

BACKGROUND MONITORING DATA ($\mu\text{g}/\text{m}^3$)									
Pollutant	Site Name	County	Year	1-Hr	3-Hr	8-Hr	24-Hr	3-Mo	Annual
PM ₁₀	Jenkins Ave/North Charleston FS	Charleston	22-24				37		
PM _{2.5}	Parklane	Richland	22-24				11.4		6.8

PM₁₀ 24-hr is the fourth-high over 3-year period.
The concentration listed for all other pollutants and averaging periods is the 3-year design value.

STANDARD NO. 2 - AMBIENT AIR QUALITY STANDARDS EMISSION RATES (LB/HR)						
Emission Point ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Lead
Emission Unit ID 01: Stone Crushing						
CR1	0.756	0.140	--	--	--	--
CR2	0.648	0.120	--	--	--	--
CR3	0.594	0.110	--	--	--	--
Emission Unit ID 02: Stone Conveying						
B1	0.055	0.016	--	--	--	--
B2	0.051	0.014	--	--	--	--
B3	0.044	0.012	--	--	--	--
C1	0.060	0.017	--	--	--	--
C2	0.060	0.017	--	--	--	--
C3	0.060	0.017	--	--	--	--
C4	0.060	0.017	--	--	--	--
C5	0.076	0.021	--	--	--	--
C6	0.048	0.014	--	--	--	--
C7	0.048	0.014	--	--	--	--
C8	0.048	0.014	--	--	--	--
C9	0.048	0.014	--	--	--	--
C10	0.048	0.014	--	--	--	--
C11	0.055	0.016	--	--	--	--
C12	0.055	0.016	--	--	--	--
C13	0.055	0.016	--	--	--	--
C14	0.055	0.016	--	--	--	--
C15	0.048	0.014	--	--	--	--
C16	0.051	0.014	--	--	--	--
C17	0.051	0.014	--	--	--	--
C18	0.051	0.014	--	--	--	--
C19	0.051	0.014	--	--	--	--
C20	0.048	0.014	--	--	--	--
C21	0.048	0.014	--	--	--	--
C22	0.048	0.014	--	--	--	--
C23	0.048	0.014	--	--	--	--
C24	0.048	0.014	--	--	--	--
C25	0.048	0.014	--	--	--	--
C26	0.048	0.014	--	--	--	--
C27	0.048	0.014	--	--	--	--
C28	0.067	0.019	--	--	--	--

STANDARD NO. 2 – AMBIENT AIR QUALITY STANDARDS EMISSION RATES (LB/HR)						
Emission Point ID	PM₁₀	PM_{2.5}	SO₂	NO_x	CO	Lead
C29	0.067	0.019	--	--	--	--
C36	0.048	0.014	--	--	--	--
C37	0.048	0.014	--	--	--	--
C40	0.044	0.012	--	--	--	--
Emission Unit ID 03: Stone Screening						
F1	0.962	0.065	--	--	--	--
GR1	0.002	0.0001	--	--	--	--
S1	1.221	0.083	--	--	--	--
S2	1.184	0.080	--	--	--	--
Fugitive Emissions Generated by the Stockpiles at the Quarry						
ST1 ⁽¹⁾	0.17	0.17	--	--	--	--
ST2 ⁽¹⁾	0.23	0.23	--	--	--	--
ST3 ⁽¹⁾	0.07	0.07	--	--	--	--
ST4 ⁽¹⁾	0.07	0.07	--	--	--	--
ST5 ⁽¹⁾	0.07	0.07	--	--	--	--
ST6 ⁽¹⁾	0.97	0.97	--	--	--	--
ST7 ⁽¹⁾	0.17	0.17	--	--	--	--
ST8 ⁽¹⁾	0.32	0.32	--	--	--	--
ST9 ⁽¹⁾	0.07	0.07	--	--	--	--
ST10 ⁽¹⁾	0.07	0.07	--	--	--	--
ST11 ⁽¹⁾	0.07	0.07	--	--	--	--
FACILITY TOTAL	9.53	2.63	--	--	--	--
The facility is limited to an operation of 15 hours per day with an operation of 5am to 8pm daily. The facility modeled an operating scenario by using the hour of day (HROFDY) emission rate flag in the model.						
1) These are the uncontrolled emission rates for these sources that have been modeled.						

STANDARD NO. 7 – PSD INCREMENT EMISSION RATES (LB/HR)						
Emission Point ID	Minor Source Baseline Date(s)					
	05/20/1981	06/12/2023			05/20/1981	10/26/1988
	PM₁₀	PM_{2.5}			SO₂	NO_x
Primary		SO₂	NO_x			
S1	1.221	--	--	--	--	--
S2	1.184	--	--	--	--	--
FACILITY TOTAL	2.405	--	--	--	--	--
Standard 7 is not required to be modeled for non-PSD projects. This table is included to keep track of the increment inventory for future PSD project use.						

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EMISSION POINT DESCRIPTIVE INFORMATION				
Emission Point ID	Source Identification & Description	Date Installed (Modified)	Status	Control Device / Other
Emission Unit ID 01: Stone Crushing				
CR1	1300 tph Primary Jaw Crusher 1	2025		Wet suppression
CR2	1200 tph Crusher 2	2025		Wet suppression
CR3	1100 tph Crusher 3	2025		Wet suppression
Emission Unit ID 02: Stone Conveying				
B1	1200 tph Surge Bin 1	2025		Water carry over
B2	1100 tph Surge Bin 2	2025		Water carry over
B3	950 tph Surge Bin 3	2025		Water carry over
C1	1300 tph 60" Conveyor 1	2025		Wet suppression
C2	1300 tph 36" Conveyor 2	2025		Water carry over
C3	1300 tph 42" Conveyor 3	2025		Water carry over
C4	1300 tph 36" Conveyor 4	2025		Wet suppression
C5	1650 tph 36" Conveyor 5	2025		Wet suppression
C6	1050 tph 60" Conveyor 6	2025		Wet suppression
C7	1050 tph 36" Conveyor 7	2025		Wet suppression
C8	1050 tph 36" Conveyor 8	2025		Water carry over
C9	1050 tph 36" Conveyor 9	2025		Water carry over
C10	1050 tph 36" Conveyor 10	2025		Water carry over
C11	1200 tph 36" Conveyor 11	2025		Water carry over
C12	1200 tph 48" Conveyor 12	2025		Water carry over
C13	1200 tph 36" Conveyor 13	2025		Wet suppression
C14	1200 tph 36" Conveyor 14	2025		Wet suppression
C15	1050 tph 36" Conveyor 15	2025		Wet suppression
C16	1100 tph 36" Conveyor 16	2025		Water carry over
C17	1100 tph 48" Conveyor 17	2025		Water carry over
C18	1100 tph 36" Conveyor 18	2025		Wet suppression
C19	1100 tph 36" Conveyor 19	2025		Wet suppression
C20	1050 tph 36" Conveyor 20	2025		Wet suppression
C21	1050 tph 36" Conveyor 21	2025		Water carry over
C22	1050 tph 36" Conveyor 22	2025		Wet suppression

EMISSION POINT DESCRIPTIVE INFORMATION				
Emission Point ID	Source Identification & Description	Date Installed (Modified)	Status	Control Device / Other
C23	1050 tph 36" Conveyor 23	2025		Water carry over
C24	1050 tph 36" Conveyor 24	2025		Wet suppression
C25	1050 tph 36" Conveyor 25	2025		Water carry over
C26	1050 tph 36" Conveyor 26	2025		Wet suppression
C27	1050 tph 36" Conveyor 27	2025		Water carry over
C28	1450 tph 36" Conveyor 28	2025		Water carry over
C29	1450 tph 36" Conveyor 29	2025		Water carry over
C36	1050 tph 36" Conveyor 36	2025		Water carry over
C37	1050 tph 36" Conveyor 37	2025		Water carry over
C40	950 tph 36" Conveyor 40	2025		Water carry over
Emission Unit ID 03: Stone Screening				
F1	1300 tph twin 36" Pan Feeder 1	2025		Wet suppression
GR1	1300 tph 4'x10' Grizzly Feeder 1	2025		Wet suppression
S1	1650 tph 8' x 20' TD Scalping Screen 1	2025		Wet suppression
S2	1600 tph 8' x 20' TD Scalping Screen 2	2025		Water carry over
Emission Unit ID 04: Stone Washing				
C30	2350 tph 36" Conveyor 30	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
C31	2350 tph 36" Conveyor 31	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
C32	2350 tph 36" Conveyor 32	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
C33	2350 tph 36" Conveyor 33	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
C34	2350 tph 36" Conveyor 34	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
C35	2350 tph 36" Conveyor 35	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
C38	2350 tph 36" Conveyor 38	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
C39	2350 tph 36" Conveyor 39	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
MS1	2350 tph Material Splitter	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
S3	2750 tph 8'x 20' Screen 3	2025	Exempt Std 2, 7, 8: No emissions	Wash plant
Fugitive Emissions Generated by the Stockpiles at the Quarry				
ST1	E. Base stockpile	2025		
ST2	E. #57 stockpile	2025		
ST3	E. #789 stockpile	2025		
ST4	E. SCR stockpile	2025		
ST5	E. W. SCR sand stockpile	2025		

EMISSION POINT DESCRIPTIVE INFORMATION				
Emission Point ID	Source Identification & Description	Date Installed (Modified)	Status	Control Device / Other
ST6	Auxiliary stockpile	2025		
ST7	N. Base stockpile	2025		
ST8	N. #57 stockpile	2025		
ST9	N. SCR stockpile	2025		
ST10	N. W. SCR stockpile	2025		
ST11	N. #789 stockpile	2025		

AREA POLYGON SOURCE PARAMETERS								
Emission Point ID	Date Last Modeled	Location (UTM)		Release Height AGL (ft)	Initial Vertical Dimension (ft)	Number Of Vertices	Area (ft ²)	Distance To Property Line (ft)
		East-1 (m)	North-1 (m)					
Fugitive Emissions Generated by the Stockpiles at the Quarry								
ST1	Current	491912	3771337	15		4		See modeling files
ST2	Current	491984	3771315	15		4		
ST3	Current	492043	3771367	15		4		
ST4	Current	492082	3771382	15		4		
ST5	Current	492118	3771395	15		4		
ST6	Current	491818	3771346	20		4		
ST7	Current	492129	3771718	20		4		
ST8	Current	492185	3771739	15		4		
ST9	Current	492298	3771758	15		4		
ST10	Current	492335	3771770	15		4		
ST11	Current	492373	3771782	30		4		

VOLUME SOURCE PARAMETERS

Emission Point ID	Date Last Modeled	Location (UTM)		Release Height AGL (ft)	Physical Horizontal Dimension (ft)	Initial Horizontal Dimension σ_y (ft)	Physical Vertical Dimension (ft)	Initial Vertical Dimension σ_z (ft)	Distance To Property Line (ft)
		East (m)	North (m)						
Emission Unit ID 01: Stone Crushing									
CR1	Current	492158	3771581	5.0		1.16		3.49	See modeling files
CR2	Current	492068	3771524	5.0		1.16		3.49	
CR3	Current	492028	3771550	5.0		1.16		3.49	
Emission Unit ID 02: Stone Conveying									
B1	Current	492063	3771521	5.0		0.7		1.4	See modeling files
B2	Current	492033	3771548	5.0		0.7		1.4	
B3	Current	492055	3771573	5.0		0.7		1.4	
C1	Current	492175	3771584	5.0		1.16		1.16	
C2	Current	492139	3771567	5.0		0.7		1.16	
C3	Current	492119	3771568	5.0		0.81		1.16	
C4	Current	492132	3771550	5.0		0.7		1.16	
C5	Current	492115	3771545	5.0		0.7		1.16	
C6	Current	492080	3771498	5.0		0.7		1.16	
C7	Current	492060	3771490	5.0		0.7		1.16	
C8	Current	492064	3771472	5.0		0.7		1.16	
C9	Current	492054	3771499	5.0		0.7		1.16	
C10	Current	492035	3771486	5.0		0.7		1.16	
C11	Current	492066	3771513	5.0		0.7		1.16	
C12	Current	492071	3771504	5.0		0.93		1.16	
C13	Current	492061	3771533	5.0		0.7		1.16	
C14	Current	492046	3771543	5.0		0.7		1.16	
C15	Current	492019	3771551	5.0		0.7		1.16	
C16	Current	492057	3771534	5.0		0.7		1.16	
C17	Current	492041	3771542	5.0		0.93		1.16	
C18	Current	492016	3771515	5.0		0.7		1.16	
C19	Current	492016	3771500	5.0		0.7		1.16	
C20	Current	492016	3771553	5.0		0.7		1.16	
C21	Current	492011	3771566	5.0		0.7		1.16	
C22	Current	492038	3771557	5.0		0.7		1.16	

VOLUME SOURCE PARAMETERS

Emission Point ID	Date Last Modeled	Location (UTM)		Release Height AGL (ft)	Physical Horizontal Dimension (ft)	Initial Horizontal Dimension σ_y (ft)	Physical Vertical Dimension (ft)	Initial Vertical Dimension σ_z (ft)	Distance To Property Line (ft)
		East (m)	North (m)						
C23	Current	492054	3771567	5.0		0.7		1.16	
C24	Current	492027	3771540	5.0		0.7		1.16	
C25	Current	492014	3771526	5.0		0.7		1.16	
C26	Current	492017	3771532	5.0		0.7		1.16	
C27	Current	492007	3771531	5.0		0.7		1.16	
C28	Current	492052	3771579	5.0		0.7		1.16	
C29	Current	492037	3771577	5.0		0.7		1.16	
C36	Current	491994	3771565	5.0		0.7		1.16	
C37	Current	492017	3771587	5.0		0.7		1.16	
C40	Current	492067	3771569	5.0		0.93		1.16	
Emission Unit ID 03: Stone Screening									
F1	Current	492128	3771557	5.0		1.16		1.4	See modeling files
GR1	Current	492199	3771587	5.0		2.33		23.26	
S1	Current	492100	3771510	5.0		2.94		3.49	
S2	Current	492026	3771550	5.0		2.94		3.49	

AERMOD/AERMAP SPECIFICATIONS TABLE

MET DATA	CAE-GSO 2015-2019 [Surface = Columbia, SC (224 ft MSL); Upper Air = Greensboro, NC]											
	ADJ_U*	<input checked="" type="checkbox"/>	N	(Y/N)								
NED TERRAIN FILES	Richland, SC											
PROJECTION DATUM	NAD27	<input type="checkbox"/>		NAD83	<input checked="" type="checkbox"/>	Y		WGS-84	<input type="checkbox"/>		NWS-84	<input type="checkbox"/>
RURAL or URBAN?	Rural	<input checked="" type="checkbox"/>	Y	Urban	<input type="checkbox"/>							
ELEVATIONS EXTRACTED	Buildings	<input type="checkbox"/>		Sources	<input checked="" type="checkbox"/>	Y		Tanks	<input type="checkbox"/>		Receptors	<input checked="" type="checkbox"/>

HISTORY

Date	By	Reason	Description
Current	AJF	C/P	The facility plans to construct a 1400 TPH granite processing plant. Equipment will include one (1) Grizzly Feeder, three (3) Crushers, three (3) Screens, one (1) Material Splitter, one (1) Feeder, forty (40) Conveyors, and three (3) Surge Bins. Facility-wide PM ₁₀ and PM _{2.5} AERMOD modeling has been completed, and the results have been included below. The facility is limited to an operation of 15 hours per day with an operation of 5am to 8pm daily. The facility modeled an operating scenario by using the hour of day (HROFDY) emission rate flag in the model to demonstrate compliance.

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