3M Environment,
Health, and Safety

3M Center 0224-05-W-03
St. Paul, MN 55144

May 9, 2022

Certified Mail

Mr. Mark Cuilla
Chief, Permitting Section
1641 Mail Service Center
Raleigh, NC 27699-1641

Re: Title V Renewal/Application 21C Addendum Submittal
3M Pittsboro – Industrial Mineral Products
Air Permit ID No. 1900104

Dear Mr. Cuilla:

3M Company (3M) owns and operates a plant located in Moncure, NC (3M Pittsboro Plant; Facility ID #1900104). The Pittsboro Plant currently operates under Title V operation permit number 09006T06, issued by the North Carolina Department of Environmental Quality (NCDEQ) on April 6, 2016.

Please find enclosed three copies of a combined addendum submittal for 3M Pittsboro's Title V renewal (Draft Permit T09) and most recent minor modification (Application No. 21C). A combined addendum has been submitted because Division of Air Quality (DAQ) has rolled its review of Application No. 21C into the Title V renewal. Per a phone call with Ms. Judy Lee on 4/27/2022, it was recommended by Ms. Lee to submit three copies of this addendum to the Central Office. The Central Office will then forward one copy to the Regional Office as the Central team has been working directly with 3M and has clarity for why an addendum is necessary.

3M and DAQ met via Teams meeting on 4/21/2022. As a result of the meeting, 3M was to provide additional permitting forms and supporting documentation to formally incorporate the new Enclosed East and West Pugmill System ("the pugmill") as an emissions source and remove all of the proposed "wet suppression" requirements for the pugmill from the draft Title V renewal. The pugmill meets applicable emission limits without emissions control, and "wet suppression" is not required as emissions control for the pugmill by either state or federal regulations. Updating potential to emit to include uncontrolled pugmill values does not cause a change in permitting status (e.g., from Title V to PSD) or otherwise impact regulatory applicability. Removing "wet suppression" requirements related to the pugmill inherently requires "water carryover from pugmill" to be removed from the control device descriptions for the Enclosed Waste Stacker Conveyor No. 25 (ID: F72) and Waste Stacker Conveyor No. 25A (ES25A) as these are affected downstream equipment. Therefore, 3M has provided all the necessary application forms to formalize these changes and has included them within Appendix A of this submittal. Additionally, as requested by Ms. Lee, 3M has provided an updated Form A, E4, and E5 signed by the responsible official to satisfy certification requirements of this *entire* submittal package. Emission calculations and a process flow diagram for the pugmill and conveyors can be referenced in Appendix B. Additional supporting narrative relating to 3M's

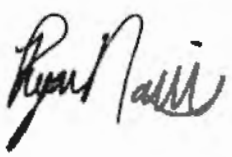
position to remove all proposed "wet suppression" requirements for the pugmill from the draft Title V renewal can be referenced in Appendix C. Per Ms. Lee's request, 3M will also provide 3M Pittsboro's pugmill manual via email due to its large document size.

3M has also provided an addendum to resolve issues directly related to Application No. 21C. Applicable forms have been updated and provided to address various inconsistencies noted in previous correspondence with DAQ. These forms have been separated from the forms related to the pugmill for clarity and organizational purposes considering that these are separate but parallel issues. These forms can be referenced in Appendix D. Please note, Forms A, E4, and E5 are located in Appendix A is intended to be inclusive for this entire package, hence, why these forms have not been included again within Appendix D. During this review it was discovered by 3M that the original application identified the incorrect crusher that is to be replaced with this 21C permit action. The original application referenced G Crusher No. 1 (ES2426.2) being replaced. The correct crusher that will be replaced is G Crusher No. 2 (ES2729.2). 3M has provided updated forms to clarify this discrepancy. C1 forms have also been provided and should clarify the discrepancies noted regarding CAM applicability. 3M has also provided additional documentation to support its CAM assessment within Appendix E. Calculations applicable to these application forms can be referenced in Appendix F. Elevator 12 is listed as an insignificant activity and not subject to NSPS OOO because it moves dust from baghouses in the coloring portion of plant; therefore, it is not considered an affected facility in a nonmetallic mineral processing plant and not subject to NSPS OOO.

In Appendix G, 3M has provided a narrative to support its onsite processes and systems related to DAHS.

3M thanks the DAQ again for its time to meet and discuss the Title V renewal, and we look forward to any future discussions as needed. Please contact me if you have any additional questions or need any additional information at rnavis@mmm.com or at 651-230-4776.

Sincerely,



Ryan Navis, P.E.
Advanced Environmental Engineer
(rnavis@mmm.com)

cc (electronically)
Judy Lee, Division of Air Quality Permitting Section (judy.lee@ncdenr.gov)
Blake Arnett, Plant Director (blarnett@mmm.com)

Title V Renewal/Application 21C Addendum

3M Pittsboro

Moncure, North Carolina

Facility ID: 1900104

May 2022

APPENDICES

Appendix A: Pugmill, Conveyor 25, & Conveyor 25A Application Forms

FORM A

GENERAL FACILITY INFORMATION

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | A

NOTE- APPLICATION WILL NOT BE PROCESSED WITHOUT THE FOLLOWING:

☐	Local Zoning Consistency Determination (new or modification only)	☑	Appropriate Number of Copies of Application	**Application Fee** (please check one option below)
☑	Responsible Official/Authorized Contact Signature	☐	P.E. Seal (if required)	☑ Not Required ☐ ePayment ☐ Check Enclosed

GENERAL INFORMATION

Legal Corporate/Owner Name:	3M Company
Site Name:	3M Company - Pittsboro
Site Address (911 Address) Line 1:	4191 Highway 87 South
Site Address Line 2:	
City: Moncure	State: North Carolina
Zip Code: 27559	County: Chatham

CONTACT INFORMATION

Responsible Official/Authorized Contact:		***Invoice Contact:***	
Name/Title: Blake Arnett, Plant Director		Name/Title: Blake Arnett, Plant Director	
Mailing Address Line 1: 4191 Highway 87 South		Mailing Address Line 1: 4191 Highway 87 South	
Mailing Address Line 2:		Mailing Address Line 2:	
City: Moncure State: NC Zip Code: 27559		City: Moncure State: NC Zip Code: 27559	
Primary Phone No.: (919) 642-4011	Fax No.: (919) 642-4017	Primary Phone No.: (919) 642-4011	Fax No.: (919) 642-4017
Secondary Phone No.:		Secondary Phone No.:	
Email Address: blarnett@mmm.com		Email Address: blarnett@mmm.com	
Facility/Inspection Contact:		***Permit/Technical Contact:***	
Name/Title: Blake Arnett, Plant Director		Name/Title: Ryan Navis, Advanced Environmental Engineer	
Mailing Address Line 1: 4191 Highway 87 South		Mailing Address Line 1: 3M Company , 3M Center	
Mailing Address Line 2:		Mailing Address Line 2: Building 224-05-W-03	
City: Moncure State: NC Zip Code: 27559		City: St. Paul State: MN Zip Code: 55144	
Primary Phone No.: (919) 642-4011	Fax No.: (919) 642-4017	Primary Phone No.: (651) 230-4776	Fax No.:
Secondary Phone No.:		Secondary Phone No.:	
Email Address: blarnett@mmm.com		Email Address: rnavis@mmm.com	

APPLICATION IS BEING MADE FOR

☐ New Non-permitted Facility/Greenfield ☐ Modification of Facility (permitted) ☐ Renewal Title V ☐ Renewal Non-Title V
☐ Name Change ☐ Ownership Change ☐ Administrative Amendment ☑ Renewal with Modification

FACILITY CLASSIFICATION AFTER APPLICATION (Check Only One)

☐ General ☐ Small ☐ Prohibitory Small ☐ Synthetic Minor ☑ Title V

FACILITY (Plant Site) INFORMATION

Describe nature of (plant site) operation(s):
Manufacture of roofing granules

	Facility ID No. 1900104
Primary SIC/NAICS Code: 3295	Current/Previous Air Permit No. 09006T06 Expiration Date: 3/31/2021
Facility Coordinates: Latitude: 35-40-00	Longitude: 79-10-00

Does this application contain confidential data? ☐ YES ☑ NO ***If yes, please contact the DAQ Regional Office prior to submitting this application.*** **(See Instructions)**

PERSON OR FIRM THAT PREPARED APPLICATION

Person Name: Ryan Navis		Firm Name: 3M Company	
Mailing Address Line 1: 3M Company, 3M Center		Mailing Address Line 2: Building 224-05-W-03	
City: St. Paul	State: MN	Zip Code: 55144	County: Ramsey
Phone No.: (651) 230-4776	Fax No.:	Email Address: rnavis@mmm.com	

SIGNATURE OF RESPONSIBLE OFFICIAL/AUTHORIZED CONTACT

Name (typed): Blake Arnett	Title: Plant Director
X Signature(Blue Ink):	Date: 5/10/22

Attach Additional Sheets As Necessary

FORM A (continued, page 2 of 2)

GENERAL FACILITY INFORMATION

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | A

SECTION AA1 - APPLICATION FOR NON-TITLE V PERMIT RENEWAL

_____ (Company Name) hereby formally requests renewal of Air Permit No. _____

There have been no modifications to the originally permitted facility or the operations therein that would require an air permit since the last permit was issued.

Is your facility subject to 40 CFR Part 68 "Prevention of Accidental Releases" - Section 112(r) of the Clean Air Act? ☐ YES ☐ NO

If yes, have you already submitted a Risk Manage Plan (RMP) to EPA? ☐ YES ☐ NO Date Submitted: _____

Did you attach a current emissions inventory? ☐ YES ☐ NO

If no, did you submit the inventory via AERO or by mail? ☐ Via AERO ☐ Mailed Date Mailed: _____

SECTION AA2- APPLICATION FOR TITLE V PERMIT RENEWAL

In accordance with the provisions of Title 15A 2Q .0513, the responsible official of 3M Pittsboro (Company Name) hereby formally requests renewal of Air Permit No. 09006T06 (Air Permit No.) and further certifies that:

(1) The current air quality permit identifies and describes all emissions units at the above subject facility, except where such units are exempted under the North Carolina Title V regulations at 15A NCAC 2Q .0500;

(2) The current air quality permit cits all applicable requirements and provides the method or methods for determing compliance with the applicable requirements;

(3) The facility is currently in compliance, and shall continue to comply, with all applicable requiremetns. (Note: As provided under 15A NCAC 2Q .0512 compliance with the conditions of the permit shall be deemed compliance with the applicable requirements specifically identified in the permit);

(4) For applicable requirements that become effective during the term of the renewed permit that the facility shall comply on a timely basis;

(5) The facility shall fulfill applicable enhanced monitoring requirements and submit a compliance certification as required by 40 CFR Part 64.

The responsible official (signature on page 1) certifies under the penalty of law that all information and statements provided above, based on information and belief formed after reasonable inquiry, are true, accurate, and complete.

SECTION AA3- APPLICATION FOR NAME CHANGE

New Facility Name: _____

Former Facility Name: _____

An official facility name change is requested as described above for the air permit mentioned on page 1 of this form. Complete the other sections if there have been modifications to the originally permitted facility that would requie an air quality permit since the last permit was issued and if ther has been an ownership change associated with this name change.

SECTION AA4- APPLICATION FOR AN OWNERSHIP CHANGE

By this application we hereby request transfer of Air Quality Permit No. _____ from the former owner to the new owner as described below. The transfer of permit responsibility, coverage and liability shall be effective _____ (Immediately or insert date.) The legal ownership of the facility described on page 1 of this form has been or will be transferred on _____ (date). There have been no modifications to the originally permitted facility that would require an air quality permit since the last permit was issued.

Signature of New (Buyer) Responsible Official/Authorized Contact (as typed on page 1):

X Signature (Blue Ink): _____

Date:

New Facility Name:

Former Facility Name:

Signature of Former (Seller) Responsible Official/Authorized Contact:

Name (typed or print):

Title:

X Signature (Blue Ink): _____

Date:

Former Legal Corporate/Owner Name:

In lieu of the seller's signature on this form, a letter may be submitted with the seller's signature indicating the ownership change

SECTION AA5- APPLICATION FOR ADMINISTRATIVE AMENDMENT

Describe the requested administrative amendment here (attach additional documents as necessary):

Attach Additional Sheets As Necessary

FORMs A2, A3

EMISSION SOURCE LISTING FOR THIS APPLICATION - A2

112r APPLICABILITY INFORMATION - A3

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — **A2**

EMISSION SOURCE LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted			
EMISSION SOURCE ID NO.	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE ID NO.	CONTROL DEVICE DESCRIPTION
Equipment To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)			
F6772	Enclosed East and West Pugmill System	N/A	N/A
Existing Permitted Equipment To Be MODIFIED By This Application			
F72	Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	N/A	N/A
ES25A	Waste Stacker Conveyor No. 25A (to waste pile (ID No. FWP))	N/A	N/A
Equipment To Be DELETED By This Application			
F6771	Enclosed pugmill with wet suppression (dust and waste processing)	N/A	N/A

112(r) APPLICABILITY INFORMATION — A 3

Is your facility subject to 40 CFR Part 68 "Prevention of Accidental Releases" - Section 112(r) of the Federal Clean Air Act? ☐ Yes ☑ No

If No, please specify in detail how your facility avoided applicability: Facility is subject to RMP regulations under the general provisions, but no requirements are triggered as the facility's inventory is not higher than the threshold quantity.

If your facility is Subject to 112(r), please complete the following:

A. Have you already submitted a Risk Management Plan (RMP) to EPA Pursuant to 40 CFR Part 68.10 or Part 68.150?

☐ Yes ☐ No Specify required RMP submittal date: _____ If submitted, RMP submittal date: _____

B. Are you using administrative controls to subject your facility to a lesser 112(r) program standard?

☐ Yes ☐ No If yes, please specify: _____

C. List the processes subject to 112(r) at your facility:

PROCESS DESCRIPTION	PROCESS LEVEL (1, 2, or 3)	HAZARDOUS CHEMICAL	MAXIMUM INTENDED INVENTORY (LBS)

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: Enclosed East and West Pugmill System	EMISSION SOURCE ID NO: F6772
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):

The Enclosed East and West Pugmill System contains two pugmills operating in parallel to one another. The two pugmills within this system cannot operate at the same time. The pugmill system is a totally enclosed system where waste fines, dust fines, and water meet and are mixed to form a waste slurry stream. Water is not added to control emissions, but is added to be mixed to create the waste slurry with the larger waste fines. This then allows the smaller dust fines to adsorb all in an effort to create a final waste stream that can be handled in a safer and practical manner. Water is considered to be an inherent part of the process. Without water, the pugmill cannnot operate as designed and would more than likely malfunction. Additionally, this pugmill system is located inside a building. PM and PM10 emission factors used to quantify emissions are equal to twice the factor for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04). These emissions estimates are considered to be abundantly conservative considering the unit is an enclosed piece of equipment and located inside a building.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: January 2020 — DATE MANUFACTURED:

MANUFACTURER / MODEL NO.: N/A — EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR

IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): QQQ ☐ NESHAP (SUBPARTS?):

PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25 MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42 11.19.2	1.5	6.57	1.5	6.57	1.5	6.57
PARTICULATE MATTER<10 MICRONS (PM_{10})		0.55	2.41	0.55	2.41	0.55	2.41
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)		0.55	2.41	0.55	2.41	0.55	2.41
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
N/A								

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr
N/A					

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B**

EMISSION SOURCE DESCRIPTION: Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	EMISSION SOURCE ID NO: F72
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
Enclosed Waste Stacker Conveyor No. 25 is fed a wetted slurry waste material from the East and West Pugmill System. This conveyor then feeds to Waste Stacker Conveyor No. 25A. The PM and PM10 emission factors used are for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04). These emissions estimates are considered to be abundantly conservative considering that these factors represent an uncontrolled conveyance of a dry mineral material. 3M has taken no credit for the fact that the waste material conveyed contains water and inherently significantly reduces particulate emissions.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

☐ Coal,wood,oil, gas, other burner (Form B1)	☐ Woodworking (Form B4)	☐ Manuf. of chemicals/coatings/inks (Form B7)
☐ Int.combustion engine/generator (Form B2)	☐ Coating/finishing/printing (Form B5)	☐ Incineration (Form B8)
☐ Liquid storage tanks (Form B3)	☐ Storage silos/bins (Form B6)	☑ Other (Form B9)

START CONSTRUCTION DATE:	DATE MANUFACTURED:
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42 11.19.2	0.675	2.96	0.675	2.96	0.675	2.96
PARTICULATE MATTER<10 MICRONS (PM_{10})		0.248	1.08	0.248	1.08	0.248	1.08
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)		0.248	1.08	0.248	1.08	0.248	1.08
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
N/A								

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr
N/A					

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B**

EMISSION SOURCE DESCRIPTION: Waste Stacker Conveyor No. 25A (to waste pile (ID No. FWP))	EMISSION SOURCE ID NO: ES25A CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
Waste Stacker Conveyor No. 25A is fed a wetted slurry waste material from Enclosed Waste Stacker Conveyor No. 25. This conveyor then unloads to the outside waste pile (ID No. FWP). The PM and PM10 emission factors used are for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04). These emissions estimates are considered to be abundantly conservative considering that these factors represent an uncontrolled conveyance of a dry mineral material. 3M has taken no credit for the fact that the waste material conveyed contains water and inherently significantly reduces particulate emissions.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

☐ Coal,wood,oil, gas, other burner (Form B1)	☐ Woodworking (Form B4)	☐ Manuf. of chemicals/coatings/inks (Form B7)
☐ Int.combustion engine/generator (Form B2)	☐ Coating/finishing/printing (Form B5)	☐ Incineration (Form B8)
☐ Liquid storage tanks (Form B3)	☐ Storage silos/bins (Form B6)	☑ Other (Form B9)

START CONSTRUCTION DATE:	DATE MANUFACTURED:
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS)		POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)	
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
PARTICULATE MATTER (PM)	AP-42 11.19.2	0.675	2.96	0.675	2.96	0.675	2.96
PARTICULATE MATTER<10 MICRONS (PM_{10})		0.248	1.08	0.248	1.08	0.248	1.08
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)		0.248	1.08	0.248	1.08	0.248	1.08
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS)		POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)	
			lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
N/A								

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS		
			lb/hr	lb/day	lb/yr
N/A					

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: Enclosed East and West Pugmill System	EMISSION SOURCE ID NO: F6772
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

The Enclosed East and West Pugmill System contains two pugmills operating in parallel to one another. The two pugmills within this system cannot operate at the same time. The pugmill system is a totally enclosed system where waste fines, dust fines, and water meet and are mixed to form a wetted slurry waste stream. Water is not added to control emissions, but is added to be mixed to create the waste slurry with the larger waste fines. This then allows the smaller dust fines to adsorb all in an effort to create a final waste stream that can be handled in a safer and practical manner. Water is considered to be an inherent part of the process. Without water, the pugmill cannnot operate as designed and would more than likely malfunction. Additionally, this pugmill system is located inside a building. PM and PM10 emission factors used to quantify emissions are equal to twice the factor for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04). These emissions estimates are considered to be abundantly conservative considering the unit is an enclosed piece of equipment and located inside a building.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Slurry waste stream (Waste fines, dust fines, and water mixture)	Tons	250	250

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)
N/A			

MAXIMUM DESIGN (BATCHES / HOUR): N/A	
REQUESTED LIMITATION (BATCHES / HOUR): N/A	(BATCHES/YR): N/A
FUEL USED: N/A	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR): N/A
MAX. CAPACITY HOURLY FUEL USE: N/A	REQUESTED CAPACITY ANNUAL FUEL USE: N/A

COMMENTS:

The maximum rated capacity for the pugmill system is 250 tons per hour. However, because of process bottlenecks, the facility cannot operate at this capacity in practice. The facility proposes to permit the worst case emissions from operating at the designed maximum capacity (250 tons per hour) without restrictions/limitations on its throughput capacity.

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	EMISSION SOURCE ID NO: F72
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):
Enclosed Waste Stacker Conveyor No. 25 is fed a wetted slurry waste material from the East and West Pugmill System. This conveyor then feeds to Waste Stacker Conveyor No. 25A. The PM and PM10 emission factors used are for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04). These emissions estimates are considered to be abundantly conservative considering that these factors represent an uncontrolled conveyance of a dry mineral material. 3M has taken no credit for the fact that the waste material conveyed contains water and inherently significantly reduces particulate emissions.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Slurry waste stream (Waste fines, dust fines, and water mixture)	Tons	225	225

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)
N/A			

MAXIMUM DESIGN (BATCHES / HOUR): N/A	
REQUESTED LIMITATION (BATCHES / HOUR): N/A	(BATCHES/YR): N/A
FUEL USED: N/A	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR): N/A
MAX. CAPACITY HOURLY FUEL USE: N/A	REQUESTED CAPACITY ANNUAL FUEL USE: N/A

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: Waste Stacker Conveyor No. 25A (to waste pile (ID No. FWP))	EMISSION SOURCE ID NO: ES25A
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):
Waste Stacker Conveyor No. 25A is fed a wetted slurry waste material from Enclosed Waste Stacker Conveyor No. 25. This conveyor then unloads to the outside waste pile (ID No. FWP). The PM and PM10 emission factors used are for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04). These emissions estimates are considered to be abundantly conservative considering that these factors represent an uncontrolled conveyance of a dry mineral material. 3M has taken no credit for the fact that the waste material conveyed contains water and inherently significantly reduces particulate emissions.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Slurry waste stream (Waste fines, dust fines, and water mixture)	Tons	225	225

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)
N/A			

MAXIMUM DESIGN (BATCHES / HOUR): N/A	
REQUESTED LIMITATION (BATCHES / HOUR): N/A	(BATCHES/YR): N/A
FUEL USED: N/A	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR): N/A
MAX. CAPACITY HOURLY FUEL USE: N/A	REQUESTED CAPACITY ANNUAL FUEL USE: N/A

COMMENTS:

Attach Additional Sheets as Necessary

FORM D1

FACILITY-WIDE EMISSIONS SUMMARY

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | D1

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

AIR POLLUTANT EMITTED	EXPECTED ACTUAL EMISSIONS (AFTER CONTROLS / LIMITATIONS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITATIONS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITATIONS) tons/yr
PARTICULATE MATTER (PM)		147,201	218.7
PARTICULATE MATTER < 10 MICRONS (PM_{10})		128,300	143.9
PARTICULATE MATTER < 2.5 MICRONS ($PM_{2.5}$)		128,300	143.9
SULFUR DIOXIDE (SO_2)			
NITROGEN OXIDES (NOx)			
CARBON MONOXIDE (CO)			
VOLATILE ORGANIC COMPOUNDS (VOC)			
LEAD			
GREENHOUSE GASES (GHG) (SHORT TONS)			
OTHER			

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

HAZARDOUS AIR POLLUTANT EMITTED	CAS NO.	EXPECTED ACTUAL EMISSIONS (AFTER CONTROLS / LIMITATIONS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITATIONS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITATIONS) tons/yr
No change of emissions with this permit action.				

TOXIC AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

INDICATE REQUESTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS. EMISSIONS ABOVE THE TOXIC PERMIT EMISSION RATE (TPER) IN 15A NCAC 2Q .0711 MAY REQUIRE AIR DISPERSION MODELING. USE NETTING FORM D2 IF NECESSARY.

TOXIC AIR POLLUTANT EMITTED	CAS NO.	lb/hr	lb/day	lb/year	Modeling Required ? Yes	No
No change of emissions with this permit action. Modification is only adding a pickups to existing permitted equipment						

COMMENTS:

Attach Additional Sheets As Necessary

FORM E1

TITLE V GENERAL INFORMATION

IF YOUR FACILITY IS CLASSIFIED AS "MAJOR" FOR TITLE V YOU MUST COMPLETE THIS FORM AND ALL OTHER REQUIRED "E" FORMS (E2 THROUGH E5 AS APPLICABLE)

Indicate here if your facility is subject to Title V by: ☑ EMISSIONS ☐ OTHER

If subject to Title V by "OTHER", specify why: ☐ NSPS ☐ NESHAP (MACT) ☐ TITLE IV ☐ OTHER (specify) _____

If you are or will be subject to any maximum achievable control technology standards (MACT) issued pursuant to section 112(d) of the Clean Air Act, specify below:

EMISSION SOURCE ID	*EMISSION SOURCE DESCRIPTION*	*MACT*

List any additional regulation which are requested to be included in the shield and provide a detailed explanation as to why the shield should be granted:

REGULATION	*EMISSION SOURCE (Include ID)*	*EXPLANATION*

Comments:

Attach Additional Sheets As Necessary

FORM E2

EMISSION SOURCE APPLICABLE REGULATION LISTING

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | E2

EMISSION SOURCE ID NO.	EMISSION SOURCE DESCRIPTION	OPERATING SCENARIO INDICATE PRIMARY (P) OR ALTERNATIVE (A)	POLLUTANT	APPLICABLE REGULATION
ES 1	*Coal/Wood Boiler*	*P - Coal*	*PM*	*NCAC 2D .0503*
		A - Wood	*PM*	*NCAC 2D .0504*
F6772	Enclosed East and West Pugmill System	P	PM	15A NCAC 02D .0510
F6772	Enclosed East and West Pugmill System	P	PM	15A NCAC 02D .0524 40 CFR 60, Subp. OOO
F6772	Enclosed East and West Pugmill System	P	Visible Emissions	15A NCAC 02D .0524 40 CFR 60, Subp. OOO
F72	Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	P	PM	15A NCAC 02D .0510
F72	Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	P	PM	15A NCAC 02D .0524 40 CFR 60, Subp. OOO
F72	Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	P	Visible Emissions	15A NCAC 02D .0524 40 CFR 60, Subp. OOO
ES25A	Waste Stacker Conveyor No. 25A (to waste pile (ID No. FWP))	P	PM	15A NCAC 02D .0510
ES25A	Waste Stacker Conveyor No. 25A (to waste pile (ID No. FWP))	P	PM	15A NCAC 02D .0524 40 CFR 60, Subp. OOO
ES25A	Waste Stacker Conveyor No. 25A (to waste pile (ID No. FWP))	P	Visible Emissions	15A NCAC 02D .0524 40 CFR 60, Subp. OOO

Attach Additional Sheets As Necessary

FORM E3

EMISSION SOURCE COMPLIANCE METHOD

REVISED 09/22/16 | **NCDEQ/Division Of Air Quality - Application for Air Permit to Construct/Operate** | **E3**

Emission Source ID NO. F6772	Regulated Pollutant: PM (PM10 and TSP) Applicable Regulation: 15A NCAC 02D .0510 & 15A NCAC 02D. 0524 (40 CFR 60, Subp. OOO)
Alternative Operating Scenario (AOS) NO: N/A	

ATTACH A SEPARATE PAGE TO EXPAND ON ANY OF THE BELOW COMMENTS

MONITORING REQUIREMENTS

Is Compliance Assurance Monitoring (CAM) 40 CFR Part 64 Applicable? ☐ YES ☑ NO

If yes, is CAM Plan Attached (if applicable, CAM plan must be attached)? ☐ YES ☑ NO

Describe Monitoring Device Type: NA

Describe Monitoring Location: NA

Other Monitoring Methods (Describe In Detail): NA

Describe the frequency and duration of monitoring and how the data will be recorded (i.e., every 15 minutes, 1 minute instantaneous readings taken to produce an hourly average):

Initial performance testing was completed in accordance with 40 CFR 60 Subpart OOO on December 1, 2021. Quarterly Method 22 visible observations will be required pursuant to NSPS OOO. Results of the observations will be recorded on a log sheet.

RECORDKEEPING REQUIREMENTS

Data (Parameter) being recording: Visible Emissions

Frequency of recordkeeping (How often is data recorded?): Quarterly Method 22 inspections.

REPORTING REQUIREMENTS

Generally describe what is being reported: Deviation from permit requirements in accordance to permit requirements

Frequency: ☐ MONTHLY ☐ QUARTERLY ☑ EVERY 6 MONTHS ☐ OTHER (DESCRIBE):

TESTING

Specify proposed reference test method: Method 9. Initial Performance testing was completed on 12/1/2021.

Specify reference test method rule and citation: NSPS OOO - 40 CFR 60.675(a)

Specify testing frequency: Initial Performance Testing, then once every 5 years.

NOTE - Proposed test method subject to approval and possible change during the test protocol process

Attach Additional Sheets As Necessary

FORM E3

EMISSION SOURCE COMPLIANCE METHOD

REVISED 09/22/16 | **NCDEQ/Division Of Air Quality - Application for Air Permit to Construct/Operate** | **E3**

Emission Source ID NO. F72	Regulated Pollutant: PM (PM10 and TSP) Applicable Regulation: 15A NCAC 02D .0510 & 15A NCAC 02D. 0524 (40 CFR 60, Subp. OOO)
Alternative Operating Scenario (AOS) NO: N/A	

ATTACH A SEPARATE PAGE TO EXPAND ON ANY OF THE BELOW COMMENTS

MONITORING REQUIREMENTS

Is Compliance Assurance Monitoring (CAM) 40 CFR Part 64 Applicable? ☐ YES ☑ NO

If yes, is CAM Plan Attached (if applicable, CAM plan must be attached)? ☐ YES ☑ NO

Describe Monitoring Device Type: NA

Describe Monitoring Location: NA

Other Monitoring Methods (Describe In Detail): NA

Describe the frequency and duration of monitoring and how the data will be recorded (i.e., every 15 minutes, 1 minute instantaneous readings taken to produce an hourly average):

Initial performance testing was completed in accordance with 40 CFR 60 Subpart OOO on December 1, 2021. Quarterly Method 22 visible observations will be required pursuant to NSPS OOO. Results of the observations will be recorded on a log sheet.

RECORDKEEPING REQUIREMENTS

Data (Parameter) being recording: Visible Emissions

Frequency of recordkeeping (How often is data recorded?): Quarterly Method 22 inspections.

REPORTING REQUIREMENTS

Generally describe what is being reported: Deviation from permit requirements in accordance to permit requirements

Frequency: ☐ MONTHLY ☐ QUARTERLY ☑ EVERY 6 MONTHS ☐ OTHER (DESCRIBE):

TESTING

Specify proposed reference test method: Method 9. Initial Performance testing was completed on 12/1/2021.

Specify reference test method rule and citation: NSPS OOO - 40 CFR 60.675(a)

Specify testing frequency: Initial Performance Testing, then once every 5 years.

NOTE - Proposed test method subject to approval and possible change during the test protocol process

Attach Additional Sheets As Necessary

FORM E3

EMISSION SOURCE COMPLIANCE METHOD

REVISED 09/22/16 | **NCDEQ/Division Of Air Quality - Application for Air Permit to Construct/Operate** | **E3**

Emission Source ID NO. ES25A	Regulated Pollutant: PM (PM10 and TSP) Applicable Regulation: 15A NCAC 02D .0510 & 15A NCAC 02D. 0524 (40 CFR 60, Subp. OOO)
Alternative Operating Scenario (AOS) NO: N/A	

ATTACH A SEPARATE PAGE TO EXPAND ON ANY OF THE BELOW COMMENTS

MONITORING REQUIREMENTS

Is Compliance Assurance Monitoring (CAM) 40 CFR Part 64 Applicable? ☐ YES ☑ NO

If yes, is CAM Plan Attached (if applicable, CAM plan must be attached)? ☐ YES ☑ NO

Describe Monitoring Device Type: NA

Describe Monitoring Location: NA

Other Monitoring Methods (Describe In Detail): NA

Describe the frequency and duration of monitoring and how the data will be recorded (i.e., every 15 minutes, 1 minute instantaneous readings taken to produce an hourly average):

Initial performance testing was completed in accordance with 40 CFR 60 Subpart OOO on December 1, 2021. Quarterly Method 22 visible observations will be required pursuant to NSPS OOO. Results of the observations will be recorded on a log sheet.

RECORDKEEPING REQUIREMENTS

Data (Parameter) being recording: Visible Emissions

Frequency of recordkeeping (How often is data recorded?): Quarterly Method 22 inspections.

REPORTING REQUIREMENTS

Generally describe what is being reported: Deviation from permit requirements in accordance to permit requirements

Frequency: ☐ MONTHLY ☐ QUARTERLY ☑ EVERY 6 MONTHS ☐ OTHER (DESCRIBE):

TESTING

Specify proposed reference test method: Method 9. Initial Performance testing was completed on 12/1/2021.

Specify reference test method rule and citation: NSPS OOO - 40 CFR 60.675(a)

Specify testing frequency: Initial Performance Testing, then once every 5 years.

NOTE - Proposed test method subject to approval and possible change during the test protocol process

Attach Additional Sheets As Necessary

FORM E4

EMISSION SOURCE COMPLIANCE SCHEDULE

COMPLIANCE STATUS WITH RESPECT TO ALL APPLICABLE REQUIREMENTS

Will each emission source at your facility be in compliance with all applicable requirements at the time of permit issuance and continue to comply with these requirements?

☑ YES ☐ NO **If NO**, complete **A** through **F** below for each requirement for which compliance is not achieved.

Will your facility be in compliance with all applicable requirements taking effect during the term of the permit and meet such requirements on a timely basis?

☑ YES ☐ NO **If NO**, complete **A** through **F** below for each requirement for which compliance is not achieved.

If this application is for a modification of existing emissions source(s), is each emission source currently in compliance with all applicable requirements?

☐ YES ☑ NO **If NO**, complete **A** through **F** below for each requirement for which compliance is not achieved.

A. Emission Source Description (Include ID NO.)

F6772, CDB1, CDB2, CDB4, CDB5, CDB7, CDB8, CDB9, CDB10, CDB11, CDB12, CDB13, CDB14, CDB15

B. Identify applicable requirement for which compliance is not achieved:

Per Notice of Violation issued on December 11, 2020, the operation of the Enclosed East and West Pugmill System (F6772) without prior inclusion into the permit is in violation of North Carolina General Statute 143-215.108.

Per Notice of Violation issued on August 12, 2021, 3M Pittsboro is in violation of Section 3, General Condition G, Permit Modifications for not submitting the minor modification permit application prior to the transition from Seneca to BHA Parker bagfilters for its control devices. Changes to CDB3 and CDB6 have already been resolved via Permit 09006T07 issuance.

C. Narrative description of how compliance will be achieved with this applicable requirements:

The forms submitted within this addendum to the Title V renewal application and Application 21C will formally document the inclusion of the Enclosed East and West Pugmill System (F6772). The 21C Application originally requested to change the affected baghouse surface area descriptions. The Title V draft renewal sent on April 1, 2022 incorporated updates to the baghouse descriptions. Compliance will be achieved by integrating Application 21C into the Title V renewal (like DAQ has already done) and issuing the Title V Renewal.

D. Detailed Schedule of Compliance:

Step(s)	Date Expected
Submit necessary permitting documentation	10-May-22
DAQ drafts Title V renewal permit.	Dependent upon DAQ
3M reviews Title V draft permit.	2-4 weeks after receiving draft
DAQ reviews comments, makes necessary changes, and issues Title V renewal.	Dependent upon DAQ

E. Frequency for submittal of progress reports (6 month minimum):

Not necessary

F. Starting date of submittal of progress reports: Not necessary

Attach Additional Sheets As Necessary

FORM E5

TITLE V COMPLIANCE CERTIFICATION (Required)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | E5

In accordance with the provisions of Title 15A NCAC 2Q .0520 and .0515(b)(4) the responsible company official of:

SITE NAME: 3M Company - Pittsboro

SITE ADDRESS: 4191 Highway 87

CITY, NC : Moncure, NC

COUNTY: Chatham

PERMIT NUMBER : 09006T06

CERTIFIES THAT (Check the appropriate statement(s):

☐ The facility is in compliance with all applicable requirements

☑ In accordance with the provisions of Title 15A NCAC 2Q .0515(b)(4) the responsible company official certifies that the proposed minor modification meets the criteria for using the procedures set out in 2Q .0515 and requests that these procedures be used to process the permit application.

☑ The facility is not currently in compliance with all applicable requirements
If this box is checked, you must also complete Form E4 "Emission Source Compliance Schedule"

The undersigned certifies under the penalty of law, that all information and statements provided in the application, based on information and belief formed after reasonable inquiry, are true, accurate, and complete.

Signature of responsible company official (REQUIRED, USE BLUE INK) Date: 5/10/22

Blake Arnett, Plant Director

Name, Title of responsible company official (Type or print)

Attach Additional Sheets As Necessary

Received
MAY 12 2022
Air Permits Section

FORM E6

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN (4 pages)

For CAM-affected emission units, the applicant must submit additional information in the form of a CAM Plan as required under 40 CFR 64.

For information about the CAM rule and this form, please refer to 40 CFR 64 and 15A NCAC 2D .0614.
Additional information (including guidance documents may be found at the following URLs:
https://www3.epa.gov/ttn/emc/cam.html
https://deq.nc.gov/about/divisions/air-quality/air-quality-enforcement/compliance-assurance-monitoring

SOURCE INFORMATION

1.	**Facility Name:**	3M Pittsboro
2.	**Permit Number:**	09006T06
3.	**Date Form Prepared:**	May-22

BASIS OF CAM SUBMITTAL

4. Mark the appropriate box below as to why this CAM Plan is being submitted as part of this application:

☑ **Renewal Application:** ALL Emission Units (Pollutant Specific Emission Units [PSEUs] considered separately with respect to EACH regulated air pollutant) for which a CAM Plan has NOT yet been approved needs to be addressed in this CAM Plan submittal.
See Renewal Procedures per 15 A NCAC 2Q .0513.

☐ **Initial Application (Submitted after 4/20/1998):** Only large PSEUs (PSEUs with potential post control device emissions of an applicable regulated air pollutant that are equal to or greater than major source threshold levels) need to be addressed in this CAM Plan submittal.
See Initial Application Procedures per 15A NCAC 2Q .0505(1).

☐ **Significant Modification to Large PSEUs:** Only large PSEUs (PSEUs with potential post control device emissions of an applicable regulated air pollutant that are equal to or greater than major source threshold levels) being modified after 4/20/1998 need to be addressed in this CAM Plan submittal. For large PSEUs with an approved CAM Plan, only address the appropriate monitoring requirements affected by the significant modification.
See Significant Modification Procedures per 15 A NCAC 2Q .0516.

CAM APPLICABILITY DETERMINATION

5. To determine CAM applicability, a PSEU must meet ALL of the following criteria (if not, then the remainder of this form need not be completed):

A. The PSEU is located at a major source;
B. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;
List of EXEMPT Emission Limitations or Standards below OR as provided in 15A NCAC 2Q .0614(b)(1):
- NSPS (40 CFR Part 60) or NESHAP (40 CFR Part 61 and 63) proposed after 11/15/1990.
- Stratospheric ozone protection requirements.
- Acid Rain program requirements.
- Emission limitations or standards for which a Title V permit specifies a continuous compliance determination method, as defined in the CAM rule (40 CFR 64.1), Continuous Compliance Determination Method.
- An emission cap that meets the requirements specified in 40 CFR 70.4(b)(12).

*If the PSEU is subject to both **Exempt** and **Not Exempt** emission standards for the same pollutant, then the facility is required to determine the CAM applicability for **Not Exempt** emission standards.*

C. The PSEU uses an add-on control device to achieve compliance with an emission limitation or standard;
D. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than major source threshold levels; **and**
E. The PSEU is NOT an exempt backup utility power emission unit that is municpally owned and appropriately documentd as provided in 15A NCAC 2D .0614(b)(2).

BACKGROUND DATA AND INFORMATION **E6-2**

6. **Complete the following table for ALL PSEUs that need to be addressed in this CAM Plan submittal. This section is to be used to provide background data and information for each PSEU in order to supplement the submittal requirements specified in 40 CFR 64.4. If additional space is needed, please attach and label additional sheets as appropriate.**

PSEU Designation	PSEU Description	Pollutant	Control Device	[a]Emission Limitation OR Standard	[b]Monitoring Requirement
NOT APPLICABLE – CAM PLANS EXIST FOR ALL REQUIRED EQUIPMENT. THERE IS NO EQUIPMENT FOR WHICH CAM APPLIES THAT DO NOT ALREADY HAVE ESTABLISHED CAM PLANS. 3M has addressed a further assessment within APPENDIX E of this submittal.					

[a] Indicate the emission limitation or standard for any applicable requirement that constitutes an emisson limitation, emission standard, or standard of performance. Examples of emission limitations or standards may include a permitted emission limitation, applicable regulations, work practices, process or control device parameters, or other forms of specific design, equipment, operational or maintenance requirements.

[b] Indicate the monitoring requirements for the control device that are required by an applicable regulation or permit condition.

Attach Additional Sheets As Necessary

[a] CAM MONITORING APPROACH CRITERIA				E6-3
7	**Complete this section for EACH PSEU and for each affected pollutant that needs to be addressed in this CAM Plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR 64.3 and 64.4. If more than two indicators are being selected for a PSEU or if additional space is need, attach and label with the apprtopriate PSEU designation, pollutant, and indicator Nos.**			
PSEU DESIGNATION		POLLUTANT	[b] INDICATOR NO. 1	[b] INDICATOR NO. 2
7a.	General Criteria Describe the monitoring approach used to measure the indicators.	NOT APPLICABLE because all CAM applicable PSEUs are incorporated in previous permit submittals.		
	[c] Establish the appropriate indicator range or the procedures for establishing the indicator range which provides a reasonable assurance of compliance			
	[d] Provide Quality Improvement Plan (QIP) Threshold levels.			
7b.	Performance criteria Provide the Specification for Obtaining Representative Data (*Such as detector location and installation specifications*).			
	Provide Quality Assurance and Quality Control (QA/QC) Practices that are adequate to ensure the continuing validity of the data, considering manufacturerer's recommendations			
	[e] Provide the Monitoring Frequency Provide the Data Collection Procedures that will be used			
	Provide the Data Averaging Period for the purpose of determining whether an excursion or exceedance has occurred.			

[a] If a Continuous Emission Monitoring System (CEMS), Continuous Opacity Monitoring System (COMS), or Predictive Emission Monitoring System (PEMS) is used, then this section need not be completed **ONLY** for the CEMS, COMS, or PEMS, **EXCEPT** that the Special Criteria Information of 40 CFR 64.3(d) must be provided. Special Criteria Information may be provided on a separate sheet.

[b] Describe all indicators to be monitored which satisfy 40 CFR 64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[c] Indicator ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. In addition, unless specifically stated otherwise by an applicable requirement, the owner or operator shall monitor the indicators to detect any **bypass** of the control deivce (or capture system) to the atmosphere.

[d] The QIP threshold is based on the number of excursions identified in a reporting period. (Example: if the historical monitoring data for a facility indicates that the indicator range was exceeded 10 times in a 6-month period, the threshold could be established at no more than 10 excursions outside the indicator range during a 6-month reporting period.) The threshold levels also could be established based on the duration of excursions as a percentage of operating time.

[e] At a minimum, the owner of a large PSEU must collect four or more data values equally spaced over each hour and average the values. All other PSEUs must collect data **at least once** per 24-hour period *or possibly* ***more*** to provide reasonable assurance of compliance over the anticipated range of operating conditions.

RATIONALE AND JUSTIFICATION **E6-4**

8. **Complete this section for EACH PSEU and for each affected pollutant that needs to be addressed in this CAM Plan submittal. This section *may be copied as needed*. Use this section to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR 64.3 and 64.4. If more than two indicators are being selected for a PSEU or if additional speace is needed, attach additional sheets and label with the appropriate PSEU designation, pollutant, and indicator Nos.**

PSEU DESIGNATION	POLLUTANT
NOT APPLICABLE	NOT APPLICABLE

9. INDICATORS AND THE MONITORING APPROACH: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data suporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed and the manufacturer's recommendations. (If addiional space is needed, attach and label with the appropirate PSEU designation and pollutant).

NOT APPLICABLE

10. **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a Compliance or Performance Test, a Test Plan and Schedule, or by Engineering Assessments. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label with the appropriate PSEU designation and pollutant):

- COMPLIANCE or PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall **include** a summary of the compliance or performance test results that were used to determine the indicator range and documentation indicating that no changes have taken place that could result in a significant change in the control system perfommace or the selected indicator ranges since the compliance or performante test was conducted and approved by DAQ.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall **include** the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practical after approval of this CAM Plan, but in no case shall the schedule for completing installation and beginning operation of the minitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturer's design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall **include** documentaion demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

NOT APPLICABLE

Appendix B: Pugmill, Conveyor 25, & Conveyor 25A Emission Calculations and Process Flow Diagram

Potential Emission Calculations
3M Pittsboro

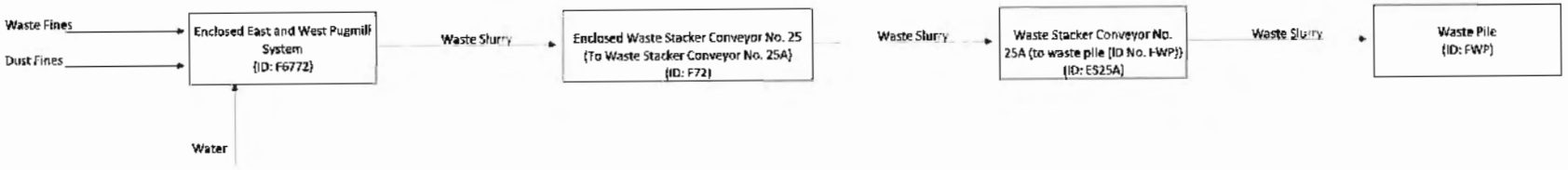
EU No.	EU or GP Description	CE No.	Pollutant Name	CAS No. (no dashes)	Max Rate units/hr	Max Rate units	Em Factor lb/units	Em Factor units	Ref. No.	Uncontr Potl to Emit (PTE) (lb/hr)	Uncontr Potl to Emit (PTE) (tpy)	Poll Contr Eff (%)	Contr Potl to Emit (PTE) (tpy)
F6772	Enclosed East and West Pugmill System	N/A	PM	N/A	250	tons	0.006	ton	1	1.50	6.57		6.57
F6772	Enclosed East and West Pugmill System	N/A	PM10	N/A	250	tons	0.0022	ton	1	0.55	2.41		2.41
F6772	Enclosed East and West Pugmill System	N/A	PM2.5	N/A	250	tons	0.0022	ton	1	0.55	2.41		2.41
F72	Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	N/A	PM	N/A	225	tons	0.003	ton	2	0.675	2.96		2.96
F72	Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	N/A	PM10	N/A	225	tons	0.0011	ton	2	0.248	1.08		1.08
F72	Enclosed Waste Stacker Conveyor No. 25 (To Waste Stacker Conveyor No. 25A)	N/A	PM2.5	N/A	225	tons	0.0011	ton	2	0.248	1.08		1.08
ES25A	Waste Stacker Conveyor No.25A (to waste pile (ID No. FWP))	N/A	PM	N/A	225	tons	0.003	ton	2	0.675	2.96		2.96
ES25A	Waste Stacker Conveyor No.25A (to waste pile (ID No. FWP))	N/A	PM10	N/A	225	tons	0.0011	ton	2	0.248	1.08		1.08
ES25A	Waste Stacker Conveyor No.25A (to waste pile (ID No. FWP))	N/A	PM2.5	N/A	225	tons	0.0011	ton	2	0.248	1.08		1.08

Emission References

3M Pittsboro

1	PM and PM10 emission factors are equal to twice the factor for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04).
2	PM and PM10 emission factors for "Conveyor Transfer Point" from AP-42, Chapter 11.19.2, Table 11.19.2-2 (08/04).

Process Flow Diagram
3M Pittsboro



Appendix C: Pugmill Narrative

3M Environment,
Health, and Safety

3M Center 0224-05-W-03
St. Paul, MN 55144

Appendix C: Pugmill Narrative (Request to remove "wet suppression" requirements and language from Draft Title V Operating Permit 09006-T09)

This document provides details on 3M's request to remove all references to and requirements associated with wet suppression as required particulate control for the Enclosed East and West Pugmill (F6772), and for water carryover as required particulate emissions control for the Enclosed Waste Stacker Conveyor No. 25 (F72) and the Waste Stacker Conveyor 25A (ES25A), in draft Title V Operating Permit No. 09006-T09.

Pugmills are industrial mixers used in a variety of applications. 3M Pittsboro uses the Enclosed East and West Pugmill ("Pugmill") to mix rock processing waste from baghouses and other plant waste sources with water. The purpose of the Pugmill at 3M Pittsboro is not for emissions control. The purpose of the Pugmill at 3M Pittsboro is to improve the physical characteristics of the waste for ease of handling and transport. Water addition to the Pugmill for mixing with rock processing waste is inherent to normal Pugmill operation and is not functionally intended for emissions or dust control. Operation of the Pugmill without water addition for mixing would not be considered normal Pugmill operation.

The Operations and Maintenance Manual for the Pugmill (e-mailed to Ms. Judy Lee on May 9, 2022) contains no references to emission or dust control as a purpose for water addition to the Pugmill. Further, there is no reference in the Manual to the Pugmill's purpose as emissions or dust control.

In potential to emit (PTE) calculations submitted by 3M to the Department as part of Appendix C to the 2020 operating permit renewal application, an emission reduction factor for water addition to the pugmill was applied to more closely approximate emissions from the pugmill. This emission reduction factor was labeled "wet suppression" and was incorrectly represented in the PTE calculations as emissions control. Since they are immediately downstream of the Pugmill, the Enclosed Waste Stacker Conveyor No. 25 ("Conveyor 25") and the Waste Stacker Conveyor 25A ("Conveyor 25A") have been represented as controlled by "wet suppression" and "water carryover" in previous permit application documents and PTE calculations. 3M is not required to control emissions from the Pugmill or Conveyors 25 and 25A by wet suppression, water carryover or by any other emissions control mechanism due to permitting thresholds, federal or state emissions standards, or for any other reason.

When the term "wet suppression" is used in NSPS Subpart OOO text, it refers to emissions control (reference 40 CFR 60.674(b)). Emissions control is not required on an NSPS OOO affected facility if applicable emissions limits can be met without it. The Pugmill is a post-2008 NSPS OOO affected facility that does not vent to a control device. Emission points associated with the Pugmill are subject to the NSPS OOO Table 3 opacity limit of 7%. Compliance with this limit was observed at all emission points associated with the Pugmill during NSPS OOO initial performance testing conducted on December 1, 2021. The initial performance testing was conducted during normal Pugmill operation, where rock processing waste was mixed with water as part of the inherent process.

Pursuant to 15A NCAC 02D .0510(c), emissions from crushed stone operations must be controlled such that the applicable emission limits at 15A NCAC 02D .0521 and 15A NCAC 02D .0524 are not exceeded. 15A NCAC 02D .0521(b) defers to the emission limits of 15A NCAC 02D .0524, which is the state regulatory incorporation of federal New Source Performance Standards. The applicable emission limit under 15A NCAC 02D .0524 for the Pugmill is the NSPS OOO emission limit – 7% opacity. Compliance with this limit was demonstrated during NSPS OOO initial performance testing as described above.

To simplify Pugmill, Conveyor 25, and Conveyor 25A PTE calculations and mitigate confusion surrounding the use of the terms "wet suppression" and "water carryover" in permit documents, 3M has updated PTE calculations to remove the emissions reduction factor for water addition to the Pugmill, the control efficiencies for water carryover from Conveyors 25 and 25A, and the capture efficiencies for unit and building enclosures for the Pugmill and Conveyors 25 and 25A. All references to "wet suppression" for the Pugmill, and "wet suppression"/"water carryover" for Conveyors 25 and 25A have been removed from permit application documents, and the draft operating permit renewal has been redlined to remove "wet suppression" and "water carryover" language and requirements. Reference Appendix A for updated application documents. Reference Appendix B for updated Pugmill, Conveyor 25, and Conveyor 25A PTE calculations.

Appendix D: 21C Application Forms

REVISED 10/17/2014

Title V Minor Modification (Prior to Permit Revision)

FORM A1 - MINOR

MINOR MODIFICATION QUALIFICATION CHECKLIST

- [x] This change does not violate any existing requirement in the current Title V air quality permit.
- [ ] This change does not result in any significant change in existing monitoring, reporting or recordkeeping provisions in my current permit.
- [ ] This change does not require a case-by-case determination (e.g. BACT)
- [x] This change is not a modification under Title I of the federal Clean Air Act.
- [x] This change is not a significant modification. (See 15A NCAC 2Q .0516)
- [x] This change does not require a change to an existing permit term that was taken to avoid an applicable requirement. (e.g. PSD avoidance condition)
- [x] This change does not require a permit under the NC Toxics program.

MINOR MODIFICATION DESCRIPTION

3M Pittsboro proposes to replace equipment ES3537B (M Screener No. 2), ES3537C (M Screener No. 3), ES3537G (M Screener No. 4), and ES3537H (M Screener No. 5) with new M Screeners. The M screeners are used to separate different sizes of crushed aggregate from the Live M Feed Bin and load the screened aggregate onto Conveyor #14, #19, and #21. The replacement is being done due to normal wear that these pieces of equipment experience over several years of use. The units will remain connected to existing baghouses (CDB 2 and CDB 4) and a new pick up point will be added but there will be no increase of airflow through the baghouse. The new M Screeners will have larger screening area, but the screening throughput is limited by upstream conveyors; therefore, no emissions increase will be expected from the replacement. The new M Screeners are subject to 40 CFR Part 60, Subpart OOO (NSPS OOO).

3M Pittsboro has installed a new crusher to replace an existing crusher unit (C Crusher No. 2, ES2729.2). The replacement is being done due to normal wear that these pieces of equipment experience over several years of use. C Crusher No. 2B (ES233) will have a larger electric motor, but the throughput is limited by downstream equipment; therefore, no emissions increase will be expected from the replacement. The new crusher is subjected to NSPS OOO. The unit will remain connected to an existing baghouse (CDB5).

3M Pittsboro proposes to install a bypass chute for the cone crusher to allow for screening of material prior to crushing. The C Crusher No. 1 Bypass Chute (ES2426.3) will allow material to be screened prior to crushing to allow any correct sized material to bypass the crusher. There will be no increase to throughput for the conveyor that the bypass chute is discharging to or out of the screener; therefore, no emissions increase will be expected from the modification. C Crusher No. 1 Bypass Chute (ES2426.3) will discharge aggregate to Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7) (ES8913D). Screened aggregate would return to the crusher via C bin feed conveyor No. 4 (D screen No. 1 to C crusher bin) (ES8913E). The conveyors are subjected to NSPS OOO. The units will remain connected to an existing baghouse (CDB 2) with an additional pickup point for the proposed chute.

3M Pittsboro proposes to install a metal diverter chute to remove separated metal from the aggregate. The Converyor No. 6 Metal Divertar Chute (ES2327C) will discharge seperated metal and small amounts of aggregate out of the building. The proposed equipment are subject to NSPS OOO. The proposed diverter chute will be uncontrolled.

3M Pittsboro recently determined that D Screen Bin #1 (ES8913A) has a loadout chute (not currently permitted) that is subject to NSPS OOO. The D Screen Bin No. 1 Loadout Chute (ES8913G) would discharge to trucks if D Screen Bin No.1 (ES8913A) needs to be emptied for any reason. The other D Screen Bins do not have loadout chutes.

3M Pittsboro is including documentation to demonstrate that Elevator 12 (IS-30) is an insignificant activity per Regulation 15A NCAC 02Q.0503(8). Elevator 12 is not subject to 40 CFR Part 60, Subpart OOO (NSPS OOO).

3M Pittsboro has changed baghouse bag manufacturers that have a different bag filter area then was originally permitted for the site. The updated baghouse filter areas are included with this application.

All new units subject to Subpart OOO will undergo initial performance testing for PM and opacity will be completed in accordance with 40 CFR Part 60, Subpart OOO.

APPLICABLE REGULATIONS TO THE PROPOSED MODIFICATION (attach additional sheets if necessary)

Emission Source	ID No.	Applicable Standard	Applicable Requirement	Proposed Monitoring, Recordkeeping, and Reporting
M Screener No. 2	ES3537B	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
M Screener No. 3	ES3537C	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
M Screener No. 4	ES3537G	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
M Screener No. 5	ES3537H	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7)	ES8913D	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
C bin feed conveyor No. 4 (D screen No. 1 to C crusher bin)	ES8913E	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
C Crusher No. 2B	ES233	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
C Crusher No. 1 Bypass Chute	ES2426.3	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
D Screen Bin No. 1 Loadout Chute	ES8913G	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
Conveyor No. 6 Metal Diverter Chute	ES2327C	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540	N/A
Elevator 12	IS-30	N/A	15A NCAC 02Q.0503(8)	N/A

ATTACH A COPY OF THE PROPOSED PERMIT CONDITIONS FOR EACH REQUIREMENT THAT APPLIES TO THE PERMIT MODIFICATION.

SPECIFIC PERMIT TERMS AND PROVISIONS AFFECTED BY THIS MODIFICATION (attach additonal sheets if necessary)

Source & ID No.	Permit Condition	Specify Provisions Which No Longer Apply
N/A		

Upon receipt of the completeness determination letter, you may make the modification in accordance with 15A NCAC 2Q .0515(f). A determination of application completeness by the DAQ is not a determination that each change qualifies as a minor permit modification. It is the responsibility of the applicant to ensure each proposed change meets the criteria of 15A NCAC 2Q .0515. The applicant assumes all financial risks associated with construction and operation without a permit revision. You shall comply with both the applicable requirements governing the change and the proposed permit conditions until final action is taken on the permit application. You need not comply with the existing permit terms and conditions you seek to modify. However, if you fail to comply with the proposed monitoring, the Director may enforce the terms and conditions of the existing permit that you seek to modify. You must certify compliance with the proposed permit terms on the annual compliance certification. The permit shield in 15A NCAC 2Q .0512(a) does not extend to this modification.

FORMs A2, A3

EMISSION SOURCE LISTING FOR THIS APPLICATION - A2

112r APPLICABILITY INFORMATION - A3

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — **A2**

EMISSION SOURCE LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted

EMISSION SOURCE ID NO.	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE ID NO.	CONTROL DEVICE DESCRIPTION
Equipment To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)			
ES2426.3	C Crusher No. 1 Bypass Chute	CDB1	Crusher baghouse No. 1 (6,178 square feet of filter area)
ES8913G	D Screen Bin No. 1 Loadout Chute	N/A	N/A
ES2327C	Conveyor No. 6 Metal Diverter Chute	N/A	N/A
Existing Permitted Equipment To Be MODIFIED By This Application			
ES3537B	M Screener No. 2	CDB2	Screen baghouse No. 1 (11,296 square feet of filter area)
ES3537C	M Screener No. 3	CDB2	Screen baghouse No. 1 (11,296 square feet of filter area)
ES3537G	M Screener No. 4	CDB4	Screen baghouse No. 2 (9,002 square feet of filter area)
ES3537H	M Screener No. 5	CDB4	Screen baghouse No. 2 (9,002 square feet of filter area)
ES8913D	Undersize conveyor No. 3 (D screen No. 1 to dryer feed	CDB2	Screen baghouse No. 1 (11,296 square feet of filter area)
ES8913E	C bin feed conveyor No. 4 (D screen No. 1 to C crusher bin)	CDB2	Screen baghouse No. 1 (11,296 square feet of filter area)
ES233	C Crusher No. 2B	CDB5	Crushing Baghouse No. 2 (4,942 square feet of filter area)
CDB1	Crushing Baghouse No. 1	CDB1	Crusher baghouse No. 1 (6,178 square feet of filter area)
CDB2	Screen Baghouse No. 1	CDB2	Screen baghouse No. 1 (11,296 square feet of filter area)
CDB3	Dryer Baghouse	CDB3	Dryer Baghouse (12,002 square feet of filter area)
CDB4	Screen Baghouse No. 2	CDB4	Screen baghouse No. 2 (9,002 square feet of filter area)
CDB5	Crushing Baghouse No. 2	CDB5	Crushing Baghouse No. 2 (4,942 square feet of filter area)
CDB6	Grade Baghouse	CDB6	Grade Baghouse (4,942 square feet of filter area)
CDB7	Waste Handling Baghouse	CDB7	Waste Handling Baghouse (2,648 square feet of filter area)
CDB8	Raw Granule Baghouse	CDB8	Raw Granule Baghouse (5,472 square feet of filter area)
CDB9	Preheater Baghouse No. 1	CDB9	Preheater Baghouse No. 1 (6,354 square feet of filter area)
CDB10	Preheater Baghouse No. 2	CDB10	Preheater Baghouse No. 2 (6,354 square feet of filter area)
CDB11	Mixer Baghouse No. 1	CDB11	Mixer Baghouse No. 1 (2,648 square feet of filter area)
CDB12	Mixer Baghouse No. 2	CDB12	Mixer Baghouse No. 2 (2,648 square feet of filter area)
CDB13	Kiln 1 Baghouse	CDB13	Kiln 1 Baghouse (10,590 square feet of filter area)
CDB14	Kiln 2 Baghouse	CDB14	Kiln 2 Baghouse (10,590 square feet of filter area)
CDB15	Finished Granule Baghouse	CDB15	Finished Granule Baghouse (5,825 square feet of filter area)
Equipment To Be DELETED By This Application			
ES2729.2	G Crusher No. 2		

112(r) APPLICABILITY INFORMATION — **A 3**

Is your facility subject to 40 CFR Part 68 "Prevention of Accidental Releases" - Section 112(r) of the Federal Clean Air Act? ☐ Yes ☑ No

If No, please specify in detail how your facility avoided applicability: Facility is subject to RMP regulations under the general provisions, but no requirements are triggered as the facility's inventory is not higher than the threshold quantity.

If your facility is Subject to 112(r), please complete the following:

A. Have you already submitted a Risk Management Plan (RMP) to EPA Pursuant to 40 CFR Part 68.10 or Part 68.150?

☐ Yes ☐ No Specify required RMP submittal date: _____ If submitted, RMP submittal date: _____

B. Are you using administrative controls to subject your facility to a lesser 112(r) program standard?

☐ Yes ☐ No If yes, please specify: _____

C. List the processes subject to 112(r) at your facility:

PROCESS DESCRIPTION	PROCESS LEVEL (1, 2, or 3)	HAZARDOUS CHEMICAL	MAXIMUM INTENDED INVENTORY (LBS)

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: M Screener No. 2	EMISSION SOURCE ID NO: ES3537B
	CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following; Waste Conveyor No. 21 (ES3537F), Grade Collecting Conveyor No. 19 (ES3537E) and L Crusher Feed Bin Conveyor No. 14 (ES3537D). Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: TBD	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			18.83	82.45	5.65E-03	2.47E-02
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			6.55	28.69	5.24E-03	2.30E-02
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: M Screener No. 3	EMISSION SOURCE ID NO: ES3537C
	CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following; Waste Conveyor No. 21 (ES3537F), Grade Collecting Conveyor No. 19 (ES3537E) and L Crusher Feed Bin Conveyor No. 14 (ES3537D). Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: TBD	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			18.83	82.45	5.65E-03	2.47E-02
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			6.55	28.69	5.24E-03	2.30E-02
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: M Screener No. 4	EMISSION SOURCE ID NO: ES3537G
	CONTROL DEVICE ID NO(S): CDB4
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):

ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following; Waste Conveyor #21 (ES3537L), Grade Collecting Conveyor 19 (ES3537K), L Crusher Feed Bin Conveyor No.14 (ES3537J), and Feed Conveyor No. 6. Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

☐ Coal,wood,oil, gas, other burner (Form B1)	☐ Woodworking (Form B4)	☐ Manuf. of chemicals/coatings/inks (Form B7)
☐ Int.combustion engine/generator (Form B2)	☐ Coating/finishing/printing (Form B5)	☐ Incineration (Form B8)
☐ Liquid storage tanks (Form B3)	☐ Storage silos/bins (Form B6)	☑ Other (Form B9)

START CONSTRUCTION DATE: TBD	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			18.83	82.45	5.65E-03	2.47E-02
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			6.55	28.69	5.24E-03	2.30E-02
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: M Screener No. 5	EMISSION SOURCE ID NO: ES3537H
	CONTROL DEVICE ID NO(S): CDB4
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):

ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following: Waste Conveyor #21 (ES3537L), Grade Collecting Conveyor 19 (ES3537K), L Crusher Feed Bin Conveyor No.14 (ES3537J), and Feed Conveyor No. 6. Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

☐ Coal,wood,oil, gas, other burner (Form B1)	☐ Woodworking (Form B4)	☐ Manuf. of chemicals/coatings/inks (Form B7)
☐ Int.combustion engine/generator (Form B2)	☐ Coating/finishing/printing (Form B5)	☐ Incineration (Form B8)
☐ Liquid storage tanks (Form B3)	☐ Storage silos/bins (Form B6)	☑ Other (Form B9)

START CONSTRUCTION DATE: TBD	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25 MAR-MAY 25 JUN-AUG 25 SEP-NOV 25	

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			18.83	82.45	5.65E-03	2.47E-02
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			6.55	28.69	5.24E-03	2.30E-02
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7)	EMISSION SOURCE ID NO: ES8913D
	CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):

ES 8913 - Crushed greenstone aggregate from Product Conveyor No.3 (C crusher to D screen bin No. 1) (ESC3) loadout to D Feed Bin 1 (ES8913A). D Feed Bin 1 (ES8913A) loadout into D Screen No.1 Feeder (ES8913B) and through to D Screen No.1 (ES8913C). From D Screen No.1, the aggregate either goes onto C Bin Feed Conveyor No. 4 (D Screen No.1 to C Crusher Bin) (ES8913E) or Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7) (ES8913D).

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

☐ Coal,wood,oil, gas, other burner (Form B1)	☐ Woodworking (Form B4)	☐ Manuf. of chemicals/coatings/inks (Form B7)
☐ Int.combustion engine/generator (Form B2)	☐ Coating/finishing/printing (Form B5)	☐ Incineration (Form B8)
☐ Liquid storage tanks (Form B3)	☐ Storage silos/bins (Form B6)	☑ Other (Form B9)

START CONSTRUCTION DATE: 1970	DATE MANUFACTURED:1970
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			1.61	7.03	4.81E-04	2.11E-03
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			0.59	2.58	4.71E-04	2.06E-03
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: C Bin Feed Conveyor No. 4 (D screen No. 1 to C Crusher Bin)	EMISSION SOURCE ID NO: ES8913E
	CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):

ES 8913 - Crushed greenstone aggregate from Product Conveyor No.3 (C crusher to D screen bin No. 1) (ESC3) loadout to D Feed Bin 1 (ES8913A). D Feed Bin 1 (ES8913A) loadout into D Screen No.1 Feeder (ES8913B) and through to D Screen No.1 (ES8913C). From D Screen No.1, the aggregate either goes onto C Bin Feed Conveyor No. 4 (D Screen No.1 to C Crusher Bin) (ES8913E) or Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7) (ES8913D).

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: 1970	DATE MANUFACTURED:1970
MANUFACTURER / MODEL NO.: N/A	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			1.61	7.03	4.81E-04	2.11E-03
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			0.59	2.58	4.71E-04	2.06E-03
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: C Crusher No. 2B	EMISSION SOURCE ID NO: ES233
	CONTROL DEVICE ID NO(S): CDB5
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
Crushed aggregate is conveyed from G Crusher Feed Conveyor No. 8B (ID No. ES24271 - G Crusher Feed Bin No.1 to G Crusher No.1) into C Crusher No. 2B (ES233) for secondary crushing of the aggregate. Aggregate from C Crusher No. 2B is fed onto the Dryer and G Crusher Product Conveyor No. 9 (G Crusher to D Screens Feed Bin No.2) (ES16-C).

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: TBD — DATE MANUFACTURED: TBD

MANUFACTURER / MODEL NO.: N/A — EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR

IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO ☐ NESHAP (SUBPARTS?):

PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25 MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			1.62	7.10	4.86E-04	2.13E-03
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			0.72	3.15	5.76E-04	2.52E-03
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: C Crusher No.1 Bypass Chute	EMISSION SOURCE ID NO: ES2426.3
	CONTROL DEVICE ID NO(S): CDB1
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):

The C Crusher No. 1 Bypass Chute (ES2426.3) will divert aggregate that currently goes to C Crusher No. 1 (ES2426.2) onto Product Conveyor No. 3 (C crusher to D screen bin No. 1) (ESC3) for screening prior to crushing.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: TBD	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.:	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25 MAR-MAY 25 JUN-AUG 25 SEP-NOV 25	

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			1.61	7.03	1.00E-03	6.00E-03
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			0.59	2.58	5.00E-04	2.00E-04
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: D Screen Bin No. 1 Loadout Chute	EMISSION SOURCE ID NO: ES8913G
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
D Screen Bin No. 1 Loadout Chute (ES8913G) would discharge to trucks if D Screen Bin #1 (ES8913A) needs to be emptied for any reason.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: 1970	DATE MANUFACTURED:1970
MANUFACTURER / MODEL NO.:	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			1.08	4.73	1.08	4.73
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			0.40	1.73	0.40	1.73
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **B**

EMISSION SOURCE DESCRIPTION: Conveyor No. 6 Metal Diverter Chute	EMISSION SOURCE ID NO: ES2327C
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
A metal detector will identify metal in the aggregate and will trigger a diverter valve will divert separated metal and aggregate outside via Conveyor No. 6 Metal Diverter Chute (ES2327C).

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: TBD	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.:	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): OOO	☐ NESHAP (SUBPARTS?):
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25	MAR-MAY 25 JUN-AUG 25 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42			3.00E-03	1.31E-02	3.00E-03	1.31E-02
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42			1.10E-03	4.82E-03	1.10E-03	4.82E-03
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)							
SULFUR DIOXIDE (SO2)							
NITROGEN OXIDES (NOx)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: M Screener No. 2	EMISSION SOURCE ID NO: ES3537B CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following; Waste Conveyor No. 21 (ES3537F), Grade Collecting Conveyor No. 19 (ES3537E) and L Crusher Feed Bin Conveyor No. 14 (ES3537D). Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Crushed Aggregate (greenstone)	Tons	753	753

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: M Screener No 3	EMISSION SOURCE ID NO: ES3537C
	CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following: Waste Conveyor No. 21 (ES3537F), Grade Collecting Conveyor No. 19 (ES3537E) and L Crusher Feed Bin Conveyor No. 14 (ES3537D). Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Crushed Aggregate (greenstone)	Tons	753	753

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: M Screener No. 4	EMISSION SOURCE ID NO: ES3537G
	CONTROL DEVICE ID NO(S): CDB4
OPERATING SCENARIO: _____1_____ OF _____1_____	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following; Waste Conveyor #21 (ES3537L), Grade Collecting Conveyor 19 (ES3537K), L Crusher Feed Bin Conveyor No.14 (ES3537J), and Feed Conveyor No. 6. Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Crushed Aggregate (greenstone)	Tons	753	753

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: M Screener No. 5	EMISSION SOURCE ID NO: ES3537H
	CONTROL DEVICE ID NO(S): CDB4
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

ES 3537 - Loading crushed aggregate from Live M Feed Bin (ES340B) to all 6 M Screeners. This emission source also includes loadout from the M Screeners onto the following; Waste Conveyor #21 (ES3537L), Grade Collecting Conveyor 19 (ES3537K), L Crusher Feed Bin Conveyor No.14 (ES3537J), and Feed Conveyor No. 6. Control device for M Screeners (No. 1 through 3) and (No. 4 through 6) processes is CDB2 and CDB4, respectively.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Crushed Aggregate (greenstone)	Tons	753	753

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: Undersize Conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7)	EMISSION SOURCE ID NO: ES8913D CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

ES 8913 - Crushed greenstone aggregate from Product Conveyor No.3 (C crusher to D screen bin No. 1) (ESC3) loadout to D Feed Bin 1 (ES8913A). D Feed Bin 1 (ES8913A) loadout Into D Screen No.1 Feeder (ES8913B) and through to D Screen No.1 (ES8913C). From D Screen No.1, the aggregate either goes onto C Bin Feed Conveyor No. 4 (D Screen No.1 to C Crusher Bin) (ES8913E) or Undersize Conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7) (ES8913D).

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Crushed Aggregate (greenstone)	Tons	535	535

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: C Bin Feed Conveyor No. 4 (D screen No. 1 to C Crusher Bin)	EMISSION SOURCE ID NO: ES8913E
	CONTROL DEVICE ID NO(S): CDB2
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

ES 8913 - Crushed greenstone aggregate from Product Conveyor No.3 (C crusher to D screen bin No. 1) (ESC3) loadout to D Feed Bin 1 (ES8913A). D Feed Bin 1 (ES8913A) loadout Into D Screen No.1 Feeder (ES8913B) and through to D Screen No.1 (ES8913C). From D Screen No.1, the aggregate either goes onto C Bin Feed Conveyor No. 4 (D Screen No.1 to C Crusher Bin) (ES8913E) or Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7) (ES8913D).

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Crushed Aggregate (greenstone)	Tons	535	535

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: C Crusher No. 2B	EMISSION SOURCE ID NO: ES233 CONTROL DEVICE ID NO(S): CD85
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

Crushed aggregate is conveyed from G Crusher Feed Conveyor No.8B (ID No. ES24271 - G Crusher Feed Bin No.1 to G Crusher No.1) into C Crusher No. 2B (ES233) for secondary crushing of the aggregate. Aggregate from C Crusher No. 2B is fed onto the Dryer and G Crusher Product Conveyor No. 9 (G Crusher to D Screens Feed Bin No.2) (ES16-C).

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Crushed Aggregate (greenstone)	Tons	300	300

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: C Crusher No.1 Bypass Chute	EMISSION SOURCE ID NO: ES2426.3
	CONTROL DEVICE ID NO(S): CDB1
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

The C Crusher No. 1 Bypass Chute (ES2426.3) will divert aggregate the currently goes to C Crusher No. 1 (ES2426.2) onto Product Conveyor No. 3 (C crusher to D screen bin No. 1) (ESC3) for screening prior to crushing.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Undersized Aggregate	ton	1092	535

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: D Screen Bin No. 1 Loadout Chute	EMISSION SOURCE ID NO: ES8913G
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

D Screen Bin No. 1 Loadout Chute (ES8913G) would discharge to trucks if D Screen Bin #1 (ES8913A) needs to be emptied for any reason.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Finished granule	tons	360	360

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: Conveyor No. 6 Metal Diverter Chute	EMISSION SOURCE ID NO: ES2327C
	CONTROL DEVICE ID NO(S): N/A
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): N/A

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

A metal detector will identify metal in the aggregate and will trigger a diverter valve will divert separated metal and aggregate outside via Conveyor No. 6 Metal Diverter Chute (ES2327C).

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Aggregate with metal	ton	1	1

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED:	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR):
MAX. CAPACITY HOURLY FUEL USE:	REQUESTED CAPACITY ANNUAL FUEL USE:

COMMENTS:

Attach Additional Sheets as Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** | **C1**

CONTROL DEVICE ID NO: CDB1	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ES123, ES412, ES607.1, ES607.2, ES2327A, ES2426.1, ES2426.2, ES3031, ES3941, ES4347.1, ES4347.2, ESC3, ESC23A.1
EMISSION POINT (STACK) ID NO(S): EP S1	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB1). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	16.09	5.81		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.87 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	4.65E-03	4.65E-03		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 100	MAX 200
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 100	MAX 200
INLET AIR FLOW RATE (ACFM): 26000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 480	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 6178	AIR TO CLOTH RATIO: 4.2		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from feed conveyors, bins, crushers inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB2	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ES16-A, ES32.1, ES32A, ES32B, ES340-A, ES1721A, ES1721B, ES1721C, ES1721D, ES1721E, ES3537A, ES3537B, ES3537C, ES3537D, ES3537E, ES3537F, ES8913A, ES8913B, ES8913C, ES8913D, ES8913E, ES8913F
EMISSION POINT (STACK) ID NO(S): EP S2	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB2). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	39.53	13.87		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	1.14E-02	1.11E-02		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 100	MAX 200
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 100	MAX 200
INLET AIR FLOW RATE (ACFM): 47,000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 896	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2) 11296	AIR TO CLOTH RATIO: 4.2		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from feed conveyors, bins, crushers, and screeners inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — **C1**

CONTROL DEVICE ID NO: CDB3	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESC23A,2, ES1415
EMISSION POINT (STACK) ID NO(S): EP S3	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☑ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB3). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	PM(includes PM10 and TSP)			
BEFORE CONTROL EMISSION RATE (LB/HR):	13,697.48			
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.92 %	%	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	8.48			

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 250	MAX 400
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 250	MAX 400
INLET AIR FLOW RATE (ACFM): 50,000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 952	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 12002	AIR TO CLOTH RATIO: 4.2		

DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE — FILTER MATERIAL: ☐ WOVEN ☐ FELTED

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) and combustion emissions exhaust from the dryer and Conveyor No. 22

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S).

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — C1

CONTROL DEVICE ID NO: CDB4	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ES16-B, ES33A, ES33B, ES340-B, ES1822A, ES1822B, ES1822C, ES1822D, ES2327B, ES3537G, ES3537H, ES3537I, ESC3537J, ES8913K, ESC23C
EMISSION POINT (STACK) ID NO(S): EP S4	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB4). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	26.16	9.21		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	7.56E-03	7.37E-03		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (^oF): MIN 100	MAX 200
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (^oF) MIN 100	MAX 200
INLET AIR FLOW RATE (ACFM): 36,000		FILTER OPERATING TEMP (^oF):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 714	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 9002	AIR TO CLOTH RATIO: 4.2		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from feed conveyors, bins, crushers, and screeners inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS

Attach Additional Sheets As Necessary

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FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **C1**

CONTROL DEVICE ID NO: CDB5	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ES16-C, ES32.2, ES38, ES39, ES2327, ES2729.1, ES233, ES4042, ES4043, ES4044, ES4448.1, ES4448.2
EMISSION POINT (STACK) ID NO(S): EP S5	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB5). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	9.68	3.83		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	2.80E-03	3.06E-03		

PRESSURE DROP (IN H_2O): MIN: MAX: GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):	INLET TEMPERATURE (°F): MIN 100 MAX 200
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3	OUTLET TEMPERATURE (°F) MIN 100 MAX 200
INLET AIR FLOW RATE (ACFM): 21,000	FILTER OPERATING TEMP (°F):

NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 392	LENGTH OF BAG (IN.): 100.5
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75
TOTAL FILTER SURFACE AREA (FT^2): 4942	AIR TO CLOTH RATIO: 4.2	

DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE — FILTER MATERIAL: ☐ WOVEN ☐ FELTED

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from feed conveyors, bins, crushers inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1
CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** | **C1**

CONTROL DEVICE ID NO: CDB6	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ES49A, ES49B, ES50, ES57, ES58, ES59, ES5155A, ES5155B, ES5155C
EMISSION POINT (STACK) ID NO(S): EP S6	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB6). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	4.58	1.68		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	1.32E-03	1.34E-03		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 100	MAX 200
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 100	MAX 200
INLET AIR FLOW RATE (ACFM): 21,000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 392	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 4942	AIR TO CLOTH RATIO: 4.2		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from conveyors, bucket elevators, and grade silos inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

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FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** | **C1**

CONTROL DEVICE ID NO: CDB7	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ES23C, ES63A, ES63B, ES68A, ES68B, ES6456, ES6466SC, ES6970
EMISSION POINT (STACK) ID NO(S): EP S7	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB7). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	1.47	0.539		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	4.25E-04	4.31E-04		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (^oF): MIN 70	MAX 150
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (^oF) MIN 70	MAX 150
INLET AIR FLOW RATE (ACFM): 11,000		FILTER OPERATING TEMP (^oF):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 210	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 2648	AIR TO CLOTH RATIO: 4.2		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from conveyors, elevators, and bins inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S).

COMMENTS:

Attach Additional Sheets As Necessary

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FORM C1
CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB8	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPL1-280A, ESCPL1-280B, ESCPL1-280C, ESCPL2-280A, ESCPL2-280B, ESCPL2-280C, ESCPL1-600, ESCPL2-600, ESCPL3-600, ESCP900, ESCPA9, ESCPA10, ESCPCC, IS-ESCP1, IS-ESCP2, IS-ESCP3, IS-ESCP4, IS-ESCPC-8, IS-ESCPL1-8, IS-ESCPL2-8
EMISSION POINT (STACK) ID NO(S): EP S8	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB8). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	2.70	0.99		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	7.92E-04	7.92E-04		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 100	MAX 200
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 100	MAX 200
INLET AIR FLOW RATE (ACFM): 23,000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 434	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 5472	AIR TO CLOTH RATIO: 4.6		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from conveyors and bins inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB9	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPPH1
EMISSION POINT (STACK) ID NO(S): EP S9	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
__1__ OF __1__	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB9). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	PM(Includes PM10 and TSP)			
BEFORE CONTROL EMISSION RATE (LB/HR):	1257.32			
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.92 %	%	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	1.01			

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 250	MAX 450
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 250	MAX 450
INLET AIR FLOW RATE (ACFM): 30,000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 504	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 6354	AIR TO CLOTH RATIO: 4.7		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) and combustion emissions exhaust from the dryer

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S).

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — C1

CONTROL DEVICE ID NO: CDB10	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPPH2
EMISSION POINT (STACK) ID NO(S): EP S10	POSITION IN SERIES OF CONTROLS N/A — NO. — OF — UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB10). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	PM(includes PM10 and TSP)			
BEFORE CONTROL EMISSION RATE (LB/HR):	1257.32			
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.92 %	%	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	1.01			

PRESSURE DROP (IN H_2O): MIN: MAX: GAUGE? ☐ YES ☐ NO		
BULK PARTICLE DENSITY (LB/FT^3):	INLET TEMPERATURE (°F): MIN 250	MAX 450
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3	OUTLET TEMPERATURE (°F) MIN 250	MAX 450
INLET AIR FLOW RATE (ACFM): 30,000	FILTER OPERATING TEMP (°F):	

NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 504	LENGTH OF BAG (IN.): 100.5
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75
TOTAL FILTER SURFACE AREA (FT^2): 8354	AIR TO CLOTH RATIO: 4.7	

DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE — FILTER MATERIAL: ☐ WOVEN ☐ FELTED

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) and combustion emissions exhaust from the dryer

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — C1

CONTROL DEVICE ID NO: CDB11	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPM1
EMISSION POINT (STACK) ID NO(S): EP S11	POSITION IN SERIES OF CONTROLS N/A — NO. — OF — UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB11). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	2630.67	1244.24		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	0.77	1.00		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 150	MAX 250
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 150	MAX 250
INLET AIR FLOW RATE (ACFM): 13,000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 210	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 2648	AIR TO CLOTH RATIO: 4.9		

DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE — FILTER MATERIAL: ☐ WOVEN ☐ FELTED

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) emissions exhaust from the Mixer

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

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FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** | **C1**

CONTROL DEVICE ID NO: CDB12	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPM2
EMISSION POINT (STACK) ID NO(S): EP S12	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB12). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	2630.67	1244.24		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	0.77	1.00		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN 150	MAX 250
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN 150	MAX 250
INLET AIR FLOW RATE (ACFM): 13,000		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 210	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 2648	AIR TO CLOTH RATIO: 4.9		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) emissions exhaust from the Mixer

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

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FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** | **C1**

CONTROL DEVICE ID NO: CDB13	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPK1
EMISSION POINT (STACK) ID NO(S): EP S13	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB13). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	PM(includes PM10 and TSP)			
BEFORE CONTROL EMISSION RATE (LB/HR):	2668.32			
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.92 %	%	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	2.13			

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (^oF): MIN 300	MAX 450
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (^oF) MIN 300	MAX 450
INLET AIR FLOW RATE (ACFM): 50,000		FILTER OPERATING TEMP (^oF):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 640	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 10590	AIR TO CLOTH RATIO: 4.7		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) and combustion emissions exhaust from the natural gas-fired kiln

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

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FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB14	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPK2
EMISSION POINT (STACK) ID NO(S): EP S14	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB14). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	PM(Includes PM10 and TSP)			
BEFORE CONTROL EMISSION RATE (LB/HR):	2668.32			
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.92 %	%	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	2.13			

PRESSURE DROP (IN H_2O): MIN: MAX: GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):	INLET TEMPERATURE (°F): MIN 300 MAX 450
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3	OUTLET TEMPERATURE (°F) MIN 300 MAX 450
INLET AIR FLOW RATE (ACFM): 50,000	FILTER OPERATING TEMP (°F):

NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 840	LENGTH OF BAG (IN.): 100.5
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75
TOTAL FILTER SURFACE AREA (FT^2): 10590	AIR TO CLOTH RATIO: 4.7	

DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE FILTER MATERIAL: ☐ WOVEN ☐ FELTED

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) and combustion emissions exhaust from the natural gas-fired kiln

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

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FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB15	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPL1-280A, ESCPL1-280B, ESCPL1-280C, ESCPL2-280A, ESCPL2-280B, ESCPL2-280C, ESCPL1-600, ESCPL2-600, ESCPL3-600, ESCP900, ESCPA9, ESCPA10, ESCPCC
EMISSION POINT (STACK) ID NO(S): EP S17	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB15). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	19.16	6.74		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	6.00E-03	5.00E-03		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (^oF): MIN 150	MAX 250
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (^oF) MIN 150	MAX 250
INLET AIR FLOW RATE (ACFM): 27,500		FILTER OPERATING TEMP (^oF):	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 462	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2): 5625	AIR TO CLOTH RATIO: 4.6		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from conveyors, bins, elevators, and screeners inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
TOTAL = 100		

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** | **C1**

CONTROL DEVICE ID NO: CDB16	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESA1, ESA5, ESA6, ESA7, ESA11
EMISSION POINT (STACK) ID NO(S):	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB16). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	22.64	7.92		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	6.30E-03	6.30E-03		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (^oF): MIN	MAX
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (^oF) MIN	MAX
INLET AIR FLOW RATE (ACFM):		FILTER OPERATING TEMP (^oF):	
NO. OF COMPARTMENTS:	NO. OF BAGS PER COMPARTMENT:	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2):	AIR TO CLOTH RATIO:		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from conveyors, bins, crushers, and screeners inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

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FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB17	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESA2, ESA3, ESA4, ESA8, ESA9, ESA12
EMISSION POINT (STACK) ID NO(S): EP S17	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB17). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	7.06	2.81		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	2.00E-03	2.30E-03		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT³):		INLET TEMPERATURE (°F): MIN	MAX
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT³		OUTLET TEMPERATURE (°F) MIN	MAX
INLET AIR FLOW RATE (ACFM):		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS:	NO. OF BAGS PER COMPARTMENT:	LENGTH OF BAG (IN.): 160.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT²):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT²):	AIR TO CLOTH RATIO:		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (particulate emissions) exhaust from conveyors, bins, and crushers inside of the building.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB18	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPPH3
EMISSION POINT (STACK) ID NO(S): EP S18	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB18). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	PM(includes PM10 and TSP)			
BEFORE CONTROL EMISSION RATE (LB/HR):	1257.32			
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.92 %	%	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	1.01			

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN	MAX
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN	MAX
INLET AIR FLOW RATE (ACFM):		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS:	NO. OF BAGS PER COMPARTMENT:	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2):	AIR TO CLOTH RATIO:		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) and combustion emissions exhaust from the dryer

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — C1

CONTROL DEVICE ID NO: CDB19	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPM3
EMISSION POINT (STACK) ID NO(S): EP S19	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB19). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	TSP	PM10		
BEFORE CONTROL EMISSION RATE (LB/HR):	2630.87	1244.24		
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.97 %	99.92 %	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	0.77	1.00		

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (°F): MIN	MAX
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (°F) MIN	MAX
INLET AIR FLOW RATE (ACFM):		FILTER OPERATING TEMP (°F):	
NO. OF COMPARTMENTS:	NO. OF BAGS PER COMPARTMENT:	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2):	AIR TO CLOTH RATIO:		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

- ☑ AIR PULSE
- ☐ REVERSE FLOW
- ☐ MECHANICAL/SHAKER
- ☐ OTHER:
- ☐ SONIC
- ☐ SIMPLE BAG COLLAPSE
- ☐ RING BAG COLLAPSE

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) emissions exhaust from the mixer

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

Certified by this engineering seal

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | C1

CONTROL DEVICE ID NO: CDB20	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ESCPA6, ESCPK3
EMISSION POINT (STACK) ID NO(S): EP S20	POSITION IN SERIES OF CONTROLS N/A NO. OF UNITS N/A
OPERATING SCENARIO:	
___1___ OF ___1___	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM:

Induced draft fan pulls PM emissions from all emission sources specified above to baghouse (CDB20). All emissions sources are totally enclosed in ductwork that directs air flow to the baghouse.

POLLUTANTS COLLECTED:	PM(includes PM10 and TSP)			
BEFORE CONTROL EMISSION RATE (LB/HR):	2668.32			
CAPTURE EFFICIENCY:	%	%	%	%
CONTROL DEVICE EFFICIENCY:	%	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.92 %	%	%	%
EFFICIENCY DETERMINATION CODE:				
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	2.13			

PRESSURE DROP (IN H_2O): MIN:	MAX:	GAUGE? ☐ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3):		INLET TEMPERATURE (^oF): MIN	MAX
POLLUTANT LOADING RATE: ☐ LB/HR ☐ GR/FT^3		OUTLET TEMPERATURE (^oF) MIN	MAX
INLET AIR FLOW RATE (ACFM):		FILTER OPERATING TEMP (^oF):	
NO. OF COMPARTMENTS:	NO. OF BAGS PER COMPARTMENT:	LENGTH OF BAG (IN.): 100.5	
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 5.75	
TOTAL FILTER SURFACE AREA (FT^2):	AIR TO CLOTH RATIO:		
DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE		FILTER MATERIAL: ☐ WOVEN ☐ FELTED	

DESCRIBE CLEANING PROCEDURES:

☑ AIR PULSE ☐ SONIC
☐ REVERSE FLOW ☐ SIMPLE BAG COLLAPSE
☐ MECHANICAL/SHAKER ☐ RING BAG COLLAPSE
☐ OTHER:

DESCRIBE INCOMING AIR STREAM:

Dust (Particular matter) and combustion emissions exhaust from the kiln and feed elevator.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1		
1-10		
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S).

COMMENTS:

Attach Additional Sheets As Necessary

FORM D1

FACILITY-WIDE EMISSIONS SUMMARY

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | D1

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

	EXPECTED ACTUAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)
AIR POLLUTANT EMITTED	tons/yr	tons/yr	tons/yr
PARTICULATE MATTER (PM)		147,201	218.7
PARTICULATE MATTER < 10 MICRONS (PM_{10})		128,300	143.9
PARTICULATE MATTER < 2.5 MICRONS ($PM_{2.5}$)		128,300	143.9
SULFUR DIOXIDE (SO_2)			
NITROGEN OXIDES (NOx)			
CARBON MONOXIDE (CO)			
VOLATILE ORGANIC COMPOUNDS (VOC)			
LEAD			
GREENHOUSE GASES (GHG) (SHORT TONS)			
OTHER			

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

		EXPECTED ACTUAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)
HAZARDOUS AIR POLLUTANT EMITTED	CAS NO.	tons/yr	tons/yr	tons/yr
No change of emissions with this permit action.				

TOXIC AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

INDICATE REQUESTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS. EMISSIONS ABOVE THE TOXIC PERMIT EMISSION RATE (TPER) IN 15A NCAC 2Q .0711 MAY REQUIRE AIR DISPERSION MODELING. USE NETTING FORM D2 IF NECESSARY.

					Modeling Required ?	
TOXIC AIR POLLUTANT EMITTED	CAS NO.	lb/hr	lb/day	lb/year	Yes	No
No change of emissions with this permit action. Modification is only adding a pickups to existing permitted equipment						

COMMENTS:

Attach Additional Sheets As Necessary

FORM D4

EXEMPT AND INSIGNIFICANT ACTIVITIES SUMMARY

ACTIVITIES EXEMPTED PER 2Q .0102 OR
INSIGNIFICANT ACTIVITIES PER 2Q .0503 FOR TITLE V SOURCES

DESCRIPTION OF EMISSION SOURCE	SIZE OR PRODUCTION RATE	BASIS FOR EXEMPTION OR INSIGNIFICANT ACTIVITY
1. Elevator 12	50 tpy	15A NCAC 02Q.0503(8)
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach Additional Sheets As Necessary

FORM D5

TECHNICAL ANALYSIS TO SUPPORT PERMIT APPLICATION

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **D5**

PROVIDE DETAILED TECHNICAL CALCULATIONS TO SUPPORT ALL EMISSION, CONTROL, AND REGULATORY DEMONSTRATIONS MADE IN THIS APPLICATION. INCLUDE A COMPREHENSIVE PROCESS FLOW DIAGRAM AS NECESSARY TO SUPPORT AND CLARIFY CALCULATIONS AND ASSUMPTIONS. ADDRESS THE FOLLOWING SPECIFIC ISSUES ON SEPARATE PAGES:

A **SPECIFIC EMISSIONS SOURCE (EMISSION INFORMATION) (FORM B and B1 through B9)** - SHOW CALCULATIONS USED, INCLUDING EMISSION FACTORS, MATERIAL BALANCES, AND/OR OTHER METHODS FROM WHICH THE POLLUTANT EMISSION RATES IN THIS APPLICATION WERE DERIVED. INCLUDE CALCULATION OF POTENTIAL BEFORE AND, WHERE APPLICABLE, AFTER CONTROLS. CLEARLY STATE ANY ASSUMPTIONS MADE AND PROVIDE ANY REFERENCES AS NEEDED TO SUPPORT MATERIAL BALANCE CALCULATIONS.

B **SPECIFIC EMISSION SOURCE (REGULATORY INFORMATION)(FORM E2 - TITLE V ONLY)** - PROVIDE AN ANALYSIS OF ANY REGULATIONS APPLICABLE TO INDIVIDUAL SOURCES AND THE FACILITY AS A WHOLE. INCLUDE A DISCUSSION OUTING METHODS (e.g. FOR TESTING AND/OR MONITORING REQUIREMENTS) FOR COMPLYING WITH APPLICABLE REGULATIONS, PARTICULARLY THOSE REGULATIONS LIMITING EMISSIONS BASED ON PROCESS RATES OR OTHER OPERATIONAL PARAMETERS. PROVIDE JUSTIFICATION FOR AVOIDANCE OF ANY FEDERAL REGULATIONS (PREVENTION OF SIGNIFICANT DETERIORATION (PSD), NEW SOURCE PERFORMANCE STANDARDS (NSPS), NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), TITLE V), INCLUDING EXEMPTIONS FROM THE FEDERAL REGULATIONS WHICH WOULD OTHERWISE BE APPLICABLE TO THIS FACILITY. SUBMIT ANY REQUIRED INFORMATION TO DOCUMENT COMPLIANCE WITH ANY REGULATIONS. INCLUDE EMISSION RATES CALCULATED IN ITEM "A" ABOVE, DATES OF MANUFACTURE, CONTROL EQUIPMENT, ETC. TO SUPPORT THESE CALCULATIONS.

C **CONTROL DEVICE ANALYSIS (FORM C and C1 through C9)** - PROVIDE A TECHNICAL EVALUATION WITH SUPPORTING REFERENCES FOR ANY CONTROL EFFICIENCIES LISTED ON SECTION C FORMS, OR USED TO REDUCE EMISSION RATES IN CALCULATIONS UNDER ITEM "A" ABOVE. INCLUDE PERTINENT OPERATING PARAMETERS (e.g. OPERATING CONDITIONS, MANUFACTURING RECOMMENDATIONS, AND PARAMETERS AS APPLIED FOR IN THIS APPLICATION) CRITICAL TO ENSURING PROPER PERFORMANCE OF THE CONTROL DEVICES). INCLUDE AND LIMITATIONS OR MALFUNCTION POTENTIAL FOR THE PARTICULAR CONTROL DEVICES AS EMPLOYED AT THIS FACILITY. DETAIL PROCEDURES FOR ASSURING PROPER OPERATION OF THE CONTROL DEVICE INCLUDING MONITORING SYSTEMS AND MAINTENANCE TO BE PERFORMED.

D **PROCESS AND OPERATIONAL COMPLIANCE ANALYSIS - (FORM E3 - TITLE V ONLY)** - SHOWING HOW COMPLIANCE WILL BE ACHIEVED WHEN USING PROCESS, OPERATIONAL, OR OTHER DATA TO DEMONSTRATE COMPLIANCE. REFER TO COMPLIANCE REQUIREMENTS IN THE REGULATORY ANALYSIS IN ITEM "B" WHERE APPROPRIATE. LIST ANY CONDITIONS OR PARAMETERS THAT CAN BE MONITORED AND REPORTED TO DEMONSTRATE COMPLIANCE WITH THE APPLICABLE REGULATIONS.

E **PROFESSIONAL ENGINEERING SEAL** - PURSUANT TO 15A NCAC 2Q .0112 "APPLICATION REQUIRING A PROFESSIONAL ENGINEERING SEAL," A PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA SHALL BE REQUIRED TO SEAL TECHNICAL PORTIONS OF THIS APPLICATION FOR NEW SOURCES AND MODIFICATIONS OF EXISTING SOURCES. (SEE INSTRUCTIONS FOR FURTHER APPLICABILITY).

I, Kathryn Swor *attest that this application for* 3M Pittsboro *has been reviewed by me and is accurate, complete and consistent with the information supplied in the engineering plans, calculations, and all other supporting documentation to the best of my knowledge. I further attest that to the best of my knowledge the proposed design has been prepared in accordance with the applicable regulations. Although certain portions of this submittal package may have been developed by other professionals, inclusion of these materials under my seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design. Note: In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application shall be guilty of a Class 2 misdemeanor which may include a fine not to exceed $10,000 as well as civil penalties up to $25,000 per violation.*

Received
MAY 12 2022
Air Permits Section

(PLEASE USE BLUE INK TO COMPLETE THE FOLLOWING)

NAME: Kathryn Swor
DATE: May 3, 2022
COMPANY: Stantec
ADDRESS: 2080 Wooddale Drive, Suite 100 Woodbury, MN 55125
TELEPHONE: 651-395-5227
SIGNATURE: Kathryn Swor
PAGES CERTIFIED: Form C1, as identified at the top of each form.

(IDENTIFY ABOVE EACH PERMIT FORM AND ATTACHMENT THAT IS BEING CERTIFIED BY THIS SEAL)

PLACE NORTH CAROLINA SEAL HERE

5/3/22

Attach Additional Sheets As Necessary

FORM E1

TITLE V GENERAL INFORMATION

IF YOUR FACILITY IS CLASSIFIED AS "MAJOR" FOR TITLE V YOU MUST COMPLETE THIS FORM AND ALL OTHER REQUIRED "E" FORMS (E2 THROUGH E5 AS APPLICABLE)

Indicate here if your facility is subject to Title V by: ☑ EMISSIONS ☐ OTHER

If subject to Title V by "OTHER", specify why: ☐ NSPS ☐ NESHAP (MACT) ☐ TITLE IV ☐ OTHER (specify) _____

If you are or will be subject to any maximum achievable control technology standards (MACT) issued pursuant to section 112(d) of the Clean Air Act, specify below:

EMISSION SOURCE ID	*EMISSION SOURCE DESCRIPTION*	*MACT*

List any additional regulation which are requested to be included in the shield and provide a detailed explanation as to why the shield should be granted:

REGULATION	*EMISSION SOURCE (Include ID)*	*EXPLANATION*
15A NCAC 02Q.0317	Total Facility	No change will be expected. Please see comments.

Comments:
In a past permit action, 3M Pittsboro proposed a limit of less than 25.0 tons of (total) HAPs, and less than 10.0 tons of any single HAP, measured as a twelve-month rolling sum, to keep the facility a synthetic minor source of hazardous air pollutants and to avoid permitting under 15A NCAC 02Q .0101 (a)(2).

Attach Additional Sheets As Necessary

FORM E2

EMISSION SOURCE APPLICABLE REGULATION LISTING

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **E2**

EMISSION SOURCE ID NO.	EMISSION SOURCE DESCRIPTION	OPERATING SCENARIO INDICATE PRIMARY (P) OR ALTERNATIVE (A)	POLLUTANT	APPLICABLE REGULATION
ES 1	*Coal/Wood Boiler*	*P - Coal*	*PM*	*NCAC 2D .0503*
		A - Wood	*PM*	*NCAC 2D .0504*
ES3537B	M Screener No. 2	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES3537C	M Screener No. 3	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES3537G	M Screener No. 4	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES3537H	M Screener No. 5	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES8913D	Undersize Conveyor No. 3 (D Screen No. 1 to Dryer Feed Conveyor No. 7)	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES8913E	C Cin Feed Conveyor No. 4 (D screen No. 1 to C crusher bin)	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES233	C Crusher No. 2B	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES2426.3	C Crusher No. 1 Bypass Chute	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES8913G	D Screen Bin No. 1 Loadout Chute	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
ES2327C	Conveyor No. 6 Metal Diverter Chute	N/A	PM, Visible Emissions	15A NCAC 02D .0510, 15A NCAC 02D .0524 (40 CFR Part 60, Subpart OOO), 15A NCAC 02D .0540
IS-30	Elevator 12	N/A	PM, Visible Emissions	15A NCAC 02Q.0503(8)

FORM E3

EMISSION SOURCE COMPLIANCE METHOD

REVISED 09/22/16 | **NCDEQ/Division Of Air Quality - Application for Air Permit to Construct/Operate** | **E3**

	Regulated Pollutant PM (PM10 and TSP)
Emission Source ID NO. ES3537B, ES3537C, ES8913D, ES8913E	Applicable Regulation 15A NCAC 2D.0524
Alternative Operating Scenario (AOS) NO: N/A	

ATTACH A SEPARATE PAGE TO EXPAND ON ANY OF THE BELOW COMMENTS

MONITORING REQUIREMENTS

Is Compliance Assurance Monitoring (CAM) 40 CFR Part 64 Applicable? ☐ YES ☑ NO

If yes, is CAM Plan Attached (if applicable, CAM plan must be attached)? ☐ YES ☑ NO

Describe Monitoring Device Type:

Describe Monitoring Location:

Other Monitoring Methods (Describe In Detail): N/A

Describe the frequency and duration of monitoring and how the data will be recorded (i.e., every 15 minutes, 1 minute instantaneous readings taken to produce an hourly average):

Initial performance testing and quarterly Method 22 visible observations will be required pursuant to NSPS OOO.

Results of the observations will be recorded on a log sheet.

RECORDKEEPING REQUIREMENTS

Data (Parameter) being recording: PM (PM10 & TSP), Visible Emissions

Frequency of recordkeeping (How often is data recorded?): Deviation from permit requirements and the results of inspections which are completed per manufacturer's recommendations and permit requirements.

Initial and Quarterly Method 22 inspections.

REPORTING REQUIREMENTS

Generally describe what is being reported: Deviation from permit requirements in accordance to permit requirements

Frequency: ☐ MONTHLY ☐ QUARTERLY ☑ EVERY 6 MONTHS ☐ OTHER (DESCRIBE):

TESTING

Specify proposed reference test method:	Completed in compliance with 40 CFR 60, Subpart OOO.
Specify reference test method rule and citation:	NSPS OOO - 40 CFR 60.675(a)
Specify testing frequency:	Initial Performance Testing, then once every 5 years.

NOTE - Proposed test method subject to approval and possible change during the test protocol process

Attach Additional Sheets As Necessary

FORM E3

EMISSION SOURCE COMPLIANCE METHOD

REVISED 09/22/16 | **NCDEQ/Division Of Air Quality - Application for Air Permit to Construct/Operate** | **E3**

	Regulated Pollutant PM (PM10 and TSP)
Emission Source ID NO. ES3537G, ES3537H	Applicable Regulation 15A NCAC 2D.0524
Alternative Operating Scenario (AOS) NO: N/A	

ATTACH A SEPARATE PAGE TO EXPAND ON ANY OF THE BELOW COMMENTS

MONITORING REQUIREMENTS

Is Compliance Assurance Monitoring (CAM) 40 CFR Part 64 Applicable? ☐ YES ☑ NO

If yes, is CAM Plan Attached (if applicable, CAM plan must be attached)? ☐ YES ☑ NO

Describe Monitoring Device Type:

Describe Monitoring Location:

Other Monitoring Methods (Describe in Detail): N/A

Describe the frequency and duration of monitoring and how the data will be recorded (i.e., every 15 minutes, 1 minute instantaneous readings taken to produce an hourly average):

Initial performance testing and quarterly Method 22 visible observations will be required pursuant to NSPS OOO.

Results of the observations will be recorded on a log sheet.

RECORDKEEPING REQUIREMENTS

Data (Parameter) being recording: PM (PM10 & TSP), Visible Emissions

Frequency of recordkeeping (How often is data recorded?): Deviation from permit requirements and the results of inspections which are completed per manufacturer's recommendations and permit requirements.

Initial and Quarterly Method 22 inspections.

REPORTING REQUIREMENTS

Generally describe what is being reported: Deviation from permit requirements in accordance to permit requirements

Frequency: ☐ MONTHLY ☐ QUARTERLY ☑ EVERY 6 MONTHS ☐ OTHER (DESCRIBE):

TESTING

Specify proposed reference test method: Completed in compliance with 40 CFR 60. Subpart OOO.

Specify reference test method rule and citation: NSPS OOO - 40 CFR 60.675(a)

Specify testing frequency: Initial Performance Testing, then once every 5 years.

NOTE - Proposed test method subject to approval and possible change during the test protocol process

Attach Additional Sheets As Necessary

FORM E3

EMISSION SOURCE COMPLIANCE METHOD

REVISED 09/22/16 | **NCDEQ/Division Of Air Quality - Application for Air Permit to Construct/Operate** | **E3**

Emission Source ID NO. ES233	Regulated Pollutant PM (PM10 and TSP)
	Applicable Regulation 15A NCAC 2D.0524

Alternative Operating Scenario (AOS) NO: N/A

ATTACH A SEPARATE PAGE TO EXPAND ON ANY OF THE BELOW COMMENTS

MONITORING REQUIREMENTS

Is Compliance Assurance Monitoring (CAM) 40 CFR Part 64 Applicable? ☐ YES ☑ NO

If yes, is CAM Plan Attached (if applicable, CAM plan must be attached)? ☐ YES ☑ NO

Describe Monitoring Device Type:

Describe Monitoring Location:

Other Monitoring Methods (Describe In Detail): N/A

Describe the frequency and duration of monitoring and how the data will be recorded (i.e., every 15 minutes, 1 minute instantaneous readings taken to produce an hourly average):

Initial performance testing and quarterly Method 22 visible observations will be required pursuant to NSPS OOO.

Results of the observations will be recorded on a log sheet.

RECORDKEEPING REQUIREMENTS

Data (Parameter) being recording: PM (PM10 & TSP), Visible Emissions

Frequency of recordkeeping (How often is data recorded?): Deviation from permit requirements and the results of inspections which are completed per manufacturer's recommendations and permit requirements.

Initial and Quarterly Method 22 inspections.

REPORTING REQUIREMENTS

Generally describe what is being reported: Deviation from permit requirements in accordance to permit requirements

Frequency: ☐ MONTHLY ☐ QUARTERLY ☑ EVERY 6 MONTHS ☐ OTHER (DESCRIBE):

TESTING

Specify proposed reference test method: Completed in compliance with 40 CFR 60, Subpart OOO.

Specify reference test method rule and citation: NSPS OOO - 40 CFR 60.675(a)

Specify testing frequency: Initial Performance Testing, then once every 5 years.

NOTE - Proposed test method subject to approval and possible change during the test protocol process

Attach Additional Sheets As Necessary

Appendix E: CAM Assessment

3M Environment,
Health, and Safety

3M Center 0224-05-W-03
St. Paul, MN 55144

Appendix E: Facility-Wide CAM Applicability Assessment

Compliance Assurance Monitoring (CAM, 40 CFR 64) is generally applicable to permitted major sources under 40 CFR Part 70 ("Part 70", Title V) who use control equipment to comply with emission limits and do not have corresponding continuous compliance determination requirements in the Permit. For an emission unit or process to be subject to CAM for a pollutant, all of the following must be true:

- Pre-control Potential to Emit (PTE) for the emission unit or process ("emission unit") is greater than the Part 70 major source threshold for the pollutant (40 CFR 64.2(a)(3));
- The emission unit is subject to an emission limitation or standard for the pollutant that is not otherwise exempted under CAM (40 CFR 64.2(a)(1));
- The emission unit uses a control device to achieve compliance with the emission limitation or standard (40 CFR 64.2(a)(2)).

An initial screening for CAM applicability at the 3M Pittsboro facility was conducted by reviewing facility-wide PTE calculations (last submitted to the Department as part of the 2020 operating permit renewal) to identify any individual emission units that have pre-controlled PTE greater than major source thresholds for any pollutant regulated under Part 70 (Table E-1). PM_{10} is the only Part 70 regulated pollutant where a subset of individual emission units have potential emissions greater than major source thresholds. There are no individual emissions units, or groups of emission units venting to a common control device with PTE greater than Part 70 major source thresholds of any other Part 70 regulated pollutant. Those emission units identified as having pre-controlled PM_{10} PTE greater than Part 70 major source thresholds were further reviewed to determine 1) whether the emission unit was subject to a non-exempt CAM limit (40 CFR 64.2(b)), 2) whether the emission unit uses control equipment for compliance with the limit, and 3) whether there is a continuous compliance determination for the limit in the permit.

The Line 1 and 2 Mixers (ESCPM1, ESCPM2), the to-be-constructed Line 3 Mixer (ESCPM3), the Line 1 and 2 Kilns (ESCPK1, ESCPK2), and the to-be-constructed Line 3 Kiln (ESCPK3) each have pre-controlled PTE for PM_{10} greater than Part 70 major source thresholds. Each of these emission units are subject to a state regulatory process weight rate (PWR) limit on particulate (15A NCAC 02D.0510), which is listed in the Permit. "Particulate" in this instance is interpreted to include PM_{10}. There is no associated continuous compliance determination indicated in the Permit for the PWR limit. Since there is no continuous compliance determination specified in the Permit for the PWR limit, the Line 1 and 2 Mixers, and the Line 1 and 2 Kilns are subject to CAM for PM_{10} for the PWR limit. Once constructed, the Line 3 Mixer and Line 3 Kiln will also be subject to CAM for PM_{10} for the PWR limit assuming maximum process rate and control configurations do not change from what is currently represented in PTE calculations.

The Line 1 and 2 Preheaters (ESCPPH1, ESCPPH2), the to-be-constructed Line 3 Preheater (ESCPPH3), and the CNS Dryer (ES 1415) each are subject to an NSPS UUU particulate matter emissions limit. "Particulate matter" in this instance includes PM_{10} (40 CFR 60.2). Draft Permit - T09, Condition 2.1.D.2.e.i. requires installation and operation of a COMS for a continuous compliance determination for compliance with the NSPS UUU limit. The Line 1 and 2 Preheaters and the CNS Dryer are exempt from CAM pursuant to 40 CFR 64.2(b)(1)(vi) since a continuous compliance determination method is specified by Draft Permit -T09, Condition 2.1.D.2.e.i for compliance with the NSPS UUU emissions limit. Once constructed, the Line 3 Preheater will not be subject to CAM for PM_{10} for the NSPS UUU PM limit assuming maximum process rate and control configurations do not change from what is currently represented in PTE calculations.

CAM applicability was also reviewed on a per-control-device basis, based on North Carolina Department of Environmental Quality guidance. The individual PTEs of multiple units venting to a common control device were summed on a per-control-device basis for comparison to Part 70 major source thresholds (Table E-2). None of the baghouses that vent multiple units have a summed pre-control PM_{10} PTE greater than Part 70 major source thresholds. Those baghouses indicated in Table 2 with pre-controlled PM_{10} potential to emit greater than major source thresholds each vent a single unit, not multiple units. CAM applicability for 3M Pittsboro does not change when it is reviewed on a per-control-device basis.

Table E-1: CAM Applicability Analysis by Individual Emission Unit/Process

Emission Unit ID	Description	Pre-Controlled PM_{10} PTE (tpy)[1]	CAM-Applicable Emission Limit?	Use Control to Comply with Limit?	Continuous Compliance Determination in Permit?	Subject to CAM?
ESCPM1	Line 1 Mixer	5,450	Yes – PWR PM limit (Condition 2.1.F of draft Permit -T09)	Yes	No	Yes
ESCPM2	Line 2 Mixer	5,450	Yes – PWR PM limit (Condition 2.1.F of draft Permit -T09)	Yes	No	Yes
ESCPM3 (to be constructed)	Line 3 Mixer	5,450	Yes – PWR PM limit (Condition 2.1.F of draft Permit -T09)	Yes	No	Yes
ESCPK1	Line 1 Kiln	11,687	Yes – PWR PM limit (Condition 2.1.E of draft Permit -T09)	Yes	No	Yes
ESCPK2	Line 2 Kiln	11,687	Yes – PWR PM limit (Condition 2.1.E of draft Permit -T09)	Yes	No	Yes
ESCPK3 (to be constructed)	Line 3 Kiln	11,687	Yes – PWR PM limit (Condition 2.1.E of draft Permit -T09)	Yes	No	Yes
ESCPPH1	Line 1 Preheater	5,507	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No
ESCPPH2	Line 2 Preheater	5,507	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No
ESCPPH3 (to be constructed)	Line 3 Preheater	5,507	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No
ES1415	CNS Dryer	59,995	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No

1 Source: "Pittsboro PTE Updated" in 3M internal files, dated 05/04/2022. Facility-wide PTE provided as part of the 2020 Operating Permit Renewal Application.

Table E-2: CAM Applicability for Multiple Units Venting to One Control Device

Baghouse ID	Description	Sum of Pre-Controlled PM_{10} PTE by CBD (tpy)[1]	CAM-Applicable Emission Limit?	Continuous Compliance Determination in Permit?	Subject to CAM?	Emission Units Venting to CAM-Subject CDBs
CDB1	Crushing BH 1	25.45			No	
CDB2	Screening BH 1	60.74			No	
CDB3	CNS Dryer BH	59,995	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No	
CDB4	Screening BH 2	40.35			No	
CDB5	Crushing BH 2	16.77			No	
CDB6	Grade Silo BH	7.35			No	
CDB7	Waste Handling BH	2.36			No	
CDB8	Raw Granule BH	4.34			No	
CDB9	Line 1 Preheater BH	5,507	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No	
CDB10	Line 2 Preheater BH	5,507	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No	
CDB11	Line 1 Mixer BH	5,450	Yes – PWR PM limit (Condition 2.1.F of draft Permit -T09)	No	Yes	Line 1 Mixer (ESCPM1)
CDB12	Line 2 Mixer BH	5,450	Yes – PWR PM limit (Condition 2.1.F of draft Permit -T09)	No	Yes	Line 2 Mixer (ESCPM2)
CDB13	Line 1 Kiln BH	11,687	Yes – PWR PM limit (Condition 2.1.E of draft Permit -T09)	No	Yes	Line 1 Kiln (ESCPK1)

Continued on next page

Table E-2: CAM Applicability for Multiple Units Venting to One Control Device (continued)

Baghouse ID	Description	Sum of Pre-Controlled PM_{10} PTE by CBD (tpy)[1]	CAM-Applicable Emission Limit?	Continuous Compliance Determination in Permit?	Subject to CAM?	Emission Units Venting to CAM-Subject CDBs
CDB14	Line 2 Kiln BH	11,687	Yes – PWR PM limit (Condition 2.1.E of draft Permit -T09)	No	Yes	Line 2 Kiln (ESCPK2)
CDB15	Finished Granule BH	29.54			No	
CDB16 (to be constructed)	Crushing BH 3	34.70			No	
CDB17 (to be constructed)	Screening BH 3	12.33			No	
CDB18 (to be constructed)	Line 3 Preheater BH	5,507	Yes – NSPS UUU limit (Condition 2.1.D.2.b. of draft Permit -T09)	Yes (COMS, Condition 2.1.D.2.e.i of draft Permit -T09)	No	
CDB19 (to be constructed)	Line 3 Mixer BH	5,450	Yes – PWR PM limit (Condition 2.1.F of draft Permit -T09)	No	Yes	Line 3 Mixer (ESCPM3)
CDB20 (to be constructed)	Line 3 Kiln BH	11,687	Yes – PWR PM limit (Condition 2.1.E of draft Permit -T09)	No	Yes	Line 3 Kiln (ESCPK3)

1 Source: "Pittsboro PTE Updated" in 3M internal files, dated 05/04/2022. Facility-wide PTE provided as part of the 2020 Operating Permit Renewal Application.

Appendix F: 21C Application Emission Calculations and Process Flow Diagram

Potential Emission Calculations
Pittsboro

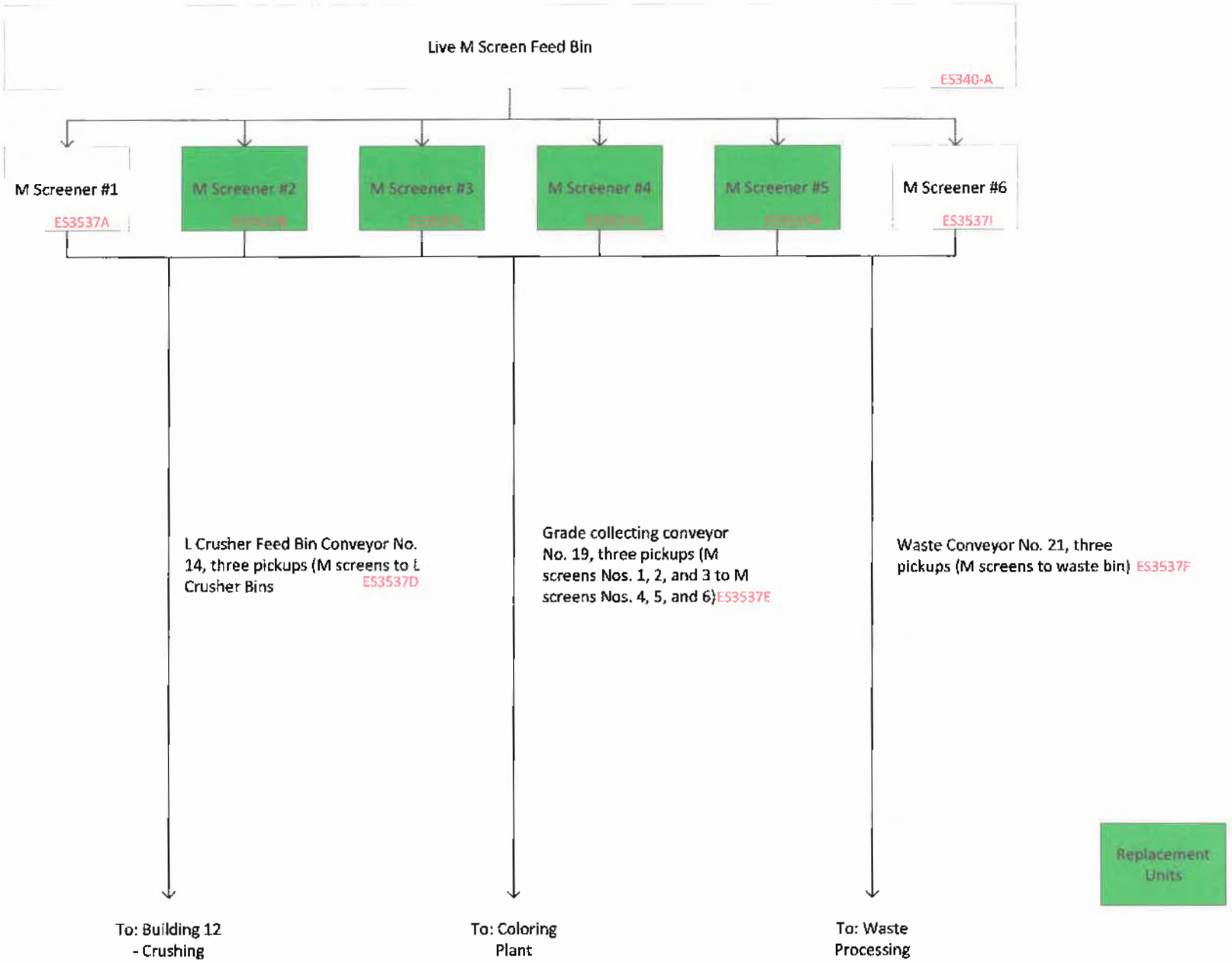
EU No.	EU or GP Description	CE No.	Pollutant Name	CAS No. (no dashes)	Max Rate units/hr	Max Rate units	Em Factor lb/units	Em Factor units	Ref. No.	Uncontr Poti to Emit (PTE) (lb/hr)	Uncontr Poti to Emit (PTE) (tpy)	Poti Contr Eff (%)	Contr Poti to Emit (PTE) (lb/hr)	Contr Poti to Emit (PTE) (tpy)
ES3537B	M Screener No. 2	CDB2	PM	N/A	753	tons	0.025	ton	1	18.83	82.45	99.97%	5.65E-03	2.47E-02
ES3537B	M Screener No. 2	CDB2	PM10	N/A	753	tons	0.0087	ton	1	6.55	28.69	99.92%	5.24E-03	2.30E-02
ES3537C	M Screener No. 3	CDB2	PM	N/A	753	tons	0.025	ton	1	18.83	82.45	99.97%	5.65E-03	2.47E-02
ES3537C	M Screener No. 3	CDB2	PM10	N/A	753	tons	0.0087	ton	1	6.55	28.69	99.92%	5.24E-03	2.30E-02
ES3537G	M Screener No. 4	CDB4	PM	N/A	753	tons	0.025	ton	1	18.83	82.45	99.97%	5.65E-03	2.47E-02
ES3537G	M Screener No. 4	CDB4	PM10	N/A	753	tons	0.0087	ton	1	6.55	28.69	99.92%	5.24E-03	2.30E-02
ES3537H	M Screener No. 5	CDB4	PM	N/A	753	tons	0.025	ton	1	18.83	82.45	99.97%	5.65E-03	2.47E-02
ES3537H	M Screener No. 5	CDB4	PM10	N/A	753	tons	0.0087	ton	1	6.55	28.69	99.92%	5.24E-03	2.30E-02
ES8913D	Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7)	CDB2	PM	N/A	535	tons	0.0030	ton	2	1.61	7.03	99.97%	4.81E-04	2.11E-03
ES8913D	Undersize conveyor No. 3 (D screen No. 1 to dryer feed conveyor No. 7)	CDB2	PM10	N/A	535	tons	0.0011	ton	2	0.59	2.58	99.92%	4.71E-04	2.06E-03
ES8913E	C bin feed conveyor No. 4 (D screen No. 1 to C crusher bin)	CDB2	PM	N/A	535	tons	0.0030	ton	2	1.61	7.03	99.97%	4.81E-04	2.11E-03
ES8913E	C bin feed conveyor No. 4 (D screen No. 1 to C crusher bin)	CDB2	PM10	N/A	535	tons	0.0011	ton	2	0.59	2.58	99.92%	4.71E-04	2.06E-03
ES233	C Crusher No. 2B	CDB5	PM	N/A	300	tons	0.0054	ton	3	1.62	7.10	99.97%	4.86E-04	2.13E-03
ES233	C Crusher No. 2B	CDB5	PM10	N/A	300	tons	0.0024	ton	3	0.72	3.15	99.92%	5.76E-04	2.52E-03
ES2426.3	C Crusher No. 1 Bypass Chute	CDB1	PM	N/A	535	tons	0.0030	ton	2	1.61	7.03	99.97%	4.81E-04	2.11E-03
ES2426.3	C Crusher No. 1 Bypass Chute	CDB1	PM10	N/A	535	tons	0.0011	ton	2	0.59	2.58	99.92%	4.71E-04	2.06E-03
ES8913G	D Screen Bin No. 1 Loadout Chute	N/A	PM	N/A	360	tons	0.0030	ton	2	1.08	4.73	0.00	1.080	4.73
ES8913G	D Screen Bin No. 1 Loadout Chute	N/A	PM10	N/A	360	tons	0.0011	ton	2	0.40	1.73	0.00	0.396	1.73
ES2327C	Conveyor No. 6 Metal Diverter Chute	N/A	PM	N/A	1	tons	0.0030	ton	2	3.00E-03	1.31E-02	0.00	3.00E-03	1.31E-02
ES2327C	Conveyor No. 6 Metal Diverter Chute	N/A	PM10	N/A	1	tons	0.0011	ton	2	1.10E-03	4.82E-03	0.00	1.10E-03	4.82E-03
IS-30	Elevator #12	N/A	PM	N/A	10	tons	0.0030	ton	2	0.03	0.13	0.00	0.030	0.13
IS-30	Elevator #12	N/A	PM10	N/A	10	tons	0.0011	ton	2	0.01	0.05	0.00	0.011	0.05

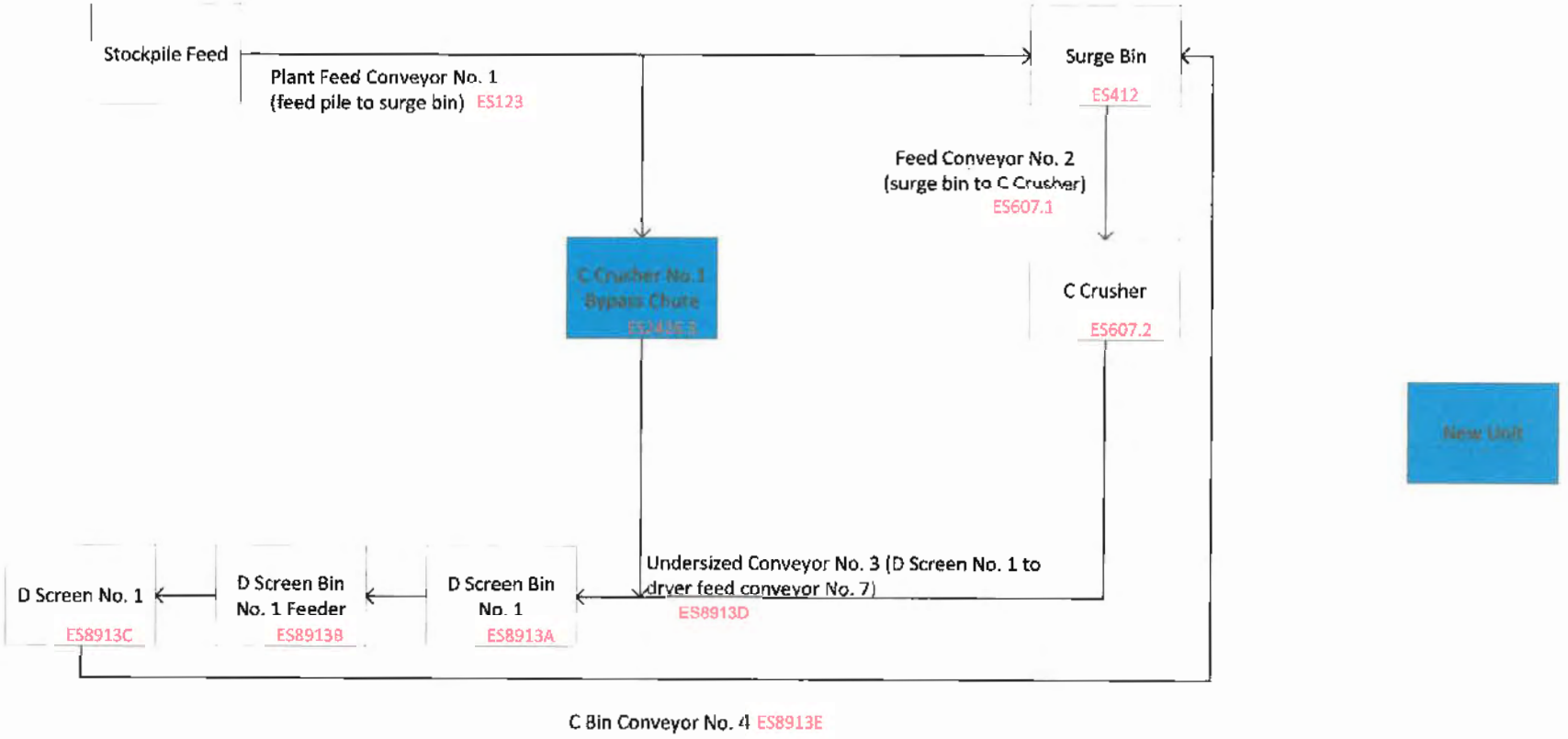
Emission References and Sample Calculations
Pittsboro

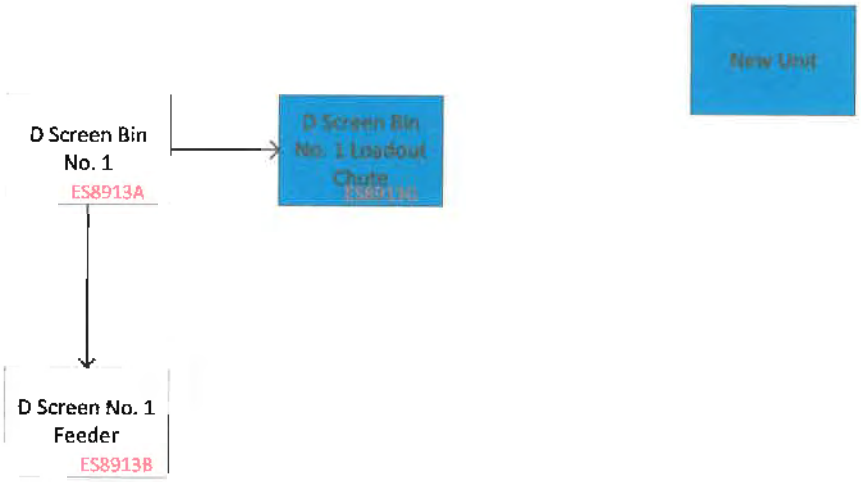
1 AP-42 Emission factors are based on Uncontrolled Screening AP-42 Chapter 11.19.2, Crushed Stone Processing and Pulverized Mineral processing.
Control efficiency is based on total enclosure to baghouse (PM 99.97%; PM10 99.92%) or uncontrolled (0%)

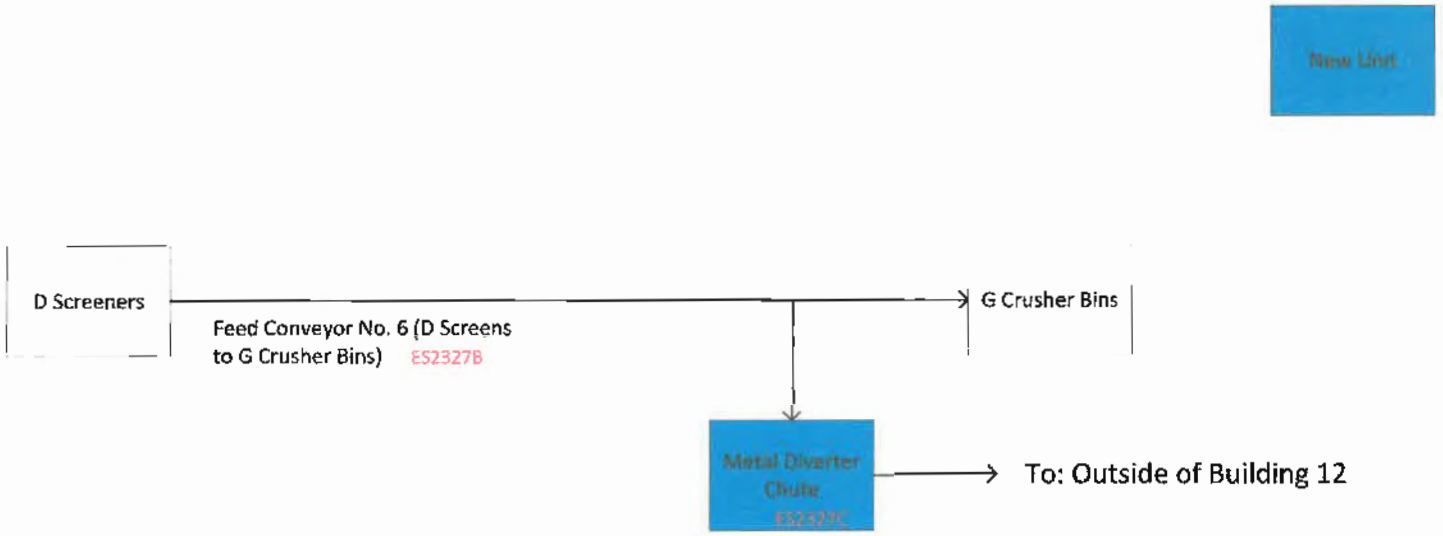
2 AP-42 Emission factors are based on Uncontrolled Conveyor Transfer Points, AP-42 Chapter 11.19.2, Crushed Stone Processing and Pulverized Mineral processing.
Control efficiency is based on total enclosure to baghouse (PM 99.97%; PM10 99.92%) or uncontrolled (0%)

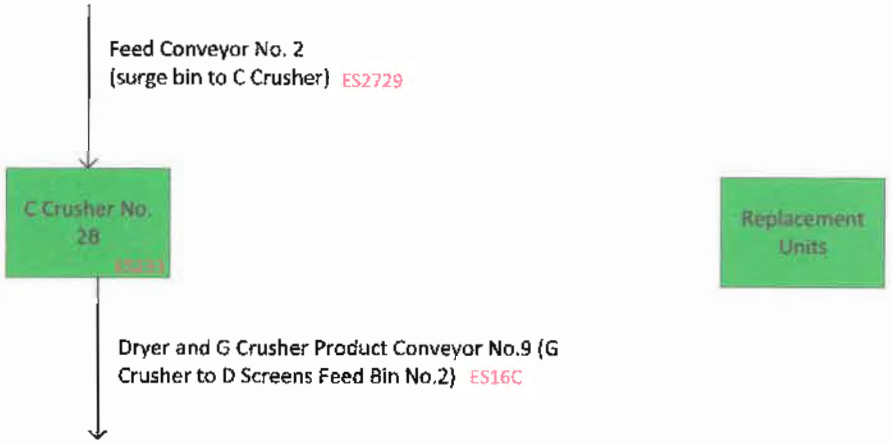
3 AP-42 Emission factors are based on Uncontrolled Tertiary Crushing, AP-42 Chapter 11.19.2, Crushed Stone Processing and Pulverized Mineral processing.
Control efficiency is based on total enclosure to baghouse (PM 99.97%; PM10 99.92%)

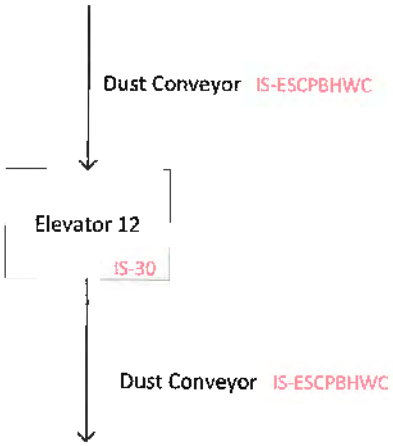

Live M Screen Feed Bin
ES340-A
M Screener #1
ES3537A
M Screener #2
M Screener #3
M Screener #4
M Screener #5
M Screener #6
ES3537I
L Crusher Feed Bin Conveyor No. 14, three pickups (M screens to L Crusher Bins ES3537D
Grade collecting conveyor No. 19, three pickups (M screens Nos. 1, 2, and 3 to M screens Nos. 4, 5, and 6) ES3537E
Waste Conveyor No. 21, three pickups (M screens to waste bin) ES3537F
Replacement Units
To: Building 12 - Crushing
To: Coloring Plant
To: Waste Processing


Stockpile Feed
Plant Feed Conveyor No. 1
(feed pile to surge bin) ES123
Surge Bin
ES412
Feed Conveyor No. 2
(surge bin to C Crusher)
ES607.1
C Crusher No.1
Bypass Chute
ES34353
C Crusher
ES607.2
New Unit
D Screen No. 1
ES8913C
D Screen Bin
No. 1 Feeder
ES89138
D Screen Bin
No. 1
ES8913A
Undersized Conveyor No. 3 (D Screen No. 1 to
dryer feed conveyor No. 7)
ES8913D
C Bin Conveyor No. 4 ES8913E


New Unit
D Screen Bin No. 1
ES8913A
D Screen Bin No. 1 Loadout Chute
D Screen No. 1 Feeder
ES8913B


New Unit
D Screeners
Feed Conveyor No. 6 (D Screens to G Crusher Bins) ES2327B
G Crusher Bins
Metal Diverter Chute ES2327C
To: Outside of Building 12


Feed Conveyor No. 2
(surge bin to C Crusher) ES2729
C Crusher No. 2B
ES233
Replacement Units
Dryer and G Crusher Product Conveyor No.9 (G Crusher to D Screens Feed Bin No.2) ES16C


Dust Conveyor IS-ESCPBHWC
Elevator 12
IS-30
Dust Conveyor IS-ESCPBHWC

Appendix G: DAHS Narrative

3M Environment,
Health, and Safety

3M Center 0224-05-W-03
St. Paul, MN 55144

Appendix G: Description of Compliance Assurance Monitoring (CAM) Continuous Compliance Data Handling – dP measurements and opacity

Instantaneous differential pressure (dP) measurements are recorded for the Line 1 and 2 Mixer Baghouses, Line 1 Kiln Baghouses A and B, and Line 2 Kiln Baghouses A and B once every 1 second in Historian. Each day, the previous day's 5-minute average records for each source are calculated and stored via an automated SQL query of the Historian data, then these records are exported to a Daily Differential Pressure PDF Report that is automatically saved to the plant's environmental records files. The Report displays the average 5-minute records and a calculated hourly and daily average dP for the Line 1 and 2 Mixer Baghouses, Line 1 Kiln Baghouses A and B, and Line 2 Kiln Baghouses A and B and 2 Kilns.

Instantaneous opacity measurements from the COMS for the CNS Dryer, Line 1 Preheater, and Line 2 Preheater are recorded once every 10 seconds in a data acquisition and handling hardware system. The software Airvision is used to automatically calculate and record 6-minute block averages for opacity from the 10-second instantaneous measurements recorded in the DAHS hardware.