

**Miramar Siesmic Reading: White Rock Quarries.**

**Location: 5276 SW 152 Ave**

<b>Date:</b>	<b>Time:</b>	<b>PPV:</b>
2/1/2021	1:15 PM	0.045
2/4/2021	1:15 PM	0.038
2/19/2021	11:15 AM	0.063
3/3/2021	1:16 PM	0.093
3/9/2021	1:16 PM	0.078
3/16/2021	10:16 AM	0.068
3/17/2021	12:16 PM	0.06
3/19/2021	10:16 AM	0.068
3/24/2021	12:16 PM	0.088
3/26/2021	12:21 PM	0.065
3/30/2021	1:02 PM	0.048

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/04/2021 11:39:26  
**Event No:** I  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

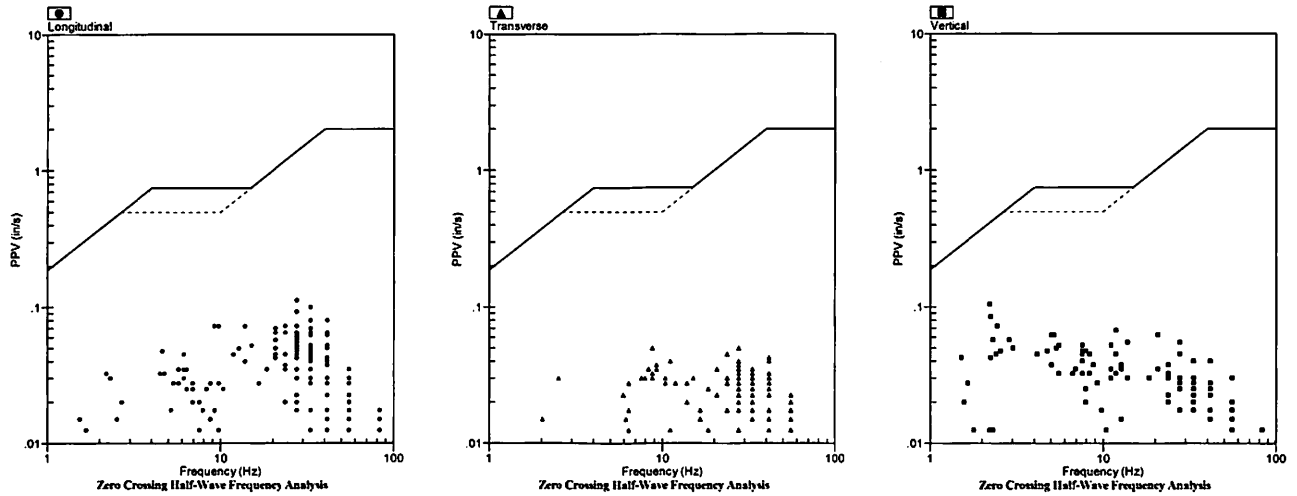
### Summary Data

	L	T	V
<b>PPV (in/s)</b>	0.113	0.050	0.105
<b>FREQ (Hz)</b>	27.8	27.8	2.2
<b>PD (.001")</b>	1.88	1.58	5.51
<b>PPA (g)</b>	0.052	0.026	0.026
<b>Peak Vector Sum:</b>	0.115 in/s		
<b>Peak Air Pressure:</b>	106 db		
	0.00064 PSI @ 5.2 Hz		

### Additional Info:

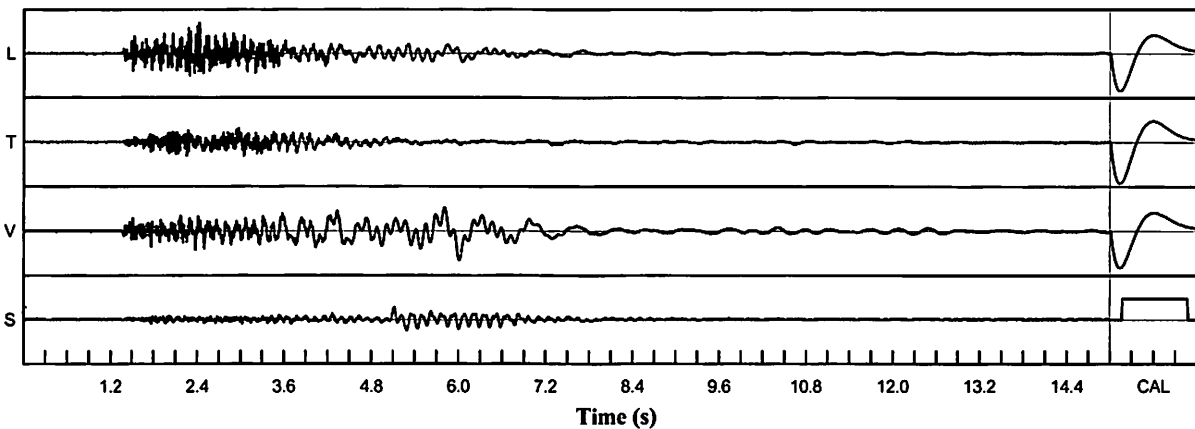
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 1



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/06/2021 14:22:08  
**Event No:** 2  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

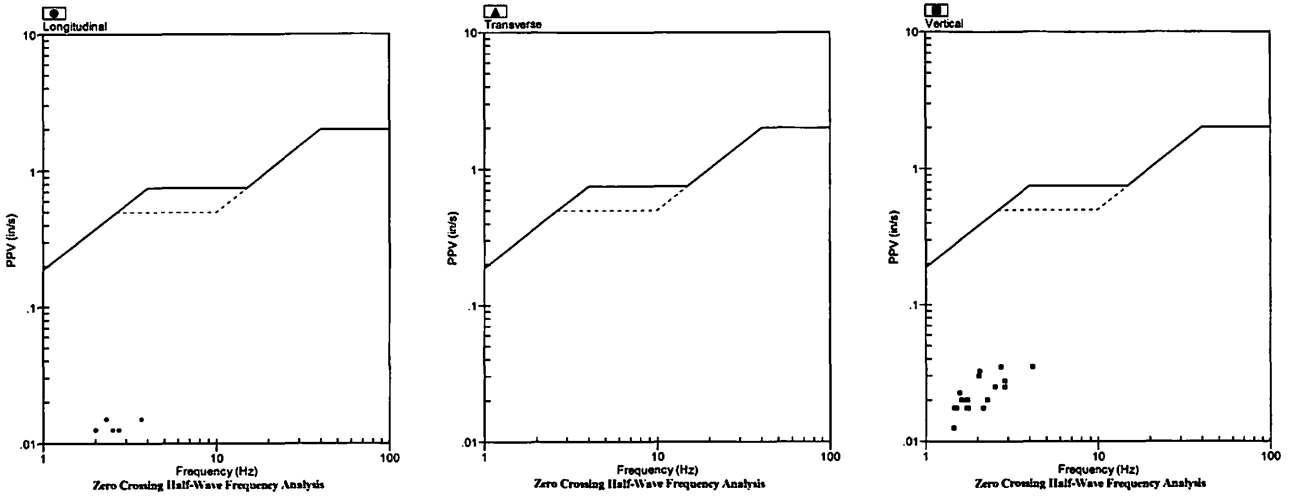
### Summary Data

	L	T	V
<b>PPV (in/s)</b>	0.015	0.008	0.035
<b>FREQ (Hz)</b>	2.3	2.3	2.3
<b>PD (.001")</b>	0.90	0.52	2.40
<b>PPA (g)</b>	0.007	0.007	0.007
<b>Peak Vector Sum:</b>	0.038 in/s		
<b>Peak Air Pressure:</b>	91 db		
	0.00025 PSI @ 1.5 Hz		

### Additional Info:

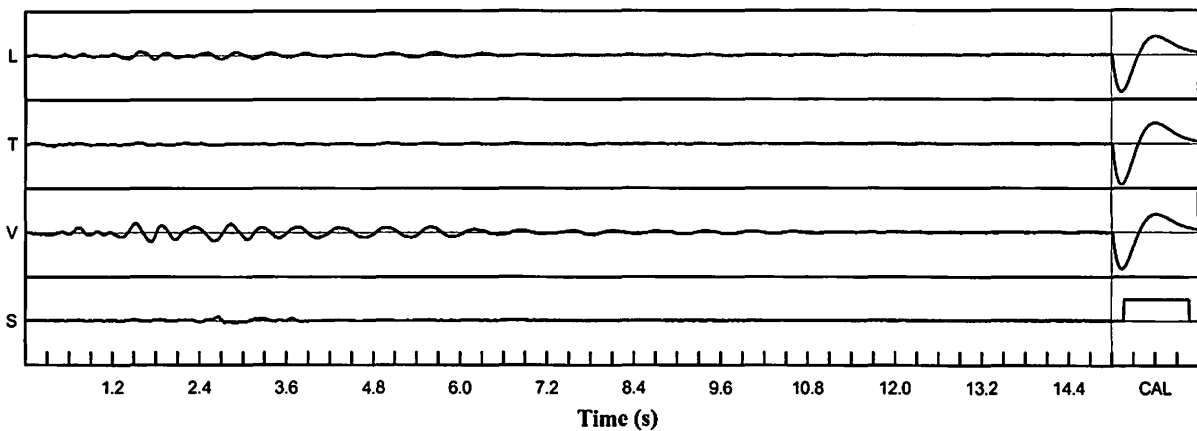
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 2



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/08/2021 13:20:59  
**Event No:** 3  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

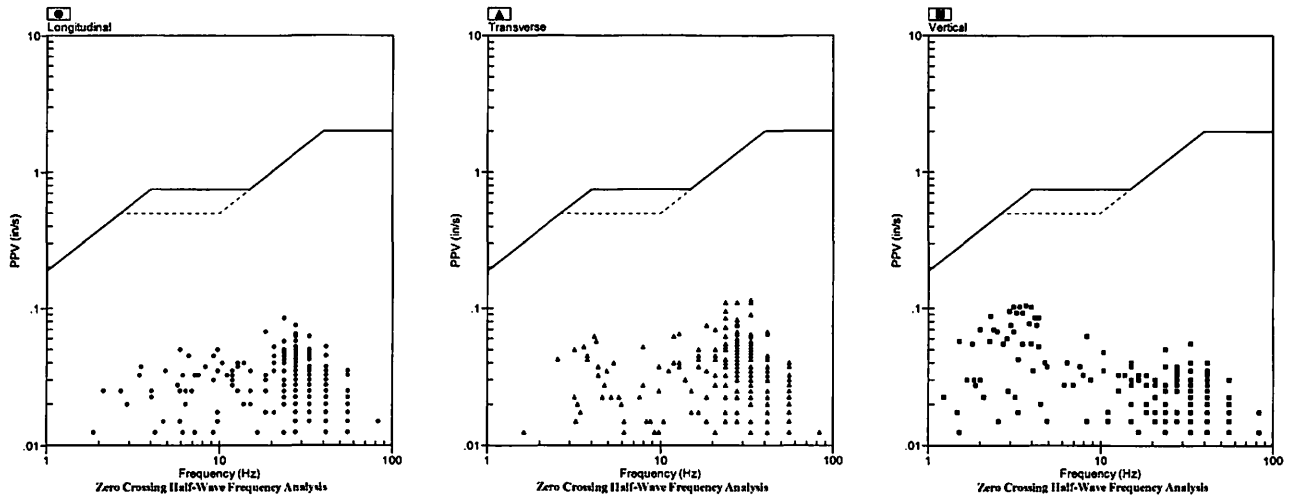
### Summary Data

	L	T	V
PPV (in/s)	0.085	0.115	0.105
FREQ (Hz)	23.8	33.3	3.7
PD (.001")	1.75	2.13	5.35
PPA (g)	0.039	0.065	0.026
Peak Vector Sum:	0.140 in/s		
Peak Air Pressure:	103 db		
	0.00050 PSI @ 4.3 Hz		

### Additional Info:

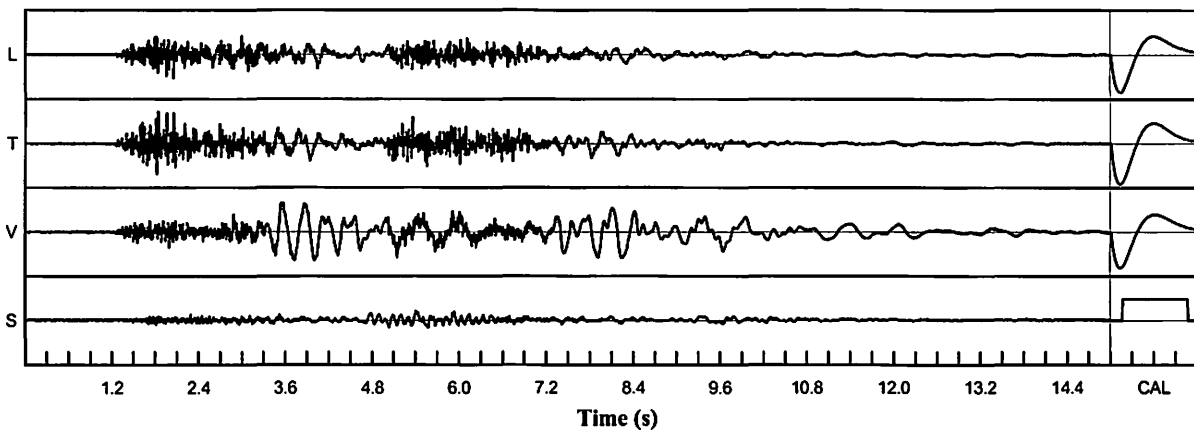
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 3



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/12/2021 13:39:06  
**Event No:** 4  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

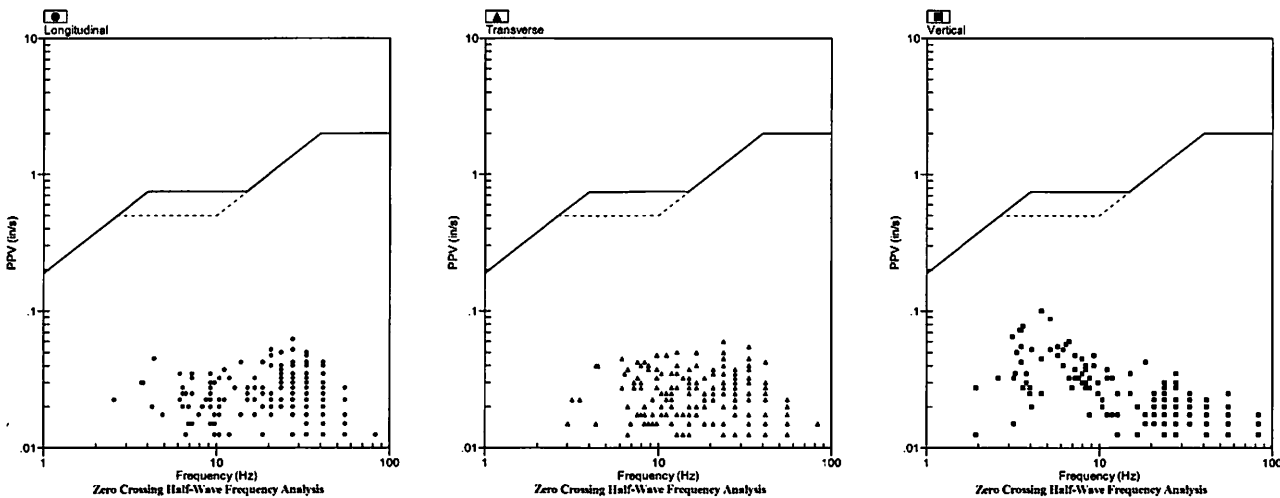
### Summary Data

	L	T	V
PPV (in/s)	0.063	0.060	0.100
FREQ (Hz)	27.8	23.8	4.6
PD (.001")	1.42	1.38	3.26
PPA (g)	0.033	0.039	0.026
Peak Vector Sum:	0.103 in/s		
Peak Air Pressure:	103 db		
	0.00050 PSI @ 4.2 Hz		

### Additional Info:

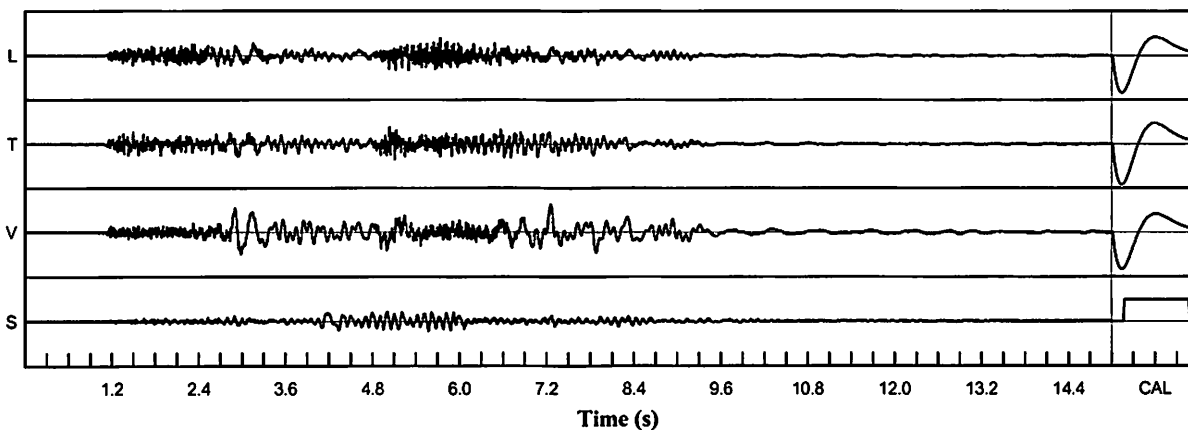
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 4



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/13/2021 11:50:26  
**Event No:** 5  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

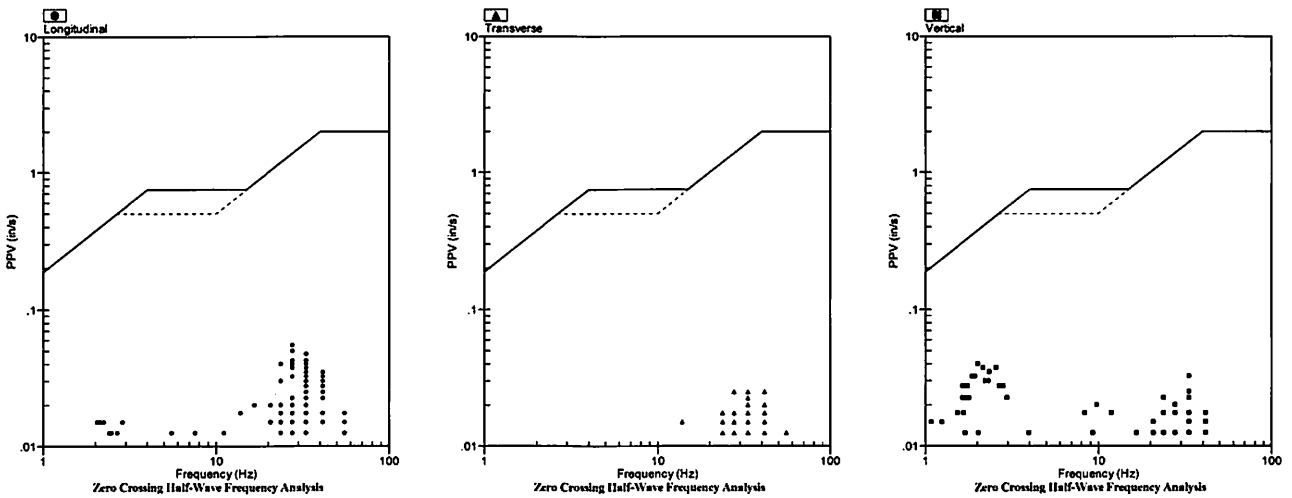
### Summary Data

	L	T	V
PPV (in/s)	0.055	0.025	0.040
FREQ (Hz)	27.8	33.3	2.0
PD (.001")	1.04	0.72	2.97
PPA (g)	0.026	0.013	0.020
Peak Vector Sum:	0.058 in/s		
Peak Air Pressure:	90 db		
	0.00021 PSI @ 6.2 Hz		

### Additional Info:

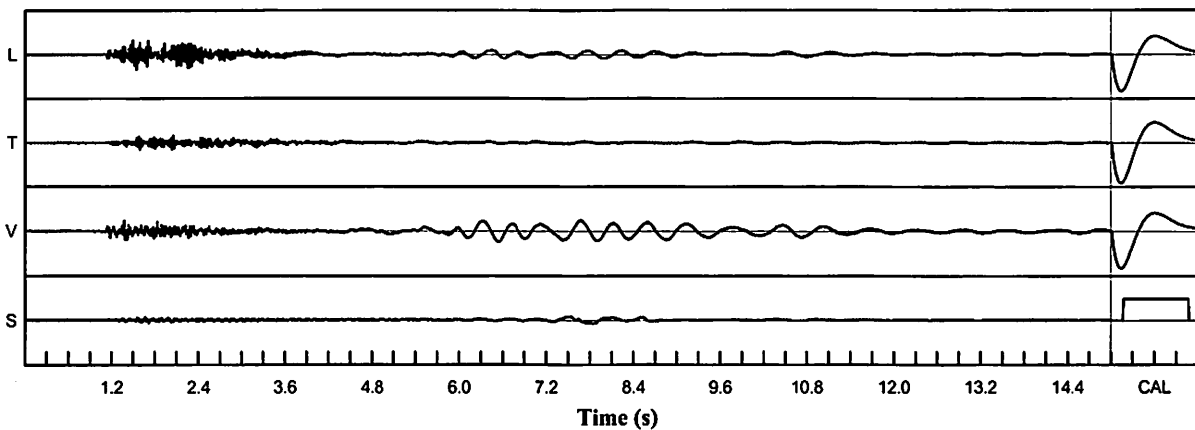
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 5



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/14/2021 11:21:54  
**Event No:** 6  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

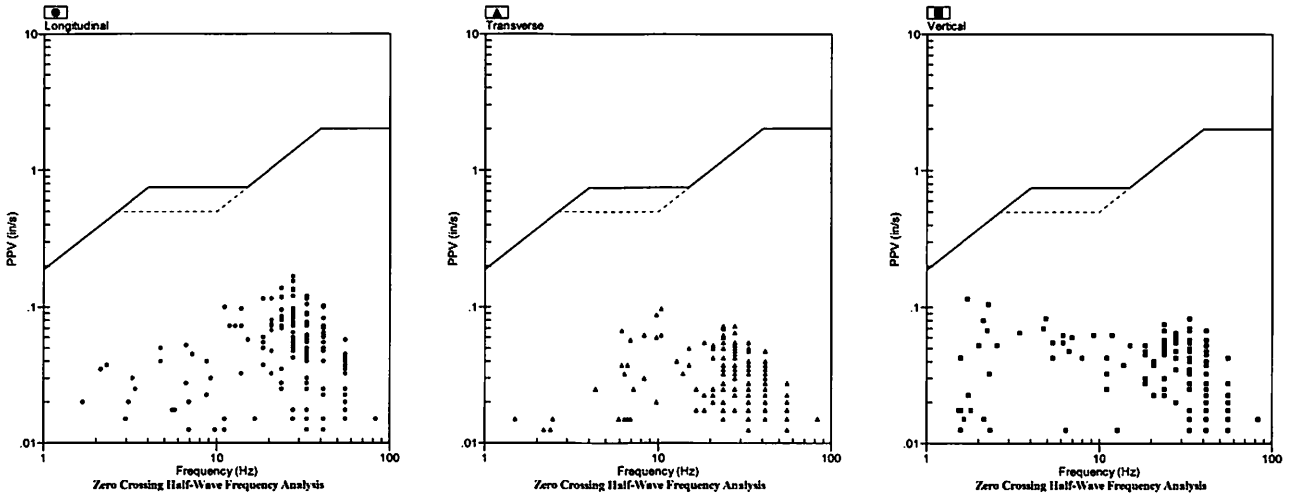
### Summary Data

	L	T	V
PPV (in/s)	0.168	0.098	0.115
FREQ (Hz)	27.8	10.4	1.7
PD (.001")	2.43	1.85	7.56
PPA (g)	0.072	0.033	0.039
Peak Vector Sum:	0.173 in/s		
Peak Air Pressure:	107 db		
	0.00068 PSI @ 7.6 Hz		

### Additional Info:

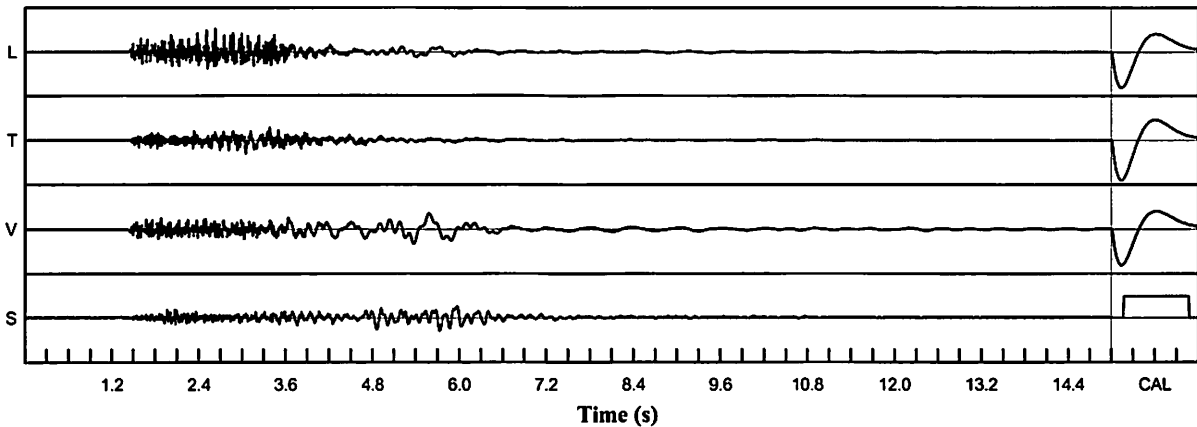
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 6



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/15/2021 13:21:26  
**Event No:** 7  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

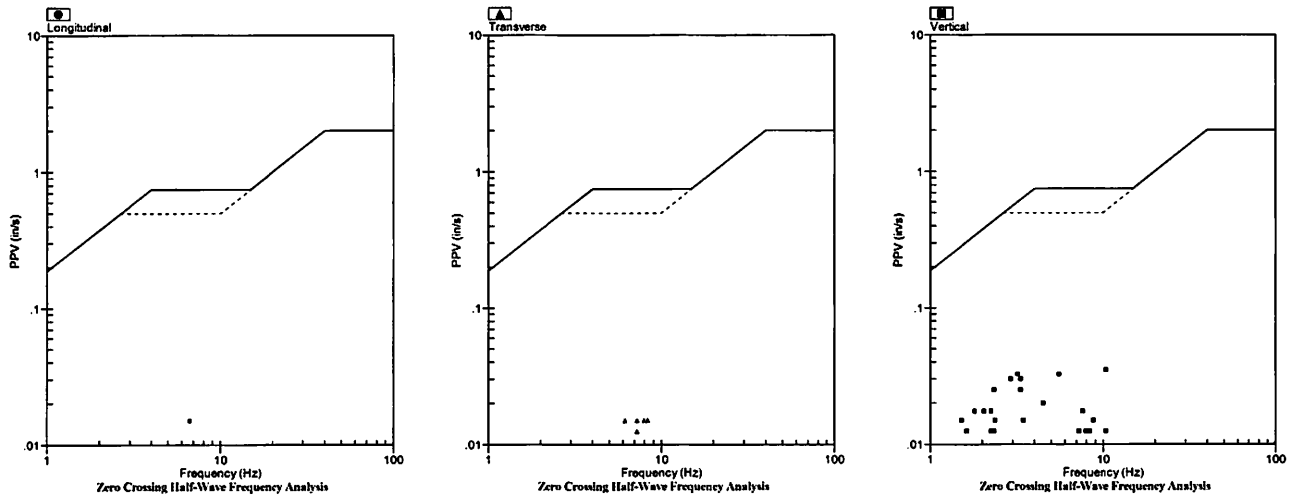
### Summary Data

	L	T	V
PPV (in/s)	0.020	0.018	0.035
FREQ (Hz)	6.4	9.8	3.1
PD (.001")	0.57	0.59	1.42
PPA (g)	0.007	0.007	0.007
Peak Vector Sum:	0.035 in/s		
Peak Air Pressure:	93 db		
	0.00028 PSI @ 16.7 Hz		

### Additional Info:

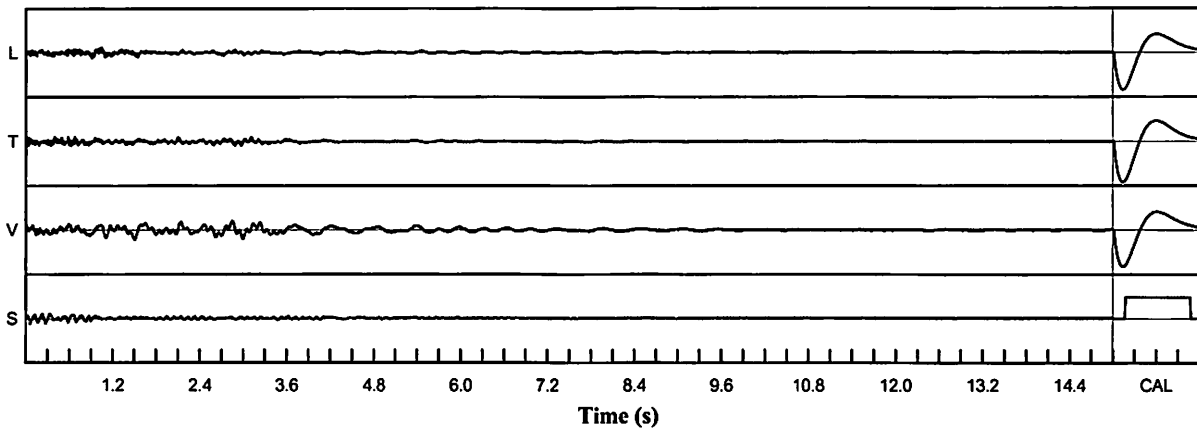
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 7



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/19/2021 11:22:02  
**Event No:** 8  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

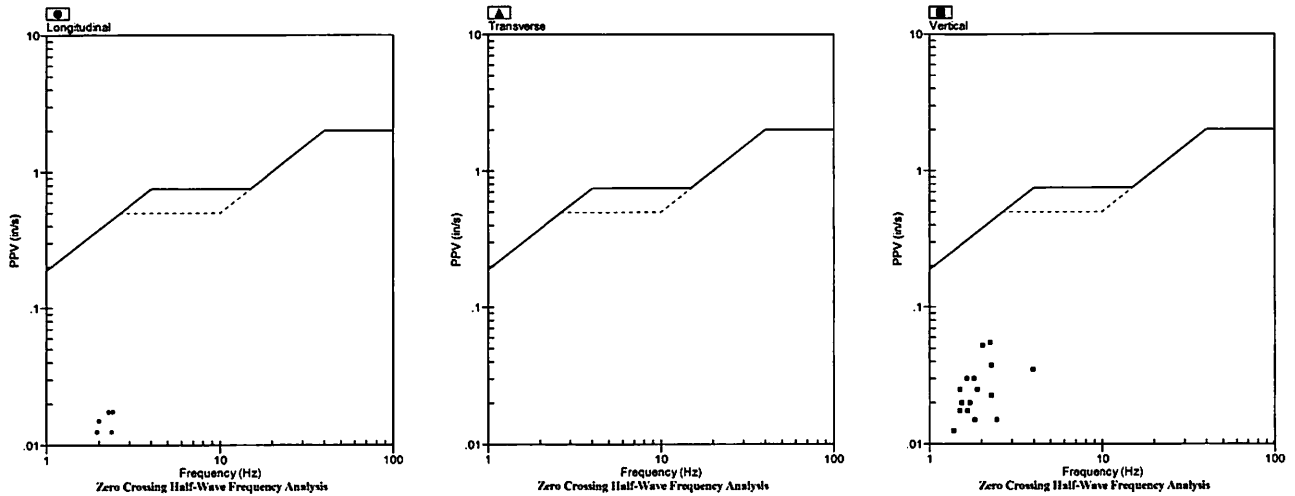
### Summary Data

	L	T	V
PPV (in/s)	0.018	0.008	0.055
FREQ (Hz)	2.3	1.3	2.3
PD (.001")	1.24	0.45	3.87
PPA (g)	0.007	0.007	0.007
Peak Vector Sum:	0.055 in/s		
Peak Air Pressure:	96 db		
	0.00036 PSI @ 2.5 Hz		

### Additional Info:

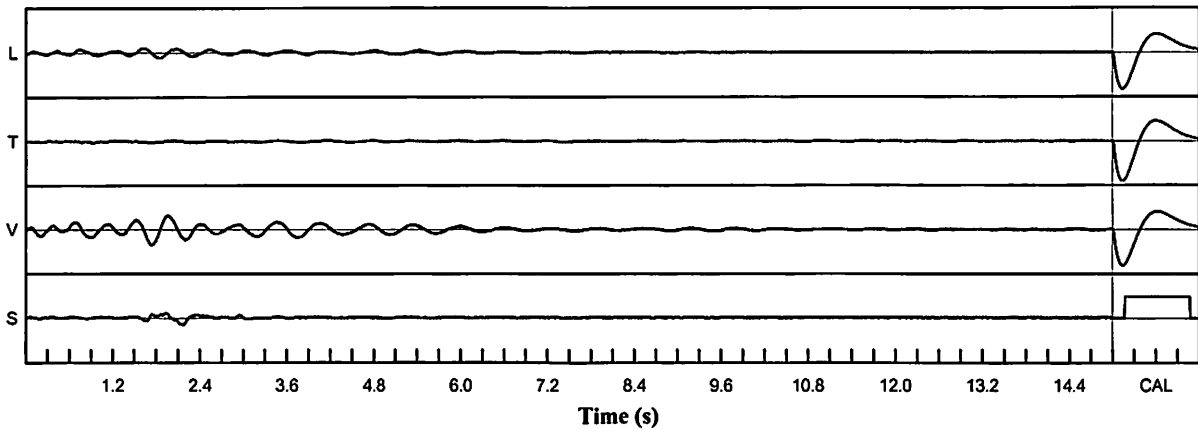
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 8



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/20/2021 13:36:49  
**Event No:** 9  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

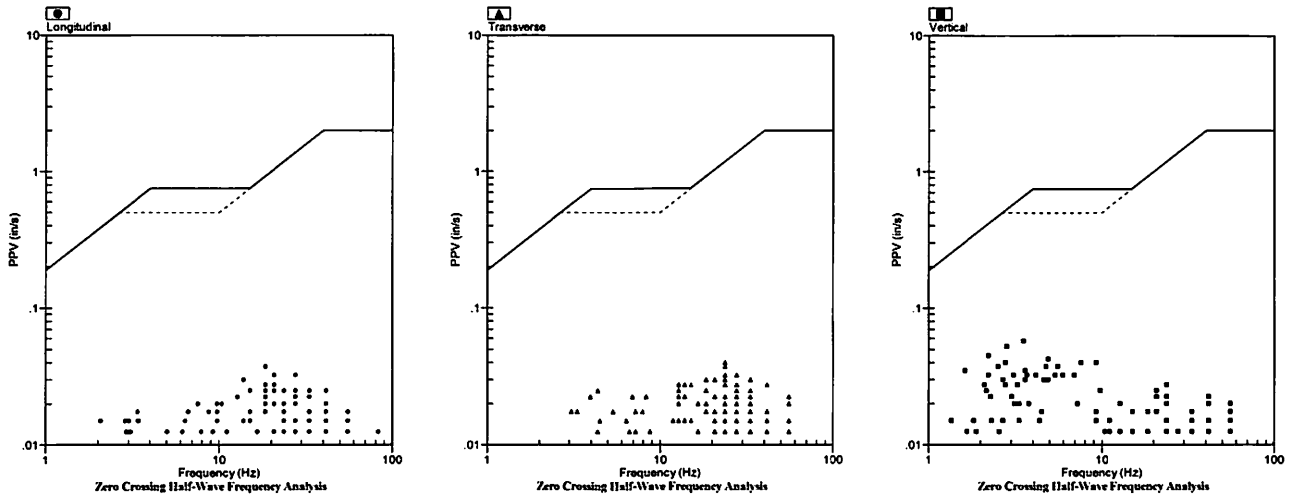
### Summary Data

	L	T	V
PPV (in/s)	0.038	0.040	0.058
FREQ (Hz)	18.5	23.8	3.5
PD (.001")	0.84	0.89	2.64
PPA (g)	0.020	0.020	0.020
Peak Vector Sum:	0.060 in/s		
Peak Air Pressure:	106 db		
	0.00061 PSI @ 9.3 Hz		

### Additional Info:

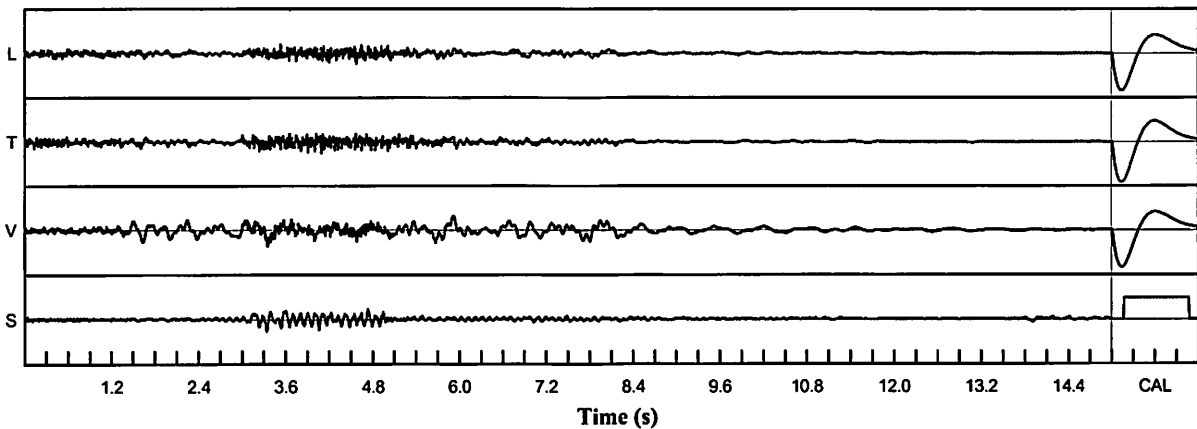
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 9



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/21/2021 13:21:36  
**Event No:** 10  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

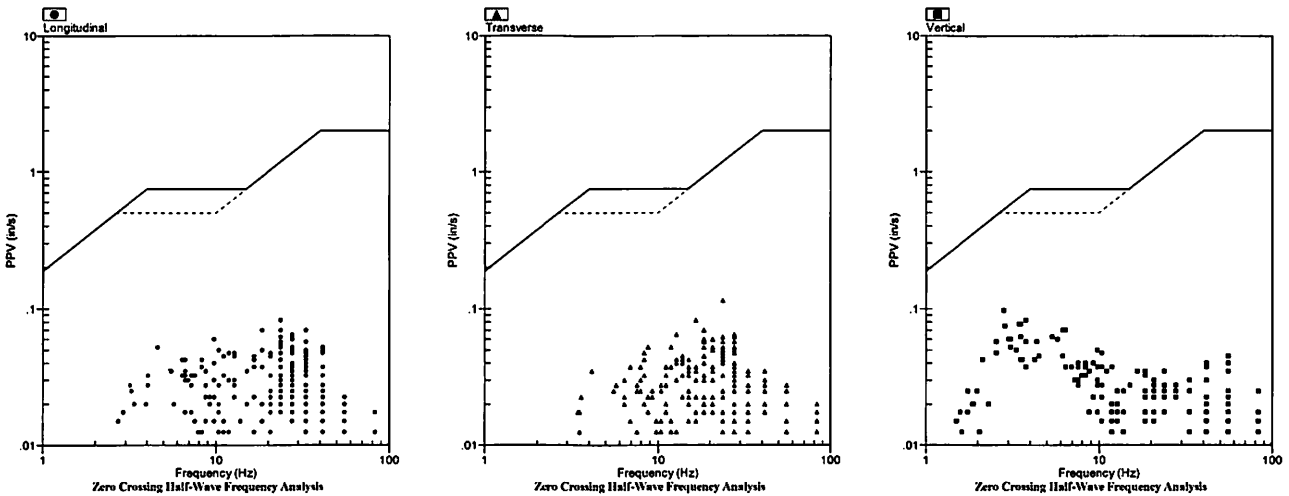
### Summary Data

	L	T	V
PPV (in/s)	0.083	0.115	0.098
FREQ (Hz)	23.8	23.8	2.8
PD (.001")	1.71	1.38	4.39
PPA (g)	0.039	0.039	0.033
Peak Vector Sum:	0.145 in/s		
Peak Air Pressure:	109 db		
	0.00096 PSI @ 12.8 Hz		

### Additional Info:

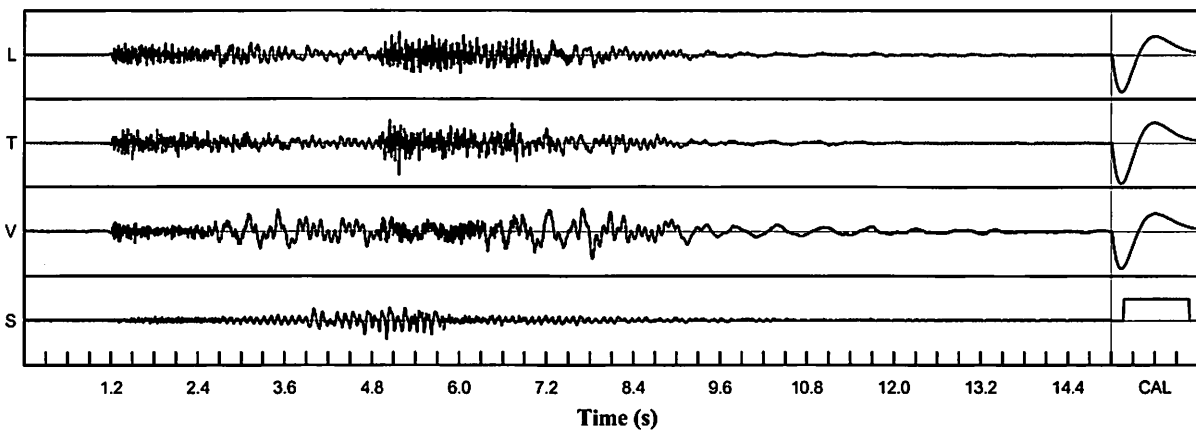
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 10



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/22/2021 13:22:05  
**Event No:** 11  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

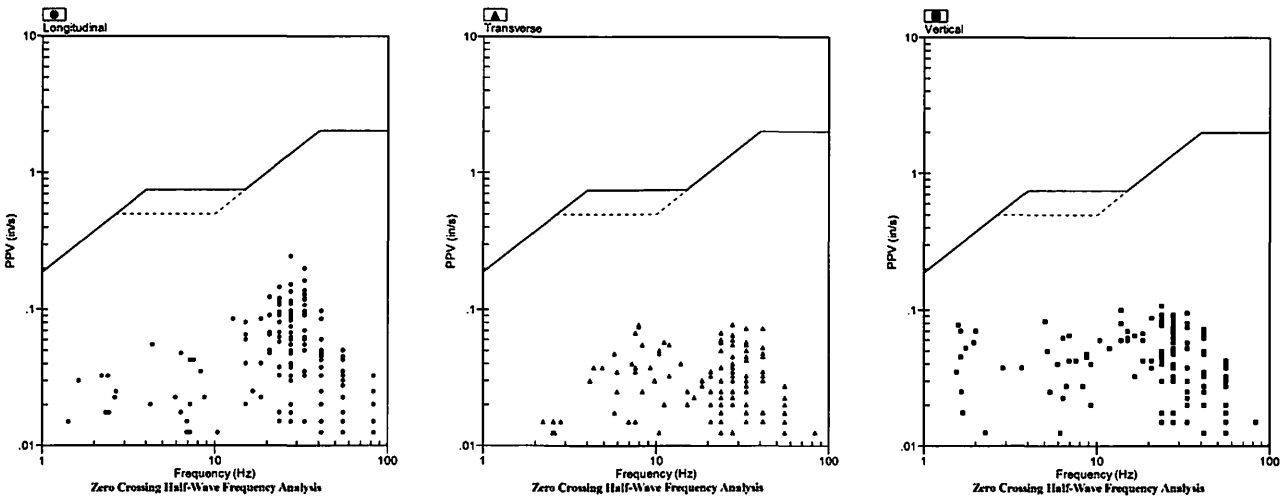
### Summary Data

	L	T	V
PPV (in/s)	0.245	0.078	0.108
FREQ (Hz)	27.8	27.8	23.8
PD (.001")	2.07	1.71	5.43
PPA (g)	0.124	0.046	0.059
Peak Vector Sum:	0.260 in/s		
Peak Air Pressure:	112 db		
	0.00128 PSI @ 10.4 Hz		

### Additional Info:

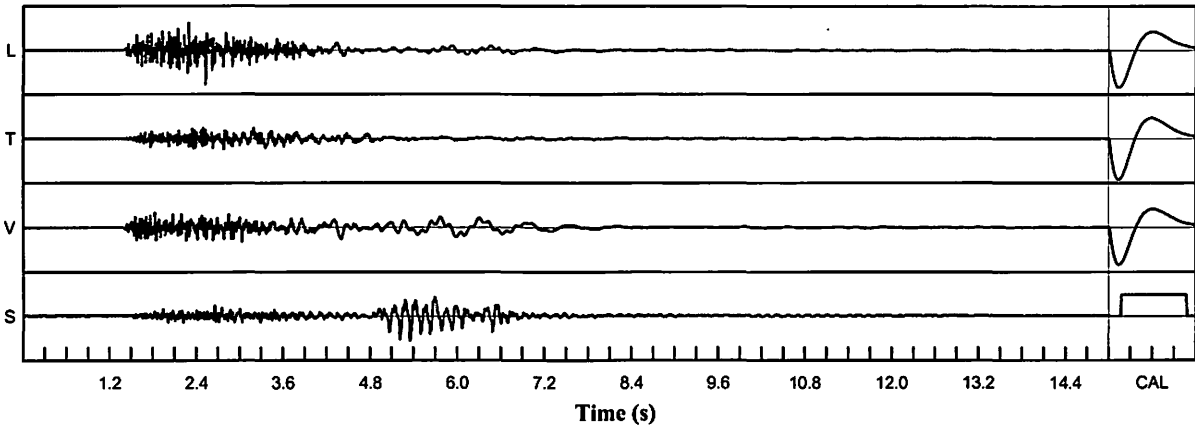
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 11



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/25/2021 11:54:22  
**Event No:** 12  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

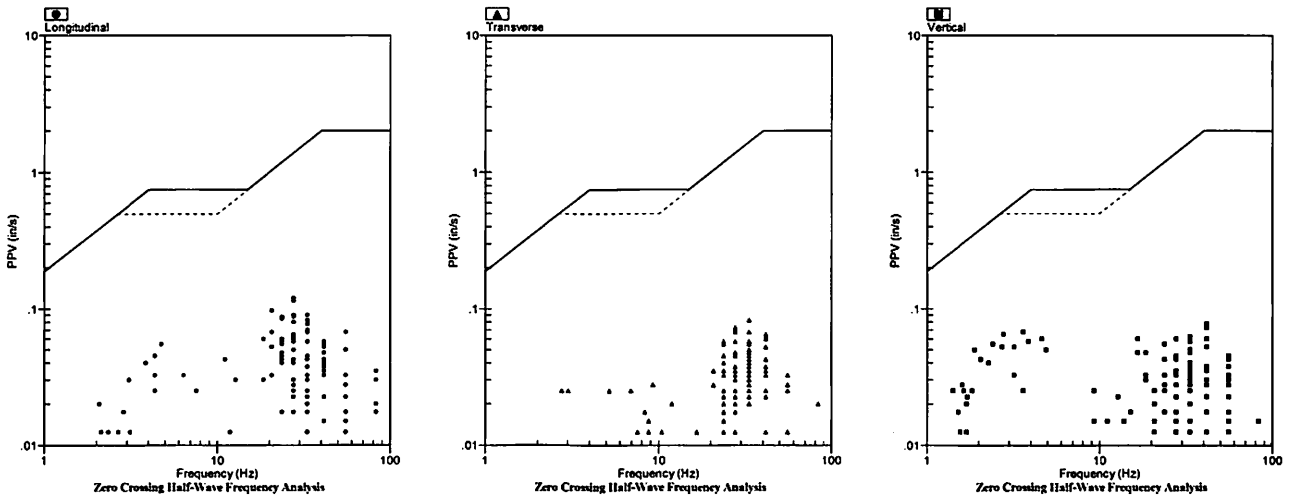
### Summary Data

	L	T	V
PPV (in/s)	0.120	0.083	0.078
FREQ (Hz)	27.8	33.3	41.7
PD (.001")	1.53	1.55	3.66
PPA (g)	0.065	0.052	0.046
Peak Vector Sum:	0.125 in/s		
Peak Air Pressure:	109 db		
	0.00096 PSI @ 3.9 Hz		

### Additional Info:

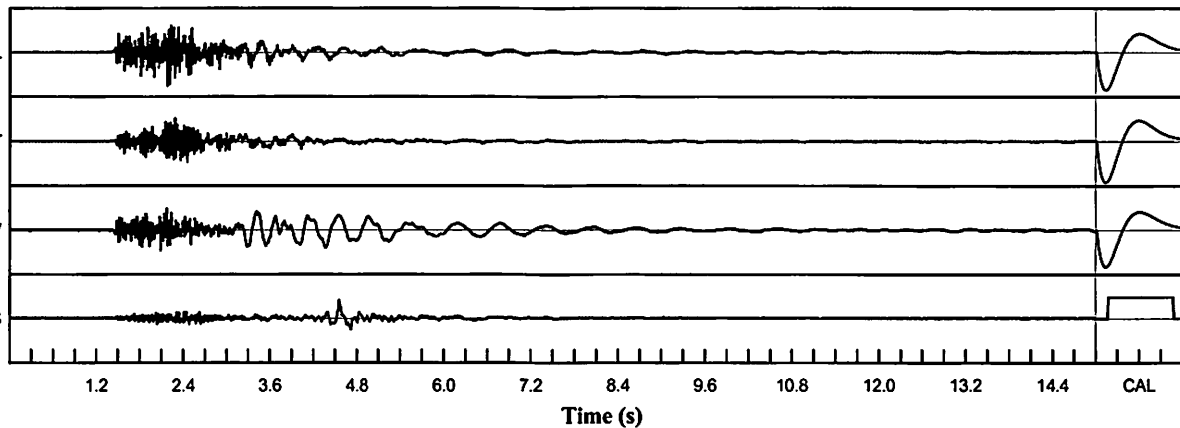
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 12



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/26/2021 13:21:50  
**Event No:** 13  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

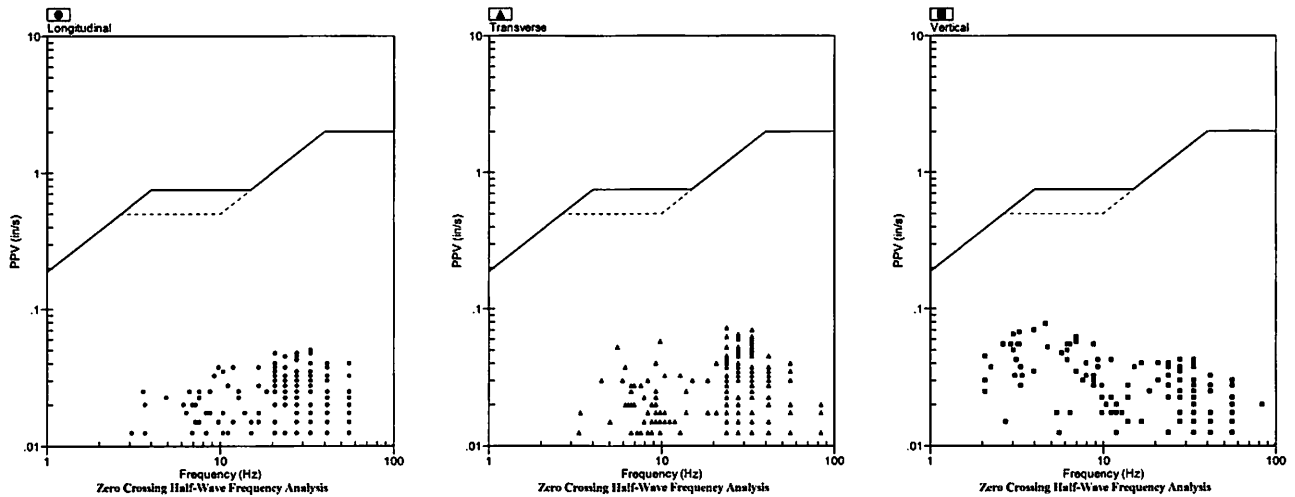
### Summary Data

	L	T	V
PPV (in/s)	0.050	0.073	0.078
FREQ (Hz)	33.3	23.8	4.6
PD (.001")	1.06	1.53	3.16
PPA (g)	0.033	0.039	0.026
Peak Vector Sum:	0.080 in/s		
Peak Air Pressure:	106 db		
	0.00064 PSI @ 4.0 Hz		

### Additional Info:

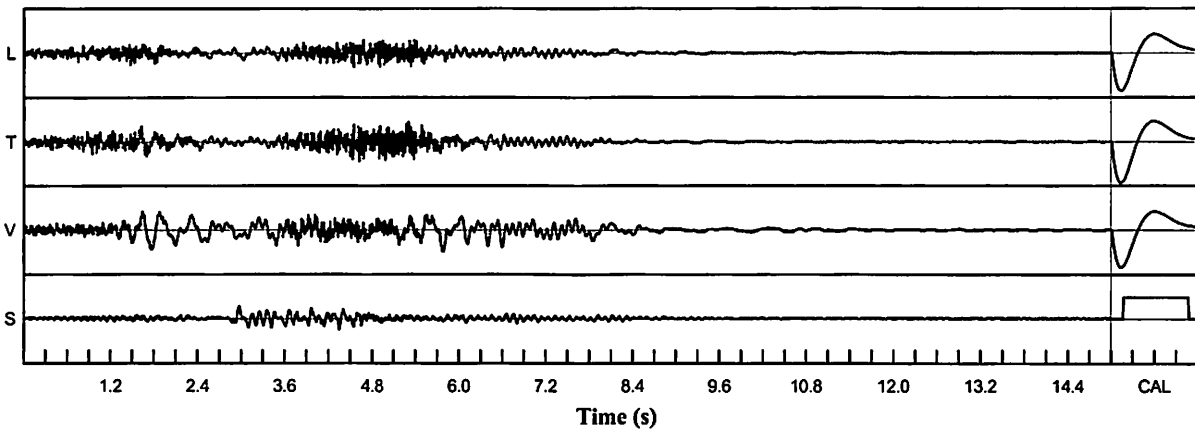
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 13



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/27/2021 13:28:26  
**Event No:** 14  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

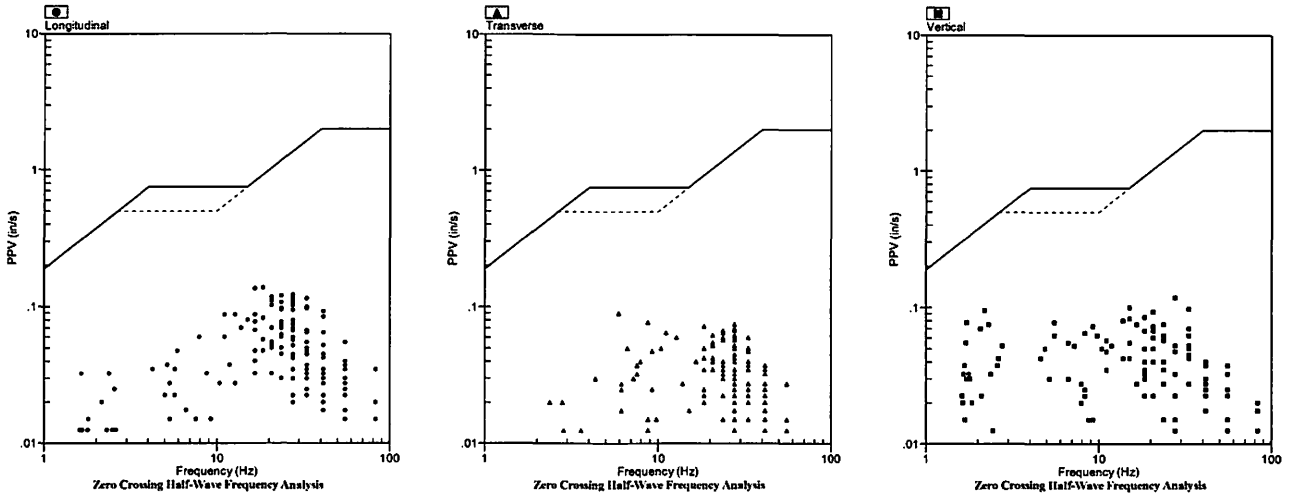
**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.138	0.090	0.118
<b>FREQ (Hz)</b>	18.5	6.0	27.8
<b>PD (.001")</b>	1.98	1.53	5.15
<b>PPA (g)</b>	0.072	0.039	0.052
<b>Peak Vector Sum:</b>	0.168 in/s		
<b>Peak Air Pressure:</b>	111 db		
	0.00117 PSI @ 11.1 Hz		

**Additional Info:**

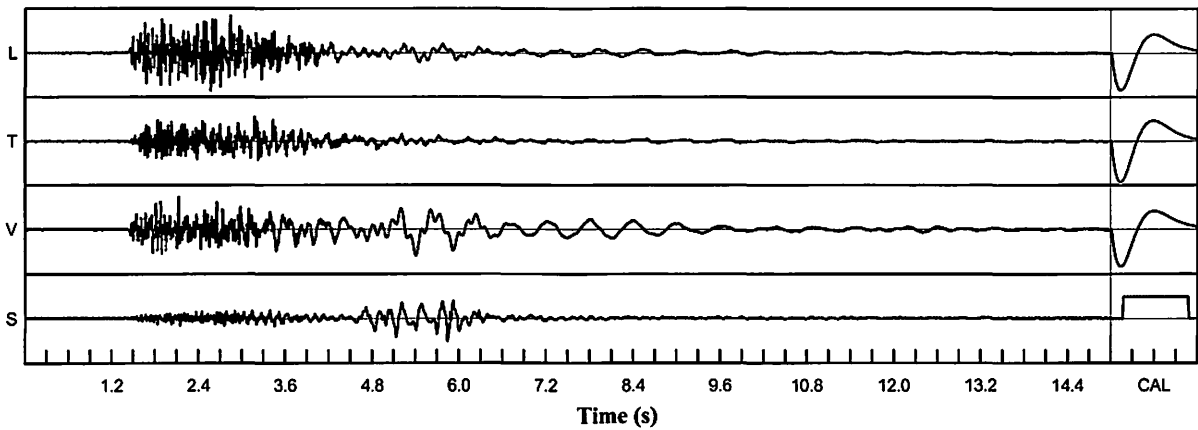
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 14



**Velocity Waveform Graph Scale**

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 01/29/2021 11:45:36  
**Event No:** 15  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

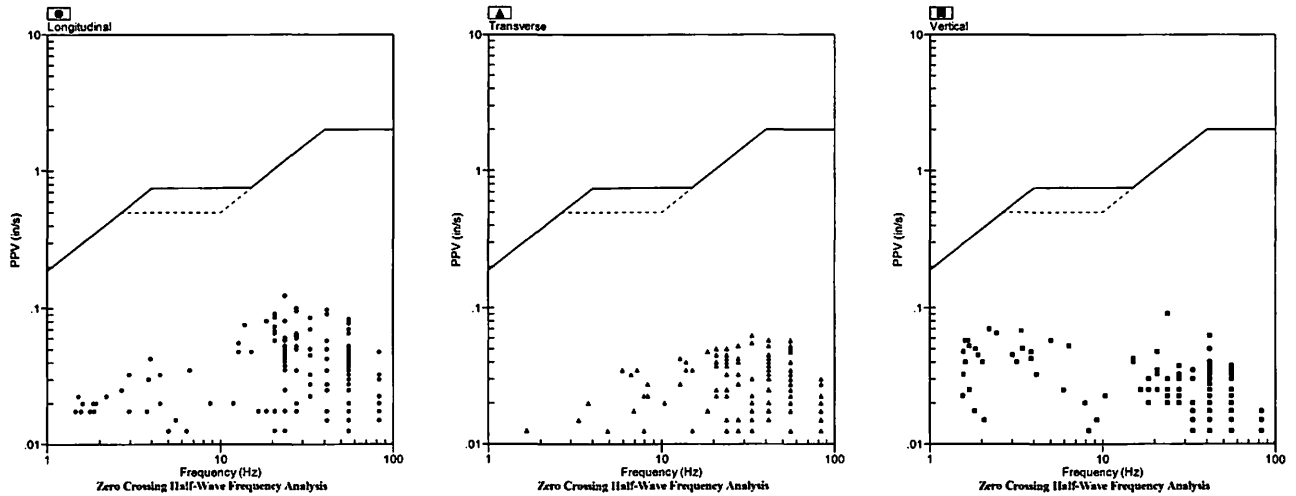
### Summary Data

	L	T	V
PPV (in/s)	0.123	0.063	0.090
FREQ (Hz)	23.8	33.3	23.8
PD (.001")	1.74	1.28	5.74
PPA (g)	0.078	0.046	0.046
Peak Vector Sum:	0.133 in/s		
Peak Air Pressure:	99 db		
	0.00043 PSI @ 9.8 Hz		

### Additional Info:

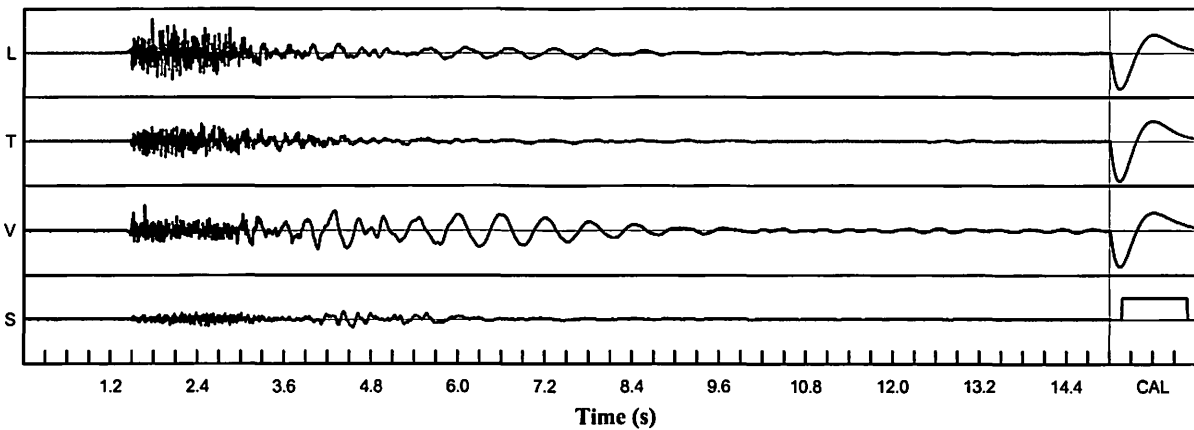
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 15



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI



# Seismic Analysis

## Velocity Waveform Analysis

**Serial No:** 5149 v3.67  
**Date:** 02/01/2021 13:15:02  
**Event No:** 13  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

### USBM Safe Blasting Levels

SN: 5149 Event: 13

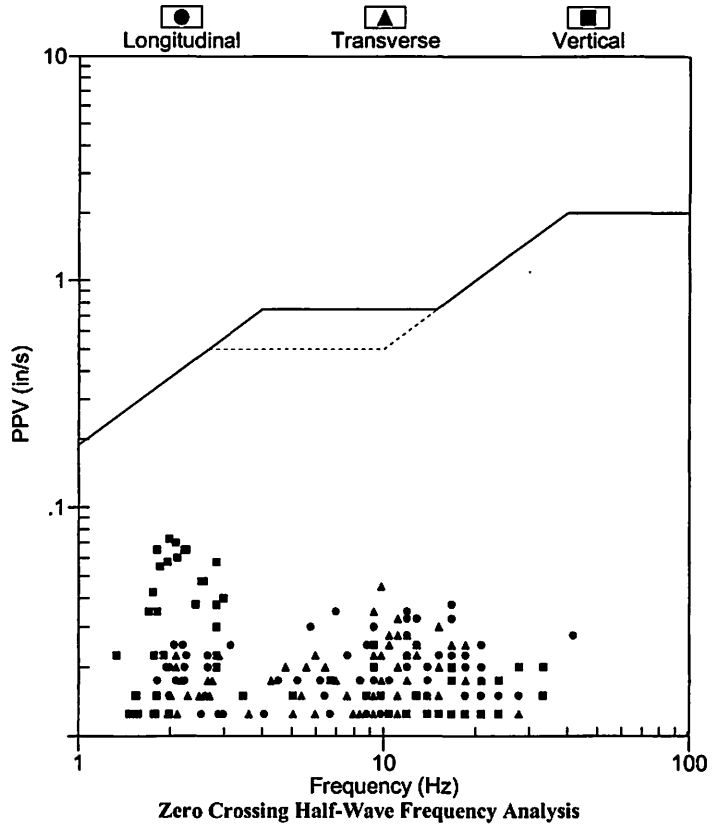
	Summary Data		
	L	T	V
PPV (in/s)	0.038	0.045	0.073
FREQ (Hz)	16.7	9.8	2.0
PD (.001")	1.66	1.59	5.69
PPA (g)	0.013	0.013	0.013
Peak Vector Sum :	0.073 in/s		
Peak Air Pressure:	117 db		
	0.00209 PSI @ 6.7 Hz		

**Additional Info:**

**Shaketable Calibrated:** 06/05/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

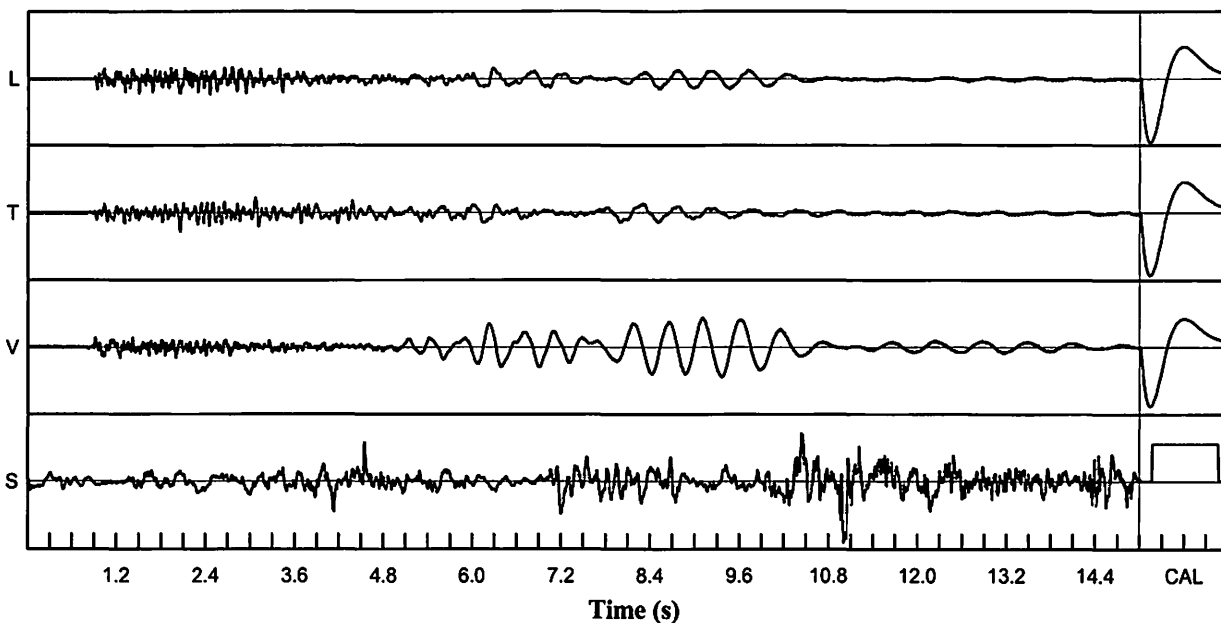
**Velocity Waveform Graph Scale**

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI



### Velocity Waveform

SN: 5149 Event: 13



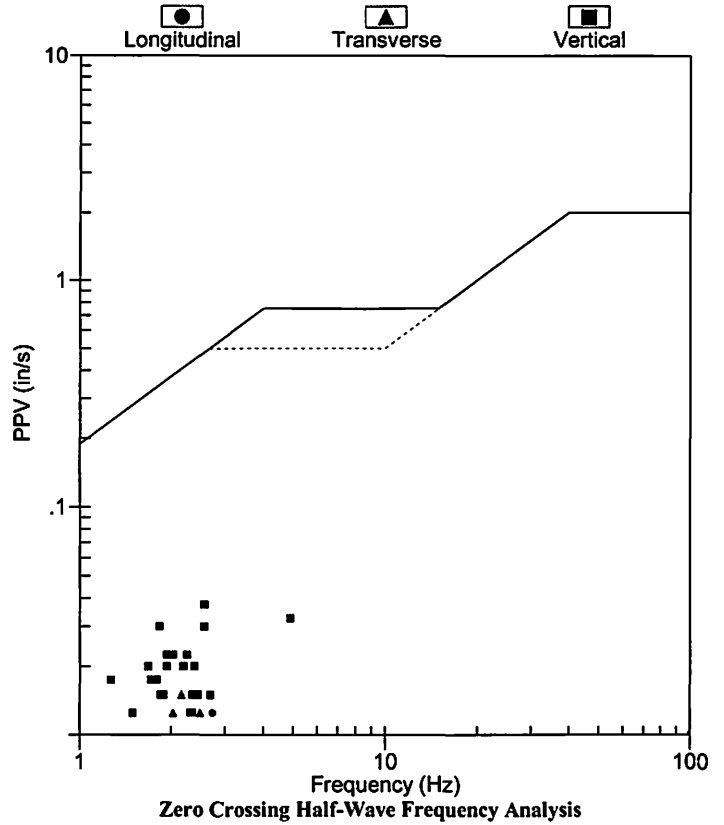
# Seismic Analysis

## Velocity Waveform Analysis

**Serial No:** 5149 v3.67  
**Date:** 02/04/2021 13:15:23  
**Event No:** 14  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

### USBM Safe Blasting Levels

SN: 5149 Event: 14



	Summary Data		
	L	T	V
PPV (in/s)	0.020	0.015	0.038
FREQ (Hz)	4.8	8.3	2.6
PD (.001")	0.79	0.76	2.17
PPA (g)	0.007	0.007	0.007
Peak Vector Sum :	0.040 in/s		
Peak Air Pressure:	101 db		
	0.00034 PSI @ 2.3 Hz		

**Additional Info:**

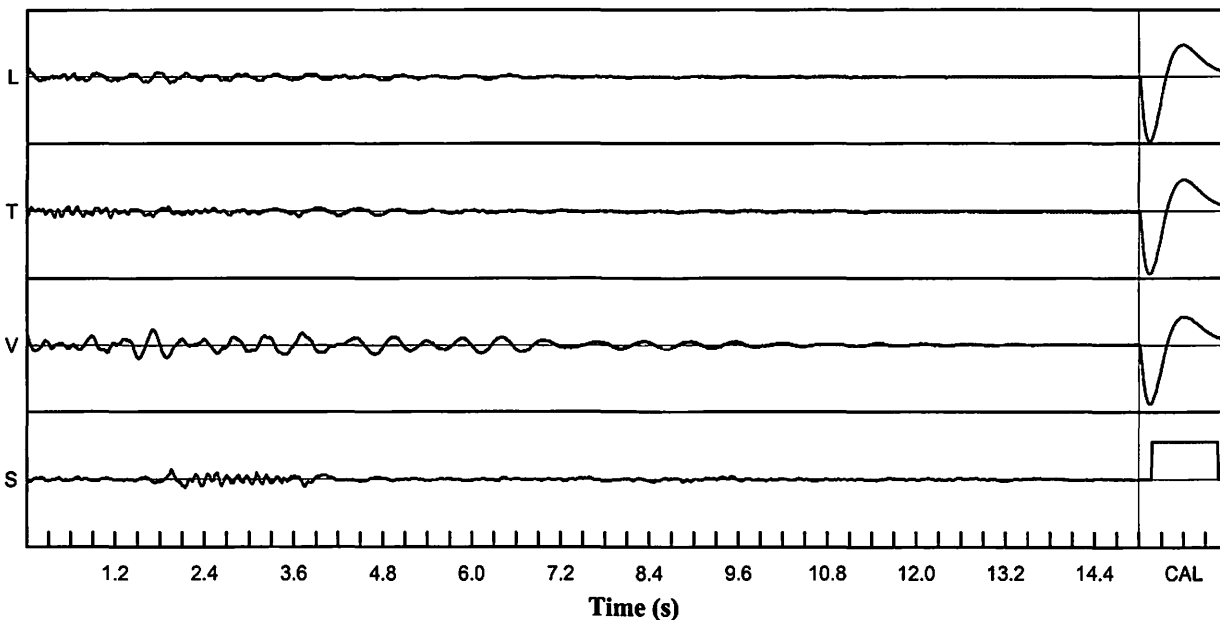
**Shaketable Calibrated:** 06/05/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

**Velocity Waveform Graph Scale**

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

### Velocity Waveform

SN: 5149 Event: 14



# GeoSonics Inc. Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 02/19/2021 11:15:22  
**Event No:** 1  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 sw 152 ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In ground  
**Seismic Trigger:** 0.050 in/s

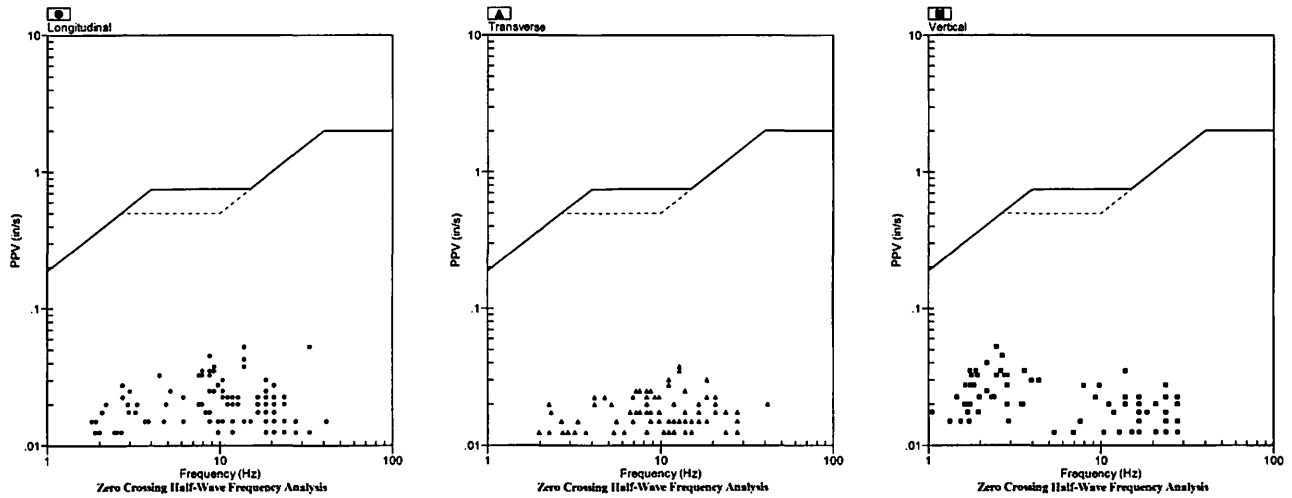
### Summary Data

	L	T	V
<b>PPV (in/s)</b>	0.063	0.043	0.053
<b>FREQ (Hz)</b>	15.2	10.4	2.5
<b>PD (.001")</b>	1.57	1.11	3.19
<b>PPA (g)</b>	0.020	0.020	0.013
<b>Peak Vector Sum:</b>	0.073 in/s		
<b>Peak Air Pressure:</b>	110 db		
	0.00096 PSI @ 2.5 Hz		

### Additional Info:

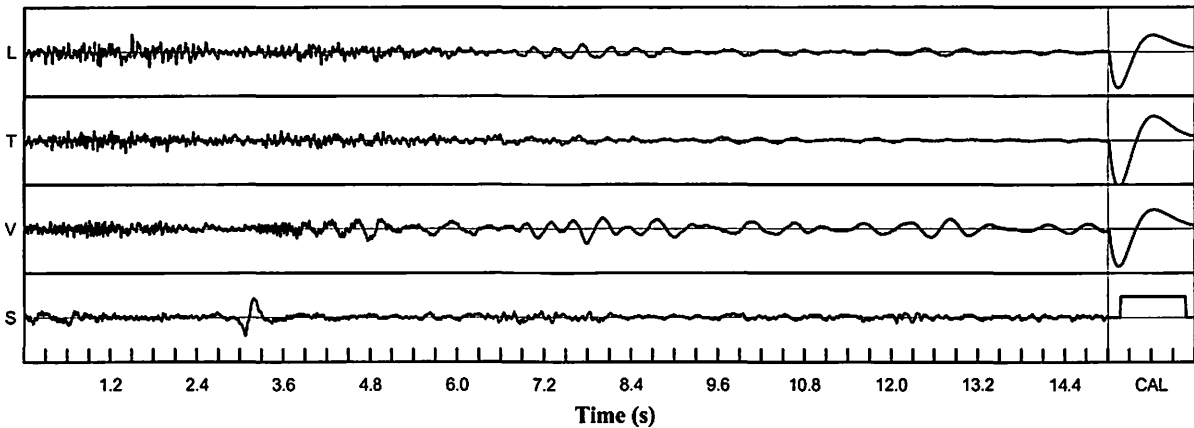
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 1



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# GeoSonics Inc. Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 03/03/2021 13:15:42  
**Event No:** 3  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 sw 152 ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In ground  
**Seismic Trigger:** 0.050 in/s

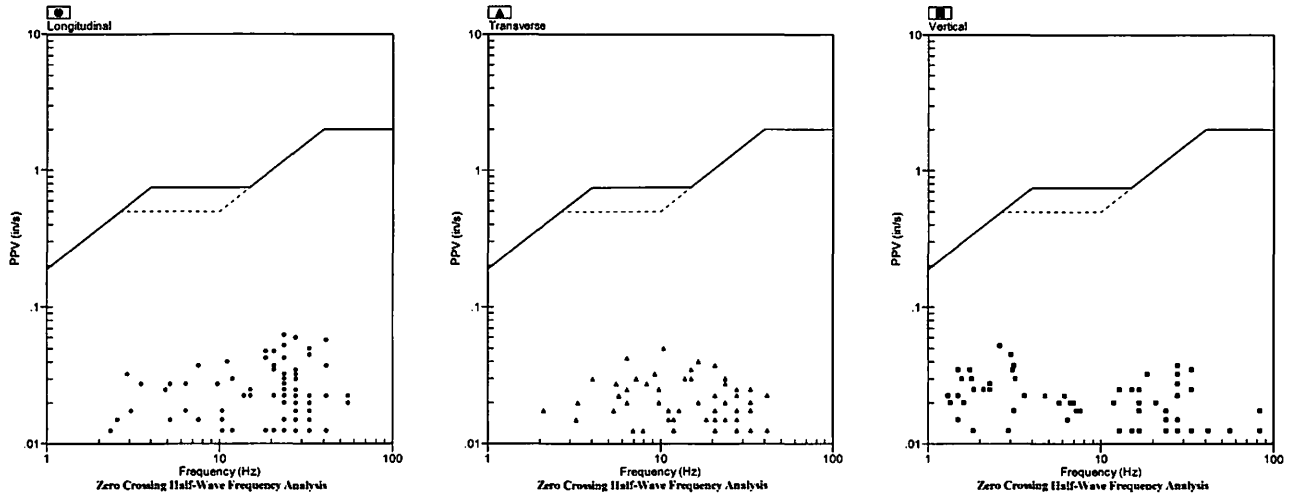
### Summary Data

	L	T	V
<b>PPV (in/s)</b>	0.093	0.058	0.053
<b>FREQ (Hz)</b>	18.5	23.8	2.6
<b>PD (.001")</b>	2.06	1.27	3.17
<b>PPA (g)</b>	0.039	0.020	0.020
<b>Peak Vector Sum:</b>	0.110 in/s		
<b>Peak Air Pressure:</b>	107 db		
	0.00073 PSI @ 6.4 Hz		

### Additional Info:

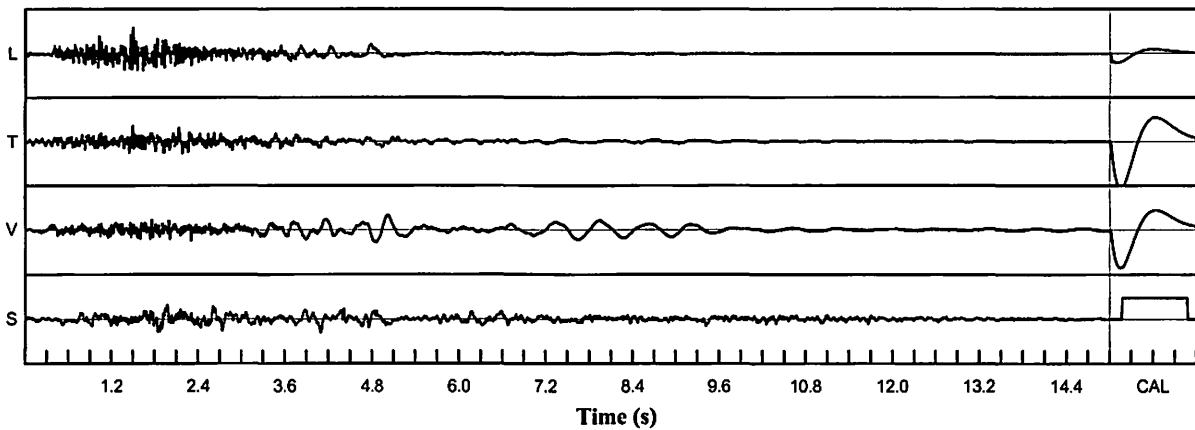
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 3



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# GeoSonics Inc. Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 03/09/2021 13:16:13  
**Event No:** 5  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 sw 152 ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In ground  
**Seismic Trigger:** 0.050 in/s

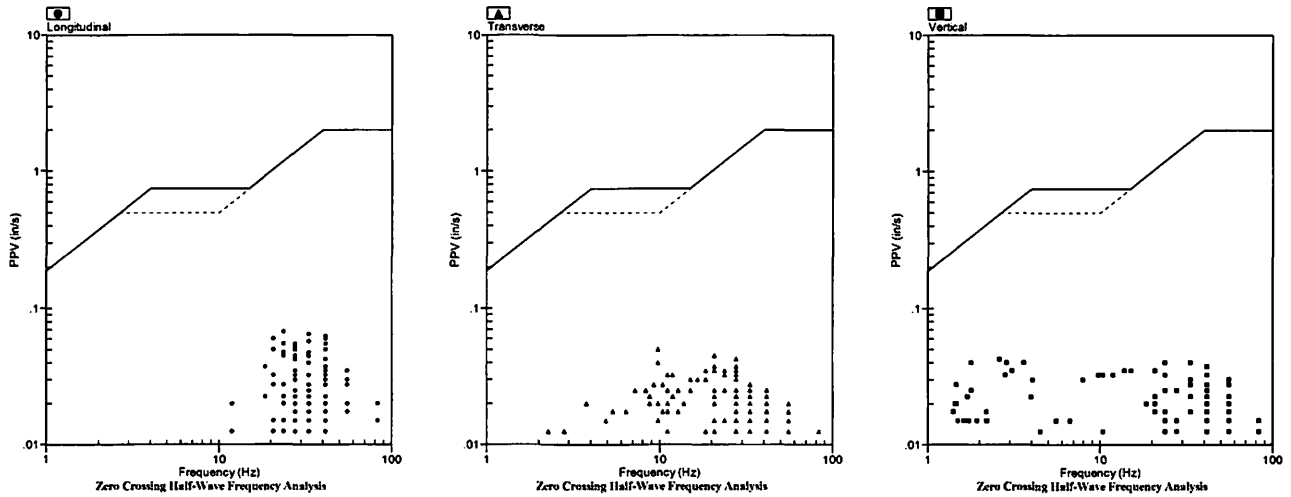
### Summary Data

	L	T	V
PPV (in/s)	0.078	0.050	0.055
FREQ (Hz)	27.8	9.8	9.8
PD (.001")	1.28	1.15	2.86
PPA (g)	0.046	0.020	0.026
Peak Vector Sum:	0.085 in/s		
Peak Air Pressure:	100 db		
	0.00030 PSI @ 3.7 Hz		

### Additional Info:

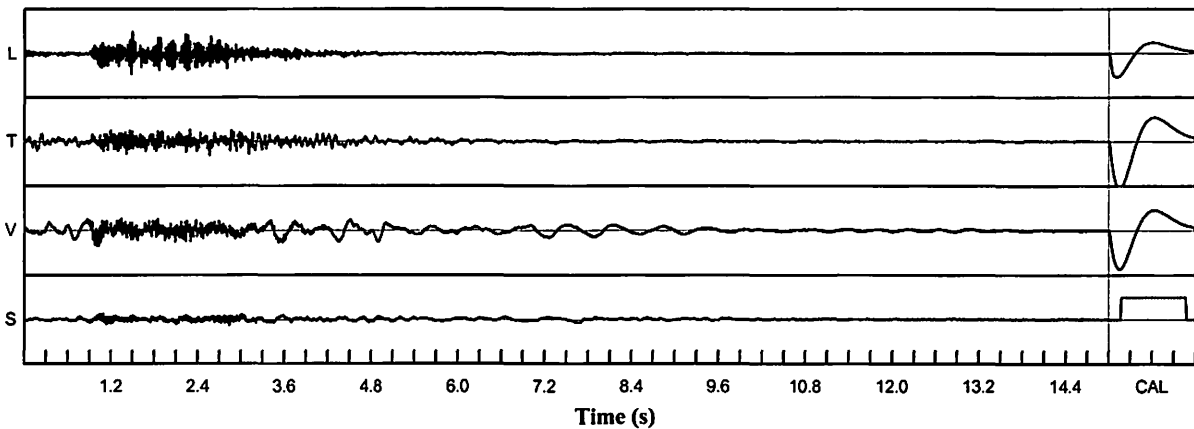
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 5



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

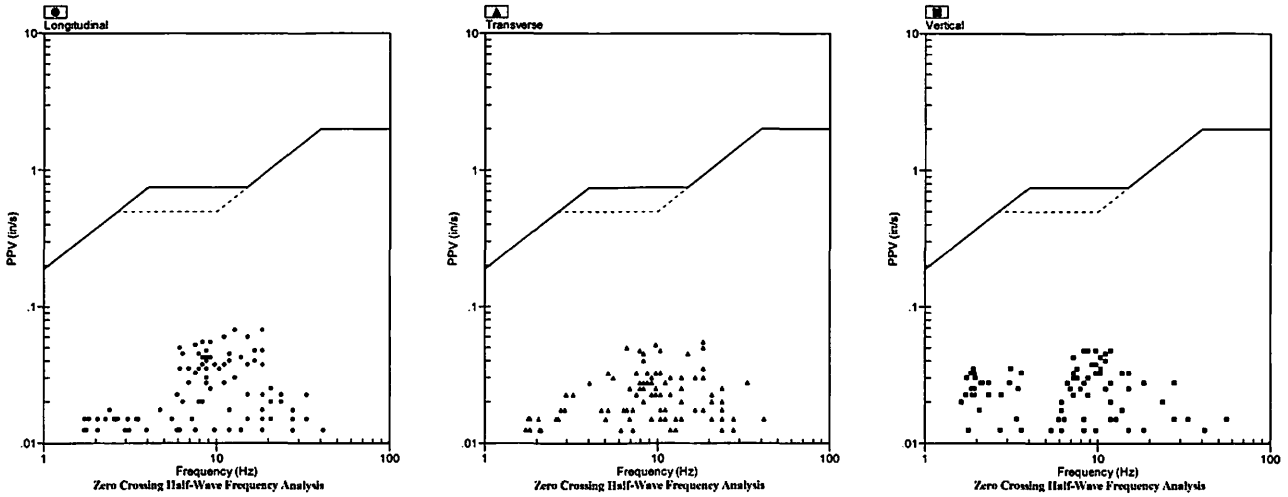
**Serial No:** 5148 v3.67  
**Date:** 03/16/2021 10:16:18  
**Event No:** 1  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

Summary Data			
	L	T	V
PPV (in/s)	0.068	0.055	0.048
FREQ (Hz)	18.5	18.5	9.8
PD (.001")	1.21	1.26	2.54
PPA (g)	0.020	0.020	0.013
Peak Vector Sum:	0.083 in/s		
Peak Air Pressure:	106 db		
	0.00057 PSI @ 6.7 Hz		

**Additional Info:**

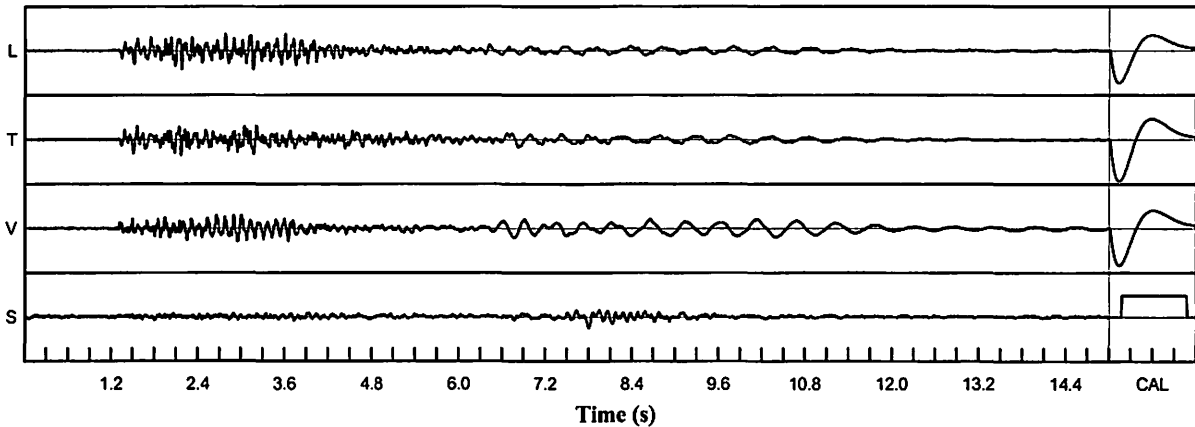
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 1



**Velocity Waveform Graph Scale**  
**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 03/17/2021 12:15:34  
**Event No:** 2  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

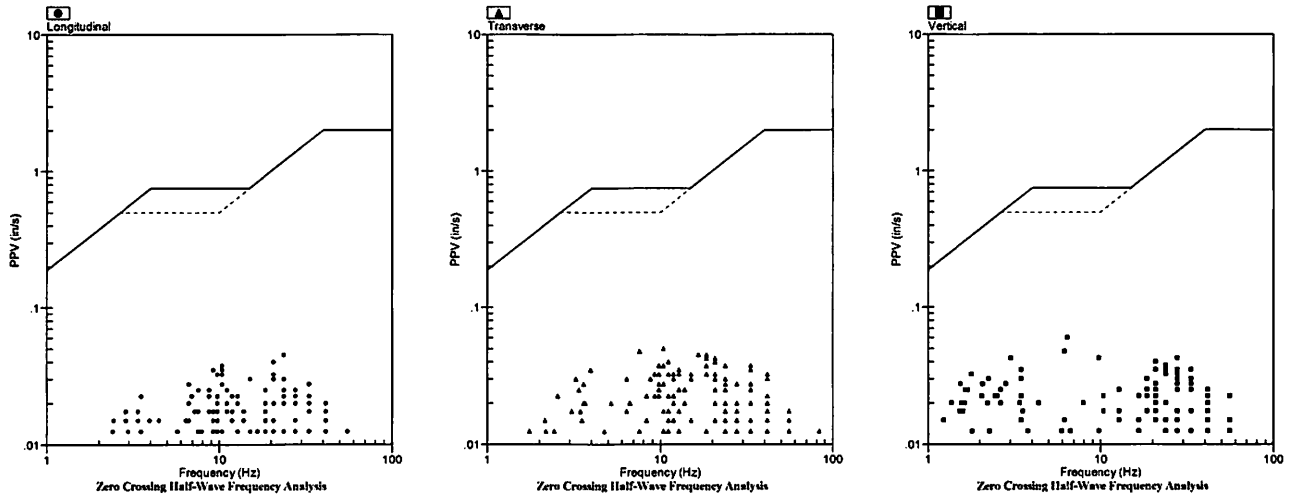
### Summary Data

	L	T	V
<b>PPV (in/s)</b>	0.045	0.050	0.060
<b>FREQ (Hz)</b>	23.8	10.4	6.4
<b>PD (.001")</b>	0.98	1.51	2.55
<b>PPA (g)</b>	0.020	0.020	0.026
<b>Peak Vector Sum:</b>	0.063 in/s		
<b>Peak Air Pressure:</b>	103 db		
	0.00050 PSI @ 10.4 Hz		

### Additional Info:

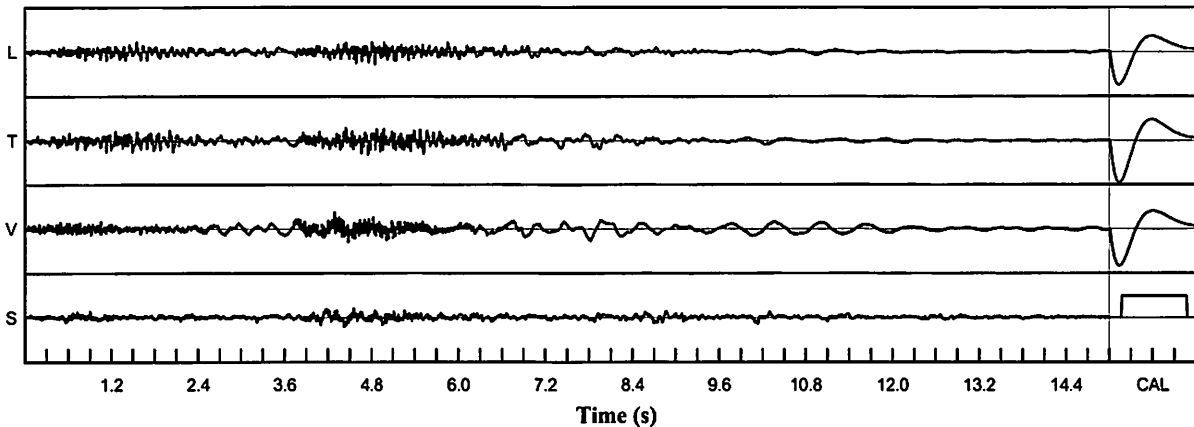
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 2



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 03/19/2021 10:15:39  
**Event No:** 3  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

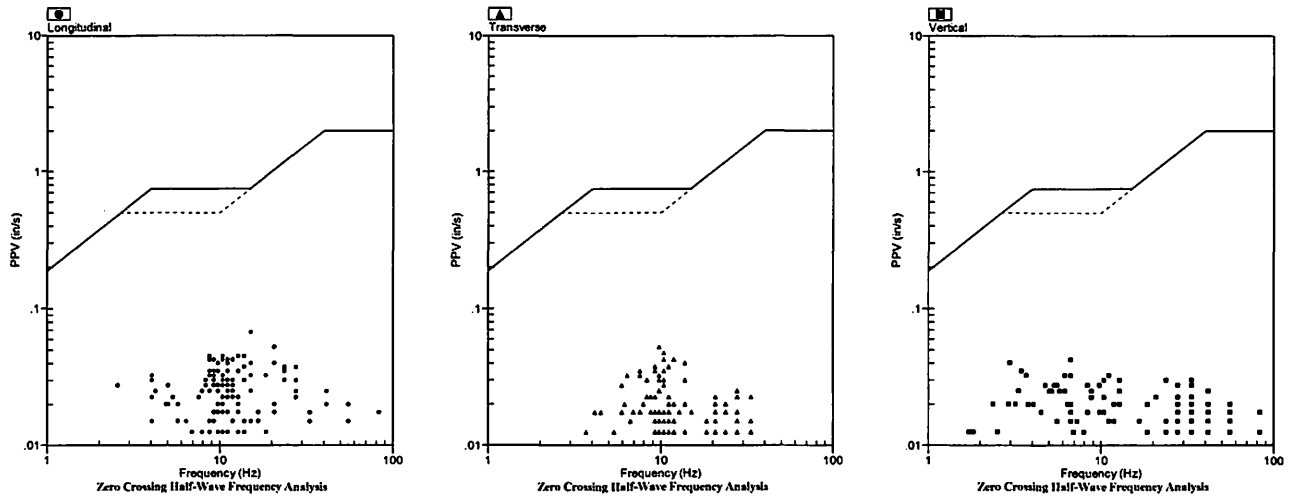
### Summary Data

	L	T	V
<b>PPV (in/s)</b>	0.068	0.053	0.043
<b>FREQ (Hz)</b>	15.2	9.8	6.7
<b>PD (.001")</b>	1.11	1.07	1.90
<b>PPA (g)</b>	0.026	0.013	0.020
<b>Peak Vector Sum:</b>	0.075 in/s		
<b>Peak Air Pressure:</b>	103 db		
	0.00050 PSI @ 6.7 Hz		

### Additional Info:

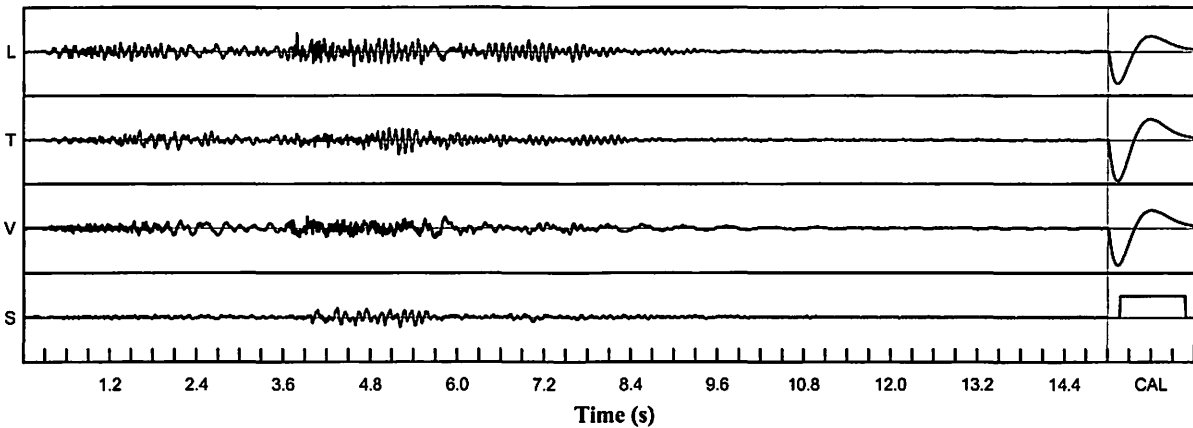
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 3



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 03/24/2021 12:16:00  
**Event No:** 5  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

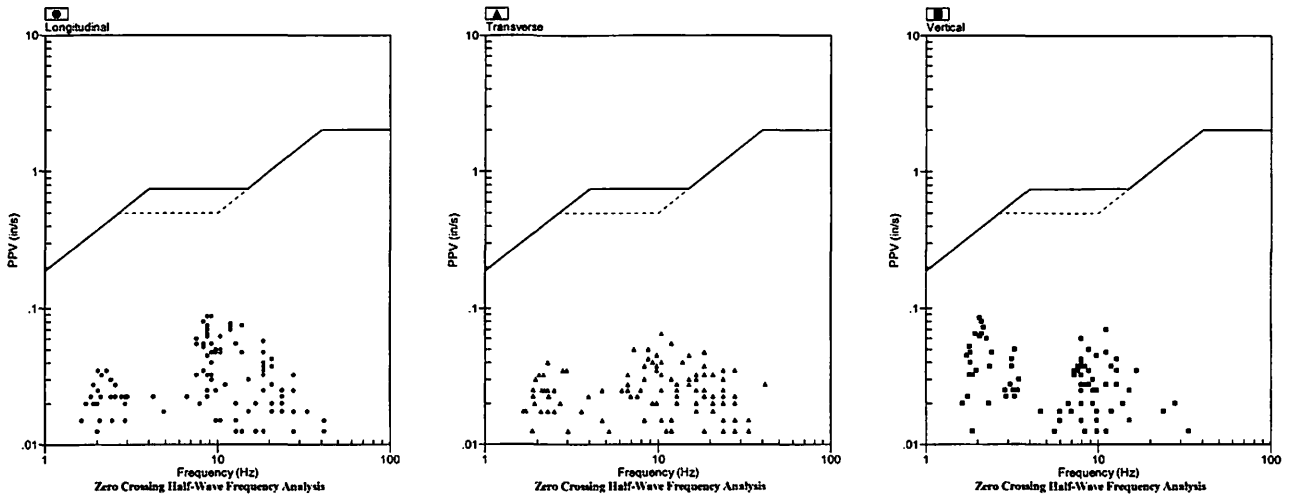
### Summary Data

	L	T	V
PPV (in/s)	0.088	0.065	0.085
FREQ (Hz)	9.3	10.4	2.1
PD (.001")	2.40	2.48	6.16
PPA (g)	0.026	0.020	0.013
Peak Vector Sum:	0.100 in/s		
Peak Air Pressure:	101 db		
	0.00046 PSI @ 2.9 Hz		

### Additional Info:

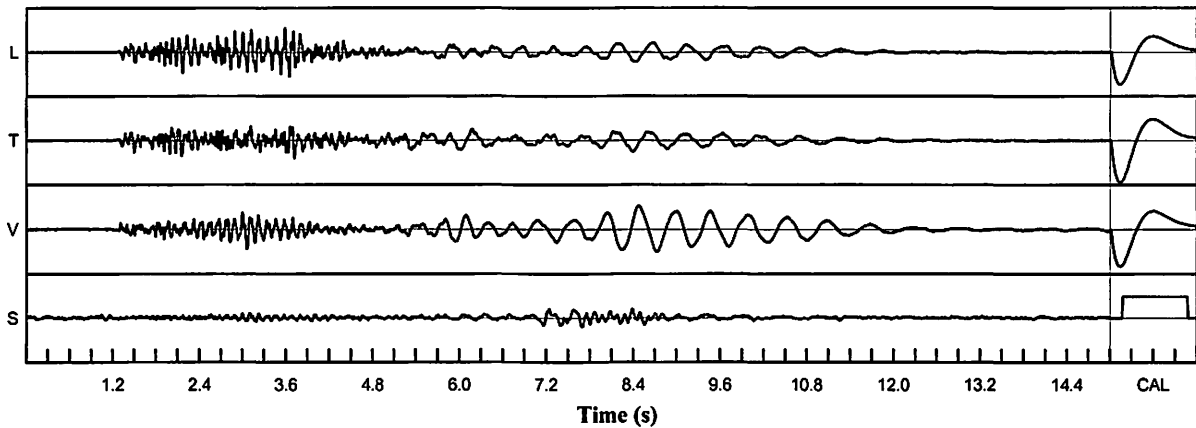
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 5



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 03/26/2021 12:20:55  
**Event No:** 6  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

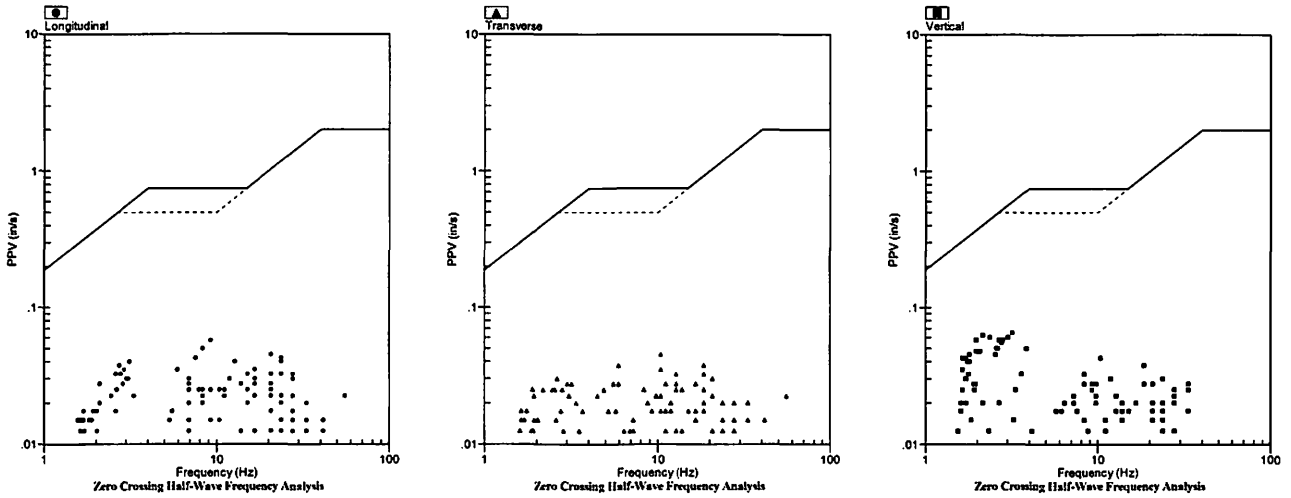
### Summary Data

	L	T	V
<b>PPV (in/s)</b>	0.058	0.045	0.065
<b>FREQ (Hz)</b>	9.3	10.4	3.2
<b>PD (.001")</b>	1.94	2.05	4.21
<b>PPA (g)</b>	0.020	0.013	0.013
<b>Peak Vector Sum:</b>	0.068 in/s		
<b>Peak Air Pressure:</b>	104 db		
	0.00053 PSI @ 4.4 Hz		

### Additional Info:

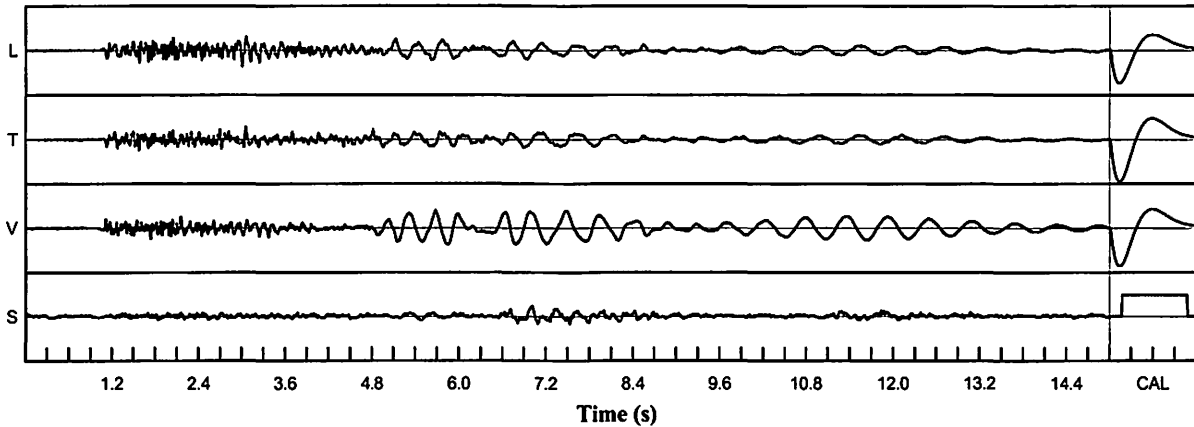
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 6



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 03/30/2021 13:01:33  
**Event No:** 7  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ave  
**Distance:**  
**Operator:** Roy A  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

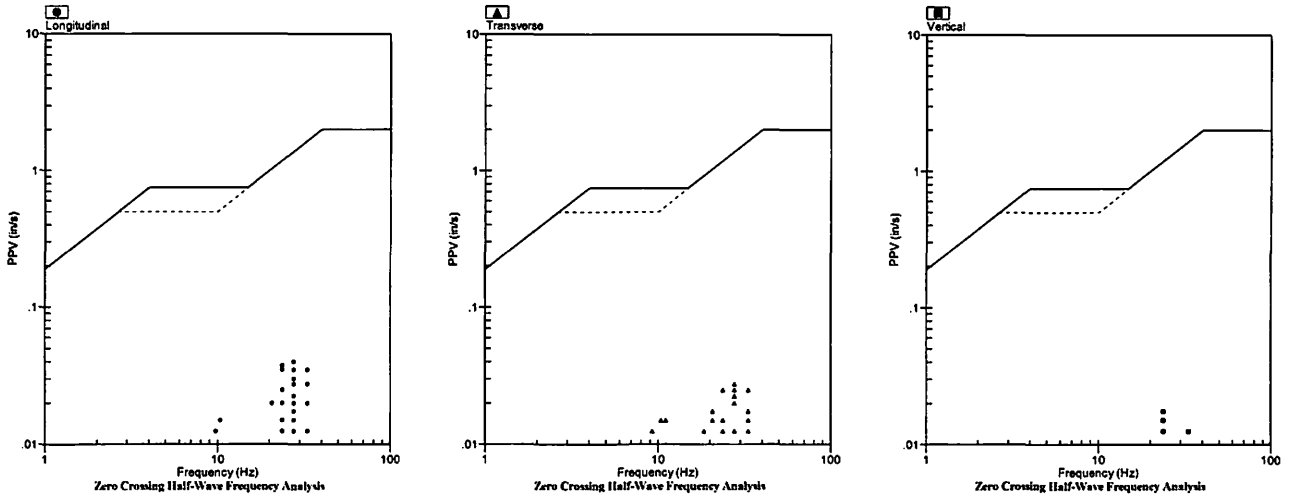
### Summary Data

	L	T	V
PPV (in/s)	0.048	0.035	0.018
FREQ (Hz)	27.8	27.8	23.8
PD (.001")	0.50	0.50	0.56
PPA (g)	0.020	0.013	0.007
Peak Vector Sum:	0.060 in/s		
Peak Air Pressure:	106 db		
	0.00061 PSI @ 7.9 Hz		

### Additional Info:

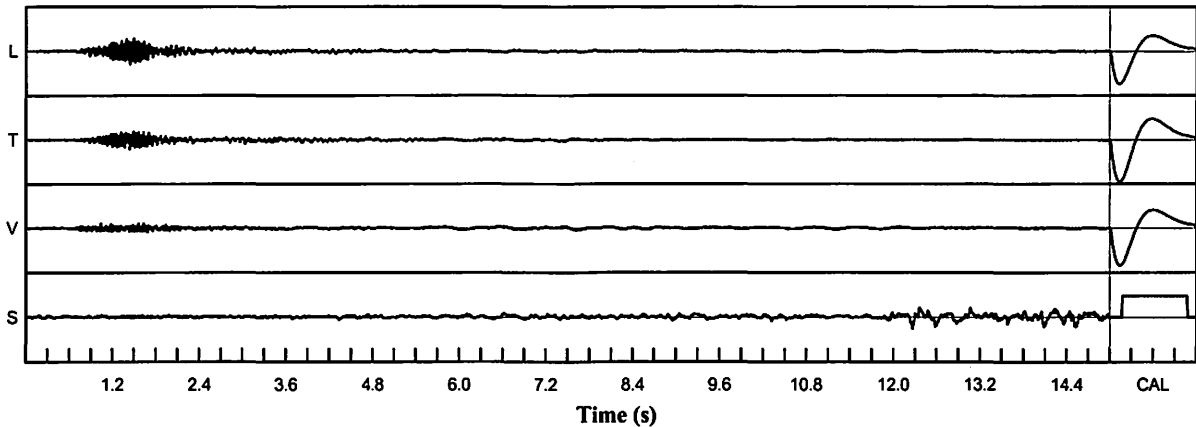
**Shaketable Calibrated:** 06/30/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 7



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.160 in/s  
**Sound Scale:** +/- 0.0023 PSI