Phillips, Cindy

From: Gordon, Ray (DERM) [GordoR@miamidade.gov]
Sent: Monday, March 07, 2005 3:47 PM
To: Phillips, Cindy
Subject: RE: Tarmac/Titan Pennsuco Cement 0250020

028 Raw Mill & Pyroprocessing System (Kiln 5): I have received a test summary report for PM testing on 11/17/04 and 11/18/04 but don't see this data in ARMS. Have you received and reviewed this test data? If so, did you consider the testing to be valid? Has an opacity test or dioxin test been performed yet?
The reports for dioxins/furans and PM were received in this office on January 18,2005. The results are not yet in ARMS but they are well within the applicable limits. The tests are valid. We did not receive any VE reports
027 Clinker Handling System: Have you received and reviewed VE test(s) for this EU?
No
020 Slag Dryer: Have you received and reviewed PM and VE tests for 2004?
The slag dryer is not in use
026 Coal Handling System (including Coal Mill): Have you received and reviewed VE tests for this EU? Have you received and reviewed the PM test for the Coal Mill?
No
022 and 023 Nonmetallic Mineral Processing Plant Equipment: Have you received and reviewed VE tests for these EUs in 2004 or 2005?
No
024 and 025 Concrete Block Plant and Ready Mix Plant: Have you received and reviewed VE tests for these EUs 2004 or 2005?
No
Also, have you received and reviewed VE tests for any of the Finish Mills in 2004 or 2005?
No

-----Original Message-----
From: Phillips, Cindy [mailto:Cindy.Phillips@dep.state.fl.us]
Sent: March 07, 2005 11:39 AM
To: gordor@miamidade.gov
Cc: jordac@miamidade.gov
Subject: Tarmac/Titan Pennsuco Cement 0250020

Ray, do you have any pollutant test or VE test data for Tarmac/Titan in your files that has not been put into ARMS yet? In the compliance plan for their draft Title V revision I've asked them to perform compliance testing for the the following which they say has been done.

028 Raw Mill & Pyroprocessing System (Kiln 5): I have received a test summary report for PM testing on 11/17/04 and 11/18/04 but don't see this data in ARMS. Have you received and reviewed this test data? If so, did you consider the testing to be valid? Has an opacity test or dioxin test been performed yet?

027 Clinker Handling System: Have you received and reviewed VE test(s) for this EU?

020 Slag Dryer: Have you received and reviewed PM and VE tests for 2004?

026 Coal Handling System (including Coal Mill): Have you received and reviewed VE tests for this EU? Have you received and reviewed the PM test for the Coal Mill?

022 and 023 Nonmetallic Mineral Processing Plant Equipment: Have you received and reviewed VE tests for these EUs in 2004 or 2005?

024 and 025 Concrete Block Plant and Ready Mix Plant: Have you received and reviewed VE tests for these EUs 2004 or

2005?

Also, have you received and reviewed VE tests for any of the Finish Mills in 2004 or 2005?

Please let me know as soon as possible.

Thanks,

Cindy

Phillips, Cindy

From: Jordahl, Claire (DERM) [JordaC@miamidade.gov]
Sent: Monday, August 30, 2004 2:27 PM
To: Phillips, Cindy
Cc: Garcia, Manuel (DERM); Muthiah, Mallika (DERM); Gordon, Ray (DERM)
Subject: FW: Titan - Baghouse Info


Untitled AttachmentCEM-ControlEquipment-PK5.pdf (...

This was sent by Scott Quaas and has all the 'pending' baghouse info that was not in the 016-AC project application.

Claire Jordahl, Air Permit Engineer
Miami-Dade County Environmental Resources Management 305-372-6949
www.miamidade.gov
"Delivering Excellence Every Day"

-----Original Message-----
From: Quaas Scott [mailto:SQuaas@titanamerica.com]
<mailto:[mailto:SQuaas@titanamerica.com]>
Sent: Friday, August 27, 2004 4:18 PM
To: Jordahl, Claire (DERM)
Subject: Titan - Baghouse Info

<<Untitled Attachment>> <<CEM-ControlEquipment-PK5.pdf>>

Phillips, Cindy

Sent: Monday, August 30, 2004 2:27 PM

image001.gif (1 KB)

Claire . . .

Attached is a list of all the baghouse information not included in the permit update application. I have also attached an info sheet regarding FLS Airtech for your information. Let me know if you need anything further.

Scott Quaas

Tarmac America, LLC

-A Titan America Business-

Environmental Manager

Phone: 954.425.4165

Fax: 954.480.9352

E-Mail: <BLOCKED::mailto:squaas@titanamerica.com> squaas@titanamerica.com

TITAN AMERICA

Pennsuco Cement
Control Equipment

PK5 Units

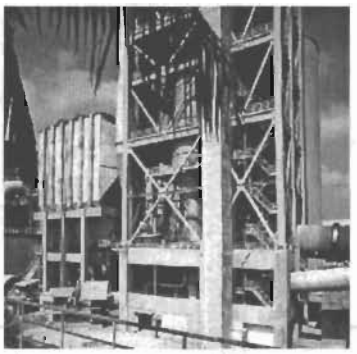
EU ID	1R	Coal System						
Unit ID	Equip.MFG	Model	Bag#	CFM	Cloth Area (sqft)	A/C Ratio	Vent Size	Vent AGL
461.BF130	FLS Airtech	36TAX10FM	36	1400	469	3.0:1	9"x10"	126
461.BF230	FLS Airtech	36TAX10FM	36	1400	469	3.0:1	9"x10"	126
461.BF350	FLS Airtech	121CX10	121	5550	1575	3.5:1	12"x15"	75
461.BF500	FLS Airtech	735SX12	735	54500	13855	3.9:1	main stack	420
461.BF650	FLS Airtech	800/7	9	294	75	3.9:1	5"	67
461.BF750	FLS Airtech	800/7	9	294	75	3.9:1	5"	67

EU ID	2R	Pyroprocessing						
Unit ID	Equip.MFG	Model	Bag#	CFM	Cloth Area (sqft)	A/C Ratio	Vent Size	Vent AGL
331.BF200	FLS Airtech	M5C690D16(16)	6900	605000	173397	3.0:1	14'	420
331.BF645	Midwest	MVL54H	36	3500	1167	3.9:1	10"	46
331.BF740	FLS Airtech	100C10	100	4250	1302	3.3:1	12"x15"	125
341.BF350	FLS Airtech	64C10	64	3760	833	4.5:1	11"x13"	241
351.BF410	FLS Airtech	64C10	64	4000	833	4.8:1	11"x13"	84
351.BF440	FLS Airtech	100C10	100	4760	1320	3.7:1	12"x15"	45
351.BF470	FLS Airtech	100C10	100	4100	1302	3.2:1	12"x15"	353

EU ID	4R	Clinker Handling & Storage						
Unit ID	Equip.MFG	Model	Bag#	CFM	Cloth Area (sqft)	A/C Ratio	Vent Size	Vent AGL
441.BF540	FLS Airtech	100C10	100	4600	1302	3.5:1	12"x15"	53
481.BF140	FLS Airtech	196C10	196	12000	2552	4.7:1	19"x23"	185
481.BF330	FLS Airtech	100C10	100	6100	1302	4.7:1	16"x19"	103
481.BF540	FLS Airtech	100C10	100	4700	1302	3.6:1	12"x15"	44
481.BF640	FLS Airtech	100C10	100	4700	1302	3.6:1	12"x15"	42
481.BF730	FLS Airtech	304C10	304	18700	3958	4.7:1	23"x33"	113
481.BF930	FLS Airtech	304C10	304	15000	3958	3.8:1	20"x30"	113

EU ID	6R	Raw Mill Feed & Grinding						
Unit ID	Equip.MFG	Model	Bag#	CFM	Cloth Area (sqft)	A/C Ratio	Vent Size	Vent AGL
311.BF650	FLS Airtech	144C10	144	8500	1875	4.5:1	19"x19"	98
311.BF750	FLS Airtech	144C10	144	7750	1875	4.5:1	18"x27"	17
311.BF950	FLS Airtech	225C10	225	11700	2930	4.0:1	20"x30"	68
321.BF470	FLS Airtech	225C10	225	10800	2930	3.7:1	17"x21"	100

F.L.Smidth Airtech Cement Industry



There are three main point sources of dust emissions from cement plants.

Kiln systems, clinker coolers and cement mills.

Custom-made solutions will ensure that your emission level always is kept. F.L.Smidth Airtech will guarantee a clean environment.

A Clean Solution for Cement Plants

Problems facing Cement Producers

Cement production is characterized by varying operating conditions of the production machines. Start and stop of machines in the process gives changes in the gas and dust composition, this requires that not only the filter, but also cooling devices, dust transportation, ID fans and dampers are designed in relation to each other and in relation to the process conditions.

We know the problems:

- very fine dust particles from the kiln
- variation in outlet temperature from kiln and cooler
- wet bottom in the cooling tower
- sticky dust from kiln by-pass

Typical solutions

A complete process line for removal of dust and sulphur from a cement kiln could consist of:
A cooling device (cooling tower or heat exchanger), a filter (electrostatic precipitators, or fabric filter), gas absorption equipment, dust removal systems, ducts and fan and a water treatment plant. De-dusting of clinker coolers and cement and coal mills are often done with electrostatic precipitators or bag filters in combination with a heat exchanger.

Who are we ?

F.L.Smidth Airtech has deep roots within the cement industry. Being a part of the F.L.Smidth Group gives you the benefit of working with a company who have in-depth knowledge of all the processes involved in cement production. We employ more than 200 extremely competent and well-educated engineers. We know the cement production process inside out.

Your benefits

In F.L.Smidth Airtech we supply custom made solutions. This means that we deliver a clean environment for your plant. You will get custom designed total solutions - considering both economical and technical aspects - based on our experience from more than 2,100 installations in the Cement industry. You will get a guarantee of performance as well as of the time for implementation, giving a minimum disturbance to the production.

Industry

Solution examples

We are proud to be a partner to the Cement industry. F.L.Smidth Airtech has a rich history of working with some of the largest cement companies in the world.

ENCI, Holland

A total turnkey solution including a large four field electrostatic precipitator for de-dusting of the kiln and dryer. The ESP is guaranteed for an emission of max. 10 mg/Nm³ dry gas, but is operating well below that level.

NORCEM, Norway

A 3,500 tpd cement kiln burning hazardous waste. Emissions must be below 10 mg/Nm³ for dust and 50 micro g/Nm³ for mercury. Two fabric filters are installed after an electrostatic precipitators. The plant can operate with only the ESPs, or when burning hazardous waste, the fabric filters are connected. Mercury collection is ensured by injection of activated carbon. For optimum adsorption of mercury the existing gas conditioning tower was rebuilt to reduce the outlet temperature to 135 °C.

Blue Circle, Hope Cement, UK / Fabric Filters

Two fabric filters for de-dusting of the kiln gases. The guaranteed emission from these filters is 10 mg/Nm³. Flow rate is 594,000 Nm³/h at a max. temperature of 260 °C.

Aalborg Portland, Denmark, Scrubbers

A solution for sulphur dioxide removal, including two wet scrubber systems. The scrubbers are part of a new heat recuperation system, which utilises the heat in the gases for the city's district heating system. The scrubbers produce gypsum, which is used in the cement mills.

APMC Rawang, Malaysia,

Clinker Cooler, Fabric filter with heat exchanger

A 5,800 tpd grate cooler de-dusted by a fabric filter preceded by a tube heat exchanger.

FLSmidth AIRTECH

F.L.Smidth Airtech supplies Air Polution Control equipment: Electrostatic precipitators • FabriClean pulse-jet fabric filters • Gas conditioning towers • Desulphurization systems • COROMAX pulse systems • PIACS microprocessor controllers and other advanced electrical control systems • Dust transport and storage equipment • All kinds of auxiliary equipment like fans, flue gas ducts, cyclones etc. • We supply new equipment or upgrading of existing equipment - no matter wehter the existing equipment is supplied by us or not.

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DK-2500 Valby
Tel. +45 3618 2000
Fax. +45 3618 2030
E-mail: info@flsairtech.com
www.flsairtech.com

Rev. 1 MRS

Phillips, Cindy

From: Phillips, Cindy
Sent: Wednesday, August 18, 2004 4:53 PM
To: 'jordac@miamidade.gov'; 'gordor@miamidade.gov'; 'garcima@miamidade.gov'
Cc: Linero, Alvaro
Subject: Tarmac Revised Draft Revision

Have you found the design info (Cloth Areas, and Air-to-Cloth Ratios) for the baghouses for the following systems that Tarmac was supposed to submit to DERM at they time they applied for their building permits?

coal handling system
raw mill and pyroprocessing
raw material handling
clinker handling & storage

Have you found the weekly reports of their hourly clinker production in Kilns 3 and 5 that Tarmac was supposed to start submitting after Kiln 5 started-up?

I think I have made all of the edits that we discussed yesterday. However, when I was editing Subsection E (see attachment) I saw something else that I need to ask you about. Table 1 (see other attachment) is listed on page 3 of the permit as a relevant document, provided to the permittee for information purposes only, so I changed the wording in the permitting note in Subsection E to reflect this. However, when I read specific condition E.1.a., it seemed that the construction permit 0250020-012-AC intended Table 1 to be an enforceable attachment.

Do you want Table 1 to be an enforceable attachment, or for information purposes only? (I'm assuming there is only one Table 1.)

-Cindy

Phillips, Cindy

From: Jordahl, Claire (DERM) [JordaC@miamidade.gov]
Sent: Tuesday, July 20, 2004 9:31 AM
To: Phillips, Cindy
Subject: RE: Additional Information Submitted for Tarmac (0250020-016-AC)

Tarmac Flow Diagram 3pgs .pdf ..

<<Tarmac Flow Diagram 3pgs .pdf>> Cindy - This is the entire 3/18/04 submittal from the paper file including the 2nd flow diagram dated 3/11/04. As we discussed, I was not able to see any changes on the 2/27/04 diagram either. The 2nd diagram in the submittal shows the 'as-built' process flow/cfm/etc without the changes. Claire

Claire Jordahl
DERM Air Permit Engineer
(P) 305-372-6925
(F) 305-372-6954

-----Original Message-----
From: Phillips, Cindy [mailto:Cindy.Phillips@dep.state.fl.us]
Sent: Monday, July 19, 2004 5:05 PM
To: jordac@miamidade.gov
Subject: FW: Additional Information Submitted for Tarmac (0250020-016-AC)

<< File: Tarmac additional info 0250020-016-AC.pdf >> Claire, I think my eyes must be getting worse because I couldn't find the differences between this flow diagram, dated 2/27/2004, and the flow diagram, dated 1/30/2004, that was included with the application. What got changed?

-Cindy

-----Original Message-----
From: Garcia, Manuel (DERM) [mailto:GarciMa@miamidade.gov]
Sent: Monday, July 19, 2004 3:58 PM
To: Phillips, Cindy
Subject: Additional Information Submitted for Tarmac (0250020-016-AC)

Cindy,
Attached please find the additional information submitted by Tarmac for the above referenced project.

<<Tarmac additional info 0250020-016-AC.pdf>>
Thanks
Rick Garcia
Air Permitting Project Manager
Department of Environmental Resources Management
Miami-Dade County
305-372-6938
305-372-6954 fax
garcima@miamidade.gov

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL USA 32653
Telephone (352) 336-5600
Fax (352) 336-6603
www.golder.com

February 7, 2005

0537511

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road, MS #5505

Attention: Ms. Cindy Phillips, P.E.

RE: Air Construction Permit Project No.: 0250020-016-AC
Request for Revision to Air Construction Permit No.: 0250020-010-AC
Tarmac Pennusco Cement Plant, Medley, Miami-Dade County

Dear Ms. Phillips:

Based on discussions at our meeting on December 15, 2004, and subsequent phone conversations with you concerning revision of Air Construction Permit No. 0250020-010-AC, Tarmac Pennusco Cement Plant (Tarmac) is submitting the attached revisions to its pending construction permit application. The revised application reflects the following changes:

1. Revised emission rate calculation tables (see Attachment A) reflecting several facility or operational modifications as described below:
   - Emissions from the Coal Mill, Kiln, Cooler, and Raw Mill are all vented through the Main Stack, which has a PM/PM_{10} emission limit of 0.125 lb/ton of kiln feed. Previously, however, PM/PM_{10} emissions from the Coal Mill have been calculated separately than those for the Main Stack. Based on the results of recent compliance tests for the Main Stack (see Attachment B), PM emissions from the Main Stack, during concurrent operation of the Kiln, Cooler, Raw Mill, and Coal Mill, are well below the permit limit of 0.125 lb/ton of kiln feed. As such, Tarmac requests that the permit limit for the Main Stack include emissions from the Coal Mill. Since the emission limit for the Main Stack is a function of the kiln feed rate, and Tarmac may operate the Coal Mill when the kiln is not operating, Tarmac requests that the Coal Mill be permitted to operate an additional 400 hours per year when the Kiln/Cooler/Raw Mill is not operating. PM emissions from the Coal Mill will still be vented from the Main Stack during these 400 hours. PM/PM_{10} emissions resulting from operation of the Coal Mill, while the Kiln/Cooler/Raw Mill is down, are presented in Table 2-1. Tables 2-4 and 2-5 have been revised to indicate that the Main Stack emissions include emissions from the Coal Mill.
   - Removal of baghouses K347 and K447 associated with the Clinker Handling System (Table 2-2).
   - Modification of the finish mill operation to include Finish Mill Nos. 1, 3, 4, and 6 (i.e., Finish Mill No. 2 has been eliminated and Finish Mill No. 6 has been added). Note that Air Construction Permit No. 0250020-010-AC allowed construction of Finish Mill No. 6, but required both Finish Mill Nos. 1 and 2 to be shutdown upon startup of Finish Mill No. 6. The specifications and emissions for Finish Mill No. 6 are the same as those contained in Permit No. 0250020-010-AC.

- Limitation of the operating hours of all finish mills to 7,884 hours per year each (Table 2-3).
- Shutdown of the existing Slag Dryer (Emission Unit ID No. 020).

2. Revised Prevention of Significant Deterioration (PSD) Applicability Determination tables (see Attachment C) showing that New Source Review under PSD regulations is not triggered by this project.

3. Revised permit application forms reflecting the facility and operational modifications described above (Attachment D).

4. A description of the operation of the Finish Mill No. 3 O-Sepa Separator (Attachment E).

Thank you for consideration of this additional information. Please call or email me if you have any questions regarding this information at (352) 336-5600 or dbuff@golder.com.

Sincerely,

GOLDER ASSOCIATES INC.

Scott A. McCann, P.E.
Associate Engineer

David A. Buff, P.E., Q.E.P.
Principal Engineer

DB/dmw

Enclosures

cc: A.A. Linero, DEP
S. Quaas, Tarmac America
P. Wong, DERM

Y:\Projects\2005\0537511 Tarmac Medley\4\4.1\020105\L020105.doc

ATTACHMENT A

EMISSION RATE CALCULATION TABLES

026

Table 2-1. Coal Handling System (EU ID No. 001) Potential Emission Rates

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM_{10} Emission Rate[a] (gr/dscf)	(lb/hr)	(TPY)
dump hopper Coal transfer	461.BF130	New	4,000	1,400	1,339	92	0.0095	0.11	0.22
Coal transfer	461.BF230	New	4,000	1,400	1,339	92	0.0095	0.11	0.22
Coal mill	461.BF300	New	7,884	54,500	45,245	176	0.01	3.88	0.78
Coal feeder	461.BF650	New	7,884	294	243	178	0.0095	0.02	0.08
Coal feeder	461.BF750	New	7,884	294	243	178	0.0095	0.02	0.08
Coal mill feed	461.BF350	New	7,884	5,500	5,261	92	0.01	0.45	1.78
						Revised Potential Emission Rates =		**4.59**	**3.15**

[b] 400 hrs/yr

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

[b] The existing emission limit for the Main Stack (see Tables 2-4 and 2-5 for emissions from the Raw Mill and Pyroprocessing) of 0.125 lb/ton of dry clinker, includes emissions from the Coal Mill which are also vented to the atmosphere through the Main Stack. So that Tarmac may operate the coal mill when the Raw Mill and Pyroprocessing are down, 400 hours of emissions from the Coal Mill operating alone are included here. The emissions associated with the additional 7,484 hours of operation for the Coal Mill are included with the potential emissions for the Main Stack.

7884-400

027

Table 2-2. Clinker Handling and Storage System (EU ID No. 002) Potential Emission Rates

	Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM_{10} Emission Rate[a] (gr/dscf)	(gr/acf)	(lb/hr)	(TPY)
01	Clinker Silos 21-23 & 26-28	F633	Existing	8,760	6,000	--	77	--	0.01	0.51	2.25
02	Clinker transfer	441.BF540	New	7,884	4,600	3,421	250	0.0095	--	0.28	1.10
03	Clinker silo	481.BF140	New	7,884	12,000	8,924	250	0.0095	--	0.73	2.86
04	Clinker transfer	481.BF540	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25
05	Clinker bins	481.BF330	New	8,760	6,100	4,536	250	0.0095	--	0.37	1.62
06	Clinker transfer	481.BF640	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25
07	Clinker transfer	481.BF730	New	8,760	18,700	13,906	250	0.0095	--	1.13	4.96
08	Clinker transfer	481.BF930	New	8,760	15,000	11,155	250	0.0095	--	0.91	3.98
								Revised Potential Emission Rates =		**4.50**	**19.26**

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 2-3. Finish Mills (EU ID No. 003) Potential Emission Rates

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM_{10} Emission Rate[a] (gr/dscf)	(gr/acf)	(lb/hr)	(TPY)
Finish Mill No. 1 Baghouse	F113	Existing	7,884	11,800	--	--	--	0.01	1.01	3.99
Finish Mill No. 1 Baghouse	F130	Existing	7,884	12,000	--	--	--	0.01	1.03	4.05
Finish Mill No. 3 Baghouse	F330	Existing	7,884	20,000	--	--	--	0.01	1.71	6.76
Finish Mill No. 3 Baghouse	F332	Existing	7,884	13,500	--	--	--	0.01	1.16	4.56
Finish Mill No. 3 Baghouse	533.BF340	New	7,884	77,800	65,307	169	0.0095	--	5.32	20.96
Finish Mill No. 4 Baghouse	F432	Existing	7,884	17,000	--	--	--	0.01	1.46	5.74
Finish Mill No. 4 Baghouse	F605	Existing	7,884	4,000	--	--	--	0.01	0.34	1.35
Finish Mill No. 4 Baghouse	F603	Existing	7,884	8,000	--	--	--	0.01	0.69	2.70
Finish Mill No. 4 Baghouse	F430	Existing	7,884	30,000	--	--	--	0.01	2.57	10.14
Finish Mill No. 4 Baghouse	F604	Existing	7,884	8,000	--	--	--	0.01	0.69	2.70
Finish Mill No. 6 Baghouse	531.BF01	New	7,884	97,300	80,905	--	0.0095	--	6.59	25.97
Finish Mill No. 6 Baghouse	531.BF02	New	7,884	25,900	21,536	--	0.0095	--	1.75	6.91
			All previously 8760				**Revised Potential Emission Rates =**		**24.31**	**95.85**

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

028

Table 2-4. Raw Mill and Pyroprocessing Unit System (EU ID No. 005) Potential Emission Rates

Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Potential PM_{10} Emission Rate (lb/hr)	Potential PM_{10} Emission Rate (TPY)
331.BF200	New	7,884	515,000	360,637	294	[a]	50.0	[d] 175.0	[d] 42.0	[b,d] 147.0 [b,d]
331.BF740	New	7,884	4,250	2,953	300	0.0095	0.24	0.95	0.24 [c]	0.95 [c]
341.BF350	New	8,760	3,760	3,112	178	0.0095	0.25	1.11	0.25 [c]	1.11 [c]
351.BF410	New	7,884	4,000	3,310	178	0.0095	0.27	1.06	0.27 [c]	1.06 [c]
351.BF440	New	7,884	4,760	3,939	178	0.0095	0.32	1.26	0.32 [c]	1.26 [c]
351.BF470	New	7,884	4,100	3,409	175	0.0095	0.28	1.09	0.28 [c]	1.09 [c]
331.BF645	New	7,884	3,500	2,910	175	0.0095	0.24	0.93	0.24 [c]	0.93 [c]
					Revised Potential Emission Rates =		**51.60**	**181.41**	**43.60**	**153.41**
					Revised Potential Emission Rates without Kiln/Cooler/Raw Mill =		**1.6**	**6.4**	**1.6**	**6.4**

[a] Emission note based on an emission factor of 0.125 lb/ton of dry kiln feed. See Table 2-5.

[b] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[c] PM_{10} emission rate calculated as 100 percent of PM emission rate.

[d] Includes emissions from the Coal Mill(EU ID No. 001) when the Kiln/Cooler/Raw Mill and Coal Mill are operating simultaneously.

028

Table 2-5. Dry Kiln, Cooler, and Raw Mill (EU ID No. 005) Potential Emissions Vented From the Main Stack

Activity Factors

Kiln Feed (Dry KF)		Clinker Production (CP)	
24-hour Average (TPH)	Maximum Annual (TPY)	Annual Average (TPH)	Maximum Annual (TPY)
400	2,792,250	208[b]	1,642,500

Particulate Matter

Emission Factor		Emission Rate[c]	
24-Hour Average (lb/ton dry KF)	Annual Average (lb/ton dry KF)	(lb/hr)	(TPY)
0.125	0.125	50.0	175

Sulfur Dioxide

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
1.540	0.981	320[a]	806[a]

Nitrogen Oxides

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
3.46	2.38	720[a]	1,953[a]

Carbon Monoxide

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
2.76	1.77	576[a]	1,457[a]

Volatile Organic Compounds

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
0.190	0.189	40[a]	155[a]

Sulfuric Acid Mist

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
0.0108	0.0108	2.24	8.86

[a] Permitted Limit.

[b] Based on 7,884 hours per year of operation.

[c] Includes Coal Mill (EU ID No. 001) emissions during concurrent operation of Kiln/Cooler/Raw Mill and Coal Mill. For emissions due to Coal Mill operating when when the Kiln/Cool/Raw Mill are shut down, see Table 2-1.

029

Table 2-6. Raw Material Handling and Storage System (EU ID No. 006) Potential Emission Rates

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM$_{10}$ Emission Rate[a] (gr/dscf)	(lb/hr)	(TPY)
Lime/gyp silos	232.BF01	New	4,000	5,170	5,170	68	0.0095	0.42	0.84
Additives	311.BF650	New	7,884	8,500	8,130	92	0.0095	0.66	2.61
Additives	311.BF750	New	7,884	7,750	7,413	92	0.0095	0.60	2.38
Additives	321.BF470	New	7,884	10,800	10,039	108	0.0095	0.82	3.22
Additives	311.BF950	New	7,884	11,700	10,876	108	0.0095	0.89	3.49
						Revised Potential Emission Rates =		**3.39**	**12.54**

[a] PM$_{10}$ emission rate calculated as 100 percent of PM emission rate.

ATTACHMENT B

SUMMARY OF STACK TEST RESULTS FOR THE MAIN STACK

TITAN AMERICA

PM/PM10 Compliance Testing
November 16-19, 2004

SUMMARY OF PARTICULATE MATTER EMISSION TEST DATA

Plant : Titan American
Source/Unit : **Kiln - Raw Mill "ON"** KILN, COOLER, RAW MILL, COAL MILL
Date: November 17 and 18, 2004

Run No.	Date	Time	Coal Mill	Dry Kiln Feed Rate (Tons/hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (F)	Stack Gas Moisture (%)	Particulate Matter		
								Conc. (gr/dscf)	Emission Rate (Lbs/Hr)	Emission Rate (lb/ton DKF)
1	11/17/04	0824 - 0930	On	320.0	323,969	197	14.2	0.0028	7.71	0.024
2	11/17/04	1449 - 1602	Off	334.8	334,223	200	12.9	0.0021	6.00	0.018
3	11/18/04	1858 - 2002	Off	313.5	344,055	211	15.2	0.0023	6.92	0.022
StdDev				10.9	10,044	7	1.1	0.0003	0.85	0.003
Average				322.8	334,082	203	14.1	0.0024	6.88	0.021

TITAN AMERICA

PM/PM10 Compliance Testing
November 16-19, 2004

SUMMARY OF PARTICULATE MATTER EMISSION TEST DATA

Plant : Titan American
Source/Unit : **Kiln - Raw Mill "OFF"**
Date: November 16 and 18, 2004

Run No.	Date	Time	Coal Mill	Process Weight Rate (Tons/hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (F)	Stack Gas Moisture (%)	Particulate Matter		
								Conc. (gr/dscf)	Emission Rate (Lbs/Hr)	Emission Rate (lb/ton DKF)
1	11/16/04	2005 - 2111	On	319.7	299,034	377	8.6	0.0040	10.23	0.032
2	11/18/04	0920 - 1027	On	314.3	353,523	352	8.3	0.0026	7.82	0.025
StdDev				3.8	38,530	17	0.2	0.0010	1.70	0.005
Average				317.0	326,278	365	8.5	0.0033	9.03	0.028

PM data extracted from: Koogler & Associates Test Report
Report Date: January 12, 2005

ATTACHMENT C

PSD APPLICABILITY DETERMINATION TABLES

Table 3-2. Future Maximum Annual Emissions From Material Handling Point Sources, Tarmac Pennsuco

Emission Unit	Emission Source	Point ID	Baghouse ID	Emission Basis	Potential Annual PM Emission Rate (TPY)	Potential Annual PM_{10} Emission Rate (TPY)
001	Coal Handling/Coal Mill System	~~003~~	6 baghouses	See Table 2-1	3.15	3.15
002	Clinker Handling and Storage	~~008~~	8 Baghouses	See Table 2-2	19.26	19.26
003	Finish Mill Nos. 1, 3, 4, and 6	010 - 013	12 baghouses	See Table 2-3	95.85	95.85
004	Cement Storage, Packhouse, & Loadout	014 - 016	11 Baghouses	As Permitted in 0250020-010-AC	25.80	25.80
005	Raw Mill and Pyroprocessing without Kiln/Cooler/Raw Mill	021	7 Baghouses	See Table 2-4	6.40	6.40
006	Raw Material Handling and Storage	--	5 Baghouses	See Table 2-6	12.54	12.54
				Total	163.00	163.00

Table 3-3. Summary of Quantifiable Fugitive Emissions for the New Cement Plant, Tarmac

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr)[a]	
	PM	PM_{10}	PM	PM_{10}
	27.6		26.7	
Coal Handling Facilities-Batch Drop	0.32	0.11	0.28	0.1
Coal Handling Facilities-Vehicular Traffic	27.46	9.61	26.4	9.24
Raw Material Blending Area[b]	2.66	0.93	2.56	0.89
Total	30.44	10.65	29.24	10.23

Notes:

[a] Based on average hourly emissions assuming 2,080 hr/yr actual operation.

[b] See Table A-1.

Table 3-7. Net Change in Emissions and PSD Significant Emission Rates, Tarmac Cement Plant Modification

	PSD Baseline Emissions (TPY)						Future Potential Emissions (TPY)						
Pollutant	Kiln No. 2	Kiln No. 3	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources	Total	New Raw Mill Preheater/ Calciner/Kiln/ Cooler	Material Handling Point Sources	Material Handling Fugitive Sources	Total	Net Increase in Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
Particulate Matter [PM(TSP)]	33.15	112.01	167.87	9.12	43.96	366.1	175.0	163.0	30.44	368.4	2.3	25	No
Particulate Matter (PM_0)	28.18	94.09	167.87	9.12	15.39	314.6	147.0	163.0	10.65	320.7	6.0	15	No
Sulfur Dioxide	14.38	1,399.76	--	18.19	--	1,432.3	806	--	--	806.0	-626.3	40	No
Nitrogen Dioxide	435.09	1,836.06	--	12.81	--	2,284.0	1,953	--	--	1,953.0	-331.0	40	No
Carbon Monoxide	52.65	1,312.25	--	3.20	--	1,368.1	1,457	--	--	1,457.0	88.9	100	No
Votatile Organic Compounds	7.03	123.13	--	0.34	--	130.5	155	--	--	155.0	24.5	40	No
Sulfuric Acid Mist	0.61	256.58	--	0.078	--	257.27	8.9	--	--	8.9	-248.4	7	No
Lead	0.00757	0.03096	--	0.00080	--	0.0393	0.0465	--	--	0.0465	0.0071	0.6	No
Mercury	0.00458	0.01875	--	0.00027	--	0.0236	0.0149	--	--	0.0149	-0.0087	0.1	No

NEG = Negligible.

ATTACHMENT D

REVISED PERMIT APPLICATION FORMS

(Note: Forms for all emission units for PM/PM_{10} are provided to be complete, although some emission units are not being revised.)

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336 - 5600** ext. Fax: **(352) 336 - 6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff
Signature

2/7/05
Date

(seal)

* Attach any exception to certification statement.
** Board of Professional Engineers Certificate of Authorization #00001670

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **31.3** lb/hour **31.0** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See note below** Reference:	7. Emissions Method Code: **2**

8. Calculation of Emissions:

Includes 4.6 lb/hr and 3.15 TPY from the baghouses and 26.7 lb/hr and 27.8 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Appendix A of Part B.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Emissions from Coal Mill Baghouse are included in Main Stack emissions when operating concurrently with Kiln/Cooler/Raw Mill.

EU005 not EU001
EU001 only includes 400 hrs/yr of Coal Mill Baghouse operation when Raw Mill and Pyroprocessing not operating

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **4.6** lb/hour **3.2** tons/year
5. Method of Compliance: **EPA Method 9 Test, except EPA Method 5 for the Coal Mill (461.BF300)**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf, applies to baghouses only, except for Coal Mill and Coal Mill feed baghouse. Allowable for these baghouses is 0.01 gr/dscf. Coal Mill allowable reflects 400 hr/yr operation when Kiln/Cooler/Raw Mill are shut down. See Table 2-1 in Part B for calculation of potential emissions.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **3.59 $p^{0.62}$**	4. Equivalent Allowable Emissions: **29.6** lb/hour **116.7** tons/year
5. Method of Compliance: **EPA Method 9 test.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to Coal Mill only. Calculated based on maximum 24-hour block average usage rates of 30 TPH and 190,000 TPY. However, emissions from the coal mill are controlled using a baghouse to 3.88 lb/hr and 3.15 TPY (see Table 2-1 in Part B).**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **14.0** lb/hour **12.9** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See note below** Reference:	7. Emissions Method Code: **2**

8. Calculation of Emissions:

Includes 4.6 lb/hr and 3.15 TPY (same as PM) for baghouses and 9.35 lb/hr and 9.72 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Appendix A of Part B.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Emission from Coal Mill Baghouse are included in Main Stack emissions when operating concurrently with Kiln/Cooler/Raw Mill.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **4.6** lb/hour **3.2** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf, applies to baghouses only, except for Coal Mill and Coal Mill feed baghouse. Allowable for these baghouses is 0.01 gr/dscf. Coal Mill allowable reflects 400 hr/yr operation when Kiln/Cooler/Raw Mill are shut down. See Table 2-1 in Part B for calculation of potential emissions.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.50** lb/hour **19.3** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See comment.** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Assumed as 100 percent of PM emissions. See Table 2-2 in Part B for emission calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **3.99** lb/hour **17.0** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf applies to all Baghouses except F633. See Table 2-2 in Part B for potential emission calculations.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf** act in Table 2-2	4. Equivalent Allowable Emissions: **0.51** lb/hour **2.25** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf applies to Baghouse F633.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.50** lb/hour **19.3** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See comment.** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Assumed as 100 percent of PM emissions. See Table 2-2 in Part B for emission calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **3.99** lb/hour **17.0** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf applies to Baghouse F633. See Table 2-2 in Part B for potential emission calculations.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **0.51** lb/hour **2.25** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf applies to Baghouse F633.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **24.31** lb/hour **95.85** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See comment.** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-3.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **10.65** lb/hour **42.0** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to all baghouses except Finish Mill No. 3 Baghouse No. 533.BF340 and Finish Mill No. 6 Baghouse Nos. 531.BF01 and 531.BF02.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **13.66** lb/hour **53.8** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit limit applies to Finish Mill No. 3, Baghouse No. 533.BF340 and Finish Mill No. 6 Baghouse Nos. 531.BF01 and 531.BF02.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM_{10}	2. Total Percent Efficiency of Control:
3. Potential Emissions: 24.31 lb/hour 95.85 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See comment. Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: See Part B, Table 2-3.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **10.65** lb/hour **42.0** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to all baghouses except Finish Mill No. 3 Baghouse No. 533.BF340 and Finish Mill No. 6 Baghouse Nos. 531.BF01 and 531.BF02.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **13.66** lb/hour **53.8** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit limit applies to Finish Mill No. 3, Baghouse No. 533.BF340 and Finish Mill No. 6 Baghouse Nos. 531.BF01 and 531.BF02.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **51.6** lb/hour **181.4** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Comment** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Tables 2-4 and 2-5.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Includes emissions from the Coal Mill when operating concurrently with the Kiln/Cooler/Raw Mill.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.125 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **50.0** lb/hour **175** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Permit No. 0250020-010-AC. Applies to emissions from Main Stack only, and includes emissions from Coal Mill (Emission Unit ID 001) when Kiln/Cooler/Raw Mill and Coal Mill are operating concurrently.**	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.1 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **40.0** lb/hour **139.6** tons/year
5. Method of Compliance: **Annual EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **MACT 40 CFR 63.1345(a)(1) for cooler only based on feed to kiln. Equivalent allowable emissions are emissions out the main stack.**	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.3 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **120.0** lb/hour **418.8** tons/year
5. Method of Compliance: **Annual EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit is MACT 40 CFR 63.1343(c)(1) for kiln only. Equivalent allowable emissions are emissions out main stack.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **1.60** lb/hour **6.4** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit requested by applicant. Applies to emissions from baghouses other than Kiln/Cooler/Raw Mill Baghouse No. 331.BF200. See Part B, Table 2-4.**	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **43.6** lb/hour **153.4** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-4.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Includes emissions from the Coal Mill when operating concurrently with the Kiln/Cooler/Raw Mill.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.105 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **42.0** lb/hour **147.0** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Permit No. 0250020-010-AC. Applies to emissions from Main Stack only, and includes emissions from Coal Mill (EU ID 001) when Kiln/Cooler/Raw Mill and Coal Mill are operating concurrently.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **100% of PM**	4. Equivalent Allowable Emissions: **1.6** lb/hour **6.4** tons/year
5. Method of Compliance: **Annual Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit requested by applicant. Applies to emissions from baghouses not exhausting through Main Stack.**	

Allowable Emissions Allowable Emissions _ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.39** lb/hour **12.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0095 gr/dscf** Reference: **Applicant Request**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-6.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _ of _

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **3.39** lb/hour **12.5** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applicant request.**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.39** lb/hour **12.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0095 gr/dscf** Reference: **Applicant Request**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-6.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _ of _

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **3.39** lb/hour **12.5** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applicant request.**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

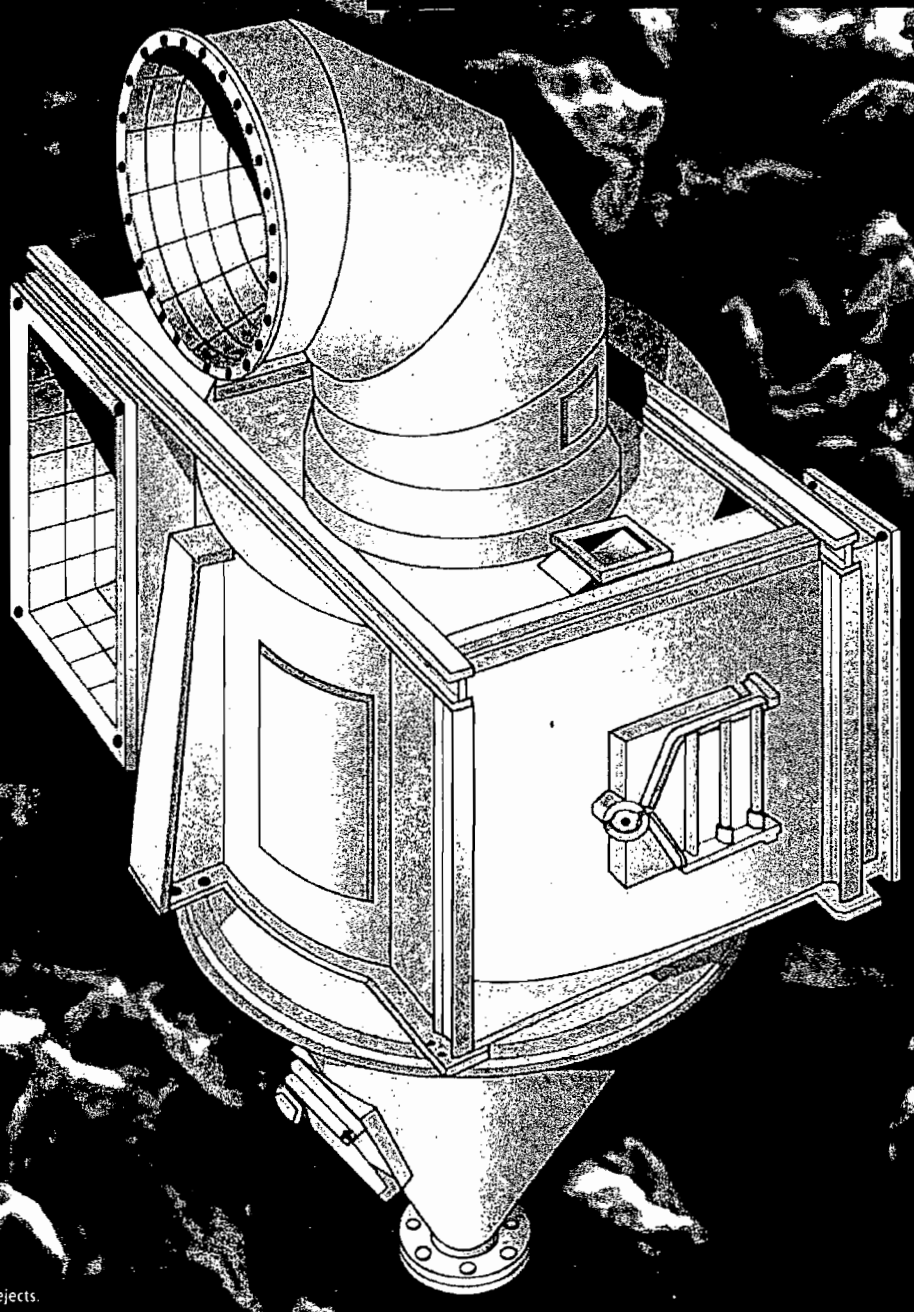
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

ATTACHMENT E

O-SEPA SEPARATOR INFORMATION

O-Sepa® Separator

- Low Maintenance
- High Efficiency
- Simple Layout



Background shows O-Sepa separator rejects.

FLSmidth

Main Features

MILL SYSTEMS

Proven Reliability
- 25 years design and operating experience
- Over 425 units worldwide

Cost Savings
- Reduced specific power consumption
- Increased grinding efficiency
- Low maintenance
- Integral cooling capability

Low Maintenance
- Wear protection targets specific abrasion mechanisms for each separator component
- Circulating oil lubrication system promotes exceptional bearing life

Reduced Capital Cost
- Compact design
- Simple Layout
- Bolt together construction for low installation time

Flexibility
- New and Retrofit installations
- Raw and Cement Grinding
- High Blaine operation
- Standard and Mixed products
- Compatible with Semi-finish Grinding
- Full Gas recirculation optional
- Full size range

Stable operation
- Simple system control Precise, uniform separation
- Less fine returns to the mill

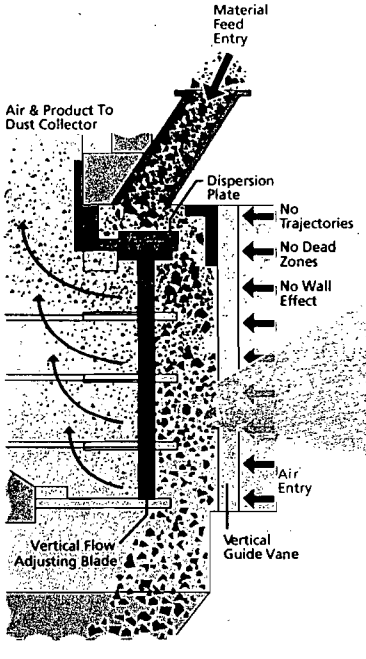
Better product quality
- High separator efficiency
- Improved product particle size distribution from first and second generation separators
- Increased cement quality
- Reduced coarse bypass in the product

The O-Sepa separator is the world standard in high-efficiency separation. F.L.Smidth has supplied O-Sepa separators since 1983. There are now over 425 units installed worldwide.

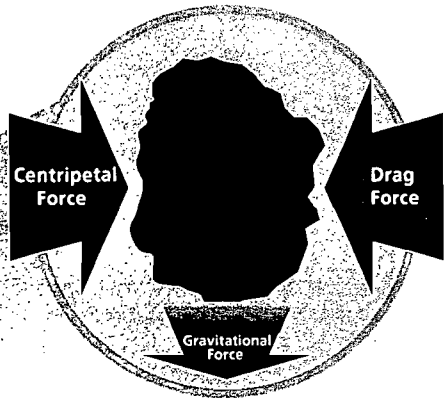
The O-Sepa separator's success, based on its innovative design, continues as a result of superior performance and optimization. There are numerous features that place the O-Sepa separator at the top of industry lists for both performance and mechanical integrity.

INSTALLATION

The O-Sepa separator has a compact design requiring minimal space for installation. Its simple circuit layout allows the highly flexible separator to be applied in a variety of systems and to fit any new process requirement or existing system. Installation time for the O-Sepa separator is minimized by its bolted-flange design.



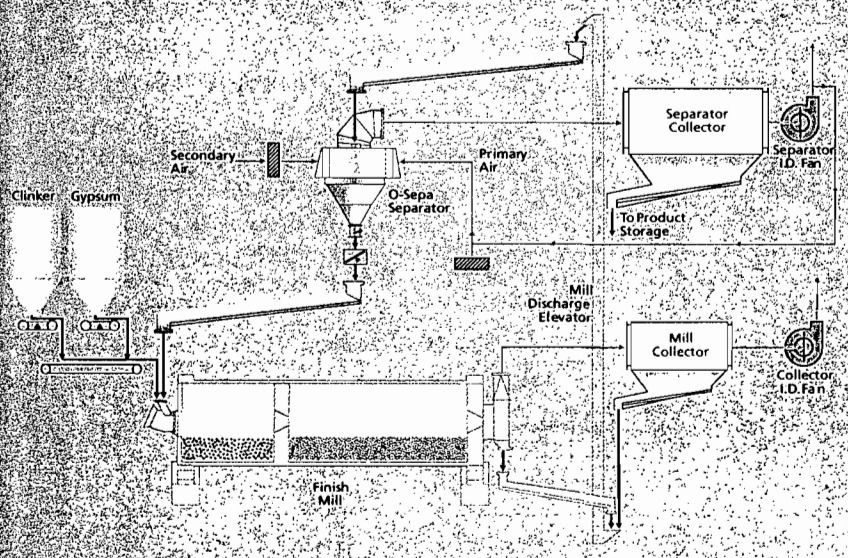
Classification Zone



Balance of Forces

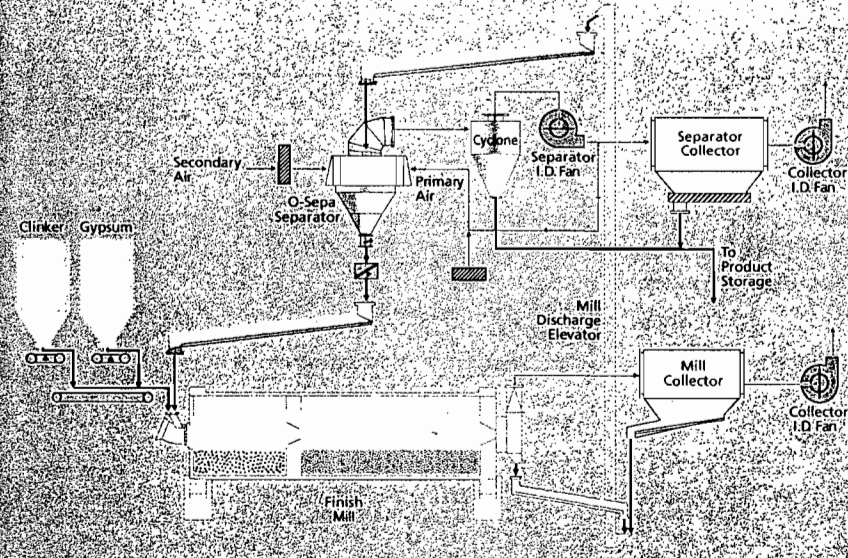
The rotor's speed directly affects the centripetal force. The amount of airflow directly affects the drag force.

Full Vent System



Alternate Arrangement:
The mill vent gases can be taken through the O-Sepa separator with either system design, thus eliminating one collector and fan.

Cyclone System



FLEXIBILITY

The O-Sepa separator is installed for cement and non-cement applications. The O-Sepa separator can be retrofit into existing ball mill circuits or installed in new mill systems.

A system with dedusting cyclones on the outlet (product) stream can be beneficial for retrofits to existing systems. In this arrangement there is less exhaust gas which can be an advantage in obtaining environmental permits. This compact system, which requires a smaller bag collector, is very flexible and can require less overall space than other system designs.

For new installations where a simpler system containing less equipment and fewer drives is desired a full vent arrangement is possible. In this arrangement the separator fan handles clean gas which reduces maintenance and allows for a higher efficiency fan design. Any recycled air is therefore clean and does not limit the duct arrangement. The dust loading is higher, but of a coarser size, which reduces dust collection problems. This system gives the maximum air cooling or maximum system temperature for controlling product quality.

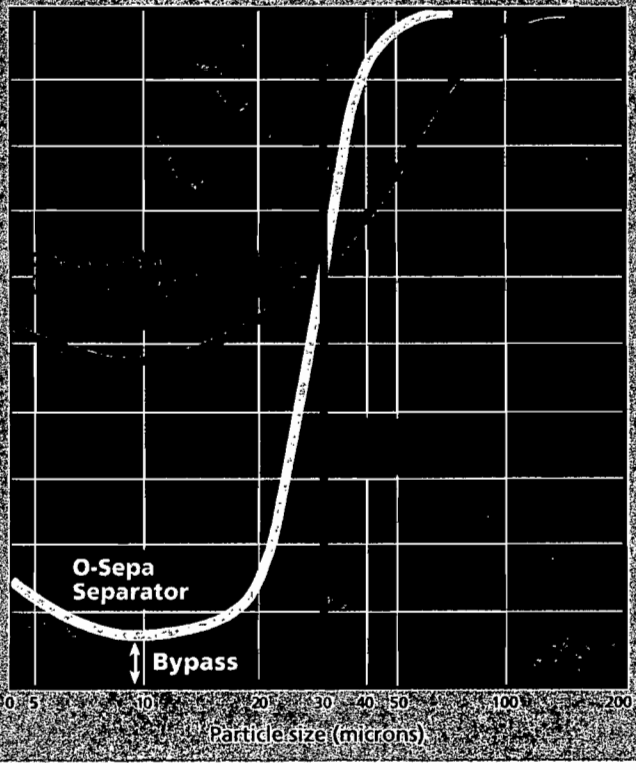
In either arrangement it is possible for all of the classifying air to come from atmosphere. Because of this feature the O-Sepa has a superior cooling capability. The ability to control recirculating material temperatures reduces the chance of ball coating and pack set problems in silos. Further, in either system arrangement it is possible to take the mill vent gases through the separator eliminating the need for a separate dust collector and fan.

Typical Separator Efficiency Curve (Tromp Curve)

The O-Sepa separator properly classifies a higher proportion of feed materials.

The Tromp curve is a plot of the probability of a given size of particle in the separator feed that will be returned to the mill. Thus better separation is indicated by higher probabilities for coarse material, and lower probabilities for fine material.

The Tromp curve is an effective tool when evaluating separator performance. Calculations are based on separator feed, rejects, and product samples. The top side control, which can be determined from the curve, indicates if the seal is operating correctly. Also, the amount of bypass and the extent of the fines' tail can be determined. These parameters along with the separator inlet loading give an accurate depiction of the separator's performance in the circuit.



OPERATION

Low Cost Operation

Compared to other separator designs the O-Sepa separator offers improved efficiency. Higher separation efficiency results in less fine material returning to the mill, which in turn reduces the mill power consumption at a given product fineness. System capacity is maximized through the combination of superior grinding efficiency and better product size distribution.

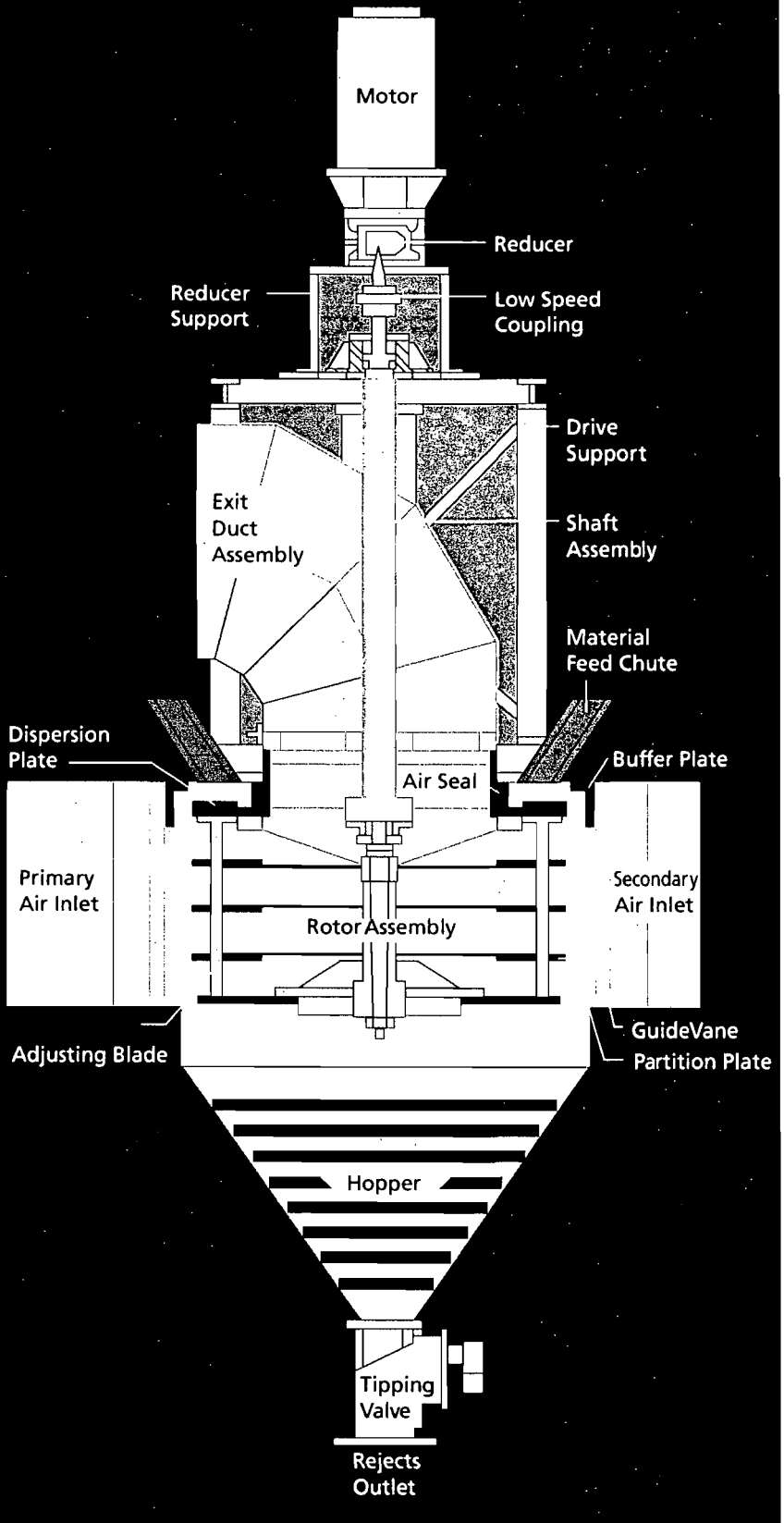
Stable operation is easily achieved through simple system control and precise, uniform separation. The results of superior efficiency and stable operation are evident through increased cement strength and a reduced amount of coarse material present in the product.

Low Maintenance

Maintenance in the O-Sepa is reduced by specifically addressing the cause and mechanism of wear in each area of the separator with the most effective wear protection materials. Ceramic tiles lining the separator inlet and exit ducts and the rotor shaft protect against jet abrasion from any dust entrained in the gas streams. The rotor vanes are coated with a spray ceramic for the same reason. The guide vanes around the rotor are made from chromium carbide bulk-welded plate to resist the impact of oversized material rejected from the rotor. The feed chutes are made from abrasion-resistant plate. The air seal and material distribution plate are made from impact and abrasion resistant NiHard castings. The use of dedicated wear materials reduces the maintenance requirements of the separator and saves overall operating costs.

To maximize the protection of the separator bearings the O-Sepa separator incorporates a standard circulating lubrication system. The use of circulating lubrication system ensures a long bearing life.

Wear Protection

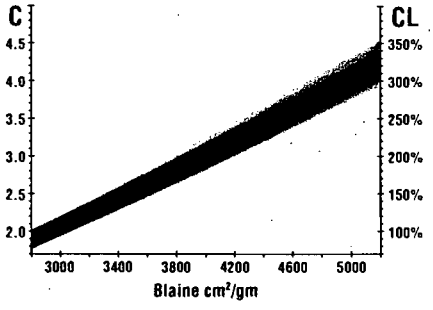


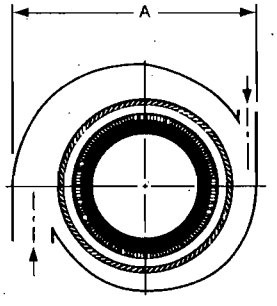
Wear Protection Components

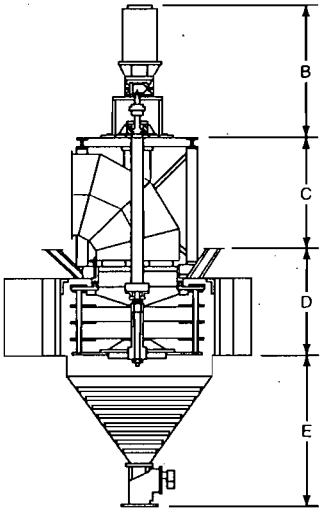
- Ceramic tile on inlet ducts, outlet ducts, and shaft assembly
- Spray ceramic coating on rotor
- Chromium carbide bulk-welded plate for guide vanes
- NiHard castings for air seal, distribution plate, and buffer ring
- Abrasion-resistant plate in feed chutes
- Autogenous hopper lining

How to Size an O-Sepa Separator

- Predict circulation factor. Circulation factor = $\left[1 + \frac{\text{Circulating Load (\%)}}{100\%}\right] = \frac{\text{separator feed}}{\text{production}}$
- Determine expected system production and feed rate to separator.
  (_____ mtph production x _____ Circulation factor = _____ mtph feed)
- Pick the separator size (from the chart below) that has rated feed and production which are greater than those expected. If separator will produce several types of cements, use maximum feed and production.







Sizing Chart

Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Typical Drive Type	Rotor Diameter (mm)	Rotor Height (mm)	Speed (rpm)	Motor (kW)	Air (m3/min)	Feed (mtph)	Production (mtph)
N-250	1522	*2550	—	673	1604	V-belt	940	550	250-550	25	250	37.5	13
N-350	1757	1350	1190	798	1510	Vertical	1040	518	170-370	35	350	52.5	18
N-500	2109	1470	1396	956	1993	Vertical	1220	580	190-420	55	500	75	26
N-750	2517	1650	1676	1107	2310	Vertical	1460	730	170-360	75	750	112.5	38
N-1000	2714	1890	1693	1387	2505	Vertical	1660	850	150-320	90	1000	150	51
N-1500	3294	2220	2281	1434	2931	Vertical	2000	1060	120-260	110	1500	225	77
N-2000	3804	2500	2541	1643	2878	Vertical	2270	1240	105-230	150	2000	300	102
N-2500	4194	2590	2894	1791	3275	Vertical	2530	1390	95-205	185	2500	375	128
N-3000	4689	2610	3087	1933	3616	Horizontal	2760	1530	85-190	225	3000	450	153
N-3500	5154	2780	3408	2077	3861	Horizontal	2970	1660	80-175	260	3500	525	179
N-4000	5459	2880	3363	2515	4118	Horizontal	3150	1780	75-165	300	4000	600	204
N-4500	5750	2890	3744	2331	4171	Horizontal	3330	1900	70-155	335	4500	675	230
N-5000	6074	2900	3458	2806	4596	Horizontal	3480	2000	65-150	375	5000	750	255
N-5500	6300	3000	3454	3330	4900	Horizontal	3640	2100	60-145	410	5500	825	281
N-6000	6613	3010	3453	3607	5100	Horizontal	3850	2200	54-135	450	6000	900	306
N-7000	6991	3020	4736	3237	5500	Horizontal	4159	2371	50-125	525	7000	1050	357

* with V-belt drive, value is B+C

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04-2004-OSEPA

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www.golder.com

December 10, 2004

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road, MS #5505

Attention: Ms. Cindy Phillips, P.E.

RE: Air Construction Permit Project No.: 0250020-016-AC
Request for Revision to Air Construction Permit No.: 0250020-010-AC
Tarmac Pennusco Cement Plant, Medley, Miami-Dade County

Response to Request for Additional Information

Dear Ms. Phillips:

On October 11, 2004, the Department issued a request for additional information for the processing of the permit application for the revision of air construction permit 0250020-010-AC. Responses to the request information are provided below in the same order as presented in the Department's letter.

1. Table 2-5 "Calculation of Potential Emissions from the Kiln, Cooler, and Raw Mill Only (EU ID No. 005) Vented From the Main Stack" was submitted with the additional information. However, there does not appear to be any difference between this version of Table 2-5 and the version that was originally submitted on March 4, 2004. Were any changes actually intended to be included in this table?

No changes were made to this table. It was included in the September 2004 submittal only to be complete and for convenience.

2. The Potential PM Emission Rates for many of the baghouses have been changed from 0.01 to 0.0095 gr/dscf. Please provide justification (manufacturers' guarantees, etc.) as to why these rates were changed.

The original manufacturer's design for these baghouses was 0.01 gr/dscf. Theses rates were changed to 0.0095 gr/dscf in order to remain below the PSD threshold for PM/PM_{10} emissions, based on the requested changes in the new cement plant. As a practical matter, there is no significant difference in 0.01 vs. 0.0095 gr/dscf, as it represents only 5 percent change. This is within the accuracy of EPA Method 5.

In further evidence of the ability of modern materials handling baghouses in the cement industry to meet a 0.0095 gr/dscf PM limit, EPA's RACT/BACT/LAER Clearinghouse was reviewed for similar type sources. The results of this review are shown in Table 1 attached. As shown, there are a number of recent BACT determinations at 0.009 gr/dscf, with the Suwanne American cement plant in Florida designed to meet 0.0085 gr/dscf.

It is also noted that two existing finish mills (Finish Mills No. 1 and 2) and the slag dryer, equipped with baghouses at the Pennsuco Cement Plant, were tested recently for PM emissions. The results (attached) show PM emissions of less than 0.005 gr/dscf for the finish mills and less than 0.0072 gr/dscf for the slag dryer. These finish mills are equipped with older baghouses; the new baghouses associated with the new cement plant at Pennsuco should perform at least as good, if not better, than these older baghouses.

Also, in follow up to our recent meeting, please find attached a flow diagram which depicts the entire clinker handling system at Pennsuco.

Thank you for consideration of this additional information. Please call or email me if you have any questions regarding this information at (352) 336-5600 or dbuff@golder.com.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E., Q.E.P.
Principal Engineer

DB/dmw

Enclosures

cc: A.A. Linero, DEP
S. Quaas, Tarmac America
P. Wong, DERM

Y:\Projects\2004\0437504 Tarmac - Medley\4\4.1\L121004.doc

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
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   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336 - 5600** ext. Fax: **(352) 336 - 6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff
Signature

12/10/04
Date

(seal)

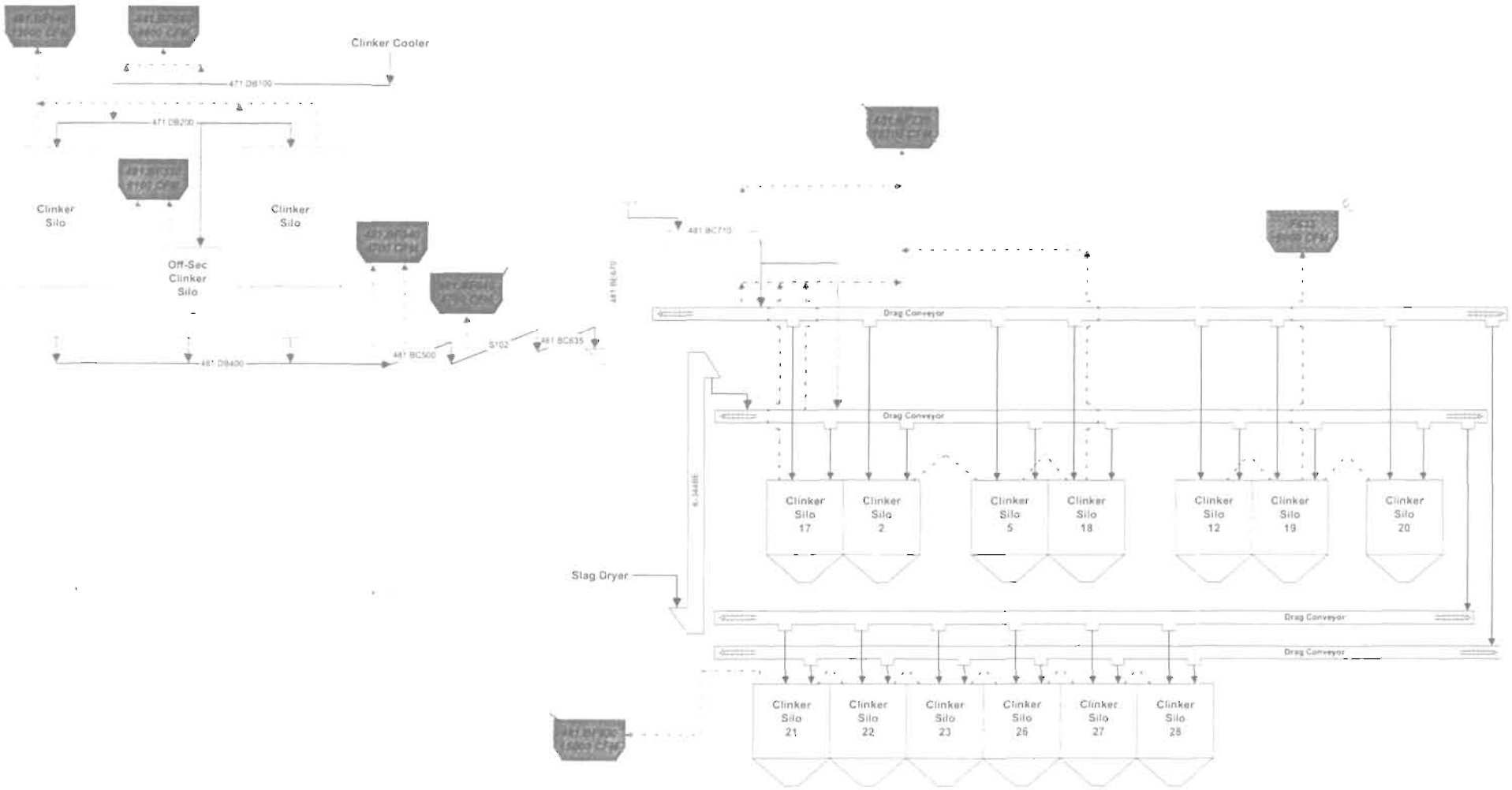
* Attach any exception to certification statement.
** Board of Professional Engineers Certificate of Authorization #00001670

Table 1. Cement Industry Baghouses with Particulate Matter Control Limits of <0.01 gr/dscf

Facility ID	Facility	Process	Control Technology	Pollutant	Limit (gr/dscf)	Basis	Permit Date
FL-0139	Suwannee American Cement Co., Inc.	Baghouse, Material Handling & Storage Silo	Baghouse	PM10	0.0085	BACT-PSD	6/1/2000
CO-0043	Rio Grande Portland Cement Corp.	Material Handling	Low temp. membrane type baghouse	PM10	0.005	BACT-PSD	9/25/2000
		Particulate Material Milling	Low temp. membrane type baghouse	PM10	0.005	BACT-PSD	9/25/2000
IA-0070	Lehigh Cement Company - Mason City	Pan & Bucket Elevators - Clinker Silo	Baghouse	PM, PM10	0.009	BACT-PSD	12/11/2003
		Bucket Elevator Feed - Cement Silo	Baghouse	PM, PM10	0.009	BACT-PSD	12/11/2003
		Airslides & Silos - Cement Silo	Baghouse	PM, PM10	0.009	BACT-PSD	12/11/2003
		Secondary Fuel Handling	Baghouse	PM	0.009	BACT-PSD	12/11/2003
		Silo Withdrawal	Baghouse	PM, PM10	0.009	BACT-PSD	12/11/2003
		Shipping Discharge Spouts	Baghouse	PM, PM10	0.009	BACT-PSD	12/11/2003
WA-0307	Ash Grove Cement Company	Kiln Exhaust Stack	Baghouse	PM2.5	0.005	LAER	10/5/2001

Source: RBLC Database, 2004.

BEST AVAILABLE COPY



Handling & Storage [EU-027]

FACILITY SCHEMATICS
EMISSION UNITS

TITLE PENNSUCO CEMENT

FILENAME CEM-TS-SCHEMATIC-CLINKERSTORAGE_12_04.VSD

LAST REVISION DATE 12/8/2004

TITAN AMERICA

ACE AIR CONSULTING & ENGINEERING, INC.
2106 N.W. 67th Place • Suite 4 • Gainesville, Florida • 32653
(352) 335-1889 FAX (352) 335-1891

September 25, 2003

Mr. Scott Quaas
Tarmac America, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

Dear Scott:

On September 4, 2003, Air Consulting and Engineering, Inc. (ACE) conducted particulate emission testing on the Finish Mills 1 and 2 at your Medley, Florida facility. Results averaged as follows:

	Flow SCFMD	Grains/SCF	lbs/Hr
Mill 1	7034	0.0042	0.251
Mill 2	11640	0.0048	0.474

United States Environmental Protection Agency Method 5 was used for sampling and analysis.

I have enclosed our printouts, field data sheets and laboratory data for your files. Please contact me if further information is required.

Sincerely,
AIR CONSULTING & ENGINEERING, INC.

Pete F. Burnette

PFB:gkg

247 03 0

Table 1 Particulate Emission Summary
Slag Dryer (ID 0250020 EU020)
Tarmac America, Inc.
Medley, Florida
April 2-3, 2003

Run Number	Time	Flow Rate SCFMD	Temp °F	Moisture %	Particulate Emissions gr/DSCF	Particulate Emissions lbs/Hr
1	1208-1310	22041	141	18.4	0.0071	1.332
2	1339-1441	21639	140	19.3	0.0071	1.319
3 (4/3/03)	1234-1336	19414	144	21.6	0.0054	0.891
AVERAGE		21031	142	19.8	0.0065	1.181

Allowable Emissions: 0.04gr/DSCF and 4.2 lbs/Hr

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

October 11, 2004

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Hardy Johnson
President, Florida Division
Tarmac America, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

Re: Air Construction Permit Project No.: 0250020-016-AC
Request for Revision to Air Construction Permit No.: 0250020-010-AC
Tarmac Pennsuco Cement Plant, Medley, Miami-Dade County

Dear Mr. Johnson:

On September 10, 2004 the Department received your additional information for the processing of the permit application for the revision of air construction permit 0250020-010-AC. The application is still incomplete. Specifically, the following information needs clarification:

1. Table 2-5 "Calculation of Potential Emissions from the Kiln, Cooler, and Raw Mill Only (EU ID No. 005) Vented From the Main Stack" was submitted with the additional information. However, there does not appear to be any difference between this version of Table 2-5 and the version that was originally submitted on March 4, 2004. Were any changes actually intended to be included in this table?

2. The Potential PM Emission Rates for many of the baghouses have been changed from 0.01 to 0.0095 gr/dscf. Please provide justification (manufacturers' guarantees, etc.) as to why these rates were changed.

As a reminder, rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature.

Within 45 days, please submit all requested information to me at FDEP Bureau of Air Regulation, MS 5505, 2600 Blair Stone Road, Tallahassee, FL 32399-2400. If you have any questions regarding this request for additional information, please contact me at (850) 921-9534 or Cindy.Phillips@dep.state.fl.us.

Sincerely,

Cindy L. Phillips, P.E.
Bureau of Air Regulation

cc: Scott Quaas, Tarmac America
David A. Buff, P.E., Golder Associates
Patrick Wong, DERM

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

TRANSMITTAL LETTER

To: Al Linero
Environmental Manager
Tarmac America, LLC
455 Fairway Drive
Deerfield Beach, Florida

Date: September 9, 2004
Project No.: 0437504-0100

Sent by: dmw

- ☐ Mail
- ☐ Air Freight
- ☐ Hand Carried
- ☐ UPS
- ☒ Federal Express

Per: SAM/DB

Quantity	Item	Description
1	Clipped Copy	**Replacement Pages for Application for New Cement Plant, Tarmac America, LLC Medley, Florida** p-6, 20

Remarks:

Copies also sent to FDEP and Scott Quaas.

Y:\Projects\2004\0437504 Tarmac - Medley\4\4.1\T030104.doc

Table 2-1. Summary of Proposed Changes to Sources Associated with the Coal Handling System (EU ID No. 001) and Calculation of Potential Emission Rates

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC										
Coal transfer	241.BF01	New	4,000	2,700	2,700	68	0.01	0.23	0.46	0.39[a]
Coal transfer	241.BF02	New	4,000	6,400	6,400	68	0.01	0.55	1.10	0.92[a]
Coal mill	461.BF01	New	7,884	54,500	43,600	200	0.01	3.74	14.73	12.37[a]
Coal feeder	461.BF02	New	7,884	800	665	175	0.01	0.06	0.22	0.19[a]
Coal feeder	461.BF03	New	7,884	800	665	175	0.01	0.06	0.22	0.19[a]
Total								4.63	16.74	14.06
Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses										
Coal transfer	461.BF130	New	4,000	1,400	1,339	92	0.0095	0.11	0.22	0.22
Coal transfer	461.BF230	New	4,000	1,400	1,339	92	0.0095	0.11	0.22	0.22
Coal mill	461.BF300	New	7,884	54,500	45,245	176	0.01	3.88	15.29	15.29[b]
Coal feeder	461.BF650	New	7,884	294	243	178	0.0095	0.02	0.08	0.078[b]
Coal feeder	461.BF750	New	7,884	294	243	178	0.0095	0.02	0.08	0.078[b]
Total								4.14	15.88	15.88
Proposed Equipment Additions										
Coal mill feed	461.BF350	New	7,884	5,500	5,261	92	0.01	0.45	1.78	1.78[b]
						Revised Potential Emission Rates =		4.59	17.7	17.7

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[b] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 2-2a. Summary of Proposed Changes to Sources Associated with the Clinker Handling and Storage System (EU ID No. 002) and Calculation of Potential Emission Rates

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (gr/acf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC											
Clinker transfer[b]	K347	Existing	8,760	5,000	--	77	--	0.01	0.43	1.88	1.58[a]
Clinker transfer[b]	K447	Existing	8,760	5,000	--	77	--	0.01	0.43	1.88	1.58[a]
Clinker Silos 21-23 & 26-28	F633	Existing	8,760	1,500	--	77	--	0.01	0.13	0.56	0.47[a]
Clinker transfer	441.BF01	New	7,884	3,000	2,494	175	0.01	--	0.21	0.84	0.71[a]
Clinker silo	481.BF01	New	7,884	10,000	8,315	175	0.01	--	0.71	2.81	2.36[a]
Clinker transfer	481.BF02	New	8,760	3,000	2,494	175	0.01	--	0.21	0.94	0.79[a]
Clinker bins	481.BF03	New	8,760	5,000	4,157	175	0.01	--	0.36	1.56	1.31[a]
Total									2.05[b]	8.59[b]	7.22[b]
Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses											
Clinker transfer	441.BF540	New	7,884	4,600	3,421	250	0.0095	--	0.28	1.10	1.10[c]
Clinker silo	481.BF140	New	7,884	12,000	8,924	250	0.0095	--	0.73	2.86	2.86[c]
Clinker transfer	481.BF540	New	8,760	4,700	3,495	250	0.0095	--	0.29	1.25	1.25[c]
Clinker bins	481.BF330	New	8,760	6,100	4,536	250	0.0095	--	0.37	1.62	1.62[c]
Total									1.66	6.83	6.83
Proposed Equipment Additions											
Clinker transfer	481.BF640	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25	1.25[c]
Clinker transfer	481.BF730	New	8,760	18,700	13,906	250	0.0095	--	1.13	4.96	4.96[c]
Clinker transfer	481.BF930	New	8,760	15,000	11,155	250	0.0095	--	0.91	3.98	3.98[c]
Total									2.33	10.18	10.18

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[b] Baghouses K347 and K447 do not operate at the same time. Therefore, the total potential emission rates reflect operation of only one of these baghouses.

[c] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 2-2b. Summary of Proposed Sources to be Permitted Associated with the Clinker Handling and Storage System (EU ID No. 002)

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (gr/acf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate[a] (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC											
Clinker transfer[b]	K347	Existing	8,760	5,000	--	77	--	0.01	0.43	1.88	1.88
Clinker transfer[b]	K447	Existing	8,760	5,000	--	77	--	0.01	0.43	1.88	1.88
Clinker Silos 21-23 & 26-28	F633	Existing	8,760	1,500	--	77	--	0.01	0.13	0.56	0.56
Clinker transfer	441.BF540	New	7,884	4,600	3,421	250	0.0095	--	0.28	1.10	1.10
Clinker silo	481.BF140	New	7,884	12,000	8,924	250	0.0095	--	0.73	2.86	2.86
Clinker transfer	481.BF540	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25	1.25
Clinker bins	481.BF330	New	8,760	6,100	4,536	250	0.0095	--	0.37	1.62	1.62
Clinker transfer	481.BF640	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25	1.25
Clinker transfer	481.BF730	New	8,760	18,700	13,906	250	0.0095	--	1.13	4.96	4.96
Clinker transfer	481.BF930	New	8,760	15,000	11,155	250	0.0095	--	0.91	3.98	3.98
							Revised Potential Emission Rates =		4.54[b]	19.5[b]	19.5[b]

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

[b] Baghouses K347 and K447 do not operate at the same time. Therefore, total the potential emission rates reflect operation of only one of these baghouses.

Table 2-3a. Summary of Proposed Changes to Sources Associated with the Finish Mills (EU ID No. 003) and Calculation Emission Rates

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM10 Emission Rate (gr/dscf)	Potential PM/PM10 Emission Rate (gr/acf)	Potential PM/PM10 Emission Rate (lb/hr)	Potential PM/PM10 Emission Rate (TPY)	Annual PM10 Emission Rate (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC											
Finish Mill No. 3 Baghouse	F330	Existing	8,760	20,000	--	--	--	0.01	1.71	7.51	6.30[a]
Finish Mill No. 3 Baghouse	F332	Existing	8,760	13,500	--	--	--	0.01	1.16	5.07	4.26[a]
Finish Mill No. 3 Baghouse	F313	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52[a]
Finish Mill No. 4 Baghouse	F432	Existing	8,760	17,000	--	--	--	0.01	1.46	6.38	5.36[a]
Finish Mill No. 4 Baghouse	F605	Existing	8,760	4,000	--	--	--	0.01	0.34	1.50	1.26[a]
Finish Mill No. 4 Baghouse	F603	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52[a]
Finish Mill No. 4 Baghouse	F430	Existing	8,760	30,000	--	--	--	0.01	2.57	11.26	9.46[a]
Finish Mill No. 4 Baghouse	F604	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52[a]
Finish Mill No. 6 Baghouse	531.BF01	New	8,760	97,300	80,905	175	0.01	--	6.93	30.37	25.51[a]
Finish Mill No. 6 Baghouse	531.BF02	New	8,760	25,900	21,536	175	0.01	--	1.85	8.09	6.79[a]
Total									18.08	79.19	66.52
Proposed Equipment Deletions											
Finish Mill No. 3 Baghouse	F313	Existing	8,760	8,000	--	--	--	0.01	-0.69	-3.00	-2.52[b]
Finish Mill No. 6 Baghouse	531.BF01	New	8,760	97,300	80,905	175	0.01	--	-6.93	-30.37	-25.51[b]
Finish Mill No. 6 Baghouse	531.BF02	New	8,760	25,900	21,536	175	0.01	--	-1.85	-8.09	-6.79[b]
Total									-9.47	-41.46	-34.82
Proposed Retained Equipment											
Finish Mill No. 1 Baghouse	F113	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43	3.72[a]
Finish Mill No. 1 Baghouse	F130	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51	4.51[b]
Finish Mill No. 2 Baghouse	F213	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43	3.72[a]
Finish Mill No. 2 Baghouse	F230	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51	4.51[b]
Total									4.08	17.87	16.46[b]
Proposed Equipment Additions											
Finish Mill No. 3 Baghouse	533.BF340	New	8,760	77,800	65,307	169	0.0095		5.32	23.29	19.56[a]

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[b] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 2-3b. Summary of Proposed Sources to be Permitted Associated with the Finish Mills (EU ID No. 003)

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (gr/acf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate[a] (TPY)
Finish Mill No. 1 Baghouse	F113	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43	4.43
Finish Mill No. 1 Baghouse	F130	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51	4.51
Finish Mill No. 2 Baghouse	F213	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43	4.43
Finish Mill No. 2 Baghouse	F230	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51	4.51
Finish Mill No. 3 Baghouse	F330	Existing	8,760	20,000	--	--	--	0.01	1.71	7.51	7.51
Finish Mill No. 3 Baghouse	F332	Existing	8,760	13,500	--	--	--	0.01	1.16	5.07	5.07
Finish Mill No. 3 Baghouse	533.BF340	New	8,760	77,800	65,307	169	0.0095	--	5.32	23.29	23.29
Finish Mill No. 4 Baghouse	F432	Existing	8,760	17,000	--	--	--	0.01	1.46	6.38	6.38
Finish Mill No. 4 Baghouse	F605	Existing	8,760	4,000	--	--	--	0.01	0.34	1.50	1.50
Finish Mill No. 4 Baghouse	F603	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	3.00
Finish Mill No. 4 Baghouse	F430	Existing	8,760	30,000	--	--	--	0.01	2.57	11.26	11.26
Finish Mill No. 4 Baghouse	F604	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	3.00
						Revised Potential Emission Rates =			18.0	78.9	78.9

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 2-4. Summary of Proposed Changes to Sources Associated with the Raw Mill and Pyroprocessing Unit System (EU ID No. 005) and Calculation of Potential Emission Rates

Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC									
331.BF01	New	7,884	486,000	392,367	194	0.0132	53.1	175.0	147.0
331.BF02	New	7,884	6,800	4,175	400	0.01	0.36	1.41	1.18[b]
341.BF01	New	8,760	6,250	5,189	176	0.01	0.44	1.95	1.64[b]
351.BF01	New	7,884	6,200	5,147	176	0.01	0.44	1.74	1.46[b]
351.BF02	New	7,884	3,000	2,491	176	0.01	0.21	0.84	0.71[b]
351.BF03	New	7,884	10,400	8,634	176	0.01	0.74	2.92	2.45[b]
							55.30	183.9	154.4
Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses									
331.BF200	New	7,884	515,000	360,637	294	[a]	50.0	175.0	147.0[b]
331.BF740	New	7,884	4,250	2,953	300	0.0095	0.24	0.95	0.95[c]
341.BF350	New	8,760	3,760	3,112	178	0.0095	0.25	1.11	1.11[c]
351.BF410	New	7,884	4,000	3,310	178	0.0095	0.27	1.06	1.06[c]
351.BF440	New	7,884	4,760	3,939	178	0.0095	0.32	1.26	1.26[c]
351.BF470	New	7,884	4,100	3,409	175	0.0095	0.28	1.09	1.09[c]
							51.36	180.5	152.5
Proposed Equipment Additions									
331.BF645	New	7,884	3,500	2,910	175	0.0095	0.24	0.93	0.93[c]
Revised Potential Emission Rates =							51.6	181.4	153.4
Revised Potential Emission Rates without Kiln/Cooler/Raw Mill =							1.6	6.4	6.4

[a] Emission based on an emission factor of 0.125 lb/ton of dry kiln feed. See Table 2-5.

[b] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[c] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 2-5 Calculation of Potential Emissions from the Kiln, Cooler, and Raw Mill Only (EU ID No. 005) Vented From the Main Stack

Activity Factors

Kiln Feed (KF)		Clinker Production (CP)	
24-hour Average (TPH)	Maximum Annual (TPY)	24-hour Average (TPH)	Maximum Annual (TPY)
400	2,792,250	208	1,642,500

Particulate Matter

Emission Factor		Emission Rate	
24-Hour Average (lb/ton dry KF)	Annual Average (lb/ton dry KF)	(lb/hr)	(TPY)
0.125	0.125	50.0	175

Sulfur Dioxide

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
1.540	0.981	320[a]	806[a]

Nitrogen Oxides

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
3.46	2.38	720[a]	1953[a]

Carbon Monoxide

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
2.76	1.77	576[a]	1457[a]

Volatile Organic Compounds

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
0.190	0.189	40[a]	155[a]

Sulfuric Acid Mist

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
0.0108	0.0108	2.24	8.86

[a] Permitted Limit.

Table 2-6. Summary of Proposed Changes to Sources Associated with the Raw Material Handling and Storage System (EU ID No. 006) and Calculation of Potential Emission Rates

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC										
Lime/gyp silos	232.BF01	New	4,000	5,170	5,170	68	0.01	0.44	0.89	0.74[a]
Additives	311.BF01	New	7,884	11,000	11,000	68	0.01	0.94	3.72	3.12[a]
Additives	311.BF02	New	7,884	6,050	4,840	200	0.01	0.41	1.64	1.37[a]
Additives	311.BF03	New	7,884	10,000	10,000	68	0.01	0.86	3.38	2.84[a]
Additives	311.BF04	New	7,884	10,000	10,000	68	0.01	0.86	3.38	2.84[a]
Total								3.52	13.00	10.92
Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses										
Lime/gyp silos	232.BF01	New	4,000	5,170	5,170	68	0.0095	0.42	0.84	0.84[b]
Additives	311.BF650	New	7,884	8,500	8,130	92	0.0095	0.66	2.61	2.61[b]
Additives	311.BF750	New	7,884	7,750	7,413	92	0.0095	0.60	2.38	2.38[b]
Additives	321.BF470	New	7,884	10,800	10,039	108	0.0095	0.82	3.22	3.22[b]
Additives	311.BF950	New	7,884	11,700	10,876	108	0.0095	0.89	3.49	3.49[b]
						Revised Potential Emission Rates =		3.39	12.5	12.5

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[b] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 3-2. Future Maximum Annual Emissions From Material Handling Point Sources, Tarmac Pennsuco

Emission Unit	Emission Source	Point ID	Baghouse ID	Emission Basis	Potential Annual PM/PM10 Emission Rate (TPY)
001	Coal Handling/Coal Mill System	003	6 baghouses	See Table 2-1	17.7
002	Clinker Handling and Storage	008	10 Baghouses	See Table 2-2b	19.5
003	Finish Mill Nos 1 through 4	010 - 013	12 baghouses	See Table 2-3b	78.9
004	Cement Storage, Packhouse, & Loadout	014 - 016	11 Baghouses	As Permitted in 0250020-010-AC	25.8
005	Raw Mill and Pyroprocessing without Kiln/Cooler/Raw Mill	021	7 Baghouses	See Table 2-4	6.4
006	Raw Material Handling and Storage	--	5 Baghouses	See Table 2-6	12.5
				Total	160.5

(163.9)

Table 3-3. Summary of Quantifiable Fugitive Emissions for the New Cement Plant, Tarmac

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr)[a]	
	PM	PM_{10}	PM	PM_{10}
Coal Handling Facilities-Batch Drop	0.32	0.11	0.28	0.1
Coal Handling Facilities-Vehicular Traffic	27.46	9.61	26.4	9.24
Raw Material Blending Area[b]	2.66	0.93	2.56	0.89
Total	30.44	10.65	29.24	10.23

Notes:

[a] Based on average hourly emissions assuming 2,080 hr/yr actual operation.

[b] See Table A-1.

Table 3-7. Net Change in Emissions and PSD Significant Emission Rates, Tarmac Cement Plant Modification

	PSD Baseline Emissions (TPY)						Future Potential Emissions (TPY)							
Pollutant	Kiln No. 2	Kiln No. 3	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources	Total	New Raw Mill Preheater/ Calciner/Kiln/ Cooler	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources	Total	Net Increase in Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
Particulate Matter [PM(TSP)]	33.15	112.01	167.87	9.12	43.96	366.1	175	150.8	9.12	30.44	375.4	9.3	25	No
Particulate Matter (PM_{10})	28.18	94.09	167.87	9.12	15.39	314.6	147	150.8	9.12	10.68	327.6	12.9	15	No
Sulfur Dioxide	14.38	1,399.76	--	18.19	--	1,432.3	806	--	18.19	--	824.2	-608.1	40	No
Nitrogen Dioxide	435.09	1,836.06	--	12.81	--	2,284.0	1953	--	12.81	--	1,965.8	-318.1	40	No
Carbon Monoxide	52.65	1,312.25	--	3.20	--	1,368.1	1457	--	3.20	--	1,460.2	92.1	100	No
Votatile Organic Compounds	7.03	123.13	--	0.34	--	130.5	155	--	0.34	--	155.3	24.8	40	No
Sulfuric Acid Mist	0.61	256.58	--	0.078	--	257.27	8.9	--	0.078	--	9.0	-248.3	7	No
Lead	0.00757	0.03096	--	0.00080	--	0.0393	0.0465	--	0.00080	--	0.0473	0.0079	0.6	No
Mercury	0.00458	0.01875	--	0.00027	--	0.0236	0.0149	--	0.00027	--	0.0151	-0.0085	0.1	No

NEG = Negligible.

Table A-1. Estimated Future Fugitive Dust Emissions from Drop Type Operations, Tarmac America, Pennsuco.

SOURCE	Type of Type of Operation[a]	M Moisture Content (%)	U Wind Speed[b] (MPH)	Emission Factor	Activity Factor	Maximum Annual PM Emissions (tons/yr)	PM_{10} Size Multiplier[d] K	Maximum Annual PM_{10} Emissions (tons/yr)
COAL HANDLING FACILITIES								
Railcar Unloading	Batch Drop	7.2	8.8	0.00111 lbs/ton	190,000 TPY[c]	0.105	0.35	0.037
Temporary Storage Pile to Active Storage Pile	Batch Drop	7.2	8.8	0.00111 lbs/ton	190,000 TPY[c]	0.105	0.35	0.037
Active Storage Pile to Loading Hopper	Batch Drop	7.2	8.8	0.00111 lbs/ton	190,000 TPY[c]	0.105	0.35	0.037
					Subtotal	0.32		0.11
RAW MATERIALS BLENDING AREA				X K			0.00112	
Raw Material Unloading	Batch Drop	1.0	8.8	0.01761 lbs/ton	200,000 TPY	1.761	0.35	0.616
Choke Feed Hopper/Conveyor	Continuous Drop	1.0	1.3	0.00147 lbs/ton	200,000 TPY	0.147	0.35	0.051
Conveyor to Conveyor Transfer	Continuous Drop	1.0	1.3	0.00147 lbs/ton	200,000 TPY	0.147	0.35	0.051
Conveyor to Stacker Conveyor (inside building)	Continuous Drop	1.0	1.3	0.00147 lbs/ton	200,000 TPY	0.147	0.35	0.051
Stacker to Storage Pile (inside building)	Continuous Drop	1.0	1.3	0.00147 lbs/ton	200,000 TPY	0.147	0.35	0.051
					Subtotal	2.347		0.822
Total						2.66		0.93

[a] Batch Drop and Continuous Emission Factors are computed from AP-42 (US EPA, 1995) Section 13.2.4-3(1). $E = 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton

[b] Based on the average wind speed measured at Miami Internation Airport of 8.8 mph unless the transfer point is enclosed in which case the minimum windspeed for which the equation maintains an "A" Quality Rating, 1. 3 mph, was used.

[c] Based on future coal throughput.

[d] PM_{10} Size Multiplier is based on particles < 10 micrometers.

Table A-2. Estimation of Future Emissions For Vehicle Traffic in the Coal Handling System
Tarmac America, Pennsuco Facility.

General Data	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Coal	Coal	
Vehicle Speed (S), mph- Average	10	10	
Vehicle weight (W), tons:			
Loaded	55.5	--	
Unloaded	--	47.5	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual [a]	2,845	2,845	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), % [b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM10 (k)	0.35	0.35	
Emission Control Data			
Emission control method	--	--	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	19.30
Controlled (Final) EF,lb/VMT- Annual	10.18	9.13	19.30
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	6.76
Controlled (Final) EF,lb/VMT- Annual	3.56	3.19	6.76
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr [c]	13.92	12.48	26.40
TPY	14.48	12.98	27.46
Particulate Matter 10 (PM10) Emission Rate			
lbs/hr [c]	4.87	4.37	9.24
TPY	5.07	4.54	9.61

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Annual VMT calculated as follows:

Annual VMT = 190,000 TPY coal/8 tons (bucket capacity of front-end loader) x 550 ft travel between (pile and hopper) x 1 mile/5,280 feet x 1.15 (factor to account for pile maintenance activities) = 2,845 miles/year

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.

MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE

ERM

ENVIRONMENTAL RESOURCES MANAGEMENT
AIR QUALITY MANAGEMENT DIVISION
33 S.W. 2nd AVENUE
SUITE 900
MIAMI, FLORIDA 33130-1540
TELEPHONE: (305) 372-6925
FAX: (305) 372-6954

April 15, 2004

Mr. Hardy Johnson
President, Florida Division
Tarmac America, LLC
455 Fairway Drive
Deerfield Beach, FL 33441

CERTIFIED MAIL NO. 7000 0600 0025 3505 2830
RETURN RECEIPT REQUESTED

Subject: Application to Modify Air Construction Permit No. 0250020-010-AC, received March 4, 2004, for the Tarmac America, LLC Tarmac Pennsuco facility, located at, near, or in the vicinity of 11000 NW 121 Way, in Medley, Miami-Dade County, Florida. [FDEP File No. 0250020]

Dear Mr. Johnson:

The Department of Environmental Resources Management (DERM) has reviewed the above referenced submittal and determined that additional information is necessary in order to continue processing the construction permit application.

Please address each of the following and provide clarification within 90 days of this request unless additional time has been requested in writing:

- Fugitive emission sources other than those from coal handling facilities and vehicular traffic in the coal handling system as shown in Tables A-1 and A-2;
- Basis for the use of 2080 hours of actual operation for materials handling fugitive sources;
- The variation in factors used to estimate PM10 emissions from PM emissions for different processes;
- CO emissions estimates;
- Operation and design specifications for the proposed new cement separator (O-Sepa Separator) including a baghouse to be installed at the existing Finish Mill No. 3.

Furthermore, the Department has concerns regarding the emissions calculations, including the estimated decrease in fugitive PM/PM10 emissions from the material handling process, that were provided in the application. DERM believes that the increase in particulate matter (PM/PM10) emissions, including fugitive emissions from this project would exceed the Prevention of Significant Deterioration (PSD) applicability thresholds as established in Chapter 62-212.400. Be

advised therefore, to either submit a proposal to this office identifying measures or projects to reduce emissions or, submit application to FDEP in Tallahassee for PSD review.

If you have any questions regarding the above, please contact Mallika Muthiah or myself at 305-372-6925.

Sincerely,

H. Patrick Wong, Chief
Air Quality Management Division

copy: Scott Quaas, Tarmac America, LLC, 455 Fairway Drive, Deerfield Beach, Fl, 33441
David Buff, P.E., Golder Associates, Inc, 6241 NW 23 St, Suite 500, Gainsville, Fl 32653-1500

Transmittal memo

Tarmac
A Titan America Business

455 Fairway Drive
Deerfield Beach, FL 33441
Environmental Department
Direct line 954.425.4165
Direct fax 954.480.9352

To	**Claire Jordahl – DERM**	**Date**	16 Mar 2004	**From**	Scott Quaas
Ref	Pennsuco Cement			**Tel no.**	(954) 425-4165

Please find enclosed a copy of the *"Flow Diagram"* from the PK5 Construction Permit Revision Application; as discussed it shows the PMCD changes that the application addresses. Additionally, I have enclosed a photo of the new plant with labels of the major system components. Let me know if you need anything further.

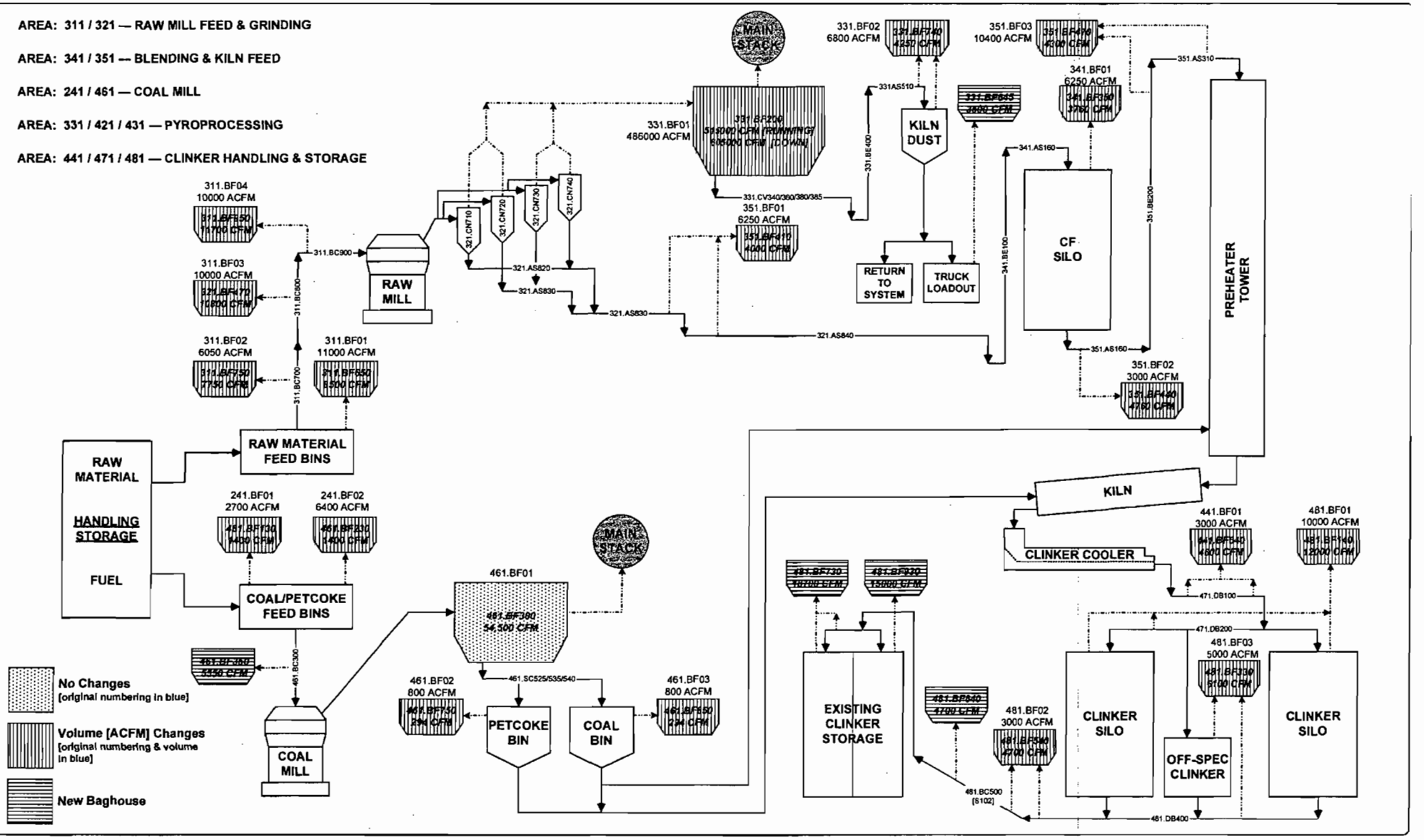
AREA: 311 / 321 — RAW MILL FEED & GRINDING

AREA: 341 / 351 — BLENDING & KILN FEED

AREA: 241 / 461 — COAL MILL

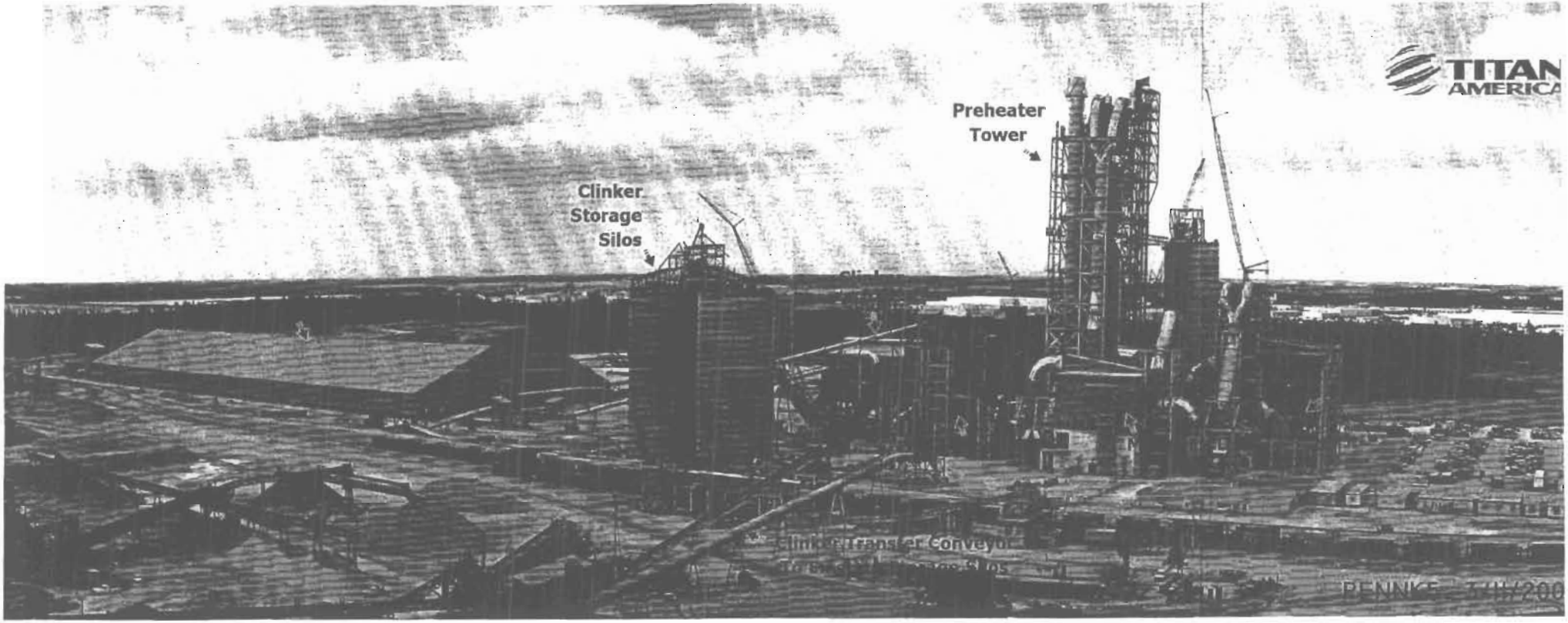
AREA: 331 / 421 / 431 — PYROPROCESSING

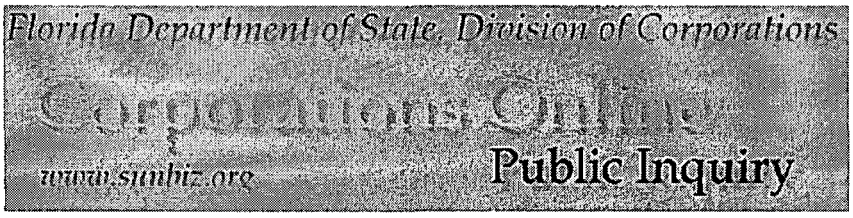
AREA: 441 / 471 / 481 — CLINKER HANDLING & STORAGE



DESCRIPTION	**FLOW DIAGRAM** PMCD CHANGES
TITLE:	PENNSUCO - PK5
FILENAME:	CEM-PK5-FLOWDIAGRAM-CHANGES.VSD
LAST REVISION DATE:	2/27/2004

Tarmac
A Titan America Business


TITAN AMERICA
Preheater Tower
Clinker Storage Silos



Foreign Limited Liability

TARMAC AMERICA LLC

PRINCIPAL ADDRESS
1151 AZALEA GARDEN RD.
NORFOLK VA 23502

MAILING ADDRESS
1151 AZALEA GARDEN RD.
NORFOLK VA 23502

Document Number	FEI Number	Date Filed
M01000001507	510405873	07/09/2001
State	**Status**	**Effective Date**
DE	ACTIVE	NONE
Last Event	**Event Date Filed**	**Event Effective Date**
NAME CHANGE AMENDMENT	09/21/2001	NONE
Total Contribution		
0.00		

Registered Agent

Name & Address
CORPORATION SERVICE COMPANY 1201 HAYS STREET TALLAHASSEE FL 32301-2525

Manager/Member Detail

Name & Address	Title
PAPADOPOULOS, ARIS 1151 AZALEA GARDEN ROAD NORFOLK VA 23502	MGR
JOHNSON, HARDY B 455 FAIRWAY DRIVE DEERFIELD BEACH FL 33441	MGR

FINK, RUSSELL A 1151 AZALEA GARDEN ROAD NORFOLK VA 23502	MGR
WILT, JR., LAWRENCE H 1151 AZALEA GARDEN ROAD NORFOLK VA 23502	MGR
SELLS, ROBERT 455 FAIRWAY DRIVE DEERFIELD BEACH FL 33441	MGR
TRAKKIDES, PANOS 11000 NW 121 WAY MEDLEY FL 33178	MGR

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2004	01/20/2004
2005	02/02/2005

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03/05/2002 -- COR - ANN REP/UNIFORM BUS REP
09/21/2001 -- Name Change
08/17/2001 -- Merger
07/09/2001 -- Foreign Limited

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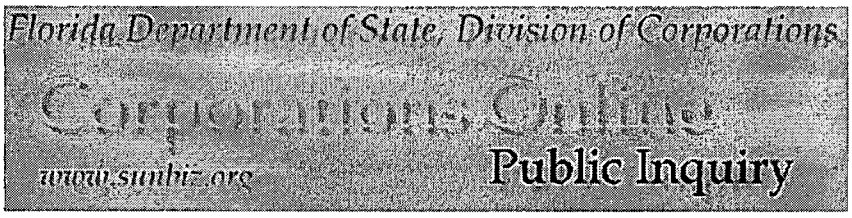

Florida Profit

TITAN, INC

PRINCIPAL ADDRESS
4485 SW 7 ST
MIAMI FL 33134
Changed 04/08/2004

MAILING ADDRESS
4485 SW 7 ST
MIAMI FL 33134
Changed 04/08/2004

Document Number	FEI Number	Date Filed
P00000099288	651051662	10/20/2000
State	**Status**	**Effective Date**
FL	ACTIVE	NONE

Registered Agent

Name & Address
CELIZ, HORACIO DANIEL 4485 SW 7 ST MIAMI FL 33134
Address Changed: 04/08/2004

Officer/Director Detail

Name & Address	Title
CELIZ, HORACIO DANIEL 4485 SW 7 ST MIAMI FL 33134	PSD

Annual Reports

Report Year	Filed Date

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2005	02/10/2005

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Florida Department of State, Division of Corporations

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TARMAC AMERICA LLC

Document Number	Date Filed	Effective Date	Status
M01000001507	07/09/2001	None	Active

EVENT TYPE	FILED DATE	EFFECTIVE DATE	DESCRIPTION
NAME CHANGE AMENDMENT	09/21/2001		OLD NAME WAS : TITAN FLORIDA LLC

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RECEIVED
MAR 0 4 2004
Air Quality
Management Division

010-AC

UPDATE OF APPLICATION FOR NEW CEMENT PLANT TARMAC AMERICA, LLC MEDLEY, FLORIDA

0250020-016-AC

Prepared for:

Tarmac America, LLC
455 Fairway Drive
Deerfield Beach, Florida 33441

Prepared by:

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

March 2004
0437504

DISTRIBUTION:
4 Copies – FDEP
2 Copies – Tarmac America, Inc.
1 Copy – Golder Associates Inc.

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Tarmac America, LLC**
2. Site Name: **Tarmac Pennsuco**
3. Facility Identification Number: **0250020**
4. Facility Location...:
   Street Address or Other Locator: **11000 N.W. 121 Way**
   City: **Medley** County: **Dade** Zip Code: **33178**
5. Relocatable Facility? ☐ Yes ☒ No
6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Scott Quaas, Environmental Manager**
2. Application Contact Mailing Address:
   Organization/Firm: **Tarmac America, LLC**
   Street Address: **455 Fairway Drive**
   City: **Deerfield Beach** State: **FL** Zip Code: **33441**
3. Application Contact Telephone Numbers...
   Telephone: **(954) 425 - 4165** ext. Fax: **(954) 480 - 9352**
4. Application Contact Email Address:

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3/4/2004
2. Project Number(s):	0250020-016-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

☒ Air construction permit.

Air Operation Permit

☐ Initial Title V air operation permit.

☐ Title V air operation permit revision.

☐ Title V air operation permit renewal.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☐ Air construction permit and Title V permit revision, incorporating the proposed project.

☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☐ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

The purpose of this document is to modify Air Construction Permit No. 0250020-010-AC to reflect the final engineering and actual equipment to be installed at the Medley facility. This application includes the following revisions to Air Construction Permit No. 0250020-010-AC:

1. **Correction to the physical and operating parameters for a number of baghouses currently contained in the referenced Air Construction Permits to reflect the actual equipment to be installed,**
2. **Modification of the clinker storage silo transfer system,**
3. **Retention of Finish Mills Nos. 1 and 2 (Finish Mill No. 6 will not be installed), and**
4. **Construction of a new O-Sepa System on Finish Mill No. 3.**

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	Coal Handling System	AC1C	
002	Clinker Handling and Storage	AC1C	
003	Finish Mill Nos. 1, 2, 3, and 4	AC1C	
005	Raw Mill and Pyroprocessing Unit	AC1C	
006	Raw Materials Handling	AC1C	

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Hardy Johnson, President, Florida Division
2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Tarmac America, LLC**
   Street Address: **455 Fairway Drive**
   City: **Deerfield Beach** State: **FL** Zip Code: **33441**
3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(954) 481 - 2800** ext. Fax: **(954) 421 - 0296**
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Signature _____ Date 3/2/04

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm:
   Street Address:
   City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
   Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official Email Address:

6. Application Responsible Official Certification:
   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   Signature Date

APPLICATION INFORMATION

RECEIVED
SEP 10 2004
BUREAU OF AIR REGULATION

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336 - 5600** ext. Fax: **(352) 336 - 6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff
Signature

9/9/04
Date

(seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336 - 5600** ext. Fax: **(352) 336 - 6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff — Signature

3/01/04 — Date

(seal)

* Attach any exception to certification statement.

Board of Professional Engineers Certificate of Authorization #00001670

Phillips, Cindy

From: Harvey, Mary
Sent: Tuesday, March 08, 2005 12:55 PM
To: Phillips, Cindy
Cc: Linero, Alvaro
Subject: FW:
Importance: High

Cindy and Al - this is your teleconferenced number for Thursday.

Thanks,
Mary

-----Original Message-----
From: Gaines, Hilda [mailto:Hilda.Gaines@myflorida.com]
Sent: Tuesday, March 08, 2005 11:38 AM
To: Harvey, Mary
Subject: RE:
Importance: High

MMCC FOR **THURSDAY 3/10/5**

30 LINERS

9:30---10:30A

850 414 1710

SC 994 1710

CON 30G 0308

I'M HOME ALONG TODA

THANKA

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **562.8** North (km) **2861.7**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **25/52/30** Longitude (DD/MM/SS) **80/22/30**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **32**	6. Facility SIC(s): **3241, 3271, 3273**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Scott Quaas, Environmental Manager**
2. Facility Contact Mailing Address... Organization/Firm: **Tarmac America, LLC** Street Address: **455 Fairway Drive** City: **Deerfield Beach** State: **FL** Zip Code: **33441**
3. Facility Contact Telephone Numbers: Telephone: **(954) 425-4165** ext. Fax: **(954) 480-9352**
4. Facility Contact Email Address:

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter - Total (PM)	**A**	**N**
Nitrogen Oxides (NO_x)	**A**	**N**
Sulfur Dioxide (SO_2)	**A**	**N**
Carbon Monoxide (CO)	**A**	**N**
Particulate Matter (PM_{10})	**A**	**N**
Hydrochloric Acid (H106)	**A** MAJOR	**N**
Dioxins/Furans (D10X)	**B** Facility regulated not major or minor	**N**

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-FI-C1** ☐ Previously Submitted, Date:____

2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-FI-C2** ☐ Previously Submitted, Date:____

3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-FI-C3** ☐ Previously Submitted, Date:____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☐ Attached, Document ID:____ ☒ Not Applicable (existing permitted facility)

2. Description of Proposed Construction or Modification:
   ☒ Attached, Document ID: **Part B**

3. Rule Applicability Analysis:
   ☒ Attached, Document ID: **TA-FI-CC3**

4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:____ ☐ Not Applicable (no exempt units at facility)

5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
   ☐ Attached, Document ID:____ ☒ Not Applicable

6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
   ☐ Attached, Document ID:____ ☒ Not Applicable

7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
   ☐ Attached, Document ID:____ ☒ Not Applicable

8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
   ☐ Attached, Document ID:____ ☒ Not Applicable

9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID:____ ☒ Not Applicable

10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:____ ☒ Not Applicable

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☐ Attached, Document ID:____ ☒ Not Applicable (revision application)

2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☐ Attached, Document ID:____
   ☒ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☐ Attached, Document ID:____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:____
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☒ Not Applicable

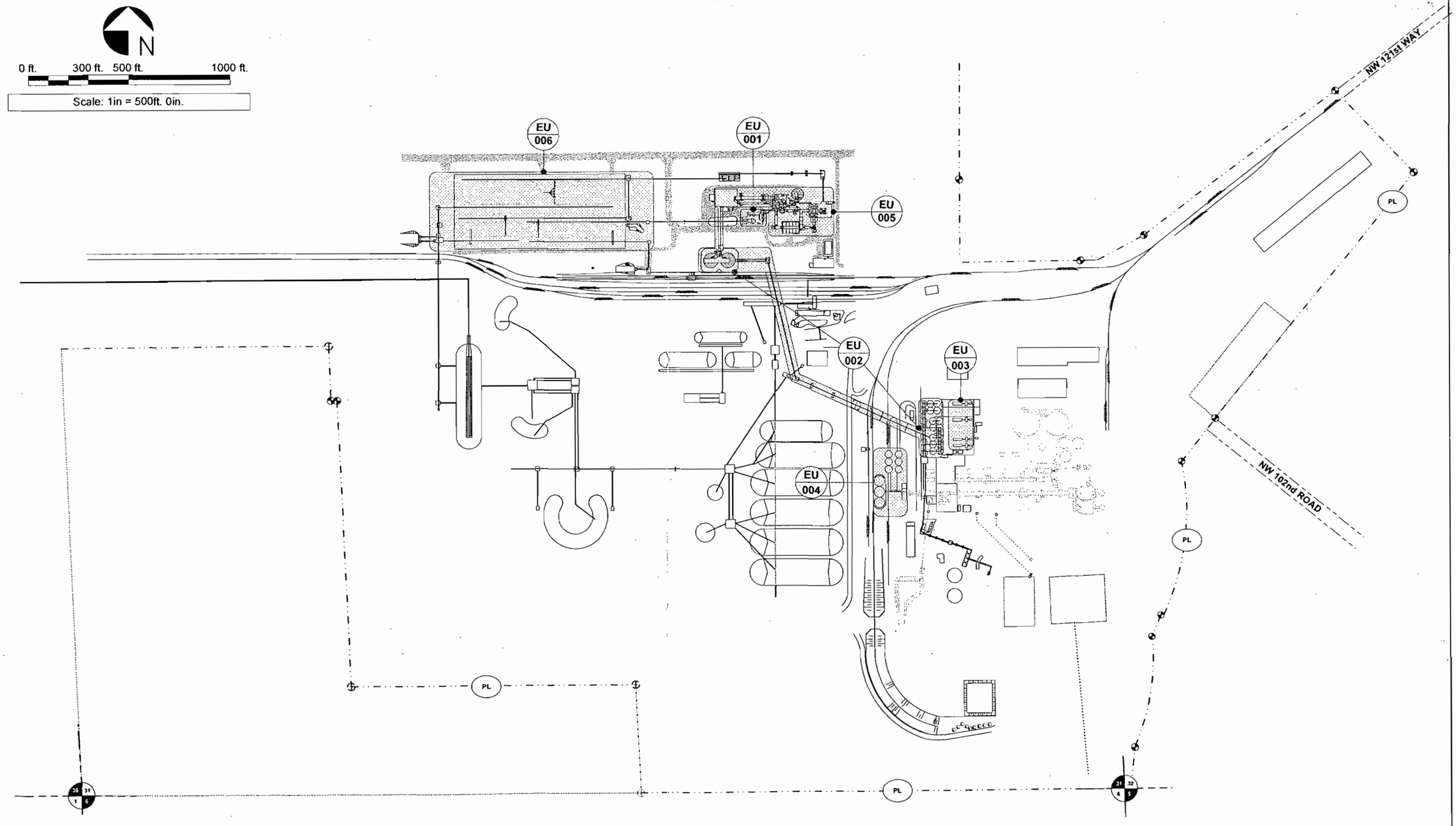
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:____ ☒ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:____ ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TA-FI-C1

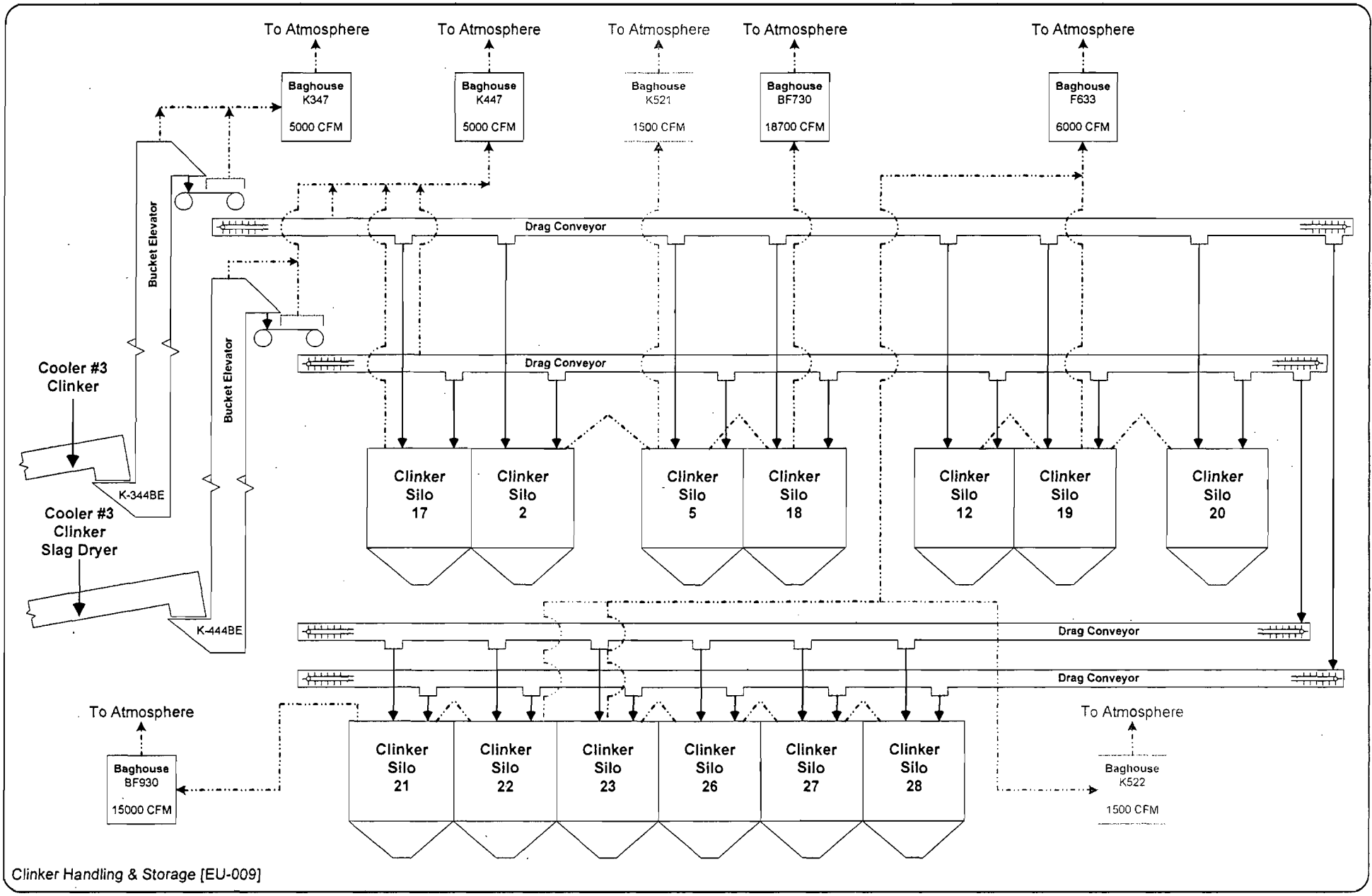
FACILITY PLOT PLAN



DESCRIPTION **FACILITY PLOT PLAN** **PK5 CONSTRUCTION**	TITLE: **PENNSUCO CEMENT** FILENAME: 0437504/4/4.4/TA-FI-C1 LAST REVISION DATE: 12/9/2003	Tarmac A Titan America Business

ATTACHMENT TA-FI-C2

PROCESS FLOW DIAGRAM



DESCRIPTION **FACILITY SCHEMATICS** **EMISSION UNITS**	TITLE: **PENNSUCO CEMENT** FILENAME: TARMAC-TITLE V.VSD LAST REVISION DATE: 9/24/2003	Tarmac A Titan America Business

ATTACHMENT TA-FI-C3

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

ATTACHMENT TA-FI-C3
PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The owner or operators shall not cause, let, permit, suffer, or allow the emissions of unconfined particulate matter (PM) from any source whatsoever, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing, or handling, without taking reasonable precautions to prevent such emissions.

Tarmac will employ reasonable precautions to control emissions of unconfined PM. These reasonable precautions may include, but are not limited to, the following:

1. Paving and maintenance of roads, parking areas, and yards.
2. Applying water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
3. Applying asphalt, water, oil, chemicals, or other dust suppressants to unpaved roads, yards, open stockpiles, and similar activities.
4. Removing PM from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.
5. Confining abrasive blasting where possible.
6. Landscaping and planting of vegetation.
7. Using hoods, fans, filters, and similar equipment to contain, capture, and/or vent PM.
8. Enclosing or covering of conveyor systems.
9. Storing all materials, coal, and petroleum coke at the plant under roof on compacted clay or concrete or in enclosed vessels.
10. Locating water supply lines, hoses, and sprinklers near all unenclosed materials to prevent unconfined PM emissions.
11. Installing tire wash for bulk transport trucks leaving the plant, to remove PM from vehicle tires before traveling on the facility's access roadways.

ATTACHMENT TA-FI-CC3

RULE APPLICABILITY ANALYSIS

ATTACHMENT TA-FI-CC3

RULE APPLICABILITY ANALYSIS

FACILITY

62-210.700(1) Excess Emissions
62-210.700(4) Excess Emissions
62-210.700(5) Excess Emissions
62-210.700(6) Excess Emissions
62-296.320(4) General Visible Emissions Std.
62-296.320(4)(c) - Unconfined Emissions
Dade County - See 24-17

COAL HANDLING SYSTEM

40 CFR 60.11(b) General NSPS Requirements
40 CFR 60.11(c) General NSPS Requirements
40 CFR 60.11(d) General NSPS Requirements
40 CFR 60.12 General NSPS Requirements
40 CFR 60.19 General NSPS Requirements
40 CFR 60.252(c) Subpart Y
40 CFR 60.254(a)
40 CFR 60.254(b)(2)
40 CFR 60.7 General NSPS Requirements
40 CFR 60.8 General NSPS Requirements
62-296.320(4)(a) Process Weight Table

CLINKER HANDLING AND STORAGE

40 CFR 60.11(b) General NSPS Requirements
40 CFR 60.11(c) General NSPS Requirements
40 CFR 60.11(d) General NSPS Requirements
40 CFR 60.12 General NSPS Requirements
40 CFR 60.19 General NSPS Requirements
40 CFR 60.62(c) Portland Cement Plant NSPS Requirement for non-kiln, non-cooler sources
40 CFR 60.7 General NSPS Requirements
40 CFR 60.8 General NSPS Requirements
62-296.320(4)(b) Visible Emissions

FINISH MILLS

Finish Mill #4 Only
40 CFR 60.11(b) General NSPS Requirements
40 CFR 60.11(c) General NSPS Requirements
40 CFR 60.11(d) General NSPS Requirements
40 CFR 60.12 General NSPS Requirements
40 CFR 60.19 General NSPS Requirements
40 CFR 60.62(c) NSPS Subpart F
40 CFR 60.7 General NSPS Requirements
40 CFR 60.8 General NSPS Requirements
Finish Mills #1 - #3: 62-296.320(4)(a) Process Weight Standard

RAW MILL AND PYROPROCESSING

40 CFR 60.11 General NSPS Requirements
40 CFR 60.12 General NSPS Requirements
40 CFR 60.13(a) General NSPS Requirements
40 CFR 60.13(b) General NSPS Requirements
40 CFR 60.13(d)(2) General NSPS Requirements
40 CFR 60.13(e)(1) General NSPS Requirements
40 CFR 60.13(f) General NSPS Requirements
40 CFR 60.13(h) General NSPS Requirements
40 CFR 60.19 General NSPS Requirements
40 CFR 60.62(a) NSPS Requirement for Cement Kilns
40 CFR 60.62(b) NSPS Requirements for Cement Plant Coolers
40 CFR 60.63(a) NSPS Requirement for Cement Kilns
40 CFR 60.63(b) NSPS Requirement for Cement Kilns
40 CFR 60.63(d) NSPS Requirement for Cement Kilns
40 CFR 60.64 NSPS Requirement for Cement Kilns
40 CFR 60.65(a) NSPS Requirement for Cement Kilns
40 CFR 60.65(b) NSPS Requirements for Cement Plant Coolers
40 CFR 60.65(c) NSPS Requirements for Cement Plant Coolers
40 CFR 60.7 General NSPS Requirements
40 CFR 60.8 General NSPS Requirements
62-296.320(4)(a) Process Weight Table
62-296.407 Portland Cement Plants
62-296.507(4)(b)8 RACT Requirements for Major VOC and NO_x Emitting Facilities
40 CFR 63, Subpart LLL – Area Source Requirements for Portland Cement Industry

RAW MATERIAL HANDLING

Rule 62-297.620(4), F.A.C. - 5% Opacity Limit in Lieu of Stack Testing

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Coal Handling System

3. Emissions Unit Identification Number: **001**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Emission unit consists of Coal Handling System for the Pyroprocessing Operation, including coal/petcoke feed bins, coal mill, and storage bins.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Baghouses (6)
   Process Enclosure

2. Control Device or Method Code(s): **018, 054**

018 - Low Temp (<185°F) Fabric Filter
054 - Process enclosed

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **190,000 TPY**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **Maximum process rate reflects coal/petroleum coke throughput.**	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 001**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **See Attachment TA-EU1-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **420** feet	7. Exit Diameter: **14** feet
8. Exit Temperature: **176**°F	9. Actual Volumetric Flow Rate: **54,500** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **45,245** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Refer to Attachment TA-EU1-C15 for point specific data. Data above reflect coal mill exit gas emitted through common stack.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Bulk Material Stockpiles: Coal.**		
2. Source Classification Code (SCC): **3-05-103-03**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **30**	5. Maximum Annual Rate: **190,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum permitted 24-hour block average usage rate is 30 TPH. Maximum annual permitted rate is 190,000 (Permit No. 0250020-010-AC). These rates are total for coal and petroleum coke. Maximum petroleum coke usage is 20 TPH, 24-hour block average.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Bulk Material Conveyors; Coal.**		
2. Source Classification Code (SCC): **3-05-101-03**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **30**	5. Maximum Annual Rate: **190,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum permitted 24-hour block average usage rate is 30 TPH. Maximum annual permitted rate is 190,000 (Permit No. 0250020-010-AC). These rates are total for coal and petroleum coke. Maximum petroleum coke usage is 20 TPH, 24-hour block average.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **31.3** lb/hour **45.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See note below** Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Includes 4.6 lb/hr and 17.7 TPY from the baghouses and 26.7 lb/hr and 27.8 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Appendix A of Part B.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **28.0** lb/hour **42.0** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See note below** Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Includes 4.6 lb/hr and 17.7 TPY from the baghouses and 23.4 lb/hr and 24.29 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Appendix B of Part B.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 4.6 lb/hour 17.7 tons/year
5. Method of Compliance: EPA Method 9 Test, except EPA Method 5 for the Coal Mill (461.BF300)	
6. Allowable Emissions Comment (Description of Operating Method): Allowable in gr/dscf, applies to baghouses only, except for Coal Mill and Coal Mill feed baghouse. Allowable for these baghouses is 0.01 gr/dscf. See Table 2-1 in Part B for calculation of potential emissions.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3.59 $p^{A^{0.62}}$	4. Equivalent Allowable Emissions: 29.6 lb/hour 116.7 tons/year
5. Method of Compliance: EPA Method 9 test.	
6. Allowable Emissions Comment (Description of Operating Method): Applies to Coal Mill only. Calculated based on maximum 24-hour block average usage rates of 30 TPH and 190,000 TPY. However, emissions from the coal mill are controlled using a baghouse to 3.88 lb/hr and 15.3 TPY (see Table 2-1 in Part B).	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **4.6** lb/hour **17.7** tons/year
5. Method of Compliance: **EPA Method 9 Test, except EPA Method 5 for the Coal Mill (461.BF300)**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to baghouses only. See Table 2-1 in Part B for calculation of potential emissions.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **3.59 p^0.62**	4. Equivalent Allowable Emissions: **29.6** lb/hour **116.7** tons/year
5. Method of Compliance: **EPA Method 9 test.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to Coal Mill only. Calculated based on maximum 24-hour block average usage rates of 30 TPH and 190,000 TPY. However, emissions from the coal mill are controlled using a baghouse to 3.88 lb/hr and 15.3 TPY (see Table 2-1 in Part B).**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM_{10}	2. Total Percent Efficiency of Control:
3. Potential Emissions: 14.0 lb/hour 27.4 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See note below Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions: Includes 4.6 lb/hr and 17.7 TPY (same as PM) for baghouses and 9.35 lb/hr and 9.72 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Appendix A of Part B.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **27.3** lb/hour **39.2** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See note below** Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Assumes 84 percent of PM is PM_{10} for the baghouses. Includes 3.9 lb/hr and 14.9 TPY from the baghouses and 23.4 lb/hr and 24.29 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Appendix B of Part B.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 4.6 lb/hour 17.7 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable in gr/dscf, applies to baghouses only, except for Coal Mill and Coal Mill feed baghouse. Allowable for these baghouses is 0.01 gr/dscf. See Table 2-1 in Part B for calculation of potential emissions.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **84% of PM**	4. Equivalent Allowable Emissions: **3.9** lb/hour **14.9** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applicable to baghouses only.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9.**	
5. Visible Emissions Comment: **Applies to all baghouses. Coal Mill baghouse subject to 40 Part 60, Subpart Y.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Permit No. 0250020-010-AC. Applies to Coal Mill baghouse only (461.BF300).**	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: **VE5**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9.**	
6. Visible Emissions Comment: **Permit No 0250020-010-AC. Applies to all baghouses except Coal Mill baghouse (461.BF300). Based on Rule 62-297.620(4) in lieu of stack testing.**	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor __ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor __ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-FI-C2** ☐ Previously Submitted, Date ____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date ____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☐ Previously Submitted, Date: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☐ To be Submitted, Date (if known): ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: ____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID: _____
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TA-EU1-C15

EMISSION POINT COMMENT

Attachment TA-EU1-C15. Summary of Stack Parameter Data for the Coal Handling System (EU 001)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Coal transfer	461.BF130	126	0.75 x 0.83	1,400	92
Coal transfer	461.BF230	126	0.75 x 0.84	1,400	92
Coal mill	461.BF300	420	14	54,500[a]	176
Coal mill feed	461.BF350	75	1.00 x 1.25	5,500	92
Coal feeder	461.BF650	67	0.42	294	178
Coal feeder	461.BF750	67	0.42	294	178

[a] The coal mill vents through the plant main stack. Flow rate represents coal mill exhaust gas only.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Clinker Handling and Storage

3. Emissions Unit Identification Number: **002**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Emission unit consists of Clinker Handling and Storage systems for the Pyroprocessing Operation and Clinker Silos 1, 2, 4, 5, 11, 12, and 18-28. Original ARMS ID Nos. Are 08 and 09.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Baghouses (7) + 1 existing = 8
   Process Enclosures

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **320 TPH (24-hour block average)**	
2. Maximum Production Rate: **1,942,500 TPY**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 002**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **7 baghouse stacks. See Attachment TA-EU2-C15.** +1 existing = 8		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **H**	6. Stack Height: **113** feet	7. Exit Diameter: feet
8. Exit Temperature: **250**°F	9. Actual Volumetric Flow Rate: **18,700** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **13,906** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Data presented above reflects Baghouse 481.BF730. Refer to Attachment TA-EU2-C15 for stack parameters for other baghouses.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Transfer.**		
2. Source Classification Code (SCC): **3-05-006-16**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **320**	5. Maximum Annual Rate: **1,942,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Note: maximum rates reflect transfer of clinker plus slag, not cement. Maximum hourly rate is 24-hour block average.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Storage Silos.**		
2. Source Classification Code (SCC):	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **320**	5. Maximum Annual Rate: **1,942,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Rates refers to tons of clinker produced plus slag, not cement. Maximum hourly rate is 24-hour block average.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 4.54 lb/hour 19.5 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: See comment. Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions: Assumed as 100 percent of PM emissions. See Table 2-2b in Part B for emission calculations.	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.75** lb/hour **20.3** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.01 gr/dscf** Reference: **Manufacturer Design**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-2.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0095 gr/dscf	4. Equivalent Allowable Emissions: 3.98 lb/hour 17.1 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable in gr/dscf applies to all baghouses except K347, K447, and F633. See Table 2-2b in Part B for potential emission calculations.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 gr/dscf	4. Equivalent Allowable Emissions: 0.56 lb/hour 2.44 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable in gr/dscf applies to Baghouses K347, K447, and F633. Allowable emissions reflect the fact that baghouses K347 and K447 do not operate at the same time.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **4.75** lb/hour **20.3** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **See Table 2-2 in Part B for potential emission calculations.**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.54** lb/hour **19.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See comment.** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Assumed as 100 percent of PM emissions. See Table 2-2b in Part B for emission calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.99** lb/hour **17.1** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Assumed as 84 percent of PM emissions. See Table 2-2 in Part B for emission calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **3.98** lb/hour **17.1** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf applies to Baghouses K347, K447, and F633. See Table 2-2b in Part B for potential emission calculations.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **0.56** lb/hour **2.44** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable in gr/dscf applies to Baghouses K347, K447, and F633. Allowable emissions reflect the fact that baghouses K347 and K447 do not operate at the same time.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **84% of PM**	4. Equivalent Allowable Emissions: **3.99** lb/hour **17.1** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9.**	
5. Visible Emissions Comment: **Based on permit No. 0250020-010-AC.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9.**	
5. Visible Emissions Comment: **Based on Permit No. 0250020-010-AC. Based on Rule 62-297.620(4), in lieu of stack testing for PM.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor __ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor __ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TA-EU2-C15

EMISSION POINT COMMENT

Attachment TA-EU2-C15. Summary of Stack Parameter Data for the Clinker Handling and Storage System (EU 002)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Vent Size (in)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
~~Clinker transfer~~	~~K347~~	~~160~~	~~1.0[a]~~	~~5,000~~	~~77~~
~~Clinker transfer~~	~~K447~~	~~160~~	~~1.0[a]~~	~~5,000~~	~~77~~
Clinker silos 21-23 and 26-28	K633	130	1.0[a]	1,500	77
Clinker transfer	441.BF540	53	12 x 15	4,600	250
Clinker silo	481.BF140	185	19 x 13	12,000	250
Clinker transfer	481.BF540	44	12 x 15	4,700	250
Clinker bins	481.BF330	103	16 x 19	6,100	250
Clinker transfer	481.BF640	42	12 x 15	4,700	250
Clinker transfer	481.BF730	113	23 x 33	18,700	250
Clinker transfer	481.BF930	113	20 x 30	15,000	250

see 2/2/05 Application revision

[a]Diameter of round stack.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Finish Mill Nos. 1, 2, 3, and 4

3. Emissions Unit Identification Number: **003**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Emission unit consists of Finish Mill Nos. 1, 2, 3, and 4. The original Arms ID Nos. for the Finish Mill Nos. 1, 2, 3, and 4 are 010, 011, 012, and 013, respectively.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Baghouses (12)
   Process Enclosure

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **274 TPH (24-hour block average)**	
2. Maximum Production Rate: **2,400,240 TPY**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **Individual capacities:** • **Finish Mill No. 1 - 25 TPH** • **Finish Mill No. 2 - 25 TPH** • **Finish Mill No. 3 - 84 TPH** • **Finish Mill No. 4 - 140 TPH** **274 TPH**	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 003**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **8 baghouses stacks. See Attachment TA-EU3-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **85** feet	7. Exit Diameter: **4.50** feet
8. Exit Temperature: **169**°F	9. Actual Volumetric Flow Rate: **77,800** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **65,307** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Stack data representative of O-Sepa Separator baghouse stack on Finish Mill No. 3 (Equipment ID No. 533.BF340). Refer to Attachment TA-EU3-C15 for stack parameters for other baghouses.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Grinding.**		
2. Source Classification Code (SCC): **3-05-006-17**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **274**	5. Maximum Annual Rate: **2,400,240**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum annual rate based on cement production equivalent to 1,942,500 TPY clinker. Maximum hourly rate is 24-hour block average.**		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **18.0** lb/hour **78.9** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See comment.** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-3b.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

See 2/2/05 REV

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **18.3** lb/hour **80.1** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Part B, Table 2-3** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-3.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **12.7** lb/hour **55.6** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to all baghouses except Finish Mill No. 3 Baghouse 533.BF340.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **5.32** lb/hour **23.29** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit limit applies to Finish Mill No. 3, Baghouse 533.BF340 only.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **12.7** lb/hour **55.58** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to all baghouses except Finish Mill No. 3 baghouse 533.BF340.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **5.60** lb/hour **24.52** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit limit applies to Finish Mill No. 3, baghouse 533.BF340 only.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **18.0** lb/hour **78.9** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See comment.** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-3b.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **15.37** lb/hour **67.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Assumed 84 percent of PM emissions; see Part B, Table 2-3.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **12.7** lb/hour **55.6** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to all baghouses except Finish Mill No. 3 Baghouse 533.BF340.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **5.32** lb/hour **23.29** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit limit applies to Finish Mill No. 3, Baghouse 533.BF340 only.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **84% of PM**	4. Equivalent Allowable Emissions: **15.37**lb/hour **67.3** tons/year
5. Method of Compliance: **EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual visible emissions test using EPA Method 9.**	
7. Visible Emissions Comment: **BACT determination from Permit PSD-FL-236 for Finish Mill No. 4 only. BACT limit is more limiting than NSPS standard [40 CFR 60.62(c)] of 10 percent. Also applicable to all baghouses per Rule 62-620(4) in lieu of stack testing.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual visible emissions test using EPA Method 9.**	
5. Visible Emissions Comment: **40 CFR 60.62(c) NSPS, applicable to Finish Mill No. 4. 40 CFR 63.1347 MACT, applicable to Finish Mill No. 3.**	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual visible emissions test using EPA Method 9.**	
8. Visible Emissions Comment: **Applies to Finish Mill Nos. 1 and 2. Rule 62-296.320(4)(b).**	

Visible Emissions Limitation: Visible Emissions Limitation ___ of ___

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
6. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor __ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-EU3-I1** ☐ Previously Submitted, Date ____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date ____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☐ Previously Submitted, Date: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☐ To be Submitted, Date (if known):____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: ____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID: _____
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TA-EU3-C15

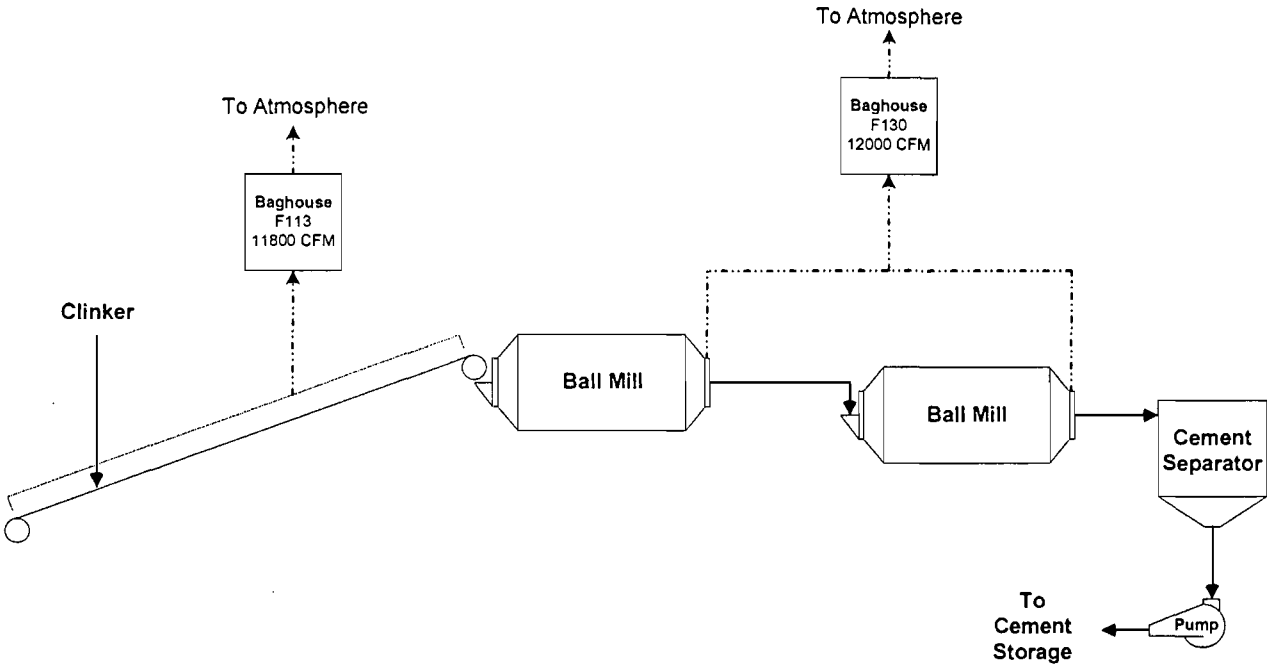
EMISSION POINT COMMENT

Attachment TA-EU3-C15. Summary of Stack Parameter Data for the Finish Mills (EU 003)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Finish Mill No. 1 Baghouse	F113	106	1.00	11,800	110
Finish Mill No. 1 Baghouse	F130	106	1.00	12,000	110
Finish Mill No. 2 Baghouse	F213	106	1.00	11,800	110
Finish Mill No. 2 Baghouse	F230	106	1.00	12,000	110
Finish Mill No. 3 Baghouse	F330	106	1.50	20,000	110
Finish Mill No. 3 Baghouse	F332	106	1.50	13,500	110
Finish Mill No. 3 Baghouse	533.BF340	84.6	4.50	77,800	169
Finish Mill No. 4 Baghouse	F432	106	2.00	17,000	110
Finish Mill No. 4 Baghouse	F605	106	2.00	4,000	110
Finish Mill No. 4 Baghouse	F603	106	1.00	8,000	110
Finish Mill No. 4 Baghouse	F430	106	1.00	30,000	110
Finish Mill No. 4 Baghouse	F604	106	1.00	8,000	110

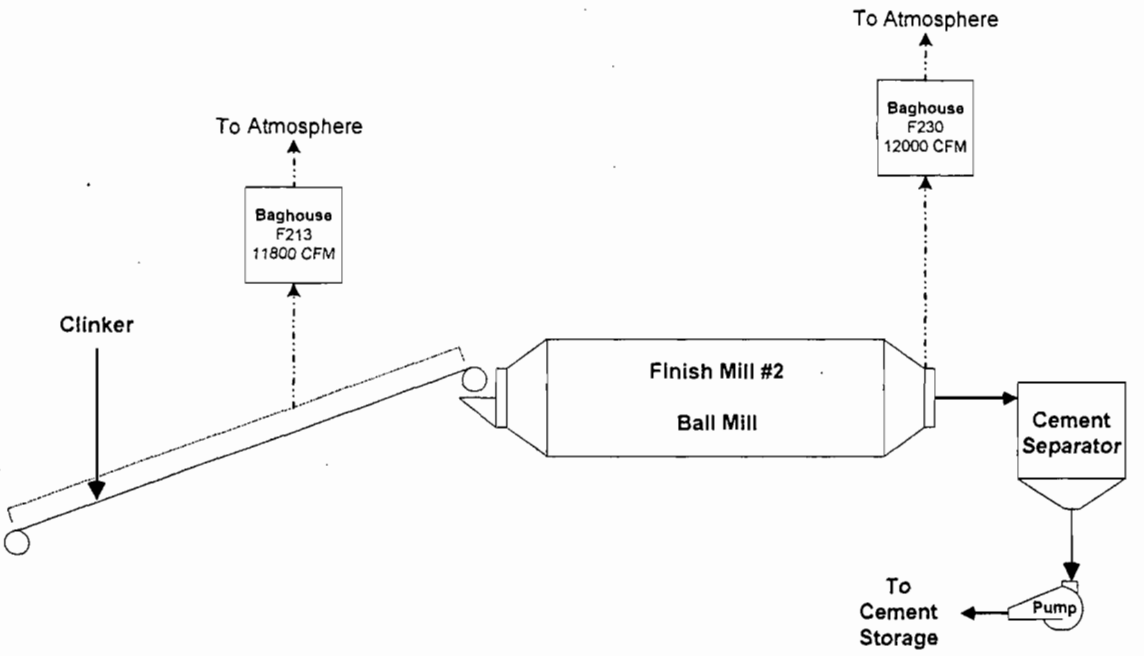
ATTACHMENT TA-EU3-I1

PROCESS FLOW DIAGRAMS



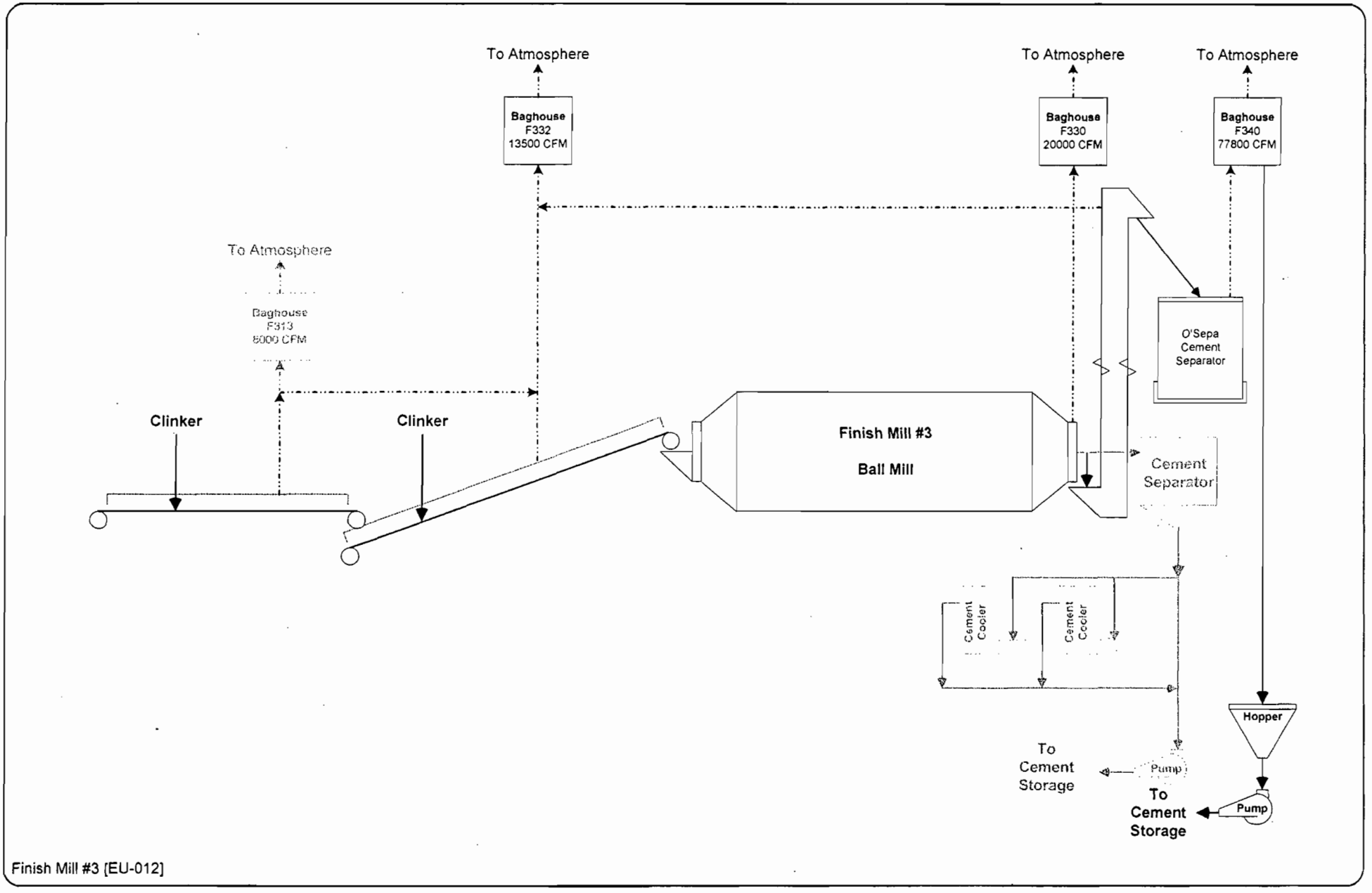
Finish Mill #1 [EU-010]

DESCRIPTION		
FACILITY SCHEMATICS **EMISSION UNITS**	TITLE: **PENNSUCO CEMENT**	Tarmac A Titan America Business
	FILENAME: TARMAC-TITLE V.VSD	
	LAST REVISION DATE: 9/24/2003	



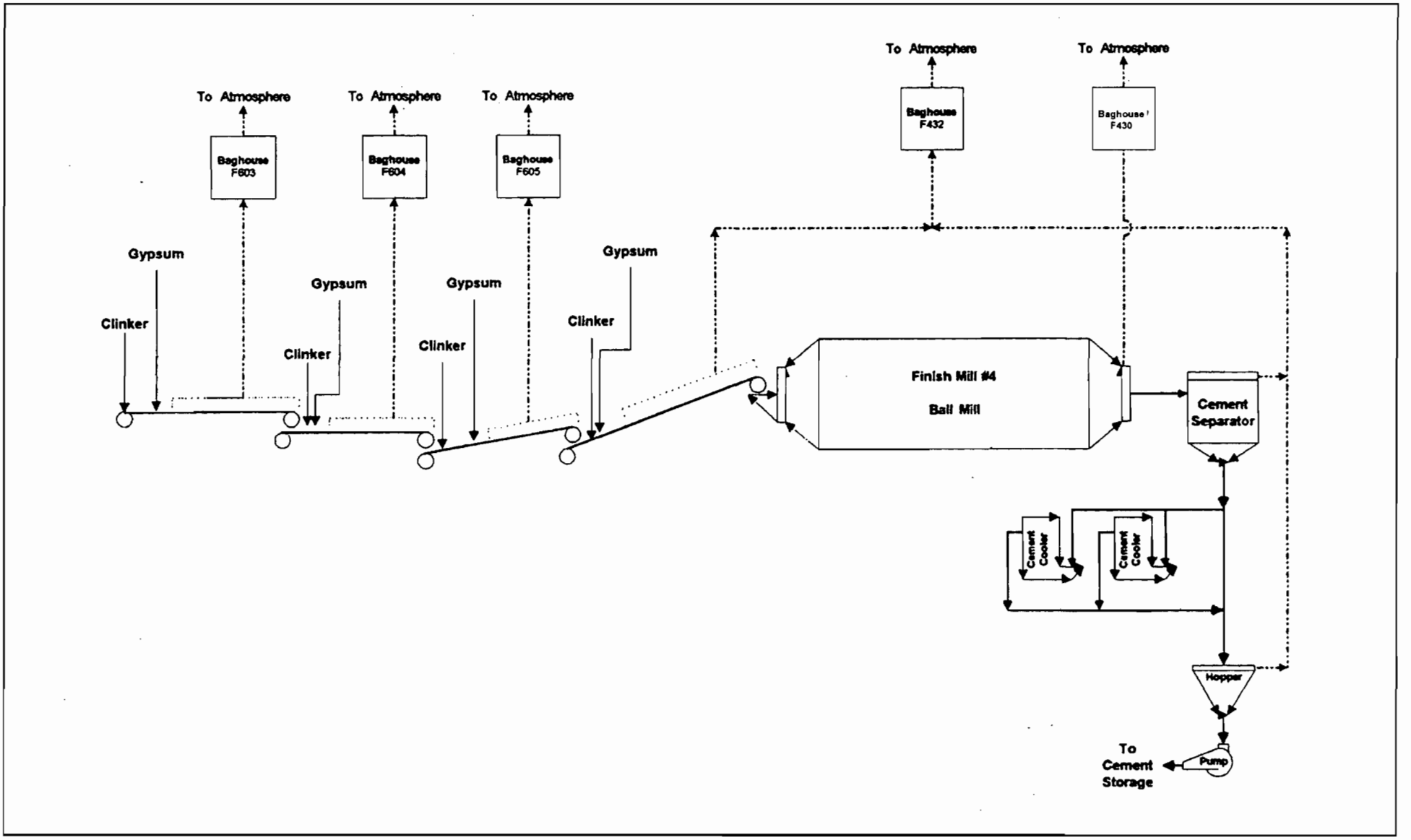
Finish Mill #2 [EU-011]

DESCRIPTION		
FACILITY SCHEMATICS **EMISSION UNITS**	TITLE: **PENNSUCO CEMENT**	Tarmac A Titan America Business
	FILENAME: TARMAC-TITLE V.VSD	
	LAST REVISION DATE: 9/24/2003	



Finish Mill #3 [EU-012]

DESCRIPTION **FACILITY SCHEMATICS** **EMISSION UNITS**	TITLE: **PENNSUCO CEMENT** FILENAME: TARMAC-TITLE V.VSD LAST REVISION DATE: 9/24/2003	Tarmac A Titan America Business



Attachment TA-EU3-I1
Process Flow Diagram – Finish Mill No. 4
Tarmac America, Medley, FL

Source: Golder, 2004.

Golder Associates

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Raw Mill and Pyroprocessing Unit

3. Emissions Unit Identification Number: **005**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Pyroprocessing consists of the preheater/calciner, kiln, and cooler.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Baghouses (7)
   Process Enclosure

2. Control Device or Method Code(s): **016, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **250 TPH (24-hour block average)**
2. Maximum Production Rate: **1,642,500 TPY**
3. Maximum Heat Input Rate: **675** million Btu/hr
4. Maximum Incineration Rate: pounds/hr
   tons/day
5. Requested Maximum Operating Schedule:
   24 hours/day **7** days/week
   52 weeks/year **8,760** hours/year
6. Operating Capacity/Schedule Comment:
   Production rates relate to clinker production.

Source Description	Heat Input Rate (MMBtu/hr)
Calciner	385
Kiln	290
Total	675

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **09, 10, 11**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **7 baghouses stacks. Attachment TA-EU4-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **420** feet	7. Exit Diameter: **14** feet
8. Exit Temperature: **294**°F	9. Actual Volumetric Flow Rate: **515,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Data for main stack. Representative of clinker production with raw mill operating. With raw mill down, parameters are 605,000 acfm @ 500°F. See Attachment TA-EU4-C15 for stack parameters for other sources.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 8

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Raw Material Grinding and Drying.**		
2. Source Classification Code (SCC): **3-05-006-13**	3. SCC Units: **Raw Feed Produced**	
4. Maximum Hourly Rate: **400**	5. Maximum Annual Rate: **2,792,250**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to raw feed produced from raw mill.**		

Segment Description and Rate: Segment 2 of 8

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Kilns**		
2. Source Classification Code (SCC): **3-05-006-06**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **250**	5. Maximum Annual Rate: **1,642,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to clinker production. Maximum hourly rate is 24-hour block average.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 8

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Cooler.**		
2. Source Classification Code (SCC): **3-05-006-14**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **250**	5. Maximum Annual Rate: **1,642,500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to clinker through clinker cooler.**		

Segment Description and Rate: Segment 4 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer (Bituminous Coal).**		
2. Source Classification Code (SCC): **3-90-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **30**	5. Maximum Annual Rate: **190,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **3.5**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **25**
10. Segment Comment: **Maximum annual rate based on 1,642,500 TPY clinker. Maximum hourly rate is 24-hour block average. Includes coal and petroleum coke.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 5 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; General-Coke.**		
2. Source Classification Code (SCC): **3-90-008-99**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **20.3**	5. Maximum Annual Rate: **177,828**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **5.5**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **28.4**
10. Segment Comment: **Refers to petroleum coke.**		

Segment Description and Rate: Segment 6 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer No. 2 Fuel Oil with Used Oil Blend.**		
2. Source Classification Code (SCC): **3-90-005-02**	3. SCC Units: **1000 Gallons Burned**	
4. Maximum Hourly Rate: **4.86**	5. Maximum Annual Rate: **31,914**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138.8**
10. Segment Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 7 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer No. 6 Fuel Oil with Used Oil Blend.**		
2. Source Classification Code (SCC): **3-90-004-02**	3. SCC Units: **1000 Gallons Burned**	
4. Maximum Hourly Rate: **4.44**	5. Maximum Annual Rate: **29,185**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **2.0**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **152**
10. Segment Comment:		

Segment Description and Rate: Segment 8 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer; Natural Gas.**		
2. Source Classification Code (SCC): **3-90-006-02**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.68**	5. Maximum Annual Rate: **4,436**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2			NS
PM	016		EL
PM_{10}	016		NS
DIOX			EL
NO_x			EL
CO			NS
VOC			NS
SAM			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **320** lb/hour **806** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **Permit Limit** Reference: **Permit No. 0250020-010-AC**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **1.54 lb SO_2/ton clinker produced (24-hour average) x 208 TPH clinker produced (24-hour average) = 320 lb SO_2/hr** **0.981 lb SO_2/ton clinker produced (annual average) x 1,642,500 TPY clinker produced x 1 ton/2,000 lb = 806 TPY SO_2**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **The hourly SO_2 emission limit at 250 TPH of clinker production is 1.28 lb SO_2/ton clinker produced, which also yields a SO_2 emission rate of 320 lb/hr.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.54 lb/ton clinker***	4. Equivalent Allowable Emissions: **320** lb/hour **806** tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): *** At 208 TPH clinker. Limit at 250 TPH is 1.28 lb/ton clinker.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.2 lb/mmBtu**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): **Additional SO_2 limit when solid fuel is fired. 24-hour average.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.8 lb/MMBtu**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): **Additional SO_2 limit when liquid fuel is fired (24-hour average).**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **51.6** lb/hour **181.4** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Comment** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Tables 2-4 and 2-5.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **51.7** lb/hour **182** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Comment** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Tables 2-4 and 2-5.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.125 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **50.0** lb/hour **175** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Permit No. 0250020-010-AC. Applies to emissions from main stack only.**	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.3 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **50.0** lb/hour **175** tons/year
5. Method of Compliance: **Annual EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **NSPS 40 CFR 60.62(b) for cooler only based on feed to kiln. Equivalent allowable emissions are emissions out the main stack.**	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.1 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **50.0** lb/hour **175** tons/year
5. Method of Compliance: **Annual EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit is NSPS (40 CFR 60.62) for kiln only. Equivalent allowable emissions are emissions out main stack.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.125 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **50.0** lb/hour **175** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Permit No. 0250020-010-AC. Applies to emissions from main stack only.**	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.3 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **50.0** lb/hour **175** tons/year
5. Method of Compliance: **Annual EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **NSPS 40 CFR 60.62(b) for cooler only based on feed to kiln. Equivalent allowable emissions are emissions out the main stack.**	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.1 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **50.0** lb/hour **175** tons/year
5. Method of Compliance: **Annual EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit is NSPS (40 CFR 60.62) for kiln only. Equivalent allowable emissions are emissions out main stack.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **1.60** lb/hour **6.4** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit requested by applicant. Applies to emissions from baghouses other than Kiln/Cooler/Raw Mill Baghouse 331.BF200. See Part B, Table 2-4.**	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **1.70** lb/hour **6.8** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit requested by applicant. Applies to emissions from baghouses other than 331.BF200.**	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **44.1** lb/hour **153.4** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-4.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **43.4** lb/hour **152.7** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **84% of PM** Reference: **AP-42**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **84 percent of PM. 51.7 lb/hr x 0.84 = 43.4 lb/hr. 181.8 TPY x 0.84 = 152.7 TPY.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.105 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **42.0** lb/hour **146.6** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Permit No. 0250020-010-AC. Applies to emissions from main stack Baghouse 331.BF200 (Kiln, Cooler, Raw Mill) only.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **100% of PM**	4. Equivalent Allowable Emissions: **1.6** lb/hour **6.4** tons/year
5. Method of Compliance: **Annual Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit requested by applicant. Applies to emissions from baghouse other than Baghouse 331.BF200 (Kiln, Cooler, Raw Mill).**	

Allowable Emissions Allowable Emissions _ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.105 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **42.0** lb/hour **146.6** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Permit No. 0250020-010-AC. Applies to emissions from main stack only.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **84% of PM**	4. Equivalent Allowable Emissions: **1.4** lb/hour **5.7** tons/year
5. Method of Compliance: **Annual Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit requested by applicant. Applies to emissions from baghouses other than 331.BF200.**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **D10X**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.00067** lb/hour **0.0026** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.4 ng/dscm (Permit Limit)** Reference: **40 CFR 63.1343 (d)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.4 ng TEQ/dscm x lb/4.54 x 10^{11} ng x 35.3 m^3/ft^3 x 360,637 dscfm x 60 min/hr = 0.00067 lb/hr** **0.00067 lb/hr x 7,884 hr/yr x 1 ton/2,000 lb = 0.0026 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Emissions are from main stack.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.4 ng/dscm**	4. Equivalent Allowable Emissions: **0.00067** lb/hour **0.0026** tons/year
5. Method of Compliance: **EPA Method 23**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on limit in Permit No. 0250020-010-AC.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **720** lb/hour **1,953** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **Permit Limit** Reference: **Permit No. 0250020-010-AC**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **3.46 lb NO_x/ton clinker produced (24-hour average) x 208 TPH clinker produced (24-hour average) = 720 lb NO_x/hr** **2.378 lb NO_x/ton clinker produced (annual average) x 1,642,500 TPY clinker x 1 ton/2,000 lb = 1,953 TPY SO_2**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **The hourly NO_x emission limit at 250 TPH of clinker production is 2.88 lb NO_x/ton of clinker produced which also yields a NO_x emission rate of 720 lb/hr.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: **720** lb/hour **1,953** tons/year
5. Method of Compliance: **Annual EPA Method 7**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Rule 62-296.570(4)(b)8. Equivalent allowable emissions are emissions out of main stack.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **576** lb/hour **1,457** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **Permit Limit** Reference: **Permit No. 0250020-010-AC**	7. Emissions Method Code: **0**

8. Calculation of Emissions:

2.76 lb CO/ton clinker produced (24-hour average) x 208 TPH clinker produced (24-hour average) = 576 lb/hr

1.774 lb CO/ton clinker produced (annual average) x 1,642,500 TPY clinker produced x 1 ton/2,000 lb = 1,457 TPY CO

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

The hourly CO emission limit at 250 TPH of clinker production is 2.30 lb CO/ton of clinker produced, which also yields a CO emission rate of 576 lb/hr.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **576 lb/hr; 1,457 TPY**	4. Equivalent Allowable Emissions: **576** lb/hour **1,457** tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on limit in Permit No. 0250020-010-AC.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **40** lb/hour **155** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **Pemit Limit** Reference: **Permit No. 0250020-010-AC**	7. Emissions Method Code: **0**

8. Calculation of Emissions:

0.19 lb VOC/ton clinker produced (24-hour average) x 208 TPH clinker produced (24-hour average) = 40 lb/hr

0.189 lb VOC/ton clinker produced (annual average) x 1,642,500 TPY clinker produced x 1 ton/2,000 lb = 155 TPY VOC

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

The hourly VOC emission limit at 250 TPH of clinker production is 0.16 lb VOC/ton of clinker production, which also yields a VOC emission rate of 40 lb/hr.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **40 lb/hr**	4. Equivalent Allowable Emissions: **40** lb/hour **155** tons/year
5. Method of Compliance: **EPA Method 25 or 25A**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on limit in Permit No. 0250020-010-AC.**	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.70** lb/hour **8.87** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0108 lb/ton clinker** Reference: **Vendor Information**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **0.0108 lb SAM/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 2.70 lb/hr** **0.0108 lb SAM/ton clinker produced (annual average) x 1,642,500 TPY clinker produced x 1 ton/2,000 lb = 8.87 TPY SAM**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0108 lb/ton clinker**	4. Equivalent Allowable Emissions: **2.70** lb/hour **8.87** tons/year
5. Method of Compliance: **EPA Method 5 and 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on limit in Permit No. 0250020-010-AC.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **COMS or EPA Method 9.**	
9. Visible Emissions Comment: **Rule 40 CFR 63.1342 for the main/common stack and Rule 40 CFR 63.1348 for the other baghouse stacks.**	

Visible Emissions Limitation: Visible Emissions Limitation _ of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement: ☒ Rule ☐ Other	
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
10. Continuous Monitor Comment: **40 CFR 60, Subpart F, Vendor not yet selected.**	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: ☐ Rule ☐ Other	
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-FI-C2** ☐ Previously Submitted, Date ____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-EU4-I2** ☐ Previously Submitted, Date ____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date ____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☐ Previously Submitted, Date: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☐ To be Submitted, Date (if known): ____
   Test Date(s)/Pollutant(s) Tested: ____
   ____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: ____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TA-EU4-C15

EMISSION POINT COMMENT

Attachment TA-EU4-C15. Summary of Stack Parameter Data for the Raw Mill and Pyroprocessing System (EU 005)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diamaeter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Kiln/Cooler/Raw Mill	331.BF200	420	14	515,000[a]	294[a]
Dust bin	331.BF740	125	1.00 x 1.25	4,250	300
Blend silo	341.BF350	241	0.92 x 1.08	3,760	178
Raw meal	351.BF410	84	0.92 x 1.08	4,000	178
Raw meal	351.BF440	45	1.00 x 1.25	4,760	178
Raw meal	351.BF470	353	1.00 x 1.25	4,100	175
Dust bin loadout	331.BF645	46	0.83	3,500	175

[a]When raw mill is operating, parameters are 605,000 acfm and 500°F when new mill is down.

ATTACHMENT TA-EU4-I2

FUEL ANALYSIS OR SPECIFICATION

Attachment TA-EU4-I2. Fuel Analysis Specification

Parameter	No. 6 Residual Fuel Oil	Coal	Petroleum Coke	No. 2 Distillate Fuel Oil
Moisture	--	8.5%	12%	--
Density	8.0 lb/gal	--	--	7.2 lb/gal
Heating Value	152,000 Btu/gal	12,500 Btu/lb	14,200 Btu/lb	138,800 Btu/gal
Nitrogen	0.5%	1.1%	--	0.5%
Sulfur	2% Max	3.5%	5.5%	0.5% Max
Ash/Inorganic	0-10	20%	1.0%	0-10

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
   Raw Material Handling

3. Emissions Unit Identification Number: **006**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Limestone/gypsum and additives storage silos and handling.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Baghouses (5)
   Process Enclosure

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate: **3,260,000 TPY (dry)**		
3. Maximum Heat Input Rate:		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	**7,884** hours/year
6. Operating Capacity/Schedule Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **5 baghouses. See Attachment TA-EU5-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **H**	6. Stack Height: **98** feet	7. Exit Diameter: **1.58 x 1.58** feet
8. Exit Temperature: **92**°F	9. Actual Volumetric Flow Rate: **8,500** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **8,130** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Stack parameters are for Baghouse 311.BF650. See Attachment TA-EU5-C15 for stack parameters of other baghouses.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Raw Material Transfer**		
2. Source Classification Code (SCC): **3-05-006-12**	3. SCC Units: **Tons Transferred or Handled**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **3,260,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Process rate is on a dry basis.**		

Segment Description and Rate: Segment ___ of ___

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.39** lb/hour **12.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0095 gr/dscf** Reference: **Applicant Request**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-6.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.57** lb/hour **13.2** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.01 gr/dscf** Reference: **Applicant Request**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-6.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _ of _

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **3.39** lb/hour **12.5** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applicant request.**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _ of _

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **3.57** lb/hour **13.2** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on Permit No. 0250020-010-AC.**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.39** lb/hour **12.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0095 gr/dscf** Reference: **Applicant Request**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-6.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.0** lb/hour **11.1** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **84% of PM** Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Assumed 84 percent of PM.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _ of _

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **3.39** lb/hour **12.5** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applicant request.**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **84% of PM**	4. Equivalent Allowable Emissions: **3.0** lb/hour **11.1** tons/year
5. Method of Compliance: **Opacity limitation of 0.5% in lieu of stack testing. Rule 62-297.620(4), F.A.C.**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE5**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Opacity limitation of 5% in lieu of stack testing. Rule 62-297.620(4), F.A.C.**	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TA-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [5] of [5]
Raw Material Handling

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TA-EU5-C15

EMISSION POINT COMMENT

Attachment TA-EU5-C15. Summary of Stack Parameter Data for the Raw Material Handling and Storage (EU 006)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Vent Size (in)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Lime/gyp silos original 10 No.	232.BF01	--	--	5,170	68
Additives 311.BF01	311.BF650	98	19 x 19	8,500	92
Additives 311.BF02	311.BF750	17	18 x 27	7,750	92
Additives 311.BF03	321.BF470	100	17 x 21	10,800	108
Additives 311.BF04	311.BF950	68	20 x 30	11,700	108

PART B

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1.0 INTRODUCTION

Tarmac America LLC (Tarmac) currently operates a Portland cement plant located in Medley, Miami-Dade County, Florida, near Miami. The existing cement plant consists of two wet process cement kilns, two coolers, a clinker handling system and storage silos, four finish mills, cement storage silos, a cement rail/truck loadout facility, and a packhouse. In June 1998, Tarmac submitted an Air Construction Permit application to the Miami-Dade County Department of Environmental Resources Management (DERM) to modernize the facility by constructing a single dry process raw mill, a new clinker cooler, a new finish mill (Finish Mill No. 6), and removing Wet Process Kilns Nos. 2 and 3, Clinker Coolers Nos. 2 and 3, and the dust insufflation system. DERM issued Air Construction Permit No. 0250020-008-AC for this project on October 21, 1999.

On November 14, 2000, Tarmac submitted a request to modify Air Construction Permit No. 0250020-008-AC. Although this application requested an increase in the production capacity for the new cement plant, limits on production, operating hours, and emission limits maintained total annual emission rates at or below those allowed by the original air construction permit. The revised permit (Air Construction Permit No. 0250020-010-AC) was issued by DERM on May 1, 2001, and allowed construction of a new Raw Material Handling System (Emission Unit ID No. 006), modification of the physical and operating parameters (i.e., air-to-cloth ratio, exhaust flow rate, etc.) of several baghouses, and removal of Finish Mills Nos. 1 and 2.

Tarmac is now proceeding with construction of the new cement plant. However, during the course of construction, several changes have been identified. The purpose of this document is to modify Air Construction Permit No. 0250020-010-AC to reflect the final engineering and actual equipment to be installed at the Medley facility. This application includes the following revisions to Air Construction Permit No. 0250020-010-AC:

1. Correction to the physical and operating parameters for a number of baghouses currently contained in the referenced Air Construction Permits to reflect the actual equipment to be installed;
2. Modification of the clinker storage silo transfer system;
3. Retention of Finish Mills Nos. 1 and 2 (Finish Mill No. 6 will not be installed); and
4. Construction of a new O-Sepa System on Finish Mill No. 3.

No change is being made to the maximum clinker production rate of the new cement plant, as contained in Air Construction Permit 0250020-010-AC (1,642,500 tons per year [TPY] clinker).

2.0 PROJECT DESCRIPTION

Air Construction Permit No. 0250020-010-AC addresses the following emissions units:

Emission Unit ID No.	System	Emission Unit Description
001	Coal Handling	Coal Feed Bin, Pet Coke Feed Bin, Coal Mill, Coal and Pet Coke Handling and Storage System
002	Clinker Handling and Storage	Clinker Transfer from Burner Building, Clinker Silo, Clinker Transfer, and Clinker Bins
003	Finish Mill	Finish Mills Nos. 3, 4, and 6
004	Cement Storage Packhouse and Loadout	Cement Silos Nos. 1 through 12, Packhouse, Bulk Loadout Unit Nos. 1 through 3
005	Raw Mill and Pyroprocessing Unit	Raw Mill, and Pyroprocessing System consisting of the Preheater, Calciner, Kiln, and Cooler
006	Raw Material Handling	Limestone/gypsum and additive Storage Silos and Handling System

Each of these emission units, with the exception of Emission Unit ID No. 004, will be modified as a result of this application. The extent of these modifications is described in the following sections, organized by emission unit.

2.1 COAL HANDLING

Two solid fuels, coal and petroleum coke (petcoke), will be utilized in the new cement plant at Tarmac's Medley facility. Both coal and petcoke will be delivered by rail and stored in in the material storage building. A stacker/reclaimer will be used to transfer the fuel to separate feed bins using conveyors.

The basis of Air Construction Permit No. 0250020-010-AC is as follows. Particulate matter (PM) emissions from the transfer of the fuels from the stacker/reclaimer to the first conveyor are controlled using a baghouse (Equipment ID No. 241.BF01). PM emissions from the transfer point from the first to the second conveyor and from each feed bin, are controlled using a second baghouse (Equipment ID No. 241.BF02). From the feed bins, coal and petcoke are transferred to the coal mill for grinding. PM emissions from the coal grinding operation are controlled using a third baghouse (Equipment ID No. 461.BF01). The dust collected in Baghouse 461.BF01 is recycled back to the

coal mill. Ground coal/petcoke are then transferred to two coal/petcoke surge bins. PM emissions from this transfer operation are controlled using two identical baghouses (Equipment ID Nos. 461.BF02 and 461.BF03). These surge bins are used to feed the kiln and preheater/calciner.

Emission sources associated with the coal and petcoke handling and storage system are currently permitted to operate 7,884 hours per year (hr/yr), with the exception of the baghouses used to control emissions from the transfer of coal/petcoke from the storage piles to the feed bins (Equipment ID Nos. 241.BF01 and 241.BF02), which are permitted to operate up to 4,000 hr/yr. Air Construction Permit No. 0250020-010-AC limits the maximum combined usage of coal/petcoke to 30 tons per hour (TPH) on a 24-hour block average and 190,000 TPY annually. The use of petcoke only is limited to 20 TPH, 24-hour block average

Tarmac is not proposing to change the configuration of the coal and petcoke handling and storage system as described in Air Construction Permit No. 0250020-010-AC, other than to add another baghouse to control emissions from the coal mill feed operation. However, the operating parameters (flowrates and temperature) for the baghouses Tarmac now intends to install differ somewhat from those described in Air Construction Permit No. 0250020-010-AC. Since the PM emission limits in the existing permit are a function of the exhaust flowrate, they are also being revised. A summary of the operating parameters and proposed emission limits for each baghouse for the revised final design is presented in Table 2-1. A flow diagram of the revised Coal Handling emissions unit is presented in the application form, Attachment TA-FI-C2.

2.2 CLINKER HANDLING AND STORAGE

Clinker from the pyroprocessing unit will be cooled in the new Clinker Cooler. From the Clinker Cooler, the clinker is stored in one of fourteen clinker storage silos. Tarmac is not proposing to change the configuration of the clinker handling and storage system described in Air Construction Permit No. 0250020-010-AC. The permit allows construction of two new clinker storage silos and an off-spec clinker storage silos along with four bag houses to control PM emissions. The operating parameters (flowrates and temperature) and Equipment ID Nos. for the baghouses Tarmac now intends to install differ somewhat from those described in construction permit. Again, since the PM emission limits in the existing permit are a function of the exhaust flowrate, they also are being revised. A summary of the operating parameters and proposed emission limits for each baghouse is presented in Table 2-2a.

Additionally, Tarmac is proposing to add three new baghouses to the Clinker Handling and Storage System. Two of these baghouses, (Equipment ID Nos. 481.BF730 and 481.BF930) will be installed to control PM emissions from the existing clinker storage silos. The third baghouse (Equipment ID No. 481.BF640) will be installed to control PM emissions from the conveyor system used to transfer clinker to these existing storage silos. A summary of the operating parameters and proposed emission limits for each of these baghouses is presented in Table 2-2a. A flow diagram of the revised Clinker Handling and Storage emissions unit is presented in the application form, Attachment TA-FI-C2.

A summary of all of the sources to be included in this emissions unit in the future is presented in Table 2-2b. Note that the changes to the current construction permit are detailed in Table 2-2a, whereas all the future sources included in the Clinker Handling and Storage System emissions unit are detailed in Table 2-2b.

2.3 FINISH MILLS

The current Air Construction Permit includes Finish Mills Nos. 3, 4, and 6. The permitted finish mills consist of a number of conveyors used to transfer clinker in and out of one or a series of ball mills. The ground clinker from the ball mills is transferred to a cement separator for sizing of the product, using an air classification system. The processed clinker, now in a granular or powdered form, may then be cooled or sent directly to storage. Generally, baghouses are used to control PM emissions from the conveyor systems and from the milling operation.

Tarmac is proposing the following changes to the Finish Mills emissions unit:

1. Retain existing Finish Mills Nos. 1 ~~and 2;~~ Rev. 2/2/05
2. Add an new cement separator (O-Sepa Separator), including a baghouse, to existing Finish Mill No. 3;
3. Remove an existing baghouse from Finish Mill No. 3; and
4. ~~Delete Finish Mill No. 6.~~ Rev. 2/2/05

No changes to Finish Mill No. 4 are anticipated at this time.

PM emissions from existing Finish Mill No. 1 are controlled using two baghouses. The first baghouse (Equipment ID No. F113) controls PM emissions from the transfer of clinker to the first of two ball mills. The second baghouse (Equipment ID No. F130) is used to control PM emissions from the transfer of material from the first ball mill to the second ball mill and from the transfer of material from the second ball mill to the cement separator.

PM emissions from existing Finish Mill No. 2 are controlled using two baghouses. The first baghouse (Equipment ID No. F213) controls PM emissions from the transfer of clinker to the ball mill. The second baghouse (Equipment ID No. F230) is used to control PM emissions from the transfer of material from the ball mill to the cement separator.

PM emissions from existing Finish Mill No. 3 and the new O'Sepa cement separator will be controlled using three baghouses. The first baghouse (Equipment ID No. F332) will control PM emissions from the transfer of clinker on each of two conveyors, as well as from the transfer of cement from the ball mill to the O'Sepa cement separator. This baghouse will replace the baghouse (Equipment ID No. F313) described in the application for Air Construction Permit No. 0250020-010-AC, which controlled PM emissions from the first conveyor used to transfer clinker from clinker storage. A second baghouse (Equipment ID No. F330) will be used to control PM emissions from the exit of the ball mill. A third baghouse (Equipment ID No. 533.BF340) will be used to control PM emission from the O'Sepa cement separator.

Process flow diagrams for all the finish mills are presented in Attachment TA-EU3-I1 of the permit application. A summary of the proposed changes to the finish mills as currently described in Air Construction Permit No. 0250020-010-AC, along with emission estimates, is presented in Table 2-3a. A summary of the sources to be included in the Finish Mills emissions unit in the future is presented in Table 2-3b. Note that the changes to the current construction permit are detailed in Table 2-3a, whereas all the future sources included in the Finish Mill emissions unit are detailed in Table 2-3b.

2.4 CEMENT STORAGE LOADOUT AND PACKHOUSE

Cement from the finish mills will be sent to the existing cement storage silos. From the storage silos the cement will be transferred to one of several operations for delivery, including a combination rail/truck load out, two truck loadouts, and/or a bagging operation.

The configuration of process equipment, as described in Air Construction Permit No. 0250020-010-AC, will not be changed as a result of this application.

2.5 RAW MILL AND PYROPROCESSING UNIT

Tarmac is not proposing to change the configuration of the Raw Mill and Pyroprocessing Unit as described in Air Construction Permit No. 0250020-010-AC other than to add another baghouse to control PM emissions from the truck loadout for the Kiln Dust Bin. However, the operating parameters (flowrates and temperature) and Equipment ID Nos. for the baghouses Tarmac now intends to install are different than those described in Air Construction Permit No. 0250020-010-AC. Since the PM emission limits in the existing permit are a function of the exhaust flowrate, they are also being revised. A summary of the operating parameters and proposed emission limits for each baghouse for the revised final design is presented in Table 2-4. A summary of emissions rate calculations for the Kiln, Cooler and Raw Mill only, which vents to the main stack (emissions from the coal mill also vent to the main stack), is presented in Table 2-5. A revised process flow diagram for this operation is presented in Attachment TA-FI-C2 of the permit application.

2.6 RAW MATERIAL HANDLING

Tarmac is not proposing to change the configuration of the Raw Material Handling operation as described in Air Construction Permit No. 0250020-010-AC. However, the operating parameters (flowrates and temperature) and Equipment ID Nos. for the baghouses Tarmac now intends to install are different than those described in Air Construction Permit No. 0250020-010-AC. Since the PM emission limits in the existing permit are a function of the exhaust flowrate, they are also being revised. A summary of the operating parameters and proposed emission limits for each baghouse for the revised final design is presented in Table 2-6. A flow diagram of the revised Raw Material Handling emissions unit is presented in the application form, Attachment TA-FI-C2.

3.0 SOURCE APPLICABILITY

3.1 NEW SOURCE PERFORMANCE STANDARDS

The kiln, cooler, raw mill, finish mills, clinker handling and storage system, and cement storage/packhouse/loadout system included in Air Construction Permit No. 0250020-010-AC are subject to 40 CFR 60, Subpart F, New Source Performance Standards for Portland Cement Plants. Subpart F states that particulate emissions for kilns and coolers shall not exceed 0.30 lb/ton dry kiln feed and 0.10 lb/ton dry kiln feed, respectively. Subpart F also limits the opacity for kilns and coolers to 20 and 10 percent, respectively. These requirements will also apply to the revised cement plant described in this application.

The Coal Handling system included in Air Construction Permit No. 0250020-010-AC is subject to 40 CFR 60, Subpart Y, New Source Performance Standards for Coal Preparation Plants. Subpart Y states that, the opacity shall not exceed 20 percent for coal processing, conveying, storage, transfer, and loading systems. These requirements will also apply to the revised Coal Handling system described in this application.

3.2 FLORIDA EMISSION STANDARDS

The State of Florida emission limiting standards potentially applicable to the proposed Portland cement plant modernization are contained in Florida Administrative Code, Rules 62-296.407 and 62-296.701. Paragraph (1) of Rule 62-296.407 applies to existing kilns and coolers, therefore paragraph (1) does not apply to the proposed project. Paragraph (2) limits particulate matter emissions to 0.3 lb/ton of feed for new kilns and 0.1 lb/ton of feed for new coolers. Paragraph (3) states that the test method for particulate emissions shall be EPA Method 5. These requirements will also apply to the revised cement plant described in this application.

The proposed project is not located in a particulate matter air quality maintenance area or in the area of influence of such an air quality maintenance area, therefore Rule 62-296.701 does not apply.

Table 1

Facility Name	NO_X (lb/ton)	SO_2 (lb/ton)	VOC (lb/ton)	PM_{10} (lb/ton)	CO (lb/ton)	Mercury (lb/yr)	Additional Information
Florida Rock	1.95 lb/ton (30-day)	0.28 lb/ton (24-hour)	0.12 lb/ton (30-day)	0.20 (kiln) 0.08 (cooler)	3.6 lb/ton (30-day)	122 lb	Conservative assumption is that all mercury entering process is emitted. Significant raw material testing. Continuous emission monitors for NOx, SO2, VOC, CO.
Holcim Lee, MO	2.40 lb/ton (30-day)	1.26 lb/ton (30-day)	0.33 lb/ton (30-day)	0.28 (kiln) 0.07 (cooler)	6.0 lb/ton (30-day)	160 lb	Less conservative assumption is that some mercury is removed by process. One time stack test and then test every five years. Stack test could easily be conducted when raw mill is on and miss high emissions periods when raw mill is off. Continuous emission monitors for NOx, SO2, VOC, CO. Largest permitted cement kiln in U.S. Permit issued June 2004.

3.3 MODIFICATION/PREVENTION OF SIGNIFICANT DETERIORATION (PSD) REVIEW

3.3.1 REQUIREMENTS

Federal PSD requirements are contained in Title 40, Code of Federal Regulations (CFR), Part 52.21, Prevention of Significant Deterioration of Air Quality. The State of Florida has adopted PSD regulations (Chapter 62-212.400, F.A.C.) that essentially are identical to the federal regulations. PSD regulations require that all new major stationary sources or major modifications to existing major sources of air pollutants regulated under CAA be reviewed and a construction permit issued. Florida's State Implementation Plan (SIP), which contains PSD regulations, has been approved by EPA and PSD approval authority in Florida has been granted to FDEP.

A "major facility" is defined under Florida PSD regulations as any one of 28 named source categories that has the potential to emit 100 tons per year (TPY) or more of any pollutant regulated under the CAA, or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under CAA. A "source" is defined as an identifiable piece of process equipment or emissions unit. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant, considering the application of control equipment and any other federally enforceable limitations on the source's capacity. A "major modification" is defined under PSD regulations as a change at an existing major stationary facility that increases emissions by greater than significant amounts. PSD significant emission rates are shown in Table 3-1.

DOES NOT APPLY ! (2)(g) = RELAXATION OF EMISSION LIMIT TRIGGERS PSD...

3.3.2 PSD APPLICABILITY

Tarmac has previously obtained a construction permit for the new cement plant. Tarmac is now seeking to modify that permit. Based on Rule 62-212.400(2)(g), F.A.C., PSD applicability for the proposed modification must be determined "as though construction had not yet commenced on it". Therefore, the revised potential-to-emit of the modified facility must be compared to the original "baseline" emissions for the existing cement plant, as presented in the original June 1998 air permit application.

The revised potential-to-emit for the new cement plant emission units being currently modified are presented in Tables 2-1 through 2-6. A summation of potential emission from the material handling point sources is presented in Table 3-2. This summation includes emissions from EU ID 004,

Cement Storage, Packhouse and Loadout, which are not being modified by the current application, but will be a part of the new cement plant.

Fugitive dust emissions from the Coal Handling System associated with the new cement plant will be affected by the proposed modification, as compared to the original June 1998 application. This is due to an increase in the coal/petcoke throughput from 176,080 TPY to 190,000 TPY, as reflected in permit no. 0250020-010-AC. Estimated future potential fugitive dust emissions from these sources are in summarized in Table 3-3. Detailed calculations are presented in Appendix A. These calculations are based on the same methodology and equations used in the 1998 application.

The revised PSD source applicability analysis is presented in Table 3-4. The PSD baseline emissions are the same as those included in the 1998 application for the new cement plant. For convenience, the basis of these emissions is repeated in Appendix B.

The PSD applicability analysis includes the slag dryer. At the time of the 1998 application, the new slag dryer at Tarmac Pennsuco was under a construction permit. Since it had just recently started operations, its PSD baseline future emissions are equivalent to its allowable or potential emissions. The basis for these emissions is presented Appendix B.

As shown in Table 3-4, the revised PSD applicability analysis shows the net change in emissions of all PSD regulated pollutants is below the PSD significant emission rate. As a result, the proposed modification is not subject to PSD review.

Table 2-1. Summary of Proposed Changes to Sources Associated with the Coal Handling System (EU ID No. 001) and Calculation of Potential Emission Rates

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate[a] (TPY)
			Equipment as Permitted in Permit No. 0250020-010-AC							
Coal transfer	241.BF01	New	4,000	2,700	2,700	68	0.01	0.23	0.46	0.39
Coal transfer	241.BF02	New	4,000	6,400	6,400	68	0.01	0.55	1.10	0.92
Coal mill	461.BF01	New	7,884	54,500	43,600	200	0.01	3.74	14.73	12.37
Coal feeder	461.BF02	New	7,884	800	665	175	0.01	0.06	0.22	0.19
Coal feeder	461.BF03	New	7,884	800	665	175	0.01	0.06	0.22	0.19
Total								4.63	16.74	14.06
			Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses							
Coal transfer	461.BF130	New	4,000	1,400	1,339	92	0.01	0.11	0.23	0.19
Coal transfer	461.BF230	New	4,000	1,400	1,339	92	0.01	0.11	0.23	0.19
Coal mill	461.BF300	New	7,884	54,500	45,245	176	0.01	3.88	15.29	12.84
Coal feeder	461.BF650	New	7,884	294	243	178	0.01	0.02	0.08	0.069
Coal feeder	461.BF750	New	7,884	294	243	178	0.01	0.02	0.08	0.069
Total								4.15	15.91	13.37
			Proposed Equipment Additions							
Coal mill feed	461.BF350	New	7,884	5,500	5,261	92	0.01	0.45	1.78	1.49
						Revised Potential Emission Rates =		**4.60**	**17.7**	**14.9**

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

Table 2-2a. Summary of Proposed Changes to Sources Associated with the Clinker Handling and Storage System (EU ID No. 002) and Calculation of Potential Emission Rates

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (gr/acf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate[a] (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC											
~~Clinker transfer~~[b]	~~K347~~	~~Existing~~	~~8,760~~	~~5,000~~	~~--~~	~~77~~	~~--~~	~~0.01~~	~~0.43~~	~~1.88~~	~~1.58~~
~~Clinker transfer~~[b]	~~K447~~	~~Existing~~	~~8,760~~	~~5,000~~	~~--~~	~~77~~	~~--~~	~~0.01~~	~~0.43~~	~~1.88~~	~~1.58~~
Clinker Silos 21-23 & 26-28	F633	Existing	8,760	1,500	--	77	--	0.01	0.13	0.56	0.47
Clinker transfer	441.BF01	New	7,884	3,000	2,494	175	0.01	--	0.21	0.84	0.71
Clinker silo	481.BF01	New	7,884	10,000	8,315	175	0.01	--	0.71	2.81	2.36
Clinker transfer	481.BF02	New	8,760	3,000	2,494	175	0.01	--	0.21	0.94	0.79
Clinker bins	481.BF03	New	8,760	5,000	4,157	175	0.01	--	0.36	1.56	1.31
Total									2.05[b]	8.59[b]	7.22[b]
Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses											
Clinker transfer	441.BF540	New	7,884	4,600	3,421	250	~~0.01~~	--	0.29	1.16	0.97
Clinker silo	481.BF140	New	7,884	12,000	8,924	250	~~0.01~~	--	0.76	3.02	2.53
Clinker transfer	481.BF540	New	8,760	4,700	3,495	250	~~0.01~~	--	0.30	1.31	1.10
Clinker bins	481.BF330	New	8,760	6,100	4,536	250	~~0.01~~	--	0.39	1.70	1.43
Total									1.75	7.19	6.04
Proposed Equipment Additions											
Clinker transfer	481.BF640	New	8,760	4,700	3,495	250	~~0.01~~	--	0.30	1.31	1.10
Clinker transfer	481.BF730	New	8,760	18,700	13,906	250	~~0.01~~	--	1.19	5.22	4.39
Clinker transfer	481.BF930	New	8,760	15,000	11,155	250	~~0.01~~	--	0.96	4.19	3.52
Total									2.45	10.72	9.01

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[b] Baghouses K347 and K447 do not operate at the same time. Therefore, the total potential emission rates reflect operation of only one of these baghouses.

Table 2-2b. Summary of Proposed Sources to be Permitted Associated with the Clinker Handling and Storage System (EU ID No. 002)

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM_{10} Emission Rate (gr/dscf)	(gr/acf)	(lb/hr)	(TPY)	Annual PM_{10} Emission Rate[a] (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC											REV. 2/2/05
~~Clinker transfer[b]~~	~~K347~~	~~Existing~~	~~8,760~~	~~5,000~~	~~--~~	~~77~~	~~--~~	~~0.01~~	~~0.43~~	~~1.88~~	~~1.58~~
~~Clinker transfer[b]~~	~~K447~~	~~Existing~~	~~8,760~~	~~5,000~~	~~--~~	~~77~~	~~--~~	~~0.01~~	~~0.43~~	~~1.88~~	~~1.58~~
Clinker Silos 21-23 & 26-28	F633	Existing	8,760	1,500	--	77	--	0.01	0.13	0.56	0.47
Clinker transfer	441.BF540	New	7,884	4,600	3,421	250	0.01	--	0.29	1.16	0.97
Clinker silo	481.BF140	New	7,884	12,000	8,924	250	0.01	--	0.76	3.02	2.53
Clinker transfer	481.BF540	New	8,760	4,700	3,495	250	0.01	--	0.30	1.31	1.10
Clinker bins	481.BF330	New	8,760	6,100	4,536	250	0.01	--	0.39	1.70	1.43
Clinker transfer	481.BF640	New	8,760	4,700	3,495	250	0.01	--	0.30	1.31	1.10
Clinker transfer	481.BF730	New	8,760	18,700	13,906	250	0.01	--	1.19	5.22	4.39
Clinker transfer	481.BF930	New	8,760	15,000	11,155	250	0.01	--	0.96	4.19	3.52
						Revised Potential Emission Rates =			**4.75[b]**	**20.3[b]**	**17.1[b]**

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[b] Baghouses K347 and K447 do not operate at the same time. Therefore, total the potential emission rates reflect operation of only one of these baghouses.

Table 2-3a. Summary of Proposed Changes to Sources Associated with the Finish Mills (EU ID No. 003) and Calculation Emission Rates

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM10 Emission Rate (gr/dscf)	Potential PM/PM10 Emission Rate (gr/acf)	Potential PM/PM10 Emission Rate (lb/hr)	Potential PM/PM10 Emission Rate (TPY)	Annual PM10 Emission Rate[a] (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC											
Finish Mill No. 3 Baghouse	F330	Existing	8,760	20,000	--	--	--	0.01	1.71	7.51	6.31
Finish Mill No. 3 Baghouse	F332	Existing	8,760	13,500	--	--	--	0.01	1.16	5.07	4.26
~~Finish Mill No. 3 Baghouse~~	~~F313~~	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52
Finish Mill No. 4 Baghouse	F432	Existing	8,760	17,000	--	--	--	0.01	1.46	6.38	5.36
Finish Mill No. 4 Baghouse	F605	Existing	8,760	4,000	--	--	--	0.01	0.34	1.50	1.26
Finish Mill No. 4 Baghouse	F603	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52
Finish Mill No. 4 Baghouse	F430	Existing	8,760	30,000	--	--	--	0.01	2.57	11.26	9.46
Finish Mill No. 4 Baghouse	F604	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52
Finish Mill No. 6 Baghouse	531.BF01	New	8,760	97,300	80,905	175	0.01	--	6.93	30.37	25.51
Finish Mill No. 6 Baghouse	531.BF02	New	8,760	25,900	21,536	175	0.01	--	1.85	8.09	6.79
Total									18.08	79.19	66.52
Proposed Equipment Deletions											
Finish Mill No. 3 Baghouse	F313	Existing	8,760	8,000	--	--	--	0.01	-0.69	-3.00	-2.52
~~Finish Mill No. 6 Baghouse~~	~~531.BF01~~	~~New~~	~~8,760~~	~~97,300~~	~~80,905~~	~~175~~	~~0.01~~	~~--~~	~~-6.93~~	~~-30.37~~	~~-25.51~~
Finish Mill No. 6 Baghouse	531.BF02	New	8,760	25,900	21,536	175	0.01	--	-1.85	-8.09	-6.79
Total									-9.47	-41.46	-34.83
Proposed Retained Equipment											
Finish Mill No. 1 Baghouse	F113	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43	3.72
Finish Mill No. 1 Baghouse	F130	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51	3.78
~~Finish Mill No. 2 Baghouse~~	~~F213~~	~~Existing~~	~~8,760~~	~~11,800~~	~~--~~	~~--~~	~~--~~	~~0.01~~	~~1.01~~	~~4.43~~	~~3.72~~
~~Finish Mill No. 2 Baghouse~~	~~F230~~	~~Existing~~	~~8,760~~	~~12,000~~	~~--~~	~~--~~	~~--~~	~~0.01~~	~~1.03~~	~~4.51~~	~~3.78~~
Total									4.08	17.87	15.01
Proposed Equipment Additions											
Finish Mill No. 3 Baghouse	533.BF340	New	8,760	77,800	65,307	169	0.01		5.60	24.52	20.60

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

150 see 2/2/05 Revision

Table 2-3b. Summary of Proposed Sources to be Permitted Associated with the Finish Mills (EU ID No. 003)

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM/PM10 Emission Rate (gr/dscf)	Potential PM/PM10 Emission Rate (gr/acf)	Potential PM/PM10 Emission Rate (lb/hr)	Potential PM/PM10 Emission Rate (TPY)	Annual PM10 Emission Rate[a] (TPY)
Finish Mill No. 1 Baghouse	F113	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43	3.72
Finish Mill No. 1 Baghouse	F130	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51	3.78
Finish Mill No. 2 Baghouse	F213	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43	3.72
Finish Mill No. 2 Baghouse	F230	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51	3.78
Finish Mill No. 3 Baghouse	F330	Existing	8,760	20,000	--	--	--	0.01	1.71	7.51	6.31
Finish Mill No. 3 Baghouse	F332	Existing	8,760	13,500	--	--	--	0.01	1.16	5.07	4.26
Finish Mill No. 3 Baghouse	533.BF340	New	8,760	77,800	65,307	169	0.01	--	5.60	24.52	20.60
Finish Mill No. 4 Baghouse	F432	Existing	8,760	17,000	--	--	--	0.01	1.46	6.38	5.36
Finish Mill No. 4 Baghouse	F605	Existing	8,760	4,000	--	--	--	0.01	0.34	1.50	1.26
Finish Mill No. 4 Baghouse	F603	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52
Finish Mill No. 4 Baghouse	F430	Existing	8,760	30,000	--	--	--	0.01	2.57	11.26	9.46
Finish Mill No. 4 Baghouse	F604	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00	2.52
									Revised Potential Emission Rates =	**18.3**	~~80.1~~ 78.9	**67.3**

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

55.6
~~21.52~~ 23.29
~~80.12~~ 78.9

Table 2-4. Summary of Proposed Changes to Sources Associated with the Raw Mill and Pyroprocessing Unit System (EU ID No. 0(and Calculation of Potential Emission Rates

Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate[b] (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC									
331.BF01	New	7,884	486,000	392,367	194	0.0132	53.1	175.0	147.00
331.BF02	New	7,884	6,800	4,175	400	0.01	0.36	1.41	1.18
341.BF01	New	8,760	6,250	5,189	176	0.01	0.44	1.95	1.64
351.BF01	New	7,884	6,200	5,147	176	0.01	0.44	1.74	1.46
351.BF02	New	7,884	3,000	2,491	176	0.01	0.21	0.84	0.71
351.BF03	New	7,884	10,400	8,634	176	0.01	0.74	2.92	2.45
							55.30	183.86	154.44
Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses									
331.BF200	New	7,884	515,000	360,637	294	[a]	50.0	175.0	147.00
331.BF740	New	7,884	4,250	2,953	300	0.01	0.25	1.00	0.84
341.BF350	New	8,760	3,760	3,112	178	0.01	0.27	1.17	0.98
351.BF410	New	7,884	4,000	3,310	178	0.01	0.28	1.12	0.94
351.BF440	New	7,884	4,760	3,939	178	0.01	0.34	1.33	1.12
351.BF470	New	7,884	4,100	3,409	175	0.01	0.29	1.15	0.98
							51.43	180.77	151.84
Proposed Equipment Additions									
331.BF645	New	7,884	3,500	2,910	175	0.01	0.25	0.98	0.83
						Revised Potential Emission Rates =	**51.7**	**181.8**	**152.7**
						Revised Potential Emission Rates without Kiln/Cooler/Raw Mill =	**1.7**	**6.8**	**5.7**

[a] Emission based on an emission factor of 0.125 lb/ton of dry kiln feed. See Table 2-5.

[b] PM_{10} emission rate calculated as 84 percent of PM emission rate.

Table 2-5 Calculation of Potential Emissions from the Kiln, Cooler, and Raw Mill Only (EU ID No. 005) Vented From the Main Stack

Activity Factors

Kiln Feed (KF)		Clinker Production (CP)	
24-hour Average (TPH)	Maximum Annual (TPY)	24-hour Average (TPH)	Maximum Annual (TPY)
400	2,792,250	208	1,642,500

Particulate Matter

Emission Factor		Emission Rate	
24-Hour Average (lb/ton dry KF)	Annual Average (lb/ton dry KF)	(lb/hr)	(TPY)
0.125	0.125	50.0	175

Sulfur Dioxide

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
1.540	0.981	320[a]	806[a]

Nitrogen Oxides

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
3.46	2.38	720[a]	1953[a]

Carbon Monoxide

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
2.76	1.77	576[a]	1457[a]

Volatile Organic Compounds

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
0.190	0.189	40[a]	155[a]

Sulfuric Acid Mist

Emission Factor		Emission Rate	
24-Hour Average (lb/ton CP)	Annual Average (lb/ton CP)	(lb/hr)	(TPY)
0.0108	0.0108	2.24	8.86

[a] Permitted Limit.

Table 2-6. Summary of Proposed Changes to Sources Associated with the Raw Material Handling and Storage System (EU ID No. 006) and Calculation of Potential Emission Rates

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Exhaust Flow Rate (dscfm)	Temperature (°F)	Potential PM Emission Rate (gr/dscf)	Potential PM Emission Rate (lb/hr)	Potential PM Emission Rate (TPY)	Annual PM_{10} Emission Rate[a] (TPY)
Equipment as Permitted in Permit No. 0250020-010-AC										
Lime/gyp silos	232.BF01	New	4,000	5,170	5,170	68	0.01	0.44	0.89	0.74
Additives	311.BF01	New	7,884	11,000	11,000	68	0.01	0.94	3.72	3.12
Additives	311.BF02	New	7,884	6,050	4,840	200	0.01	0.41	1.64	1.37
Additives	311.BF03	New	7,884	10,000	10,000	68	0.01	0.86	3.38	2.84
Additives	311.BF04	New	7,884	10,000	10,000	68	0.01	0.86	3.38	2.84
Total								3.52	13.00	10.92
Proposed Revisions to Equipment Nos., Flow Rates, and Baghouses										
Lime/gyp silos	232.BF01	New	4,000	5,170	5,170	68	0.01	0.44	0.89	0.74
Additives	311.BF650	New	7,884	8,500	8,130	92	0.01	0.70	2.75	2.31
Additives	311.BF750	New	7,884	7,750	7,413	92	0.01	0.64	2.50	2.10
Additives	321.BF470	New	7,884	10,800	10,039	108	0.01	0.86	3.39	2.85
Additives	311.BF950	New	7,884	11,700	10,876	108	0.01	0.93	3.67	3.09
						Revised Potential Emission Rates =		**3.57**	**13.2**	**11.1**

[a] PM_{10} emission rate calculated as 84 percent of PM emission rate.

SEE 2/2/05 REVISIONS

Table 3-1. National and State AAQS, Allowable PSD Increments, and Significant Impact Levels ($\mu g/m^3$)

Pollutant	Averaging Time	AAQS			PSD Increments		Significant Impact Levels[d]
		National Primary Standard	National Secondary Standard	State of Florida	Class I	Class II	
Particulate Matter[a] (PM_{10})	Annual Arithmetic Mean	50	50	50	4	17	1
	24-Hour Maximum[b]	150[b]	150[b]	150[b]	8	30	5
Sulfur Dioxide	Annual Arithmetic Mean	80	NA	60	2	20	1
	24-Hour Maximum[e]	365[b]	NA	260[b]	5	91	5
	3-Hour Maximum[b]	NA	1,300[b]	1,300[b]	25	512	25
Carbon Monoxide	8-Hour Maximum[b]	10,000[b]	10,000[b]	10,000[b]	NA	NA	500
	1-Hour Maximum[b]	40,000[b]	40,000[b]	40,000[b]	NA	NA	2,000
Nitrogen Dioxide	Annual Arithmetic Mean	100	100	100	2.5	25	1
Ozone[a]	1-Hour Maximum	235[c]	235[c]	235[c]	NA	NA	NA
	1-Hour Maximum	235	235	NA	NA	NA	NA
Lead	Calendar Quarter Arithmetic Mean	1.5	1.5	1.5	NA	NA	NA

Note: NA = Not applicable, i.e., no standard exists.
PM_{10} = particulate matter with aerodynamic diameter less than or equal to 10 micrometers.

[a] On July 18, 1997, the EPA promulgated revised AAQS for particulate matter and ozone. For particulate matter, $PM_{2.5}$ standards were introduced with a 24-hour standard of 65 $\mu g/m^3$ (3-year average of 98th percentile) and an annual standard of 15 $\mu g/m^3$ (3-year average at community monitors). Implementation of these standards has not yet occurred. The ozone standard was modified to be 0.08 ppm for 8-hour average; achieved when 3-year average of 99th percentile is 0.08 ppm or less. The FDEP has not yet adopted these standards.

[b] Short-term maximum concentrations are not to be exceeded more than once per year except for the PM_{10} AAQS (these do not apply to significant impact levels). The PM_{10} 24-hour AAQS is attained when the expected number of days per year with a 24-hour concentration above 150 $\mu g/m^3$ is equal to or less than 1. For modeling purposes, compliance is based on the sixth highest 24-hour average value over a 5-year period.

[c] Achieved when the expected number of days per year with concentrations above the standard is fewer than 1.

[d] Maximum concentrations.

Sources: Federal Register, Vol. 43, No. 118, June 19, 1978. 40 CFR 50. 40 CFR 52.21. Rule 62-204, F.A.C.

Table 3-2. Future Maximum Annual Emissions From Material Handling Point Sources, Tarmac

Emission Unit	Emission Source	Point ID	Baghouse ID	Emission Basis	Potential Annual PM Emission Rate (TPY)	Potential Annual PM_{10} Emission Rate (TPY)
001	Coal Handling/Coal Mill System	003	6 baghouses	See Table 2-1	17.7	14.9
002	Clinker Handling and Storage	008	10 Baghouses	See Table 2-2b	20.3	17.1
003	Finish Mill Nos 1 through 4	010 - 013	12 baghouses	See Table 2-3b	80.1	67.3
004	Cement Storage, Packhouse, & Loadout	014 - 016	11 Baghouses	As Permitted in 0250020-010-AC	25.8	21.7
005	Raw Mill and Pyroprocessing without Kiln/Cooler/Raw Mill	021	7 Baghouses	See Table 2-4	6.8	5.7
006	Raw Material Handling and Storage	--	5 Baghouses	See Table 2-6	13.2	11.1
				Total	163.9	137.8

Table 3-3. Summary of Quantifiable Fugitive Emissions for the New Cement Plant, Tarma

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr)[a]	
	PM	PM_{10}	PM	PM_{10}
Coal Handling Facilities-Batch Drop	0.32	0.11	0.28	0.1
Coal Handling Facilities-Vehicular Traffic	25.46	9.61	26.4	9.24
Total	25.78	9.72	26.68	9.34

Notes:

[a] Based on average hourly emissions assuming 2,080 hr/yr actual operation.

Table 3-7. Net Change in Emissions and PSD Significant Emission Rates, Tarmac Cement Plant Modification

	PSD Baseline Emissions (TPY)						Future Potential Emissions (TPY)							
Pollutant	Kiln No. 2	Kiln No. 3	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources	Total	New Raw Mill Preheater/ Calciner/Kiln/ Cooler	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources	Total	Net Increase In Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
Particulate Matter [PM(TSP)]	33.15	112.01	167.87	9.12	43.96	366.1	175	163.8	9.12	25.78	373.7	7.6	25	No
Particulate Matter (PM_{10})	28.18	94.09	167.87	9.12	15.39	314.6	147	137.8	9.12	9.72	303.6	-11.0	15	No
Sulfur Dioxide	14.38	1,399.76	--	18.19	--	1,432.3	806	--	18.19	--	824.2	-608.1	40	No
Nitrogen Dioxide	435.09	1,836.06	--	12.81	--	2,284.0	1953	--	12.81	--	1,965.8	-318.1	40	No
Carbon Monoxide	52.65	1,312.25	--	3.20	--	1,368.1	1457	--	3.20	--	1,460.2	92.1	100	No
Votatile Organic Compounds	7.03	123.13	--	0.34	--	130.5	155	--	0.34	--	155.3	24.8	40	No
Sulfuric Acid Mist	0.61	256.58	--	0.078	--	257.27	8.9	--	0.078	--	9.0	-248.3	7	No
Lead	0.00757	0.03096	--	0.00080	--	0.0393	0.0465	--	0.00080	--	0.0473	0.0079	0.6	No
Mercury	0.00458	0.01875	--	0.00027	--	0.0236	0.0149	--	0.00027	--	0.0151	-0.0085	0.1	No

NEG = Negligible.

APPENDIX A

FUGITIVE EMISSIONS ASSOCIATED WITH COAL HANDLING SYSTEM FOR NEW CEMENT PLANT

Table A-1. Estimated Future Fugitive Dust Emissions from Drop Type Operations, Tarmac

SOURCE	Type of Operation[a]	M Moisture Content (%)	U Wind Speed (MPH)	Emission Factor	Activity Factor[b]	Maximum Annual PM Emissions (tons/yr)	PM_{10} Size Multiplier[c]	Maximum Annual PM_{10} Emissions (tons/yr)
COAL HANDLING FACILITIES								
Railcar Unloading	Batch Drop	7.2	8.8	0.00111 lbs/ton	190,000 TPY	0.105	0.35	0.037
Temporary Storage Pile to Active Storage Pile	Batch Drop	7.2	8.8	0.00111 lbs/ton	190,000 TPY	0.105	0.35	0.037
Active Storage Pile to Loading Hopper	Batch Drop	7.2	8.8	0.00111 lbs/ton	190,000 TPY	0.105	0.35	0.037
Total						0.32		0.11

[a] Batch Drop Emission Factors are computed from AP-42 (US EPA, 1995) Section 13.2.4-3(1). E = 0.0032 x (U/5)^1.3 / (M/2)^1.4 lb/ton

[b] Based on future coal throughput.

[c] PM_{10} Size Multiplier is based on particles < 10 micrometers.

Table A-2. Estimation of Future Emissions For Vehicle Traffic in the Coal Handling System, Tarmac

General Data	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Coal	Coal	
Vehicle Speed (S), mph- Average	10	10	
Vehicle weight (W), tons:			
Loaded	55.5	--	
Unloaded	--	47.5	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual[a]	2,845	2,845	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), %[b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM_{10} (k)	0.35	0.35	
Emission Control Data			
Emission control method	- -	- -	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	19.30
Controlled (Final) EF,lb/VMT- Annual	10.18	9.13	19.30
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	6.76
Controlled (Final) EF,lb/VMT- Annual	3.56	3.19	6.76
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr[c]	13.92	12.48	26.40
TPY	14.48	12.98	27.46
Particulate Matter (PM_{10}) Emission Rate			
lbs/hr[c]	4.87	4.37	9.24
TPY	5.07	4.54	9.61

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Based on 190,000 TPY of coal transported 550 ft,
empty half the time, full the remaining time.
Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.

APPENDIX B

BASIS OF ORIGINAL BASELINE EMISSION CALCULATIONS FROM JUNE 1998 APPLICATION

Table B-1. Annual Baseline 1996-1997 Emissions From Kilns, Tarmac

Pollutant	Emission Factor		Reference	Activity Factor[a]		Baseline Emissions (tons/yr)
			Kiln No. 2 004			
Particulate Matter (TSP)	8.67	lb/hr	1	7,646.5	hr/yr	33.15
Particulate Matter (PM10)	85	% of PM	2	--		28.18
Sulfur dioxide	3.76	lb/hr	1	7,646.5	hr/yr	14.38
Nitrogen Oxides	113.8	lb/hr	3	7,646.5	hr/yr	435.09
Carbon monoxide	13.77	lb/hr	1	7,646.5	hr/yr	52.65
Volatile Organic Compounds	1.84	lb/hr	1	7,646.5	hr/yr	7.03
Sulfuric acid mist	0.16	lb/hr	4	7,646.5	hr/yr	0.61
Lead	9.20E-05	lb/ton clinker	5	164,619	tons clinker	0.0076
Mercury	5.57E-05	lb/ton clinker	5	164,619	tons clinker	0.0046
			Kiln No. 3 006			
Particulate Matter (TSP)	28.88	lb/hr	6	7,756.0	hr/yr	112.01
Particulate Matter (PM_{10})	84	% of PM	2	--		94.09
Sulfur dioxide	360.95	lb/hr	6	7,756.0	hr/yr	1,399.76
Nitrogen Oxides	473.45	lb/hr	6	7,756.0	hr/yr	1,836.06
Carbon monoxide	338.38	lb/hr	7	7,756.0	hr/yr	1,312.25
Volatile Organic Compounds	31.75	lb/hr	7	7,756.0	hr/yr	123.13
Sulfuric acid mist	66.16	lb/hr	8	7,756.0	hr/yr	256.58
Lead	9.20E-05	lb/ton clinker	5	673,096	tons clinker	0.0310
Mercury	5.57E-05	lb/ton clinker	5	673,096	tons clinker	0.0187

[a] Based on average of 1996-1997 actual operation.

References:

1. Based on average of 12/11/95 and 4/16/97 compliance tests for Kiln No. 2. 1996 Test Failed
2. From AP-42, for kiln with ESP control, Section 11.6.
3. Based on permit limit for Kiln No. 2, since actual emission have been in excess of this limit.
4. Based on average of 4/16/97 compliance tests for Kiln No. 2.
5. Based on source testing of Kiln No. 3 on January 10, 1992.
6. Based on average of all source tests on Kiln No. 3 during the period Janaury 1996 through December 1997.
7. Based on source test conducted on 11/22/94 on Kiln No.3. 112 is avg of 9 runs
8. Based on source tests conducted on 11/22/94 and 12/12/95 on Kiln No. 3.

04

33.15 96 32.0 97 34.05

Table 3-3. Annual 1996-1997 Baseline Emissions From Material Handling Point Sources, Tarmac Pennsuco

Emission Source	Point ID	Baghouse ID	Emission Basis	Emission Factor	Activity Factor[a]	Baseline PM/PM_{10} Emissions (TPY)	AQR 96	AQR 97
Coal Handling System	003	G-509, G-521, G-527, G-576 G-578, G-580, G-582	0.01 gr/acf; 50,000 acfm	4.29 lb/hr	7,756.0 hr/yr	16.62	16.8	16.4
Cooler No. 2	005	K-232	Stack Tests[b]	16.15 lb/hr	7,646.5 hr/yr	61.75	~~51.9~~	~~50.05~~ 11.5
Cooler No. 3	007	K-332	Stack Tests[b]	9.32 lb/hr	7,756.0 hr/yr	36.14	51.9	20.78
Dust Insufflation System - Kiln 2	--	K-181	0.01 gr/acf; 3,000 acfm (design spec)	0.26 lb/hr	7,646.5 hr/yr	0.98		
Dust Insufflation System - Kiln 3	--	K-383, K-396	0.01 gr/acf; 10,000 acfm (design spec)	0.86 lb/hr	7,756.0 hr/yr	3.32		
Clinker Handling/Stg - Kilns 1 & 2 Silos 1, 2, 4, 5, 11 and 12	008	K-147, K-247[c]	0.01 gr/acf; 3,000 acfm	0.26 lb/hr	7,646.5 hr/yr	0.98	0.99	0.97
Clinker Handling/Stg - Kiln 3 Silos 1, 4, 11, 17-23, 26-28	009	K-347, K-447, K-521, K-522, K-633[d]	0.01 gr/acf; 9,500 acfm	0.81 lb/hr	7,756.0 hr/yr	3.16	3.12	3.12
Finish Mill No. 1	010	F-130, F-113	0.01 gr/acf; 23,800 acfm	2.04 lb/hr	4,881.0 hr/yr	4.98	~~5.3~~	4.7
Finish Mill No. 2	011	F-230, F-213	0.01 gr/acf; 23,800 acfm	2.04 lb/hr	6,072.5 hr/yr	6.19	5.9	6.4
Finish Mill No. 3	012	F-313, F-330, F-332	0.01 gr/acf; 41,500 acfm (design spec)	3.56 lb/hr	4,546.0 hr/yr	8.09	8.2	8.0
Finish Mill No. 4	013	F-430, F-432, F-603, F-604, F-605	0.01 gr/acf; 67,000 acfm (design spec)	5.74 lb/hr	3,876.0 hr/yr	11.13	10.6	11.7
Cement Silos #1-#12	014	F-511, F-512, F-513, F-514, F-515	0.01 gr/acf; 43,000 acfm	3.69 lb/hr	6,072.5 hr/yr	11.19	10.72	11.66
Cement Distribution-Rail/Truck	015	B-110, B-210, B-372, B-374, B-382	0.01 gr/acf; 15,000 acfm 85,13,100 in AQR	1.29 lb/hr	2,721.5 hr/yr	1.75	1.69	1.81
Cement Distribution-Packhouse	016	B-621	0.01 gr/acf; 12,000 acfm	1.03 lb/hr	3,080.5 hr/yr	1.58	1.68	
					Total	167.87		

[a] Based on average of 1996-1997 actual operation.

[b] Based on average of April 1997 and December 1997 stack tests. 1996 test failed 4/97 was 97 AQR data but used for 96 value

[c] Only one baghouse operates at any one time.

[d] Baghouses K347 and K447 do not operate at the same time.

Table B-3. Maximum Emissions From Slag Dryer, Tarmac

Parameter	No. 2 Fuel Oil	Natural Gas
OPERATING DATA[a]		
Operating Time	3,120 hr/yr	3,120 hr/yr
Heat Input Rate	57.48 MMBtu/hr	57.48 MMBtu/hr
Heat Value	140,000 MMBtu/gal	1000 Btu/scf
Hourly Fuel Use	410.6 gal/hr	57,480 scf/hr
Annual Fuel Use	1,280,983 gal/yr	179.34 MMscf/yr
Max Sulfur Content	0.2 Wt%	0.01 gr/scf

	Fuel Oil			Natural Gas		
		Maximum Emissions			Maximum Emissions	
Pollutant	Emission Factor[b]	lb/hr	TPY	Emission Factor[b]	lb/hr	TPY
EMISSION DATA						
PM/PM_{10}	0.02 gr/dscf ; 34,100 dscfm	5.85	9.12	0.02 gr/dscf ; 34,100 dscfm	5.85	9.12
SO_2	142*S lb/Mgal[c]	11.66	18.19	0.60 lb/MMscf	0.034	0.054
NO_x	20 lb/Mgal	8.21	12.81	140.00 lb/MMscf	8.05	12.55
CO	5 lb/Mgal	2.05	3.20	35.00 lb/MMscf	2.01	3.14
NMVOC	0.2 lb/Mgal	0.082	0.13	3.83 lb/MMscf	0.22	0.34
Sulfuric Acid Mist	0.1225 lb/Mgal	0.050	0.08	NA	--	--
Lead-Total	8.9E-06 lb/MMBtu	5.12E-04	7.98E-04	NA	--	--
Mercury	3.0E-06 lb/MMBtu	1.72E-04	2.69E-04	NA	--	--
Beryllium	2.5E-06 lb/MMBtu	1.44E-04	2.24E-04	NA	--	--

Note: NA = not applicable.

[a]Fuel oil use is based on 140,000 Btu/gal for 0.2% S oil. Heat Input Rate is based on 0.48 MMBtu/ton and 150 ton/hr throughput

[b]Emission factors are based on AP-42 5th Edition, Tables 1.3-2, 1.3-4, and 1.3-11 for oil use and and 1.4-1 and 1.4-3 for gas. NMVOC factor for gas is reduced by 34% to reflect presence of methane.

[c]"S" denotes the weight % sulfur in fuel oil; max sulfur content = 0.2%

Table B-4. Summary of Quantifiable Fugitive Emissions, Tarmac

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr)[a]	
	PM	PM_{10}	PM	PM_{10}
Coal Handling Facilities-Batch Drop	0.28	0.1	0.32	0.11
Coal Handling Facilities-Vehicular Traffic	23.97	8.39	23.05	8.07
Raw Materials Blending-Batch Drop	3.52	1.23	3.39	1.19
Raw Materials Blending-Vehicular Traffic	14.34	5.02	13.79	4.83
Insufflation Area-Batch Drop	0.22	0.08	0.21	0.07
Insufflation Area-Vehicular Traffic	1.63	0.57	1.57	0.55
Total	43.96	15.39	42.33	14.82

Notes:

[a] Based on average hourly emissions assuming 2,080 hr/yr actual operation.

Table B-5. Estimated Baseline Fugitive Dust Emissions from Drop Type Operations, Tarmac

SOURCE	Type of Operation[a]	M Moisture Content (%)	U Wind Speed (MPH)	Emission Factor	Activity Factor[b]	Maximum Annual PM Emissions (tons/yr)	PM_{10} Size Multiplier[c]	Maximum Annual PM_{10} Emissions (tons/yr)
COAL HANDLING FACILITIES								
Railcar Unloading	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032
Temporary Storage Pile to Active Storage Pile	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032
Active Storage Pile to Loading Hopper	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032
					Subtotal	0.28		0.10
RAW MATERIALS BLENDING AREA								
Raw Material unloading	Batch Drop	1.0	8.8	0.01761 lbs/ton	200,000 TPY	1.7610	0.35	0.616
Raw Materials Pile to Blending Location	Batch Drop	1.0	8.8	0.01761 lbs/ton	200,000 TPY	1.7610	0.35	0.616
					Subtotal	3.52		1.23
INSUFFLATION AREA								
Truck Loading	Batch Drop	1.0	8.8	0.01761 lbs/ton	12,500 TPY	0.1101	0.35	0.039
Truck Unloading	Batch Drop	1.0	8.8	0.01761 lbs/ton	12,500 TPY	0.1101	0.35	0.039
					Subtotal	0.2201		0.08
Total						4.02		1.41

[a] Batch Drop Emission Factors are computed from AP-42 (US EPA, 1995) Section 13.2.4-3(1). E = 0.0032 x (U/5)^1.3 / (M/2)^1.4 lb/ton

[b] Based on average two year period, 1996-1997.

[c] PM_{10} Size Multiplier is based on particles < 10 micrometers.

Table B-6. Estimation of Baseline Emissions For Vehicle Traffic in the Coal Handling System, Tarmac

General Data	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Coal	Coal	
Vehicle Speed (S), mph- Average	10	10	
Vehicle weight (W), tons:			
Loaded	55.5	--	
Unloaded	--	47.5	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual[a]	2,483	2,483	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), %[b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM_{10} (k)	0.35	0.35	
Emission Control Data			
Emission control method	- -	- -	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	
Controlled (Final) EF,lb/VMT- Annual	10.18	9.13	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	
Controlled (Final) EF,lb/VMT- Annual	3.56	3.19	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr[c]	12.15	10.90	23.05
TPY	12.64	11.33	23.97
Particulate Matter (PM_{10}) Emission Rate			
lbs/hr[c]	4.25	3.81	8.07
TPY	4.42	3.97	8.39

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Based on 165,841 TPY (average of 1996-1997 coal throughput) of coal transported 550 ft, empty half the time, full the remaining time.
Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.

Table B-7. Estimation of Baseline Emissions For Vehicle Traffic in the Raw Material Blending Area, Tarmac

General Data	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Dry Feed	Dry Feed	
Vehicle Speed (S), mph- Average	5	5	
Vehicle weight (W), tons:			
Loaded	50	--	
Unloaded	--	40	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual[a]	3,267	3,267	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), %[b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM_{10} (k)	0.35	0.35	
Emission Control Data			
Emission control method	- -	- -	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	4.73	4.05	
Controlled (Final) EF,lb/VMT- Annual	4.73	4.05	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	1.66	1.42	
Controlled (Final) EF,lb/VMT- Annual	1.66	1.42	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr[c]	7.43	6.36	13.79
TPY	7.73	6.61	14.34
Particulate Matter (PM_{10}) Emission Rate			
lbs/hr[c]	2.60	2.22	4.82
TPY	2.70	2.31	5.02

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a]Based on 200,000 TPY (1996-1997 average throughput) of Raw Materials transported 750 ft, empty half the time, full the remaining time.

Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

[b]Tarmac Information.

[c]Assumes 2,080 hr/yr operation.

Table B-8. Estimation of Baseline Emissions For Vehicle Traffic in the Insufflation Area, Tarmac

General Data	Truck (loaded)	Truck (unloaded)	Total
Vehicle Data			
Description	Clinker Dust	Clinker Dust	
Vehicle Speed (S), mph- Average	3	3	
Vehicle weight (W), tons:			
Loaded	25.75	--	
Unloaded	--	13.75	
Vehicle number of wheels (w)	10	10	
Vehicle miles traveled (VMT)- Annual[a]	704	704	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), %[b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM_{10} (k)	0.35	0.35	
Emission Control Data			
Emission control method	- -	- -	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	2.82	1.82	
Controlled (Final) EF,lb/VMT- Annual	2.82	1.82	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	0.99	0.64	
Controlled (Final) EF,lb/VMT- Annual	0.99	0.64	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr[c]	0.95	0.61	1.57
TPY	0.99	0.64	1.63
Particulate Matter (PM_{10}) Emission Rate			
lbs/hr[c]	0.33	0.22	0.55
TPY	0.35	0.22	0.57

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Based on 12,500 (1996-1997 average throughput) TPY of clinker dust transported 3,100 ft, empty half the time, full the remaining time.
Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

ANNUAL OPERATING REPORT
FOR AIR POLLUTANT EMITTING FACILITY

See Instructions for Form No. 62-210.900(5).

I. FACILITY REPORT

A. REPORT INFORMATION

1. Year of Report	2. Number of Emissions Units in Report
1996	4 16

B. FACILITY INFORMATION

1. Facility ID	2. Facility Status	3. Date of Permanent Facility Shutdown
0250020	ACTIVE	

4. Facility Owner/Company Name
~~TARMAC FLORIDA~~ Tarmac America, Inc.

5. Site Name
TARMAC ~~FLORIDA~~ - Pennsuco Cement

6. Facility Location
Street Address or Other Locator : 11000 NW 121 WAY
City : MEDLEY County : DADE Zip Code : 33178

7. Facility Compliance Tracking Code	8. Governmental Facility Code	9. Facility SIC(s)
A	0	3241

10. Facility Comment

C. FACILITY HISTORY INFORMATION

1. Change in Facility Owner/ Company Name During Year?	Previous Name	2. Date of Change

Facility ID : 0250020

D. OWNER/CONTACT INFORMATION

1. Owner or Authorized Representative	
Name and Title	SCOTT QUAAS ENVIRONMENTAL SPEC Manager
Mailing Address	
Organization/Firm :	TARMAC ~~FLORIDA INC~~ America, Inc.
Street Address :	455 FAIRWAY DR
City :	DEERFIELD BEACH
State :	FL Zip Code : 33441
Telephone :	(305)481-2800 954 Fax :

2. Facility Contact	
Name and Title	SCOTT QUAAS – Environmental Manager
Mailing Address	
Organization/Firm :	TARMAC ~~FLORIDA,INC.~~ America, Inc.
Street Address :	P.O.BOX 8648
City :	DEERFIELD BEACH
State :	FL Zip Code : 33443
Telephone :	~~(305)481-2800~~ 954.425.4165 Fax : 954.480.9352

E. OWNER OR AUTHORIZED REPRESENTATIVE STATEMENT

I hereby certify that the information given in this report is correct to the best of my knowledge.

Signature

3/27/97
Date

Facility ID : 0250020 **Emissions Unit ID :** 003

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description ~~23 TON MILL FOR 23 TPH~~ COAL HANDLING SYSTEM		
2. Emissions Unit ID 003	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number AO13238048	6. Emissions Unit Status ACTIVE	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

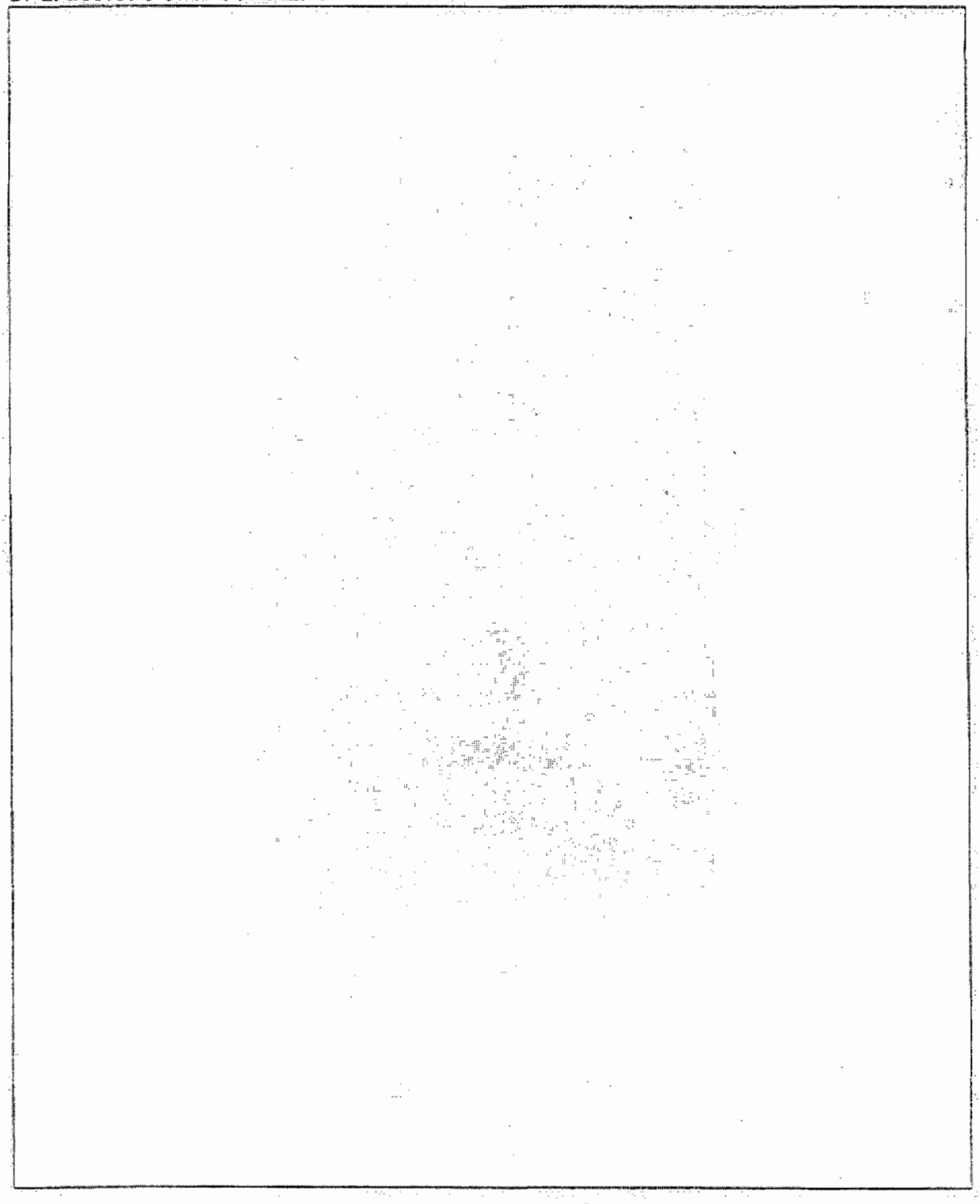
B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type ~~SINGLE POINT SERVING A SINGLE EMISSIONS UNIT~~ 3
2a. Description of Control Equipment 'a' **FABRIC FILTER LOW TEMPERATURE (T<180F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 7858
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

D. EMISSIONS UNIT COMMENT



Facility ID : 0250020 Emissions Unit ID : 003 SCC : 3-05-101-03

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-101-03	2. Description of Process or Type of Fuel Mineral Products Bulk Materials Conveyors Mineral Products Coal	
3. Annual Process or Fuel Usage Rate 162,064	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS PROCESSED
6. Fuel Average % Sulfur 0.90	7. Fuel Average % Ash —	8. Fuel Heat Content (mmBtu/SCC Unit) 26.10

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 16.94	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 5
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.01 gr/CFM – outlet grain loading		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 003 SCC : 3-05-103-03

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-103-03	2. Description of Process or Type of Fuel Mineral Products Bulk Materials Open Stockpiles Mineral Products Coal	
3. Annual Process or Fuel Usage Rate 162,064	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS PROCESSED
6. Fuel Average % Sulfur 0.9>	7. Fuel Average % Ash —	8. Fuel Heat Content (mmBtu/SCC Unit) 26.10

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 004

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **41 TPH KILN #2 W/DOUBLE CHAMBER E.S.P.**		
2. Emissions Unit ID **004**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048** **AC13169901**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **SINGLE POINT SERVING A SINGLE EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **ELECTROSTATIC PRECIPITATOR HIGH EFFICIENCY (95.0-99.9%)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 7713
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

D. EMISSIONS UNIT COMMENT

Facility ID : 0250020 Emissions Unit ID : 004 SCC : 3-05-007-06

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-06	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Kilns	
3. Annual Process or Fuel Usage Rate 167,047	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit Clinker TONS CEMENT PRODUCED
6. Fuel Average % Sulfur 0.90	7. Fuel Average % Ash —	8. Fuel Heat Content (mmBtu/SCC Unit) 26.10

(2) EMISSIONS INFORMATION

1. Pollutant CO Carbon Monoxide	CAS No. 630-08-0	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 70.19	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations) Average CO emissions: 18.20 lb/hr x 7713 hr/year ÷ 2000 lb/ton Stack test 12/12-19/96		

1. Pollutant NOX Nitrogen Oxides	CAS No. 10102-44-0	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 1184.72	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations) Average NOx emissions: 307.2 lb/hr x 7713 hr/year ÷ 2000 lb/ton Stack test 12/12-19/96		

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 004 SCC : 3-05-007-06

1. Pollutant: PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 78.96	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations): average PM emissions : 20.56 lb/hr x 7713 hr/yr ÷ 2000 lb/ton stack test 12/12-19/96		

1. Pollutant: PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 67.07	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 3 5
5. Emissions Calculation (Show separately both annual and daily emissions calculations): 85 % of PM emissions.		

1. Pollutant: SAM Sulfuric Acid Mist	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 15.66	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations): average emissions : 4.06 lb/hr x 7713 hr/yr ÷ 2000 lb/ton Stack test 12/12-19/96		

1. Pollutant: SO2 Sulfur Dioxide	CAS No. 7446-09-5	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 498.95	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations): Average emissions: 129.38 lb/hr x 7713 hr/yr ÷ 2000 lb/ton stack test 12/12-19/96		

Facility ID : 0250020 Emissions Unit ID : 004 SCC : 3-05-007-06

1. Pollutant VOC Volatile Organic Compounds	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 17.12	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations) average emission : 4.44 lb/hr x 7713 hr/yr ÷ 2000 lb/ton Stack test 12/13-14/96		

Facility ID : 0250020 Emissions Unit ID : 004 SCC : 3-90-002-01

(1) PROCESS/FUEL INFORMATION

1. SCC 3-90-002-01	2. Description of Process or Type of Fuel In-Process Fuel Use Bituminous Coal In-Process Fuel Use Cement Kiln/Dryer	
3. Annual Process or Fuel Usage Rate 34,951	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS BURNED
6. Fuel Average % Sulfur 0.93	7. Fuel Average % Ash -	8. Fuel Heat Content (mmBtu/SCC Unit) 26.1

(2) EMISSIONS INFORMATION

1. Pollutant CO Carbon Monoxide	CAS No. 630-08-0	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 70.19	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant NOX Nitrogen Oxides	CAS No. 10102-44-0	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 1184.72	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID: 0250020 Emissions Unit ID: 004 SCC: 3-90-002-01

1. Pollutant: PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 78.90	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant: PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 67.07	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant: SAM Sulfuric Acid Mist	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 15.66	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant: SO2 Sulfur Dioxide	CAS No. 7446-09-5	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year): 493.95	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code: 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 004 SCC : 3-90-002-01

1. Pollutant VOC Volatile Organic Compounds	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 17.13	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 005

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **25 TPH COOLER #2 W/MULTICLONE & DUAL CHAMBER E.S.P.**		
2. Emissions Unit ID **005**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number AO13238048	6. Emissions Unit Status ACTIVE	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **SINGLE POINT SERVING A SINGLE EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER MEDIUM TEMPERATURE (180F<T<250F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 7713
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

D. EMISSIONS UNIT COMMENT

Facility ID : 0250020 Emissions Unit ID : 005 SCC : 3-05-007-14

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-14	2. Description of Process or Type of Fuel **Mineral Products** **Cement Manufacturing: Wet Proce** **Mineral Products** **Clinker Cooler**	
3. Annual Process or Fuel Usage Rate 167,047	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit ~~TONS CEMENT PRODUCED~~ Clinker
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM **Particulate Matter - Total**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 161.93	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations) average emissions : 49.98 lb/hr × 7713 hr/yr ÷ 2000 lb/ton Stack test 12/13/96		

1. Pollutant PM10 **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations) NA		

Facility ID : 0250020 Emissions Unit ID : 006

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **142 TPH KILN #3 W/DROPOUT BOX& DUAL CHAMBER E.S.P.**		
2. Emissions Unit ID **006**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit? **Y**
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **SINGLE POINT SERVING A SINGLE EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **ELECTROSTATIC PRECIPITATOR HIGH EFFICIENCY (95.0-99.9%)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 7858
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 **Emissions Unit ID :** 006

D. EMISSIONS UNIT COMMENT

Facility ID : 0250020 Emissions Unit ID : 006 SCC : 3-05-007-06

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-06	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Kilns	
3. Annual Process or Fuel Usage Rate 662,492	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit Clinker TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant NOX Nitrogen Oxides	CAS No. 10102-44-0	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 454.87	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations) average emissions : 320.29 lb/hr x 7952 : 2546 lb/hr Stack test 12/19-20/96		

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[x] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 80.54	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations) average emissions : 20.50 lb/hr x 7952 : 2546 lb/hr Stack test 12/19-20/96		

Facility ID : 0250020 Emissions Unit ID : 006 SCC : 3-05-007-06

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations) N/A		

1. Pollutant SO2 Sulfur Dioxide	CAS No. 7446-09-5	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 2292.13	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations) average emissions : 583.4 lb/hr * 7950 hr/yr ÷ 2000 lb/ton Stack test 12/19.20/96		

Facility ID : 0250020 Emissions Unit ID : 006 SCC : 3-90-002-01

(1) PROCESS/FUEL INFORMATION

1. SCC 3-90-002-01	2. Description of Process or Type of Fuel In-Process Fuel Use Bituminous Coal In-Process Fuel Use Cement Kiln/Dryer	
3. Annual Process or Fuel Usage Rate 127,113	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS BURNED
6. Fuel Average % Sulfur 3.90	7. Fuel Average % Ash —	8. Fuel Heat Content (mmBtu/SCC Unit) 26.10

(2) EMISSIONS INFORMATION

1. Pollutant NOX Nitrogen Oxides	CAS No. 10102-44-0	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 1454.87	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[x] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 80.54	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID : 006** **SCC : 3-90-002-01**

1. Pollutant **PM10** **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant **SO2** **Sulfur Dioxide**	CAS No. **7446-09-5**	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 27 92.18	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 006 SCC : 3-90-005-02

(1) PROCESS/FUEL INFORMATION

1. SCC 3-90-005-02	2. Description of Process or Type of Fuel In-Process Fuel Use Distillate Oil In-Process Fuel Use Cement Kiln/Dryer	
3. Annual Process or Fuel Usage Rate 142.5	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit 1000 GALLONS BURNED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit) 138.0

(2) EMISSIONS INFORMATION

1. Pollutant NOX Nitrogen Oxides	CAS No. 10102-44-0	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 1454.87	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 8.54	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID : 006** **SCC : 3-90-005-02**

1. Pollutant **PM10** **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations) N/A		

1. Pollutant **SO2** **Sulfur Dioxide**	CAS No. 7446-09-5	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 2297.13	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID :** 007

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **88 TPH COOLER#3 W/DROPOUT BOX & BAGHOUSE**		
2. Emissions Unit ID **007**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **SINGLE POINT SERVING A SINGLE EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER HIGH TEMPERATURE (T>250F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week		2. Total Operation During Year (hours/year) 7858
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :		
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week		5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 **Emissions Unit ID : 007**

D. EMISSIONS UNIT COMMENT

Facility ID : 0250020 Emissions Unit ID : 007 SCC : 3-05-007-14

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-14	2. Description of Process or Type of Fuel **Mineral Products** **Cement Manufacturing: Wet Proce** **Mineral Products** **Clinker Cooler**	
3. Annual Process or Fuel Usage Rate 668,492	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit Clinker ~~TONS CEMENT PRODUCED~~
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM **Particulate Matter - Total**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 252.40	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 1
5. Emissions Calculation (Show separately both annual and daily emissions calculations) Garage emissions: 64.24 lb/hr x 7858 hr/yr ÷ 2000 lb/ton Stack test 12/17/96		

1. Pollutant PM10 **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations) N/A		

Facility ID : 0250020 Emissions Unit ID : 008

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **CLINKER HANDLING &STORAGE SYSTEM FOR KILNS #1&2(ACTLY FOR #2**		
2. Emissions Unit ID **008**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

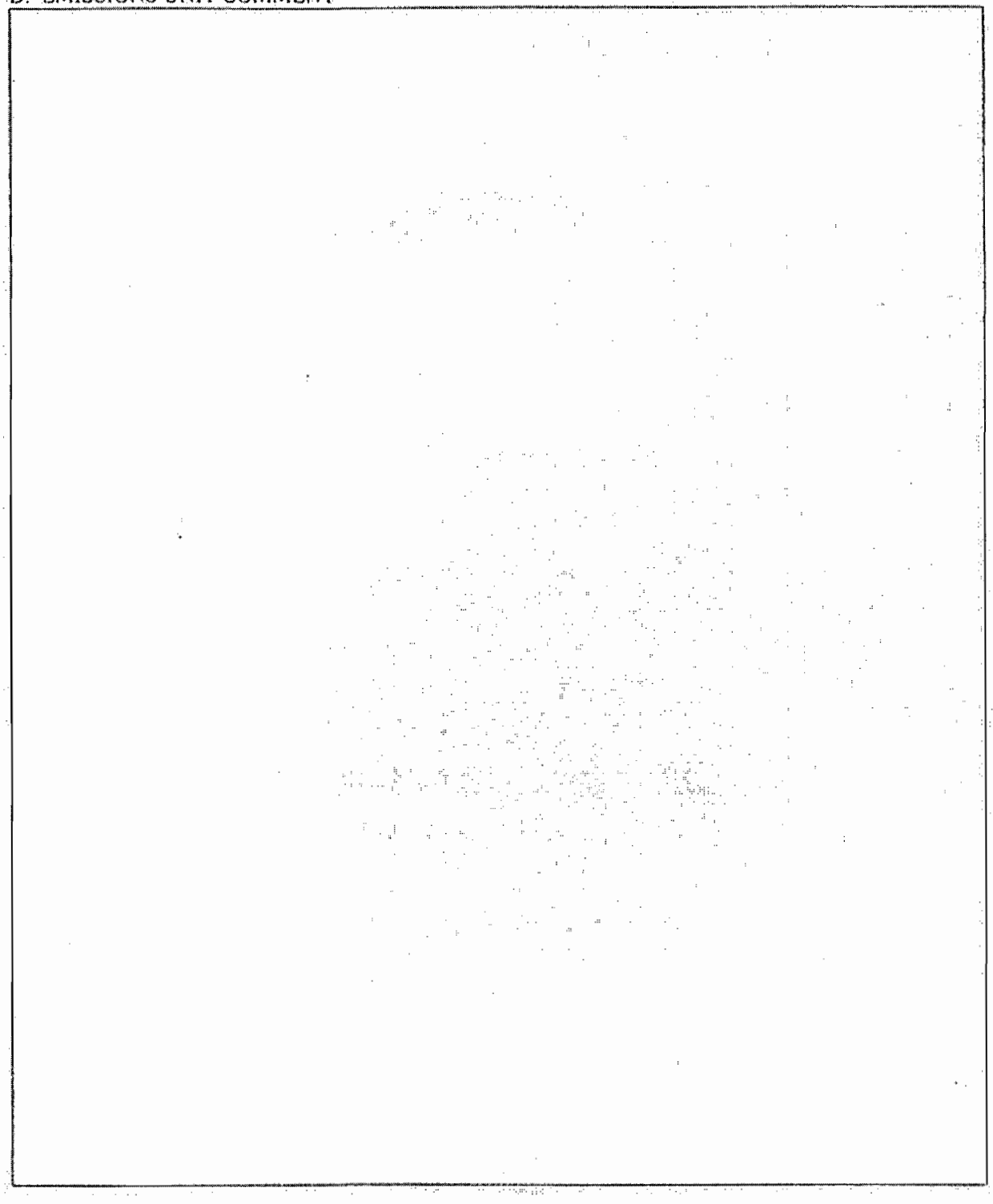
B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **MULTIPLE EMISSION POINTS SERVING 1 EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER LOW TEMPERATURE (T<180F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 7713
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

D. EMISSIONS UNIT COMMENT



Facility ID : 0250020 **Emissions Unit ID :** 008 **SCC :** 3-05-007-16

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-16	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Transfer	
3. Annual Process or Fuel Usage Rate 167,047	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit Clinker TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 0.99	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 5
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.01 gr/ACFM - outlet grain loading		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 009

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **CLINKER HANDLING &STORAGE SYSTEM FOR KILN #3**		
2. Emissions Unit ID 009	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number AO13238048	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **MULTIPLE EMISSION POINTS SERVING 1 EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER LOW TEMPERATURE (T<180F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 7959
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 **Emissions Unit ID : 009**

D. EMISSIONS UNIT COMMENT

Facility ID : 0250020 **Emissions Unit ID :** 009 **SCC :** 3-05-007-16

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-16	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Transfer	
3. Annual Process or Fuel Usage Rate 668,492	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit Clinker TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[x] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 3.20	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 5
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.01 gr/ACFM - outlet grain loading		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[x] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID : 009** **SCC : 3-05-102-02**

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-102-02 N/A	2. Description of Process or Type of Fuel Mineral Products Bulk Materials Storage Bins Mineral Products Cement	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS PROCESSED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 010

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **25 TPH FINISH MILL #1 W/AIRSLIDE,CONVEYOR & BGHS**		
2. Emissions Unit ID **010**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **MULTIPLE EMISSION POINTS SERVING 1 EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER MEDIUM TEMPERATURE (180F<T<250F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 5165
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 **Emissions Unit ID :** 010 **SCC :** 3-05-007-16

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-16 NA	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Transfer	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 010 SCC : 3-05-007-17

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-17	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Grinding	
3. Annual Process or Fuel Usage Rate 87,357	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[ ] Below Threshold [X] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 2.66	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 5
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.01 gr/ACFM - outlet grain loading		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID : 011**

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **2 STPH FINISH MILL #2 W/AIRSLIDE,CONVEYOR& BGHS**		
2. Emissions Unit ID **011**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **SINGLE POINT SERVING A SINGLE EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER MEDIUM TEMPERATURE (180F<T<250F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 5817
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 Emissions Unit ID : 011 SCC : 3-05-007-16

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-16 NA	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Transfer	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB CAS No. [ ] Below Threshold [ ] Not Emitted Lead - Total (elemental lead and lead compounds)		
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM CAS No. [ ] Below Threshold [ ] Not Emitted Particulate Matter - Total		
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 CAS No. [ ] Below Threshold [ ] Not Emitted Particulate Matter - PM10		
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 011 SCC : 3-05-007-17

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-17	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Grinding	
3. Annual Process or Fuel Usage Rate 99,613	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[ ] Below Threshold [X] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 2.99	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 5
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.01 gr/ACFM - outlet grain loading		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID :** 012

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **84 TPH FINISH MILL #3 W/AIRSLIDE,CONVEYOR &BGHS**		
2. Emissions Unit ID **012**	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **MULTIPLE EMISSION POINTS SERVING 1 EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER MEDIUM TEMPERATURE (180F<T<250F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day	7 days/week	2. Total Operation During Year (hours/year) 4610
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :		
4. Average Ozone Season Operation (June 1 to August 31) hours/day	days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 Emissions Unit ID : 012 SCC : 3-05-007-16

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-16 N/A	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Transfer	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID :** 012 **SCC :** 3-05-007-17

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-17	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Grinding	
3. Annual Process or Fuel Usage Rate 349,823	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[ ] Below Threshold [X] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 4.53	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.026 lb/ton cement produced		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 013

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **113 TPH FINISH MILL #4 W/AIRSLIDE,CONVEYOR &BGHS**		
2. Emissions Unit ID 013	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **MULTIPLE EMISSION POINTS SERVING 1 EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER MEDIUM TEMPERATURE (180F<T<250F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 3686
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 Emissions Unit ID : 013 SCC : 3-05-007-16

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-16 NA	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Transfer	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID : 013** **SCC : 3-05-007-17**

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-17	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Clinker Grinding	
3. Annual Process or Fuel Usage Rate 369,221	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PB Lead - Total (elemental lead and lead compounds)	CAS No.	[ ] Below Threshold [✓] Not Emitted
2. Annual Emissions (ton/year) 4.80	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.026 lb/ton cement produced		

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[✓] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID: 0250020 Emissions Unit ID: 014

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **CEMENT STORAGE SILOS #1-12 SERVING MILLS#1-4**		
2. Emissions Unit ID 014	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number **AO13238048**	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **MULTIPLE EMISSION POINTS SERVING 1 EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER LOW TEMPERATURE (T<180F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 5817
3. Percent Hours of Operation by Season DJF: MAM: JJA: SON:	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 Emissions Unit ID : 014 SCC : 3-05-007-18

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-18	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Cement Silos	
3. Annual Process or Fuel Usage Rate 904,964	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 10.72	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 5
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.01 gr/ACFM - outlet grain loading		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID :** 015

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **CEMENT DISTRIBUTION-RAIL AND TRUCK LOADOUTS**		
2. Emissions Unit ID 015	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number AO13238048	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **MULTIPLE EMISSION POINTS SERVING 1 EMISSIONS UNIT**
2a. Description of Control Equipment 'a' **FABRIC FILTER LOW TEMPERATURE (T<180F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 2633
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 **Emissions Unit ID :** 015 **SCC :** 3-05-007-19

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-19	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Cement Load Out	
3. Annual Process or Fuel Usage Rate 739,947	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS CEMENT PRODUCED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 1.48	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 3
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[X] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID :** 016

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **CEMENT DISTRIBUTION-PACKHOUSE W/2 BAGGERS**		
2. Emissions Unit ID 016	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year? Y
5. DEP Permit or PPS Number AO13238048	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type **AN EMISSION POINT SERVING TWO OR MORE EMISSIONS UNITS**
2a. Description of Control Equipment 'a' **FABRIC FILTER LOW TEMPERATURE (T<180F)**
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation 24 hours/day 7 days/week	2. Total Operation During Year (hours/year) 3265
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 Emissions Unit ID : 016 SCC : 3-05-007-19

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-19	2. Description of Process or Type of Fuel **Mineral Products** **Cement Manufacturing: Wet Proce** **Mineral Products** **Cement Load Out**	
3. Annual Process or Fuel Usage Rate 110,523	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit **TONS CEMENT PRODUCED**
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant **PM** **Particulate Matter - Total**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) 1.68	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 3
5. Emissions Calculation (Show separately both annual and daily emissions calculations) 0.01 gr/ACFM - outlet grain loading		

1. Pollutant **PM10** **Particulate Matter - PM10**	CAS No.	[x] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID :** 017

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **15 TON MILL FOR COAL HANDLING SYSTEM FOR KILN #2.** NA – included in EU 003		
2. Emissions Unit ID 017	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year?
5. DEP Permit or PPS Number	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type
2a. Description of Control Equipment 'a'
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation hours/day days/week	2. Total Operation During Year (hours/year)
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 **Emissions Unit ID : 017** **SCC : 3-05-101-03**

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC **3-05-101-03**	2. Description of Process or Type of Fuel **Mineral Products** **Bulk Materials Conveyors** **Mineral Products** **Coal**	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit **TONS PROCESSED**
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant **PM** **Particulate Matter - Total**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant **PM10** **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 **Emissions Unit ID : 017** **SCC : 3-05-103-03**

(1) PROCESS/FUEL INFORMATION

1. SCC **3-05-103-03**	2. Description of Process or Type of Fuel **Mineral Products Bulk Materials Open Stockpiles** **Mineral Products Coal**	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit **TONS PROCESSED**
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant **PM** **Particulate Matter - Total**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant **PM10** **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 0250020 Emissions Unit ID : 018

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description **FEEDBIN AND ELEVATOR FOR 23 TPH COAL HANDLING SYSTEM.** NA - included in EU 003		
2. Emissions Unit ID 018	3. Emissions Unit Classification **Regulated Emissions Unit**	4. Operated During Year?
5. DEP Permit or PPS Number AO13238048	6. Emissions Unit Status **ACTIVE**	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type
2a. Description of Control Equipment 'a'
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation hours/day days/week	2. Total Operation During Year (hours/year)
3. Percent Hours of Operation by Season DJF : MAM : JJA : SON :	
4. Average Ozone Season Operation (June 1 to August 31) hours/day days/week	5. Total Operation During Ozone Season (days/season)

Facility ID : 0250020 Emissions Unit ID : 018 SCC : 3-05-007-12

E. EMISSIONS INFORMATION BY PROCESS/FUEL

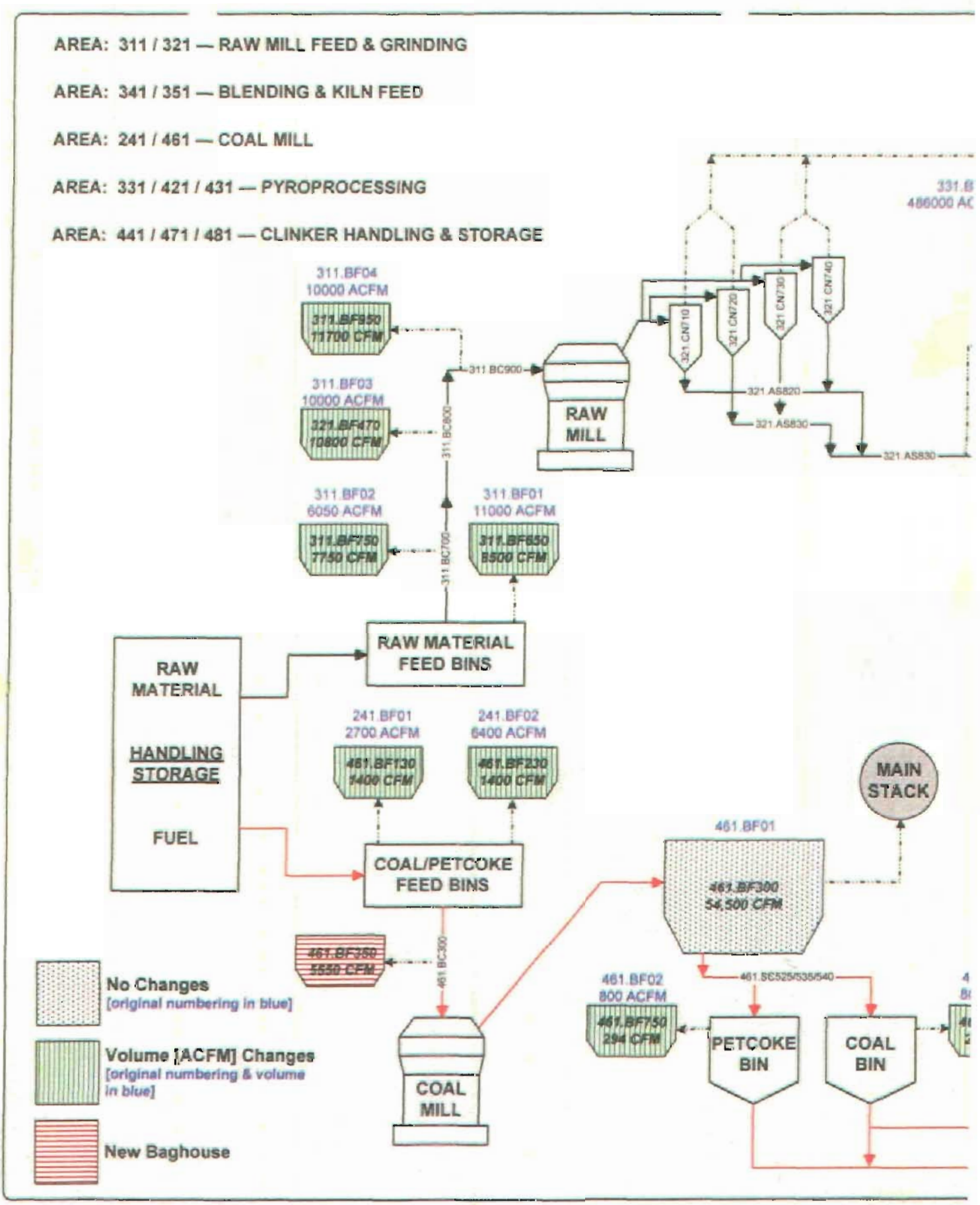
(1) PROCESS/FUEL INFORMATION

1. SCC 3-05-007-12	2. Description of Process or Type of Fuel Mineral Products Cement Manufacturing: Wet Proce Mineral Products Raw Material Transfer	
3. Annual Process or Fuel Usage Rate	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit TONS HANDLED
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant PM Particulate Matter - Total	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

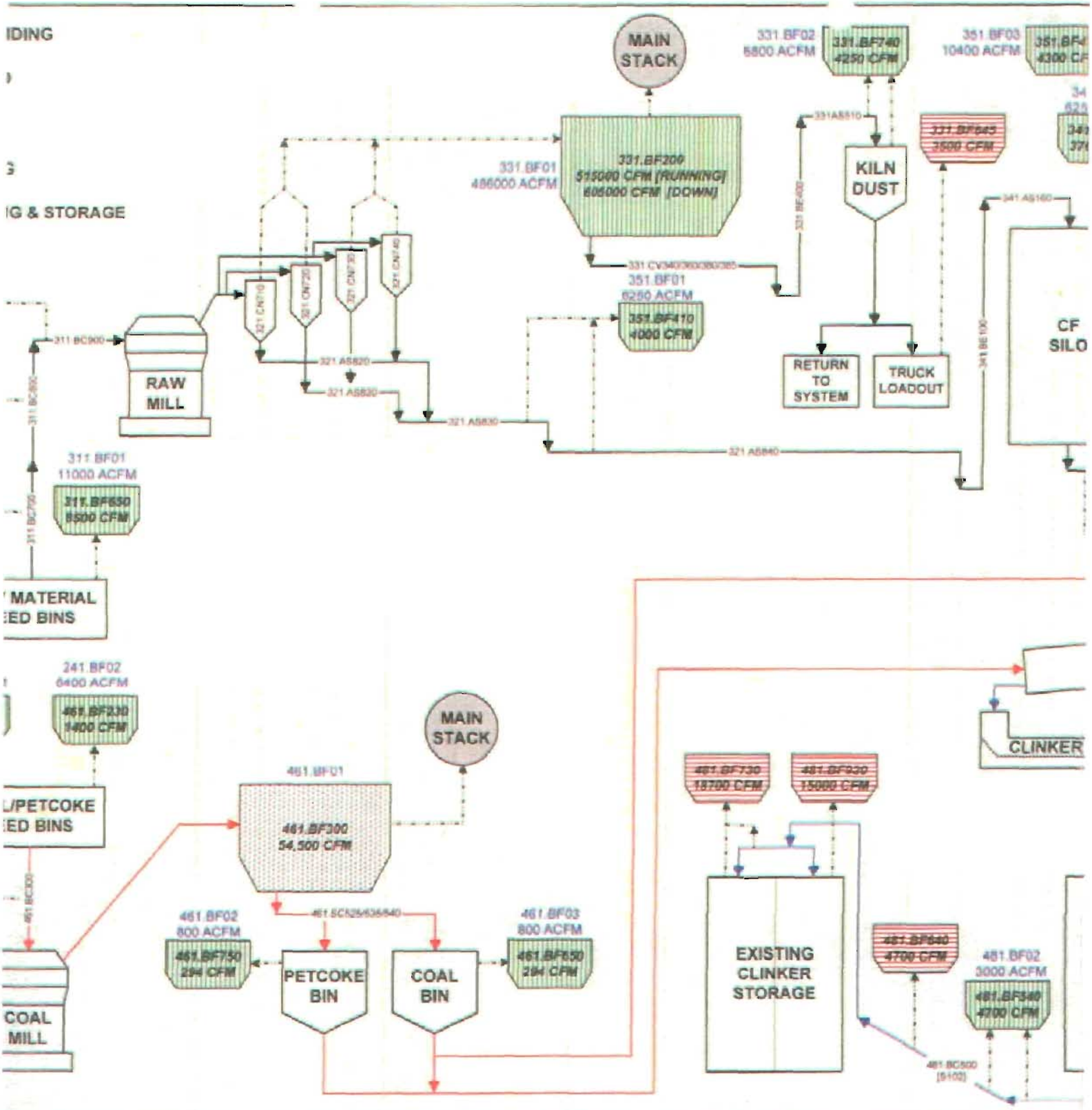
1. Pollutant PM10 Particulate Matter - PM10	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		



DESCRIPTION

TITLE PENNSUCO - PK5

BEST AVAILABLE COPY



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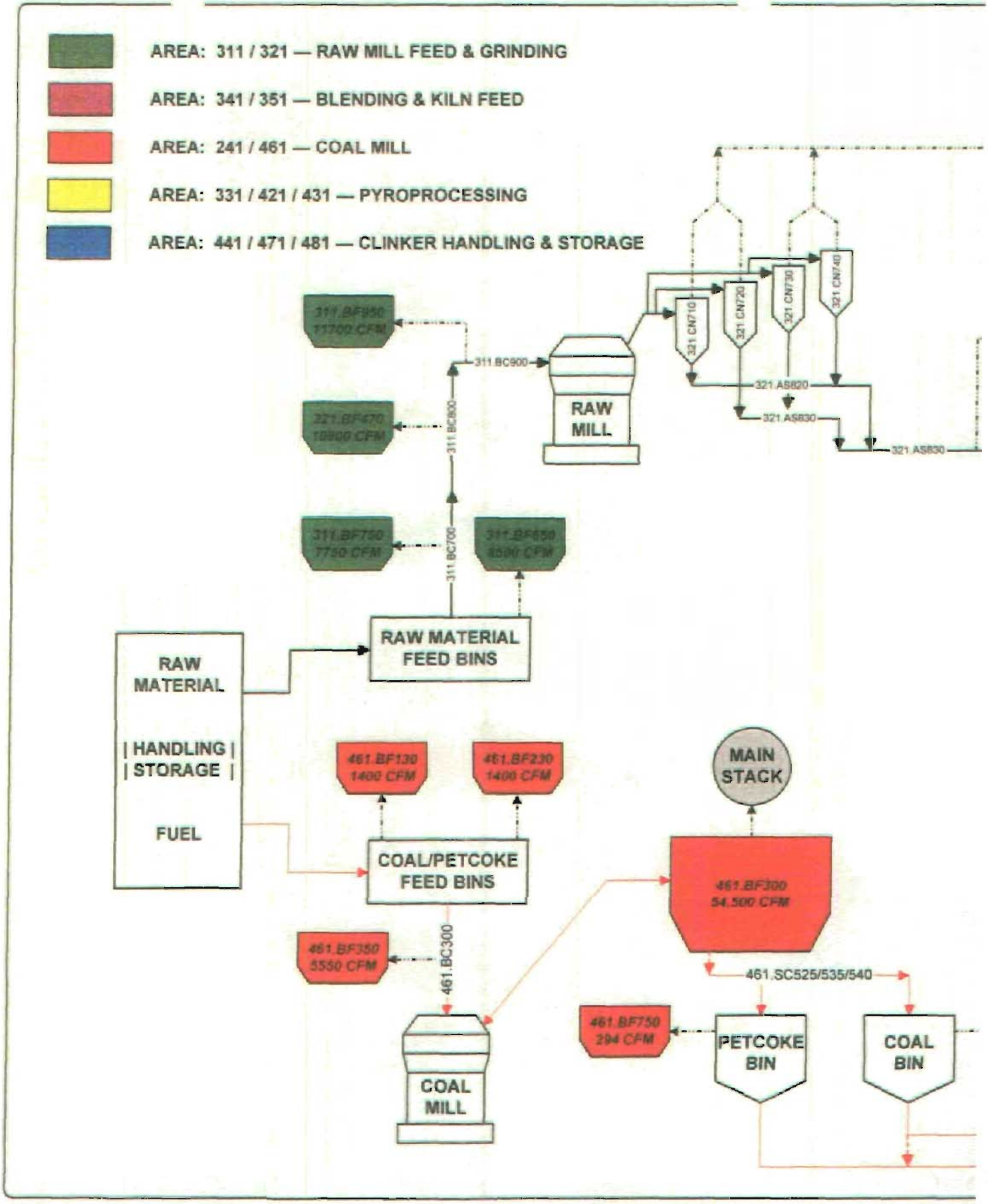
LAST REVISION DATE:	2/27/2004



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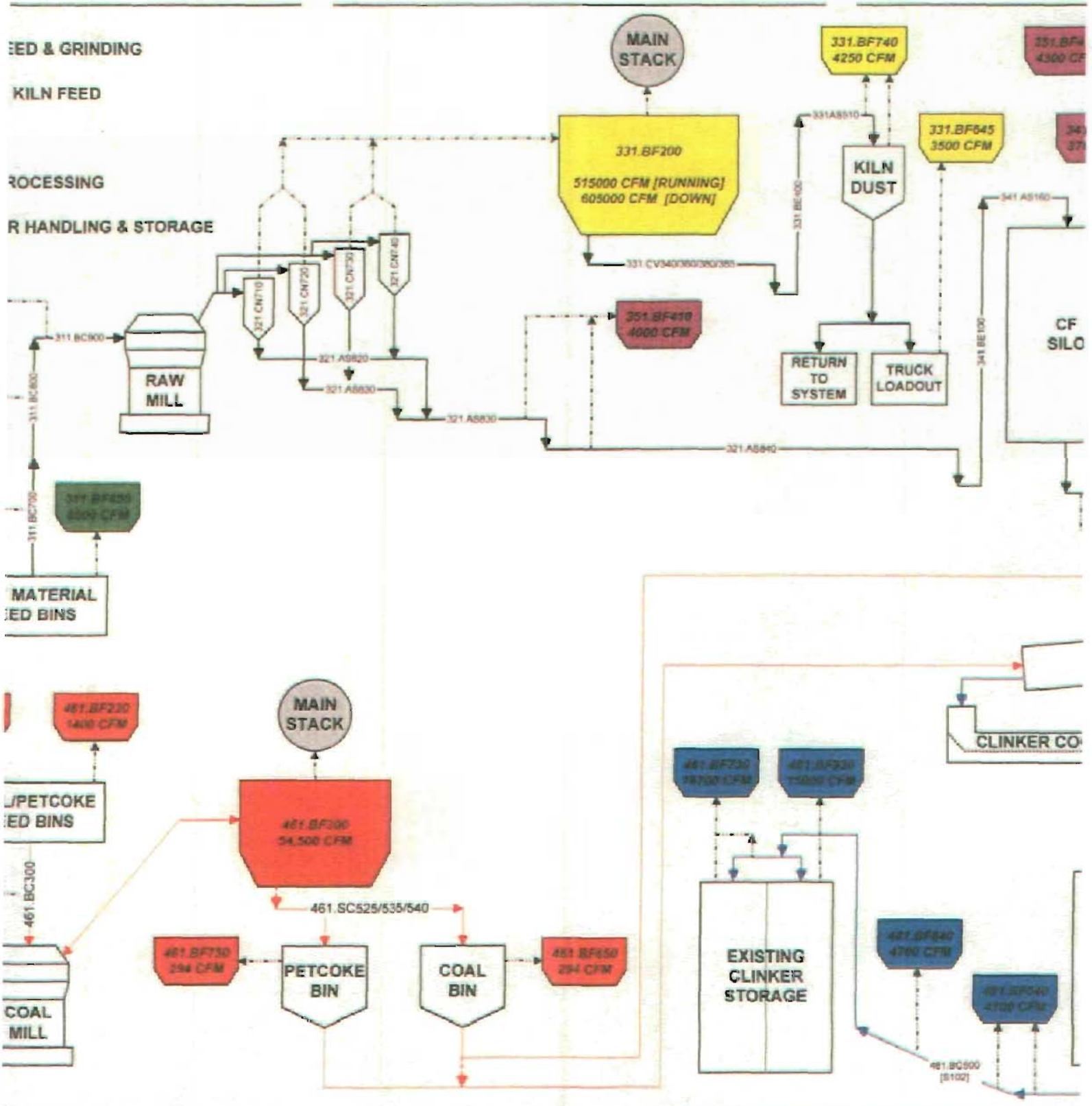
TITLE: PENNSUCO - PK5



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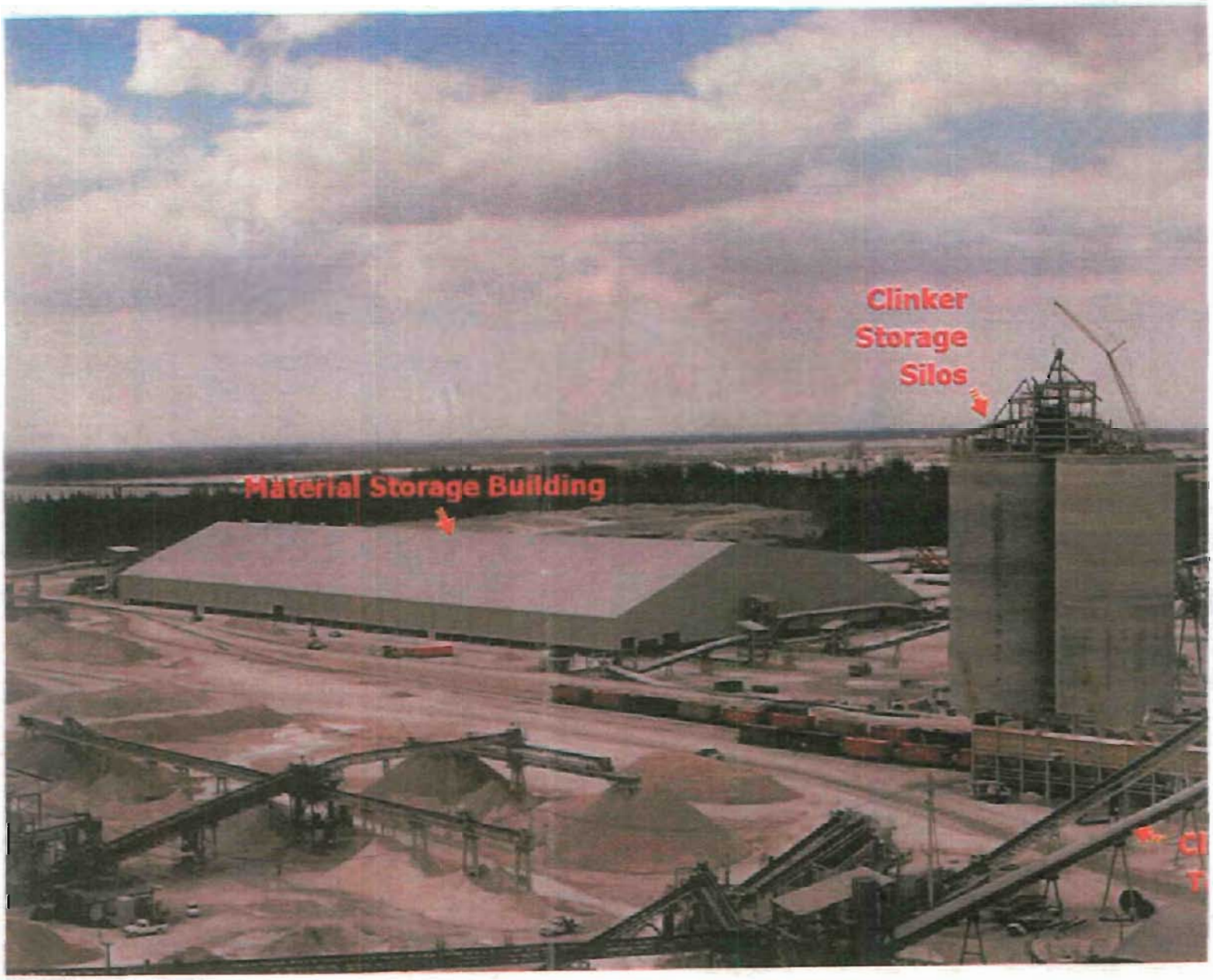
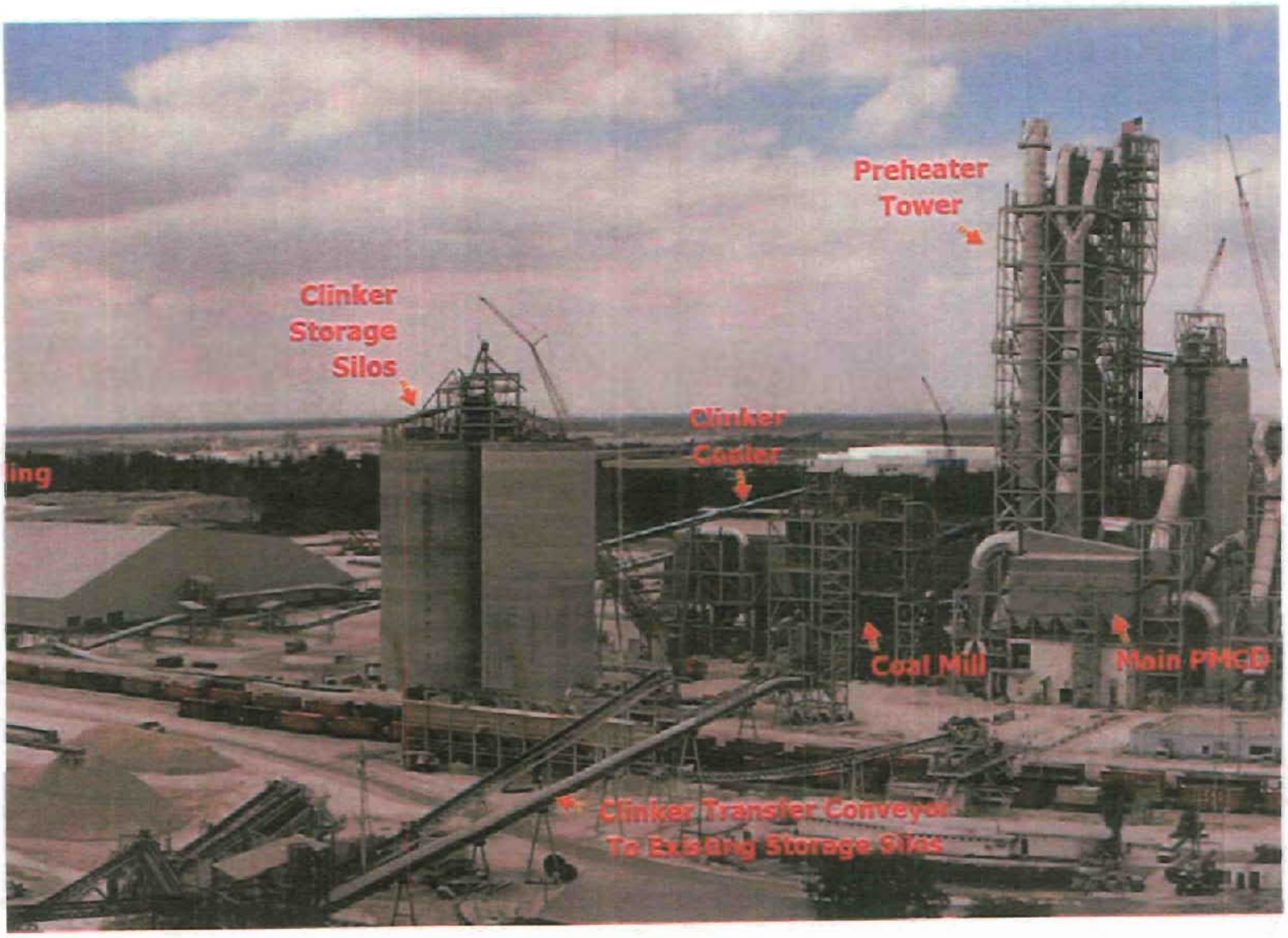
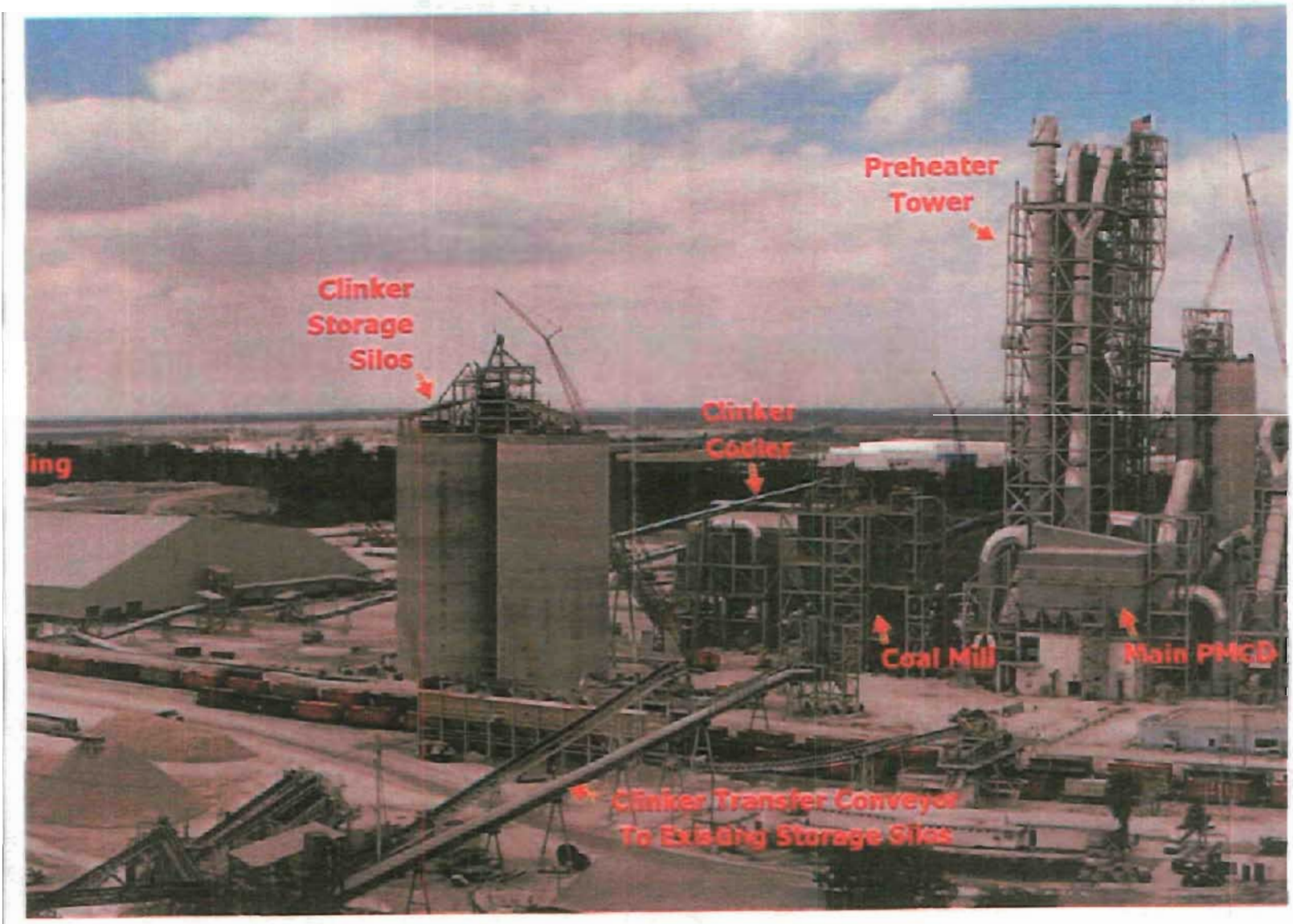
LAST REVISION DATE:	3/11/2004







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Tarmac
A Titan America Business

455 Fairway Drive
Deerfield Beach, FL 33441
Environmental Department
Direct line 954.425.4165
Direct fax 954.480.9352

Transmittal memo

RECEIVED
MAR 18 2004
Air Quality
Management Division

To	Claire Jordahl – DERM	Date	16 Mar 2004	From	Scott Quaas
Ref	Pennsuco Cement			Tel no.	(954) 425-4165

Please find enclosed a copy of the *"Flow Diagram"* from the PK5 Construction Permit Revision Application; as discussed it shows the PMCD changes that the application addresses. Additionally, I have enclosed a photo of the new plant with labels of the major system components. Let me know if you need anything further.