



**Sent via e-mail only**

**Hanson Aggregates Pennsylvania LLC**  
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August 19, 2022

Richard E. Tallman, P.E.  
Pottsville District Mining Office  
Pennsylvania Department of Environmental Protection  
5 West Laurel Boulevard  
Pottsville, PA 17901

**Re: Rock Hill Quarry – Erskine Environmental Consulting, Inc. and East Rockhill Township Comments  
Hanson Aggregates Pennsylvania LLC  
SMP No. 7974SM1  
East Rockhill Township, Bucks County, PA**

Dear Mr. Tallman:

Hanson Aggregates Pennsylvania LLC (“Hanson”) provides this response to the July 20, 2022 comment letter submitted by the Rockhill Environmental Preservation Alliance (“REPA”), which included technical memoranda prepared by Dr. Bradley Erskine of Erskine Environmental Consulting (“EEC”), and the July 28, 2022 comment letter submitted by East Rockhill Township (“Township”) regarding Hanson’s activity-based sampling events at the Rock Hill Quarry (the “Quarry”).

REPA and the Township continue to criticize Hanson’s efforts to evaluate the presence of naturally occurring asbestos (“NOA”) at the Quarry. Neither appears willing to acknowledge that zero elongate mineral particles (“EMP”) or NOA fibers were detected at the Quarry perimeter during the June 1, 2022 sampling event. Both make clear that their sole interest is to close the Quarry no matter how Hanson responds to the Pennsylvania Department of Environmental Protection’s (“PADEP”) requests and no matter the data generated by any sampling activity.

As stated in Hanson’s August 9, 2022 letter to PADEP, Hanson is planning its second limited activity-based sampling event at the Quarry pending weather limitations, and Hanson will implement its sampling event in accordance with PADEP’s July 13, 2022 letter. As with its June 1, 2022 sampling event, Hanson will monitor the site from its eight (8) perimeter air monitoring stations for a period of 9-hours, which will include the activities outlined in its August 9, 2022 letter to PADEP.

The basis for Hanson’s sampling strategy is outlined below.

I. **Hanson's Current Sampling Protocol is Appropriate to Measure Exposure to Potential Off-site Receptors.**

As part of its October 21, 2021 Letter to Hanson, PADEP requested that Hanson develop and submit to PADEP an activity-based sampling program to “gain an understanding [of] asbestos exposure at low levels of activity (driving vehicles onsite, moving piles, etc.) in order to demonstrate that removal should not cause NOA fiber migration.” See PADEP Letter to Hanson (Oct. 21, 2021), at Response 5(b)(1). Consistent with that, Hanson proposed a set of limited activity-based sampling events to determine the potential for NOA to migrate beyond the perimeter of the Quarry during certain enumerated operations. Hanson proposed to monitor NOA at the Quarry perimeter to verify whether the NOA, if detected, exceeds PADEP’s corrective action threshold.<sup>1</sup> PADEP approved Hanson’s plan with conditions on February 28, 2022.

Hanson’s perimeter sampling plan is consistent with the United States Environmental Protection Agency’s (“EPA”) 2021 *Framework for Investigating Asbestos-Contaminated Comprehensive Environmental Response, Compensation and Liability Act Sites* (the “Framework”)<sup>2</sup>, which recommends procedures for collecting activity-based air samples per EPA’s *Scientific Engineering Response and Analytical Services (SERAS) SOP #2084* (the “SOP”).<sup>3</sup> See EPA Framework for Investigating Asbestos-Contaminated CERCLA Sites, OLEM Directive No. 9200.0-90 (2021), Section 4.3, at 20. According to EPA, activity-based sampling can be monitored at various locations, including on personal monitors at or near a disturbance activity and at the perimeter of a site, like that to be implemented by Hanson. See id. Per EPA, “[s]tationary air monitors are used in the context of this framework to document site conditions around the perimeter of ABS activities and during removal actions.” See id. For context, EPA defines “perimeter samples” to mean “samples collected upwind, downwind or crosswind of a specific activity.” See SOP, section 7.9, at 25.

EPA instructs that:

[p]erimeter air sampling should be performed to determine the concentrations of asbestos at the activity perimeter or the site perimeter and to ensure that ABS activities do not result in excessive airborne asbestos emissions from the site.

See id.

And, further, that perimeter air monitoring should be conducted to, among other things, “[d]ocument air quality during ABS and establish perimeter levels of asbestos during site activities.” See id. Finally, EPA notes in its *Framework* that stationary sampling events typically last 8-24 hours in order to characterize longer-term exposures. See Framework, at iv.

Hanson’s plan accomplishes these goals by monitoring the Quarry before, during, and after each activity at the eight (8) perimeter air monitoring stations identified in Hanson’s Air Monitoring and Mitigation Plan (“AMMP”), which represent upwind, downwind, and crosswind locations. For its June 1, 2022 sampling event, Hanson monitored the Quarry for a nine (9) hour period, which included the identified truck-driving activity, which, per EPA, is adequate to characterize longer term exposure. Any NOA detected during that period would represent the level of NOA exposure

<sup>1</sup> The Township erroneously states that the corrective action threshold is 0.001 fibers/cc. PADEP has currently established a corrective action threshold of 0.01 f/cc, which is ten (10) times greater than that mistakenly stated by the Township. Any conclusions asserted by the Township based on this discrepancy are therefore inaccurate.

<sup>2</sup> Available at <https://semspub.epa.gov/work/HQ/100002942.pdf>

<sup>3</sup> Available at <https://response.epa.gov/sites/2107/files/ERT-PROC-2084-21-R1.1%20SOP%20Manual.pdf>

to potential off-site receptors that may occur as a result of that activity. Were any structures detected, Hanson's consultant R.J. Lee Group, Inc. could then accurately derive a concentration of NOA to represent exposure to potential off-site receptors and determine if that concentration exceeded PADEP's corrective action threshold. PADEP acknowledged in its July 13, 2022 letter that analysis of Hanson's June 1, 2022 sampling event showed non-detect at each of the eight (8) sampling stations.

REPA and the Township comment that Hanson should only collect samples during the limited time of each activity. REPA and the Township, however, appear to conflate Hanson's perimeter sampling with personal sampling, which may be collected to monitor short-term exposures to receptors who breathe dust generated by certain disturbances (e.g., raking, bike riding, driving an ATV). See SOP, Section 1.0, at 4. This criticism misunderstands the purpose of Hanson's current sampling activities, which is to determine if certain mining activities will result in EMP or NOA migration off-site.

Hanson will collect personal data from on-site operators per MSHA requirements during full Quarry operations. However, as noted above, PADEP approved Hanson's current perimeter monitoring plan with conditions in February 2022. Neither REPA nor the Township commented until roughly six months after PADEP's approval.

Ultimately, the number and location of monitoring stations and the manner in which Hanson collects data at the Quarry perimeter are consistent with the stated intent of the exercise, which is to measure the off-site migration of NOA, if any, resulting from limited site operations. Hanson's plan is also consistent with EPA's *Framework* and *SOP*. Hanson will implement the same protocol for its upcoming sampling activities, subject to further PADEP instruction.

## **II. Increasing the Flow Rate to Collect Data Only During the Duration of On-site Activity Risks Unnecessarily Damaging the Air Filters.**

In addition to properly serving the sampling goal of measuring the potential for off-site migration of NOA, Hanson's monitoring program is also guided by the practical limitations of the filters used to collect airborne particulate. Monitoring NOA requires that Hanson collect a certain volume in order to achieve the desired analytical sensitivity for the TEM analysis. Limiting data collection to the 2-hour window of an event requires significantly increasing the flow rate to meet volume requirements, which risks damaging the filters.

Indeed, EPA's *Framework* cautions against using an excessively high flow rate:

High flow rates may result in sampling errors including filter damage due to failure of its physical support associated with increased pressure drop, leakage of air around the filter mount so that the filter is bypassed or damage to the asbestos structures (breakup of bundles and clusters) due to increased impact velocities (ISO Method 10312; ISO, 2019a). High flow rates can also tear the filters during initial pump startup due to the shock load placed on the filter when the pump is first started.

See Framework, Section 4.3.2, at 23. EPA repeats this caution in its *SOP*. See SOP, 4.2, at 6. In fact, EPA has previously cautioned against using a flow rate exceeding 16 liters/minute. See USEPA Asbestos Sampling Standard Operating Procedure # 2015 (Nov. 17, 1994), Section 4, at 2.<sup>4</sup>

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<sup>4</sup> Available at <https://archive.epa.gov/region9/toxic/web/pdf/epa-ert-asbestos-sampling-sop-2015.pdf>

As stated above, the current manner in which Hanson collects air samples is appropriate for its data needs. Neither the flow rate nor monitoring time limit Hanson's ability to accurately calculate an exposure concentration to potential off-site receptors if any EMPs or NOA are detected at the Quarry perimeter. Increasing the flow rate risks unnecessarily damaging the air filters and will not improve the quality of the data with respect to measuring potential for NOA migration off-site. In fact, terminating monitoring upon the completion of the event risks missing possible detections of NOA since NOA may stay airborne for an extended period of time following an event.

**III. Request for Data.**

Hanson will provide the chain-of-custody for the samples collected during the June 1, 2022 sampling event and for all events hereafter. Hanson will also provide the humidity data in each sampling event report. Please see Attachments A and B included with this response for data from the June 1, 2022 event.

Hanson remains committed to working with PADEP to allow the removal of the Cessation Order so that quarrying activities can safely resume at the Quarry.

Regards,



Andrew J. Gutshall, P.G.  
Area Environmental Manager



David A. Assalone, Esq.  
Associate General Counsel – Northeast Region

encl. as stated.

cc: John Stefanko, PADEP (e-mail only)  
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Environmental File

**ATTACHMENT A**  
**Chain of Custody from June 1, 2022 Sampling**  
**Event**

# Request for Environmental and IH Laboratory Analytical Services

<b>ATTENTION TO:</b> Bryan Bandili		Purchase Order No.:		Client Job No.:	
<b>Lab Use Only</b>	Project No.:		Client No.:		<input type="checkbox"/> YES <input type="checkbox"/> NO Rush Charges Authorized? (check one)
	Date Logged In:		Logged In By:		
<b>Report Results To</b>	Temperature Upon Receipt (Chem Only) _____ °C		Therm ID No. _____		Sample Purpose: Information <input type="checkbox"/> Regulatory <input type="checkbox"/> Accreditation (please list below): System ID #: _____ DOH Source #: _____ Multiple Sources #: _____ Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/>
	Name: Andrew Gutshall				
	Company: Hanson				
	Address: 7660 Imperial Way				
	City, State, Zip: Allentown, PA 18195				
Phone: 484-955-2407		Fax: _____			
Email Results To: <a href="mailto:andrew.gutshall@lehighhanson.com">andrew.gutshall@lehighhanson.com</a>					
Name: Andrew Gutshall		Email: _____		Matrix: WW=Wastewater GW=Groundwater Water S=Soil/Sludge E=Extract O=Oil X=Other	
Company: Hanson				Preservation: Unpres H <sub>2</sub> SO <sub>4</sub> 4 °C HCl HNO <sub>3</sub> NaOH Other Na <sub>2</sub> SO <sub>4</sub>	
Address: 7660 Imperial Way				Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube)	
City, State, Zip: Allentown, PA 18195					
Phone: 484-955-2407		Fax: _____			
Standard Turn Around Time					
<b>Analysis Requested</b>					
<b>Special Instructions</b>	<b>Client Sample ID</b>		<b>Sample Description</b>		<b>Analysis Requested</b>
	<b>Chain of Custody</b>	<b>Sample Collection Date (required)</b>	<b>Sampler (required)</b>	<b>Sample Collection Time</b>	
20220601-01	0.45m TEM	6/1/2022	Schlenker	15:24	505
20220601-02	0.45m TEM	6/1/2022	Schlenker	15:43	501
20220601-03	0.45m TEM	6/1/2022	Schlenker	15:49	500
20220601-04	0.45m TEM	6/1/2022	Schlenker	15:58	501
20220601-05	0.45m TEM	6/1/2022	Schlenker	16:11	499
20220601-06	0.45m TEM	6/1/2022	Schlenker	16:17	498
20220601-07	0.45m TEM	6/1/2022	Schlenker	16:24	492
20220601-08	0.45m TEM	6/1/2022	Schlenker	16:30	488
20220601-09	0.45m TEM	6/1/2022	Schlenker	Field Blank	
20220601-10	0.45m TEM	6/1/2022	Schlenker	Lab Blank	
<b>Chain of Custody</b>		Date: 6/1/2022		Time: 1900	
Relinquished By (Print Name):		Relinquished To:		FedEx	
Company Name: CMI		Method of Shipment: FedEx		FedEx	
<b>Chain of Custody</b>		Date:		Time:	
Relinquished By (Print Name):		Relinquished To:		Method of Shipment:	
Company Name:		Method of Shipment:		Method of Shipment:	

**ATTACHMENT B**  
**Wind and Precipitation Data**  
**May 29 – June 1, 2022**  
**with Humidity Data**



**Hanson Aggregates PA, LLC - Activity Based Sampling**  
**Wind and Precipitation Data from May 29, 2022 to June 1, 2022 at the Rock Hill Quarry**

Date/Time	Outdoor Temperature (°F)	Wind Speed (mph)	Wind Gust (mph)	Wind Direction (°)	Hourly Rain (in/hr)	Daily Rain (in)	Outdoor Humidity (%)
6/1/2022 23:55	59.7	7.4	11.6	140	0.03	0.06	98
6/1/2022 23:40	59.5	5.6	10.5	140	0.09	0.04	98
6/1/2022 23:25	59.2	7.8	15.2	136	0.03	0.03	97
6/1/2022 23:10	59.2	8.7	15.7	136	0	0.03	98
6/1/2022 22:55	59.4	5.8	15.7	146	0.03	0.02	97
6/1/2022 22:40	59.9	6.9	15	139	0.09	0	95
6/1/2022 22:25	60.8	2	8.7	124	0	0	93
6/1/2022 22:10	61.5	2.5	8.9	254	0	0	92
6/1/2022 21:55	62.1	3.8	13.9	121	0	0	92
6/1/2022 21:40	63.1	5.6	14.1	125	0	0	90
6/1/2022 21:25	64.2	4.5	11.9	115	0	0	88
6/1/2022 21:10	65.1	6	12.8	128	0	0	87
6/1/2022 20:55	65.5	4.7	11.4	128	0	0	86
6/1/2022 20:40	66	4	8.7	129	0	0	86
6/1/2022 20:25	66.6	2	9.6	123	0	0	85
6/1/2022 20:10	67.5	4.7	12.8	119	0	0	83
6/1/2022 19:55	68.2	5.6	11	128	0	0	82
6/1/2022 19:40	68.9	6.5	13	127	0	0	81
6/1/2022 19:25	69.8	6	15.4	125	0	0	79
6/1/2022 19:10	70.9	7.4	13.9	129	0	0	78
6/1/2022 18:55	72.3	4.5	12.1	121	0	0	76
6/1/2022 18:40	73.6	4.3	12.8	123	0	0	75
6/1/2022 18:25	74.1	6.9	14.5	124	0	0	73
6/1/2022 18:10	75	5.8	14.1	122	0	0	72
6/1/2022 17:55	76.1	6.7	14.3	124	0	0	70
6/1/2022 17:40	77.4	4.9	15.7	113	0	0	68
6/1/2022 17:25	77.9	5.8	16.1	120	0	0	67
6/1/2022 17:10	78.6	6.7	15	126	0	0	65
6/1/2022 16:55	79	6.7	12.5	130	0	0	64
6/1/2022 16:40	80.1	5.8	13	125	0	0	63
6/1/2022 16:25	80.1	5.6	13.9	124	0	0	63
6/1/2022 16:10	80.1	7.4	15.9	130	0	0	63
6/1/2022 15:55	80.2	7.2	13.6	133	0	0	62
6/1/2022 15:40	80.1	7.6	16.1	136	0	0	62
6/1/2022 15:25	80.2	8.5	14.8	139	0	0	62
6/1/2022 15:10	81.3	6.3	12.8	129	0	0	60
6/1/2022 14:55	80.1	6.9	13.4	139	0	0	61
6/1/2022 14:40	80.2	7.2	14.1	142	0	0	61
6/1/2022 14:25	80.1	6.7	12.3	136	0	0	61
6/1/2022 14:10	81	4.5	11.6	126	0	0	60
6/1/2022 13:55	79.9	5.4	13.2	122	0	0	61
6/1/2022 13:40	79.9	6.5	14.1	141	0	0	61
6/1/2022 13:25	79.9	4.9	12.1	136	0	0	61
6/1/2022 13:10	79.5	5.4	12.5	156	0	0	61
6/1/2022 12:55	78.4	5.1	10.1	145	0	0	62
6/1/2022 12:40	77.2	5.6	11.4	143	0	0	65
6/1/2022 12:25	76.8	5.1	9.8	149	0	0	65
6/1/2022 12:10	75.9	6	12.5	130	0	0	66
6/1/2022 11:55	75.2	5.4	11.6	135	0	0	67
6/1/2022 11:40	75.6	4.3	9.8	129	0	0	66
6/1/2022 11:25	74.1	4.5	8.7	132	0	0	68
6/1/2022 11:10	72.7	4.9	12.5	133	0	0	70
6/1/2022 10:55	72.9	3.1	11.9	124	0	0	70
6/1/2022 10:40	71.4	1.8	6.9	119	0	0	72
6/1/2022 10:25	71.8	2.9	8.3	128	0	0	72

\*The green shaded cells represent the approximate time period (7:30am-4:30pm) during which Hanson collected air sampling data on June 1, 2022, from eight (8) air monitors located around the Quarry perimeter.

\*\*The blue shaded cells represent the approximate time period (10:30am-1:00pm) that Hanson and its consultants performed the required ABS activity at the Rock Hill Quarry on June 1, 2022. Note, Hanson collected air sampling data from the eight (8) air monitors during this time.

**Hanson Aggregates PA, LLC - Activity Based Sampling**  
**Wind and Precipitation Data from May 29, 2022 to June 1, 2022 at the Rock Hill Quarry**

Date/Time	Outdoor Temperature (Å°F)	Wind Speed (mph)	Wind Gust (mph)	Wind Direction (Å°)	Hourly Rain (in/hr)	Daily Rain (in)	Outdoor Humidity (%)
6/1/2022 10:10	69.6	3.1	10.1	121	0	0	76
6/1/2022 9:55	67.8	2.5	8.5	120	0	0	80
6/1/2022 9:40	65.7	3.4	8.3	131	0	0	85
6/1/2022 9:25	64.9	4.9	10.1	124	0	0	87
6/1/2022 9:10	64.8	3.4	7.6	135	0	0	88
6/1/2022 8:55	64	3.8	8.9	128	0	0	89
6/1/2022 8:40	63.5	4	8.7	131	0	0	90
6/1/2022 8:25	63.5	4	9.2	125	0	0	91
6/1/2022 8:10	63.7	4.7	11.9	132	0	0	91
6/1/2022 7:55	63.5	4.5	10.1	136	0	0	91
6/1/2022 7:40	63.3	5.8	12.1	135	0	0	93
6/1/2022 7:25	63.5	5.1	11.2	129	0	0	93
6/1/2022 7:10	63.5	5.4	11.6	127	0	0	94
6/1/2022 6:55	63.5	5.6	11.9	129	0	0	93
6/1/2022 6:40	63.9	6.7	13.4	139	0	0	94
6/1/2022 6:25	64	5.8	12.1	136	0	0	93
6/1/2022 6:10	64.6	5.4	9.8	131	0	0	92
6/1/2022 5:55	65.3	5.4	9.8	138	0	0	90
6/1/2022 5:40	66.4	4.7	8.3	133	0	0	88
6/1/2022 5:25	67.5	3.8	8.7	122	0	0	86
6/1/2022 5:10	67.3	1.3	5.1	116	0	0	86
6/1/2022 4:55	67.6	0	0	327	0	0	86
6/1/2022 4:40	68.5	0.2	2.7	327	0	0	83
6/1/2022 4:25	70	1.3	3.6	327	0	0	77
6/1/2022 4:10	69.6	1.8	2.7	327	0	0	80
6/1/2022 3:55	69.4	0.2	2	327	0	0	80
6/1/2022 3:40	69.8	0	1.1	327	0	0	79
6/1/2022 3:25	70.3	0	1.3	327	0	0	78
6/1/2022 3:10	70	1.1	3.1	327	0	0	81
6/1/2022 2:55	70.2	2.2	5.6	334	0	0	80
6/1/2022 2:40	69.6	1.6	2.9	338	0	0	83
6/1/2022 2:25	71.1	1.8	4.3	338	0	0	79
6/1/2022 2:10	73.4	1.6	3.1	338	0	0	71
6/1/2022 1:55	75.9	2.9	6.3	330	0	0	62
6/1/2022 1:40	76.1	2.9	6.7	320	0	0	61
6/1/2022 1:25	75.9	1.8	4.9	320	0	0	63
6/1/2022 1:10	76.3	1.8	4.5	320	0	0	62
6/1/2022 0:55	76.1	2	4.9	320	0	0	64
6/1/2022 0:40	75.2	1.3	3.6	320	0	0	65
6/1/2022 0:25	75	0	2.2	320	0	0	67
6/1/2022 0:10	75.6	0	2	320	0	0	65
5/31/2022 23:55	75.9	0.2	2.7	320	0	0	66
5/31/2022 23:40	76.1	0.2	2.7	320	0	0	65
5/31/2022 23:25	77.2	0.4	2.5	320	0	0	62
5/31/2022 23:10	76.5	0.7	3.8	320	0	0	65
5/31/2022 22:55	77.7	0.2	2.5	320	0	0	62
5/31/2022 22:40	78.8	1.1	3.8	320	0	0	58
5/31/2022 22:25	78.3	0.7	2.9	320	0	0	60
5/31/2022 22:10	79.3	0.4	2.9	320	0	0	57
5/31/2022 21:55	78.8	0.4	6.9	320	0	0	58
5/31/2022 21:40	78.6	0	2.2	320	0	0	61
5/31/2022 21:25	79.7	0	1.6	320	0	0	58
5/31/2022 21:10	79.7	0.7	4	320	0	0	57
5/31/2022 20:55	79.2	0.2	3.1	320	0	0	61
5/31/2022 20:40	79.3	0	1.3	320	0	0	62

**Hanson Aggregates PA, LLC - Activity Based Sampling**  
**Wind and Precipitation Data from May 29, 2022 to June 1, 2022 at the Rock Hill Quarry**

Date/Time	Outdoor Temperature (Å°F)	Wind Speed (mph)	Wind Gust (mph)	Wind Direction (Å°)	Hourly Rain (in/hr)	Daily Rain (in)	Outdoor Humidity (%)
5/31/2022 20:25	80.6	0	1.3	320	0	0	60
5/31/2022 20:10	82.6	0.2	3.1	320	0	0	56
5/31/2022 19:55	84.2	0	1.6	320	0	0	54
5/31/2022 19:40	86.4	0.9	4	320	0	0	49
5/31/2022 19:25	88	1.3	6.3	318	0	0	45
5/31/2022 19:10	89.1	2.7	7.6	311	0	0	41
5/31/2022 18:55	89.8	4	8.7	300	0	0	39
5/31/2022 18:40	89.6	6.3	11.6	298	0	0	37
5/31/2022 18:25	89.8	8.1	14.5	303	0	0	37
5/31/2022 18:10	90	8.3	15.9	299	0	0	36
5/31/2022 17:55	90.1	8.9	18.8	300	0	0	36
5/31/2022 17:40	91	6.3	13.4	296	0	0	35
5/31/2022 17:25	91	8.5	14.8	300	0	0	34
5/31/2022 17:10	91.8	9.2	18.3	300	0	0	34
5/31/2022 16:55	91.6	8.9	18.3	301	0	0	34
5/31/2022 16:40	92.1	6.9	17	285	0	0	34
5/31/2022 16:25	91.9	7.6	15.4	300	0	0	34
5/31/2022 16:10	92.3	7.6	16.1	287	0	0	34
5/31/2022 15:55	91.9	8.1	16.8	296	0	0	34
5/31/2022 15:40	91.9	7.8	24.4	296	0	0	34
5/31/2022 15:25	91.4	11	20.6	299	0	0	34
5/31/2022 15:10	92.5	7.2	16.8	290	0	0	34
5/31/2022 14:55	91.4	9.6	17.4	299	0	0	35
5/31/2022 14:40	92.1	8.5	17.2	306	0	0	34
5/31/2022 14:25	92.1	6.3	13.4	299	0	0	35
5/31/2022 14:10	91.4	7.4	15.7	305	0	0	35
5/31/2022 13:55	91.8	5.8	17.9	314	0	0	35
5/31/2022 13:40	91	6.9	17.9	310	0	0	35
5/31/2022 13:25	90.7	8.9	19.7	303	0	0	36
5/31/2022 13:10	90.7	7.8	16.3	311	0	0	36
5/31/2022 12:55	90.1	7.8	17	306	0	0	37
5/31/2022 12:40	89.2	10.3	19	302	0	0	38
5/31/2022 12:25	88.7	9.2	22.8	307	0	0	39
5/31/2022 12:10	88.7	9.2	18.8	301	0	0	39
5/31/2022 11:55	88.2	10.1	23	303	0	0	39
5/31/2022 11:40	87.3	10.3	21	303	0	0	42
5/31/2022 11:25	86.5	11.2	25.9	304	0	0	43
5/31/2022 11:10	86	10.3	29.3	306	0	0	46
5/31/2022 10:55	85.3	9.8	19.7	306	0	0	48
5/31/2022 10:40	84.9	8.3	22.6	303	0	0	50
5/31/2022 10:25	84	8.7	19.9	302	0	0	52
5/31/2022 10:10	83.1	7.8	17.2	311	0	0	54
5/31/2022 9:55	82	8.9	16.1	304	0	0	56
5/31/2022 9:40	81.5	9.4	17.9	306	0	0	56
5/31/2022 9:25	81	8.5	16.8	307	0	0	58
5/31/2022 9:10	80.1	8.1	14.8	307	0	0	61
5/31/2022 8:55	79	8.1	15	304	0	0	63
5/31/2022 8:40	77.9	7.4	13.9	306	0	0	67
5/31/2022 8:25	76.1	6.3	11.6	306	0	0	71
5/31/2022 8:10	74.3	4	6.9	317	0	0	76
5/31/2022 7:55	73.4	4.9	7.8	317	0	0	77
5/31/2022 7:40	72.3	4.3	7.2	331	0	0	79
5/31/2022 7:25	70.9	2.2	3.6	343	0	0	83
5/31/2022 7:10	69.1	1.3	3.8	343	0	0	88
5/31/2022 6:55	67.6	1.3	2.7	343	0	0	91

**Hanson Aggregates PA, LLC - Activity Based Sampling**  
**Wind and Precipitation Data from May 29, 2022 to June 1, 2022 at the Rock Hill Quarry**

Date/Time	Outdoor Temperature (Å°F)	Wind Speed (mph)	Wind Gust (mph)	Wind Direction (Å°)	Hourly Rain (in/hr)	Daily Rain (in)	Outdoor Humidity (%)
5/31/2022 6:40	67.5	1.8	3.1	343	0	0	90
5/31/2022 6:25	68.4	2	4	343	0	0	88
5/31/2022 6:10	68.9	2	5.1	343	0	0	86
5/31/2022 5:55	69.8	2	4	343	0	0	83
5/31/2022 5:40	71.1	2	5.4	343	0	0	79
5/31/2022 5:25	72.1	2.9	5.8	343	0	0	77
5/31/2022 5:10	72.1	2.5	6	343	0	0	77
5/31/2022 4:55	72.1	2	5.8	343	0	0	77
5/31/2022 4:40	72.1	0.9	6.5	343	0	0	77
5/31/2022 4:25	72.5	0.7	4.7	343	0	0	77
5/31/2022 4:10	72.3	1.3	4.7	343	0	0	77
5/31/2022 3:55	72	1.6	4.7	325	0	0	79
5/31/2022 3:40	72.1	2.5	6.9	311	0	0	78
5/31/2022 3:25	72.9	2.7	8.3	317	0	0	76
5/31/2022 3:10	73.2	2	5.6	327	0	0	76
5/31/2022 2:55	72.9	1.1	5.1	257	0	0	77
5/31/2022 2:40	72.5	0.2	3.1	190	0	0	79
5/31/2022 2:25	72.3	0.7	3.8	190	0	0	79
5/31/2022 2:10	72.7	0.4	3.1	190	0	0	78
5/31/2022 1:55	72.7	0.7	4.5	190	0	0	79
5/31/2022 1:40	72.3	1.3	5.8	176	0	0	79
5/31/2022 1:25	72.5	0.9	3.6	173	0	0	79
5/31/2022 1:10	72.9	0.4	3.1	173	0	0	79
5/31/2022 0:55	73.2	2	5.8	173	0	0	78
5/31/2022 0:40	73.6	1.6	6.3	181	0	0	77
5/31/2022 0:25	74.1	1.8	7.2	157	0	0	76
5/31/2022 0:10	74.3	1.6	6.5	158	0	0	76
5/30/2022 23:55	74.7	2.2	6.7	181	0	0	75
5/30/2022 23:40	75.2	2	5.6	182	0	0	74
5/30/2022 23:25	75.6	1.6	6.7	192	0	0	73
5/30/2022 23:10	75.9	3.1	7.6	157	0	0	72
5/30/2022 22:55	76.1	2.7	7.2	151	0	0	73
5/30/2022 22:40	76.5	2.5	7.2	154	0	0	72
5/30/2022 22:25	77	2.9	6.5	160	0	0	71
5/30/2022 22:10	77.4	3.1	6.9	167	0	0	70
5/30/2022 21:55	77.9	2.2	8.7	173	0	0	69
5/30/2022 21:40	78.4	3.4	7.8	163	0	0	67
5/30/2022 21:25	78.8	2.2	5.6	146	0	0	66
5/30/2022 21:10	79.2	2.2	6.9	178	0	0	64
5/30/2022 20:55	79.3	2.2	5.1	148	0	0	62
5/30/2022 20:40	77.9	1.6	5.6	260	0	0	63
5/30/2022 20:25	78.6	0	2.2	288	0	0	63
5/30/2022 20:10	80.2	0	0	288	0	0	62
5/30/2022 19:55	82.9	0.2	2	288	0	0	54
5/30/2022 19:40	84.6	0.9	4	288	0	0	50
5/30/2022 19:25	85.5	1.8	4.5	288	0	0	48
5/30/2022 19:10	85.8	2.7	7.6	288	0	0	47
5/30/2022 18:55	86.7	2.5	7.8	260	0	0	46
5/30/2022 18:40	86.9	2.2	6.5	289	0	0	46
5/30/2022 18:25	87.1	3.1	8.9	275	0	0	45
5/30/2022 18:10	86.7	4	8.9	265	0	0	44
5/30/2022 17:55	87.3	4.5	11.2	285	0	0	42
5/30/2022 17:40	87.1	5.4	11.2	291	0	0	43
5/30/2022 17:25	87.8	5.4	12.5	260	0	0	42
5/30/2022 17:10	88.3	3.6	10.3	275	0	0	42

**Hanson Aggregates PA, LLC - Activity Based Sampling**  
**Wind and Precipitation Data from May 29, 2022 to June 1, 2022 at the Rock Hill Quarry**

Date/Time	Outdoor Temperature (°F)	Wind Speed (mph)	Wind Gust (mph)	Wind Direction (°)	Hourly Rain (in/hr)	Daily Rain (in)	Outdoor Humidity (%)
5/30/2022 16:55	88.7	3.8	11.9	291	0	0	42
5/30/2022 16:40	87.6	4.5	10.5	250	0	0	43
5/30/2022 16:25	87.1	4.3	14.8	259	0	0	45
5/30/2022 16:10	87.4	4.3	13.2	181	0	0	44
5/30/2022 15:55	88.2	3.4	12.1	257	0	0	43
5/30/2022 15:40	87.1	5.8	11.2	303	0	0	45
5/30/2022 15:25	87.3	5.6	14.8	294	0	0	46
5/30/2022 15:10	87.6	3.8	10.1	213	0	0	46
5/30/2022 14:55	87.1	4.3	11.4	246	0	0	46
5/30/2022 14:40	87.1	4.3	10.5	256	0	0	46
5/30/2022 14:25	86.2	4	10.1	174	0	0	48
5/30/2022 14:10	84.7	4.7	13.6	270	0	0	49
5/30/2022 13:55	84	5.6	15.4	255	0	0	50
5/30/2022 13:40	85.3	3.6	12.1	249	0	0	50
5/30/2022 13:25	85.6	5.6	13.4	165	0	0	50
5/30/2022 13:10	84.6	4.5	11.9	216	0	0	51
5/30/2022 12:55	84	5.4	13.6	238	0	0	51
5/30/2022 12:40	84.6	3.6	10.5	227	0	0	49
5/30/2022 12:25	84.4	3.8	9.2	255	0	0	50
5/30/2022 12:10	82.2	5.4	11.6	306	0	0	52
5/30/2022 11:55	81.9	5.4	14.1	268	0	0	53
5/30/2022 11:40	81.5	3.6	9.4	272	0	0	53
5/30/2022 11:25	80.6	5.1	14.5	294	0	0	53
5/30/2022 11:10	81.5	3.8	9.6	277	0	0	52
5/30/2022 10:55	80.4	4.3	11.4	200	0	0	54
5/30/2022 10:40	80.1	4	9.6	244	0	0	55
5/30/2022 10:25	79.2	4.3	10.1	287	0	0	56
5/30/2022 10:10	78.3	4.3	10.3	254	0	0	57
5/30/2022 9:55	77.2	5.4	11.2	304	0	0	60
5/30/2022 9:40	76.5	3.6	8.9	275	0	0	61
5/30/2022 9:25	75.2	3.4	10.1	250	0	0	64
5/30/2022 9:10	73.6	4.7	11	284	0	0	67
5/30/2022 8:55	72.7	5.8	11	299	0	0	68
5/30/2022 8:40	72.1	4	8.3	300	0	0	70
5/30/2022 8:25	69.4	2	9.8	177	0	0	76
5/30/2022 8:10	67.3	0	2	143	0	0	80
5/30/2022 7:55	65.3	0	1.6	143	0	0	85
5/30/2022 7:40	63	0	2.5	143	0	0	91
5/30/2022 7:25	61	0.9	2	143	0	0	93
5/30/2022 7:10	59.5	0.4	2	143	0	0	95
5/30/2022 6:55	58.3	0.2	1.8	143	0	0	97
5/30/2022 6:40	57.9	0	1.3	143	0	0	97
5/30/2022 6:25	58.1	0	1.6	143	0	0	97
5/30/2022 6:10	58.6	0	0	143	0	0	96
5/30/2022 5:55	59.7	0	1.6	143	0	0	94
5/30/2022 5:40	60.8	1.6	4	143	0	0	91
5/30/2022 5:25	60.3	1.3	3.1	143	0	0	94
5/30/2022 5:10	59.5	0	2	143	0	0	96
5/30/2022 4:55	59.5	0	1.6	143	0	0	95
5/30/2022 4:40	60.1	0	0	143	0	0	93
5/30/2022 4:25	60.4	0.2	2.5	143	0	0	92
5/30/2022 4:10	61.3	0	1.6	143	0	0	90
5/30/2022 3:55	62.2	0	1.3	143	0	0	87
5/30/2022 3:40	62.2	0.4	2.9	143	0	0	87
5/30/2022 3:25	63.1	0.2	3.6	143	0	0	85

**Hanson Aggregates PA, LLC - Activity Based Sampling**  
**Wind and Precipitation Data from May 29, 2022 to June 1, 2022 at the Rock Hill Quarry**

Date/Time	Outdoor Temperature (°F)	Wind Speed (mph)	Wind Gust (mph)	Wind Direction (°)	Hourly Rain (in/hr)	Daily Rain (in)	Outdoor Humidity (%)
5/30/2022 3:10	63.1	1.6	3.8	143	0	0	85
5/30/2022 2:55	63	0.2	2.7	143	0	0	85
5/30/2022 2:40	63.5	0.7	3.6	143	0	0	82
5/30/2022 2:25	63.7	1.6	5.4	148	0	0	82
5/30/2022 2:10	63.3	2.2	4.7	121	0	0	83
5/30/2022 1:55	62.6	2.9	5.1	121	0	0	85
5/30/2022 1:40	61.7	2.7	4.5	121	0	0	87
5/30/2022 1:25	61.3	1.8	3.6	121	0	0	88
5/30/2022 1:10	61.3	0.7	2.5	121	0	0	86
5/30/2022 0:55	61.9	2	5.6	121	0	0	88
5/30/2022 0:40	62.8	0.4	6.5	237	0	0	87
5/30/2022 0:25	63.5	0	2.7	240	0	0	84
5/30/2022 0:10	64.6	0	1.1	240	0	0	79
5/29/2022 23:55	64.8	0	0	240	0	0	79
5/29/2022 23:40	64.8	0	0	240	0	0	79
5/29/2022 23:25	66.4	0	1.6	240	0	0	73
5/29/2022 23:10	66.9	0	1.1	240	0	0	71
5/29/2022 22:55	66.7	0	1.3	240	0	0	70
5/29/2022 22:40	63.9	0	1.6	240	0	0	77
5/29/2022 22:25	63.3	0	1.3	240	0	0	81
5/29/2022 22:10	63.3	0	0	240	0	0	82
5/29/2022 21:55	63.5	0	0	240	0	0	82
5/29/2022 21:40	64	0	0	240	0	0	81
5/29/2022 21:25	64.8	0	0	240	0	0	80
5/29/2022 21:10	65.5	0	0	240	0	0	76
5/29/2022 20:55	66.6	0	0	240	0	0	73
5/29/2022 20:40	67.8	0	0	240	0	0	71
5/29/2022 20:25	69.6	0	0	240	0	0	66
5/29/2022 20:10	71.8	0	0	240	0	0	60
5/29/2022 19:55	73.6	0	0	240	0	0	56
5/29/2022 19:40	75.4	0.2	2.2	240	0	0	54
5/29/2022 19:25	77.2	0.7	3.8	244	0	0	48
5/29/2022 19:10	77.7	1.8	7.2	286	0	0	43
5/29/2022 18:55	78.6	1.1	4	269	0	0	43
5/29/2022 18:40	78.8	1.6	5.8	233	0	0	43
5/29/2022 18:25	78.4	1.1	4.5	197	0	0	43
5/29/2022 18:10	78.6	2.7	8.3	268	0	0	41
5/29/2022 17:55	79.7	2.7	7.2	241	0	0	41
5/29/2022 17:40	78.3	2.9	7.6	264	0	0	43
5/29/2022 17:25	79.3	4.9	12.1	305	0	0	40
5/29/2022 17:10	81.1	3.1	9.2	218	0	0	39
5/29/2022 16:55	80.6	0.4	4.3	169	0	0	41
5/29/2022 16:40	79.9	2	6.7	192	0	0	41
5/29/2022 16:25	79.7	2.7	9.4	266	0	0	41
5/29/2022 16:10	78.6	4.3	9.8	293	0	0	42
5/29/2022 15:55	81	4.3	11.4	277	0	0	40
5/29/2022 15:40	79.5	2.2	10.1	255	0	0	41
5/29/2022 15:25	81	2.2	7.6	265	0	0	39
5/29/2022 15:10	79.9	2.5	10.5	231	0	0	40
5/29/2022 14:55	77	3.8	11	290	0	0	44
5/29/2022 14:40	77.4	5.1	13.2	314	0	0	43
5/29/2022 14:25	77.7	5.4	13	307	0	0	43
5/29/2022 14:10	78.4	3.6	13.2	230	0	0	41
5/29/2022 13:55	77.5	4.7	12.5	302	0	0	42
5/29/2022 13:40	76.6	3.6	9.4	292	0	0	45

**Hanson Aggregates PA, LLC - Activity Based Sampling**  
**Wind and Precipitation Data from May 29, 2022 to June 1, 2022 at the Rock Hill Quarry**

Date/Time	Outdoor Temperature (Å°F)	Wind Speed (mph)	Wind Gust (mph)	Wind Direction (Å°)	Hourly Rain (in/hr)	Daily Rain (in)	Outdoor Humidity (%)
5/29/2022 13:25	74.5	4.9	11.4	304	0	0	47
5/29/2022 13:10	75.6	6.7	13.4	297	0	0	45
5/29/2022 12:55	75.4	5.4	14.5	302	0	0	45
5/29/2022 12:40	73.6	4.7	11.2	289	0	0	48
5/29/2022 12:25	74.3	3.8	11.4	289	0	0	46
5/29/2022 12:10	74.5	4.7	15.7	302	0	0	47
5/29/2022 11:55	73.9	6.3	12.5	300	0	0	47
5/29/2022 11:40	74.8	4.3	9.8	307	0	0	47
5/29/2022 11:25	73.8	2.7	8.5	273	0	0	49
5/29/2022 11:10	72.7	4.3	13	313	0	0	51
5/29/2022 10:55	72.1	5.4	12.5	297	0	0	51
5/29/2022 10:40	73.2	3.6	11.9	300	0	0	50
5/29/2022 10:25	70.7	3.8	8.7	307	0	0	53
5/29/2022 10:10	69.8	4.3	7.4	292	0	0	55
5/29/2022 9:55	69.6	4.3	9.8	286	0	0	57
5/29/2022 9:40	68.2	4.3	9.6	294	0	0	63
5/29/2022 9:25	67.5	4.3	9.8	303	0	0	65
5/29/2022 9:10	65.8	5.4	11.2	316	0	0	68
5/29/2022 8:55	64.9	5.8	10.1	307	0	0	71
5/29/2022 8:40	63.5	4.9	11.2	302	0	0	77
5/29/2022 8:25	62.2	4.5	10.1	306	0	0	85
5/29/2022 8:10	61.2	5.1	8.9	307	0	0	88
5/29/2022 7:55	60.1	4.9	8.1	310	0	0	91
5/29/2022 7:40	59	4.7	7.6	311	0	0	94
5/29/2022 7:25	57.9	4.9	6.7	311	0	0	96
5/29/2022 7:10	56.5	4.5	6.7	311	0	0	99
5/29/2022 6:55	55.8	3.8	5.1	311	0	0	100
5/29/2022 6:40	54.5	3.1	4.7	311	0	0	100
5/29/2022 6:25	53.8	2.2	3.8	311	0	0	100
5/29/2022 6:10	54	2.7	3.8	311	0	0	100
5/29/2022 5:55	54.3	1.8	3.4	311	0	0	100
5/29/2022 5:40	54.5	1.1	2.2	311	0	0	100
5/29/2022 5:25	54.9	1.3	2.2	311	0	0	100
5/29/2022 5:10	55.2	0	1.6	311	0	0	100
5/29/2022 4:55	55.8	0.9	3.1	311	0	0	100
5/29/2022 4:40	56.1	1.3	3.1	311	0	0	100
5/29/2022 4:25	56.3	1.6	2.9	311	0	0	100
5/29/2022 4:10	56.7	1.6	3.1	311	0	0	100
5/29/2022 3:55	57.2	0.7	2.2	311	0	0	100
5/29/2022 3:40	57.7	1.3	2.2	311	0	0	99
5/29/2022 3:25	58.5	0.2	2.2	311	0	0	98
5/29/2022 3:10	58.5	0	1.6	311	0	0	99
5/29/2022 2:55	58.5	0	0	311	0	0	99
5/29/2022 2:40	58.6	0	1.3	311	0	0	99
5/29/2022 2:25	59	0.2	2	311	0	0	99
5/29/2022 2:10	59.4	0.9	2.5	311	0	0	98
5/29/2022 1:55	59.5	0	2	311	0	0	97
5/29/2022 1:40	59.7	0	1.3	311	0	0	99
5/29/2022 1:25	60.3	0	0	311	0	0	100
5/29/2022 1:10	60.3	0	0	311	0	0	100
5/29/2022 0:55	60.1	0.7	2.5	311	0	0	99
5/29/2022 0:40	60.4	0.4	2.7	311	0	0	99
5/29/2022 0:25	60.8	0	1.1	311	0	0	100
5/29/2022 0:10	60.8	0.2	2	311	0	0	100