

CITY OF FRANKLIN
QUARRY MONITORING COMMITTEE*
MEETING AGENDA

Revised

Franklin City Hall, **Hearing Room**
9229 West Loomis Road, Franklin, Wisconsin 53132
Tuesday, January 25, 2022, 6:00 p.m.

- I. Call to Order, Roll Call and Pledge of Allegiance
- II. Approval of Minutes
 - a. Regular meeting of November 24, 2021.
- III. Citizen Comment Period
PLEASE NOTE: Each speaker may need to be limited to three minutes, allowing everyone who wishes the opportunity to speak.
- IV. Hearings
- V. Business (Action may be taken on any item)
 - a. Quarterly presentation by Stantec Consulting Services, Inc., 4th quarter of calendar year 2021 (October, November and December).
 - b. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan and Stantec (the City's consultant).
- VI. Meeting scheduling discussion
- VII. Adjournment

** Notice is given that a majority of the Common Council may attend this meeting to gather information about an agenda item over which the Common Council has decision-making responsibility. This may constitute a meeting of the Common Council per State ex rel. Badke v. Greendale Village Board, even though the Common Council will not take formal action at this meeting.*

Notice is further given that upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information, please contact the Franklin City Clerk's office at (414) 425-7500.

City of Franklin
Quarry Monitoring Committee Meeting
Council Chambers, Franklin City Hall
6:00 PM
November 24, 2021
Minutes

unapproved

I. CALL TO ORDER

The November 24, 2021, Quarry Monitoring Committee meeting was called to order by Alderwoman Kristen Wilhelm at 6:00 p.m. in the Council Chambers at City Hall.

Alderwoman Kristen Wilhelm, Alderman Mike Barber, members Fred Kneuppel and Jon TenHaken were present. Non-voting member Dina Swanson was absent. Also present was Principal Planner Régulo Martínez-Montilva.

II. APPROVAL OF THE MINUTES

a. Regular meeting of October 28, 2021.

Alderman Barber moved and member Kneuppel seconded to approve the minutes with corrections. On voice vote, all present voted 'aye'; the vote was 4-0-0, motion carried.

III. CITIZEN COMMENT PERIOD

Citizen comment period opened at 6:03 p.m. and closed at 6:03 p.m. No citizen comments.

IV. HEARINGS

a. None.

No action needed. None taken.

V. BUSINESS

a. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan and Stantec (the City's consultant).

Alderman Barber asked about the current status of the pre-blast notifications from the quarry operator to neighbors. Principal Planner Martínez commented that staff will follow up with the quarry operator.

b. Status update on the quarry monitoring services scope of work for calendar year 2022 by Stantec Consulting Services, Inc.

With regards to the relocation of Stantec monitors discussed during the October 28, meeting, Principal Planner Martínez indicated that Stantec suggests two options for consideration of the Committee. Option 1, to better monitor blasts that occur in the northern portion of the quarry: move the existing Stantec monitor from Location A (7301 S. 51st St.) to Location B (7526 S 51st St.), and to better monitor blasts that occur in the southern portion of the quarry: move the existing Stantec monitor at Location D (5800 Allwood) to Location C (SE of Quarry). Option 2, to better monitor blasts that occur in the northern portion of the quarry: same recommendation as Option 1, and to better monitor blasts that occur in the southern portion of the quarry: even though the highest average readings have been obtained at Location C (SE of Quarry), the Committee could choose to leave the monitor at Location D (5800 Allwood), primarily since the majority of complaints originate from homeowners in that area.

Alderman Barber moved and member TenHaken seconded to select the Option 2 suggested by Stantec Consulting Services, and to include the monitor relocation in the city's newsletter for 2022. On voice vote, all present voted 'aye'; the vote was 4-0-0, motion carried.

c. Status update on the Franklin Aggregates Reclamation Plan.

Principal Planner Martínez informed the committee that the Reclamation Plan was approved by the Common Council on November 2. Member Knueppel recommended to add to the Reclamation Plan a note indicating the date of approval and, as motioned by the Council, a 5-year review period.

VI. SCHEDULE NEXT MEETING

Next meeting scheduled for January 25, 2021, based on quorum.

VII. ADJOURNMENT

Member Knueppel moved and member TenHaken seconded to adjourn the November 24, 2021, Quarry Monitoring Committee meeting at 6:28 p.m. All present voted 'aye'; motion carried.



Stantec Consulting Services Inc.
1165 Scheuring Road
De Pere, Wisconsin 54115
Tel: (920) 592-8400
Fax: (920) 592-8444

January 13, 2022

Heath Eddy
Planner - Department of City Development
City of Franklin
9229 W. Loomis Road
Franklin, Wisconsin 53132
HEddy@franklinwi.gov

Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary
Period: 4th Quarter 2021
Stantec Project: 193707487

Dear Mr. Eddy:

The enclosed information summarizes monitoring activities completed during the fourth quarter of 2021 by Stantec Consulting Services Inc. (Stantec) pertaining to the Franklin Aggregates, Inc. quarry (owned by Payne & Dolan, Inc.) located at 6211 W. Rawson Avenue, Franklin, Wisconsin (the Quarry). Stantec was retained by the City of Franklin to conduct a combination of direct observation (visual) monitoring, seismic monitoring of the quarry operations, and evaluation of citizen complaints. Separate description of services and project background are provided in Attachments A and B, respectively. This letter summarizes the results.

Direct Observation (Visual) Monitoring

Copies of completed observation forms are prepared and posted to the project FTP site for review by City representatives. Copies of individual reports are not provided with this summary report.

No observation events were completed during the monitoring period; observation events will resume in spring 2022.

Seismic Monitoring

As contracted by the City, Stantec provided remote vibration monitoring using two seismographs co-located with two existing Payne & Dolan (Vibra-Tech) monitors at 7301 S. 51st Street (VT1 and S1) and 5800 W. Allwood Drive (VT4 and S2). The monitoring provides continuous (24/7) remote monitoring. Payne & Dolan also has monitors at 7526 S. 51st Street (VT2) and southeast of the quarry (VT3). Summaries of blasting data, comparing the Payne & Dolan unit recordings to the Stantec (Sauls Seismic) unit recordings, were prepared for the quarter, and are presented in Attachment C. Figure 1 illustrates the locations of the blasts in the quarter.

Highlights of the seismic data include the following:

- Between October 1 and December 31, 2021, a total of 20 blasting events occurred. All of these blasts were confirmed by the Stantec monitors.
- Per the Planned Development District agreements (PDD), 85% of the quarry's blasts within any calendar year must be below the maximum permissible vibration (of 0.30 inches per second (in/sec), measured at the closest residence or inhabited structure not owned or controlled by the quarry. This is more stringent than State of Wisconsin regulations which require quarry operators to report any ground vibration levels to the Wisconsin Department of Natural Resources that are above 0.75 in/sec.
 - None of the blasting events measured by Payne & Dolan or Stantec had a vibration greater than 0.30 in/sec; thus 100% of the quarry's blasts were below this level. This is in conformance with the PDD.

- Per the PDD, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year, measured at the residence or inhabited structure closest to the site of the blast which is not owned or controlled by the Operator. Notwithstanding any other provision in this subsection, the Operator shall not exceed the airblast limitation imposed by Wis. Adm. Code, SPS Ch. 307.
 - None of the blasting events measured by Payne & Dolan or Stantec had an air overpressure (AO) greater than 123dB; thus 100% of the quarry's blasts were below this level. This is in conformance with the PDD.
- The corresponding blast data measured by Stantec with the Sauls Seismic monitors generally aligned with the readings at each Payne & Dolan sponsored Vibra-Tech monitors. There were some larger differences in the AO readings. It should be noted that in addition to the fact the monitors are produced by different manufacturers, there are a variety of variables that can influence actual PPV readings. The Sauls Seismic monitors were recalibrated on October 21, 2021.
- In general, the largest blast readings at each monitor appear to correlate with the proximity of the nearest adjacent blast location.

Blast Complaint Evaluation

A compilation of all complaints received by Stantec for the period October 1 through December 31, 2021, is provided as Attachment C. Note that Attachment C does not provide the actual complainant details (name, address, and phone number) if known; it was decided to have this information remain confidential. The locations of all blasts and complaints are shown on Figure 1. The following highlights the results of the complaint evaluation:

Complaints - General

- 8 complaints (formally submitted) – total (Note: some complaints were for multiple reasons)
- 1 complaints (informally submitted; e.g., phone call)
- 1 complaint – regarding noise
- 1 complaint – regarding dust
- 0 complaints – miscellaneous
- 8 complaints – regarding vibration

Complaints – Blast Related

- 8 complaints – corresponding to actual blast events
(One of these complaints was from a former Quarry Monitoring Committee member that claimed she received 9 calls from neighbors about a particular blast. She directed the callers to contact the City or their Alderperson to file formal complaints.)
- 0 complaints – not corresponding to actual blast events
- 6 complaints – complainant location identified
 - 4 households that complained once each
 - 1 household that complained two times
 - 2 complaints – no name and address provided (requested confidentiality)

January 13, 2022

Page 3 of 4

Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 4Q2021

Complaints (non-anonymous; confirmed blast related) - Locations

- 0 complaint – east of 51st Street
- 6 complaints – south of Drexel Avenue
- 0 complaints – west of Root River

Blast Events

- 20 blast events - during monitoring period 3Q2021 (shot numbers 62 through 81)
- 5 blast events - corresponding to complaints
 - 0 weather: rain
 - 3 weather: haze, partly to mostly cloudy, or cloudy
 - 2 weather: clear, fair, or scattered clouds
 - 4 time: prior to 12:00 pm (noon)
 - 1 time: after 12:00 pm
- 3 blast events with one complaint
- 1 blast events with two complaints
- 1 blast event with three complaints

Quarry Blast Locations Producing Complaints

- 4 southern area of quarry
- 1 northern area of quarry

Upon review of these results outlined above, on Figure 1, and in Attachment C, the following observations are made:

- One operational complaint was made regarding dust. Most complaints focus on quarry blasting and resulting ground vibrations. There was only one noise complaint this quarter.
- All of the non-confidential formal complaints (100%) in this quarter originate from residences south of Drexel Avenue.
- No blast this quarter had more than three formal complaints received by the City.
- No formal complaints came from west of the Root River.
- Due to increased amount of employees now working from home, residents may have been at home more during the day than in years prior to 2021 and 2020. However, this is essentially the “new normal”.



January 13, 2022

Page 4 of 4

Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 4Q2021

Please feel free to contact Mike Roznowski at 920-278-3200 or mike.roznowski@stantec.com; or Kristen Gunderson-Inden at 262-665-3447 or kristen.gunderson-inden@stantec.com if you have any questions.

Respectfully,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in blue ink, appearing to read 'Kristen Gunderson-Inden'.

Kristen Gunderson-Inden
Senior Environmental Scientist

A handwritten signature in blue ink, appearing to read 'Michael B. Roznowski'.

Michael B. Roznowski, CHMM
Senior Principal

Attachments A - Franklin Quarry Seismic Monitoring Description of Services
 B - Franklin Quarry Seismic Monitoring Project Background
 C - Summary of Seismic Data – 4th Quarter 2021
 Figure 1 - Seismic Monitoring, Blasting, and Complaint Locations, 4th Quarter 2021

ATTACHMENT A

FRANKLIN QUARRY SEISMIC MONITORING DESCRIPTION OF SERVICES

DESCRIPTION OF SERVICES

Direct Observation (Visual) Monitoring

During 2020, Stantec will conduct a total of ten (10) qualitative site visits at the quarry to observe and document whether the site was compliant with operational parameters defined in the existing Planned Development District (PDD) agreements, and to evaluate whether the quarry's general operations are consistent with best management practices employed by other similar quarries. Site visits are a combination of announced and unannounced, but all are conducted during normal business hours. The days of the week and times of the day for the visits vary. The observations will be completed between April and October, when quarry operations are occurring, and airborne dust is more likely. Qualitative data to be collected includes the following:

- Visual observation of all aspects of the mining operation, including but not limited to:
 - Trucking operations, in particular pertaining to dust issues along Rawson Avenue
 - Operational issues that may affect local citizens in some form of adverse off-site impact
- Direct air quality observations, including:
 - General site and surrounding visual air quality, including opacity, in particular along Rawson Avenue
 - Dust control measures and issues on-site that may affect off-site receptors
 - Dust control issues directly adjacent off-site
 - Any other dust issues that may affect local citizens
- Quarry operations review (for announced visits), including:
 - Review of quarry records pertaining to dust control measures and recordkeeping, ensuring that the operator is following standard protocol to minimize off-site impacts, and evaluating how well and how quickly they respond to potential of actual off-site impact situations
 - Comparison of records to stated performance objectives and respective PDD compliance, only as they pertain to dust in general, and along Rawson Avenue in particular

The findings of each visit will be documented on a standard form previously approved by the City. The form will be filled out by hand during each site visit, and then scanned/posted to a project file transfer protocol (FTP) site for review by City representatives. Stantec also will obtain photos to document site or directly adjacent off-site conditions, and short-duration video clips (e.g., showing dust impacts). These photos and videos are also uploaded to the project FTP site.

In addition to the observations and record review, Stantec also will obtain and document on the inspection forms local meteorological conditions that were relevant to the observations (e.g., temperature, wind speed, wind direction, humidity, and precipitation).

Stantec also will notify the City Planning Manager of any condition (pertaining to air or dust monitoring, or other PDD condition) that we become aware of that exceeds the allowances outlined in the PDD. This communication will be completed prior to noon the business day following the day we become aware of any such event.

Seismic Monitoring

Stantec provides remote vibration monitoring by using Nomis Seismographs. Sauls Seismic is subcontracted to operate two separate seismographs, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51st Street, and 5800 W. Allwood Drive. Each monitor was pole-mounted and provided with a weatherproof enclosure. Power is provided via an internal battery and an external battery connected to a solar panel. This type of configuration provides continuous (24/7) remote monitoring, allowing Stantec to have access to data anytime via the Internet.

Stantec also will notify the City Planning Manager of any condition (pertaining to blasting, noise or other PDD condition) that we become aware of that exceeded the allowances outlined in the PDD. This communication will be completed prior to noon the business day following the day we become aware of any such event.

Blast Complaint Evaluation

Periodically the City forwards to Stantec specific information pertaining to quarry complaints received. Stantec evaluates each one on a quarterly basis to determine the following corresponding collaborative conditions:

- Off-site dust complaints: weather conditions (wind direction and speed) the day of the complaint
- Off-site seismic complaints: seismic data from both Stantec (if monitoring at the time) and Payne & Dolan placed monitors
- On occasion, the City may request an exceptional blast complaint evaluation if a blast event receives an unusually high number of complaints. A letter report will be issued by Stantec within approximately one week of the request that describes:
 - seismic data from both Stantec and Payne & Dolan placed monitors
 - weather conditions (wind direction and speed) the day of the complaint
 - a figure showing location of blast and complaints

ATTACHMENT B

FRANKLIN QUARRY SEISMIC MONITORING PROJECT BACKGROUND

Background Summary

Seismic monitoring was completed to document whether the site was compliant with operational parameters defined in the existing Planned Development District (PDD) agreements. Prior to 2018, Stantec completed a variety of 2, 4, and 8-week seismic monitoring periods. During 2018, Stantec completed one 4-week period and one 16-week period of monitoring. Monitoring consisted of placing a city owned and maintained InstanTel MiniMate Plus fixed seismograph equipped with an external geophone at one of two city-established blast monitoring sites or vaults for each period. Seismic data was downloaded once every two weeks. Due to equipment limitations the data could not be downloaded remotely as it occurs (i.e., real time).

In 2019, Stantec provided remote vibration monitoring by using Nomis Seismographs. Sauls Seismic was subcontracted to install two separate seismographs, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51st Street, and 5800 W. Allwood Drive. Each monitor was pole-mounted and provided with a weatherproof enclosure. Power was provided via an internal battery and an external battery connected to a solar panel. This type of configuration provided continuous (24/7) remote monitoring, allowing Stantec to have access to data anytime via the Internet.

As contracted by the City, Stantec provided remote vibration monitoring using two seismographs co-located with two existing Payne & Dolan (Vibra-Tech) monitors at 7301 S. 51st Street and 5800 W. Allwood Drive. The monitor provided continuous (24/7) remote monitoring. Monthly summaries of blasting data, comparing the Payne & Dolan (Vibra-Tech) unit recordings, to the Stantec (Sauls Seismic) unit recordings, were prepared for the months April through December.

Per the PDD #23 and #24 Ordinances, 85% of the quarry's blasts within any calendar year must be below the maximum permissible vibration (also referred to as particle or ground velocity) of 0.30 inches per second (in/sec), measured at the closest residence or inhabited structure not owned or controlled by the quarry. This is more stringent than State of Wisconsin regulations (Wisconsin Department of Industry, Labor and Human Relations in ch.ILHR 7, Wis. Adm. Code on any blast [new reference now Wis. Adm. Code, Safety and Professional Services (SPS) Chapter 307]) which require quarry operators to report any ground vibration levels to the Wisconsin Department of Natural Resources that are above 0.75 in/sec.

Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year, measured at the residence or inhabited structure closest to the site of the blast which is not owned or controlled by the Operator. Notwithstanding any other provision in this subsection, the Operator shall not exceed the airblast limitation imposed by Wis. Adm. Code, SPS Ch. 307.

In addition to obtaining and reviewing the blast data from the city-owned, fixed seismograph, Stantec also received data from Payne & Dolan's Vibra-Tech meters, which provided independently monitored Franklin Aggregate blasting data for the entire calendar year. Four monitors are used by Vibra-Tech, three along South 51st Street, and one just south of West Drexel Avenue. This independently monitored data was compared to the Stantec-obtained data.

ATTACHMENT C

SUMMARY OF SEISMIC DATA –4th QUARTER 2021

Payne & Dolan Blast Monitoring Data								Stantec Blast Monitoring Data		Comparison of P&D and Stantec Monitoring Data		Complaint Information			Weather (for complaints only)							
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	AO (dB)	PPV (in/sec)	AO (dB)	Difference in PPV Values	Difference in AO dB Values	Com-plaints?	#	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipitation	Temp. (°F)
10/1/21	10:55 AM	62	south	5800 ALLWOOD	1,244	0.05	111	0.09	109	-0.04	2.00	yes	3	south	SSE	3	0	29.42	60	fair	none	79
10/1/21	11:00 AM	62	south	7301 S 51st Street	3,256	N/A	N/A	N/A	N/A	--	--											
10/1/21	10:55 AM	62	south	7526 S. 51st Street	2200	0.025	111															
10/1/21	10:55 AM	62	south	SE of Quarry	1,356	0.048	108															
10/6/21	10:56 AM	63	south	5800 ALLWOOD	1,170	0.075	111	0.11	109	-0.04	2.00	no										
10/6/21	10:56 AM	63	south	7301 S 51st Street	3,324	N/A	N/A	N/A	N/A	--	--											
10/6/21	10:56 AM	63	south	7526 S. 51st Street	2,280	0.028	113															
10/6/21	10:56 AM	63	south	SE of Quarry	1,439	0.065	110															
10/8/21	1:00 PM	64	north	5800 ALLWOOD	3,559	N/A	N/A	N/A	N/A	--	--	no										
10/8/21	1:04 PM	64	north	7301 S 51st Street	1,127	0.148	111	0.11	105	0.04	6.00											
10/8/21	1:04 PM	64	north	7526 S. 51st Street	1,348	0.093	118															
10/8/21	1:04 PM	64	north	SE of Quarry	2,148	0.033	108															
10/11/21	10:49 AM	65	south	5800 ALLWOOD	1,229	0.12	106	0.17	108	-0.05	-2.00	yes	1	south	S	6	0	28.97	79	cloudy	none	74
10/11/21	10:50 AM	65	south	7301 S 51st Street	3,289	N/A	N/A	N/A	N/A	--	--											
10/11/21	10:49 AM	65	south	7526 S. 51st Street	2,206	0.05	112															
10/11/21	10:49 AM	65	south	SE of Quarry	1,320	0.07	110															
10/13/21	12:25 PM	66	north	5800 ALLWOOD	3,644	N/A	N/A	N/A	N/A	--	--	no										
10/13/21	12:24 PM	66	north	7301 S 51st Street	936	0.155	99	0.14	99	0.02	0.00											
10/13/21	12:24 PM	66	north	7526 S. 51st Street	1,170	0.128	109															
10/13/21	12:24 PM	66	north	SE of Quarry	2,071	0.033	99															
10/20/21	11:00 AM	67	north	5800 ALLWOOD	3,673	N/A	N/A	N/A	N/A	--	--	no										
10/20/21	11:03 AM	67	north	7301 S 51st Street	917	0.22	106	0.24	98	-0.02	8.00											
10/20/21	11:03 AM	67	north	7526 S. 51st Street	1,190	0.153	109															
10/20/21	11:03 AM	67	north	SE of Quarry	2,099	0.038	107															
10/22/21	10:15 AM	68	north	5800 ALLWOOD	3,576	N/A	N/A	N/A	N/A	--	--	no										
10/22/21	10:12 AM	68	north	7301 S 51st Street	1,122	0.108	107	0.10	107	0.01	0.00											
10/22/21	10:12 AM	68	north	7526 S. 51st Street	1,365	0.078	114															
10/22/21	10:12 AM	68	north	SE of Quarry	2,170	0.028	112															
10/27/21	12:30 PM	69	north	5800 ALLWOOD	3,614	N/A	N/A	N/A	N/A	--	--	no										
10/27/21	12:25 PM	69	north	7301 S 51st Street	1,081	0.163	107	0.11	107	0.05	0.00											
10/27/21	12:25 PM	69	north	7526 S. 51st Street	1,359	0.085	111															
10/27/21	12:25 PM	69	north	SE of Quarry	2,185	0.03	107															
11/1/21	12:00 PM	70	north	5800 ALLWOOD	3634	N/A	N/A	N/A	N/A	--	--	yes	1	unknown (confidential complaint)	W	16	22	29.47	36	mostly cloudy	none	48
11/1/21	11:58 AM	70	north	7301 S 51st Street	1,070	0.183	111	0.18	110	0.00	1.00											
11/1/21	11:58 AM	70	north	7526 S. 51st Street	1,371	0.16	117															
11/1/21	11:58 AM	70	north	SE of Quarry	2,203	0.03	116															
11/2/21	11:40 AM	71	north	5800 ALLWOOD	3,722	N/A	N/A	N/A	N/A	--	--	no										
11/2/21	11:36 AM	71	north	7301 S 51st Street	898	0.173	108	0.14	108	0.03	0.00											
11/2/21	11:36 AM	71	north	7526 S. 51st Street	1,248	0.09	115															
11/2/21	11:36 AM	71	north	SE of Quarry	2164	0.023	107															
11/8/21	12:49 PM	72	south	5800 ALLWOOD	1,144	0.163	110	0.17	99	-0.01	11.00	yes	2	south	SSW	5	0	29.29	50	fair	none	65
11/8/21	12:50 PM	72	south	7301 S 51st Street	3,343	N/A	N/A	N/A	N/A	--	--											
11/8/21	12:49 PM	72	south	7526 S. 51st Street	2,331	0.035	106															
11/8/21	12:49 PM	72	south	SE of Quarry	1,525	0.04	107															
11/10/21	12:10 PM	73	south	5800 ALLWOOD	1,368	0.043	111	0.05	101	-0.01	10.00	no										
11/10/21	12:15 PM	73	south	7301 S 51st Street	3,154	N/A	N/A	N/A	N/A	--	--											
11/10/21	12:10 PM	73	south	7526 S. 51st Street	2,067	0.075	103															
11/10/21	12:10 PM	73	south	SE of Quarry	1,205	0.095	106															

Payne & Dolan Blast Monitoring Data								Stantec Blast Monitoring Data		Comparison of P&D and Stantec Monitoring Data		Complaint Information			Weather (for complaints only)									
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	AO (dB)	PPV (in/sec)	AO (dB)	Difference in PPV Values	Difference in AO dB Values	Com-plaints?	#	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipitation	Temp. (°F)		
11/15/21	10:31 AM	74	south	5800 ALLWOOD	1,110	0.063	111	0.07	100	-0.01	11.00	no												
11/15/21	10:30 AM	74	south	7301 S 51st Street	3,378	N/A	N/A	N/A	N/A	--	--													
11/15/21	10:31 AM	74	south	7526 S. 51st Street	2,360	0.04	105																	
11/15/21	10:31 AM	74	south	SE of Quarry	1,540	0.053	107																	
11/16/21	10:51 AM	75	north	5800 ALLWOOD	3,977	N/A	N/A	N/A	N/A	--	--	no												
11/16/21	10:51 AM	75	north	7301 S 51st Street	1,392	0.123	104	0.11	104	0.01	0.00													
11/16/21	10:51 AM	75	north	7526 S. 51st Street	2,024	0.07	107																	
11/16/21	10:51 AM	75	north	SE of Quarry	2,825	0.023	95																	
11/19/21	10:24 AM	76	south	5800 ALLWOOD	1,296	0.083	112	0.09	103	-0.01	9.00	yes	1	south	WSW	10	none	29.70	46	partly cloudy	none	37		
11/19/21	10:25 AM	76	south	7301 S 51st Street	3,218	N/A	N/A	N/A	N/A	--	--													
11/19/21	10:24 AM	76	south	7526 S. 51st Street	2,141	0.045	106																	
11/19/21	10:24 AM	76	south	SE of Quarry	1,278	0.083	107																	
12/3/21	12:10 PM	77	north	5800 ALLWOOD	3,658	N/T	N/A	N/A	N/A	--	--	no												
12/3/21	12:04 PM	77	north	7301 S 51st Street	1,068	0.165	111	0.17	110	-0.01	1.00													
12/3/21	12:04 PM	77	north	7526 S. 51st Street	1,401	0.095	118																	
12/3/21	12:04 PM	77	north	SE of Quarry	2237	0.038	114																	
12/7/21	12:50 PM	78	north	5800 ALLWOOD	3,712	N/T	N/A	N/A	N/A	--	--	no												
12/7/21	12:46 PM	78	north	7301 S 51st Street	888	0.15	108	0.15	106	0.00	2.00													
12/7/21	12:46 PM	78	north	7526 S. 51st Street	1,214	0.083	111																	
12/7/21	12:50 PM	78	north	SE of Quarry	2136	N/T	N/A																	
12/8/21	9:53 AM	79	south	5800 ALLWOOD	1,212	0.06	112	0.07	102	-0.01	10.00	no												
12/8/21	10:00 AM	79	south	7301 S 51st Street	3,281	N/T	N/A	N/A	N/A	--	--													
12/8/21	9:53 AM	79	south	7526 S. 51st Street	2,241	0.05	105																	
12/8/21	9:52 AM	79	south	SE of Quarry	1413	0.123	104																	
12/8/21	1:04 PM	80	north	5800 ALLWOOD	3,687	N/T	N/A	N/A	N/A	--	--	no												
12/8/21	1:01 PM	80	north	7301 S 51st Street	1,054	0.198	111	0.19	107	0.01	4.00													
12/8/21	1:01 PM	80	north	7526 S. 51st Street	1,419	0.093	118																	
12/8/21	1:01 PM	80	north	SE of Quarry	2265	0.03	116																	
12/14/21	11:15 AM	81	north	5800 ALLWOOD	3,734	N/T	N/A	N/A	N/A	--	--	no												
12/14/21	11:11 AM	81	north	7301 S 51st Street	886	0.175	107	0.16	107	0.02	0.00													
12/14/21	11:11 AM	81	north	7526 S. 51st Street	1,249	0.108	111																	
12/14/21	11:11 AM	81	north	SE of Quarry	2171	0.02	103																	
Totals		20	blast events									5	8	events with complaints / total complaints										

Notes: Shaded cells do not have a meter in that location
N/D = not detected, meter did not detect blast

FIGURE 1

SEISMIC MONITORING, BLASTING, AND COMPLAINT LOCATIONS, 4th QUARTER 2021

V:\1937\Active\193707487\03_data\lgis_sad\lgis\mxd\2021_4th_Quarter_Report\lgis_Seismic_Complaints_193707487.mxd Revised: 2022-01-13 By: asvaim



Figure No.

1

Title

Seismic Monitoring, Blasting, and Complaint Locations - 4th Quarter 2021

Client/Project
City of Franklin
Vicinity of Payne and Dolan Quarry

193707487

Project Location
C. of Franklin, Milwaukee Co., WI

Prepared by AJS on 2022-01-11
TR by JS on 2022-01-13
IR by KGI on 2022-01-13



0 500 1,000
Feet
(At original document size of 11x17)
1:12,000

Legend

Seismic Monitoring Location

- (A) Vibra-Tech(VT1) and Stantec(S1)
- (B) Vibra-Tech(VT2)
- (C) Vibra-Tech(VT3)
- (D) Vibra-Tech(VT4) and Stantec(S2)

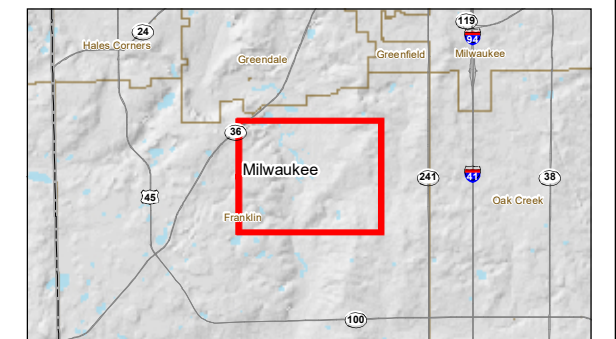
Blast Complaint

- ▲ Blast #62
- ▲ Blast #65
- ▲ Blast #72
- ▲ Blast #76

Blast Location

- Non-complaint Blast Location
- Blast #62
- Blast #65
- Blast #70*
- Blast #72
- Blast #76

*Confidential complaint(No address location)



- Notes**
- Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
 - Data Sources: Stantec, SCO, WDNR, WisDOT
 - Orthophotography: ESRI Clarity Imagery



Franklin Aggregates
Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24
October 2021

Time	Activity	Location	Distance	PPV	Freq	AO
10/27/2021 12:25	69	5800 ALLWOOD	3,614	N/T	N/T	N/A
10/27/2021 12:25	69	7526 S. 51st Street	1,359	0.085	50	111
10/27/2021 12:25	69	SE of Quarry	2,185	0.03	21.7	107
10/27/2021 12:25	69	7301 S 51st Street	1,081	0.163	33.3	107
10/22/2021 10:12	68	5800 ALLWOOD	3,576	N/T	N/T	N/A
10/22/2021 10:12	68	7526 S. 51st Street	1,365	0.078	29.4	114
10/22/2021 10:12	68	SE of Quarry	2,170	0.028	18.5	112
10/22/2021 10:12	68	7301 S 51st Street	1,122	0.108	33.3	107
10/20/2021 11:03	67	5800 ALLWOOD	3,673	N/T	N/T	N/A
10/20/2021 11:03	67	7526 S. 51st Street	1,190	0.153	29.4	109
10/20/2021 11:03	67	SE of Quarry	2,099	0.038	25	107
10/20/2021 11:03	67	7301 S 51st Street	917	0.22	33.3	106
10/13/2021 12:24	66	5800 ALLWOOD	3,644	N/T	N/T	N/A
10/13/2021 12:24	66	7526 S. 51st Street	1,170	0.128	21.7	109
10/13/2021 12:24	66	SE of Quarry	2,071	0.033	26.3	99
10/13/2021 12:24	66	7301 S 51st Street	936	0.155	45.5	99
10/11/2021 10:49	65	5800 ALLWOOD	1,229	0.12	33.3	106
10/11/2021 10:49	65	7526 S. 51st Street	2,206	0.05	27.8	112
10/11/2021 10:49	65	SE of Quarry	1,320	0.07	33.3	110
10/11/2021 10:49	65	7301 S 51st Street	3,289	N/T	N/T	N/A
10/8/2021 13:04	64	5800 ALLWOOD	3,559	N/T	N/T	N/A
10/8/2021 13:04	64	7526 S. 51st Street	1,348	0.093	33.3	118
10/8/2021 13:04	64	SE of Quarry	2,148	0.033	25	108
10/8/2021 13:04	64	7301 S 51st Street	1,127	0.148	35.7	111
10/6/2021 10:56	63	5800 ALLWOOD	1,170	0.075	38.5	111
10/6/2021 10:56	63	7526 S. 51st Street	2,280	0.028	27.8	113
10/6/2021 10:56	63	SE of Quarry	1,439	0.065	27.8	110
10/6/2021 10:56	63	7301 S 51st Street	3,324	N/T	N/T	N/A
10/1/2021 10:55	62	5800 ALLWOOD	1,244	0.05	33.3	111
10/1/2021 10:55	62	7526 S. 51st Street	2,200	0.025	17.9	111
10/1/2021 10:55	62	SE of Quarry	1,356	0.048	31.3	108
10/1/2021 10:55	62	7301 S 51st Street	3,256	N/T	N/T	N/A

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the airblast limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in ch. ILHR 7, Wis. Adm. Code on any blast (new reference now Wis. Adm. Code, Safety and Professional Services [SPS] Chapter 307).

Franklin Aggregates
Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24
November 2021

Time	Activity	Location	Distance	PPV	Freq	AO
11/19/2021 10:24	76	5800 ALLWOOD	1,296	0.083	38.5	112
11/19/2021 10:24	76	7526 S. 51st Street	2,141	0.045	25	106
11/19/2021 10:24	76	SE of Quarry	1,278	0.083	33.3	107
11/19/2021 10:24	76	7301 S 51st Street	3,218	N/T	N/T	N/A
11/16/2021 10:51	75	5800 ALLWOOD	3,977	N/T	N/T	N/A
11/16/2021 10:51	75	7526 S. 51st Street	2,024	0.07	41.7	107
11/16/2021 10:51	75	SE of Quarry	2,825	0.023	20	95
11/16/2021 10:51	75	7301 S 51st Street	1,392	0.123	45.5	104
11/15/2021 10:31	74	5800 ALLWOOD	1,110	0.063	33.3	111
11/15/2021 10:31	74	7526 S. 51st Street	2,360	0.04	35.7	105
11/15/2021 10:31	74	SE of Quarry	1,540	0.053	26.3	107
11/15/2021 10:31	74	7301 S 51st Street	3,378	N/T	N/T	N/A
11/10/2021 12:10	73	5800 ALLWOOD	1,368	0.043	45.5	111
11/10/2021 12:10	73	7526 S. 51st Street	2,067	0.075	33.3	103
11/10/2021 12:10	73	SE of Quarry	1,205	0.095	31.3	106
11/10/2021 12:10	73	7301 S 51st Street	3,154	N/T	N/T	N/A
11/8/2021 12:49	72	5800 ALLWOOD	1,144	0.163	38.5	110
11/8/2021 12:49	72	7526 S. 51st Street	2,331	0.035	25	106
11/8/2021 12:49	72	SE of Quarry	1,525	0.04	20.8	107
11/8/2021 12:49	72	7301 S 51st Street	3,343	N/T	N/T	N/A
11/2/2021 11:36	71	5800 ALLWOOD	3,722	N/T	N/T	N/A
11/2/2021 11:36	71	7526 S. 51st Street	1,248	0.09	41.7	115
11/2/2021 11:36	71	SE of Quarry	2,164	0.023	33.3	107
11/2/2021 11:36	71	7301 S 51st Street	898	0.173	38.5	108
11/1/2021 11:58	70	5800 ALLWOOD	3,634	N/T	N/T	N/A
11/1/2021 11:58	70	7526 S. 51st Street	1,371	0.16	29.4	117
11/1/2021 11:58	70	SE of Quarry	2,203	0.03	25	116
11/1/2021 11:58	70	7301 S 51st Street	1,070	0.183	33.3	111

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the airblast limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in ch. ILHR 7, Wis. Adm. Code on any blast (new reference now Wis. Adm. Code, Safety and Professional Services [SPS] Chapter 307).

Franklin Aggregates
Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24
December 2021

Time	Activity	Location	Distance	PPV	Freq	AO
12/14/2021 11:11	81	5800 ALLWOOD	3,734	N/T	N/T	N/A
12/14/2021 11:11	81	7526 S. 51st Street	1,249	0.108	31.3	111
12/14/2021 11:11	81	SE of Quarry	2,171	0.02	22.7	103
12/14/2021 11:11	81	7301 S 51st Street	886	0.175	45.5	107
12/8/2021 13:01	80	5800 ALLWOOD	3,687	N/T	N/T	N/A
12/8/2021 13:01	80	7526 S. 51st Street	1,419	0.093	31.3	118
12/8/2021 13:01	80	SE of Quarry	2,265	0.03	25	116
12/8/2021 13:01	80	7301 S 51st Street	1,054	0.198	38.5	111
12/8/2021 9:53	79	5800 ALLWOOD	1,212	0.06	12.5	112
12/8/2021 9:53	79	7526 S. 51st Street	2,241	0.05	33.3	105
12/8/2021 9:53	79	SE of Quarry	1,413	0.123	27.8	104
12/8/2021 9:53	79	7301 S 51st Street	3,281	N/T	N/T	N/A
12/7/2021 12:46	78	5800 ALLWOOD	3,712	N/T	N/T	N/A
12/7/2021 12:46	78	7526 S. 51st Street	1,214	0.083	25	111
12/7/2021 12:46	78	SE of Quarry	2,136	N/T	N/T	N/A
12/7/2021 12:46	78	7301 S 51st Street	888	0.15	35.7	108
12/3/2021 12:04	77	5800 ALLWOOD	3,658	N/T	N/T	N/A
12/3/2021 12:04	77	7526 S. 51st Street	1,401	0.095	31.3	118
12/3/2021 12:04	77	SE of Quarry	2,237	0.038	23.8	114
12/3/2021 12:04	77	7301 S 51st Street	1,068	0.165	33.3	111

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the airblast limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in ch. ILHR 7, Wis. Adm. Code on any blast (new reference now Wis. Adm. Code, Safety and Professional Services [SPS] Chapter 307).



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Search:

Date	Time	Shot #	Seismo Loc	PPV	AO
1/13/2022	10:40 am	2	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
1/13/2022	10:38 am	2	Franklin Quarry (7526 S. 51st Street)	0.103	112
1/13/2022	10:38 am	2	Franklin Quarry (7301 S 51st Street)	0.178	108
1/13/2022	10:38 am	2	Franklin Quarry (SE of Quarry)	0.030	107
1/06/2022	12:30 pm	1	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
1/06/2022	12:28 pm	1	Franklin Quarry (SE of Quarry)	0.030	118
1/06/2022	12:28 pm	1	Franklin Quarry (7301 S 51st Street)	0.183	113
1/06/2022	12:28 pm	1	Franklin Quarry (7526 S. 51st Street)	0.163	119
12/14/2021	11:15 am	81	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
12/14/2021	11:11 am	81	Franklin Quarry (SE of Quarry)	0.020	103

Showing 1 to 10 of 324 entries

FirstPrevious12345...33NextLast

Franklin Quarry