



**Rx Monitoring Sevices, LLC - Salomon Smith Barney**

**5/30/00 - 6/6/00**

**Customer Information**

Rx Monitoring Sevices, LLC  
 670 North Commercial Street  
 4th Floor, Jefferson Mill Bldg.  
 Manchester, NH 03101-1149  
 USA

**Site Information**

Salomon Smith Barney  
 13th Floor Data Center  
 123 Route 303  
 Camden, NJ 00901

Report To : John Smith  
 123 4th Street

Somewhere, MO 23456  
 Voice : (800) 123-4567 Ext 123  
 Fax :

Site #: 2610  
 Type: Rx3  
 Recorder S/N: 40016  
 Site Equipment: EBCT Scanner  
 Monitor Location: Wall Power (s/n 01795)  
 Client Site Code:

CC : Russell J.. Knowles remetronix@aol.com JonSmith@aol.com, Daniel Gargano, Walt Kucharski, Tony Camporeale, Erik Kindseth Erik@rxms.com

Power Quality	Chan L1-L2	Chan L3-L1	Chan L2-L3	Chan N-G	Rx Rating	Meets Specs	Comments
Power Failures	0	0	0	0	Good	Yes	
Sags	245	199	5	0	Severe	No	Protection required: See Event log
Surges	0	0	0	0	Good	Yes	
Impulses	177	167	3	1	Moderate	No	Isolation Transformer required
Impedance mΩ	667	685	777	N/A			milliohms- Outside System Spec.

Data Logging	Actual Low	Actual High	Low Spec	High Spec	Rx Rating	Meets Specs	Comments
Chan L1-L2	414	498	467	504	Severe	No	Feeder undersized and/or overloaded
Chan L3-L1	413	499	467	504	Severe	No	Check wire Impedance with meter
Chan L2-L3	474	502	467	504	Good	Yes	Within spec.
Chan N-G	4.4	6.9	0	3	Severe	No	Due to current flowing on Ground
Temperature	70	85	62	77	Moderate	No	Outside 77° spec. & Changes/hour
Humidity	40	60	30	60	Good	Yes	Good Stability. A few changes/hr. high
Frequency	58.2	61.1	59	61	Severe	No	Outside system spec.
L1 Current	16	54	N/A	N/A	N/A	N/A	L1 Current Peak
L2 Current	12	148	N/A	N/A	N/A	N/A	L2 Current Peak
L3 Current	7	54	N/A	N/A	N/A	N/A	L3 Current Peak
N Current							
G Current	N/A	8	N/A	N/A	N/A	N/A	Ground current
DC Volts - CH 1							
DC Volts - CH 2							
Volt Diff Max	N/A	17.1%	N/A	2.0%	Severe	No	Redistribute loads until balanced

**Rx Ratings**

Safety	Severe	Moderate	Minor	Good
NEC Violation or other Safety Hazard	Damage is likely. Disruption is Highly likely	Damage is possible. Disruption is likely	Damage unlikely. Disruption is possible	Meets Manufacturer Specifications

Please email [Sales@rxms.com](mailto:Sales@rxms.com) or call **Rx Monitoring Services, LLC** at **(603) 666-6606** for answers to any questions regarding this report.

Manchester, NH. USA - [WWW.RXMS.COM](http://WWW.RXMS.COM)



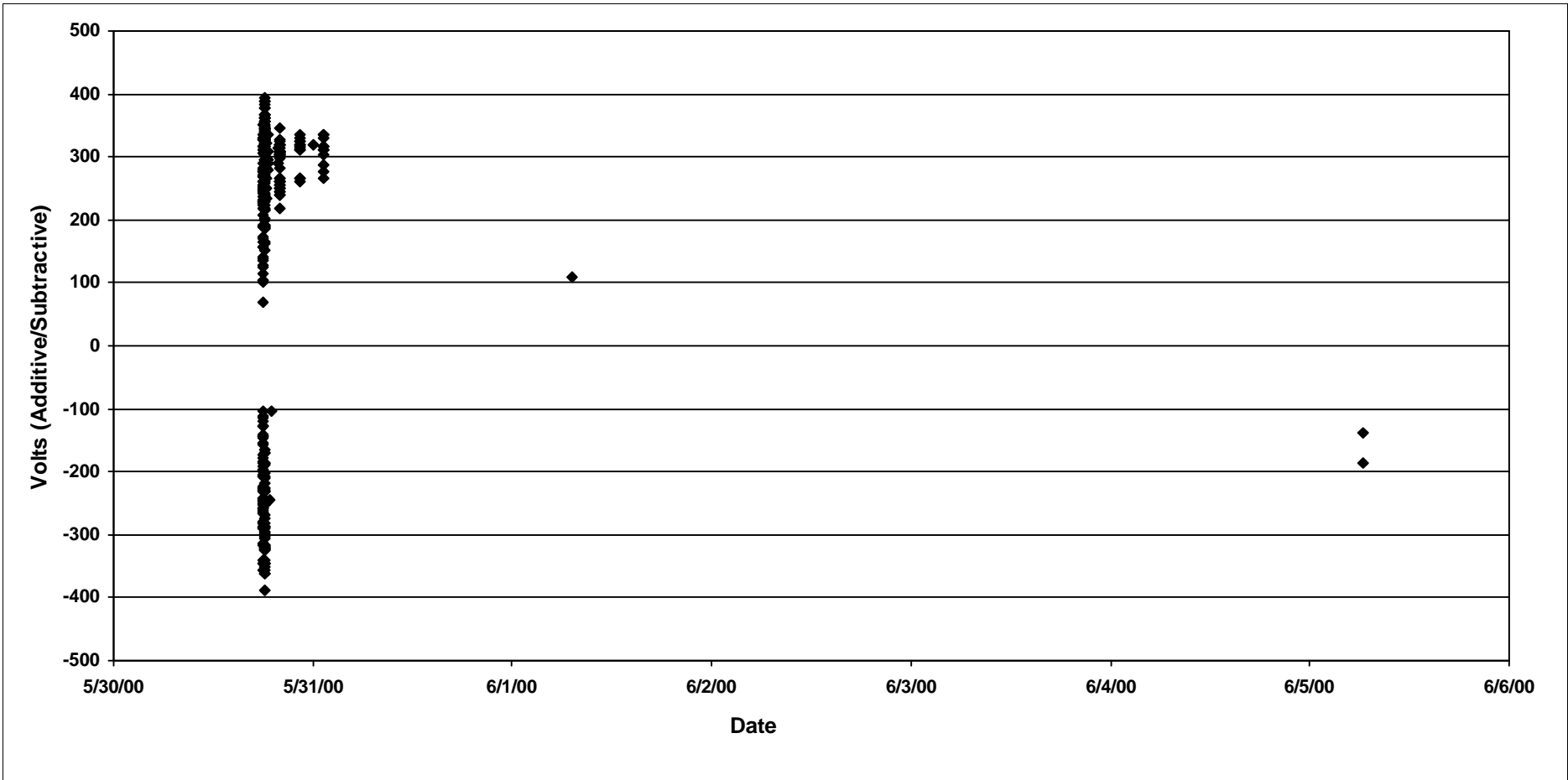
### HF Impulse (Additive/Subtractive)

Site: 2610

Rx Monitoring Sevices, LLC Salomon Smith Barney

5/30/00 - 6/6/00

Filter Good Events



**Recommendations:**

Other loads on the feeder cause impulses with a positive direction. Negative going impulses are often due to the load. Excessive negative impulses often means that the source is causing the load to react.



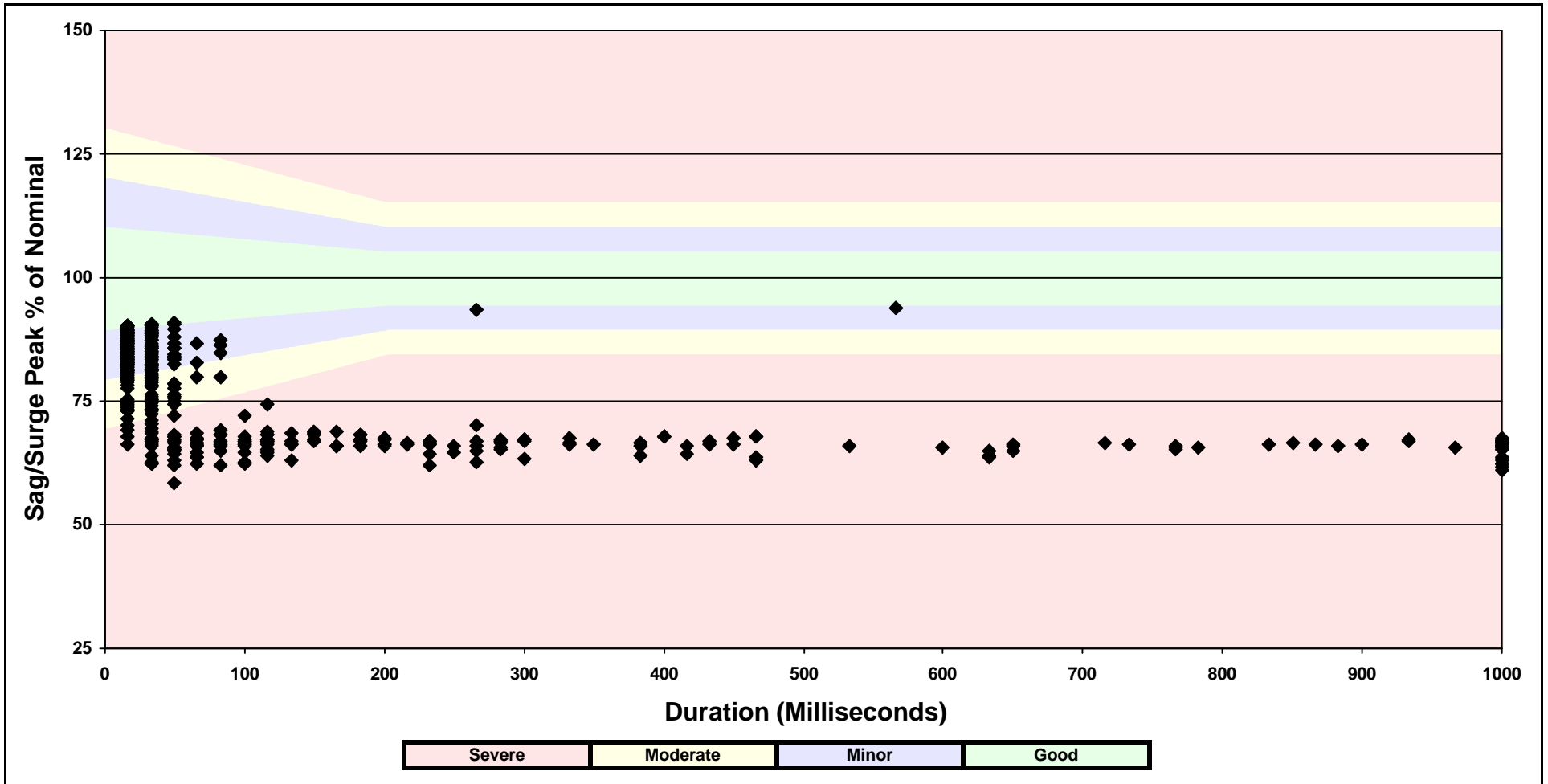
### Sags/Surges vs. Duration

Site: 2610

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5/30/00 - 6/6/00

Filter Good Events



**Recommendations:**

The green area on the chart indicates that the sags are within the system specs. The red area shows sags/surges outside system spec. System maintenance required. System reset/shutdown likely. Phase L1 dropped below equipment spec.



# Detail Event Log

7/13/00

Site: 2610

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Filter Good Events

5/30/00 - 6/6/00

Date/Time	Event ID	Event Type	Chan	P 1	P 2	P3	Severity
Jun 01, 00 07:05:51.47	6121	HF Transient	L2-L3	-109	152	337	Minor
Jun 01, 00 07:14:08.75	6128	RMS Sag	L2-L3	440	33	488	Minor
Jun 04, 00 08:21:37.36	6943	RMS Sag	L2-L3	459	566	490	Minor
Jun 05, 00 06:20:02.21	7134	HF Transient	L1-L2	-138	257	139	Moderate
Jun 05, 00 06:20:06.12	7136	HF Transient	L2-L3	187	228	261	Moderate
Jun 05, 00 06:20:06.12	7144	RMS Sag	L2-L3	289	50	495	Severe
Jun 05, 00 06:20:37	7153	System Shutdown					
Jun 05, 00 07:00:25	7154	System Power-Up					
Jun 05, 00 07:00:27	7155	Start					
Jun 05, 00 19:07:31.75	7536	RMS Sag	L1-L2	415	83	489	Minor
Jun 05, 00 19:07:31.77	7535	RMS Sag	L3-L1	437	33	490	Minor
Jun 05, 00 20:14:40.44	7550	RMS Sag	L1-L2	425	49	490	Minor
Jun 06, 00 13:46:13	7873	Stop					
Jun 06, 00 13:47:10	7874	System Shutdown					
May 30, 00 17:56:04	39	Start					
May 30, 00 17:56:09.33	59	HF Transient	L3-L1	119	12	319	Minor
May 30, 00 17:56:09.64	65	HF Transient	L1-L2	127	70	344	Minor
May 30, 00 17:56:10.95	66	HF Transient	L3-L1	-114	72	223	Minor
May 30, 00 17:56:11.68	83	HF Transient	L3-L1	341	66	219	Moderate
May 30, 00 17:56:11.90	86	HF Transient	L3-L1	197	17	324	Moderate
May 30, 00 17:56:12.55	94	HF Transient	L1-L2	-143	15	12	Minor
May 30, 00 17:56:12.96	97	HF Transient	L1-L2	127	15	232	Minor
May 30, 00 17:56:13.89	104	HF Transient	L1-L2	-158	28	182	Minor
May 30, 00 17:56:15.19	101	HF Transient	L3-L1	104	254	15	Minor
May 30, 00 17:56:15.19	105	HF Transient	L3-L1	104	33	63	Minor
May 30, 00 17:56:17.81	117	HF Transient	L1-L2	153	229	302	Moderate
May 30, 00 17:56:17.95	126	HF Transient	L1-L2	127	29	30	Minor
May 30, 00 17:56:18.35	129	HF Transient	L1-L2	127	257	182	Moderate
May 30, 00 17:56:19.11	118	HF Transient	L3-L1	-166	257	182	Moderate
May 30, 00 17:56:19.44	127	HF Transient	L3-L1	-114	24	143	Minor
May 30, 00 17:56:19.46	136	HF Transient	L1-L2	-247	12	341	Moderate
May 30, 00 17:56:19.80	132	HF Transient	L3-L1	-140	214	293	Moderate
May 30, 00 17:56:20.18	134	HF Transient	L3-L1	270	128	115	Moderate
May 30, 00 17:56:23.24	138	HF Transient	L1-L2	205	6	248	Minor
May 30, 00 17:56:24.54	139	HF Transient	L3-L1	-229	32	129	Moderate
May 30, 00 17:56:24.71	149	HF Transient	L1-L2	184	14	223	Minor
May 30, 00 17:56:26.01	150	HF Transient	L3-L1	-104	150	120	Minor
May 30, 00 18:00:14.93	153	HF Transient	L1-L2	101	81	42	Minor
May 30, 00 18:01:55.99	168	HF Transient	L1-L2	-231	15	97	Moderate

### Parameters

RMS Nominal	RMS Re-Nominal	HF Transient	HF Sensitivity	RMS Sag/Surge
P1 = Nominal Volts	P1 = Prev Nom Volts P2 = New Nom Volts	P1 = Peak Voltage P2 = Duration uSec P3 = Phase Angle	P1 = Sens Val	P1 = Peak Voltage P2 = Duration mSec P3 = Nom Voltage

### Comments:

Check for loose connections or ground loops. Impulses mainly due to load turn-On/Off. Wire impedance could be high causing Sags & load generated Impulses. A UPS is required to prevent system resets & downtime.

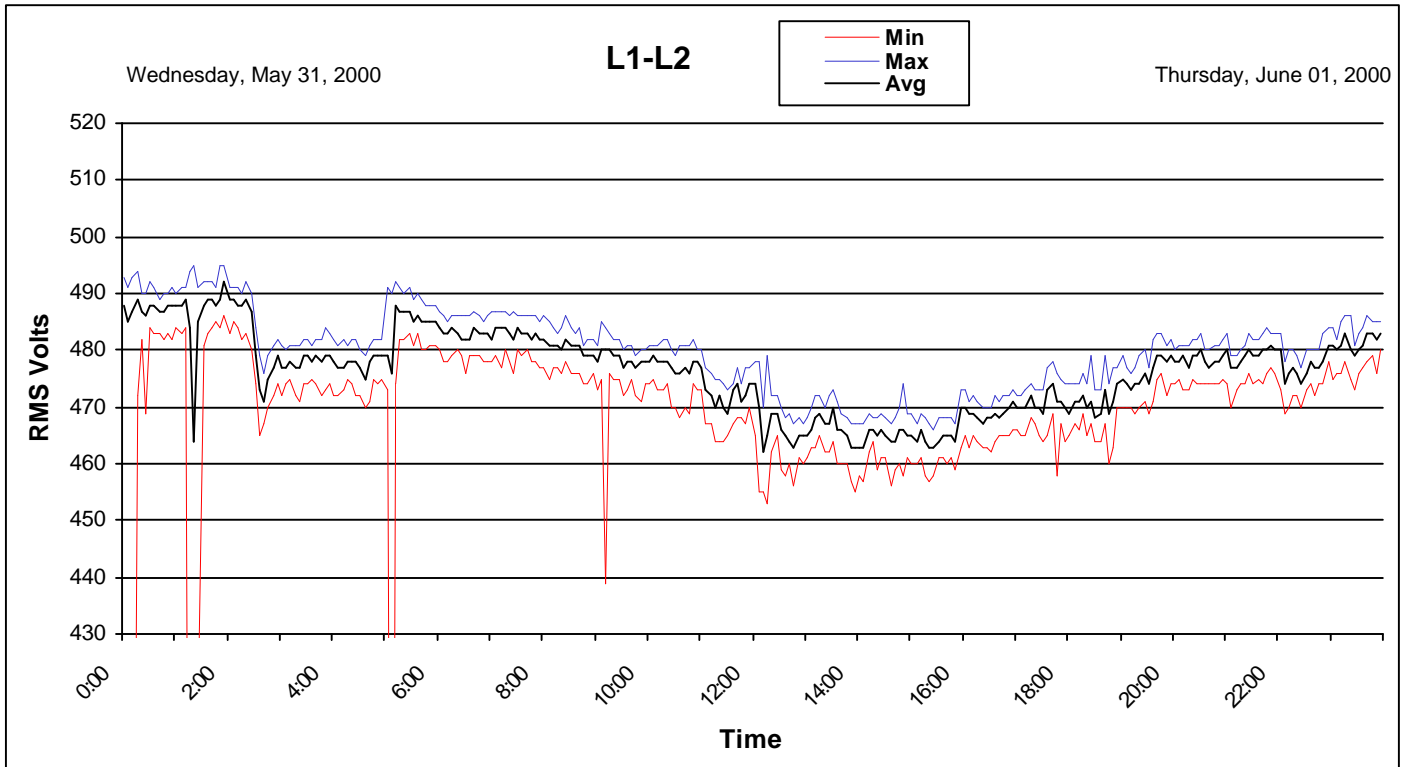
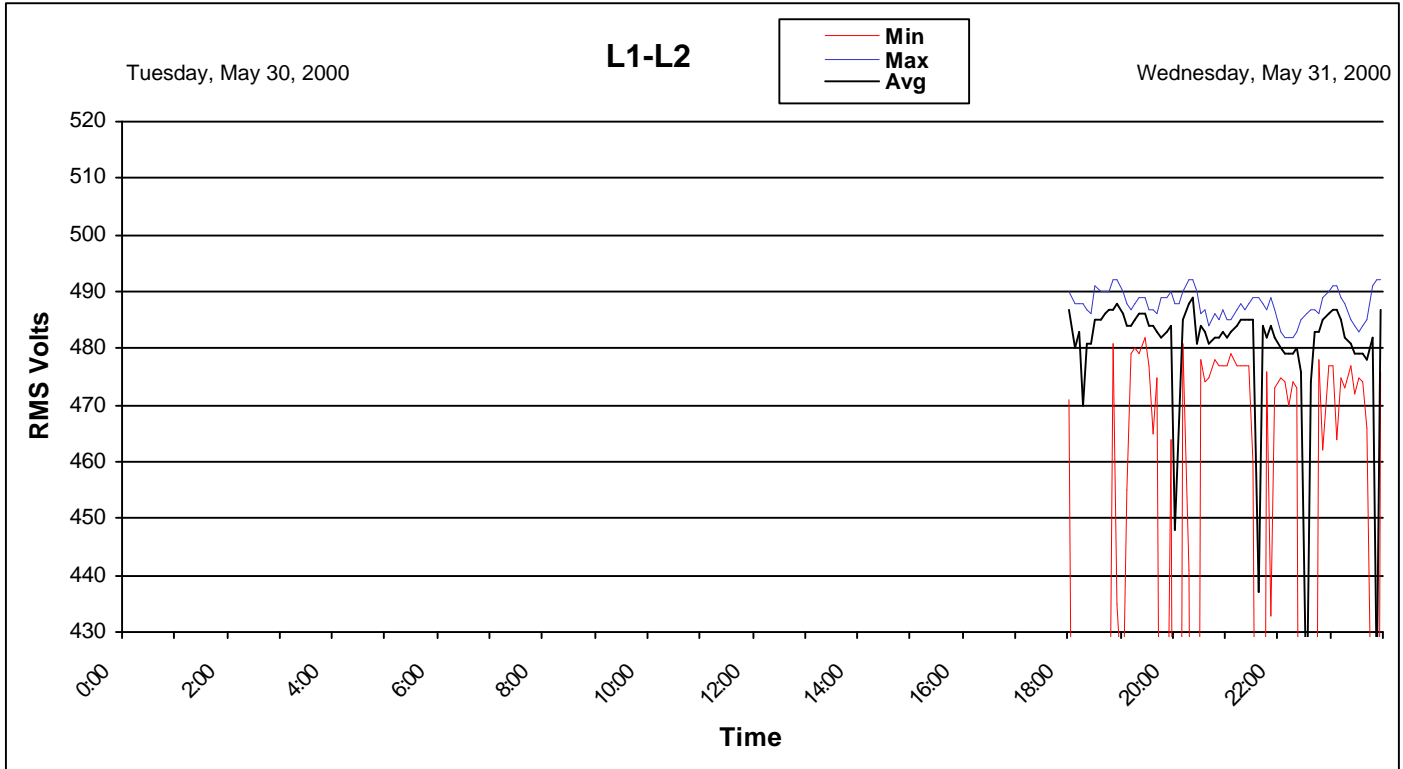


# RMS Voltage Logs

Site: 2610

Rx Monitoring Services, LLC Salomon Smith Barney

5/30/00 - 6/6/00



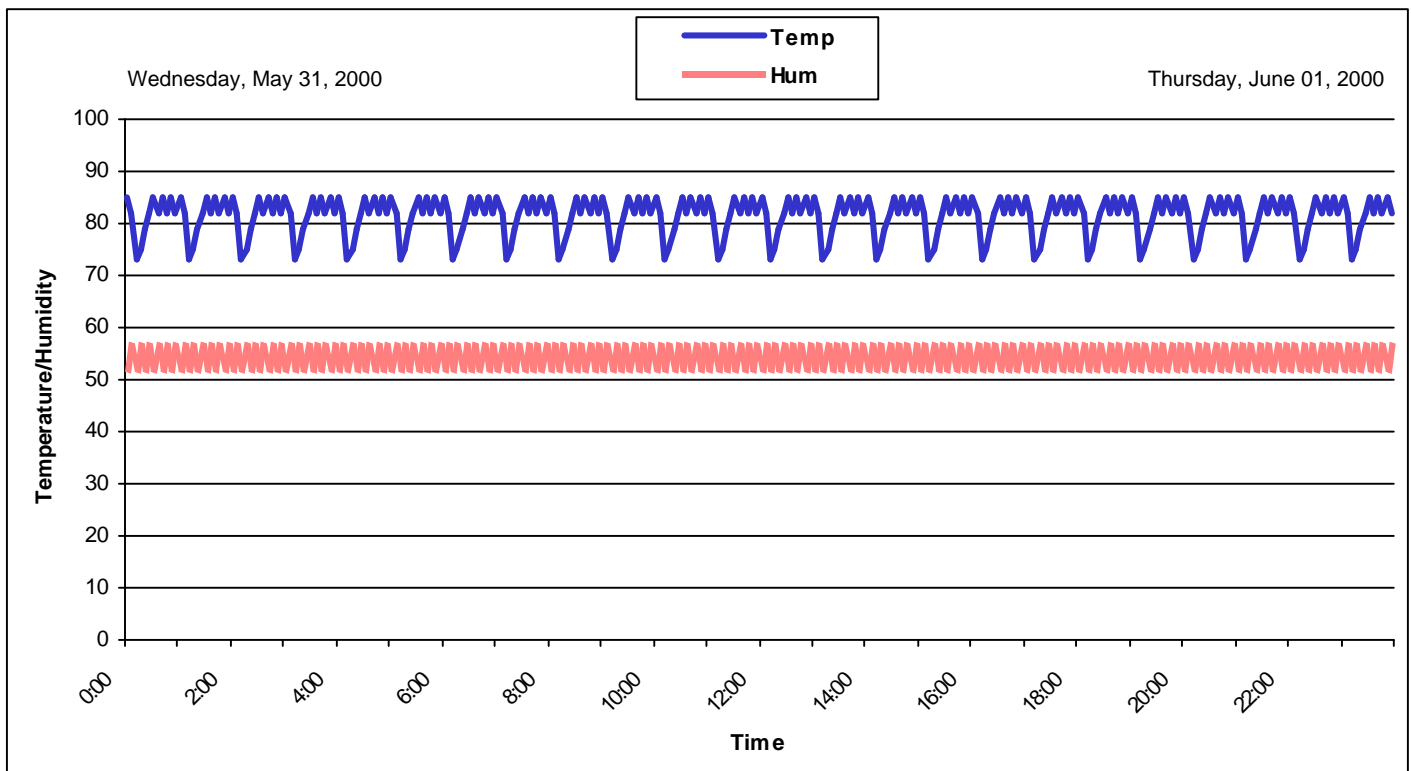
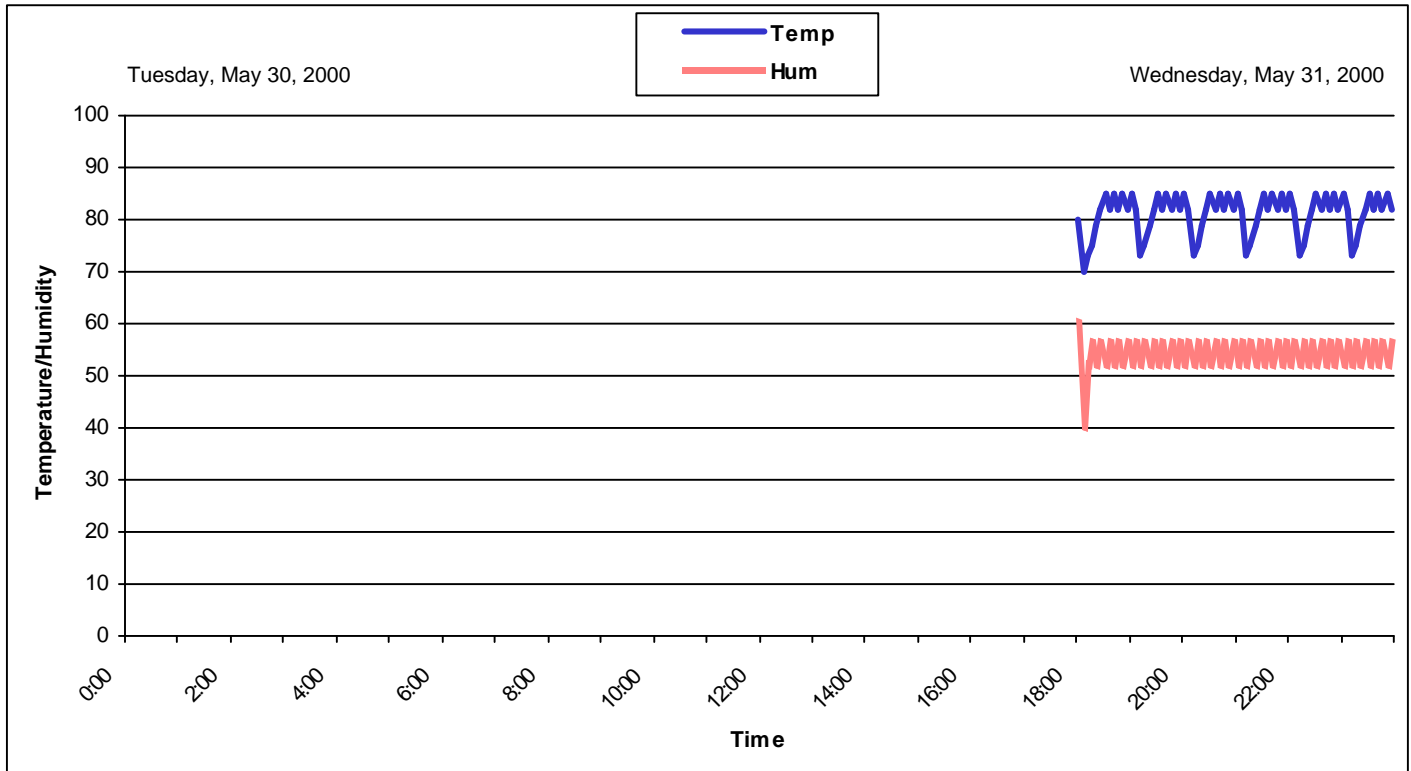


# Temp/Humidity Logs

Site: 2610

Rx Monitoring Sevices, LLC Salomon Smith Barney

5/30/00 - 6/6/00





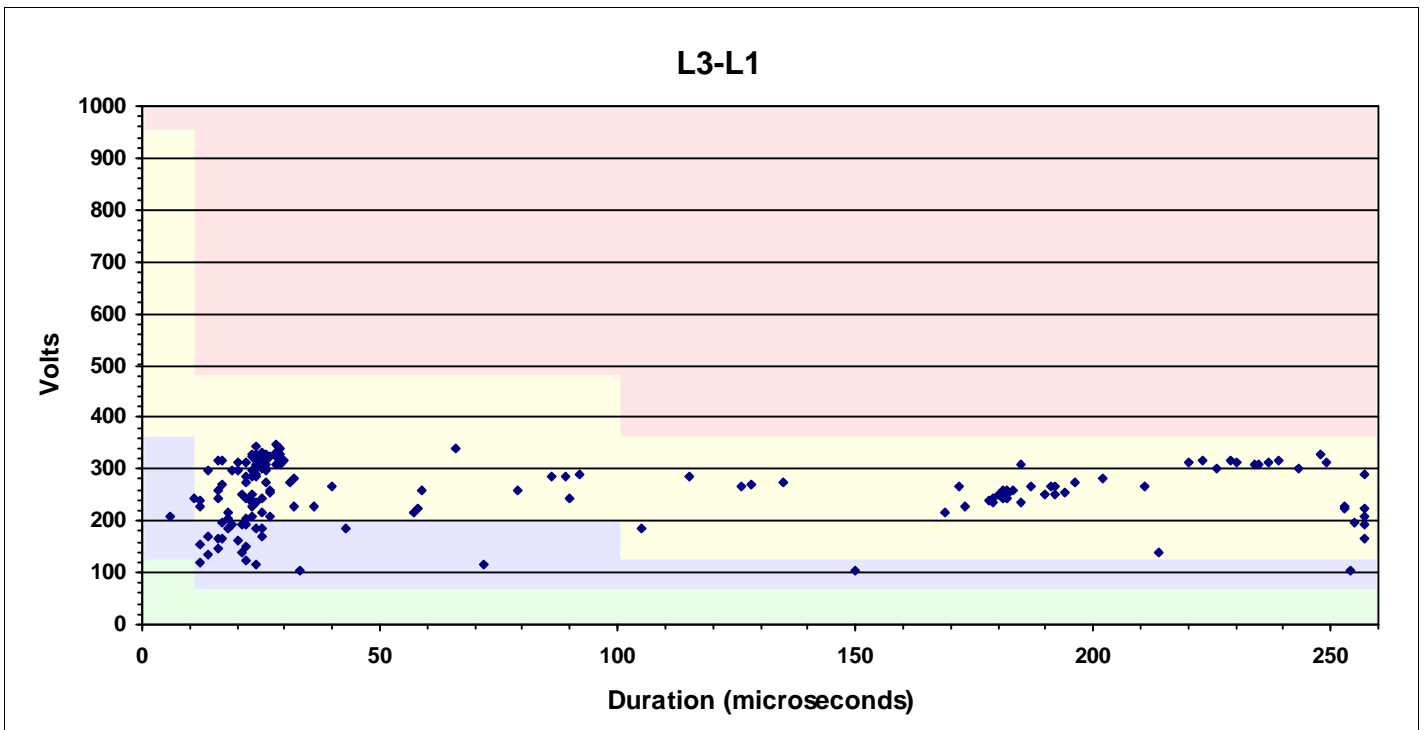
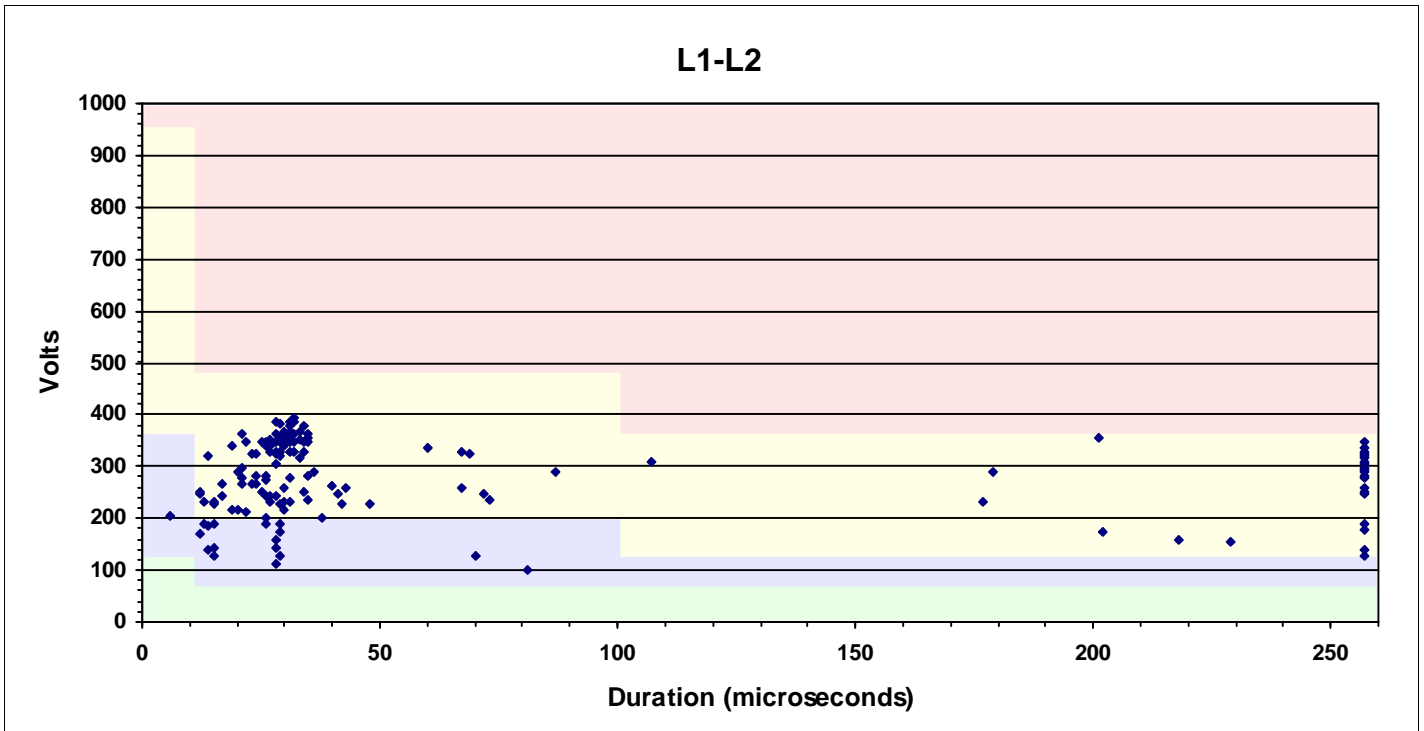
# Impulse Scatter Plot

Site: 2610

Rx Monitoring Services, LLC Salomon Smith Barney

5/30/00 - 6/6/00

Filter Good Events



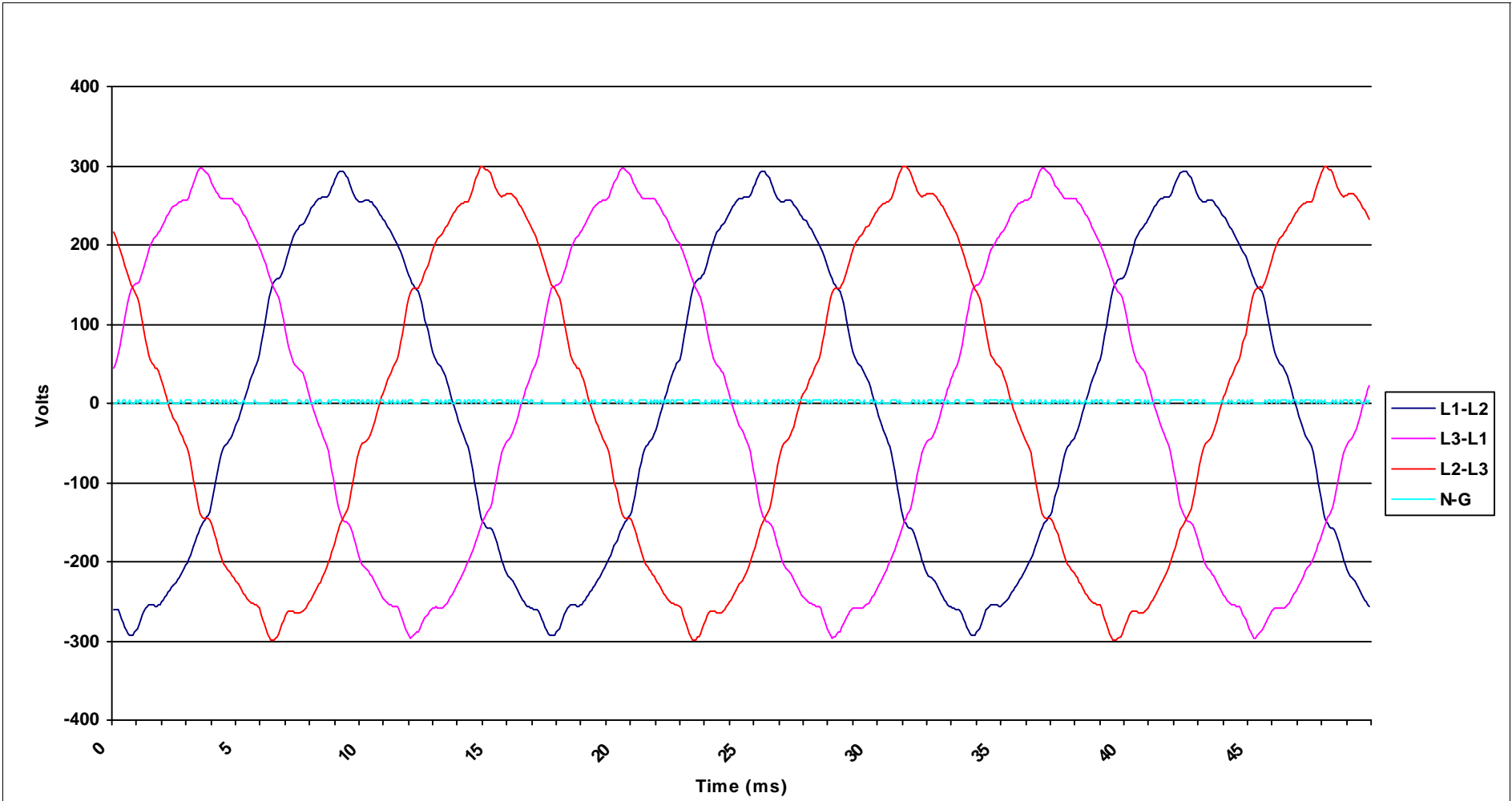


# Voltage Snapshot

Site: 2610

Rx Monitoring Sevices, LLC Salomon Smith Barney

Tuesday, May 30 2000 17:56:04



**Comments:**

Lightly loaded UPS system that was designed to prevent against flat topping

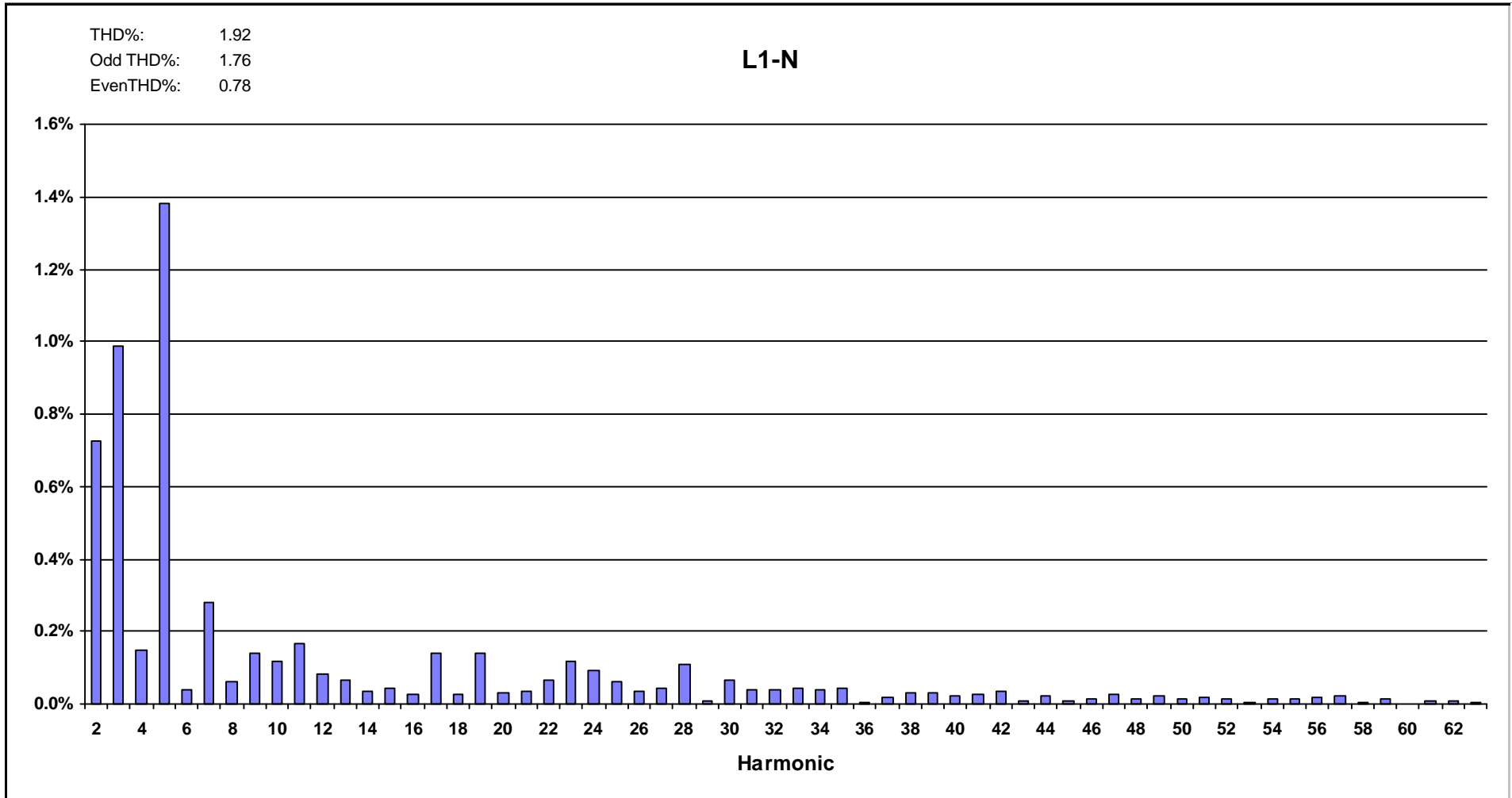


# Snapshot Harmonics

Site: 2610

Rx Monitoring Sevices, LLC Salomon Smith Barney

Monday, Jun 5 2000 07:00:27



Comments:

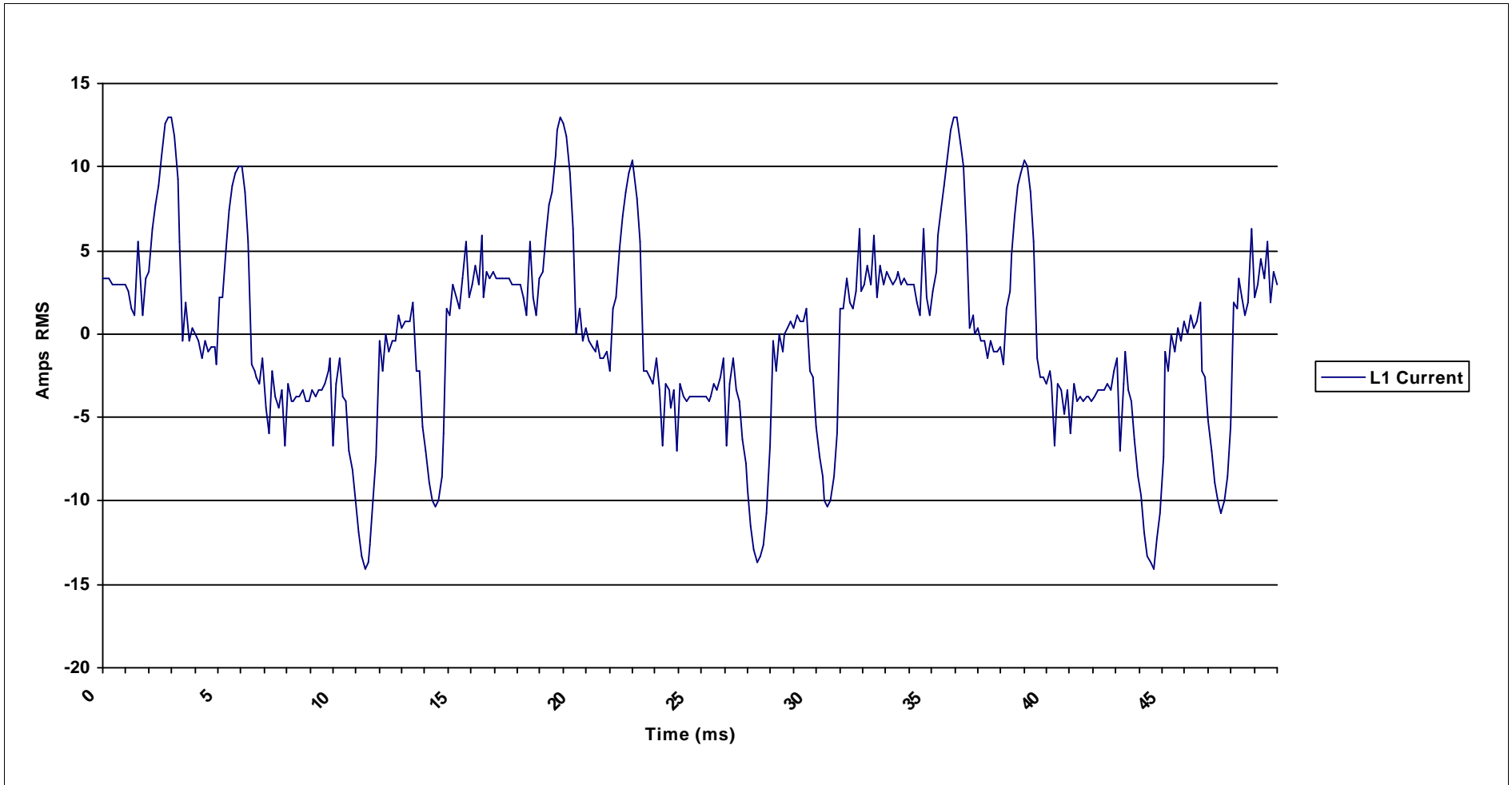


# Current Snapshot

Site: 2610

Rx Monitoring Sevices, LLC - Salomon Smith Barney

Monday, Oct 2 2000 12:00:02



## Comments:

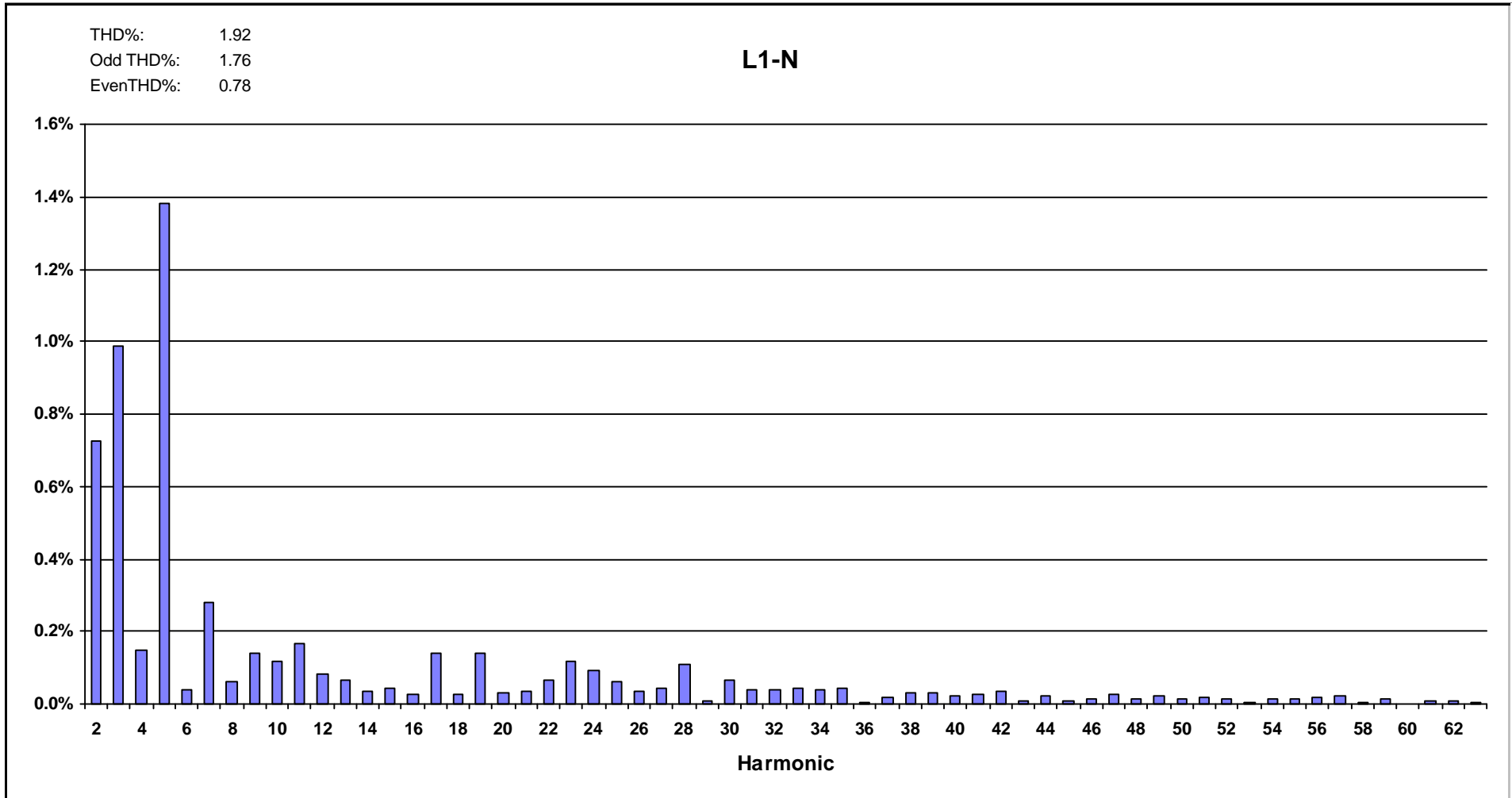


# Snapshot Harmonics

Site: 2610

Rx Monitoring Sevices, LLC Salomon Smith Barney

Monday, Jun 5 2000 07:00:27



Comments:

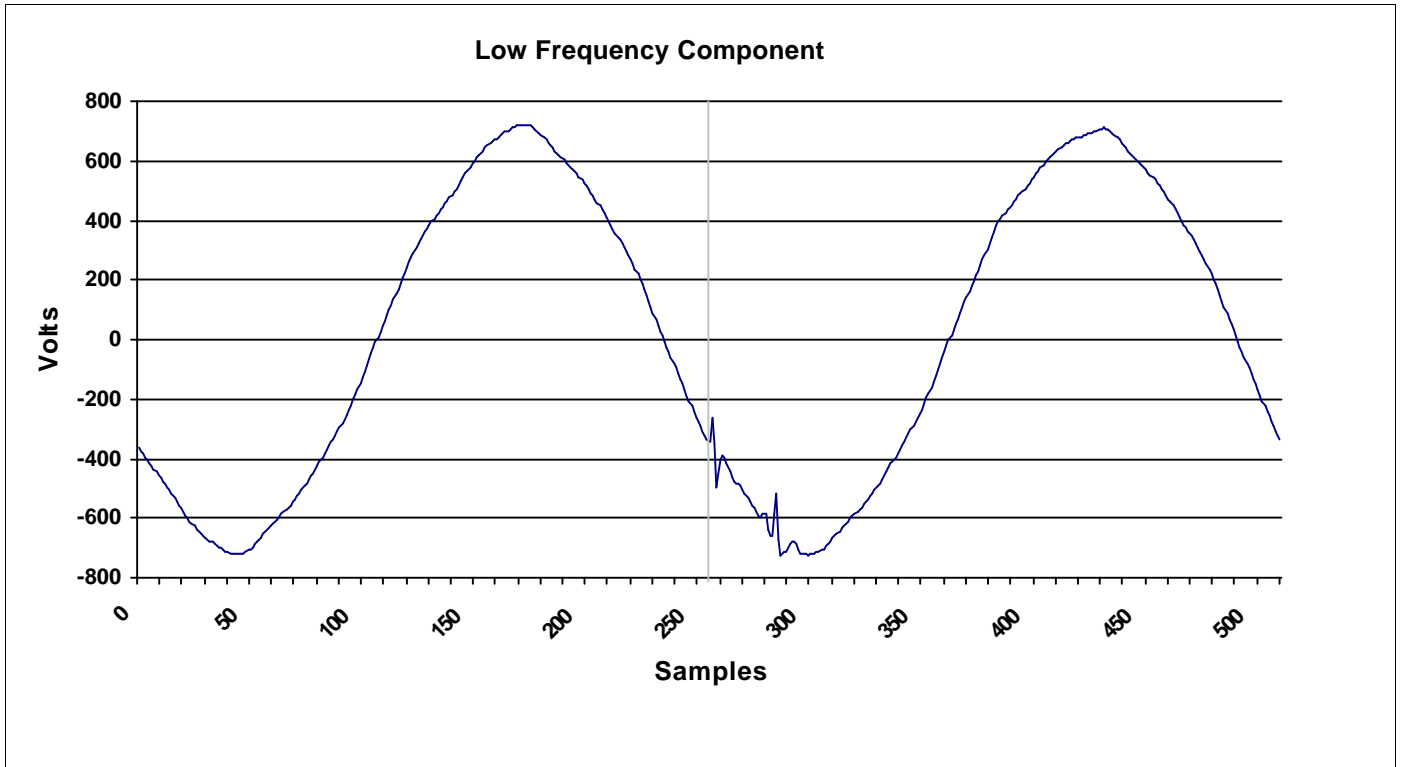
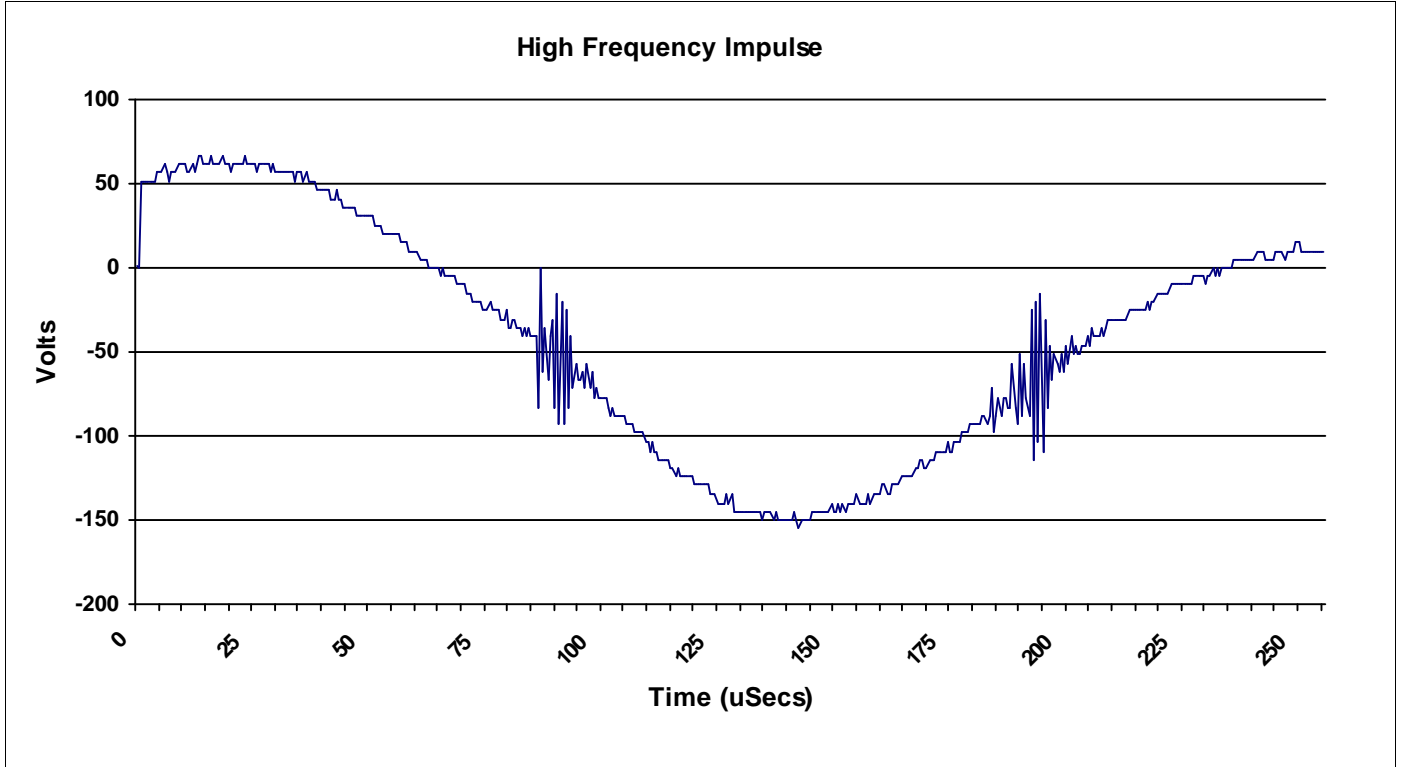


# HF Impulse

Site: 2610

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Event 97 - May 30, 00 17:56:12.960



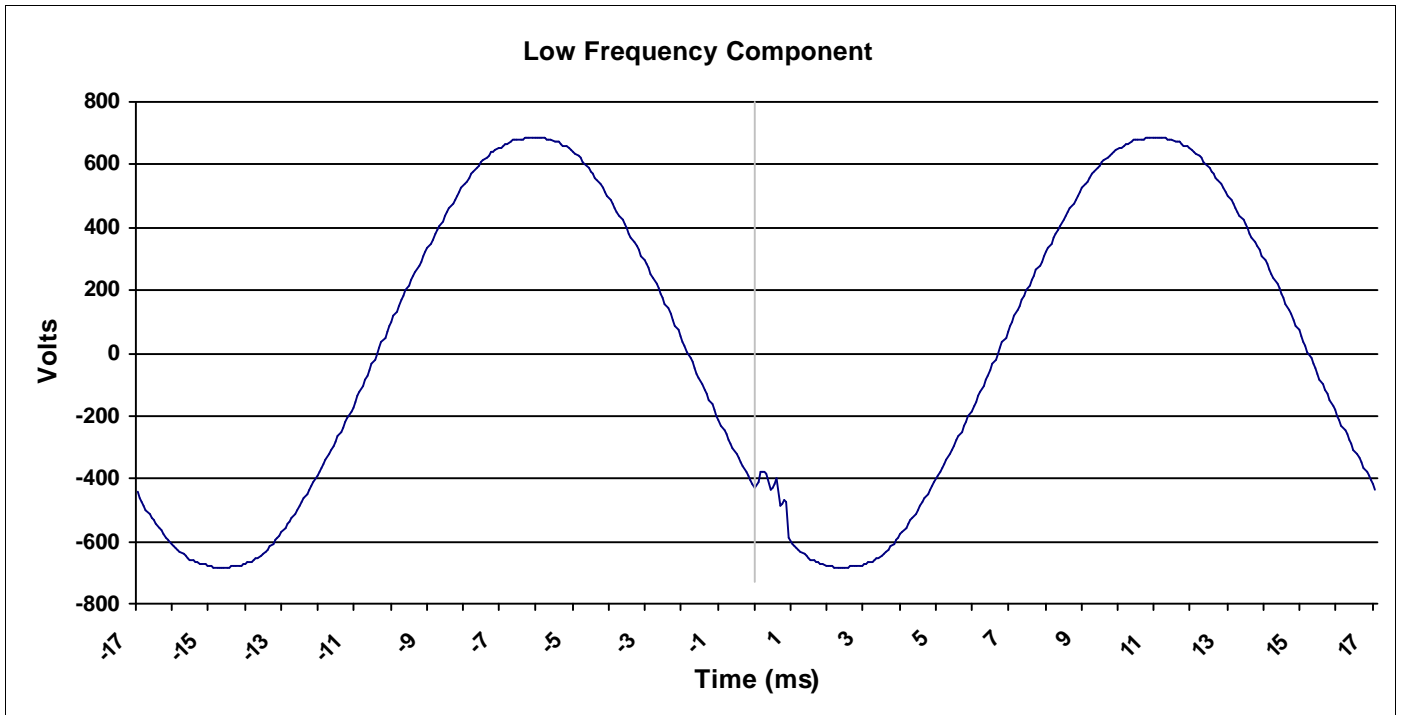
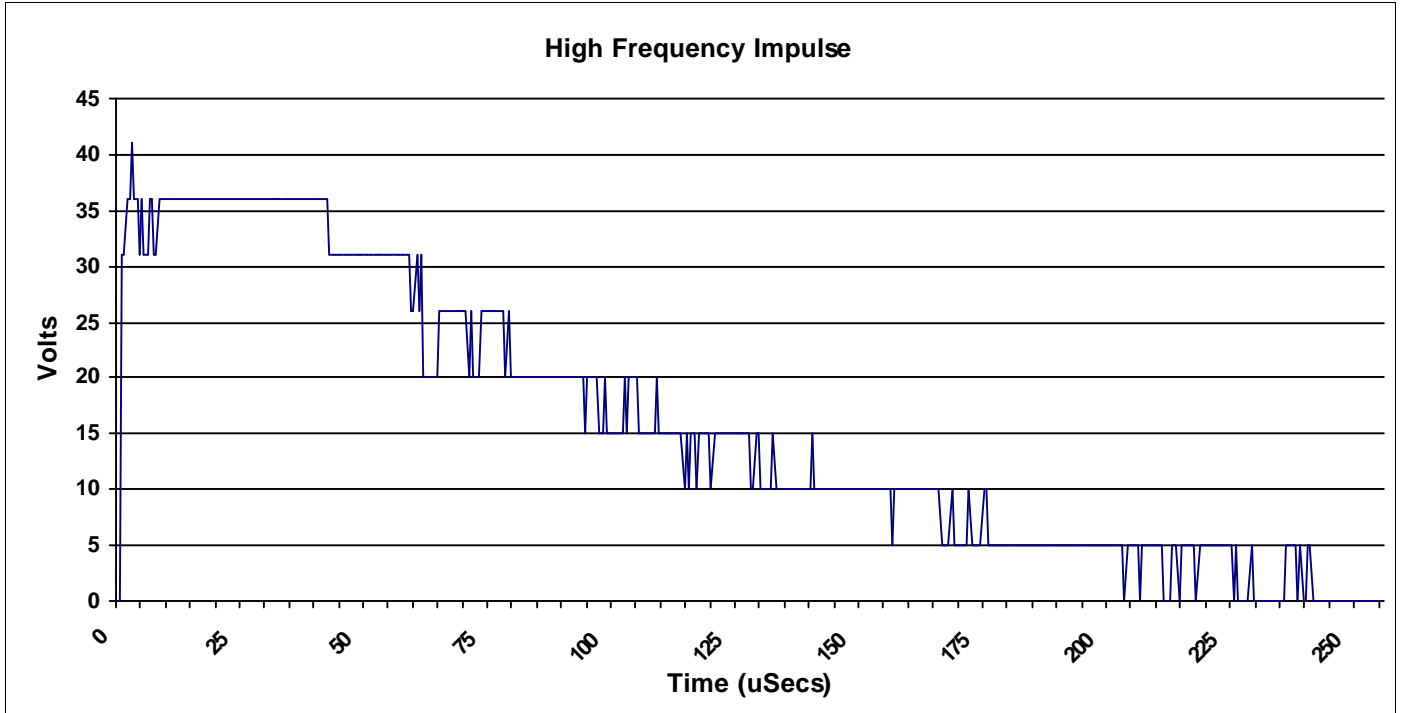


# HF Impulse

Site: 2610

Rx Monitoring Sevices, LLC Salomon Smith Barney

Event 83 - Tuesday, May 30 2000 17:56:11



**Comments:**

Load induced impulse. Sudden load causes slight resonance with feeder. Due to high impedance of Feeder.



# RMS Voltage Differential

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5/30/00 - 6/6/00

**Maximum Voltage Differential: 17.1%**

