestown, New York

Attn: Ray Fashano

Third complete evaluation billing period for Power Shaver Energy Saving System

Billing period: 7-28-09 to 8-28-09

Reductions compared to same period 2008

kWh: -51,360 = -29%

kW: +24 = +5%%

rkVarh: -97 = -37%

Cost: -\$ 2,791.07 = -24.2%

Cost per kWh: 0.06889 = + 0.00419 compared to 2008

Average temperature: 67 degrees in 09, +3.1 degrees compared to 2008

Jefferson Middle School is continuing to yield reductions in use and cost compared to last August that is a more average representation of their use even with a slight increase in cost. The weather was Warmer on average over 2008.

Thank you,

John Knapp

Power Shaver





October 22, 2009

Jefferson Middle School
Jamestown, New York

Attn: Ray Fashano

Fourth complete evaluation billing period for Power Shaver Energy Saving System

Billing period: 8-28-09 to 9-28-09

Reductions compared to same period 2008

kWh:	-42,720	=	-26.3%
kW:	+15	=	+2.8%
rkVarh:	-115	=	-42.5%
Cost:	-\$ 1,721.04	=	-16.4%
Cost per kWh:	0.06374	=	+ 0.00552 compared to 2008
Average temperature:	60.5 degrees	=	- .56 degrees compared to 2008

Jefferson Middle School is continuing to yield reductions in use and cost compared to last September that is a more average representation of their use even with a slight increase in cost. The weather was Cooler on average over 2008.

Thank you,

John Knapp

Power Shaver



November 19, 2009

Jefferson Middle School
Jamestown, New York

Attn: Ray Fashano

Fifth complete billing period evaluation for Power Shaver Energy Saving System

Billing period: 9-28-09 to 10-28-09

Reductions compared to same period 2008

kWh:	-27,840	=	-17.2%
kW:	-8	=	-1.7 %
rkVarh:	-97.6	=	-48.5%
Cost:	-\$ 995.35	=	-10.6%
Cost per kWh:	0.06269	=	+0.00462 compared to 2008
Average temperature:	50.8 degrees	=	+2.39 degrees compared to 2008

Jefferson Middle School is continuing to yield reductions in use and cost compared to last October that is a more average representation of their use even with a slight increase in cost. The weather was warmer on average over 2008. During Power Shavers recent Timed Interval Sampling measurements at James town Middle School on October 26th 2009, it was necessary to turn our system on and off every 15 minutes for the 6 hour measuring period. The potential negative effect should have been that the kW demand rate for the month was increased but in this case, due to timing, this did not happen in fact there was a slight reduction in demand over last year.

This evaluation completes Power Shaver Energy Saving Systems billing evaluations to verify the energy savings systems performance. Power Shaver is pleased with our systems performance and happy to have assisted James town School District in reducing their operational electric consumption and costs.

Thank you

John Knapp

President
Power Shaver



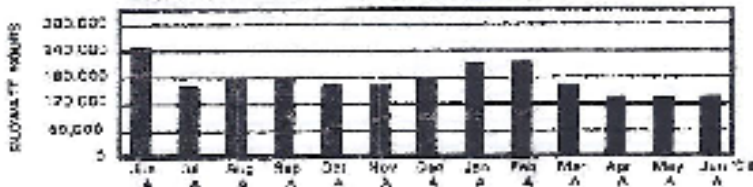
CITY OF JAMESTOWN BOARD OF PUBLIC UTILITIES PO Box 700, Jamestown, New York 14702-0700 (716) 661-1660

USAGE SUMMARY	KVA METER	KW METER	ELECTRIC METER	WATER METER	BOARD OF EDUCATION		
Meter #	48023129	48006130	48006129	012109/01	195 MARTIN RD JAMESTOWN		
Multiplier			100	1.000	Industrial: SCJ		
Current Reading	31.42 ACT	84.11 ACT	31,890 ACT	803 ACT	JEFF. Account # 024-1668-04		
Previous Reading	32.48 ACT	80.95 ACT	31,074 ACT	693 ACT			
Consumption	156.40	505.60	136,906	118			
CURRENT CHARGES SUMMARY	RATE	ELECTRIC	WATER	WASTEWATER	SOLID WASTE	TOTAL	
Basic Service Charge		160.00		24.32	24.45	208.77	
Demand Charge Per KW	4.55	2,300.48				2,300.48	
Reactive Demand Charge	.28	.00				.00	
Energy Charge Per KWH	.02294	4,100.58				4,100.58	
Fuel Adjustment Per KWH	.01216	1,668.43				1,668.43	
New York State Assessment	.00131	179.42				179.42	
Sales Tax		.00				.00	
Per Unit Charge Water	1.73		198.95			198.95	
3 (Hydrantia)	7.42		22.26			22.26	
Per Unit Charge Wastewater	3.12			358.80		358.80	
Current Charges Total						\$9,034.59	
PAYMENT HISTORY							
Payment(s) Received		8,719.14	155.57	221.01		\$9,095.72	
ACCOMPLISH SUMMARY		06/30/2009	06/30/2009	06/30/2009			
Current Amount Due		8,405.91	245.53	383.25		\$9,034.59	
Amount Paid Due		.00	.00	.00		\$0.00	
Amount By Division Due Upon Receipt		8,405.91	245.53	383.25		\$9,034.59	

628⁷⁸

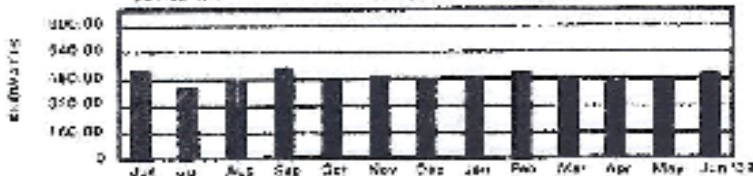
Electric Consumption History

This Month Last Year: 268,840 KWH
Last Month: 131,000 KWH
This Month: 138,980 KWH



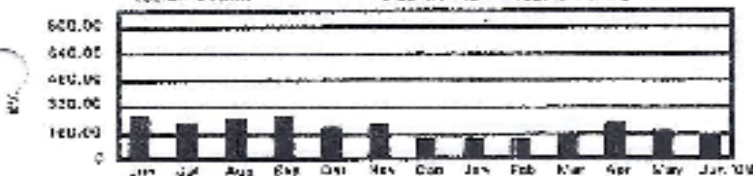
KW Actual Demand History

This Month Last Year: 831.20 KW
Last Month: 482.10 KW
This Month: 508.90 KW



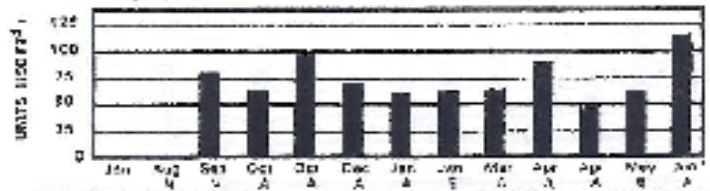
KVA Actual Demand History

This Month Last Year: 262.40 KVARs
Last Month: 179.23 KVARs
This Month: 180.40 KVARs



Water/Wastewater Consumption History

This Month Last Year: 0 Units
Last Month: 83 Units
This Month: 118 Units



Messages: Billing Date: 07/18/2009

- * Billing period from: 05/28/2009 to 06/28/2009 31 days!
- * To avoid 1.5% late charge, pay by 08/10/2009
- * Make checks payable to Jamestown City Treasurer PO Box 700, Jamestown, New York 14702-0700
- * The BPU has placed a new line on customer bills known as the "New York State Assessment" as a result of a recent, additional State of New York fee charged to the BPU and other utilities in the state.

FAX (916) 988-6180
c/o J. KNAPP

From R. STINEMAN, JPS

Jamestown, NY

CITY OF JAMESTOWN BOARD OF PUBLIC UTILITIES PO Box 700, Jamestown, NY 14702-0700 (716) 661-1660

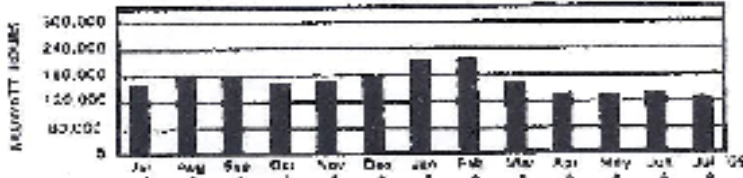
USAGE SUMMARY	RKVA METER	KW METER	ELECTRIC METER	WATER METER	BOARD OF EDUCATION
Meter #	1620312R	4000123	49506139	02218782	<i>Exhibit C</i>
Multipier			150	1000	
Current Reading	34.18 ACV	36.79 ACV	32,657 ACV	575 CWT	188 MARTIN RD JAMESTOWN
Previous Reading	33.42 ACV	34.14 ACV	31,800 ACV	538 CWT	Industry: BGC
Consumption	128.80	424.61	126,920	07	JEFF Account # 024-1668-04

CURRENT CHARGES SUMMARY	RATE	ELECTRIC	WATER	WASTEWATER	SOLID WASTE	TOTAL
Basic Service Charge		160.00		24.32	24.43	208.77
Demand Charge Per KVA	4.55	1,929.20				1,929.20
Reactive Demand Charge	.28	.00				.00
Energy Charge Per KWH	.02994	3,770.04				3,770.04
Fuel Adjustment Per KWH	.01909	2,403.81				2,403.81
New York State Assessment	.00131	179.42				179.42
Sales Tax		.00				.00
Per Unit Charge Water	1.73		115.91			115.91
3 Hydrants	7.42		22.26			22.26
Per Unit Charge Wastewater	3.12			209.04		209.04
Current Charges Total						\$6,838.65

PAYMENT HISTORY					
Payment(s) Received		8,405.91	245.53	363.25	\$9,034.69
		07/29/2009	07/29/2009	07/29/2009	
ACCOUNT SUMMARY					
Current Amount Due		8,428.01	152.49	233.49	\$8,823.99
Amount Past Due		.00	.00	.00	\$0.00
Amount By Division Due Upon Receipt		8,428.01	152.49	233.49	\$8,823.99

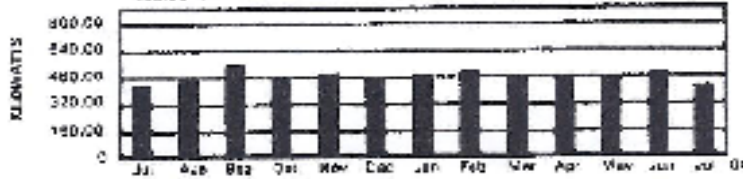
Electric Consumption History

This Month Last Year This Month
162,000 kWh 151,800 kWh 125,820 kWh



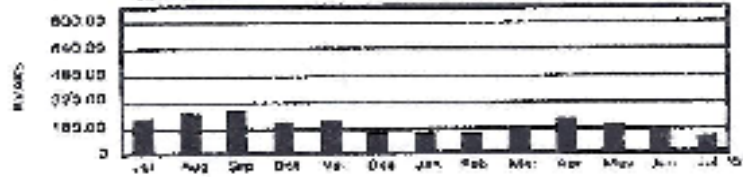
KW Actual Demand History

This Month Last Year This Month
432.00 KW 505.60 KW 424.00 KW



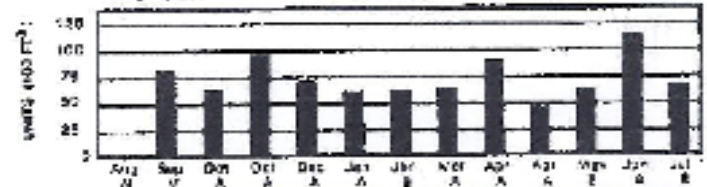
RKVA Actual Demand History

This Month Last Year This Month
324.00 RKVA 330.40 RKVA 100.00 RKVA



Water/Wastewater Consumption History

This Month Last Year This Month
0 Units 116 Units 87 Units



Messages: Billing Date: 08/14/2008

- Billing period from: 08/28/2008 to 07/28/2009 30 days!
- To avoid 1.5% late charge, pay by 09/08/2009
- Make checks payable to Jamestown City Treasurer PO Box 700, Jamestown, New York 14702-0700
- The BPU has placed a new line on customer bills known as the "New York State Assessment" as a result of a recent, additional State of New York fee charged to the BPU and other utilities in the state.

g/o JOHN KUTAP
FAX # 916-988-6180
SENT R. STINEMAN
AUG 19, 2009

CITY OF JAMESTOWN BOARD OF PUBLIC UTILITIES PD Box 700, Jamestown, New York 14702-0700 (716) 861-1660

USAGE SUMMARY	RKVA METER	KW METER	ELECTRIC METER	WATER METER	IS
Meter #	48628122	48628122	48628129	02109792	
Multiplier			100	1.000	
Current Reading	39.26 ACT	82.88 ACT	33.462 ACT	926 ACT	
Previous Reading	36.10 ACT	85.79 ACT	32.667 ACT	875 EST	
Consumption	149.01	444.00	127.200	41	

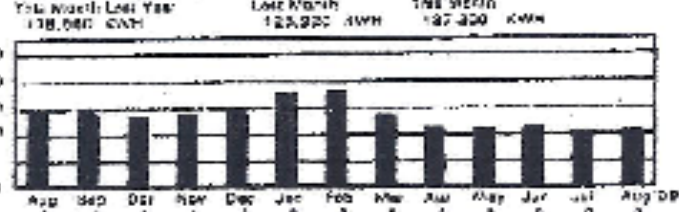
BOARD OF EDUCATION
199 MARTIN RD JAMESTOWN
Industrial: SC3
JEFF. Account # 024-1688-04

CURRENT CHARGES SUMMARY	RATE	ELECTRIC	WATER	WASTEWATER	SOLID WASTE	TOTAL
Basic Service Charge		160.00		24.37	24.45	208.77
Demand Charge Per KW	4.55	2,249.52				2,249.52
Reactive Demand Charge	.28	1.34				1.34
Energy Charge Per KWH	.02994	3,808.37				3,808.37
Fuel Adjustment Per KWH	.01859	2,377.37				2,377.37
New York State Assessment	.00131	166.63				166.63
Sales Tax		.00				.00
Per Unit Charge Water	1.73		70.93			70.93
3 Hydrants	7.62		22.26			22.26
Per Unit Charge Wastewater	3.12			127.92		127.92
Current Charges Total						89,033.11

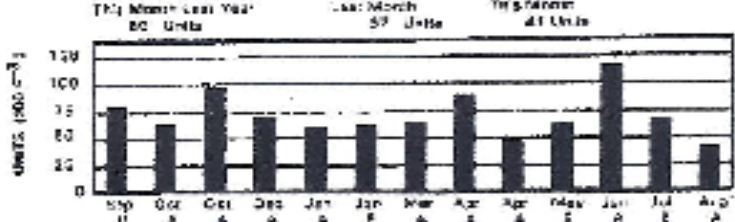
PAYMENT HISTORY	AMOUNT	DATE	AMOUNT	DATE	TOTAL
Payment(s) Received	8,426.01	09/01/2009	162.49	09/01/2009	86,823.99
Current Amount Due	8,763.23		117.51		89,033.11
Amount Past Due	.00		.00		8.00
Amount By Division Due Upon Receipt	8,763.23		117.51		89,033.11

269.58 ✓

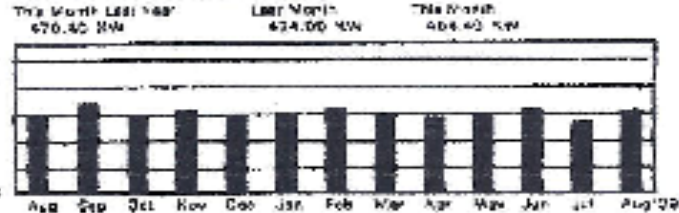
Electric Consumption History



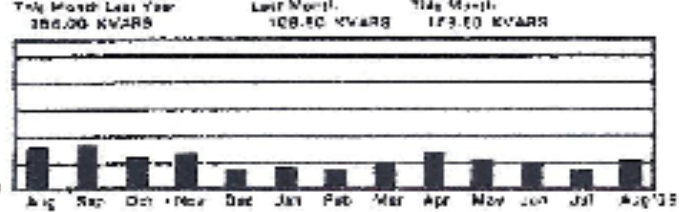
Water/Wastewater Consumption History



KW Actual Demand History



RKVA Actual Demand History



Messages: Billing Date: 09/16/2009

- * Billing period from: 07/28/2009 to 08/28/2009 (31 days)
- * To avoid 1.0% late charge, pay by 10/12/2009
- * Make checks payable to Jamestown City Treasurer PO Box 700, Jamestown, New York 14702-0700
- * The BPU has placed a new lien on customer bills known as the "New York State Assessment" as a result of a recent, additional State of New York fee charged to the BPU and other utilities in the state.

Fax JOHN KNAPP
916-988-6180
From R. STINEMAN, JPS

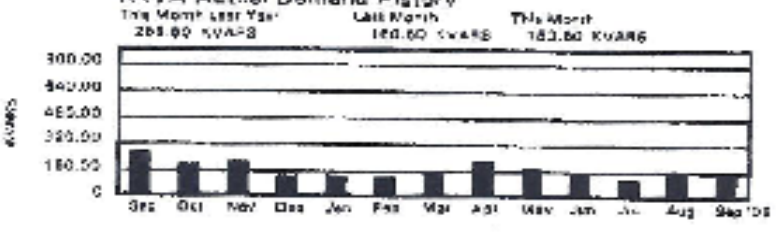
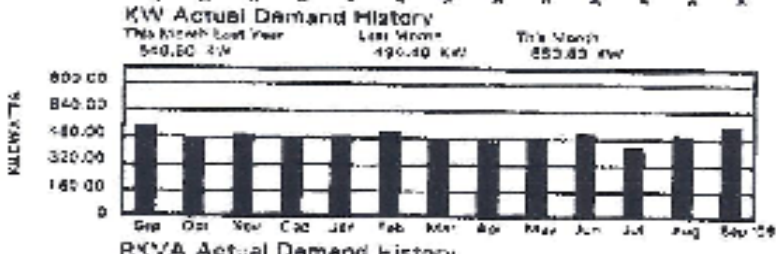
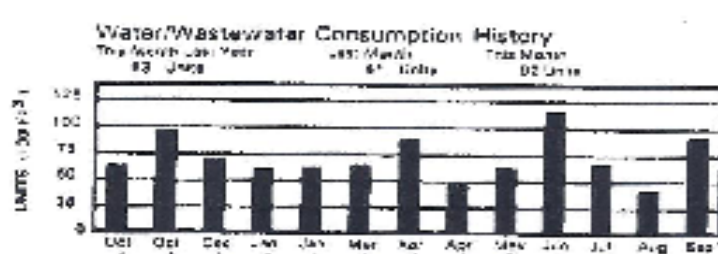
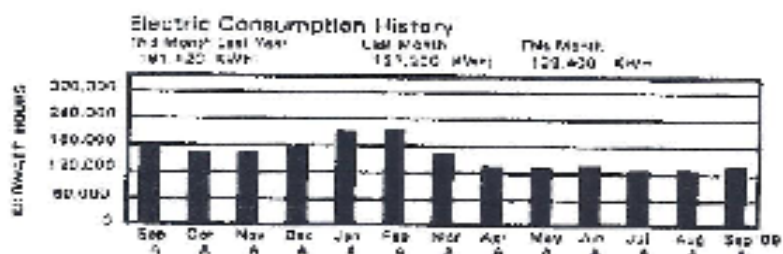
CITY OF JAMESTOWN BOARD OF PUBLIC UTILITIES PO Box 700, Jamestown, New York 14702-0700 (716) 861-1800

USAGE SUMMARY	KVA METER	KW METER	ELECTRIC METER	WATER METER	IN
Meter #	4880120	4880121	4880123	02210202	
Multiplier			100	1.000	
Current Reading	35.12 ACT	93.31 ACT	31,327 ACT	1,108 ACT	
Previous Reading	35.15 ACT	89.89 ACT	31,462 ACT	116 ACT	
Consumption	153.60	553.60	138,400	92	

BOARD OF EDUCATION
 195 MARTIN RD JAMESTOWN
 Industrial BLDG
 JEFF
 Account # **D24-1668-04**

CURRENT CHARGES SUMMARY	RATE	ELECTRIC	WATER	WASTEWATER	SOLID WASTE	TOTAL
Basic Service Charge		160.00	24.32	24.45		208.77
Demand Charge Per KW	4.55	2,518.88				2,518.88
Reactive Demand Charge	.28	.00				.00
Energy Charge Per KWH	0.2994	4,143.70				4,143.70
Fuel Adjustment Per KWH	0.1314	1,818.58				1,818.58
New York State Assessment	0.0131	181.30				181.30
Sales Tax		.00				.00
Per Unit Charge Water	1.73		159.15			159.15
3 Hydrant/ft	7.42		22.26			22.26
Per Unit Charge Wastewater	3.12			287.04		287.04
Current Charges Total						\$9,339.69

PAYMENT HISTORY	AMOUNT	DATE	TOTAL
Payment(s) Received	8,763.23	10/02/2009	8,763.23
ACCOUNT SUMMARY			
Current Amount Due	8,822.46		8,822.46
Amount Past Due	.00		.00
Amount By Division Due Upon Receipt	8,822.46		8,822.46



Messages: Billing Date: 10/18/2009

- * Billing period from: 09/28/2009 to 09/28/2009 31 days!
- * To avoid 1.5% late charge, pay by 11/08/2009
- * Make checks payable to Jamestown City Treasurer PO Box 700, Jamestown, New York 14702-0700
- * The BRU has placed a new line on customer bills known as the "New York State Assessment" as a result of a recent, additional State of New York fee charged to the BRU and other utilities in the state.

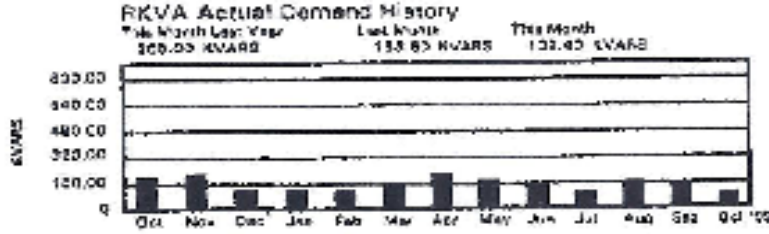
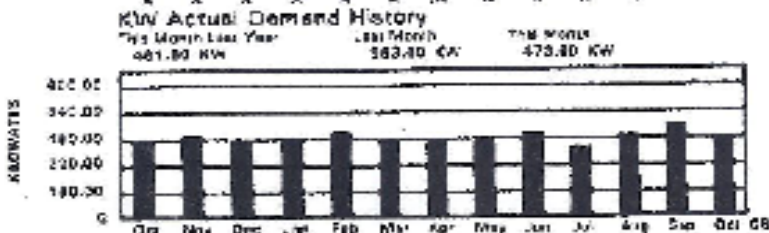
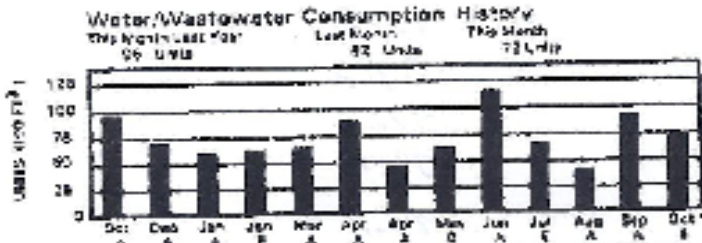
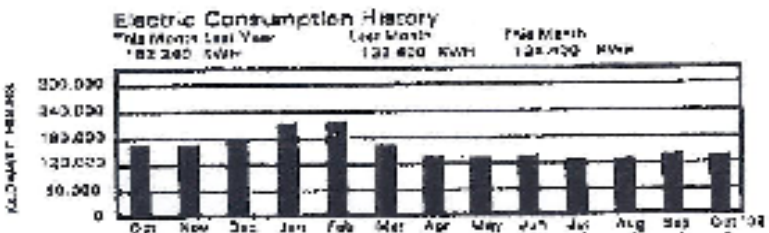
CITY OF JAMESTOWN BOARD OF PUBLIC UTILITIES PO Box 700, Jamestown, New York 14702-0700 (716) 881-1680

USAGE SUMMARY	RKVA METER	KW METER	ELECTRIC METER	WATER METER	BOARD OF EDUCATION
Meter #	4880129	4880812	4880812	022102702	185 MARTIN RD JAMESTOWN
Multiplier			100	1.000	INVOICE # 603
Current Reading	36.76 ACT	95.20 ACT	38.167 ACT	1.083 ACT	Account # 024-1688-04
Previous Reading	36.13 ACT	93.38 ACT	34.327 ACT	1.008 ACT	
Consumption	502.40 KWARS	473.82 KWARS	134.400 kWh	0.075 Units	

CURRENT CHARGES SUMMARY	RATE	ELECTRIC	WATER	WASTEWATER	SOLID WASTE	TOTAL
Basic Service Charge		150.00		24.32	24.45	209.77
Demand Charge Per KW	4.55	2,154.88				2,154.88
Reactive Demand Charge	.28	.00				.00
Energy Charge Per KWH	0.0294	4,023.94				4,023.94
Fuel Adjustment Per KWH	0.1422	1,911.17				1,911.17
New York State Assessment	0.0131	176.06				176.06
Sales Tax		.00				.00
Per Unit Charge Water	1.73		124.56			124.56
3 Hydrant/af	7.42		22.26			22.26
Per Unit Charge Wastewater	3.12			224.64		224.64
Current Charges Total						13,846.25

PAYMENT HISTORY				
Payments Received		8,822.46	205.74	311.49
ACCOUNT SUMMARY		10/29/2009	10/29/2009	10/29/2009
Current Amount Due		8,426.05	171.14	249.09
Amount Paid Due		.00	.00	.00
Amount By Division Due Upon Receipt		8,426.05	171.14	249.09

420²³ ✓



Message: Billing Date: 11/18/2009

- Billing period from: 09/29/2009 to 10/26/2009 (30 day s)
- To avoid 1.5% late charge, pay by 12/10/2008
- Make checks payable to Jamestown City Treasurer PO Box 700, Jamestown, New York 14702-0700
- The BPU has placed a new line on customer bills known as the "New York State Assessment" as a result of a recent, additional State of New York fee charged to the BPU and other utilities in the state.

2009 = 50.80
2008 = 48.41

Installation Configuration



The photograph above shows the installation configuration at the service entrance. The Current Transformers for the Amprobe DMII Pro meter are placed around the incoming bus bars to measure the electrical parameters for the entire MCC.

Acceptance of TIS Report

Having read the TIS Report / USES® System Evaluation for Jefferson Middle School, dated November 30, 2009, I hereby accept the results and agree that Power Shaver, Energy Saving Systems has sufficiently validated the performance presented to Jefferson Middle School.

**Jamestown
School District
Authorized Representative**

Jamestown School District

Title

Date