



## Illinois Department of Natural Resources

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

Pat Quinn, Governor  
Marc Miller, Director

December 09, 2013

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 1203 Whitetail Drive, 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 10/25/13 through 11/21/13.

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**  
**John Bobera Property *59man***

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...\82620131025001.dtb 001	10/25/2013 15:29	0.0500 0.0	134/1.00 0.0	0.0150 0.0	0.0500 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620131025002.dtb 002	10/25/2013 15:30	0.5050 0.0	134/1.00 0.0	0.5000 0.0	0.5050 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620131029003.dtb 003	10/29/2013 03:31	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.5050 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620131101004.dtb 004	11/1/2013 15:32	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.5050 0.0	0.0000 826	0.0800 132	7.1 x2
*c:\myron\downloads\m...\82620131105005.dtb 005	11/5/2013 03:33	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.5050 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620131108006.dtb 006	11/8/2013 15:34	0.5050 0.0	134/0.98 0.0	0.4950 0.0	0.5000 0.0	0.0000 826	0.0800 132	7.1 x2
*c:\myron\downloads\m...\82620131112007.dtb 007	11/12/2013 03:35	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.5050 0.0	0.0000 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620131113008.dtb 008	11/13/2013 14:23	0.1650 10.2	117/0.14 5.1	0.0800 31.0	0.1650 10.2	0.1850 826	0.0800 132	7.2 x2
*c:\myron\downloads\m...\82620131117009.dtb 009	11/17/2013 02:25	0.5000 0.0	134/1.00 0.0	0.4950 0.0	0.5000 0.0	0.0000 826	0.0800 132	7.1 x2
c:\myron\downloads\m...\82620131117010.dtb 010	11/17/2013 12:11	0.0050 0.0	133/0.94 7.8	0.0050 0.0	0.0050 0.0	0.0050 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620131117011.dtb 011	11/17/2013 12:41	0.0050 0.0	133/0.94 5.1	0.0050 0.0	0.0050 0.0	0.0050 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620131117012.dtb 012	11/17/2013 13:50	0.0050 0.0	133/0.90 19.6	0.0050 0.0	0.0050 0.0	0.0100 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620131117013.dtb 013	11/17/2013 13:50	0.0050 0.0	136/1.28 9.1	0.0050 0.0	0.0050 0.0	0.0050 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620131117014.dtb 014	11/17/2013 13:52	0.0050 0.0	133/0.88 46.5	0.0050 0.0	0.0050 0.0	0.0050 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620131117015.dtb 015	11/17/2013 15:17	0.0050 0.0	140/2.06 2.1	0.0050 0.0	0.0050 0.0	0.0050 826	0.0800 132	7.0 x2

\* Denotes a calibration event.

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**Office of Mines and Minerals**  
**Mine Safety and Training Div.**  
**VCNA Prairie Agg. Ill., Inc. - North Central Pit**  
**John Bobera 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... \82620131121016.dtb 016	11/21/2013 03:18	0.5000 0.0	134/0.98 0.0	0.4900 0.0	0.5000 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m... \82620131121017.dtb 017	11/21/2013 11:57	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.5050 0.0	0.0000 826	0.0800 132	7.1 x2

\* Denotes a calibration event.

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File Name: c:\myron\downloads\manteno\man59\82620131113008.dtb  
 Number: 008  
 Date: 11/13/2013  
 Time: 14:23  
 Serial Number: 826  
 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: 7.2

*MSM*

**Amplitudes and Frequencies**

*Acoustic: 117 dB, 0.14 Mb @ 5.1 Hz*  
*Radial: 0.1400 in/sec @ 13.4Hz*  
*Vertical: 0.0800 in/sec @ 31.0Hz*  
*Transverse: 0.1650 in/sec @ 10.2Hz*

**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*

