

Payne & Dolan, Inc.
Racine Quarry - Village of Caledonia
Recorded Ground Vibration and Airblast Levels for the East Quarry CUP (New) Area
December 2021

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
12/3/2021 11:28	81	Ellis	2,175	0.035	27.8	106
12/3/2021 11:28	81	St. Rita	1,978	0.023	20	110
12/3/2021 11:28	81	Marquette	523	0.355	45.5	114
12/3/2021 11:28	81	Berkeley	649	0.25	35.7	121
12/3/2021 9:58	80	Ellis	2,229	0.025	33.3	111
12/3/2021 9:58	80	St. Rita	1,927	N/T	N/T	N/A
12/3/2021 9:58	80	Marquette	770	0.185	41.7	118
12/3/2021 9:58	80	Berkeley	590	0.255	41.7	120

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 2 Hz or lower -- Flat response 6 Hz or lower -- Flat response	Maximum Level in db 123 peak 129 peak
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