

Payne & Dolan, Inc.
Racine Quarry - Village of Caledonia
Recorded Ground Vibration and Airblast Levels for the East Quarry CUP (New) Area
June 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
6/29/2022 11:02	EAST 35	Ellis	1,994	N/T	N/T	N/A
6/29/2022 11:02	EAST 35	St. Rita	1,847	N/T	N/T	N/A
6/29/2022 11:02	EAST 35	Marquette	442	0.225	35.7	118
6/29/2022 11:02	EAST 35	Berkeley	843	0.14	33.3	119
6/29/2022 9:22	EAST 34	Ellis	1,656	0.048	26.3	94
6/29/2022 9:22	EAST 34	St. Rita	1,492	0.04	17.9	104
6/29/2022 9:22	EAST 34	Marquette	688	0.265	23.8	114
6/29/2022 9:22	EAST 34	Berkeley	1,151	0.108	25	115
6/22/2022 9:28	EAST 33	Ellis	1,653	0.033	16.7	100
6/22/2022 9:28	EAST 33	St. Rita	1,440	0.038	13.2	107
6/22/2022 9:28	EAST 33	Marquette	767	0.148	20.8	117
6/22/2022 9:28	EAST 33	Berkeley	1,155	0.09	21.7	119
6/20/2022 9:15	EAST 32	Ellis	1,448	0.04	21.7	102
6/20/2022 9:15	EAST 32	St. Rita	1,313	0.043	17.2	103
6/20/2022 9:15	EAST 32	Marquette	831	0.113	21.7	110
6/20/2022 9:15	EAST 32	Berkeley	1,359	0.053	17.2	107
6/15/2022 9:14	EAST 31	Ellis	1,779	N/T	N/T	N/A
6/15/2022 9:14	EAST 31	St. Rita	1,667	N/T	N/T	N/A
6/15/2022 9:14	EAST 31	Marquette	509	0.203	38.5	110
6/15/2022 9:14	EAST 31	Berkeley	1,054	0.053	38.5	108
6/13/2022 13:01	EAST 30	Ellis	1,619	0.035	35.7	97
6/13/2022 13:01	EAST 30	St. Rita	1,524	0.025	23.8	95
6/13/2022 13:01	EAST 30	Marquette	623	0.12	29.4	107
6/13/2022 13:01	EAST 30	Berkeley	1,206	0.05	25	105
6/13/2022 10:33	EAST 29	Ellis	1,533	0.038	25	105
6/13/2022 10:33	EAST 29	St. Rita	1,422	0.025	25	108
6/13/2022 10:33	EAST 29	Marquette	724	0.085	15.2	114
6/13/2022 10:33	EAST 29	Berkeley	1,280	0.058	22.7	112
6/13/2022 9:17	EAST 28	Ellis	1,516	0.025	11.9	94
6/13/2022 9:17	EAST 28	St. Rita	1,351	0.033	11.4	102
6/13/2022 9:17	EAST 28	Marquette	806	0.085	22.7	109
6/13/2022 9:17	EAST 28	Berkeley	1,291	0.05	25	111
6/7/2022 9:16	EAST 27	Ellis	1,610	0.033	18.5	95
6/7/2022 9:16	EAST 27	St. Rita	1,497	N/T	N/T	N/A
6/7/2022 9:16	EAST 27	Marquette	655	0.08	38.5	109
6/7/2022 9:16	EAST 27	Berkeley	1,207	0.043	27.8	107
6/1/2022 13:58	EAST 26	Ellis	1,597	0.023	12.8	101
6/1/2022 13:58	EAST 26	St. Rita	1,415	0.038	11.9	105
6/1/2022 13:58	EAST 26	Marquette	762	0.073	20	105
6/1/2022 13:58	EAST 26	Berkeley	1,210	0.038	25	107

6/1/2022 13:00	EAST 25	Ellis	1,714	0.04	13.9	92
6/1/2022 13:00	EAST 25	St. Rita	1,527	0.03	13.5	102
6/1/2022 13:00	EAST 25	Marquette	680	0.245	20	114
6/1/2022 13:00	EAST 25	Berkeley	1,093	0.093	22.7	119
6/1/2022 9:20	EAST 24	Ellis	1,703	0.06	20	100
6/1/2022 9:20	EAST 24	St. Rita	1,479	0.033	10.4	102
6/1/2022 9:20	EAST 24	Marquette	752	0.26	18.5	114
6/1/2022 9:20	EAST 24	Berkeley	1,105	0.118	25	118

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

