

**Payne & Dolan, Inc.**  
**Racine Quarry - Village of Caledonia**

**Recorded Ground Vibration and Airblast Levels for the East Quarry CUP (New) Area**

All Ground Vibrations (PPV) were below State of Wisconsin and Village of Caledonia Maximum Limits

All Airblasts (AO) were below State of Wisconsin and Village of Caledonia Maximum Limits

Time	Activity	Location	Distance	PPV	Freq	AO
6/30/2021 12:30	34	Ellis	1,922	N/T	N/T	N/A
6/30/2021 12:30	34	St. Rita	1,684	N/T	N/T	N/A
6/30/2021 12:30	34	Marquette	663	0.13	33.3	110
6/30/2021 12:30	34	Berkeley	885	0.09	41.7	118
6/30/2021 10:08	33	Ellis	1,338	0.098	20.8	112
6/30/2021 10:08	33	St. Rita	1,111	0.12	23.8	120
6/30/2021 10:08	33	Marquette	1,043	0.253	13.9	107
6/30/2021 10:08	33	Berkeley	1,486	0.125	25	111
6/29/2021 9:12	32	Ellis	1,419	0.045	14.7	115
6/29/2021 9:12	32	St. Rita	1,108	0.075	22.7	126
6/29/2021 9:12	32	Marquette	1,087	0.153	17.2	109
6/29/2021 9:12	32	Berkeley	1,436	0.108	13.5	108
6/28/2021 10:29	31	Ellis	1,937	N/T	N/T	N/A
6/28/2021 10:29	31	St. Rita	1,678	N/T	N/T	N/A
6/28/2021 10:29	31	Marquette	701	0.13	33.3	107
6/28/2021 10:29	31	Berkeley	873	0.093	27.8	111
6/28/2021 9:21	30	Ellis	2,180	N/T	N/T	N/A
6/28/2021 9:21	30	St. Rita	1,922	N/T	N/T	N/A
6/28/2021 9:21	30	Marquette	664	0.13	33.3	111
6/28/2021 9:21	30	Berkeley	627	0.185	35.7	113
6/22/2021 11:00	29	Ellis	2,230	N/T	N/T	N/A
6/22/2021 11:00	29	St. Rita	1,964	N/T	N/T	N/A
6/22/2021 11:00	29	Marquette	685	0.153	33.3	111
6/22/2021 11:00	29	Berkeley	577	0.158	45.5	113
6/22/2021 9:29	28	Ellis	2,178	N/T	N/T	N/A
6/22/2021 9:29	28	St. Rita	1,916	N/T	N/T	N/A
6/22/2021 9:29	28	Marquette	673	0.095	29.4	111
6/22/2021 9:29	28	Berkeley	628	0.208	45.5	119
6/16/2021 12:02	27	Ellis	1,286	0.103	22.7	107
6/16/2021 12:02	27	St. Rita	1,043	0.18	33.3	118
6/16/2021 12:02	27	Marquette	1,108	0.205	13.9	107
6/16/2021 12:02	27	Berkeley	1,546	0.093	13.5	108
6/16/2021 10:01	26	Ellis	2,030	N/T	N/T	N/A
6/16/2021 10:01	26	St. Rita	1,766	N/T	N/T	N/A
6/16/2021 10:01	26	Marquette	688	0.123	38.5	109
6/16/2021 10:01	26	Berkeley	779	0.093	31.3	111
6/11/2021 11:00	25	Ellis	2,285	0.02	38.5	106
6/11/2021 11:00	25	St. Rita	1,997	N/T	N/T	N/A
6/11/2021 11:00	25	Marquette	747	0.133	38.5	110
6/11/2021 11:00	25	Berkeley	526	0.22	31.3	118
6/9/2021 11:31	24	Ellis	2,071	N/T	N/T	N/A
6/9/2021 11:31	24	St. Rita	1,800	N/T	N/T	N/A
6/9/2021 11:31	24	Marquette	696	0.13	31.3	109
6/9/2021 11:31	24	Berkeley	739	0.115	55.6	114

6/8/2021 10:29	23	Ellis	1,257	0.098	12.8	109
6/8/2021 10:29	23	St. Rita	1,005	0.113	17.2	116
6/8/2021 10:29	23	Marquette	1,144	0.168	17.2	106
6/8/2021 10:29	23	Berkeley	1,581	0.085	19.2	112
6/2/2021 12:00	22	Ellis	2,061	N/T	N/T	N/A
6/2/2021 12:00	22	St. Rita	1,792	N/T	N/T	N/A
6/2/2021 12:00	22	Marquette	694	N/T	N/T	N/A
6/2/2021 12:00	22	Berkeley	749	0.028	11.9	114
6/2/2021 10:02	21	Ellis	1,509	0.08	14.7	111
6/2/2021 10:02	21	St. Rita	1,194	0.085	13.9	119
6/2/2021 10:02	21	Marquette	1,029	0.15	14.3	108
6/2/2021 10:02	21	Berkeley	1,342	0.113	14.7	109

N/T - seismograph did not trigger

Ground Vibration (PPV) Limit - The Village of Caledonia explosives use ordinance states that “the ground vibration produced by such blasts does not exceed 0.65 inches per second or the limitations imposed by the Wisconsin Department of Industry, Labor and Human Relations in Section ILHR 7.64(4), Wis. Adm. Code, as amended from time to time, whichever is more stringent”.

Airblast (AO) Limit - The Village of Caledonia explosives use ordinance states that “Airblast shall not exceed the maximum limits listed in Table A-1 at the location of any dwelling, public building, place of employment, school, church or community or institutional building outside and beyond the permitted explosives use area. Notwithstanding this general requirement, an annual permit holder subject to this limitation may exceed the limitation on up to five percent (5%) of the blasts it initiates during the six (6) month period from July 1 to December 31, and during the six (6) month period from January 1 to June 30, without violating this ordinance, provided that the airblast produced by such blasts does not exceed the limitations on airblast imposed by Wisconsin Department of Industry, Labor and Human Relations in Subsection ILHR 7.64(2), Wis. Adm. Code, as amended from time to time.”

TABLE A-1 AIRBLAST  
LIMITS

Lower Frequency Limit of Measuring System in Hz	Maximum Level in db
2 Hz or lower -- Flat response	123 peak
6 Hz or lower -- Flat response	129 peak

