

Payne & Dolan, Inc.
Racine Quarry - Village of Caledonia
Recorded Ground Vibration and Airblast Levels for the East Quarry CUP (New) Area
August 2020

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
8/26/2020 11:05	76	St. Rita	1,697	N/T	N/T	N/A
8/26/2020 11:05	76	Marquette	837	0.098	29.4	110
8/26/2020 11:05	76	Ellis	2,028	0.02	10	104
8/26/2020 11:05	76	Berkeley	815	0.193	41.7	112
8/26/2020 11:02	75	St. Rita	1,583	0.033	17.9	107
8/26/2020 11:02	75	Marquette	879	0.128	35.7	109
8/26/2020 11:02	75	Ellis	1,925	0.028	23.8	108
8/26/2020 11:02	75	Berkeley	928	0.123	41.7	115
8/19/2020 11:11	73	St. Rita	1,108	0.028	16.7	106
8/19/2020 11:11	73	Ellis	1,419	0.03	13.5	103
8/19/2020 11:11	73	Marquette	1,087	0.105	35.7	105
8/19/2020 11:11	73	Berkeley	1,436	0.11	31.3	107
8/19/2020 11:04	72	St. Rita	1,572	0.043	13.9	112
8/19/2020 11:04	72	Ellis	1,925	0.058	19.2	107
8/19/2020 11:04	72	Marquette	902	0.088	21.7	109
8/19/2020 11:04	72	Berkeley	938	0.035	13.9	106
8/17/2020 11:09	71	Ellis	2,317	N/T	N/T	N/A
8/17/2020 11:09	71	St. Rita	1,972	N/T	N/T	N/A
8/17/2020 11:09	71	Marquette	883	0.115	29.4	113
8/17/2020 11:09	71	Berkeley	537	0.16	38.5	116
8/17/2020 11:03	70	Ellis	2,221	0.043	13.9	105
8/17/2020 11:03	70	Marquette	885	0.12	29.4	108
8/17/2020 11:03	70	St. Rita	1,869	0.055	15.2	108
8/17/2020 11:03	70	Berkeley	640	0.068	13.5	106
8/11/2020 11:33	69	St. Rita	1,956	N/T	N/T	N/A
8/11/2020 11:33	69	Marquette	910	0.108	18.5	115
8/11/2020 11:33	69	Ellis	2,312	0.02	11.9	101
8/11/2020 11:33	69	Berkeley	557	0.143	26.3	117
8/11/2020 11:29	68	Marquette	1,032	0.098	17.2	110
8/11/2020 11:29	68	St. Rita	1,156	0.045	15.6	112
8/11/2020 11:29	68	Berkeley	1,400	0.048	18.5	107
8/11/2020 11:29	68	Ellis	1,438	0.085	17.9	109
8/5/2020 11:00	65	Berkeley	714	0.093	23.8	107
8/5/2020 11:00	65	Ellis	2,218	0.063	15.6	104
8/5/2020 11:00	65	Marquette	1,005	0.13	19.2	106
8/5/2020 11:00	65	St. Rita	1,814	0.045	13.2	112
8/4/2020 10:02	64	St. Rita	1,861	0.02	17.2	96
8/4/2020 10:02	64	Ellis	2,220	0.028	16.7	102
8/4/2020 10:02	64	Marquette	900	0.075	31.3	112
8/4/2020 10:02	64	Berkeley	650	0.203	33.3	112

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

