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Jeff Koerner, Administrator
Air Permitting and Compliance Program
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399
Jeff.koerner@dep.state.fl.us

RE: CEMEX Brooksville South Cement Plant, Facility ID: 0530021
Request for Time Extension for Compliance to NESHAP LLL
Kiln 1 and 2 Systems

Dear Mr. Koerner,

Cemex Construction Materials Florida, LLC (CEMEX) owns and operates the Brooksville South cement plant (AIRS ID 0530021, Title V permit 0530021-047-AV) located in Brooksville, Florida. The plant includes two kiln systems, designated as Kiln 1 and Kiln 2. CEMEX submits this request for an extension to the date of compliance for its Kiln 1 and 2 systems at the Brooksville South Cement Plant with certain requirements of the Portland Cement NESHAP. The request is pursuant to the requirements of 40 CFR 63.6(i)(4), as adopted by reference at 62-204.800(d) F.A.C. and under the authority of 42 USC 7412(i)(3)(B), 40 CFR Part 63, Subpart LLL ("PCMACT").

The reasons for this request are pollutant specific. The Kiln 1 system had significant downtime and has had very limited periods of operation since 2010. While, Kiln 2 has not experienced the same amount of downtime as Kiln 1, Kiln 2 has had a number of unforeseeable delays for which PCMACT compliance for the specific pollutant of hydrochloric acid is requested to be extended. Discussion of each Line and each pollutant is separately provided below.

Satisfaction of 40 C.F.R. 63.6(i)

The provisions of 40 C.F.R. 63.6(i)(6)(i) require that a request for an extension of the compliance date include the following information.

> *The request for a compliance extension under paragraph (i)(4) of this section shall include the following information:*
>
> *(A) A description of the controls to be installed to comply with the standard;*
>
> *(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:*

(1) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(2) The date by which final compliance is to be achieved.

(3) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(4) The date by which final compliance is to be achieved.

CEMEX addresses below each of the PCMACT pollutants in the context of 40 C.F.R. 63.6(i) that CEMEX is seeking extensions for Kilns 1 and 2.

Kiln 1 - Background

Kiln 1 began operation in 1986 with the finish mill starting in 1987. Today, Kiln 1 includes numerous emission units (001 through 024 and 060 through 063), as listed in the Title V permit. The main unit of concern is Emission Unit 20 ((EU 020) Cement Kiln 1, In-Line Kiln/Raw Mill and Clinker Cooler 1 with Baghouse), which includes a 4-stage Gapol styled preheater kiln with inline raw mill, clinker cooler and coal mill venting to one exhaust stack.

Kiln 1 operated without any extended period of downtime from 1986 until June 2010. Due to the recent economic slowdown, CEMEX began to reduce Kiln 1 operation in 2009. This is evident in the annual operation hours of Kiln 1, which were: 7,774 hours in 2008 and 4,259 hours in 2009. Kiln 1 did not operate in January and February of 2010, and then ran 1,758 hours from March through June 24, 2010. CEMEX shutdown Kiln 1 on June 24, 2010; starting it back up for only 171 hours in February 2011, to allow for a PM test. Thus, since the NESHAP Subpart LLL amendments were first issued on September 9, 2010, Kiln 1 only operated for several weeks in February 2011.

EPA issued amendments to the PCMACT standards on September 9, 2010. In addition, the D.C. Court of Appeals remanded the rule amendments in December of 2011 because EPA failed to consider kilns classified as CISWI units in its emissions analysis. EPA then issued proposed revisions to the PCMACT amendments on June 22, 2012 and final revisions on December 20, 2012, with final publication in the Federal Register on February 12, 2013. In the revised PCMACT amendments, issued on February 12, 2013, the usual three year time frame for compliance demonstration for existing sources was shortened by EPA to September 9, 2015 (approximately 2.5 years).

During this period of PMACT review and re-issuance, CEMEX planned for demonstrating compliance with the expected PCMACT amendments. However, for Kiln 1 at the Brooksville South Cement Plant, CEMEX has not been able to generate operation and emissions data, design and install needed control systems, make operational adjustments related to monitoring and control systems, and plan to demonstrate compliance by September 9, 2015. Recently, this began to change. Eighteen months after EPA published the revised amendments on February 12, 2013, due to an improved

economic outlook, CEMEX brought Kiln 1 back on line on July 14, 2014 and notice was provided to the Department of its actions. Due to a combination of continuing maintenance and repair issues after the re-start, and rapidly changing economic conditions, CEMEX halted operation of Kiln 1 on September 29, 2014, just two months after re-start. It should be clearly noted that during the July 14 to September 29, 2014 period, the daily clinker production was greater than 90 percent of permitted capacity only for a single day. CEMEX restarted Kiln 1 on February 20, 2015.

The following chart shows the Kiln 1 daily clinker production for February 20 to March 31, 2015. It is apparent from the data that the daily production values show the kiln system has not been able to consistently achieve 90 percent or greater level of production. On the day of March 7, 2015, CEMEX was able to achieve greater than 90 percent of permitted capacity. CEMEX conducted PM emissions testing for Raw Mill up and down on March 5-6, 2015 in an effort to quickly evaluate for the PCMACT but Kiln 1 was not able to achieve 90 percent production and therefore these data are not entirely indicative of the expected PM emissions. These PM tests are discussed more in following section, "Kiln 1 – Particulate Matter."

Going forward in 2015, Kiln 1 is scheduled to be down from mid-June throughout August. Kiln 1 will come back up September and October and then down for remainder of the year. Looking forward into 2016, CEMEX plans to operate the kiln 50 percent of the year with outages spaced regularly throughout the year. This limited level of operation will hinder the efforts to demonstrate compliance to the PCMACT. It should be noted that the activities to demonstrate compliance on Kiln 1 are complicated by having to manage compliance demonstration with the additional Kiln 2.

CEMEX has been and continues to prepare for compliance to the PCMACT and has procured the monitoring equipment for PCMACT pollutants (Hg, THC, HCl, and PM) for Kiln 1. This equipment is in the process of installation. However, since Kiln 1 did not essentially operate since June of 2010 until February 20, 2015, CEMEX could not adequately and confidently assess and then design the controls for Kiln 1 system to meet the PCMACT limitations and demonstrate compliance.

Table 1. Kiln 1 Operation February 20 to March 31, 2015.

	Kiln No. 1	
	Clinker TPH	Is production > 90 % of 83 TPH?
19-Feb-15	0.0	
20-Feb-15	33.3	NO
21-Feb-15	46.1	NO
22-Feb-15	62.8	NO
23-Feb-15	70.8	NO
24-Feb-15	67.3	NO
25-Feb-15	62.3	NO
26-Feb-15	64.0	NO
27-Feb-15	62.4	NO
28-Feb-15	70.0	NO
1-Mar-15	51.7	NO
2-Mar-15	54.0	NO
3-Mar-15	63.0	NO
4-Mar-15	54.3	NO
5-Mar-15	69.0	NO
6-Mar-15	73.2	NO
7-Mar-15	77.3	YES
8-Mar-15	64.2	NO
9-Mar-15	72.8	NO
10-Mar-15	72.4	NO
11-Mar-15	52.8	NO
12-Mar-15	62.4	NO
13-Mar-15	56.7	NO
14-Mar-15	65.9	NO
15-Mar-15	60.6	NO
16-Mar-15	40.0	NO
17-Mar-15	0.0	down
18-Mar-15	0.0	down
19-Mar-15	61.6	NO
20-Mar-15	66.8	NO
21-Mar-15	64.5	NO
22-Mar-15	63.3	NO
23-Mar-15	56.6	NO
24-Mar-15	62.5	NO
25-Mar-15	44.5	NO
26-Mar-15	52.8	NO
27-Mar-15	58.0	NO
28-Mar-15	0.0	down
29-Mar-15	0.0	down
30-Mar-15	0.0	down
31-Mar-15	51.3	NO

In addition to the lack of operation of Kiln 1, since Kiln 1 went offline in June of 2010, major operational changes occurred. This relates to its separation from the Florida Power Development coal-fired power plant that utilized much of the same exhaust system. This separation allowed Kiln 1 to become its own emission source at the location where it was a combined emissions source, but also resulted in significant kiln operational challenges (e.g., changes in flow and heat distribution) that remain ongoing. In the sequence of events for separating from the power plant for ownership and maintenance of the main exhaust stack, CEMEX spent time and effort to evaluate the need to replace the aging existing stack and CEMS/sampling platform. The audits and assessments of the infrastructure have been completed and the stack has been found structurally sound and the sampling platform may be moved, pending evaluation, to a lower but acceptable sampling location. Through this review, CEMEX concluded that the older main stack does not have reasonable access for the requirements of the NESHAP monitoring requirements. In the past, Kiln 1 only required annual stack testing which was performed from a platform at 194 feet from the ground only accessible by tethering to a single vertical ladder. This system is not reasonable for day-to-day operations for NESHAP compliance and CEMEX is in the process of changing platform equipment.

Kiln 1- Particulate Matter

The upcoming emission limitation for particulate matter for Kiln 1 is 0.07 lb/ton of clinker or alternatively equation 1 from 40 CFR 63.1343. Recent Method 5 stack testing was conducted on March 5-6, 2015 for raw mill up and down modes. The kiln system was not able to achieve 90 percent or greater of permitted capacity. Using the data from that testing, the alternative PM limit is estimated to be in the range of 0.3 lb/ton clinker. The PM emissions were measured during raw mill up to be 0.11 lb/ton clinker and 0.16 lb/ton clinker during raw mill down. Note that the single set of tests were both conducted with Kiln 1 at less than 90 percent of permitted capacity and thus are not adequate to meet the requirements of PCMACT testing. The following table shows the historical PM emissions from Kiln 1 using compliance stack test data this value will potentially be difficult to meet where three of the 11 tests are within 80 percent or more of 0.3 lb/ton clinker. However these historical values were measured at times when Kiln 1 shared many elements of its hardware with the neighboring power plant. Therefore, these data points are not entirely representative of how Kiln 1 currently operates but are instructive of potential PM testing results.

Table 2. Kiln 1, 2000 to 2011 PM Method 5 test results.

Cement Plant Only Brooksville South Cement K1					
Cement Plant Operating					
			Cement Plant Only		
Test Date	Federal Fiscal Year	Run No.	PM Lb/Hr	Preheater Feed TPH	Equivalent lb/ton clinker
May 22, 2000		1	17.40	134.40	0.21
May 22, 2000		2	20.69	134.05	0.26
May 22, 2000	2000	3	22.27	133.10	0.28
		Average	**20.12**	**133.85**	**0.25**
March 8, 2001		1	22.86	133.30	0.28
March 8, 2001		2	20.25	132.00	0.25
March 8, 2001	2001	3	21.50	131.00	0.27
		Average	**21.54**	**132.10**	**0.27**
March 12, 2002		1	27.00	136.40	0.33
March 12, 2002		2	13.03	137.00	0.16
March 12, 2002	2002	3	14.85	136.05	0.18
		Average	**18.29**	**136.48**	**0.22**
November 8, 2002		1	11.31	130.00	0.14
November 8, 2002		2	9.14	136.00	0.11
November 8, 2002	2003	3	9.29	138.00	0.11
		Average	**9.91**	**134.67**	**0.12**
January 13, 2003		1	4.64	131.00	0.06
January 13, 2003		2	3.87	132.80	0.05
January 13, 2003	2004	3	5.67	133.00	0.07
		Average	**4.73**	**132.27**	**0.06**
March 16, 2004		1	15.81	129.30	0.20
March 16, 2004		2	15.11	133.00	0.19
March 16, 2004	2005	3	10.59	127.50	0.14
		Average	**13.84**	**129.93**	**0.18**
November 24, 2005		1	14.74	124.30	0.20
November 24, 2005		2	16.90	125.60	0.22
November 24, 2005	2006	3	13.53	125.20	0.18
		Average	**15.06**	**125.03**	**0.20**
October 24, 2006		1	16.27	136.00	0.20
October 24, 2006		2	20.97	136.00	0.26
October 24, 2006	2007	3	19.27	136.00	0.24
		Average	**18.84**	**136.00**	**0.23**
October 30, 2007		1	78.78	136.0	0.96
October 30, 2007		2	10.63	138.0	0.13
October 30, 2007	2008	3	8.61	138.0	0.10
		Average	**32.67**	**137.33**	**0.40**
November 18, 2008		1	4.60	126.0	0.06
November 18, 2008		2	0.22	130.0	0.00
November 18, 2008	2009	3	3.40	128.0	0.04
		Average	**2.74**	**128.00**	**0.04**
November 13, 2009		1	1.26	127.0	0.02
November 13, 2009		2	1.54	138.2	0.02
November 13, 2009	2010	3	0.41	128.6	0.01
		Average	**1.07**	**131.27**	**0.01**
February 17, 2011		1	13.41	134.0	0.17
February 17, 2011		2	13.76	138.0	0.17
February 17, 2011	2011	3	12.11	133.0	0.15
		Average	**13.09**	**135.00**	**0.16**

CEMEX is in the process of evaluating the existing baghouse performance capabilities to reach the PCMACT standards. This includes a determination into the number and type of bags needed, optimizing a reverse air cleaning system, updating the actuators on the

reverse air dampers and fans, and accounting for the learning curve needed to understand the updated operational changes by the system operators.

In addition, the PCMACT will require the use of a particulate matter continuous parametric monitoring system (PM CPMS). Therefore, the baghouse optimization and adjustments need to occur in conjunction with the installation and calibration of the PM CPMS system. As such, CEMEX is requesting a 12 month extension to the PCMACT PM requirements. This will enable CEMEX to redesign and optimize the baghouse, evaluate the operating data and PM CPMS values, and to understand the operational impacts and correlations to baghouse performance.

(A) A description of the controls to be installed to comply with the standard;

The existing baghouse system is currently under assessment to determine Method 5 PM emissions of the current system while the Kiln 1 is at 90 percent of capacity or greater. CEMEX is considering a number of options to adjust/retrofit the older baghouse system including, reconfiguring which compartments should be used and the type and the number of compartments to operate, and optimizing the reverse air cleaning system including updating the actuators on the air dampers and fans. Despite the struggle to maintain the kiln at or above 90% of capacity, CEMEX will continue to evaluate PM emissions and what changes are needed on the control system.

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(1) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(2) The date by which final compliance is to be achieved.

(3) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(4) The date by which final compliance is to be achieved.

Table 3. provides the compliance schedule required for *(B)* above. Note that the scheduled items timing could be increased by any unscheduled system downtime.

Table 3. Kiln 1 – Schedule for Compliance to PM NESHAP Limit.

Kiln 1 - Key Milestones for Particulate Matter	Target Completion Dates
Kiln 1 Re-Activation Project	
Complete review of Baghouse System	6/1/2015
Obtain bids for Modification to Control Equipment	8/1/2015
Complete Procurement of Control Equipment	10/1/2015
Initiate Installation of Control Equipment	1/1/2016
Complete installation of Control Equipment	4/1/2016
Complete PM emissions Evaluation and Operational Testing of Control Equipment	6/1/2016
Complete Cement MACT Performance Testing	8/1/2016
Compliance Date	9/9/2016
Progress Reports	Quarterly

Kiln 1 - Hydrogen Chloride

The upcoming emission limitation for hydrogen chloride for Kiln 1 is 3 ppmvd at 7% oxygen. Because CEMEX was not able to test HCl emissions or evaluate an HCl CEMS at this location, CEMEX will use SO_2 monitoring and sorbent injection for HCl control. Without adequate HCl emissions data and lack of assurance from EPA of acceptable HCl monitoring systems, CEMEX conservatively assumed that a fail-safe sorbent injection system should be installed to allow alternative monitoring. CEMEX is installing scrubbing systems throughout the country for SO_2 surrogate monitoring because EPA cannot assure that HCl CEMS will be an acceptable monitoring method. In fact, as of today, HCl CEMS by FTIR cannot meet the requirements of the PCMACT rule because certified gases are still not available for quality assurance requirements and the Performance Specification of other types of HCl CEMS are not final. EPA met with Portland Cement Association (PCA) last week and encouraged companies to apply for PCMACT extensions for those monitoring by HCl CEMS. In hindsight, EPA should have allowed SO_2 CEMs for all kiln systems and not have required a scrubbing system for use of SO_2 surrogate monitoring given the continued problems plaguing HCl CEMS.

To accomplish the action to install a scrubbing system and knowing that Kiln 1 would be brought back on-line soon, on February 13, 2015, CEMEX submitted an air construction permit for the installation and shakedown of a hydrated lime injection system for Kiln 1. As stated in the permit application for this construction permit, this hydrated lime injection system will assure compliance with the hydrogen chloride limit.

FDEP issued the draft AC permit on April 1, 2015 and the final construction permit will be issued shortly. Following issuance of the final permit, CEMEX will begin the

installation and the completion of the injection system. This installation project schedule is not set but, should be completed by the fall of 2015. Following the installation of the lime injection system, CEMEX will need time to optimize its use, test for its effectiveness, and collect enough data to properly develop a correlation between SO_2 and HCl emissions. Developing this correlation is important since CEMEX plans to use an alternative continuous monitoring approach via continuously required hydrated lime injection and SO_2 continuous monitoring to comply with the HCl emissions limit.

Due to all of these moving variables, CEMEX is requesting an 8 month extension to the PCMACT HCl requirements. This will enable CEMEX to obtain the construction permit to build a lime injection system for HCl controls, build, optimize, and test the new system, and ultimately generate enough data points to develop a strong correlation between SO_2 and HCl emissions.

(A) A description of the controls to be installed to comply with the standard;

As noted above, CEMEX is obtaining permitting and will install and use sorbent injection to control of HCl.

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(1) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(2) The date by which final compliance is to be achieved.

(3) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(4) The date by which final compliance is to be achieved.

Table 4. provides the compliance schedule required for *(B)* above and includes expected downtime of Kiln 1. Note that the scheduled items timing could be increased by any unscheduled system downtime.

Table 4. Kiln 1 – Schedule for Compliance to HCl NESHAP Limit.

Kiln 1 - Key Milestones for Hydrochloric Acid	Target Completion Dates
Kiln 1 Re-Activation Project	
Complete AC permitting Control Equipment, sorbent injection (SI) System	5/1/2015
Initiate installation of SI system	6/1/2015
Complete installation of SI system	9/1/2015
Complete Evaluation and Operational Testing of Control Equipment	2/1/2016
Complete Cement MACT Performance Testing	5/1/2016
Compliance Date	5/9/2016
Progress Reports	Quarterly

Kiln 1 - Mercury

The upcoming emission limitation for mercury for Kiln 1 is 55 pounds per million tons of clinker produced. Similar to the limitations for meeting the PM PCMACT emission limits, there is a shortage in applicable data points that can be used to determine if mercury is capable of being met under the new mercury PCMACT limits. This is largely due to Kiln 1 not operating for any significant time since June of 2010 and the fact that the Kiln 1 system was previously attached to a coal fired power plant. Since the Kiln 1 startup in February, CEMEX has been in the process of evaluating the existing performance capabilities of the system and reactivating the dust transfer system to remove particulate bound mercury from the system. Depending on the efficiency in removing mercury, the dust transfer system will be used to transfer the dust materials from the kiln baghouse to the finish mill. These dust transferring systems will need time to develop optimal working procedures to maximize the removal of mercury from the system and can help determine if the upgraded dust transfer system is needed. As noted above in the Background section, CEMEX is in the process of installing the necessary monitoring equipment and sampling platform for the measurement of mercury from Kiln 1, as specified in the PCMACT.

CEMEX will commit to perform monthly material analysis and mass balances to determine the amount of mercury leaving the system, for emissions purposes in the interim of this extension.

CEMEX is requesting an 8 month extension to the PCMACT Hg requirements. This will enable CEMEX to restart the dust transfer system, test its effectiveness of removing particle bound mercury from the system, determine if an updated version of the dust transfer system is needed, install the continuous monitoring systems for mercury, test and

certify these systems, and develop an overall operational understanding of these processes.

(A) A description of the controls to be installed to comply with the standard;

The control of Hg emissions will be by a dust transfer system. The dust transfer system has been reactivated. The system is being reviewed as to whether the feed system from the kiln dust transfer bin needs upgrading.

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(1) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(2) The date by which final compliance is to be achieved.

(3) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(4) The date by which final compliance is to be achieved.

Table 5. provides the compliance schedule required for *(B)* above and includes expected downtime of Kiln 1. Note that the scheduled items timing could be increased by any unscheduled system downtime.

Table 5. Kiln 1 – Schedule for Compliance to Hg NESHAP Limit.

Kiln 1 - Key Milestones for Mercury	**Target Completion Dates**
Kiln 1 Re-Activation Project	
Initiate Dust Transfer System (DTS) as Control Equipment	5/1/2015
Initiate preliminary stack sampling to evaluate DTS operations	6/1/2015
Initiate Interim Hg Material Analysis and Balance	9/1/2015
Complete installation of platform and Sorbent Trap System	12/1/2015
Complete Evaluation and Operational Testing of Control Equipment	4/1/2016
Complete Cement MACT Performance Testing	5/1/2016
Compliance Date	5/9/2016
Progress Reports	Quarterly

Kiln 1 - Total Hydrocarbons

The upcoming emission limitation for total hydrocarbons for Kiln 1 is 24 ppmvd at 7% oxygen. Given initial data short term data collection, CEMEX believes that Kiln 1 will be challenged to meet this compliance and needs longer operating periods to determine if new controls are needed to comply with the 30-day rolling average requirements. Since CEMEX has only used Kiln 1 in a limited capacity since June of 2010, adequate periods of extended use are not available to determine how the system will operate under a range of scenarios.

Due to the limited data that CEMEX has to properly asses its ability to meet compliance for the THC PCMACT, CEMEX is requesting an 8 month extension to the PCMACT THC requirements. This will enable CEMEX to develop an adequate database to determine if compliance can be met, determine if controls need to be added, and optimize the overall operations of the Kiln 1 system.

(A) A description of the controls to be installed to comply with the standard;

The primary means to control THC emissions is raw material selection for which CEMEX is in the process of collecting THC emissions data and correlated organic data of raw materials. Thus the controls to be implemented are more process review in nature and less defined by mechanical equipment. The installation will be the process review to evaluate the incoming materials and related THC emissions to determine how CEMEX can select materials to demonstrate compliance to the NESHAP using a procurement process of analyzed materials for organics content.

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(1) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(2) The date by which final compliance is to be achieved.

(3) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(4) The date by which final compliance is to be achieved.

Table 6. provides the compliance schedule required for *(B)* above and includes expected downtime of Kiln 1. Note that the scheduled items timing could be increased by any unscheduled system downtime.

Table 6. Kiln 1 – Schedule for Compliance to THC NESHAP Limit.

Kiln 1 - Key Milestones for Total Hydrocarbons	Target Completion Dates
Kiln 1 Re-Activation Project	
Initiate THC emissions data at 90% + operations capacity	5/1/2015
Complete initial review Raw Materials and THC emissions.	9/1/2015
Evaluate Procurement Options of Raw Materials and material analysis	9/1/15 to 3/1/2016
Complete Evaluation and Operational Testing of Selected Raw Materials	5/1/2016
Complete Cement MACT Performance Testing	5/1/2016
Compliance Date	5/9/2016
Progress Reports	Quarterly

Kiln 2 - Background

Kiln 2 began operation in 2008 and continues to operate on a near continual basis. The kiln system is a modern precalciner/preheater system with the cooler system venting into the main stack. Kiln 2 will be in compliance with PCMACT limits for PM, Hg, and THC without the need for a time extension. CEMEX is requesting an extension to the PCMACT limit for HCl due to the installation of a lime injection system.

Kiln 2 - Hydrogen Chloride

On February 13, 2015, CEMEX submitted an air construction permit for the installation and shakedown of a hydrated lime injection system for Kiln 2. As stated in the permit application for this construction permit, this hydrated lime injection system will assure compliance with the hydrogen chloride limits.

FDEP issued the draft AC permit on April 1, 2015 and the final construction permit will be issued shortly. Following issuance of the final permit, CEMEX will begin the installation and the completion of the injection system. This installation project schedule is not set but, should be completed by the fall of 2015. Following the installation of the lime injection system, CEMEX will need time to optimize its use, test for its effectiveness, and collect enough data to properly develop a correlation between SO_2 and HCl emissions. Developing this correlation is important since CEMEX plans to use SO_2 continuous monitoring and lime injection to comply with the HCl emissions limit.

Due to all of these moving variables, CEMEX is requesting an 8 month extension to the PCMACT HCl requirements. This will enable CEMEX to obtain the construction permit to build a lime injection system for HCl controls, build, optimize, and test the new system, and ultimately generate enough data points to develop a strong correlation between SO_2 and HCl emissions.

(A) A description of the controls to be installed to comply with the standard;

As noted above, CEMEX is obtaining permitting and will install and use sorbent injection to control of HCl.

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(1) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated; and

(2) The date by which final compliance is to be achieved.

(3) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(4) The date by which final compliance is to be achieved.

Table 7. provides the compliance schedule required for *(B)* above and includes expected downtime of Kiln 2. Note that the scheduled items timing could be increased by any unscheduled system downtime.

Table 7. Kiln 1 – Schedule for Compliance to HCl NESHAP Limit.

Kiln 1 - Key Milestones for Hydrochloric Acid	**Target Completion Dates**
Kiln 1 Re-Activation Project	
Complete AC permitting Control Equipment, sorbent injection (SI) System	5/1/2015
Initiate installation of SI system	6/1/2015
Complete installation of SI system	9/1/2015
Complete Evaluation and Operational Testing of Control Equipment	2/1/2016
Complete Cement MACT Performance Testing	5/1/2016
Compliance Date	5/9/2016
Progress Reports	Quarterly

PCMACT Rule On-Going Calculation Discrepancies

We provide discussion above specific to Kilns 1 and 2 compliance. The basis for this extension request is primarily the operational issues discussed above. However, additional consideration should also be given to the current NESHAP regulatory uncertainty in regards to pending, unresolved technical clarifications, corrections, and CEMs monitoring capabilities. Although EPA has been attempting to finalize the NESHAP regulations, many critical issues remain unresolved including the following:

- Clarification and corrections to the calculations utilized to determine the Site Specific Operating Limits and Kiln Specific Limits
- HCl CEMs monitoring and certification
- Mercury CEMs monitoring and certification

These circumstances have been communicated to EPA personnel on several occasions in both comments on draft rule revisions and meetings of EPA Office of Air and Radiation (OAR) officials and representatives of the Portland Cement Association. The problems were discussed extensively with the EPA staff that is responsible for the Portland Cement NESHAP on May 7, 2015, in a meeting at their offices in Research Triangle Park. During the meeting with EPA staff on May 7, 2015, in which the issues described in this letter were presented, EPA acknowledged that there were problems. We respectfully request that exchange and ongoing discussions be taken into account in connection with this extension request.

Emission Calculations

In the November 19, 2014 NESHAP rule revisions, EPA proposed several changes that affect compliance demonstrations. The formulas for calculating kiln specific THC and HCl limits for kilns with alkali bypass and/or coal mill stacks in equations 9 and 11 respectively were revised resulting in unclear performance criteria and a more challenging compliance demonstration. In fact, the revised denominators in those equations are now technically incorrect.

For **Equation 9**, which is used to set the kiln specific THC limit when one has kiln gas exhausted from an alkali bypass and/or a coal mill with a separate stack, the denominator is now incorrect. Compliance with the THC limit should be averaged over all the stacks. To set the limit for the kiln, one should take the THC remaining (after adjusting for THC in the other stacks) and divide by the volume of gas emitted by the kiln. Instead the new equation divides by the total volume of gases from all the stacks, which lowers the kiln concentration limit incorrectly. Specifically, the denominator in this equation should be Qks and not the sum of Qks, Qab and Qcm).

There are two concerns with the revisions to **Equation 10** for mercury. First, the hours when either the flow or concentration is not quality data are excluded from the numerator determination of mass emissions, but the production during those hours is apparently not excluded from the denominator. This lowers the result but was not likely intentional. Second, the definition of "P", which is million tons of clinker production, refers to "total runs" when one can guess they meant "total tons"

The same problem is present in **Equation 11** for HCl compliance and time-weighting issues remain a problem for the PM Alternative Limit expressed in **Equation 1.**

The above unresolved issues impacts the calculations utilized to determine the site specific operating limits and kiln specific limits are not resolved. Accordingly, the

CEMEX –plant currently cannot with certainty determine the applicable compliance thresholds.

HCl and Mercury CEMs

Due to technology limitations, it will not be possible to install and operate HCl CEMS or mercury CEMS in accordance with the applicable regulatory requirements by September 9, 2015. The EPA Performance Specification 18 and its associated Appendix F, Procedure 6 for HCl CEMS is not yet final, NIST Traceable HCl calibration gases are not commercially available, and due to delays at the National Institute of Standards and Technology (NIST), mercury calibration gas generators cannot be certified in accordance with the applicable requirements. Without the ability to operate these monitoring devices, one cannot implement the control measures for mercury or HCl using CEMs in accordance with the terms of the regulations.

Particulate Matter – Alternative PM Emission Limit.

Equation 1 in 40 CFR 63.1343(b)(2) provides for calculation of an alternative PM compliance limit for kiln systems that receive gases from other emissions sources than the kiln, such as the clinker cooler or coal mill exhaust. To date, EPA has not officially clarified many aspects of this calculation which is indicative of the state of flux of this rule. Examples of remaining issues include;

- The equation presumably when used for in-line raw mill kilns systems is used to create a time-weighted alternative limit comprised of raw mill up and down mode emissions. Determining the fraction of time weighting for each mode is presumably to be conducted in a similar estimation for time-weighting THC or HCl kiln–specific limits. EPA has not officially clarified this presumption.
- EPA has not officially clarified if the alternative limit is revised after each new Method 5 test series and at what point in time after the test the alternative PM limit becomes effective.
- EPA has not officially clarified if the input values for the flow rates and tonnage feed used in the calculation of dscf/ton feed are determined from short term Method 5/5i data or longer term data. The question arises given the disconnect for EPA presumably using time-weighted average mill up and down modes but short term averages for equation inputs for dscf/ton feed. More accurate average values of a dscf/ton feed value would certainly be obtained from continuous long-term monitoring data.
- EPA has not officially clarified how and when a new time-weighted average alternative PM emission limit revises the continual monitoring of the thirty kiln operating day continuous parametric monitoring system (CPMS) operating limit.

Pursuant to 40 CFR §63.6(i)(4)(i)(B), nonfrivolous requests submitted under §63.6(i)(4)(i)(B) will stay the applicability of the rule for subject emission points and units until such time as the request is granted or denied. Pursuant to 40 CFR §63.6(i)(12)(i), CEMEX respectfully requests the Department notify us in writing of the status of this application within 30 calendar days after receipt of this application. Pursuant to 40 CFR §63.6(i)(12)(i), CEMEX requests the Department notify us in writing of approval or intention to deny approval of this request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under 40 CFR §63.6(i)(4)(i)(A).

Thank you for your time and I look forward to working with you and your staff on this request.

I (Max Lee, President of Koogler and Associates, Inc.) am submitting this request on behalf of CEMEX Construction Materials Florida, LLC.

Sincerely,

Max Lee
President, Koogler and Associates, Inc.

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