Florida Department of Environmental Protection

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Secretary

PERMITTEE

CEMEX Construction Materials Florida, LLC
10311 Cement Plant Road
Brooksville, Florida 34601

Authorized Representative:
Mr. Alberto Calleros, Plant Manager

Air Permit No. 0530021-072-AC
Permit Expires: 06/30/2018
Minor Air Construction Permit
CEMEX Brooksville South Cement Plant
Minor AC Revision

PROJECT

This is the final air construction permit, which revises older permits for the following items: update the on-spec used oil condition, remove obsolete requirements of 40 CFR 61, Subpart E, and fix some minor typographical errors contained in previously issued AC permits. CEMEX Brooksville South Cement Plant is a Portland cement manufacturing plant categorized under Standard Industrial Classification No. 3241. The existing facility is in Hernando County at 10311 Cement Plant Road in Brooksville, Florida. The UTM coordinates are Zone 17; 360.00 kilometers (km) East; and, 3162.50 km North.

This final permit is organized into the following sections: Section 1 (General Information) and Section 2 (Permit Revisions). As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. A copy of this permit modification shall be filed with the referenced permit and shall become part of the permit.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

David Lyle Read, P.E.

David Lyle Read, P.E.
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For:
Syed Arif, P.E., Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Permit Revision, Technical Evaluation and Preliminary Determination, Final Determination, and Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Mr. Alberto Calleros, CEMEX: alberto.calleros@cemex.com
Mr. Brent Steele, CEMEX: brentc.steele@cemex.com
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Ms. Lynn Scearce, DEP OPC: lynn.scearce@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Lynn Scearce 2017.12.28 10:41:44 -05'00'

FACILITY DESCRIPTION

The plant combines raw materials and utilizes a preheater/precalciner kiln with in-line raw mill to produce clinker. The clinker is milled and combined with gypsum to produce Portland cement. The plant consists of two in-line kiln/raw-mill systems (Lines 1 and 2). Cement Line No. 1 is a dry Gepol preheater in-line kiln/raw mill, clinker cooler arrangement. Cement Line No. 2 is a dry preheater/precalciner process. The kiln has an in-line calciner and an in-line arrangement with the raw mill. Annual clinker production is limited to 727,800 tons and 1,227,500 tons in Lines 1 and 2, respectively.

Fuels fired in the pyroprocessing system of Cement Line No. 1 consist of coal, petcoke, natural gas, No. 2 distillate fuel oil, residual fuel oil, "on-specification" used oil, and tire derived fuel (TDF), including shredded and whole tires. No. 2 fuel oil is used for the cement kiln No. 1's startup/preheating operation. On-specification used oil can be fired as a blend with purchased fuel oil as a startup fuel only. TDF may be introduced at the base of the preheater (i.e., kiln No. 1's inlet) or at the hot end of the kiln with a Tire Injection Mechanism (TIM). The firing of the TDF does not commence unless the kiln No. 1 has reached an operating temperature (at least 1,400 ºF), which is measured at the cement kiln No. 1's inlet. Water/chemical sprays and fabric filters are used to control emissions of particulate matter (PM) in the material handling areas and coal yard activities. Continuous monitors are operated for PM, total hydrocarbons (THC), mercury (Hg), nitrogen oxides (NO_X), sulfur dioxide (SO_2), carbon dioxide (CO_2) and oxygen (O_2).

Portland Cement Line 2 includes a raw mill system, a dry process preheater/precalciner kiln system, clinker handling system, finish grinding operations, three cement loadout silos, and coal handling and grinding operations. NO_X emissions are controlled by the use of Selective Non-catalytic Reduction (SNCR) technology. SO_2 emissions are controlled by use of low sulfur raw materials and inherent scrubbing by finely divided lime in the calciner and limestone in the raw mill. Carbon monoxide (CO) and volatile organic compounds (VOC) emissions are controlled by promoting complete combustion in the kiln and calciner and minimizing carbon and the oil/grease content of raw materials. Particulate matter (PM/PM_{10}) from the pyroprocessing system and the clinker cooler are controlled by fabric filter baghouses. Hg emissions are controlled by material balance. All of the materials handling activity particulate matter emissions are controlled by fabric filters. Water sprays or chemical wetting agents and stabilizers are used at the coal yard activities. Continuous monitors are operated for PM, Hg, NO_X, SO_2, CO, THC, CO_2 and O_2.

The existing facility consists of the following emissions units (EU).

EU ID No.	Facility's Internal ID No.	Brief Description
Brooksville South Portland Cement Line 1		
Raw Mill and Raw Meal Handling and Storage System		
001	D-75	Filter Dust Bin (was Pre-Mix Bin) with Baghouse
002	D-67	Fly Ash/Equilibrium Catalyst Storage Silo with Baghouse
004	F-14	Raw Meal Transfer with Baghouse
	TBD	Dry Sorbent Injection System
006	G-12 (A & B)	Two Blend Silos with Baghouse
007	H-15	Kiln Feed Surge Bin with Baghouse
Clinker Handling and Storage		
008	S-04	Clinker Receiving/Handling System
009	K-07 & L-03	Clinker Cooler Discharge with Baghouse
010	L-05, L-06, L-07 & TBD	Clinker Storage Silos and Loadout Spout with Baghouses

Finish Mill System		
011	L-08	Gypsum and Limestone Bins with Baghouse
012	M-08 M-04	EP-01 Silo Discharge with Baghouse (M-08) and EP-02 Clinker Feeder Baghouse (M-04).
013	N-13	Finish Mill with Baghouse
019	M-05	Finish Mill Feed Belt with Baghouse
014	Q-17	A-Side Cement Storage Silos #1 & #2 Discharge System with Baghouse
015	Q-15	Cement Storage Silos #1 & #2 with Baghouse
Pyroprocessing System		
020	E-42	In-Line Cement Kiln 1, In-Line Kiln/Raw Mill, Coal Mill and Clinker Cooler 1 with Baghouse
Cement Silos and Loadout		
021	Q-18	B-Side Cement Storage Silos #1, #2 & #3 Discharge System with Baghouse
022	Z-15	Cement Storage Silo #3 with Baghouse
023	TBD	Cement Storage Silo #4 and Truck Loadout System with Baghouse
024	Z-18	Cement Storage Silo and Railcar Loadout System with Baghouses
064	M-03	Kiln No. 1 Clinker Belt Dust Control
Brooksville South Portland Cement Plant 2		
Pyroprocessing System		
044	331.BF300	In-Line Cement Kiln 2, Pre-Heater, Pre-calciner and Clinker Cooler
Raw Mill and Raw Meal Handling and Storage System		
045	331.BF640	Filter Dust Bin
	311.LS609	Filter Dust Bin Loadout Spout
046	341.BF400	Blend Silo
047	351.BF420	Kiln Feed Transport
	341.BF410	Blend Silo Discharge
	351.BF410	Kiln Feed Bin
	331.XA120	Dry Sorbent Injection System
Clinker Handling and Storage		
048	471.BF110 & BV64-100-144A421*H1SZ	Clinker Transport
050	471.BF120	Clinker Storage Silo,
	481.BF155	Clinker Silo Discharge 1
	481.BF165	Clinker Silo Discharge 2
Finish Mill System		

051	511.BF650	Finish Mill Additives
052	531.BF500	Finish Mill and Air Heater
054	531.BF020	Finish Mill Bucket Elevator
057	531.BF400	Finish Mill Cement Transport
	531.BF290	Finish Mill Rejects Transport
Cement Silos and Loadout		
058	612.BF005	Cement Silo 5
	612.BF620	Cement Silo 5 Loading Bin
	622.LS140	Cement Silo 5 Loadout Spout N
	622.LS160	Cement Silo 5 Loadout Spout S
059	611.BF005	Multi Cell Cement Silo
	611.BF045	Multi Cell Cement Silo Alleviator
	611.BF610	Multi Cell Loadout Transport
	611.LS760	Multi Cell Loadout Spout
062	641.BF150	Packing Plant
065	614.BV240 & 614.DC410	Cement Storage Silo and Railcar Loadout System with Baghouses
Coal Grinding & Handling System		
060	461.BF400	Coal Mill
061	461.BF560	Fine Coal Bin
Emergency Diesel Generator		
063	N/A	Emergency Diesel Generator
Alternative Fuel Handling and Processing		
Not Numbered		Alternative Fuel Handling and Processing
Brooksville South Portland Cement Line 1 and Portland Cement Line 2		
042	N/A	Coal Receiving, Handling and Transfer System (fugitives)

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility operates units subject to the New Source Performance Standards (NSPS) of Title 40 Part 60 of the Code of Federal Regulations (40 CFR 60).

- The facility operates units subject to the National Emissions Standards of Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

PROPOSED PROJECT

Update the on-spec used oil condition, remove obsolete requirements of 40 CFR 61, Subpart E, and fix some minor typographical errors contained in previously issued AC permits.

This project will modify the following emissions units.

EU No.	Emission Unit Description
020	In-Line Cement Kiln 1, In-Line Kiln/Raw Mill, Coal Mill and Clinker Cooler 1 (E-42)
044	In-Line Cement Kiln 2, Pre-heater, Pre-Calciner and Clinker Cooler (Pyroprocessing System) (331.BF300)

The following permit conditions are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight. Except for the modified conditions noted below, all other previously established permits and conditions remain in effect.

Permits Being Modified:

Permit No. 0530021-039-AC

Affected Emissions Unit: EU-044, In-Line Cement Kiln 2, Pre-heater, Pre-Calciner and Clinker Cooler (Pyroprocessing System)

1. Section 3, Subsection A, Specific Condition 12 is removed.

   12. ~~NESHAP 40 CFR 61 Requirements - Subpart A: When combusting biosolids the permittee shall comply with all applicable requirements of 40 CFR 61, Subpart A, General Provisions, which have been adopted by reference in Rule 62-204.800(10)(d), F.A.C., except for 40 CFR 61.08 and except that the Secretary is not the Administrator for the purposes of 40 CFR 61.04, 40 CFR 61.11, and 40 CFR 61.18. In lieu of the process set forth in 40 CFR 61.08, the Department will follow the permit processing procedures of Rule 62-4.055, F.A.C. When combusting biosolids the permittee shall comply with all applicable provisions of Appendix C. 40 CFR 61 Subpart A - General Provisions included with this permit. [Rule 62-204.800(10)(d), F.A.C.]~~

2. Section 3, Subsection A, Specific Condition 13 is removed.

   13. ~~Mercury Emissions from Biosolids: The permitted maximum allowable emission rate for mercury is 7.1 pounds per 24-hour period. [Rule 62-204.800(10)(d), F.A.C. and 40 CFR 61.52]~~

   ~~*{Permitting Note: The permittee will remain subject to the current Title V permit limitation of 122 pounds per year of Hg, based on material analysis. If the plant runs at least 50 percent of the time, the effective maximum permitted 24-hour emissions would average 0.7 pound/24-hour. This value (0.7 pound/24-hour period) is less than 10 percent of the allowed Hg emissions of 40 CFR 61.52. As such the permittee is not expected to come near this limit. The compliance requirements for the mercury emissions from biosolids as specified in Condition 21 may be satisfied with the sampling requirements of Condition 20.}*~~

3. Section 3, Subsection A, Specific Condition 21 is removed.

   ~~21. Testing of Biosolids for Mercury: The permittee shall test biosolids unless a waiver of emission testing is obtained under 40 CFR 61.13 from the Department. Such tests shall be conducted in accordance with the procedures set forth in 40 CFR 61 Subpart E as follows.~~

   ~~a. The emission or sampling test shall be performed within 90 days of startup of firing biosolids per Method 101A or 105 in Appendix B to 40 CFR 61 Subpart E. A total of three composite samples or as necessary shall be obtained within an operating period of 24 hours. When the 24-hour operating period is not continuous, the total sampling period shall not exceed 72 hours after the first grab sample is obtained. Samples shall not be exposed to any condition that may result in mercury contamination or loss.~~

   ~~b. The Department shall be notified at least 30 days prior to an emission or sampling test.~~

   ~~c. The permittee shall take samples over such a period or periods as are necessary to determine accurately the maximum emissions which will occur in a 24-hour period. No changes shall be made in the operation which would potentially increase emissions above the level determined by the most recent stack test, until the new emission level has been estimated by calculation and the results reported to the Department.~~

~~d. All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack or sampling test. Each determination shall be reported to the Department by a registered letter within 15 calendar days following the date such determination is completed. Records of emission test results and other data needed to determine total emissions shall be retained at the source and shall be made available, for inspection by the Department, for a minimum of 2 years.~~

~~e. The maximum 24-hour period biosolids firing rate shall be determined by use of a flow rate measurement device that can measure the mass rate of biosolids charged to the incinerator or dryer with an accuracy of ±5 percent over its operating range. Other methods of measuring biosolids mass charging rates may be used if they have received prior approval by the Department.~~

~~f. If sampling is used, mercury emissions shall be determined by use of the following equation.~~

$$E_{Hg} = \frac{MQ\,F_{sm(avg)}}{1000}$$ ~~where:~~

~~E_{Hg} = Mercury emissions, g/day.~~

~~M = Mercury concentration of biosolids on a dry solids basis, µg/g.~~

~~Q = Biosolids changing rate, kg/day.~~

~~F_{sm} = Weight fraction of solids in the collected biosolids after mixing.~~

~~1000 = Conversion factor, kg µg/g^2.~~

~~g. No changes in the operation of a plant shall be made after a biosolids test has been conducted which would potentially increase emissions above the level determined by the most recent biosolids test, until the new emission level has been estimated by calculation and the results reported to the Department.~~

~~h. If mercury emissions exceed 3.5 pound per 24-hour period, demonstrated either by stack sampling according to 40 CFR 61.53 or biosolids sampling, the permittee shall monitor mercury emissions at intervals of at least once per year. The results of monitoring shall be reported and retained as indicated in Condition 18.d.~~

~~[Rule 62-204.800(10)(d), F.A.C. and 40 CFR 61.53, 53, 54, and 55]~~

~~*{Permitting Note: The sampling requirements of Condition 21 may be satisfied with the sampling requirements of Condition 20.}*~~

Permit No. 0530021-043-AC (PSD-FL-091K)

4. Section 3, Subsection C, Specific Condition 8 is revised as follows:

   8. "On-Specification" Used Oil: The burning of "on-specification" used oil is allowed at this facility in accordance with all other conditions of this permit and the following additional conditions:

      a. *Blending.* The permittee may blend "on-specification" used oil generated at the CEMEX Company's Gregg Mine, the Cement Plant Complex, or purchased on-specification used oil with the purchased new fuel oil, which is to be used only as a startup fuel for preheating the cement kiln No. 1. "On-specification" used oil is defined as each used oil delivery that meets the 40 CFR 279.11 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered "off-specification" oil and shall not be fired.

Constituent/Property~~*~~	Allowable Level	Test Method
Arsenic	5 ppm maximum	~~EPA SW-846 (3040-7130)~~
Cadmium	2 ppm maximum	~~EPA SW-846 (3040-7130)~~
Chromium	10 ppm maximum	~~EPA SW-846 (3040-7130)~~
Lead	100 ppm maximum	~~EPA SW-846 (3040-7130)~~
Flash Point	100°F Minimum	
Total Halogens	~~41~~,000 ppm maximum	~~ASTM E442~~
~~Flash Point~~	~~140°F Minimum~~	~~ASTM D93~~
~~Sulfur~~	~~Percent~~	~~ASTM D2622-92, ASTM D4294-90 or both ASTM D4057-88 & ASTM D129-91~~
~~Heat of Combustion~~	~~Btu/gal~~	~~ASTM D240-76~~
~~Density~~	~~lbs/gal~~	~~ASTM D1298-80~~
~~As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).~~		
Notes: 1. Applicable standards for the burning of used oil containing polychlorinated byphenlys (PCB) are imposed by 40 CFR 761.20(e). 2. The allowable levels do not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see 40 CFR 279.10(b)). 3. Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b)(1). Such used oil is subject to 40 CFR 266 Subpart H when burned for energy recovery unless the presumption of mixing can be successfully rebutted.		

b. *Hazardous Waste.* Permittee agrees that the used oil to be blended and burned at this facility shall not be a hazardous waste as defined in Rule 62-210.200, F.A.C., or 40 CFR Part 261, and will not include fuels or blended fuels consisting in whole or part of hazardous waste or which include mixtures of any solid waste generated from the treatment, storage, or disposal of hazardous waste, and such burning shall be in compliance with Section 403.769(3), F.S.

c. ~~Fuel analysis shall be in accordance with 40 CFR 266.43(b)(1) & (6).~~

c. *Fuel Specifications.* Compliance with the on-specification used oil fuel specifications in **Specific Condition 8** shall be demonstrated by a fuel analysis or certified by fuel supplier.

d. *Sulfur Content.* Compliance with the fuel sulfur content of the blend of on-specification used oil and purchased on-specification used oil with the purchased new fuel oil shall be demonstrated by a certified ASTM fuel oil analysis or certified by fuel supplier. ASTM test methods include ASTM D2622-92, ASTM D4294-90 or both ASTM D4057-88 and ASTM D129-91.

e. *Records.* Records shall be retained for at least 5-years and made available to the Department upon request.

[Rule 62-210.200, F.A.C.; 40 CFR 261, 279.11, & 279.72(a)]

Permit No. 0530021-044-AC (PSD-FL-351E)

5. Section 2, Specific Condition 10 is revised as follows:

10. Previous Permits: This permit supersedes and replaces all previous air construction permits and applicable conditions related to Cement Line No. ~~1~~ 2 at the CEMEX South Brooksville Cement Plant, except for Permit No. 0530021-039-AC. [Rules 62-4.070(3); 62-210.200(PTE); and 62-212.400 (PSD) F.A.C.]