

**Payne & Dolan, Inc.**  
**Racine Quarry - Village of Caledonia**  
**Recorded Ground Vibration and Airblast Levels for the East Quarry CUP (New) Area**  
**July 2022**

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
7/25/2022 13:29	EAST 43	Ellis	1,678	N/T	N/T	N/A
7/25/2022 13:29	EAST 43	St. Rita	1,628	N/T	N/T	N/A
7/25/2022 13:29	EAST 43	Marquette	513	0.26	41.7	112
7/25/2022 13:29	EAST 43	Berkeley	1,178	0.105	38.5	110
7/25/2022 12:01	EAST 42	Ellis	1,879	N/T	N/T	N/A
7/25/2022 12:01	EAST 42	St. Rita	1,816	N/T	N/T	N/A
7/25/2022 12:01	EAST 42	Marquette	348	0.233	27.8	114
7/25/2022 12:01	EAST 42	Berkeley	1,009	0.103	38.5	114
7/22/2022 10:15	EAST 41	Ellis	1,603	0.035	20	102
7/22/2022 10:15	EAST 41	St. Rita	1,402	0.06	14.3	110
7/22/2022 10:15	EAST 41	Marquette	786	0.245	20	116
7/22/2022 10:15	EAST 41	Berkeley	1,205	0.075	20	119
7/13/2022 11:44	EAST 40	Ellis	1,525	0.03	33.3	87
7/13/2022 11:44	EAST 40	St. Rita	1,493	N/T	N/T	N/A
7/13/2022 11:44	EAST 40	Marquette	649	0.113	29.4	108
7/13/2022 11:44	EAST 40	Berkeley	1,317	0.043	20.8	111
7/13/2022 10:14	EAST 39	Ellis	2,076	0.023	19.2	101
7/13/2022 10:14	EAST 39	St. Rita	1,935	N/T	N/T	N/A
7/13/2022 10:14	EAST 39	Marquette	403	0.268	41.7	115
7/13/2022 10:14	EAST 39	Berkeley	779	0.18	31.3	123
7/13/2022 9:18	EAST 38	Ellis	1,910	N/T	N/T	N/A
7/13/2022 9:18	EAST 38	St. Rita	1,790	N/T	N/T	N/A
7/13/2022 9:18	EAST 38	Marquette	429	0.213	41.7	113
7/13/2022 9:18	EAST 38	Berkeley	935	0.06	41.7	111
7/6/2022 11:32	EAST 37	Ellis	1,465	0.035	25	94
7/6/2022 11:32	EAST 37	St. Rita	1,381	0.038	17.2	102
7/6/2022 11:32	EAST 37	Marquette	759	0.068	21.7	107
7/6/2022 11:32	EAST 37	Berkeley	1,350	0.038	26.3	114
7/6/2022 9:14	EAST 36	Ellis	1,632	N/T	N/T	N/A
7/6/2022 9:14	EAST 36	St. Rita	1,563	N/T	N/T	N/A
7/6/2022 9:14	EAST 36	Marquette	579	0.195	35.7	108
7/6/2022 9:14	EAST 36	Berkeley	1,206	0.048	27.8	107

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

