TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Tarmac American, LLC
455 Fairway Drive, Suite 200
Deerfield Beach, Florida 33441

Pennsuco Complex
Standard Industrial Classification Code No. 3241
Facility ID No. 0250020

PROJECT

Project No. 0250020-036-AC
Application for Minor Source Air Construction Permit
Revision of Several Existing Permit Conditions and Construction of Three Baghouses

COUNTY

Miami-Dade County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road, MS#5505
Tallahassee, Florida 32399-2400

June 11, 2013

1. GENERAL PROJECT INFORMATION

1.1. Facility Description and Location

Tarmac America, LLC. (through various subsidiaries or affiliates) operates the Pennsuco Facility in Medley, Miami-Dade County, Florida. The facility consists of a dry process portland cement plant, an aggregate plant, two batch "ready-mix" concrete plants, and a cement block plant located at 11000 NW 121 Way, Medley, Miami-Dade County. The UTM coordinates are Zone 17, 562.3 kilometers (km) East and 2861.7 km North. Figure 1 indicates the location of the facility.

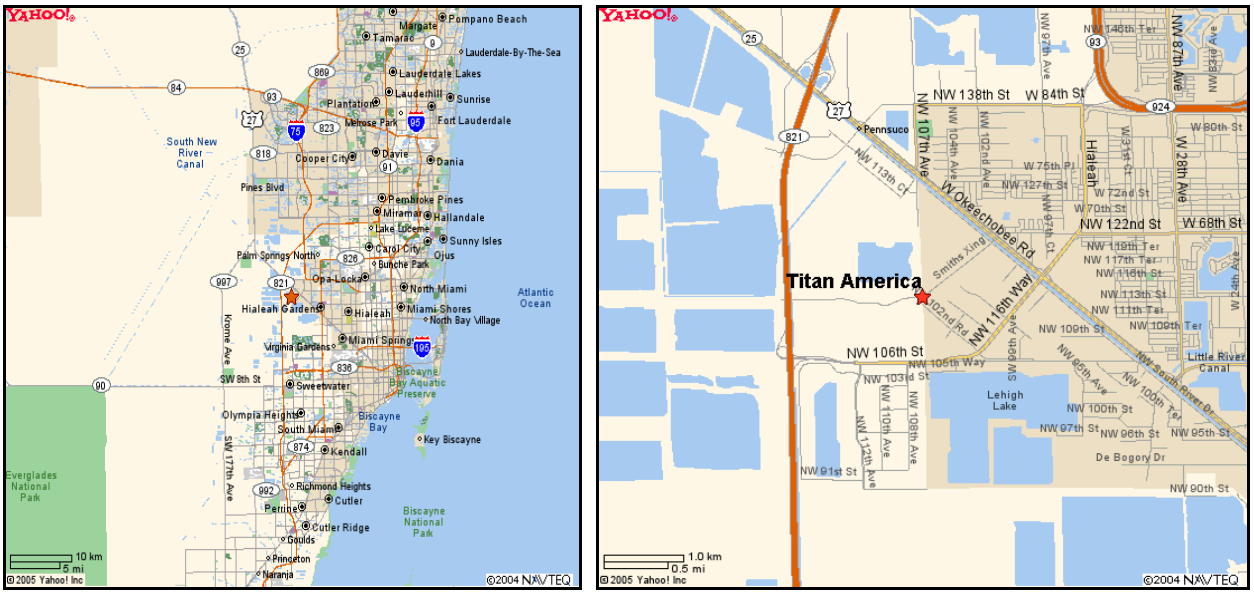

Figure 1. Titan/Tarmac Pennsuco Facility Location in Medley, Miami-Dade County

Figure 2 is a picture of Kiln 5 that replaced older wet process Kiln 2 and 3 in 2004. Kiln 1 was shut down in the 1980s and Kiln 4 never operated. Kilns 1-4 have all been dismantled.

Figure 2. Tarmac Pennsuco Portland Cement Plant Dry Process Kiln No. 5

1.2. Process Description Preheater/Calciner Kiln with In-Line Raw Mill

This section describes only the pyroprocessing of raw materials to make clinker (prior to grinding and blending to make cement). A more complete descriptions, including raw materials and fuel handling, clinker handling, finishing, storage and shipping are discussed in other Department documents including one that authorized expansion to the present plant capacity: Link to Expansion Evaluation

Following is a very simplified process flow diagram of a preheater/calciner kiln that is useful for discussing the details of the Tarmac Pennsuco Plant.

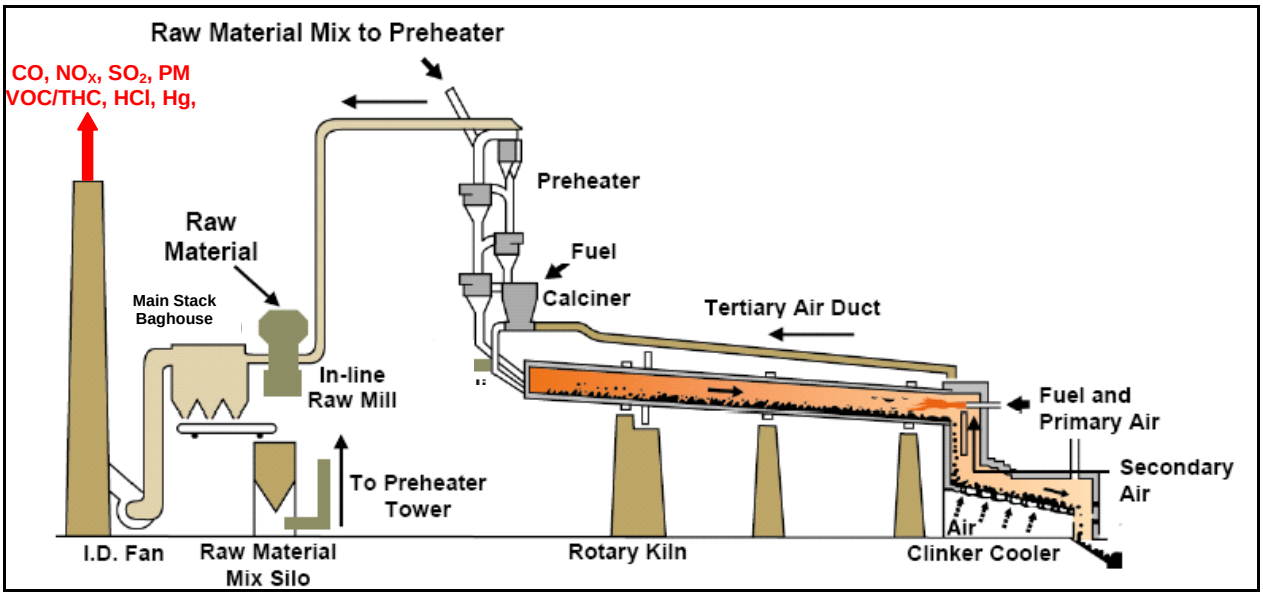

Figure 3. Process Diagram of Dry Process Preheater/Calciner Pyroprocessing System

Pyroprocessing includes all of components that emit through the main stack shown on the left hand side of the above diagram. The emissions unit consists of the coal mill (not shown), raw mill, feed silo, preheater, calciner, kiln, clinker cooler, and the kiln dust system.

Raw materials from the limestone and mineral aggregates feed bins enter the raw mill, where the material is ground to size and the moisture content is reduced. Heat for drying within the raw mill is supplied from the calciner/kiln/cooler exhaust gas after passing through the preheater. From the Raw mill, the material is blown to a series of mechanical cyclones that recover most of the material. Dust captured after the cyclones, in the main stack baghouse, is conveyed to a storage bin. From the storage bin, the kiln dust is returned to the process in an enclosed system or is loaded out to truck.

The exhaust from the cyclones passes through the main particulate matter control device which is the main stack baghouse. The gases are drawn through the induced draft fan and discharged to the 410-foot main stack that is adjacent to the preheater as shown in Figure 2. When the raw mill is off, exhaust gas leaving the preheater is bypassed to a conditioning tower that cools the gases and then to the main baghouse. Pictures of the main stack baghouse and the raw mill building are shown in Figure 4.

The properly milled and sized raw material is pneumatically conveyed to the preheater feed silo, which is controlled by a baghouse. Material from the feed silo, known as raw meal, is then conveyed to and introduced at the five-stage preheater tower. The conveying system is also controlled by baghouses.

The raw meal passes through the preheater/calciner/kiln system. Initially, fixed moisture is released from the raw meal. Then the raw meal is calcined (conversion of limestone fraction to lime). Finally the calcined meal is sintered in the kiln to produce clinker nodules. The kiln is a two-pier, 65 meter horizontally oriented cylinder and is 5 meters in diameter. The plant has a permitted clinker limits of 250 tons/hour of clinker on a 24-hour basis and 2,190,000 tons/year.

Figure 4. Lower Preheater, Main Stack Baghouse (PMCD), Ducting From Raw Mill Cyclones

Coal/petcoke or alternative fuels are fed to both the medium temperature calciner burner and the high temperature kiln burner to provide heat for the process. Hot air from the kiln hood and clinker cooler provides secondary combustion air to the main kiln burner and tertiary air to the calciner to support calcination and complete burnout.

The key pollutants from the process are particulate matter (PM), carbon monoxide (CO), nitrogen oxides (NO_X), volatile organic compounds (VOC), total hydrocarbons (THC), sulfur dioxide (SO_2) and small amounts of hydrogen chloride (HCl) and mercury (Hg).

Continuous emission monitoring systems (CEMS) in the main kiln/raw mill stack measure and record emissions of NO_X, SO_2, CO and THC, which also serves as a surrogate for volatile organic compounds (VOC). They have process monitors for CO. A continuous opacity monitoring system (COMS) measures and records the opacity of the flue gas exhaust in the in-line raw mill/kiln stack. The baghouse inlet temperature is continuously measured and maintained at a level less than that of the most recent compliance stack test to prevent de-novo dioxin/furan formation.

The permitted emissions units (EUs) for the entire facility are listed in Table 1. The key EUs of interest in this review are EU 028 – Pyroprocessing/Raw Mill (Kiln 5) and .

1.3. Air Pollution Control Equipment

Process cyclones and the main kiln baghouse (the PMCD) raw meal swept from the raw mill for return to the process. The baghouse further controls emissions of particulate matter (PM) from the PH/C kiln exhaust. Judicious selection of raw materials and combustion design are the key to control of all other pollutants. These are the specific controls for CO, VOC/THC and organic hazardous air pollutants (HAP) such as dioxin and furan. NO_X emissions are further controlled by indirect firing, multiple burn points, and fuel/air staging in the calciner.

Acid gases such as SO_2 and hydrogen chloride (HCl) are further controlled by limestone scrubbing by raw materials and by contact with the finely divided hot lime in the calciner. Mercury (Hg) is also controlled by judicious selection and sampling of Hg content in raw materials.

Table 1 – List of Emissions Units at the Tarmac America LLC Facility

EU No.	Brief Description
010	Finish Mill System: Finish Mill No. 1
011	Finish Mill System: Finish Mill No. 2
012	Finish Mill System: Finish Mill No. 3
013	Finish Mill System: Finish Mill No. 4
030	Finish Mill System: Finish Mill No. 6
014	Cement Handling System: Cement Storage Silos. 1 through 12
015	Cement Handling System: Cement Distribution, Rail and Truck Loadout Mobile Cementitious Material Sack Loadout System
016	Cement Handling System: Cement Packhouse
022	Nonmetallic Mineral Processing Plant Equipment and Operations at Aggregate Plant Subject to 40 CFR 60, Subpart OOO
023	Nonmetallic Mineral Processing Plant Equipment and Operations at Aggregate Plant <u>not</u> Subject to 40 CFR 60, Subpart OOO
024	Concrete Block Plant
025	Two Concrete Batch Ready Mix Plants
026	Coal Handling System
027	Clinker Handling and Storage System
028	Pyroprocessing/Raw Mill System (Kiln 5)
029	Raw Material Handling System
031	Unregulated Emissions Units and/or Activities: Fugitive Emissions
032	Cementitious Sack Loadout System
034	Transloading of Cementitious Material
036	Emergency Diesel Fuel Fired Air Compressor
038	Emergency Diesel Fuel Fired Generators Subject to 40 CFR 63, Subpart ZZZZ
039	Emergency Diesel Fuel Fired Generators Subject to 40 CFR 60, Subpart IIII

1.4. Facility Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP) subject to the applicable provisions in 40 Code of Federal Regulations, Part 63 (40 CFR 63), National Emission Standards for Hazardous Air Pollutants (NESHAP).
- The facility includes affected sources subject to the applicable provisions in 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS).
- The facility is an existing Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is an existing major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. Only CO emissions have been previously reviewed for PSD and a determination of best available control technology (BACT).

1.5. General Project Description

Koogler and Associates submitted an application on behalf of Titan/tarmac to the Department on May 6, 2013. The applicant requests to modify previous permits applicable to the Pennsuco facility as follows:

- Remove the requirement contained in previous permits (including the present Title V Air Operation Permit 0250020-034-AV) to monitor SO_2 emissions from the main kiln/preheater stack using the existing SO_2-CEMS ; and
- Reclassify EU 036 as a is a non-road engine and not subject to the requirements of 40 CFR 60, Subpart IIII-NSPS for Stationary Compression Ignition Internal Combustion Engines or 40 CFR 63, Subpart ZZZZ- NESHAP for Stationary Reciprocating Internal Combustion Engines.

See following links: Application Title V Permit Subpart IIII Subpart ZZZZ

1.6. Processing Schedule

May 6, 2013 Received complete application for a minor source air pollution construction permit.

June 11, 2013 Draft permit mailed out.

2. EVALUATION

2.1. Background

In 1999, the Miami-Dade County Department of Environmental Resource Management (DERM) issued Non-PSD Permit 0250020-008-AC to construct a 160 tons per hour (TPH of clinker) dry process cement plant (In-line Kiln and Clinker No.5 and support equipment). 1999 Permit and Correspondence

Prior to construction of Kiln 5, DERM issued Permit 0250020-010-AC in 2001, which reflected the plans of the new owner (Titan America) to construct a large 250 TPH of clinker line with an annual production limitation of 1,642,500 tons per year. 2001 Permit and Correspondence

The line was started up in 2004. On December 2, 2005 the Florida Department of Environmental Protection (the Department) issued Permit 0250020-017-AC that removed the annual clinker production restriction while maintaining the short-term limitation of 250 TPH. 2005 Permit and Correspondence

The permit included SO_2 limits of 0.50 pounds per ton of clinker (lb/ton) on a 30-day basis and 320 lb/hour on a 24-hour basis. Compliance was specified as by use of an SO_2-CEMS. The limits and compliance methods were designed to insure that the project did not trigger the Prevention of Significant Deterioration (PSD) and best available control technology (BACT) requirements of Department Rule 62-212.400, Florida Administrative Code (F.A.C.). The potential-to-emit (PTE) of Kiln 5 was restricted in this manner to 548 TPY of SO_2 compared with emissions of 514 TPY from Kiln 2 and 3 (prior to their dismantlement). Refer to the Technical Evaluation in the Department's Draft Permit package.
Intent Package and Evaluation

2.2. Annual SO_2 Emissions

The contemporaneous creditable emissions changes from the 2005 evaluation are presented in Table 2. The primary basis of creditable reductions is the shutdown of the wet process pyroprocessing lines in 2004 (basis 2002-2003). The primary basis of the creditable increases is the startup (2004) of the dry process line as modified by the present (2005) request to increase annual production.

The permitted emission limits that resulted from the evaluation are shown in Table 3 and were incorporated into 2005 permit. They were also incorporated into the present facility Title V Operation permit. For reference, some of the limits given were based on the 1999 version of 40 CFR 60, Subpart LLL - National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (the Cement NESHAP). As discussed further below, the Cement NESHAP has been updated by EPA and some additional standards will apply in 2015.

Table 2 - Net Emissions Increases and Decreases, Comparisons with Respective PSD SER (2005)

Pollutant	**Increases Dry Process at Proposed Capacity (TPY)**	**Decreases Slag Dryer & Wet Process Shutdown Actual Emissions (TPY)**	**Net Increases and (Decreases) (TPY)**	**PSD Significant Emission Rate (TPY)**
PM	355	385	(30)	25
PM_{10}	321	307	14	15
SO_2	**548**	**514**	**34**	**40**
NO_x	2,376	2,344	32	40
CO	2,190	1,323	867	100
VOC	175	145	30	40
H_2SO_4 (SAM)	12	19	(7)	7
Hg	229 lb/yr	30 lb/yr	199 lb/yr	200 lb/yr
Pb	1,293 lb/yr	94 lb/yr	1,199 lb/yr	1,200

Table 3 - Pyroprocessing/Raw Mill Permitted Emission Limits Applicable at Kiln 5 Main Stack

Parameter	**Emissions Limit**	**Averaging Time**	**Compliance Method**	**Limit Basis**
Opacity	10 Percent	6 minute block	COMS, Method 9	PTE, Avoid PSD 40 CFR 60, Subpart LLL
PM	0.067 lb/ton of dry kiln feed	3 hours	Annual Method 5	PTE, Avoid PSD 40 CFR 60, Subpart LLL
	28.5 lb/hr			
PM_{10}	0.056 lb/ton of dry kiln feed	3 hours[5]	Annual Method 5	PTE, Avoid PSD 40 CFR 60, Subpart LLL
	23.9 lb/hr			
SO_2	**0.50 lb/ton of clinker**	**30 days**	**CEMS**	**PTE, Avoid PSD**
	320 lb/hour	**24 hours**		
NO_X (as NO_2)	2.17 lb/ton of clinker	12-months	CEMS	PTE, Avoid PSD
	720 lb/hour	24 hours		
CO	2.0 lb/ton of clinker	30 days	CEMS	BACT
	576 lb/hour [1]	24 hours		
VOC	0.16 lb/ton of clinker	30 days	CEMS	PTE, Avoid PSD
	40 lb/hour	24 hours		
Mercury (Hg)	229 lb/yr (base + 199 lb/yr)	12-month	Fuels, Materials	PTE, Avoid PSD
Temperature	Baghouse Temperature (T) $\leq$ T during Dioxin/Furan Tests	Continuous		40 CFR 63, Subpart LLL
Dioxin/Furan	0.2 ng TEQ/dscm ($T \geq 204$ ^oC)	3 hours	30 Months, Method 23	40 CFR 63, Subpart LLL
	0.4 ng TEQ/dscm ($T < 204$ ^oC)			

2.3. Annual SO_2 Emissions

Refer to Table 4. Prior to operation of Kiln 5, emissions from Tarmac Kilns 2 and 3 (combined) ranged from 550 to nearly 1,800 TPY. The reported result for 2003 of 20 tons appears to be an outlier.

Table 4 – Annual Clinker Production and SO_2 Emissions from Tarmac Kilns

Year	Kilns	Clinker Production (tons)	SO_2 Emissions (TPY) [1]	
1996	2 & 3	835,539	1,791	
1997	2 & 3	839,890	653	
1998	2 & 3	797,289	730	
1999	2 & 3	764,486	1,343	
2000	2 & 3	571,264	550	
2001	2 & 3	769,774	717	
2002	2 & 3	806,805	20 [2]	514 (avg.) (Past Actual SO_2)
2003	2 & 3	742,698	1008	
2004	2, 3 & 5	1,105,552	500	
2005	5	1,716,967	2 [3]	
2006	5	1,714,239	5	
2007	5	1,390,239	16	
2008	5	1,259,556	5	
2009	5	808,512	5	
2010	5	712,691	4	
2011	5	845,600	10	
2012	5	935,308	6	

1. Based on annual stack tests for Kilns 2 and 3 and SO_2 CEMS for Kiln 5.
2. SO_2 measurement in 2002 seems to be an outlier. Emissions were likely much higher.
3. The 2002-2003 average of 514 TPY was used as reference past actual emissions in 2005 permit.
4. After 2004, SO_2 emissions were well controlled by internal lime and limestone scrubbing.

Following construction of Kiln 5 and shutdown of Kilns 2 and 3, annual emissions have been only 2 to 16 TPY as measured by the SO_2-CEMS that has been calibrated annually through a relative accuracy test audits (RATA) in accordance with EPA protocols. Thus, after 8 years of operation, it is clear that the Kiln 5 project did not trigger PSD and that the facility actually emits less than the significant emission rate (SER) of 40 TPY.

2.4. Mechanism for Removal of SO_2

Some SO_2 formed by burning fuel in the main kiln burner is efficiently scrubbed out by reactions with alkali species (Na and K) in the kiln to form stable sulfate compounds that are incorporated into the clinker. Kilns 2 and 3 relied solely on this mechanism to reduce SO_2 emissions. This process is not very efficient, particularly in wet process kilns (like Kilns 2 and 3) unless there is intimate mixing of combustion gases in the kiln with the solid materials undergoing the different steps in pyroprocessing.

Kiln SO_2 reaching the calciner (such as installed in Kiln 5) and all SO_2 from burning fuel in the calciner are completely scrubbed out at the temperatures prevailing in the calciner as follows: [1]

$$CaO + SO_2 \leftrightarrow CaSO_3 \text{ or } CaO + SO_2 + 0.5O_2 \leftrightarrow CaSO_4$$

At 1,045°C, the formation and decomposition reactions for $CaSO_4$ are at equilibrium at normal excess oxygen levels. As materials move through the high temperature regime in the kiln, the $CaSO_4$ can break down per the above reaction releasing the SO_2 or it can fuse/react with the alkali sulfates and other species to form stable compounds that depart with the clinker.

In summary, the control of fuel SO_2 is generally not an issue in modern kilns. Limiting fuel sulfur makes little difference in emissions. Generally severe operational problems such as coating formation and blockages will occur due to use of high sulfur fuels before significant SO_2 emissions occur. [2]

Control of Raw Material SO_2. Sulfide or elemental sulfur contained in raw materials may be "roasted" or oxidized to SO_2 in areas of the pyroprocessing system where sufficient oxygen is present and the material temperature is in the range of 300-600°C. [3,4] Uncontrolled SO_2 emissions can be very significant when pyritic sulfur is present in the raw materials and much greater than the very minimal emissions caused by fuel sulfur. However, SO_2 emissions are very low at Florida preheater/calciner kilns because there are only minute amounts of sulfides in most of the available limestone, with the exception of random pockets in northern Florida.

Operating the raw mill promotes raw material lime SO_2 removal by limestone scrubbing under humid conditions, due in part to freshly generated limestone surface produced by grinding. Some of the SO_2 generated in the top preheater stages is also scrubbed out by small amounts of free CaO that are carried back from hotter zones by combustion flue gases.

The mechanisms for SO_2 removal in preheater/calciner kilns were not fully appreciated when Kiln 5 was permitted in 1999, 2001 and 2005. Once a full understanding was gained, it was possible to reconcile the very low emissions of Kiln 5 with the much greater emissions from Kilns 2 and 3 and it is now clear that SO_2 emissions are inherently low and minimal from modern cement kilns in Florida. Had this behavior been fully understood when Kiln 5 was originally permitted, it would not have been necessary to set an SO_2 limit or to require an SO_2-CEMS given the net reduction of more than 500 TPY compared with baseline emissions in 2002-2003 and the reduction of roughly 1,000 TPY compared with earlier years.

2.5. SO_2-CEMS Record

Figure 5 is a scatter chart of the hourly data recorded by the SO_2-CEMS during 2012. The data appear to include start-up emissions. The total emissions were roughly 6 to 7 tons during 2012. Most of the recorded values were less than 2 lb/hour. All individual hourly values were less than 200 lb/hour compared with the 24-hour average limit of 720 lb/hour. The highest values likely occurred during startup prior to feeding of raw materials and scrubbing effect of the raw mill and calciner.

Table 5 is a summary of emissions, on a month-by-month basis, submitted by Tarmac in support of their request. The monthly emission factor is one to two orders of magnitude less than the permitted limit of 0.50 lb/ton clinker.

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1 Miller, F. M.; Hawkins, G. J. "Formation and Emission of Sulfur Dioxide from the Portland Cement Industry" in *Proceedings of the 93rd Air and Waste Management Association Conference.* 2000. San Diego, CA.

2 Presentation. Waste Management Technologies in Japanese Cement Industry. Taiyeho Cement, Taiyeho Engineering, CTI/Industry Joint Seminar, February 2004.

3 Miller, F. M.; Young, G. L.; von Seebach, M., *Formation and Techniques for Control of Sulfur Dioxide and Other Sulfur Compounds in Portland Cement Kiln Systems*; Portland Cement Association: Skokie, Illinois, 2001.

4 Greer, W. L., *Interactions Among Gaseous Pollutants from Cement Manufacture and Their Control Technologies*; Portland Cement Association: Skokie, Illinois, 2003.

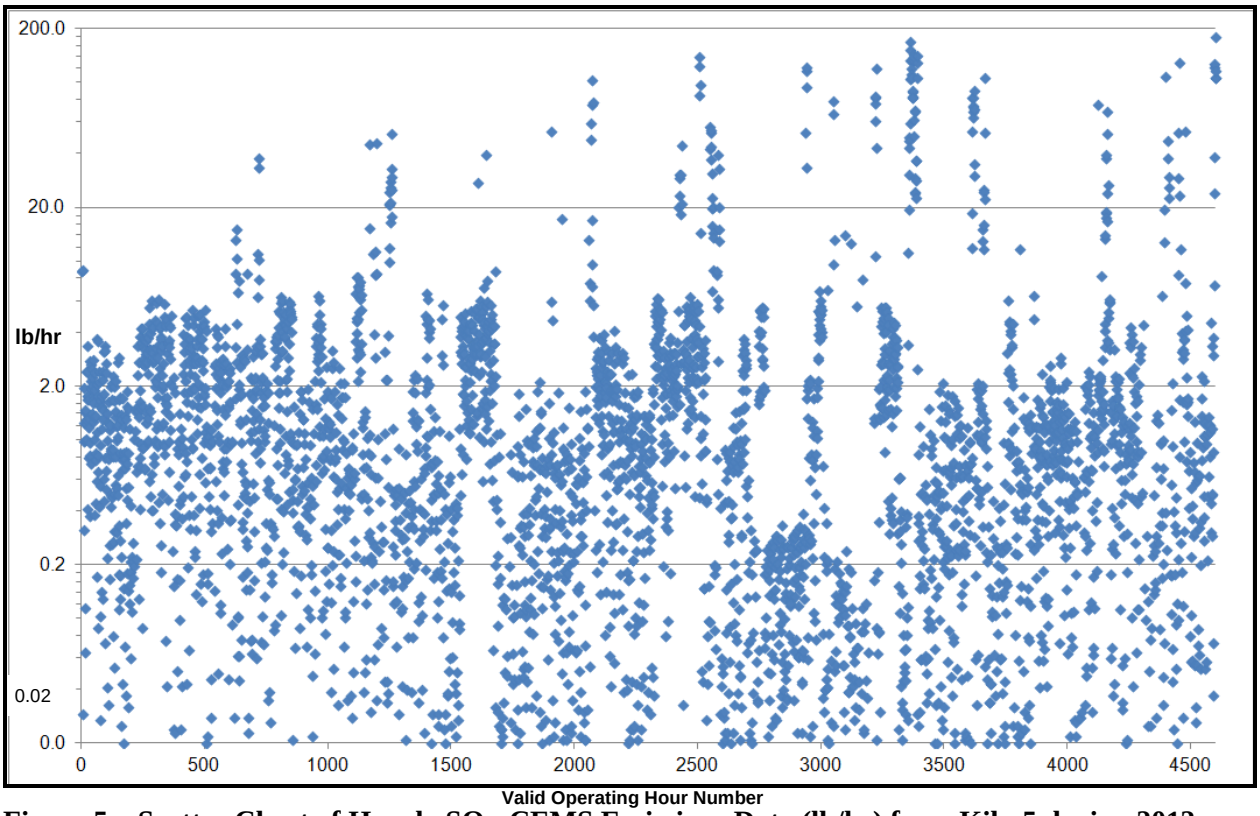

Figure 5 – Scatter Chart of Hourly SO_2–CEMS Emissions Data (lb/hr) from Kiln 5 during 2012

Table 5 – Summary of SO_2 Emissions from Tarmac Kiln 5 during 2012

Month 2012	Clinker Production (tons)	Kiln Operation (hours)	SO_2 Emissions (avg. lb/hr)	Emission Factor (lb/ton clinker)
January	142,363	609	1.5	0.006
February	0	0	-	-
March	130,921	562	1.6	0.007
April	0	0	-	-
May	156,377	680	1.6	0.007
June	11,874	58	0.3	0.002
July	142,914	643	3.7	0.016
August	1,407	7	3.1	0.015
September	61,588	282	6.3	0.029
October	148,650	664	2.2	0.010
November	59,840	261	3.3	0.014
December	79,375	352	5.3	0.023
Monthly Avg.	77,942	343	2.9	0.013
Total	**935,308**	**4,117**	**2.7**	**0.012**

2.6. Addition Requirements of the Revised Cement NESHAP

The 1999 version of the Cement NESHAP established standards for PM, dioxin/furan and THC. In 2010 and 2013 EPA revised the rule to:

- Establish an emission standard for hydrogen chloride (HCl) of 3 parts per million by volume, dry, at 7 percent oxygen (ppmvd @7% O_2);
- Establish an emission standard for mercury (Hg) of 55 lb/million tons of clinker;
- Reduce the emission standard for PM from combined kiln and cooler stacks from approximately 0.64 lb/ton clinker to approximately 0.09 lb/ton clinker;
- Reduce the emission standard for THC from 50 to 24 ppmvd @7% O_2; and
- Establish continuous monitoring requirements for HCl, Hg and PM.

The compliance date with the revised Cement NESHAP was recently deferred from September 2013 to September 2015.

To comply with the Cement NESHAP, Tarmac will likely need to:

- Continue to use membrane filter bags in the main stack baghouse and install a continuous particulate monitoring system (CPMS);
- Reduce Hg emissions by at least 50%, most likely by process changes (such as filter dust shuttling to the product) and also install a Hg-CEMS or sorbent trap system; and
- Implement measures such as lime injection (as-needed) to insure low HCl emissions and install a HCl-CEMS.

No additional actions are required for THC because the emission standards and monitoring requirements established by the Department in earlier permits are approximately as stringent as the requirements of the revised Cement NESHAP.

The continuous monitoring of PM, HCl and Hg is generally not (yet) practiced at existing industries in the U.S. The equipment required to continuously monitor these pollutants is more expensive and sophisticated than equipment for conventional gaseous pollutants such as NO_X, SO_2 and CO. Furthermore, the ability to comply with some of the performance specifications and relative accuracy test audits is the subject of much professional debate between experts.

The requirements to reduce and continuously monitor emissions of HCl will further suppress emissions of SO_2. The Department has determined based on historical data that SO_2 emissions from Kiln 5 are <u>inherently</u> low without the need for add-on control equipment or additional reagent . In fact SO_2 emissions are less than the major stationary source threshold of 100 tons/year and also less than the applicable significant emission rate (SER) of 40 tons/year.

2.7. Request to Reclassify EU 036 as a Non-Road, Non-Stationary Source Engine

EU 036 was permitted by Miami-Dade DERM in 2011. The reference is Permit 0250020-025-AC dated April 4, 2011. The project to install EU 036 was described in the permit as follows:

> "Installation of one (1) 475 HP diesel fired air compressor (EU 036). The air compressor will be used as a backup unit in the event of power outage or equipment maintenance for the cement packhouse (EU 016), cement silos (EUs 014 and 015), and cementitious material sack loadout operations (EUs 032 and 033)".

Details of the air compressor taken from the referenced permit are provided in Figure 6, together with a picture of a 1,600 cubic feet per minute (cfm) Sullair portable compressor similar to the one located at Tarmac.

Figure 6 - Description of Emissions Unit 036, Picture of a Sullair 1,600 CFM Portable Compressor

Emergency Diesel-fired Air Compressor (New)	
Serial No. 79300017083	
Manufacture Date: 5/24/2005	
Engine: CAT Power Diesel	
Manufacturer: Sullair	
Model No: 1600DTQ	
Power: 475 HP (354 kW)	
Displacement: 15.2L	

In 2008 EPA issued an applicability determination for a non-road, non-stationary related to NSPS subpart IIII and NESHAP subpart ZZZZ. Link to EPA Determination

Clearly the compressor is a non-road engine as it is transportable without supplying the energy and drive components to effect its own transport. Secondly it is a non-stationary source because it does not remain in a single location on a permanent basis. In this context, a location is a site that can be "within a building, structure, facility, or installation". The use of the compressor at several locations within the Tarmac facility qualifies the compressor as a non-stationary source.

The mentioned EPA determination was summarized by two questions and answers as follows:

Question 1: Does 40 CFR part 63, subpart ZZZZ, apply to non-road, non-stationary reciprocating internal combustion engines located at a major source of hazardous air pollutants?

Answer 1: No. MACT (i.e. NESHAP) subpart ZZZZ does not apply to non-road, non-stationary reciprocating internal combustion engines located at a major source of hazardous air pollutants.

Question 2: Does 40 CFR part 60, subpart IIII, apply to non-road, non-stationary reciprocating internal combustion engines?

Answer 2: No. NSPS subpart IIII does not apply to non-road, non-stationary reciprocating internal combustion engines.

The described use of the Sullair compressor falls squarely within the bounds of the EPA determination. Therefore, the Department will modify Permit 0250020-025-AC to remove NSPS subpart IIII and NESHAP subpart ZZZZ as applicable conditions.

2.8. Changes to Other Permits Affected by Request

On August 11, 2011 the Department issued Air Construction Permit No. 0250020-031-AC to Tarmac LLC. Link to 2011 Permit The permit authorized construction/installation of new or additional fuel handling, feeding and burner systems to fire a variety of non-hazardous secondary materials as Alternative Solid Fuels (ASF). The permit included requirements to report actual annual emissions for CO, NO_X, PM, SO_2, VOC, Hg and Pb.

The annual emissions of CO, NO_X, SO_2 and VOC were to be reported based on use of the installed CEMS. The alternative fuels will by and large contain less sulfur and will be subject to the same internal scrubbing as the kiln exhaust gases when using the conventional fossil fuels. The Department has reasonable assurance that the use of ASF will not cause an increase in SO2 emissions equal to or greater than the SO2 significant emission rate (SER) of 40 tons/year.

Therefore the Department will modify Permit 0250020-031-AC to remove SO2 CEMS-based monitoring and reporting.

3. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed changes in the requirements that are applicable to the Tarmac facility will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Alvaro Linero, the project engineer, is responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting Mr. Linero at 850-717-9076 or alvaro.linero@dep.state.fl.us or in writing at the Department's Office of Permitting and Compliance at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.