

Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

April 30, 2012

Village of Manteno
Attn: Ms. Janice Schulteis
269 N. Main Street
Manteno, Illinois 60950

Dear Ms. Schulteis:

The Illinois Department of Natural Resources installed a blasting seismograph on property located at 891 Whitetail Bend, Manteno, Illinois 60950. Enclosed, please find a copy of the seismographic data obtained at this location. This data includes blasting events occurring at the VCNA Prairie Aggregates Illinois, Inc. – North Central Materials quarry from 03/05/12 through 04/27/12.

The first page(s) of digital information is a summary of all events recorded by the seismograph, including both blasting and non-blasting events. All subsequent pages are copies of the waveform analysis of the recorded events determined to be blast induced vibrations. Analysis of the waveforms indicate **compliance** with the regulatory limits established to prevent damage to protected structures.

Looking at the waveform analysis, four (4) channels of information are displayed. The first channel is the acoustic or airblast waveform. The regulatory airblast limit is 133 decibels (dB). The next three channels are the ground vibrations waveforms, measured in three (3) mutually perpendicular directions (Radial, Vertical and Transverse). The regulatory ground vibration limit is 1.0 inch per second (ips) for all three (3) directions of motion.

If you have any questions concerning this seismograph information, please contact myself at (815) 216-2361 (cell).

Sincerely,

Myron L. McCaskey – Blasting Specialist
Mine Safety and Training Division
Office of Mines and Minerals
Enclosure

cc: M.McCaskey

Illinois Department of Natural Resources
Office of Mines and Minerals
Mine Safety and Training Div.
VCNA Prairie Agg. Ill., Inc. - North Central Pit
Manteno Village Property 49 man

Record Name	Date	Peak (ips)	Acoustic (dB/Mb)	Vertical (ips)	Transverse (ips)	Vector Sum (ips)	Seismic Trigger (ips)	Battery
Number	Time	Hz	Hz	Hz	Hz	Serial Number	Acoustic Trigger dB	Gain
c:\myron\downloads\m...110120120305000.dtb 000	3/5/2012 15:48	9.9200 3.9	133/0.90 341.3	7,2800 3.9	7,4400 3.7	12,9200 1101	0,0400 130	7.0 x2
*c:\myron\downloads\m...110120120305001.dtb 001	3/5/2012 15:01	0,5200 0.0	134/1,00 0.0	0,5200 0.0	0,5000 0.0	0,0000 1101	0,0800 132	7.0 x2
c:\myron\downloads\m...110120120305002.dtb 002	3/5/2012 15:07	0,0800 3.0	100/0,02 0.0	0,0400 0.0	0,0800 3.7	0,1000 1101	0,0800 132	7.0 x2
c:\myron\downloads\m...110120120306003.dtb 003	3/6/2012 11:58	0,0000 0.0	133/0.94 5.6	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	7.0 x2
c:\myron\downloads\m...110120120306004.dtb 004	3/6/2012 12:12	0,2000 9.5	114/0.10 3.4	0,1000 26.9	0,1600 20.0	0,2050 1101	0,0800 132	7.0 x2
c:\myron\downloads\m...110120120306005.dtb 005	3/6/2012 13:12	0,0000 0.0	134/1,00 5.2	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	7.0 x2
c:\myron\downloads\m...110120120306006.dtb 006	3/6/2012 13:37	0,0000 0.0	134/1,00 3.3	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	7.0 x2
c:\myron\downloads\m...110120120306007.dtb 007	3/6/2012 13:48	0,0000 0.0	134/1,04 6.1	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	7.0 x2
c:\myron\downloads\m...110120120306008.dtb 008	3/6/2012 14:32	0,0000 0.0	133/0.92 2.6	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	6.9 x2
c:\myron\downloads\m...110120120306009.dtb 009	3/6/2012 14:50	0,0000 0.0	134/1.02 3.1	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	6.9 x2
c:\myron\downloads\m...110120120306010.dtb 010	3/6/2012 14:52	0,0000 0.0	133/0.90 9.0	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	6.9 x2
c:\myron\downloads\m...110120120306011.dtb 011	3/6/2012 15:09	0,0000 0.0	134/0.96 2.1	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	6.9 x2
c:\myron\downloads\m...110120120306012.dtb 012	3/6/2012 15:11	0,0000 0.0	134/1.00 2.8	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	6.9 x2
c:\myron\downloads\m...110120120306013.dtb 013	3/6/2012 15:29	0,0000 0.0	133/0.90 3.0	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	6.9 x2
c:\myron\downloads\m...110120120306014.dtb 014	3/6/2012 16:34	0,0000 0.0	133/0.88 6.0	0,0000 0.0	0,0000 0.0	0,0000 1101	0,0800 132	6.9 x2

* Denotes a calibration event.

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Manteno Village Property

Record Name	Date	Peak (ips)	Acoustic (dB/Mb)	Vertical (ips)	Transverse (ips)	Vector Sum (ips)	Seismic Trigger (ips)	Battery
Number	Time	Hz	Hz	Hz	Hz	Serial Number	Acoustic Trigger dB	Gain
c:\myron\downloads\m...A110120120307015.dtb 015	3/7/2012 10:47	0.0000 0.0	136/1.22 6.9	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m...A110120120307016.dtb 016	3/7/2012 13:29	0.0000 0.0	135/1.18 4.3	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	7.0 x2
c:\myron\downloads\m...A110120120307017.dtb 017	3/7/2012 13:57	0.0000 0.0	134/1.04 8.1	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	7.0 x2
c:\myron\downloads\m...A110120120307018.dtb 018	3/7/2012 14:24	0.0000 0.0	133/0.90 6.7	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m...A110120120307019.dtb 019	3/7/2012 14:26	0.0000 0.0	134/1.00 2.1	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m...A110120120307020.dtb 020	3/7/2012 14:36	0.0000 0.0	134/1.02 4.2	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m...A110120120307021.dtb 021	3/7/2012 14:41	0.0000 0.0	137/1.40 3.5	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m...A110120120307022.dtb 022	3/7/2012 14:47	0.0000 0.0	136/1.20 3.4	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m...A110120120307023.dtb 023	3/7/2012 17:17	0.0000 0.0	136/1.30 2.8	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	7.0 x2
c:\myron\downloads\m...A110120120308024.dtb 024	3/8/2012 06:18	0.0000 0.0	133/0.90 9.3	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	7.0 x2
*c:\myron\downloads\m...A110120120311025.dtb 025	3/11/2012 18:20	0.5200 0.0	134/1.00 0.0	0.5200 0.0	0.5000 0.0	0.0000 1101	0.0800 132	7.0 x2
*c:\myron\downloads\m...A110120120315026.dtb 026	3/15/2012 06:21	0.5200 0.0	134/0.98 0.0	0.5200 0.0	0.5200 0.0	0.0000 1101	0.0800 132	7.0 x2
c:\myron\downloads\m...A110120120316027.dtb 027	3/16/2012 09:48	0.2000 14.2	112/0.08 3.8	0.0800 19.3	0.1600 17.9	0.2050 1101	0.0800 132	7.0 x2
*c:\myron\downloads\m...A110120120319028.dtb 028	3/19/2012 21:50	0.5200 0.0	134/1.00 0.0	0.5200 0.0	0.5200 0.0	0.0000 1101	0.0800 132	6.9 x2
*c:\myron\downloads\m...A110120120323029.dtb 029	3/23/2012 09:51	0.5200 0.0	134/0.98 0.0	0.5200 0.0	0.5200 0.0	0.0000 1101	0.0800 132	6.9 x2

* Denotes a calibration event.

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Record Name	Date	Peak (ips)	Acoustic (dB/Mb)	Vertical (ips)	Transverse (ips)	Vector Sum (ips)	Seismic Trigger (ips)	Battery
Number	Time	Hz	Hz	Hz	Hz	Serial Number	Acoustic Trigger dB	Gain
*c:\myron\downloads\m... \110120120326030.dtb 030	3/26/2012 21:52	0.5200 0.0	134/1.00 0.0	0.5200 0.0	0.5000 0.0	0.0000 1101	0.0800 132	7.0 x2
*c:\myron\downloads\m... \110120120330031.dtb 031	3/30/2012 09:53	0.5200 0.0	134/0.98 0.0	0.5200 0.0	0.5000 0.0	0.0000 1101	0.0800 132	7.0 x2
c:\myron\downloads\m... \110120120402032.dtb 032	4/2/2012 14:31	0.1200 11.3	110/0.06 3.1	0.0800 24.3	0.1000 22.7	0.1400 1101	0.0800 132	7.0 x2
*c:\myron\downloads\m... \110120120406033.dtb 033	4/6/2012 02:32	0.5200 0.0	134/0.98 0.0	0.5200 0.0	0.5000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m... \110120120407034.dtb 034	4/7/2012 16:21	0.0200 0.0	138/1.52 6.5	0.0200 0.0	0.0000 0.0	0.0200 1101	0.0800 132	7.1 x2
*c:\myron\downloads\m... \110120120411035.dtb 035	4/11/2012 04:23	0.5200 0.0	134/0.98 0.0	0.5200 0.0	0.5000 0.0	0.0000 1101	0.0800 132	6.9 x2
*c:\myron\downloads\m... \110120120414036.dtb 036	4/14/2012 16:24	0.5200 0.0	134/1.00 0.0	0.5200 0.0	0.5200 0.0	0.0000 1101	0.0800 132	7.2 x2
c:\myron\downloads\m... \110120120416037.dtb 037	4/16/2012 06:21	0.0000 0.0	134/0.96 2.6	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	6.9 x2
c:\myron\downloads\m... \110120120416038.dtb 038	4/16/2012 06:44	0.0000 0.0	133/0.90 4.5	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	7.0 x2
c:\myron\downloads\m... \110120120416039.dtb 039	4/16/2012 12:42	0.0000 0.0	133/0.92 4.5	0.0000 0.0	0.0000 0.0	0.0000 1101	0.0800 132	7.0 x2
c:\myron\downloads\m... \110120120418040.dtb 040	4/18/2012 10:30	0.2200 16.7	114/0.10 4.2	0.1000 24.3	0.1600 28.4	0.2500 1101	0.0800 132	7.0 x2
*c:\myron\downloads\m... \110120120421041.dtb 041	4/21/2012 22:31	0.5200 0.0	134/1.00 0.0	0.5200 0.0	0.5200 0.0	0.0000 1101	0.0800 132	6.9 x2
*c:\myron\downloads\m... \110120120425042.dtb 042	4/25/2012 10:32	0.5200 0.0	134/0.98 0.0	0.5200 0.0	0.5200 0.0	0.0000 1101	0.0800 132	7.1 x2
*c:\myron\downloads\m... \110120120427043.dtb 043	4/27/2012 14:29	0.5200 0.0	134/1.00 0.0	0.5200 0.0	0.5000 0.0	0.0000 1101	0.0800 132	6.9 x2

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File Name: c:\myron\downloads\manteno-man49\110120120306004.dtb
 Number: 004
 Date: 3/6/2012
 Time: 12:12
 Serial Number: 1101
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

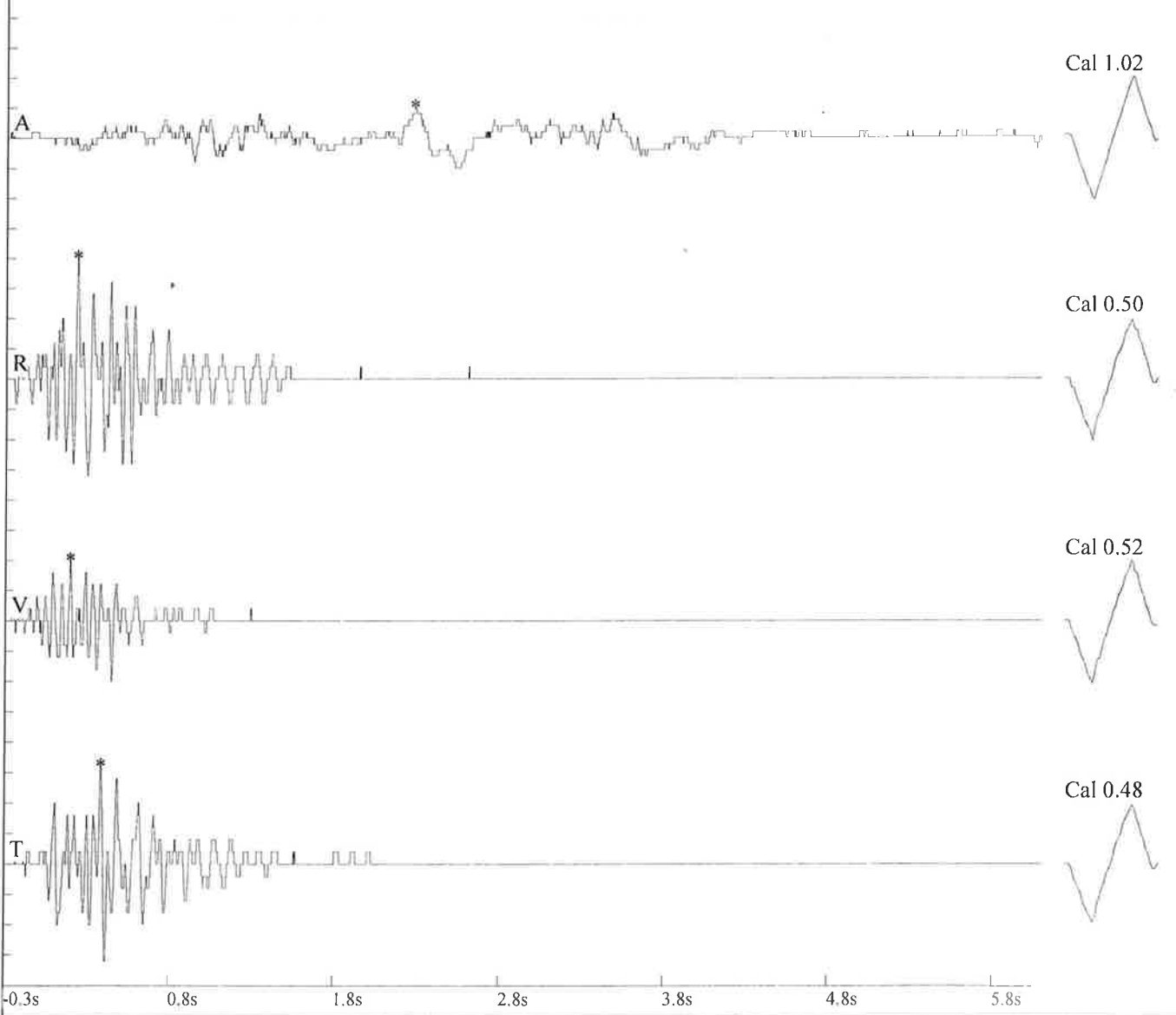
MSM

Amplitudes and Frequencies

Acoustic: 114 dB, 0.10 Mb @ 3.4 Hz
Radial: **0.2000 in/sec @ 9.5Hz**
Vertical: 0.1000 in/sec @ 26.9Hz
Transverse: 0.1600 in/sec @ 20.0Hz

Graph Information

Duration: -0.250 s To: 6.000 s
Acoustic Scale: 126 dB
Seismic Scale: 0.20 in/sec (0.050 in/sec/div)
Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\manteno-man49\110120120316027.db
 Number: 027
 Date: 3/16/2012
 Time: 09:48
 Serial Number: 1101
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

MEM

Amplitudes and Frequencies

Acoustic: 112 dB, 0.08 Mb @ 3.8 Hz

Radial: 0.2000 in/sec @ 14.2Hz

Vertical: 0.0800 in/sec @ 19.3Hz

Transverse: 0.1600 in/sec @ 17.9Hz

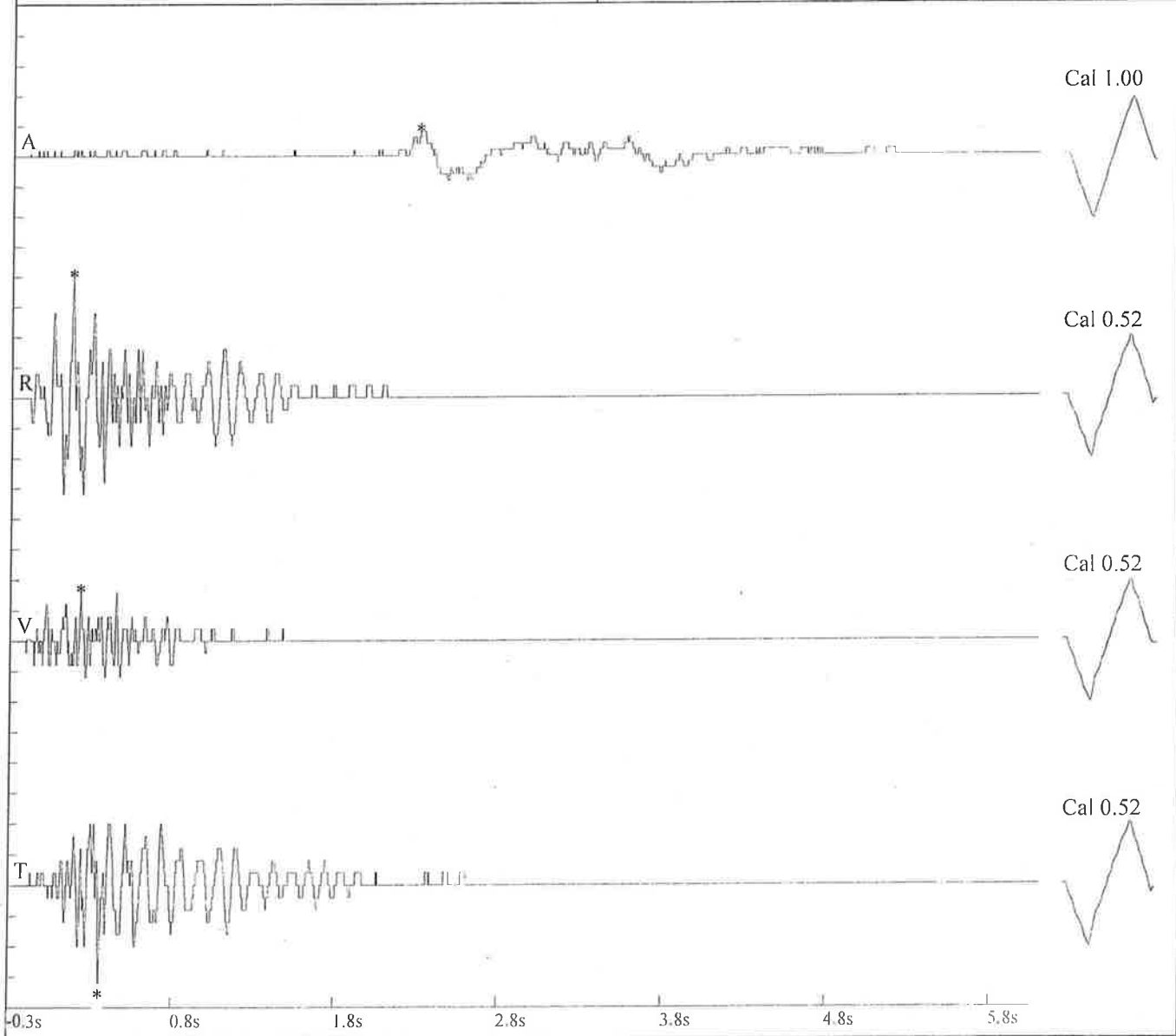
Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.20 in/sec (0.050 in/sec/div)

Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\manteno\man49\110120120402032.dib
 Number: 032
 Date: 4/2/2012
 Time: 14:31
 Serial Number: 1101
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

MSM

Amplitudes and Frequencies

Acoustic: 110 dB, 0.06 Mb @ 3.1 Hz

Radial: 0.1200 in/sec @ 11.3Hz

Vertical: 0.0800 in/sec @ 24.3Hz

Transverse: 0.1000 in/sec @ 22.7Hz

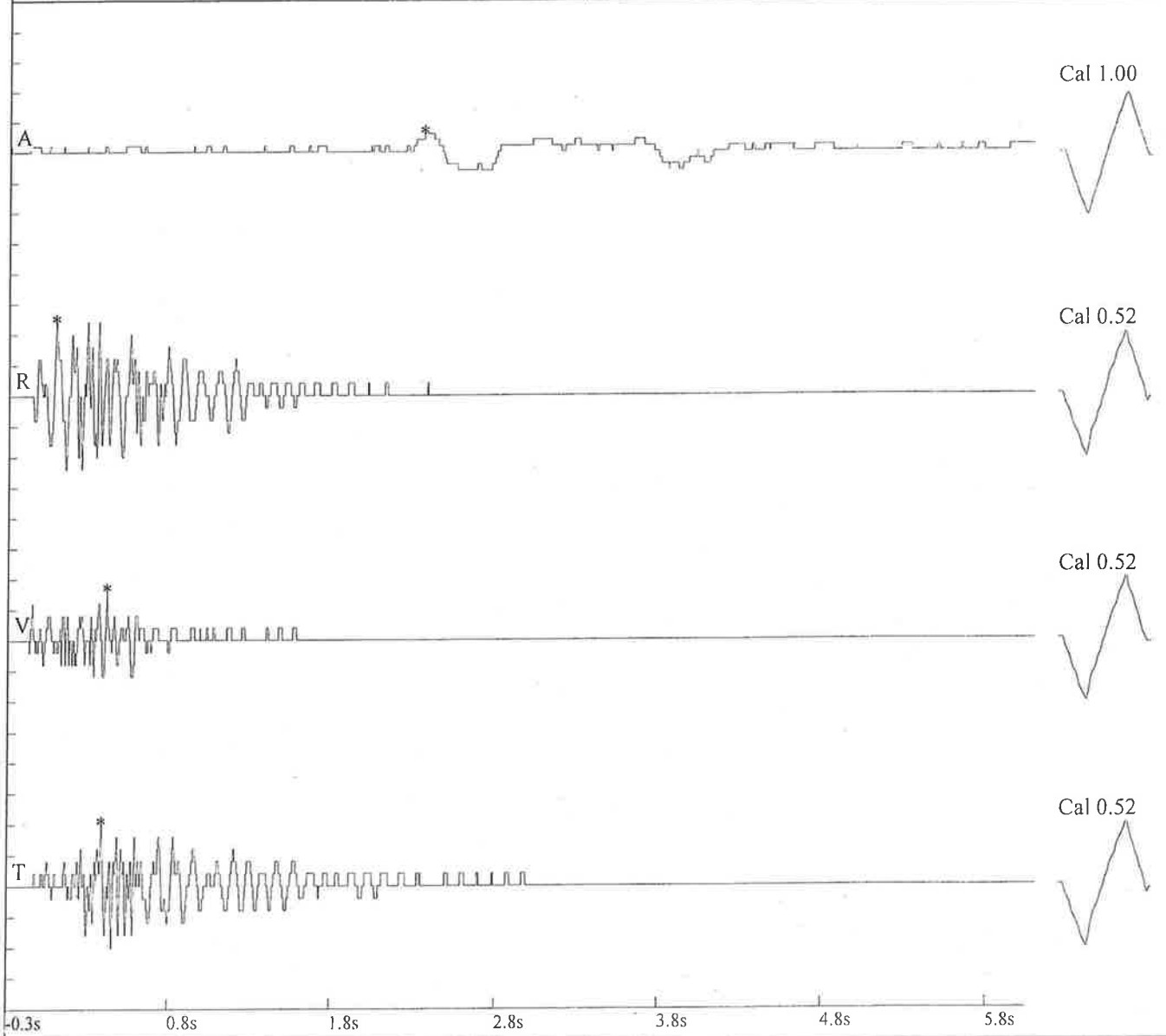
Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.20 in/sec (0.050 in/sec/div)

Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\manteno\man49\110120120418040.dtb
 Number: 040
 Date: 4/18/2012
 Time: 10:30
 Serial Number: 1101
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

MSM

Amplitudes and Frequencies

Acoustic: 114 dB, 0.10 Mb @ 4.2 Hz

Radial: 0.2200 in/sec @ 16.7Hz

Vertical: 0.1000 in/sec @ 24.3Hz

Transverse: 0.1600 in/sec @ 28.4Hz

Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.40 in/sec (0.100 in/sec/div)

Time Intervals at: 1.00 s

