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1.0 SOURCE IDENTIFICATION

1.1 Source

LaFarge Midwest, Inc.  
2500 Portland Road  
Grand Chain, Illinois 62941

618/543-7541

I.D. No.: 127855AAA

Standard Industrial Classification: 3241, Cement Manufacturing

1.2 Owner/Parent Company

LaFarge Midwest, Inc. - U.S. Cement Region  
400 Town Center, Suite 2000, P.O. Box 887  
Southfield, Michigan 48075

1.3 Operator

LaFarge Midwest, Inc.  
2500 Portland Road  
Grand Chain, Illinois 62941

Ron Ryan  
618/543-7541

1.4 General Source Description

Lafarge's Joppa facility manufactures Portland Cement. Raw materials include sources of calcium, iron, silica, and alumina. The raw materials are ground into a fine mix and are introduced into a rotary kiln and exposed to temperatures near 3000°F. In the kiln, the four primary ingredients melt together and undergo chemical and mineralogical changes to produce an interim product called clinker. This clinker is a hard, black, glassy compound which does not resemble the raw materials. Gypsum is added to the clinker and the materials are ground to a fine powder which is the final product - Portland Cement.

Depending on the proportions of the original raw materials, the duration and intensity of the kiln processing, and the parameters set during grinding, different cements are produced with distinctly different capabilities and uses.

The manufacturing process consists of the following activities:

Raw material receiving; Raw material storage; Raw material reclaim; Raw material grinding; Raw material storage and kiln feed; Pyroprocessing (kilns); Clinker storage; Clinker reclaim; Clinker grinding; Cement storage and Cement loadout.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ACMA	Alternative Compliance Market Account
ATUs	Allotment Trading Units
BAT	Best Available Technology
Btu	British thermal unit
°C	Degrees Celsius
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
Cm	Centimeter
ERMS	Emission Reduction Market System
°F	Degrees Fahrenheit
Ft <sup>2</sup>	Feet square
ft <sup>3</sup>	Cubic foot
gal	Gallon
Gm	Gram
HAP	Hazardous Air Pollutant
Hp	Horse power
hr	Hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
In	Inch
°K	degrees Kelvin
Kg	kilo gram
KW	Kilowatts
kpa	Kilopascals
lb	Pound
MACT	Maximum Available Control Technology
mmcf	Million cubic feet
MG	Mega Gram
M	Meter
mmBtu	Million British thermal units
mmHg	Millimeters of mercury
mo	Month
MW	Mega Watts
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
OM	Organic Material
PM	Particulate Matter
PM <sub>10</sub>	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods

ppm	parts per million
PSD	Prevention of Significant Deterioration
psia	Pounds per square inch absolute
RMP	Risk Management Plan
scf	Standard cubic foot
SO <sub>2</sub>	Sulfur Dioxide
T	Ton
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
wt.	Weight
yr	Year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

None

3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

- 1 Grinding Aid Tank, 12,000 Gallons (JT-6)
- 1 Flambinder Tank, 12,000 Gallons (JT-9)
- 1 Water Tower Additive Tank (JT-11)
- 1 Chlorine Tank (JT-12)
- 1 Chemtron Tank-Liquid CO<sub>2</sub> (JT-13)

3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Number of Activities	Activity Description	35 IAC Regulatory Citation
1	#1 Kiln Emergency Drive Diesel Generator (J-42)	201.210(a)(16)
1	Natural Gas Space Heater (J-89)	201.210(a)(4A)
15	Kerosene Space Heaters (J-90)	201.210(a)(4B)
1	Kerosene Tank, 550 Gallons (JT-3)	201.210(a)(11)
1	Diesel Tank #2, 1,650 Gallons (JT-4)	201.210(a)(11)
1	Gasoline Tank, 850 Gallons (JT-5)	201.210(a)(11)
1	Used oil Tank, 2,000 Gallons (JT-7)	201.210(a)(11)
1	Diesel Tank #3, 2,500 Gallons (JT-8)	201.210(a)(11)
1	Portable Diesel Tank, 240 Gallons (JT-10)	201.210(a)(11)

3.1.4 The Permittee has activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

### 3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

- 3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.
- 3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.
- 3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

### 3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE\*

Emission Unit	Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**
01	J-1a	Raw Material Unloading from Barge	N/A
	J-1b	Clinker Unloading from Barge	Barge Unloading Hopper DC
	J-2	Raw Material Transfer from #9 Belt to #10 Belt	N/A
	J-3	Raw Material Transfer from #10 Belt to #11 Belt and From #11 Belt to #12 or #13 Belts	N/A
	J-5	Raw Material Transfer from #12a Belt to Outside Storage	N/A
	J-7	Reclaim of Outside Materials at Receiving Hopper South of Administrative Building	N/A
	J-9	Rock/Sand Transfer from #13 Belt Tripper to South Rock/Sand Storage	N/A
	J-11	Rock/Sand Transfer from #14 Belt Tripper to North Rock/Sand Storage	N/A
	J-12	Raw Material Transfer from #14 Belt and/or #18 Belt to #19 Belt and from #19 Belt to Storage Hall	N/A
	J-16	FCC Tank	FCC Tank DC
	J-17	#1 Raw Mill (Grinding and Combustion Emissions)	#1 Raw Mill - North DCs #1 and #2, South DCs #1 and #2, and Auxiliary DC
	J-21	#2 Raw Mill (Grinding and Combustion Emissions)	#2 Raw Mill - Utility DC #2 and Air Separator DC #1
	J-23	#2 Raw Mill - FK Pump Hopper	#2 Raw Mill - FK Pump Hopper DC #6
	J-25	Blending Silo #1	Blending Silo #1 DC
	J-26	Blending Silo #2	Blending Silo #2 DC
	J-27	Blending Silo #3	Blending Silo #3 DC
	J-28	Blending Silo #4	Blending Silo #4 DC
	J-39	#1 Kiln Schenck Feed Tank	Schenck Feed Tank DC
	J-41	#1 Kiln	#1 Kiln ESP
	J-43	#1 Clinker Cooler	#1 Clinker Cooler DC
J-44	#1 Kiln Clinker Elevator and Transfers from the Elevator to #26 and #30 Belts	#1 Clinker Elevator Utility DC	

Emission Unit	Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**
01 (Cont.)	J-45	#2 Kiln Feed Tank	#2 Kiln Feed Tank DC
	J-46	#2 Kiln Flowmeter	#2 Kiln Flowmeter DC
	J-47	#2 Kiln	#2 Kiln Baghouse
	J-49a	Waste Dust Tank	Waste Dust Tank DC
	J-49b	Waste Dust Load-Out Spout	Load-Out Spout DC
	J-50	#2 Clinker Cooler	#2 Clinker Cooler Gravel Bed Filter and #2 Clinker Cooler Vent DC
	J-51	#2 Kiln Clinker Elevator and Transfers from the Elevator to #27 and #31 Belts	#2 Clinker Elevator Utility DC
	J-52	Transfer to Outside Clinker Reclaim Hopper Then to #1 Belt	N/A
	J-53	Outside Clinker Crusher (Emissions from Crusher, Screen, and Transfers to and from Crusher and Screen)	Outside Clinker Crusher DC
	J-54	Transfer from #2 Belt to Clinker Storage Hall	N/A
	J-55	Transfer from #31 Belt to #32 Belt	Transfer from #31 Belt to #32 Belt DC
	J-56	#32 Belt Discharge	#32 Belt Discharge and DC
	J-57/58	Clinker Feed from #26 and #27 to #28 Belt in Storage Hall	Clinker Feed from #26 and #27 to #28 Belt DC
	J-59	Clinker Feed to Storage Hall (From #28 Belt and/or #32 Belt)	N/A
	J-60	Feed from Bucket Elevator to #7 Belt	N/A
	J-61	Feed from #7 Belt	N/A
	J-62	Clinker Transfer - Storage to #5 Belt	Transfer to #5 Belt DC
	J-64/65	Clinker Transfer - #5 Belt to #6 Belt; #6 Belt to Bucket Elevator	Transfer from #6 Belt to Bucket Elevator DC
	J-67	Clinker Bins Discharge to Feed Belts and Transfer from Feed Belts to #22 Belt	Clinker Bins Discharge to Feed Belts and Transfer from Feed Belts to #22 Belt DC #4
	J-69	Clinker/Gypsum Transfer to #23 Belt	Clinker/Gypsum Transfer to #23 Belt DC #5

Emission Unit	Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**
01 (Cont.)	J-70	#1 Finish Mill	#1 Finish Mill - North Main DC #1 and Auxiliary DC #3
	J-71	#1 Finish Mill - FK Pump Hopper	#1 Finish Mill - RK Pump Hopper DC
	J-74	Clinker/Gypsum Transfer #39 Belt	Clinker/Gypsum Transfer to #39 Belt DC
	J-75	#39 Belt Discharge	#39 Belt Discharge DC
	J-76	#2 Finish Mill	#2 Finish Mill - Vent DC
	J-77	#2 Finish Mill - FK Pump Hopper	#2 Finish Mill - FK Pump Hopper DC
	J-78	Group #1 (West) Cement Silos	Group #1 (West) Cement Silo Fill Vent DC
	J-79	Group #2 (East) Cement Silos	Group #2 (East) Cement Silo Fill Vent DC
	J-80	Upstream Barge Cement Loading Spout	Upstream Barge Cement Load Out DC
	J-81	Downstream Barge Cement Loading Spout	Downstream Barge Cement Load Out DC
	J-82	Group #1 Cement Silos East Truck Load Out	Group #1 Cement Silos East Truck Load Out DC #1
	J-83	Group #1 Cement Silos West Truck Load Out	Group #1 Cement Silos West Truck/Railroad Load Out DC #2
	J-84	Group #1 Cement Silos West Truck/Railroad Load Out	Group #1 Cement Silos East Truck/Railroad Load Out DC #3
	J-85	Group #1 Cement Silos East Truck/Railroad Load Out	Group #1 Cement Silos East Truck/Railroad Load Out DC #4
	J-86	Group #2 Cement Silos Truck Load Out	Group #2 Cement Silos Truck Load Out DC #4
	J-95	#2 Kiln Back-Up Feed System	Schenck Feed Tank DC
	J-96	#1 Clinker Cooler Ray-Jet Burner	#1 Kiln Indirect Firing System DC
	J-97	#2 Clinker Cooler Ray-Jet Burner	#2 Kiln Indirect Firing System DC
J-106	Raw Material Stacker	N/A	

Emission Unit	Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**
01 (Cont.)	J-107	Portable Clinker Stacker	N/A
	J-108	#2 Kiln Dust Return System	#2 Kiln Dust Return System DC
	J-111	Cement Surge Bin	Cement Surge Bin DC
	J-112	Cement Fringe Bin	Cement Fringe Bin DC
	J-113	#2 Finish Mill Air Separator	Air Separator DC
02	J-100	Handling of Materials Stored Outside	---
	J-101	Alternate Raw/Intermediate Material Unloading	---
	J-102	Material Transfers Without 100 Percent Capture Efficiencies	---
	J-103	Storage Piles	---
	J-104	Unpaved Haul Roads	---
	J-105	Paved Haul Roads	---

\* The above list of emission units may not include units constructed after the submittal of the original application. However, any such units are identified in the attached state construction and operating permits that are incorporated here in (see Attachment 4). These units are permitted to operate under this permit in accordance with the conditions of these attached permits. This list will be revised to include such units in subsequent reopening of this permit in accordance with the timely submittal of the necessary information.

\*\* In this column DC is for Dust Collector

## 5.0 OVERALL SOURCE CONDITIONS

### 5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of NO<sub>x</sub>, PM, SO<sub>2</sub> and HAP emissions.

### 5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

#### 5.2.3 Ozone Depleting Substances

The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an

approved technician certification program pursuant to 40 CFR 82.161.

#### 5.2.4 Risk Management Plan

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

- a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
- b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

#### 5.2.6 Episode Action Plan

- a. The source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.

- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.
- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to Illinois EPA, Compliance Section.

#### 5.2.7 CAM Plan

This stationary source has a pollutant-specific emissions unit that is subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The source must submit a CAM plan for each affected pollutant-specific emissions unit upon application for renewal of the initial CAAPP permit, or upon a significant modification to the CAAPP permit for the construction or modification of a large pollutant-specific emissions unit which has the potential post-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

#### 5.3 Non-Applicability of Regulations of Concern

None

#### 5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

#### 5.5 Source-Wide Emission Limitations

##### 5.5.1 Permitted Emissions for Fees

Emission limitations are not set for this source for the purpose of permit fees. The Permittee shall be required to pay the maximum fee of \$100,000.00 per year, pursuant to Section 39.5(18)(a)(ii)(A) of the Act.

#### 5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

#### 5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

### 5.6 General Recordkeeping Requirements

#### 5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

#### 5.6.5 Records for Operating Scenarios

N/A

#### 5.6.6 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the source with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and compliance procedures in Section 7 (Unit Specific Conditions) of this permit.

6.0 NOT APPLICABLE TO THIS PERMIT

## 7.0 UNIT SPECIFIC CONDITIONS

### 7.1 Unit 01: Cement Plant

#### 7.1.1 Description

##### Raw Material Receiving:

Raw materials are received at the facility primarily by barge, but are also received by truck, pneumatic pipeline, and potentially by rail. Typical raw materials include (but are not limited to) limestone, sand, clay, gypsum, bottom ash, fly ash, iron oxide, mill scale, iron slag, shale, alumina, spent industrial catalysts, foundry sand, coal tailings, and fuels such as coal and/or petroleum coke. Raw materials unloaded also include purchased clinker.

Materials can be transferred from barges in several ways:

Clam-shell crane transfer to Lafarge conveyor system; Self unloading barge transfer to Lafarge conveyor system (self-unloading barges have built-in conveyors to unload materials); Clam-shell crane transfer to river-side storage piles with subsequent transfer to appropriate storage areas using end-loader and/or trucks; Certain raw materials, such as fly-ash or other powdered materials, can also be pneumatically conveyed directly to storage tanks from trucks, or, in one case, via a permanent pipeline from an adjoining power plant.

##### Raw Material Storage:

Raw materials are stored in several areas: Outside storage piles; Covered storage piles; Concrete storage bins; Enclosed steel storage tanks. In general, the larger shipments are stored either in the outside or covered storage piles where the materials can be gradually reclaimed for use.

##### Raw Material Reclaim:

Materials are reclaimed from storage by several methods.

Materials can be transferred via end-loader and/or truck from covered storage piles or outside storage piles to one of several reclaim hoppers that feed various conveyors. Lafarge can also operate portable belts to transfer materials to many locations on the conveyor system. It should be noted that the reclaim hoppers and portable belts could also be used to transfer purchased materials directly to the conveyor system from trucks.

Materials from inside storage can feed directly to conveyors via vibratory feeders located under the covered storage hall.

Materials stored in bins and tanks are fed directly to the conveyor system.

#### Raw Material Grinding:

Materials are fed to the raw mill system by conveyors. The raw materials used by Lafarge are typically coarse and wet. The raw materials are fed into one of two 3,000 horsepower Nordberg ball mills (referred to as #1 Raw Mill and #2 Raw Mill), where hot dry gas recovered from the kiln systems (and supplemented as by natural gas furnaces) is drawn through the grinding system as the raw materials are ground. The raw mills mix and grind the raw materials to a fine consistency.

The typical feed to the raw mill consists of approximately 90 percent limestone with the balance made of sand, clay, mill scale, bottom ash, fly ash, and other materials. In general, all raw material is added here with the exception of gypsum and clinker. However, manufacturing specifications may require the addition of gypsum or clinker into the raw mills. To assist in the grinding process, a liquid grinding aid is sometimes injected into the raw mills.

The supply air to the raw mills can be heated to facilitate drying. Pre-heated supply air for the #2 Raw Mill can be drawn from the #2 Clinker Cooler exhaust. For both raw mills, further heating of the supply air is performed as needed by direct-fire, natural gas furnaces.

The raw mills are air swept. Material in the raw mills is recycled through the mills via air conveyance, air separators, screw conveyors, and/or belt conveyors. As the materials are ground to the desired particle size, they are removed in the air separators. The resulting mixture, often referred to as kiln feed, is pneumatically conveyed to four storage silos located near the feed end of the kilns.

#### Kiln Feed Storage and Transfer to Kilns:

Kiln feed from the raw mill system is pneumatically conveyed to four large storage and blending silos located near the feed end of the kilns. Kiln feed is then transferred to smaller surge tanks before transfer to the kilns. One feed tank, the #2 Kiln feed tank, currently can feed only the #2 Kiln. However, another surge tank, the "Schenck Feed Tank" that typically feeds to the #1

Kiln, can actually feed to either kiln as part of a back-up feed system to either kiln.

A hopper and conveyor system at the feed end of the kilns allows reclaim of outside materials (typically clinker) at the feed end of the kilns.

Coal and Coke Tank Filling Flow:

Coal and (petroleum) coke is transferred from covered storage via a system of vibratory feeders, conveyors, and a bucket elevator. As a last step before being transferred to the coal or coke tanks, the fuel is crushed in an enclosed coal and coke crusher.

Pyroprocessing (Kilns):

Kiln Feed Flow

Both kilns at the Joppa facility are long dry kilns. Each kiln is essentially a slightly inclined rotating cylinder. Raw kiln feed is introduced into the uphill end of each kiln while fuel and air is introduced into the downhill end. As the kiln rotates, the raw feed and combustion air flow counter-current.

In the #1 Kiln, kiln feed is introduced directly into the kiln via a bucket elevator. The #2 Kiln, on the other hand, is equipped with a 1-stage preheater, where the raw kiln feed is introduced into a series of cyclones. In the cyclones, the material flows counter-current with the kiln exhaust, thus recovering heat from the exhaust gases to preheat the raw feed.

Once in the kilns, the materials undergo complex chemical and physical changes. The ratio of raw kiln feed to kiln product (clinker) ranges between 1.5:1 and 1.6:1. This loss during pyroprocessing results from moisture being driven off as well as chemical reactions yielding gaseous products.

As the clinker leaves the kiln, it resembles road gravel in size and consistency, with most material typically on the order of one-half to one inch in diameter.

The clinker is fed directly from the kiln to the clinker cooler, where it is air-cooled. In the clinker cooler, the clinker travels across grates as air is blown upward through the product.

The clinker is transferred via belt conveyors from the clinker cooler to storage to await grinding.

#### Fuel Combustion:

The kiln fuel consists typically of coal or petroleum coke. In the future, Lafarge may also fire tire derived fuel in either kiln. The fuel, which has been transferred to steel tanks, is transferred by conveyors to coal mills where it is milled to a consistency that can be pneumatically transferred. The fuel is pneumatically transferred to storage tanks at the top of the kiln burner building. The transfer air is de-dusted by one of two baghouses (one for each kiln system). From these storage tanks, the pulverized coal is pneumatically injected into the kiln. Transfer air for fuel injection into the kiln is carefully controlled to optimize the combustion conditions. In addition to the transfer air, combustion air is injected at various locations in the burner to achieve optimum flame control.

#### Clinker Storage:

Clinker from the clinker coolers is transferred via conveyors either to covered storage piles, covered storage bins, or directly to the steel feed tanks associated with the finish mill feed systems. From the covered storage piles, clinker can be transferred as needed to outside storage piles for long-term storage.

#### Clinker Reclaim:

From outside storage piles, clinker can be trucked to outside crusher/reclaim systems. From covered storage piles, reclaimed clinker can be transferred via conveyors to the concrete bins that feed the #1 Finish Mill system or the steel tanks that feed the #2 Finish Mill system.

#### Clinker Grinding:

Clinker and gypsum are introduced into the ball mills at a typical ratio of approximately 95:5.

Finish mill operation is very similar to raw mill operation. The finish mills are air swept. Material in the finish mills is recycled through the mills via air conveyance, air separators, screw conveyors, and/or belt conveyors. As the materials are ground to the desired particle size, they are removed in the air separators. The resulting product, which is finished cement, is pneumatically conveyed to the storage silos.

To assist in the grinding process, water and a liquid grinding aid are injected into the finish mills themselves.

Cement Storage and Loadout:

Cement is conveyed pneumatically from the finish mill air separators to several storage silos. From each storage silo, the cement can be further transferred either to other storage silos, to trucks, or to barges. All conveyance of finished cement is pneumatic.

7.1.2 List of Emission Units and Pollution Control Equipment\*

Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**	Date of Construction***
J-1a	Raw Material Unloading from Barge	N/A	1998
J-1b	Clinker Unloading from Barge	Barge Unloading Hopper DC	1999
J-2	Raw Material Transfer from #9 Belt to #10 Belt	N/A	1960
J-3	Raw Material Transfer from #10 Belt to #11 Belt and From #11 Belt to #12 or #13 Belts	N/A	1960
J-5	Raw Material Transfer from #12a Belt to Outside Storage	N/A	Post 1990
J-7	Reclaim of Outside Materials at Receiving Hopper South of Administrative Building	N/A	1960
J-9	Rock/Sand Transfer from #13 Belt Tripper to South Rock/Sand Storage	N/A	1960
J-11	Rock/Sand Transfer from #14 Belt Tripper to North Rock/Sand Storage	N/A	1960

Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**	Date of Construction***
J-12	Raw Material Transfer from #14 Belt and/or #18 Belt to #19 Belt and from #19 Belt to Storage Hall	N/A	1960
J-16	FCC Tank	FCC Tank DC	1960
J-17	#1 Raw Mill (Grinding and Combustion Emissions)	#1 Raw Mill - North DCs #1 and #2, South DCs #1 and #2, and Auxiliary DC	1960, Upgraded Baghouses 1994
J-21	#2 Raw Mill (Grinding and Combustion Emissions)	#2 Raw Mill - Utility DC #2 and Air Separator DC #1	1976
J-23	#2 Raw Mill - FK Pump Hopper	#2 Raw Mill - FK Pump Hopper DC #6	1976, added Baghouse 1980
J-25	Blending Silo #1	Blending Silo #1 DC	1960, Baghouse Replaced 1979
J-26	Blending Silo #2	Blending Silo #2 DC	1960, Baghouse Replaced 1979
J-27	Blending Silo #3	Blending Silo #3 DC	1960, Baghouse Replaced 1979
J-28	Blending Silo #4	Blending Silo #4 DC	1960, Baghouse Replaced 1979
J-39	#1 Kiln Schenck Feed Tank	Schenck Feed Tank DC	1980
J-41	#1 Kiln	#1 Kiln ESP	1960, Replaced #1 & #1A ESPs with #2 ESP
J-43	#1 Clinker Cooler	#1 Clinker Cooler DC	1960
J-44	#1 Kiln Clinker Elevator and Transfers from the Elevator to #26 and #30 Belts	#1 Clinker Elevator Utility DC	1960, New Control Added
J-45	#2 Kiln Feed Tank	#2 Kiln Feed Tank DC	1992
J-46	#2 Kiln Flowmeter	#2 Kiln Flowmeter DC	1992
J-47	#2 Kiln	#2 Kiln Baghouse	1975

Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**	Date of Construction***
J-49a	Waste Dust Tank	Waste Dust Tank DC	1997
J-49b	Waste Dust Load-Out Spout	Load-Out Spout DC	1975
J-50	#2 Clinker Cooler	#2 Clinker Cooler Gravel Bed Filter and #2 Clinker Cooler Vent DC	1975
J-51	#2 Kiln Clinker Elevator and Transfers from the Elevator to #27 and #31 Belts	#2 Clinker Elevator Utility DC	1977
J-52	Transfer to Outside Clinker Reclaim Hopper Then to #1 Belt	N/A	1977
J-53	Outside Clinker Crusher (Emissions from Crusher, Screen, and Transfers to and from Crusher and Screen)	Outside Clinker Crusher DC	1977
J-54	Transfer from #2 Belt to Clinker Storage Hall	N/A	1977
J-55	Transfer from #31 Belt to #32 Belt	Transfer from #31 Belt to #32 Belt DC	1975, Baghouse Added 1992
J-56	#32 Belt Discharge	#32 Belt Discharge and DC	1975, Baghouse Added 1992
J-57/58	Clinker Feed from #26 and #27 to #28 Belt in Storage Hall	Clinker Feed from #26 and #27 to #28 Belt DC	1960, DC Added 1998
J-59	Clinker Feed to Storage Hall (From #28 Belt and/or #32 Belt)	N/A	1975
J-60	Feed from Bucket Elevator to #7 Belt	N/A	1975
J-61	Feed from #7 Belt	N/A	1975

Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**	Date of Construction***
J-62	Clinker Transfer - Storage to #5 Belt	Transfer to #5 Belt DC	1975, Ductwork Modified 1998
J-64/65	Clinker Transfer - #5 Belt to #6 Belt; #6 Belt to Bucket Elevator	Transfer from #6 Belt to Bucket Elevator DC	1977, Ductwork Modified 1998
J-67	Clinker Bins Discharge to Feed Belts and Transfer from Feed Belts to #22 Belt	Clinker Bins Discharge to Feed Belts and Transfer from Feed Belts to #22 Belt DC #4	1960
J-69	Clinker/Gypsum Transfer to #23 Belt	Clinker/Gypsum Transfer to #23 Belt DC #5	1960, Baghouse Added 1993
J-70	#1 Finish Mill	#1 Finish Mill - North Main DC #1 and Auxiliary DC #3	1960, Baghouse Upgraded 1993
J-71	#1 Finish Mill - FK Pump Hopper	#1 Finish Mill - RK Pump Hopper DC	1960, Baghouse Added 1993
J-74	Clinker/Gypsum Transfer #39 Belt	Clinker/Gypsum Transfer to #39 Belt DC	1975, Baghouse Added 1992
J-75	#39 Belt Discharge	#39 Belt Discharge DC	1975, Baghouse Added 1992
J-76	#2 Finish Mill	#2 Finish Mill - Vent DC	1975, Baghouse Added 1992
J-77	#2 Finish Mill - FK Pump Hopper	#2 Finish Mill - FK Pump Hopper DC	1975
J-78	Group #1 (West) Cement Silos	Group #1 (West) Cement Silo Fill Vent DC	1960
J-79	Group #2 (East) Cement Silos	Group #2 (East) Cement Silo Fill Vent DC	1960
J-80	Upstream Barge Cement Loading Spout	Upstream Barge Cement Load Out DC	1999
J-81	Downstream Barge Cement Loading Spout	Downstream Barge Cement Load Out DC	1999

Plant Designation of Emission Unit	Emission Unit Name	Control Equipment Name**	Date of Construction***
J-82	Group #1 Cement Silos East Truck Load Out	Group #1 Cement Silos East Truck Load Out DC #1	1960
J-83	Group #1 Cement Silos West Truck Load Out	Group #1 Cement Silos West Truck/Railroad Load Out DC #2	1960
J-84	Group #1 Cement Silos West Truck/Railroad Load Out	Group #1 Cement Silos East Truck/Railroad Load Out DC #3	1960
J-85	Group #1 Cement Silos East Truck/Railroad Load Out	Group #1 Cement Silos East Truck/Railroad Load Out DC #4	1960
J-86	Group #2 Cement Silos Truck Load Out	Group #2 Cement Silos Truck Load Out DC #4	1960
J-95	#2 Kiln Back-Up Feed System	Schenck Feed Tank DC	1988
J-96	#1 Clinker Cooler Ray-Jet Burner	#1 Kiln Indirect Firing System DC	1960
J-97	#2 Clinker Cooler Ray-Jet Burner	#2 Kiln Indirect Firing System DC	1975
J-106	Raw Material Stacker	N/A	1998
J-107	Portable Clinker Stacker	N/A	1999
J-108	#2 Kiln Dust Return System	#2 Kiln Dust Return System DC	1997
J-111	Cement Surge Bin	Cement Surge Bin DC	1999
J-112	Cement Fringe Bin	Cement Fringe Bin DC	1999
J-113	#2 Finish Mill Air Separator	Air Separator DC	1999

\* The above list of emission units may not include units constructed after the submittal of the original application. However, any such units are identified in the attached state construction and operating permits that are incorporated here in (see Attachment 4). These units are permitted to operate under this permit in accordance with the conditions of these

attached permits. This list will be revised to include such units in subsequent reopening of this permit in accordance with the timely submittal of the necessary information.

\*\* In this column Dust Collector is abbreviated to DC

\*\*\* State Construction and Operating Permits (Attachment 4) provides dates of latest modification.

#### 7.1.3 Applicability Provisions and Applicable Regulations

- a. An "affected Cement Plant" for the purpose of these unit-specific conditions is an emission unit described in Conditions 7.1.1 and 7.1.2.
- b. The affected Cement Plant is subject to the emission limits identified in Condition 5.2.2.
- c. The affected Cement Plant is subject to 35 IAC Part 212 Subpart L, Particulate Matter Emissions From Process Emission Sources. This regulation is attached hereto and incorporated herein by reference (see Attachment 3).
- d. The affected Cement Plant is subject to 35 IAC Parts 212.421 and 212.422, Subpart Q, Particulate Matter Emissions From Stone, Clay, Glass and Concrete Manufacturing. This regulation is attached hereto and incorporated herein by reference (see Attachment 3).
- e. The affected Cement Plant is subject to 35 IAC Part 214 Subpart K, Sulfur Limitations from Process Emission Sources. This regulation is attached hereto and incorporated herein by reference (see Attachment 3).
- f. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from an affected cement plant, except as provided in Sections 215.302, 215.303, 215.304 of this Part and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material (see Attachment 3).
- g. The affected Cement Plant is subject to 40 CFR 60 Subparts A and y, Standards of Performance for New Pulverized Solid Fuel Firing System Under Coal Preparation Plants. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is

attached hereto and incorporated herein by reference (see Attachment 1).

- h. The affected Cement Plant is subject to the NESHAP for the Portland Cement Manufacturing Industry, 40 CFR 63 Subparts A and LLL. The Illinois EPA is administering NESHAP in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 2).

#### 7.1.4 Non-Applicability of Regulations of Concern

- a. The affected Cement Plant is not subject to 35 IAC 212.324, Process Emission Units In Certain Areas, because the source is not located in a non-attainment area for PM<sub>10</sub>, as identified in 35 IAC 212.324(a)(1).
- b. The affected cement kiln is not subject to 35 IAC 216.121 for emissions of carbon monoxide because the kiln is not by definition a fuel combustion emission unit.
- c. The affected cement kiln is not subject to 35 IAC 217.121 for emissions of nitrogen oxides because the kiln is not by definition a fuel combustion emission unit.
- d. This permit is issued based on the affected Cement Plant not being subject to 40 CFR Part 60 Subparts A and F, Standards of Performance for Portland Cement Plants pursuant to 40 CFR 63.1356.

#### 7.1.5 Operational and Production Limits and Work Practices

- a. The affected facilities shall operate in compliance with the facility Startup, Shutdown and Malfunction Plan (40 CFR 63 Subpart LLL).
- b. The Permittee shall follow good operating practices for the dust collection systems, including periodic inspection, routine maintenance and prompt repair of defects.

#### 7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Cement Plant is subject to the following:

- a. The affected Cement Plant is subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment

4). In the event that there are conflicting provisions in the incorporated State Construction and Operating Permits, the most recently issued permit conditions shall apply.

- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD) [T1].
- c. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

#### 7.1.7 Testing Requirements

- a. The affected Cement Plant is subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Cement Plant is subject to the applicable testing requirements in 35 IAC Part 212 Subpart A. This regulation is attached hereto and incorporated herein by reference (see Attachment 3).
- c. The affected Cement Plant is subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 4).

#### 7.1.8 Monitoring Requirements

- a. The affected Cement Plant is subject to the applicable monitoring requirements in 40 CFR 60 and 40 CFR 63. These regulations are attached hereto and incorporated herein by reference (see Attachment 1).

#### 7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Cement Plant to demonstrate compliance with Conditions 5.5.1, 7.1.3, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. The affected Cement Plant is subject to the applicable recordkeeping requirements in 35 IAC Part 212, Subparts A. These regulations are attached hereto and incorporated herein by reference (see Attachment 3).

- b. The affected Cement Plant is subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 4).
- c. Records addressing use of good operating practices for the dust collection systems:
  - i. Records for periodic inspection of the dust collection systems with date, individual performing the inspection, and nature of inspection; and
  - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- d. The affected Cement Plant is subject to the applicable recordkeeping requirements in 40 CFR 60.65 and 40 CFR 63 Subpart LLL. These regulations are attached hereto and incorporated herein by reference (see Attachment 1).
- e. Monthly and aggregate annual NO<sub>x</sub>, PM, SO<sub>2</sub>, and VOM emissions from the affected Cement Plant shall be maintained, based on material throughput/production, fuel usage and the applicable emission factors, with supporting calculations.

#### 7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected Cement Plant with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The affected Cement Plant is subject to the applicable reporting requirements in 35 IAC Part 212, Subparts A and Q. These regulations are attached hereto and incorporated herein by reference (see Attachment 3).
- b. The affected Cement Plant is subject to the applicable reporting requirements established in State Construction and Permits, which have been attached hereto and incorporated herein by reference (see Attachment 4).
- c. The affected Cement Plant is subject to the applicable reporting requirements in 40 CFR 60 and 40

CFR 63 Subpart LLL. These regulations are attached hereto and incorporated herein by reference (see Attachment 1).

- d. Emissions of NO<sub>x</sub>, PM, SO<sub>2</sub>, and/or VOM in excess of limits in Condition 7.2.6 within 30 days of such an occurrence.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.1.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formulas listed below:

To determine compliance with Conditions 5.5.1, 7.1.3 and 7.1.6, emissions from the affected Cement Plant shall be calculated based on the emission rates from the State Construction and Operating Permits (See attachment 4) and/or applicable emission factors from AP-42, Volume I, Fifth Edition, Supplement D, January, 1995 and subsequent revisions.

7.2 Unit 02: Fugitive Emissions

7.2.1 Description

Fugitive emissions are defined as those emissions, which would not reasonably pass through a stack, vent or other functionally equivalent opening.

7.2.2 List of Emission Units

Plant Designation of Emission Unit	Description of Emission Unit
J-100	Handling of Materials Stored Outside
J-101	Alternate Raw/Intermediate Material Unloading
J-102	Material Transfers Without 100 Percent Capture Efficiencies
J-103	Storage Piles
J-104	Unpaved Haul Roads
J-105	Paved Haul Roads

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected fugitive emission sources" for the purpose of these unit-specific conditions, are emission sources described in Conditions 7.2.1 and 7.2.2.
- b. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.

7.2.4 Non-Applicability of Regulations of Concern

- a. The affected fugitive emission sources of PM are not subject to the requirements of 35 IAC 212.321, Emissions of Particulate Matter from Process Emission Units, because due to the unique nature of this process, such rules cannot reasonably be applied.

7.2.5 Operational and Production Limits and Work Practices

None

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected fugitive emission sources are subject to the following:

- a. The affected fugitive emission sources are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 4). In the event that there are conflicting provisions in the incorporated State Construction and Operating Permits, the most recently issued permit conditions shall apply.
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD) [T1].
- c. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

7.2.7 Testing Requirements

None

7.2.8 Inspection Requirements

None

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected fugitive emission sources to demonstrate compliance with Conditions 5.5.1, 7.2.3, and 7.2.6, pursuant to Section 39.5(7)(b) of the Act:

- a. The affected fugitive emission sources are subject to the applicable recordkeeping requirements in 35 IAC Part 212, Subpart A. These regulations are attached hereto and incorporated herein by reference (see Attachment 3).
- b. The affected fugitive emission sources are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 4).

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the affected fugitive emission source with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports

shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

Compliance with the limits in Conditions 5.5.1 shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors listed below:

- a. To determine compliance with Conditions 5.5.1, 7.2.3 and 7.2.6, PM emissions from the affected fugitive emission sources shall be calculated based on the applicable emission factors for Fugitive dust sources, Section 13.2, AP-42, Volume I, Fifth Edition, Supplement D, January, 1995.

## 8.0 GENERAL PERMIT CONDITIONS

### 8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after September 7, 2002 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

### 8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

### 8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

As of the date of issuance of this permit, there are no such economic incentive, marketable permit or emission trading programs that have been approved by USEPA.

### 8.4 Operational Flexibility/Anticipated Operating Scenarios

#### 8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

#### 8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without

applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
  - i. Describe the physical or operational change;
  - ii. Identify the schedule for implementing the physical or operational change;
  - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
  - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
  - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

#### 8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

## 8.6 Reporting Requirements

### 8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

### 8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and

- g. Any proposed use of an alternative test method, with detailed justification.

#### 8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

#### 8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
  - i. Illinois EPA - Air Compliance Section  
  
Illinois Environmental Protection Agency  
Bureau of Air  
Compliance Section (MC 40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276
  - ii. Illinois EPA - Air Regional Field Office  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
5415 North University  
Peoria, Illinois 61614

iii. Illinois EPA - Air Permit Section

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section (MC 11)  
P.O. Box 19506  
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AE - 17J)  
Air & Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

## 9.0 STANDARD PERMIT CONDITIONS

### 9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

### 9.2 General Obligations of Permittee

#### 9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control

equipment), practices, or operations regulated or required under this permit;

- d. Sample or monitor any substances or parameters at any location:
  - i. At reasonable times, for the purposes of assuring permit compliance; or
  - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

#### 9.4 Obligation to Comply with Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

#### 9.5 Liability

##### 9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

##### 9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

##### 9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

##### 9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any

loss due to damage, installation, maintenance, or operation of the source.

#### 9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

### 9.6 Recordkeeping

#### 9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

#### 9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

#### 9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].
- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

### 9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

### 9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance

certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

#### 9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

#### 9.10 Defense to Enforcement Actions

##### 9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

##### 9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
  - i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency.

Normally, an act of God such as lightning or flood is considered an emergency;

- ii. The permitted source was at the time being properly operated;
  - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
  - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

#### 9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

#### 9.12 Reopening and Reissuing Permit for Cause

##### 9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

#### 9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

#### 9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

#### 9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

#### 9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements

underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

#### 9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(1), (n), and (o) of the Act].

## 10.0 ATTACHMENTS

The following permits and attachments contain applicable requirements to this source and are an integral part of this permit. The permit conditions contained in these attachments should be thoroughly reviewed and complied with, including all emission limitations, monitoring, record keeping and reporting. Any requirements these permits and attachments that conflict with those requirements found in Sections 3 through 9 are superseded by those found in Sections 3 through 9.

### 10.1 Attachment 1 - Applicable New Source Performance Standards (NSPS)

#### 10.1.1 40 CFR 60 Subpart Y--Standards of Performance for Coal Preparation Plants

10.2 Attachment 2 - Applicable National Emission Standards for  
Hazardous Air Pollutants (NESHAP)

10.2.1 40 CFR 63 Subpart LLL--National Emission Standards for  
Hazardous Air Pollutants: Portland Cement Manufacturing  
Industry

10.3 Attachment 3- Applicable Regulations from 35 Illinois  
Administrative Code, Subtitle B: Air Pollution,  
Chapter I: Pollution Control Board

10.3.1 35 IAC Part 212, Emission Standards and Limitations for  
Visible and Particulate Matter Emissions from Stationary  
Sources

**Subpart A: General**

**Section 212.100 Scope and Organization**

- a. This Part contains standards and limitations for visible and particulate matter emissions from stationary emission units.
- b. Permits for sources subject to this Part may be required pursuant to 35 Ill. Adm. Code 201.
- c. Notwithstanding the provisions of this Part, the air quality standards contained in 35 Ill. Adm. Code 243 may not be violated.
- d. This Part includes Subparts which are arranged as follows:
  - i. Subpart A: General Provisions;
  - ii. Subpart B: Visible Emissions;
  - iii. Subparts C-J: Incinerators and Fuel Combustion Emission Units;
  - iv. Subparts K-M: Fugitive and Process Emission Units;
  - v. Subparts N-T: Site specific and industry specific rules; and
  - vi. Subpart U: Additional control measures.
- e. Rules have been grouped for the convenience of the public; the scope of each is determined by its language and history.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**Section 212.107 Measurement Method for Visible Emissions**

For both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method 22, 40 CFR part 60,

Appendix A, incorporated by reference in Section 212.113 of this Subpart, except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. This Subpart shall not apply to Section 212.301 of this Part.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**Section 212.108 Measurement Methods for PM-10 Emissions and Condensable PM-10 Emissions**

- a. Emissions of PM-10 shall be measured by any of the following methods at the option of the owner or operator of an emission unit.
  - i. Method 201, 40 CFR part 51, Appendix M, incorporated by reference in Section 212.113 of this Subpart.
  - ii. Method 201A, 40 CFR part 51, Appendix M, incorporated by reference in Section 212.113 of this Subpart.
  - iii. Method 5, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Subpart, provided that all particulate matter measured by Method 5 shall be considered to be PM-10.
- b. Emissions of condensable PM-10 shall be measured by Method 202, 40 CFR part 51, Appendix M, incorporated by reference in Section 212.113 of this Subpart.
- c. The volumetric flow rate and gas velocity for stack test methods shall be determined in accordance with Methods 1, 1A, 2, 2A, 2C, 2D, 3, or 4, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Subpart.
- d. Upon a written notification by the Illinois Environmental Protection Agency (Agency), the owner or operator of a PM-10 emission unit subject to this Section shall conduct the applicable testing for PM-10 emissions, condensable PM-10 emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Agency within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Agency.
- e. A person planning to conduct testing for PM-10 or condensable PM-10 emissions to demonstrate compliance

shall give written notice to the Agency of that intent. Such notification shall be given at least thirty (30) days prior to initiation of the test unless a shorter pre-notification is agreed to by the Agency. Such notification shall state the specific test methods from subsection (a) of this Section that will be used.

- f. The owner or operator of an emission unit subject to this Section shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- g. This Section shall not affect the authority of the United States Environmental Protection Agency (USEPA) under Section 114 of the Clean Air Act (CAA) (42 U.S.C. § 7414 (1990)).

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

#### **Section 212.109 Measurement Methods for Opacity**

Except as otherwise provided in this Part, and except for the methods of data reduction when applied to Sections 212.122 and 212.123 of this Part, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, incorporated by reference in Section 212.113 of this Subpart, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

#### **Section 212.110 Measurement Methods For Particulate Matter**

- a. Measurement of particulate matter emissions from stationary emission units subject to this Part shall be conducted in accordance with 40 CFR part 60, Appendix A, Methods 5, 5A, 5D, or 5E, as incorporated by reference in Section 212.113 of this Subpart.
- b. The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR part 60,

Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4, incorporated by reference in Section 212.113 of this Subpart.

- c. Upon a written notification by the Agency, the owner or operator of a particulate matter emission unit subject to this Part shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Agency within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Agency.
- d. A person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Agency of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Agency. Such notification shall state the specific test methods from this Section that will be used.
- e. The owner or operator of an emission unit subject to this Part shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- f. This Section shall not affect the authority of the USEPA under Section 114 of the CAA.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**Section 212.111 Abbreviations and Units**

- a. The following abbreviations are used in this Part:

Btu	British thermal units (60 1/4°F)
dscf	dry standard cubic foot
Ft	foot
ft <sup>2</sup>	square feet
Fpm	feet per minute
Gal	gallon
gr	grains
gr/scf	grains per standard cubic foot
gr/dscf	grains per dry standard cubic foot
Hr	hour
J	Joule
Kg	kilogram
kg/MW-hr	kilograms per megawatt-hour
Km	kilometer
L	liter

Lbs	pounds
Lbs/hr	pounds per hour
Lbs/mmBtu	pounds per million Btu
M	meter
m <sup>2</sup>	square meters
mph	miles per hour
mg	milligram
mg/scm	milligrams per standard cubic meter
mg/dscm	milligrams per dry standard cubic meter
mg/L	milligrams per liter
Mg	megagram, metric ton or tonne
mi	mile
mmBtu	million British thermal units
mmBtu/hr	million British thermal units per hour
MW	megawatt; one million watts
MW-hr	megawatt-hour
µg	nanogram; one billionth of a gram
µg/J	nanograms per Joule
scf	standard cubic foot
scfm	standard cubic feet per minute
scm	standard cubic meter
T	short ton (2000 lbs)
yd <sup>2</sup>	square yards

b. The following conversion factors have been used in this Part:

English	Metric
2.205 lb	1 kg
1 T	0.907 Mg
1 lb/T	0.500 kg/Mg
mmBtu/hr	0.293 MW
1 lb/mmBtu	1.548 kg/MW-hr or 430 ng/J
1 mi	1.61 km
1 gr	64.81 mg
1 gr/scf	2289 mg/scm
1 ft <sup>2</sup>	0.0929 m <sup>2</sup>
1 ft	0.3048 m
1 gal	3.785 L

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**Section 212.112 Definitions**

The definitions of 35 Ill. Adm. Code 201 and 211 apply to this Part.

(Source: Added and codified at 7 Ill. Reg. 13591)

### Section 212.113 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

- a. 40 CFR part 60, Appendix A (1991):
  - i. Method 1: Sample and Velocity Traverses for Stationary Sources;
  - ii. Method 1A: Sample and Velocity Traverses for Stationary Source with Small Stacks or Ducts;
  - iii. Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S pitot tube);
  - iv. Method 2A: Direct Measurement of Gas Volume Through Pipes and Small Ducts;
  - v. Method 2C: Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube);
  - vi. Method 2D: Measurement of Gas Volumetric Flow Rates in Small Pipes and Ducts;
  - vii. Method 3: Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight;
  - viii. Method 4: Determination of Moisture Content in Stack Gases;
  - ix. Method 5: Determination of Particulate Emissions From Stationary Sources;
  - x. Method 5A: Determination of Particulate Emissions From the Asphalt Processing and Asphalt Roofing Industry;
  - xi. Method 5D: Determination of Particulate Matter Emissions From Positive Pressure Fabric Filters;
  - xii. Method 5E: Determination of Particulate Emissions From the Wool Fiberglass Insulation Manufacturing Industry;
  - xiii. Method 9: Visual Determination of the Opacity of Emissions from Stationary Sources;
  - ix. Method 22: Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares.

- b. 40 CFR part 51 Appendix M (1994):
  - i. Method 201: Determination of PM-10 Emissions;
  - ii. Method 201A: Determination of PM-10 Emissions (Constant Sampling Rate Procedure);
  - iii. Method 202: Determination of Condensable Particulate Emissions from Stationary Sources.
- c. 40 CFR 60.672(b), (c), (d) and (e) (1991).
- d. 40 CFR 60.675(c) and (d) (1991).
- e. ASAE Standard 248.2, Section 9, Basis for Stating Drying Capacity of Batch and Continuous-Flow Grain Dryers, American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085.
- f. U.S. Sieve Series, ASTM-E11, American Society of Testing Materials, 1916 Race Street, Philadelphia, PA 19103.
- g. Standard Methods for the Examination of Water and Wastewater, Section 209C, "Total Filterable Residue Dried at 103 - 105° C," 15th Edition, 1980, American Public Health Association, 1015 Fifteenth Street, N.W., Washington, D.C. 20005.
- h. "Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events," U.S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards Monitoring and Data Analysis Division, Research Triangle Park, N.C. 27711, EPA-450/4-86-007 July 1986.
- i. "Guideline on Air Quality Models (Revised)," U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, EPA-450/2-78-027R July 1986.
- j. 40 CFR 50, Appendix K (1992), "Interpretation of the National Ambient Air Quality Standard for Particulate Matter".

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**SUBPART B: VISIBLE EMISSIONS**

**Section 212.121 Opacity Standards (Repealed)**

(Source: Repealed at 20 Ill. Reg.7605, effective May 22, 1996)

**Section 212.122 Visible Emissions Limitations for Certain Emission Units For Which Construction or Modification Commenced On or After April 14, 1972**

- a. No person shall cause or allow the emission of smoke or other particulate matter into the atmosphere from any fuel combustion emission unit for which construction or modification commenced on or after April 14, 1972, with actual heat input greater than 73.2 MW (250 mmBtu/hr), having an opacity greater than 20 percent.
- b. The emissions of smoke or other particulate matter from any such emission unit may have an opacity greater than 20 percent but not greater than 40 percent for a period or periods aggregating 3 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**Section 212.123 Visible Emissions Limitations for All Other Emission Units**

- a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.
- b. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such

person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**Section 212.124 Exceptions**

- a. Sections 212.122 and 212.123 of this Subpart shall apply during times of startup, malfunction and breakdown except as provided in the operating permit granted in accordance with 35 Ill. Adm. Code 201.
- b. Sections 212.122 and 212.123 of this Subpart shall not apply to emissions of water or water vapor from an emission unit.
- c. An emission unit which has obtained an adjusted opacity standard pursuant to Section 212.126 of this Subpart shall be subject to that standard rather than the limitations of Section 212.122 or 212.123 of this Subpart.
- d. Compliance with the particulate regulations of this Part shall constitute a defense.
  - i. For all emission units which are not subject to Chapters 111 or 112 of the CAA and Sections 212.201, 212.202, 212.203 or 212.204 of this Part but which are subject to Sections 212.122 or 212.123 of this Subpart: the opacity limitations of Sections 212.122 and 212.123 of this Subpart shall not apply if it is shown that the emission unit was, at the time of such emission, in compliance with the applicable particulate emissions limitations of Subparts D through T of this Part.
  - ii. For all emission units which are not subject to Chapters 111 or 112 of the CAA but which are subject to Sections 212.201, 212.202, 212.203 or 212.204 of this Part:
    - A. An exceedance of the limitations of Section 212.122 or 212.123 of this Subpart shall constitute a violation of the applicable particulate limitations of Subparts D through T of this Part. It shall be a defense to a violation of the applicable particulate limitations if, during a subsequent performance test conducted within a reasonable time not to exceed 60 days, under the same operating

conditions for the unit and the control devices, and in accordance with Method 5, 40 CFR part 60, incorporated by reference in Section 212.113 of this Part, the owner or operator shows that the emission unit is in compliance with the particulate emission limitations.

- B. It shall be a defense to an exceedance of the opacity limit if, during a subsequent performance test conducted within a reasonable time not to exceed 60 days, under the same operating conditions of the emission unit and the control devices, and in accordance with Method 5, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Part, the owner or operator shows that the emission unit is in compliance with the allowable particulate emissions limitation while, simultaneously, having visible emissions equal to or greater than the opacity exceedance as originally observed.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

#### **Section 212.125 Determination of Violations**

Violations of Sections 212.122 and 212.123 of this Subpart shall be determined:

- a. By visual observations conducted in accordance with Section 212.109 of this Part; or
- b. By the use of a calibrated smoke evaluation device approved by the Agency as specified in Subpart J of 35 Ill. Adm. Code 201; or
- c. By the use of a smoke monitor located in the stack and approved by the Agency as specified in Subpart J or L of 35 Ill. Adm. Code 201.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

#### **Section 212.126 Adjusted Opacity Standards Procedures**

- a. Pursuant to Section 28.1 of the Environmental Protection Act (Act) [415 ILCS 5/28.1], and in accordance with 35 Ill. Adm. Code 106, Subpart E, provisions for adjusted standards for visible emissions for emission units subject to Sections

212.201, 212.202, 212.203, or 212.204 of this Part shall be granted by the Board to the extent consistent with federal law based upon a demonstration by such owner or operator that the results of a performance test conducted pursuant to this Section, Section 212.110 of this Part, and Methods 5 and 9 of 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Part, show that the emission unit meets the applicable particulate emission limitations at the same time that the visible emissions exceed the otherwise applicable standards of Sections 212.121 through 212.125 of this Subpart. Such adjusted opacity limitations:

- i. Shall be specified as a condition in operating permits issued pursuant to 35 Ill. Adm. Code 201 and Section 39.5 of the Act;
  - ii. Shall substitute for that limitation otherwise applicable;
  - iii. Shall not allow an opacity greater than 60 percent at any time; and
  - iv. Shall allow opacity for one six-minute averaging period in any 60 minute period to exceed the adjusted opacity standard.
- b. For the purpose of establishing an adjusted opacity standard, any owner or operator of an emission unit which meets the requirements of subsection (a) of this Section, may request the Agency to determine the average opacity of the emissions from the emission unit during any performance tests conducted pursuant to Section 212.110 of this Part and Methods 5 and 9 of 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Part. The Agency shall refuse to accept the results of emissions tests if not conducted pursuant to this Section.
- c. Any request for the determination of the average opacity of emissions shall be made in writing, shall include the time and place of the performance test and test specifications and procedures, and shall be submitted to the Agency at least thirty (30) days before the proposed test date.
- d. The Agency will advise the owner or operator of an emission unit which has requested an opacity determination of any deficiencies in the proposed test specifications and procedures as expeditiously as practicable but no later than ten (10) days prior

to the proposed test date so as to minimize any disruption of the proposed testing schedule.

- e. The owner or operator shall allow Agency personnel to be present during the performance test.
- f. The method for determining an adjusted opacity standard is as follows:
  - i. A minimum of 60 consecutive minutes of opacity readings obtained in accordance with Test Method 9, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Part, shall be taken during each sampling run. Therefore, for each performance test (which normally consists of three sampling runs), a total of three sets of opacity readings totaling three hours or more shall be obtained. Concurrently, the particulate emissions data from three sampling runs obtained in accordance with Test Method 5, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Part, shall also be obtained.
  - ii. After the results of the performance tests are received from the emission unit, the status of compliance with the applicable particulate emissions limitation shall be determined by the Agency. In accordance with Test Method 5, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Part, the average of the results of the three sampling runs must be less than the allowable particulate emission rate in order for the emission unit to be considered in compliance. If compliance is demonstrated, then only those test runs with results which are less than the allowable particulate emission rate shall be considered as acceptable test runs for the purpose of establishing an adjusted opacity standard.
  - iii. The opacity readings for each acceptable sampling run shall be divided into sets of 24 consecutive readings. The six (6) minute average opacity for each set shall be determined by dividing the sum of the 24 readings within each set by 24.
  - iv. The second highest six (6) minute average opacity obtained in subsection (f)(3) of this Section shall be selected as the adjusted opacity standard.

- g. The owner or operator shall submit a written report of the results of the performance test to the Agency at least thirty (30) days prior to filing a petition for an adjusted standard with the Board.
- h. If, upon review of such owner's or operator's written report of the results of the performance tests, the Agency determines that the emission unit is in compliance with all applicable emission limitations for which the performance tests were conducted, but fails to comply with the requirements of Section 212.122 or 212.123 of this Subpart, the Agency shall notify the owner or operator as expeditiously as practicable, but no later than twenty (20) days after receiving the written report of any deficiencies in the results of the performance tests.
- i. The owner or operator may petition the Board for an adjusted visible emission standard pursuant to 35 Ill. Adm. Code 106.Subpart E. In addition to the requirements of 35 Ill. Adm. Code 106.Subpart E, the petition shall include the following information:
  - i. A description of the business or activity of the petitioner, including its location and relevant pollution control equipment;
  - ii. The quantity and type of materials discharged from the emission unit or control equipment for which the adjusted standard is requested;
  - iii. A copy of any correspondence between the petitioner and the Agency regarding the performance tests which form the basis of the adjusted standard request;
  - iv. A copy of the written report submitted to the Agency pursuant to subsection (g) of this Section;
  - v. A statement that the performance tests were conducted in accordance with this Section and the conditions and procedures accepted by the Agency pursuant to Section 212.110 of this Part;
  - vi. A statement regarding the specific limitation requested; and
  - vii. A statement as to whether the Agency has sent notice of deficiencies in the results of the performance test pursuant to subsection (h) of this Section and a copy of said notice.

- j. In order to qualify for an adjusted standard the owner or operator must justify as follows:
  - i. That the performance tests were conducted in accordance with Test Methods 5 and 9, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113 of this Part, and the conditions and procedures accepted by the Agency pursuant to Section 212.110 of this Part;
  - ii. That the emission unit and associated air pollution control equipment were operated and maintained in a manner so as to minimize the opacity of the emissions during the performance tests; and
  - iii. That the proposed adjusted opacity standard was determined in accordance with subsection (f) of this Section.
- k. Nothing in this Section shall prevent any person from initiating or participating in a rulemaking, variance, or permit appeal proceeding before the Board.

(Source: Amended at 20 Ill. Reg.7605, effective May 22, 1996)

**SUBPART L: PARTICULATE MATTER EMISSIONS FROM PROCESS EMISSION SOURCES**

**Section 212.321 Process Emission Units For Which Construction or Modification Commenced On or After April 14, 1972**

- a. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.
- b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = A (P)^B$$

Where:

P = Process weight rate; and  
 E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

- c. Limits for Process Emission Units For Which Construction of Modification Commenced On or After April 14,1972

Metric		English	
P	E	P	E
Mg/hr	kg/hr	T/hr	lbs/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.20	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.	3.9	10.00	8.70
13.	4.8	15.00	10.80
18.	5.7	20.00	12.50
23.	6.5	25.00	14.00
27.	7.1	30.00	15.60
32.	7.7	35.00	17.00
36.	8.2	40.00	18.20
41.	8.8	45.00	19.20
45.	9.3	50.00	20.50
90.	13.4	100.00	29.50
140.	17.0	150.00	37.00
180.	19.4	200.00	43.00

Metric		English	
P	E	P	E
Mg/hr	kg/hr	T/hr	lbs/hr
230.	22.	250.00	48.50
270.	24.	300.00	53.00
320.	26.	350.00	58.00
360.	28.	400.00	62.00
408.	30.1	450.00	66.00
454.	30.4	500.00	67.00

Where:

P = Process weight rate in metric or T/hr, and  
E = Allowable emission rate in kg/hr or lbs/hr.

(Source: Amended at 20 Ill. Reg. 7605, effective May 22, 1996)

**Section 212.322 Process Emission Units For Which Construction or Modification Commenced Prior to April 14,1972.**

- a. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14,1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.
- b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = C + A (P)^B$$

Where:

P = Process weight rate; and,  
E = Allowable emission rate; and,

1. For process weight rates up to 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

2. For process weight rates in excess or 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	-18.4	-40.0

c. Limits for Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972

P Mg/hr	Metric	English	
	E kg/hr	P T/hr	E lbs/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.20	1.40
0.3	0.89	0.30	1.83
0.4	1.07	0.40	2.22
0.5	1.25	0.50	2.58
0.7	1.56	0.75	3.38
0.9	1.85	1.00	4.10
1.8	2.9	2.00	6.52
2.7	3.9	3.00	8.56
3.6	4.7	4.00	10.40
4.5	5.4	5.00	12.00
9.	8.7	10.00	19.20
13.	11.1	15.00	25.20
18.	13.8	20.00	30.50
23.	16.2	25.00	35.40
27.2	18.15	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

Where:

P = Process weight rate in Mg/hr or T/hr, and

E = Allowable emission rate in kg/hr or lbs/hr.

(Source: Amended at 20 Ill. Reg. 7605, effective May 22, 1996)

**Section 212.323 Stock Piles**

Sections 212.321 and 212.322 of this Subpart shall not apply to emission units, such as stock piles of particulate matter, to which, because of the disperse nature of such emission units, such rules cannot reasonably be applied.

(Source: Amended at 20 Ill. Reg. 7605, effective May 22, 1996)

**SUBPART Q: STONE, CLAY, GLASS AND CONCRETE MANUFACTURING**

**Section 212.421 Portland Cement Processes For Which Construction of Modification Commenced On or After April 14, 1972**

No person shall cause or allow the emission of smoke or other particulate matter from any Portland cement process for which construction or modification commenced on or after April 14, 1972, into the atmosphere having an opacity greater than 10 percent.

(Source: Amended at 20 Ill. Reg. 7605, effective May 22, 1996)

**Section 212.422 Portland Cement Manufacturing Processes**

Section 212.321 of this Part shall not apply to the kilns and coolers of Portland cement manufacturing processes.

- a. The kilns and clinker coolers of Portland cement manufacturing processes for which construction commenced prior to April 14, 1972, shall comply with the emission standards and limitations of Section 212.322 of this Part.
- b. The kilns and clinker coolers of Portland cement manufacturing processes for which construction or modification commenced on or after April 14, 1972, shall comply with the following emission standards and limitations:
  - i. No person shall cause or allow the emission of particulate matter into the atmosphere from any such kiln the exceed 0.3 lbs/T of feed to the kiln.

- ii. No person shall cause or allow the emission of particulate matter into the atmosphere from any such clinker cooler to exceed 0.1 lbs/T of feed to the kiln.

(Source: Amended at 20 Ill. Reg. 7605, effective May 22, 1996)

10.3.2 35 IAC Part 215, Emission Standards and Limitations for Organic Material Emissions from Stationary Sources

**SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS**

**Section 215.121 Storage Containers**

No person shall cause or allow the storage of any volatile organic liquid with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3 K (70 F) or any gaseous organic material in any stationary tank, reservoir or other container of more than 151 cubic meters (40,000 gal) capacity unless such tank, reservoir or other container:

- a. Is a pressure tank capable of withstanding the vapor pressure of such liquid or the pressure of the gas, so as to prevent vapor or gas loss to the atmosphere at all times; or,
- b. Is designed and equipped with one of the following vapor loss control devices:
  - i. A floating roof which rests on the surface of the volatile organic liquid and is equipped with a closure seal or seals between the roof edge and the tank wall. Such floating roof shall not be permitted if the volatile organic liquid has a vapor pressure of 86.19 kPa (12.5 psia) or greater at 294.3 K (70 F). No person shall cause or allow the emission of air contaminants into the atmosphere from any gauging or sampling devices attached to such tanks, except during sampling or maintenance operations.
  - ii. A vapor recovery system consisting of:
    - A. A vapor gathering system capable of collecting 85% or more of the uncontrolled volatile organic material that would be otherwise emitted to the atmosphere; and,
    - B. A vapor disposal system capable of processing such volatile organic material

so as to prevent its emission to the atmosphere. No person shall cause or allow the emission of air contaminants into the atmosphere from any gauging or sampling devices attached to such tank, reservoir or other container except during sampling.

- iii. Other equipment or means of equal efficiency approved by the Agency according to the provisions of 35 Ill. Adm. Code 201.

(Source: Amended at 12 Ill. Reg. 815, effective December 24, 1987)

#### **Section 215.122 Loading Operations**

- a. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading facility having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading facility is equipped with submerged loading pipes, submerged fill, or a device that is equally effective in controlling emissions and is approved by the Agency according to the provisions of 35 Ill. Adm. Code 201.
- b. No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe, submerged fill, or an equivalent device approved by the Agency according to the provisions of 35 Ill. Adm. Code 201 or unless such tank is a pressure tank as described in Section 215.121(a) or is fitted with a recovery system as described in Section 215.121(b)(2).
- c. Exception: If no odor nuisance exists the limitations of this Section shall only apply to the loading of volatile organic liquid with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).

(Source: Amended at 14 Ill. Reg. 9173, effective May 23, 1990)

#### **Section 215.123 Petroleum Liquid Storage Tanks**

- a. The requirements of subsection (b) below shall not apply to any stationary storage tank:

- i. Equipped before January 1, 1979 with one of the vapor loss control devices specified in Section 215.121(b) of this Part, except Section 215.121(b)(1) of this Part;
  - ii. With a capacity of less than 151.42 cubic meters;
  - iii. With a capacity of less than 1,600 cubic meters (422,400 gallons) and used to store produced crude oil and condensate prior to custody transfer;
  - iv. With a capacity of less than 1,430 cubic meters (378,000 gallons) and used to store produced oil or condensate in crude oil gathering;
  - v. Subject to new source performance standards for storage vessels of petroleum liquid, 40 CFR 60, incorporated by reference in Section 215.105 of this Part. *The provisions of Section 111 of the Clean Air Act relating to standards of performance for new stationary sources...are applicable in this State and are enforceable under [The Environmental Protection Act].* (Ill. Rev. Stat., Ch. 111 1/2, par. 1009.1(b)).
  - vi. In which volatile petroleum liquid is not stored; or
  - vii. Which is a pressure tank as described in Section 215.121(a) of this Part.
- b. Subject to subsection (a) above no owner or operator of a stationary storage tank shall cause or allow the storage of any volatile petroleum liquid in the tank unless:
- i. The tank is equipped with one of the vapor loss control devices specified in Section 215.121(b) of this Part;
  - ii. There are no visible holes, tears or other defects in the seal or any seal fabric or material of any floating roof;
  - iii. All openings of any floating roof deck, except stub drains, are equipped with covers, lids or seals such that:
    - A. The cover, lid or seal is in the closed position at all times except when

petroleum liquid is transferred to or from the tank;

- B. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
  - C. Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting;
- iv. Routine inspections of floating roof seals are conducted through roof hatches once every six months;
  - v. A complete inspection of the cover and seal of any floating roof tank is made whenever the tank is emptied for reasons other than the transfer of petroleum liquid during the normal operation of the tank, or whenever repairs are made as a result of any semi-annual inspection or incidence of roof damage or defect; and
  - vi. A record of the results of each inspection conducted under subsection (b)(4) or (b)(5) above is maintained.
- c. Owners and operators of petroleum liquid storage tanks were required to have compliance schedules as summarized in Appendix C of this Part.

(Source: Amended at 16 Ill. Reg. 13849, effective August 24, 1992)

#### **Section 215.124 External Floating Roofs**

- a. In addition to meeting the requirements of Section 215.123(b), no owner or operator of a stationary storage tank equipped with an external floating roof shall cause or allow the storage of any volatile petroleum liquid in the tank unless:
  - i. The tank has been fitted with a continuous secondary seal extending from the floating roof to the tank wall (rim mounted secondary seal) or any other device which controls volatile organic material emissions with an effectiveness equal to or greater than a rimmounted secondary seal;
  - ii. Each seal closure device meets the following requirements:

- A. The seal is intact and uniformly in place around the circumference of the floating roof between the floating roof and tank wall; and
  - B. The accumulated area of gaps exceeding 0.32 centimeter (1/8 inch) in width between the secondary seal and the tank wall shall not exceed 21.2 square centimeters per meter of tank diameter (1.0 square inches per foot of tank diameter).
- iii. Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers across at least 90 percent of the area of the opening;
  - iv. Openings are equipped with projections into the tank which remain below the liquid surface at all times;
  - v. Inspections are conducted prior to May 1 of each year to insure compliance with subsection (a);
  - vi. The secondary seal gap is measured prior to May 1 of each year;
  - vii. Records of the types of volatile petroleum liquid stored, the maximum true vapor pressure of the liquid as stored, the results of the inspections and the results of the secondary seal gap measurements are maintained and available to the Agency, upon verbal or written request, at any reasonable time for a minimum of two years after the date on which the record was made.
- b. Subsection (a) does not apply to any stationary storage tank equipped with an external floating roof:
    - i. Exempted under Section 215.123(a)(2) through 215.123(a)(6);
    - ii. Of welded construction equipped with a metallic-type shoe seal having a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal);
    - iii. Of welded construction equipped with a metallic-type shoe seal, a liquid-mounted foam seal, or a liquid-mounted liquid-filled-type seal, or other closure device of equivalent

control efficiency approved by the Agency in which a petroleum liquid with a true vapor pressure less than 27.6 kPa (4.0 psia) at 294.3 K (70 F) is stored; or

- iv. Used to store crude oil.

(Source: Amended at 14 Ill. Reg. 9173, effective May 23, 1990)

**Section 215.125 Compliance Dates and Geographical Areas**

- a. Except as otherwise stated in subsection (b), every owner or operator of an emission source subject to Sections 215.123 or 215.124 shall comply with its standards and limitations by December 31, 1983.
- b. If an emission source is not located in one of the counties listed below and is also not located in any county contiguous thereto, the owner or operator of the emission source shall comply with the requirements of Sections 215.123 and 215.124 no later than December 31, 1987:

Cook	Macoupin
DuPage	Madison
Kane	Monroe
Lake	Saint Clair

(BOARD NOTE: These counties are proposed to be designated as nonattainment by the United States Environmental Protection Agency at 47 Fed. Reg. 31588, July 21, 1982).

- c. Notwithstanding subsection (b), if any county is designated as nonattainment by the United States Environmental Protection Agency (USEPA) at any time subsequent to the effective date of this Section, the owner or operator of an emission source located in that county or any county contiguous to that county who would otherwise be subject to the compliance date in subsection (b) shall comply with the requirements of Sections 215.123 and 215.124 within one year from the date of redesignation but in no case later than December 31, 1987.

(Source: Adopted at 7 Ill. Reg. 1244, effective January 21, 1983)

**Section 215.126 Compliance Plan**

- a. The owner or operator of an emission source subject to Section 215.125(a) shall submit to the Agency a compliance plan as required by 35 Ill. Adm. Code

201.241, including a project completion schedule where applicable, no later than April 21, 1983.

- b. The owner or operator of an emission source subject to Section 215.125(b) shall submit to the Agency a compliance plan, including a project completion schedule where applicable, no later than December 31, 1986.
- c. The owner or operator of an emission source subject to Section 215.125(c) shall submit a compliance plan, including a project completion schedule within 90 days after the date of redesignation, but in no case later than December 31, 1986.
- d. Unless the submitted compliance plan or schedule is disapproved by the Agency, the owner or operator of a facility or emission source subject to the rules specified in subsections (a), (b) or (c) may operate the emission source according to the plan and schedule as submitted.
- e. The plan and schedule shall meet the requirements of 35 Ill. Adm. Code 201.241 including specific interim dates as required in 35 Ill. Adm. Code 201.242.

(Source: Adopted at 7 Ill. Reg. 1244, effective January 21, 1983)

#### **Section 215.127 Emissions Testing**

- a. Any tests of organic material emissions, including tests conducted to determine control equipment efficiency, shall be conducted in accordance with the methods and procedures specified in Section 215.102.
- b. Upon a reasonable request by the Agency, the owner or operator of an organic material emission source required to comply with this Subpart shall conduct emissions testing, at such person's own expense, to demonstrate compliance.
- c. A person planning to conduct an organic material emission test to demonstrate compliance with this Subpart shall notify the Agency of that intent not less than 30 days before the planned initiation of the tests so the Agency may observe the test.

(Source: Added at 14 Ill. Reg. 9173, effective May 23, 1990)

### **Section 215.128 Measurement of Seal Gaps**

- a. Any measurements of secondary seal gaps shall be conducted in accordance with the methods and procedures specified in 40 CFR 60, Subpart Kb incorporated by reference in Section 215.105.
- b. A person planning to conduct a measurement of seal gaps to demonstrate compliance with this Subpart shall notify the Agency of that intent not less than 30 days before the planned performance of the tests so the Agency may observe the test.

(Source: Added at 14 Ill. Reg. 9173, effective May 23, 1990)

### **SUBPART K: USE OF ORGANIC MATERIAL**

#### **Section 215.301 Use of Organic Material**

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in Sections 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material.

(Source: Amended at 3 Ill. Reg. 30, p. 124, effective July 28, 1979)

#### **Section 215.302 Alternative Standard**

Emissions of organic material in excess of those permitted by Section 215.301 are allowable if such emissions are controlled by one of the following methods:

- a. Flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water; or,
- b. A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere; or,
- c. Any other air pollution control equipment approved by the Agency capable of reducing by 85 percent or more the uncontrolled organic material that would be otherwise emitted to the atmosphere.

(Source: Amended at 3 Ill. Reg. 30, p. 124, effective July 28, 1979)

**Section 215.303 Fuel Combustion Emission Sources**

The provisions of Sections 215.301 and 215.302 shall not apply to fuel combustion emission sources.

(Source: Amended at 3 Ill. Reg. 30, p. 124, effective July 28, 1979)

**Section 215.304 Operations with Compliance Program**

The provisions of Section 215.301 and 215.302 shall not apply to any owner, operator, user or manufacturer of paint, varnish, lacquer, coatings or printing ink whose compliance program and project completion schedule, as required by 35 Ill. Adm. Code 201, provides for the reduction of organic material used in such process to 20 percent or less of total volume by May 30, 1975.

(Source: Amended at 3 Ill. Reg. 30, p. 124, effective July 28, 1979)

**Section 215.305 Viscose Exemption (Repealed)**

(Source: Repealed at 9 Ill. Reg. 13960, effective August 28, 1985)

10.4 Attachment 4 - State Construction and Operating Permits

217/782-2113

JOINT CONSTRUCTION/OPERATING PERMIT --NSPS SOURCE

PERMITTEE

LaFarge Corporation  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 02030051 I.D. No.: 127855AAA  
Applicant's Designation: CKD/Synthetic Blending System  
Subject: CKD/Synthetic Blending System Date Received: March 18, 2002  
Date Issued: May 23, 2002 Expiration Date: May 23, 2007  
Location: 2500 Portland Road, Grand Chain

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission unit(s) and/or air pollution control equipment consisting of a new CKD/Synthetic Gypsum Blending System that consists of one pugmill controlled by filter DC, feed hopper with belt conveyor, CKD storage tank, and belt conveyor as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1.0 Unit Specific Condition

1.1 CKD/Synthetic Gypsum Blending System

1.1.1 Description

Construction and operation of a system to blend cement kiln dust (CKD), i.e., particulate matter captured by the cyclones, ESPs, and baghouses from the cement kiln's exhaust with synthetic gypsum, that is interground with clinker product from the kiln to make finished cement. Particulate matter emissions from the CKD storage tank and pug mill are controlled with a new filter DC.

1.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
01	Feed Hopper with Belt Conveyor	None
02	CKD storage tank	DC
03	Pugmill	DC
04	Belt conveyor	None

1.1.3 Applicability Provisions and Applicable Regulations

- a. The new CKD/Synthetic Gypsum Blending System is subject to the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart A and F. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Emissions of particulate matter from each emission point on the CKD/Synthetic Gypsum Blending System shall not exceed 10 percent opacity, pursuant to 40 CFR 60.62(c).
- c. At all times, the Permittee shall maintain and operate the new CKD/Synthetic Gypsum Blending System, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11 (d).

1.1.4 Non-Applicability of Regulations of Concern

The CKD/Synthetic Gypsum Blending System is not a modification subject to Section 112(g), Hazardous Air Pollutants (HAPs) because emissions from HAPs are less than 10 tons/year for a single HAP and less than 25 tons/year for all combined HAPs.

1.1.5 Operational and Work Practices

- a. Operation of the new CKD/Synthetic Gypsum Blending System shall not exceed the following limits:

Throughput of Blended CKD	
(Ton/Mo)	(Ton/Yr)
18,000	150,000

- b. The Permittee shall follow good operating practices for the DC, including periodic inspection routine maintenance and prompt repair of defects.
- c. The new CKD/Synthetic Gypsum Blending System shall not operate more than 2,000 hours per year.

1.1.6 Emission Limitations

- a. Particulate matter (PM) emissions of the new CKD/Synthetic Gypsum Blending System shall not exceed the following limits:

Emission Unit	PM Emissions	
	(Lb/Hr)	(Ton/Yr)
Gypsum	0.5	0.5
DC (Filter)	0.8	0.8
Product Belt	0.3	0.3
Total	1.6	1.6

Compliance with annual limits shall be based on the running total of 12 months of data.

1.1.7 Testing Requirements

- a. Within 60 days after achieving maximum production rate but no later than 180 days after initial startup, the opacity of the particulate matter from each emission point of the new CKD/Synthetic Gypsum Blending System shall be measured in accordance with USEPA Reference Method 9 and the procedures of 40 CFR 60.11, pursuant to 40 CFR 60.8 and 60.64(b)(4).
- b. In addition to the applicable notification requirements of 40 CFR 60.7, the Permittee shall notify the Illinois EPA in writing a minimum of thirty (30) days prior to the expected date of these tests and further notified, a minimum of five (5) working days prior to the test, of the exact date, time and place of these tests, to enable the Illinois EPA to witness these tests.
- c. Copies of the final test report shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The final test report shall include:

- i. A summary of results;
- ii. General information;
- iii. Detailed description of test conditions including process weight rates, control equipment operating parameters, and preparatory inspections and maintenance;
- iv. Data and calculations, including copies of all raw data sheets and records, sample calculations, and emissions results; and
- v. An explanation of any discrepancies among individual test runs or anomalous data.

1.1.8 Monitoring Requirements

None

1.1.9 Recordkeeping Requirements

- a. Permittee shall keep operating records of the following items on a monthly basis:
  - i. Operating hours,
  - ii. Throughput of CKD and synthetic gypsum;
  - iii. The average CKD content in the CKD/Synthetic Gypsum blend;
- b. The Permittee shall keep records addressing use of good operating practices for the CKD/Synthetic Gypsum system, including the DC:
  - i. Records for periodic inspection of the DC with date, individual performing the inspection, and nature of inspection; and
  - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.

- c. The Permittee shall keep the following records relating to emissions:
  - i. PM emissions (lbs/month, tons/year)
- d. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in electronic forma (e.g. computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

1.1.10 Reporting Requirements

- a. Two copies of the required reports and applicable notifications shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
209 Mall Street  
Collinsville, Illinois 62234

- b. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the permit requirements. Reports shall describe the probable cause of such deviations and any corrective actions or preventive measures taken.

1.1.11 Compliance Procedures

- a. The Permittee shall demonstrate compliance with hourly emissions limits in Condition 1.1.6 by proper operation of equipment

- b. The Permittee shall demonstrate compliance with annual emission limits in Condition 1.1.6 by multiplying the hours of operation by the applicable emission rate, i.e., the rates in Condition 1.1.6 if the equipment is properly operated.

If you have any questions on this, please call Kaushal Desai at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:KKD:psj

cc: Region 3



217/782-2113

CONSTRUCTION PERMIT GRANT -- NESHAP SOURCE

PERMITTEE

Lafarge Corporation  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 01020048                      I.D. No.: 127855AAA  
Applicant's Designation: INSUFFLATI   Date Received: February 20, 2001  
Subject: Insufflation System  
Date Issued: March 23, 2001  
Location: 2500 Portland Road, Grand Chain

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission unit(s) and/or air pollution control equipment consisting of a new limestone insufflation system (including, truck unloading, feed hopper, feed belt, and educator) for kiln 2 as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1.0       Insufflation System

1.1       Insufflation System

1.1.1     Description

The insufflation system introduces limestone to kiln 2 at a point upstream of the clinker discharge. The limestone will absorb heat from the clinker causing the limestone to undergo a calcination reaction, converting some of it to lime. The calcined limestone in the clinker will improve the quality of the finished cement product for use in winter weather.

1.1.2     List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
01	Insufflation System	None

1.1.3 Applicability Provisions and Applicable Regulations

- a. This permit is issued based on the source being a major source for purpose of 40 CFR 63 so that the insufflation system for Portland cement manufacturing facility is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) From the Portland Cement Manufacturing Industry, 40 CFR 63, Subpart A and LLL. The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.
  - i. Pursuant to 40 CFR 63.1348, the Permittee shall not cause to be discharged any gases from the insufflation system that exhibit opacity in excess of ten percent.
- b. The Permittee shall use good air pollution control practices to minimize emissions of particulate matter from the insufflation system.

1.1.4 Non-Applicability of Regulations of Concern

- a. Pursuant to 40 CFR 63.1356, the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart F is not applicable to the affected system since the system is subject to the NESHAP.
- b. This permit is issued based on the insufflation system not being associated with a modification of the source, subject to PSD (40 CFR 52.21) because it does not change fuel consumption by the kiln and does not significantly change the throughput of other system at the source. The increases in emission of particulate matter due to the increased throughput is estimated to be at most 1 ton/year.
- c. This permit is issued based on kiln 2 and its associated clinker cooler being subject to the NSPS for Portland Cement Plants, 40 CFR 60 Subpart F at this time, so that applicability of the NSPS is unaffected by the insufflation system.

Note: for purpose of the NSPS, the limestone fed to the kiln by insufflation system shall not be considered "feed" to the kiln for determining compliance.

1.1.5 Operational and Production Limits and Work Practices

Feed rate of limestone by insufflation system shall not exceed 7 tons/hour and 35,000 tons/year.

1.1.6 Emission Limitations

This permit is issued based on negligible emissions of particulate matter from the insufflation system shall. For this purpose, emissions shall not exceed 0.04 lb/hour and 0.50 tons/year. Compliance with annual limit shall be determined from a running total of 12 months of data.

1.1.7 Testing Requirements

Permittee shall demonstrate compliance with the emission limits in Condition 1.1.3(a) using the applicable test method and procedures described in 40 CFR 63.7, 63.1349(b), and 63.1350.

1.1.8 Monitoring Requirements

The Permittee shall prepare a written operations and maintenance plan for the insufflation system pursuant to 40 CFR 63.1350. The plan shall be submitted for review and approval as part of the application for part 70 permit and shall include the information required in 40 CFR 63.1350(a)(1) through (10).

1.1.9 Recordkeeping Requirements

- a. Permittee shall maintain the following records for insufflation system:
  - i. Limestone throughput for the insufflation system (tons/month and tons/year)
  - ii. At all times the Permittee shall to the extent practicable, maintain and operate the insufflation system, including associated air

pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

iii. Records of determinations of visible emission, an observation of opacity in accordance with 40 CFR 63.1349 and 63.1350 for insufflation system.

- b. Permittee shall maintain all the records required by the 40 CFR 63.1355.
- c. The Permittee shall maintain all information (including all reports and notifications) required by this permit readily available for inspection by Illinois EPA. The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site.

#### 1.1.10 Reporting Requirements

- a. The Permittee shall fulfill all applicable notification and reporting requirements of the 40 CFR 63 Subpart LLL.
- b. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the insufflation system with permit requirements within 30 days of the violation. The report shall describe the probable cause of such deviation, and any corrective actions or preventative measures taken.

#### 1.1.11 Compliance Procedures

The Permittee shall use the records required by the Condition 1.1.9 along with the emission factors from the AP-42, control efficiency (if applicable) to show compliance with the emission limits.

- 2.0 The Permittee may operate source with the insufflation system pursuant to this permit until the CAAPP permit for the source is issued, provided the testing required by

Condition 1.1.7 is performed in a timely manner and demonstrates compliance with Condition 1.1.3(a)(i).

If you have any questions on this, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:psj

cc: Region 3

CONSTRUCTION PERMIT GRANT -- OPERATING PERMIT DENIAL -- NESHAP SOURCE

PERMITTEE

Lafarge Corporation  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 00050016                      I.D. No.: 127855AAA  
Applicant's Designation: STORAGEOPT Date Received: May 5, 2000  
Subject: Material Storage Optimization  
Date Issued: September 6, 2000  
Location: 2500 Portland Road, Grand Chain

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission unit(s) and/or air pollution control equipment consisting of modification to the river belt conveyor system; modification to the material handling system within the existing material storage hall; construction of three silos to store clinker in an enclosed manner; construction of two process tanks to handle hot and off-spec clinker; construction of conveyor systems to transfer the clinker to the new silos; construction of a new solid fuels outside storage area; and construction of conveyor systems for transfer of fuel to and from the new storage location as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1.0        Modification to existing Material Handling and Storage

1.1        Material Handling and Storage System

1.1.1     Description

Portland cement manufacturing plant includes facilities for receipt of raw materials and fuels by barge, rail and truck; facilities for loading barge and trucks; conveying systems to transfer raw materials and fuels to and from loading and unloading facilities; a covered storage hall for clinker and raw materials; two raw mill grinding systems; two dry process cement kilns; tow finish mill grinding systems; cement storage silos; and outdoor storage piles for raw materials and clinker.

To improve the facility's ability to produce quality cement in an economical manner, facility intends to undertake several changes in the plant's material storage and handling systems. These changes will provide benefits to the facility and to the environment. The

time and labor required transferring materials from the river barge unloading facility to their storage locations would be reduced. The emissions of particulate matter from material transfer and storage operation will be reduced. Less material will be exposed to the environmental elements because of the increased capacity to store and handle material in sheltered locations.

Implementation of the material handling and storage projects will not increase the plant's production capacity. The changes will include modification to the river belt conveyor system; modification to the material handling system within the existing material storage hall; construction of three silos to store clinker in an enclosed manner; construction of two process tanks to handle hot and off-spec clinker; construction of conveyor systems to transfer the clinker to the new silos; construction of a new solid fuels outside storage area; and construction of conveyor systems for transfer of fuel to and from the new storage location.

1.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
01	Clinker Silo Tanks and Conveyors	Eighteen new or relocated DCs (DCB002-010, 012, 014-016, 018-020, 022, and 023) and one existing DC (DCB024)
02	Fuel Storage and Conveyors	None
03	Storage Haul and Reclaim System	None
04	Raw Material Conveyor System	None

1.1.3 Applicability Provisions and Applicable Regulations

- a. This material handling and storage system for Portland cement manufacturing facility is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) From the Portland Cement Manufacturing Industry, 40 CFR 63, Subpart A and LLL. The Illinois EPA is administering NESHAP in Illinois on

behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 63.1348, the owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer points; bagging system; and bulk loading and unloading system; and each existing raw material dryer, at a facility shall not cause to be discharged any gases from affected sources which exhibit opacity in excess of ten percent.

1.1.4 Non-Applicability of Regulations of Concern

- a. Pursuant to 40 CFR 63.1356, the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart F is not applicable since the facility is subject to the NESHAP regulation.
- b. As a consequence of the limits in Condition 1.1.6, this permit is issued based upon the modification of material handling and storage system not constituting a new major source or major modification subject to Prevention of Significant Deterioration (PSD), 40 CFR 52.21.

1.1.5 Operational and Production Limits and Work Practices

- a. Fuel stock piles of coke shall not exceed 10,000 tons for fuel stock piles.

1.1.6 Emission Limitations

- a. Emissions and operation shall not exceed the following limits:

<u>Process Area</u>	<u>PM EMISSION</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Barged Raw Material	1.08	12.87
Raw Material Reclaim from Storage Hall	0.04	0.51
Haul Roads for Fuel	0.36	4.22
Fuel Reclaim	0.02	0.13
Fuel Receiving	0.13	1.50
Fuel Stockpiles	1.25	11.21
Clinker Handling	13.56	162.76
Outdoor Manufactured Clinker Stockpile	0.56	6.71

These limits are based on the raw material throughput, number of the emission points in storage area, control efficiency, and the emission factors using the AP-42. Compliance with the annual limits shall be determined from the running total of 12 months of data.

As a result of the above limits, modification to material handling and storage system does not constitute a major modification for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 because, the net increase in PM emissions is 19.48 ton/yr after modification. Emissions of PM-10 are below their PSD significance threshold.

1.1.7 Testing Requirements

Permittee shall demonstrate initial compliance with the emission limits Condition 1.1.3(b) using the test method and procedures described in 40 CFR 63.1349(b).

1.1.8 Monitoring Requirements

The Permittee shall prepare for each affected sources a written operations and maintenance plan pursuant to 40 CFR 63.1350. The plan shall be submitted for review and approval as part of the application for part 70 permit and shall include the information required in 40 CFR 63.1350(a)(1) through (10).

1.1.9 Recordkeeping Requirements

- a. Permittee shall maintain the following records for affected sources:
  - i. Each raw material throughput (tons)
  - ii. Emission factor calculation for each process using the AP-42 equations.
  - iii. PM emissions from each source and aggregate for the material handling as limited in Condition 1.1.6 with supporting calculation.
- b. Permittee shall maintain all the records required by the 40 CFR 63.1355.

1.1.10 Reporting Requirements

The Permittee shall fulfill all applicable notification and reporting requirements of the 40 CFR 63 Subpart LLL.

1.1.11 Compliance Procedures

The Permittee shall use the records required by the Condition 1.1.9 along with the emission factors from the AP-42, control efficiency (if applicable) to show compliance with the emission limits.

2.0 In order to insure that material handling system will be operated in compliance with 40 CFR 63, Subpart LLL. Tests must be conducted to measure opacity levels of affected source. The tests must be performed by an approved testing service in accordance with USEPA test methods.

The OPERATING permit application is DENIED because the Illinois Environmental Protection Act, Section 9, and 35 Ill. Adm. Code 201.160 might be violated.

Pursuant to Section 201.160, an operating permit may not be issued until the equipment has been constructed or modified in accordance with applicable conditions in this construction permit. The Illinois EPA suggests that you reapply for the operating permit after the construction is completed in accordance with the construction permit. This information must be submitted in duplicate and should reference the application and I.D. numbers assigned above.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:psj

cc: Region 3

217/782-2113

OPERATING PERMIT

PERMITTEE

Lafarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 99110051                      I.D. No.: 127855AAA  
Applicant's Designation: SLAG DRYER   Date Received: January 8,  
2001  
Subject: Slag Dryer  
Date Issued: January 31, 2001              Expiration Date: January 31, 2006  
Location: 2500 Portland Road, Grand Chain

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of rotary slag dryer, slag dryer baghouse, and stacker as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1. Description

Lafarge Corporation manufactures Portland cement, the current permit request is for the addition of a slag grinding operation with rotary dryer and corresponding baghouse which will allow for on-site preparation and use of granulated blast furnace slag (a waste product generated at steel manufacturing facilities) as an additive to their products to enhance desirable characteristics.

2. List of Emission Units and Pollution Control Equipment

Emission Unit	Emission Control Equipment	% Control Efficiency
Rotary Dryer	Slag Dryer Bag-house	99.0

3. Applicability Provisions and Applicable Regulations

- a. "Affected grinding equipment@ for the purpose of these unit-specific conditions, is each piece of equipment as described in Conditions 1 and 2 and associated handling and storage operations unless otherwise stated in the following conditions as unit specific.
- b. The affected grinding equipment is subject to 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new

process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321, [35 IAC 212.321(a)].

- i. The emissions of particulate matter into the atmosphere in any one hour period from each of the affected coating lines shall not exceed the allowable emission rates specified in the following equation

$$E = A(P)^B$$

Where:

P = Process weight rate; and,  
 E = Allowable emission rate; and,

- A. For process weight rates up to 408 MG/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

- B. For process weight rates in excess of 408 MG/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

Where:

P = Process weight rate in metric or English tons per hour, and

E = Allowable emission rate in kilograms or pounds per hour.

[35 IAC 212.321]

- c. The affected grinding equipment is subject to 35 IAC 214.122b(1) which provides that no person shall cause or allow the emission of sulfur dioxide into the

atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).

- d. The affected grinding equipment is subject to 35 IAC 216.121 which provides that no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.

4. Non-Applicability of Regulations of Concern

None

5. Operational and Production Limits and Work Practices

- a. The affected grinding equipment shall not exceed the following material throughput limits:

Affected Equipment	Maximum Firing Rate	Material	Throughput (Tons/hour)	Throughput (Tons/Year)
Rotary Dryer	75 mmBtu/hr	Slag	150	150,000

6. Emission Limitations

The affected grinding equipment is subject to the following:

- a. Emissions from the affected grinding equipment shall not exceed the following limits:

Emissions	Tons/Year
PM	15.79
PM <sub>10</sub>	8.95
SO <sub>2</sub>	18
NO <sub>x</sub>	12.75
CO	25.5
VOM	3.46
Pb	1.32e-3

These limits are based on the usage limits in Condition 5 and emission factors as listed in Condition 12.

- b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

7. Testing Requirements

None

8. Monitoring Requirements

None

9. Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected grinding equipment to demonstrate compliance with Conditions 3, 5, and 6, pursuant to Section 39.5(7)(b) of the Act:

a. Material throughput (tons/hour and tons/year).

b. Emissions of: PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOM, Pb.

10. Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of affected grinding equipment with the permit requirements, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

11. Operational Flexibility/Anticipated Operating Scenarios

None

12. Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 9 and the emission factors listed below:

a. To determine compliance with Condition 6, emissions from the affected grinding equipment shall be calculated based on the following emission factors:

Emission	Fuel Usage Emission Factors*
PM	0.085 Lb/Ton Throughput Fuel Oil
PM <sub>10</sub>	0.061 Lb/Ton Throughput Fuel Oil
SO <sub>2</sub>	0.24 Lb/Ton Throughput Fuel Oil
NO <sub>x</sub>	0.17 Lb/Ton Throughput Fuel Oil
CO	0.34 Lb/Ton Throughput Natural Gas
VOM	0.046 Lb/Ton Throughput Fuel Oil
Pb	0.005 Lb/1,000gal Waste Oil

	Slag Handling Emission Factors
Wet Slag Storage and Handling	PM = 0.0012 Lb/Ton PM <sub>10</sub> = 0.000403 Lb/Ton
Dried Slag Handling and Storage	
Conveyors 1 and 2	PM = 0.0176 Lb/Ton PM <sub>10</sub> = 0.0061 Lb/Ton
Emission Points J-67 and 69	PM = 0.00106 Lb/Ton PM <sub>10</sub> = 0.0004 Lb/Ton
Slag Grinding Operations	
J-70C	PM = 0.008 Lb/Ton PM <sub>10</sub> = 0.004 Lb/Ton
J-70A/B	PM = 0.028 Lb/Ton PM <sub>10</sub> = 0.014 Lb/Ton
Ground Slag Handling and Storage	
J-71/78/79	PM = 0.0024 Lb/Ton PM <sub>10</sub> = 0.0020 Lb/Ton
J-82-J-86	PM = 0.0144 Lb/Ton PM <sub>10</sub> = 0.0120 Lb/Ton

\* Worst case emission factors are used for fuel usage.

If you have any questions on this, please call Ricardo NG at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:RNG:jar

cc: Region 3

217/782-2113

JOINT CONSTRUCTION AND OPERATING PERMIT - "REVISED"

PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 99070031

Applicant's Designation: PORT SCREEN

Subject: Portable Screen Plant

Date Issued: October 1, 1999

Location: 2500 Portland Road, Grand Chain

I.D. No.: 127855AAA

Date Received: July 13, 1999

Operating Permit Expiration

Date: October 1, 2004

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and/or air pollution control equipment consisting of the portable screen plant consisting of Grizzly hopper, vibrating screen, and conveyor belts as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Operation of the emission source(s) included in this permit shall not begin until all associated air pollution control equipment has been constructed and is operational.

2.0 Unit Specific Condition

2.1 Portable Screen Plant

2.1.1 Description

Portable screen plant used to screen out oversize material for further size reduction, while passing properly sized materials into the manufacturing process. The portable screen plant will process a variety of materials, including crushed stone and similar raw materials, as well as weathered clinker which has been stored outdoor stockpiles. The portable screen plant consist of a grizzly hopper, a vibrating screen, and conveyor belts.

2.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
01	Portable Screen Plant	None

2.1.3 Applicability Provisions and Applicable Regulations

- a. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any existing process emission source which, either alone or in combination with the emission of particulate matter from all other similar new or existing process emission sources at a plant or premises, exceeds the allowable emission rates specified in the following equation [35 IAC 212.321]:

$$E = A(P)^B$$

Where:

P = Process weight rate  
E = Allowable emission rate

For process weight rates up to 408 Mg/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2.1.4 Non-Applicability of Regulations of Concern

As a consequence of limits in Conditions 2.1.5 and 2.1.6 this permit is issued based on the portable screen plant not constituting a new major source or major modification subject to Prevention of Significant Deterioration (PSD), 40 CFR 52.21.

2.1.5 Production Limits and Work Practices

- a. The stone and general raw material throughput for the portable screen plant shall not exceed the 700,000 tons in any 12 months period.

- b. The clinker throughput for the portable screen plant shall not exceed the 60,000 tons in any 12 months period.
- c. The maximum processing rate when processing the clinker shall not exceed 65 tons per hour.

#### 2.1.6 Emission Limitations

- a. The Particulate Matter (PM) emissions from the portable screen plant shall not exceed the 23.58 lb/hr and 24.36 tons/yr. The hourly limit is based on the maximum processing rate when processing clinker (65 ton/hr) and the emission estimated using the standard emission factors (0.36 lb PM/ton). The annual limit is based on the maximum material process and the appropriate emission factors. Compliance with annual limits shall be determined from the running total of 12 months of data.
- b. The PM-10 emissions from the portable screen plant shall not exceed the 11.88 lb/hr and 12.05 tons/yr. The hourly limit is based on the maximum processing rate when processing clinker (65 ton/hr) and the emission estimated using the standard emission factors (0.18 lb PM-10/ton). The annual limit is based on the maximum material process and the appropriate emission factors. Compliance with annual limits shall be determined from the running total of 12 months of data.

#### 2.1.7 Operating Requirements

None

#### 2.1.8 Inspection Requirements

None

#### 2.1.9 Recordkeeping Requirements

- a. The Permittee shall maintain monthly records of the following items:
  - i. Stone and general raw material throughput (tons).
  - ii. Clinker throughput (tons).

- iii. Maximum processing rate when screening the clinker.
  - iv. PM and PM-10 emissions calculated using the above records and emission factors.
- b. These records shall be maintained at a readily accessible location at the plant for at least three years and shall be available for inspection and copying by the Illinois EPA upon request.

2.1.10 Reporting Requirements

None

2.1.11 Operational Flexibility/Anticipated Operating Scenarios

None

2.1.12 Compliance Procedures

- a. Compliance with the emission limits in Condition 2.1.6 shall be based on the following formulas, emission factors and records required in Condition 2.1.9:

PM Emission = [(Stone/General Raw Material (Tons) \*0.0365 lb PM/lb) + (Clinker Throughput (Tons) \*0.36 lb PM/lb)]/2000.

PM-10 Emission = [(Stone/General Raw Material (Tons) \*0.0168 lb PM-10/lb) + (Clinker Throughput (Tons) \*0.18 lb PM-10/lb)]/2000.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:jar

cc: Region 3

217/782-2113

JOINT CONSTRUCTION AND OPERATION PERMIT - "REVISED"  
PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 99050056 I.D. No.: 127855AAA  
Applicant=s Designation: GOOBER REC. Date Received: May 18, 1999  
Subject: Goober Reclaim System Expiration Date: August 9, 2004  
Date Issued: August 9, 1999  
Location: Rural 1000N and 300E, Joppa

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and /or air pollution control equipment consisting of goober reclaim system, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Emissions and operation of equipment shall not exceed the following limits:

Item of Equipment	Throughput (Ton/Hour)	Particulate Matter (Lb/Hour)	Emissions (Ton/Year)
Goober Reclaim System	300	0.744	3.26

These limits are based on the maximum throughput, standard emission factor (0.00248 lb PM/ton), and operating hours. Compliance with annual limits shall be determined from a running total of 12 months of data.

2. In the event that the operation of this facility results in an odor nuisance or any other nuisance due to process operating conditions, raw materials usage or any other cause, the Permittee shall take all appropriate and necessary actions, including but not limited to, changes in process conditions, raw materials, or installation of emission controls, in order to eliminate the nuisance.
3. Operation of the emission source(s) included in this permit shall not begin until all associated air pollution control equipment has been constructed and is operational.
4. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

If you have any questions concerning this letter, please contact  
Minesh V. Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:jar

cc: Region 3

217/782-2113

"REVISED"  
OPERATING PERMIT GRANT  
NSPS SOURCE

PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 98090010

I.D. No.: 127855AAA

Applicant's Designation: E. CRANE

Date Received: September 20, 1999

Subject: E. Crane Barge Unloading

Date Issued: November 30, 1999

Operating Permit Expiration

Date: November 30, 2004

Location: 2500 Portland Road, Grand Chain

Permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of a new raw material barge unloading system that includes an Equilibrated Crane, raw material hopper/feeder that has baghouse control and foam dust suppressant control for unloading of clinker, and a conveyor belt where all are atop a floating captive barge as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. The new raw material barge unloading system is subject to the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subparts A and F. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Emissions of particulate matter from each emission point of the new raw material barge unloading system shall not exceed 10 percent opacity, pursuant to 40 CFR 60.62(c).
- c. At all times, the Permittee shall maintain and operate the new raw material barge unloading system, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11 (d).
- 2a. This permit is issued based on the new raw material barge unloading system replacing the existing raw material barge unloading system with no net increase of particulate matter (PM) emissions or particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) emissions. The existing system will remain for back-up purposes but shall not be operated concurrently with the new system.

- b. Total throughput of unloading raw material shall not exceed the following limits:

<u>Material</u>	Throughput	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Clinker	500,000	500,000
Other Raw Material That Includes But Not Limited to Limestone, Coal/Coke, Sand, Gypsum, Alumina Ash	300,000	3,000,000

These limits are based on maximum monthly and annual operation. Compliance with annual limits shall be determined from a running total of 12 months of data.

- c. Emissions of PM from unloading raw material shall not exceed the following limits:

<u>Material</u>	Emission Factor <u>(Lbs/Ton)</u>	PM Emissions	
		<u>(Lbs/Mo)</u>	<u>(Tons/Yr)</u>
Clinker	0.01760	1,920	0.96
Other Raw Material That Includes But Not Limited to Limestone, Coal/Coke, Sand, Gypsum, Alumina Ash	0.00252	1,512	7.56

These limits are based on the maximum monthly and annual throughputs of Condition 2(b), emission factors derived from the equation in Section 13.2.4 of the AP-42, and two points of emission on the raw material barge unloading system where during unloading of clinker there is a capture efficiency of 80 percent for the hopper ventilation system, a capture efficiency of 100 percent for the feeder discharge emissions and a control efficiency of 99 percent for the baghouse. Compliance with annual limits shall be determined from a running total of 12 months of data.

- d. Emissions of PM<sub>10</sub> from unloading raw material shall not exceed the following limits:

<u>Material</u>	Emission Factor <u>(Lbs/Ton)</u>	PM Emissions	
		<u>(Lbs/Mo)</u>	<u>(Tons/Yr)</u>
Clinker	0.00615	720	0.36
Other Raw Material That Includes But Not Limited to Limestone, Coal/Coke, Sand, Gypsum, Alumina Ash	0.000882	529	2.65

These limits are based on the maximum monthly and annual throughputs of Condition 2(b), emission factors derived from the equation in Section 13.2.4 of the AP-42, and two points of emission on the raw material barge unloading system where during unloading of clinker there is a capture efficiency of 80 percent for the hopper ventilation system, a capture efficiency of 100 percent for the feeder discharge emissions and a control efficiency of 99 percent for the baghouse. Compliance with annual limits shall be determined from a running total of 12 months of data.

3. The Permittee shall keep all records necessary to demonstrate compliance with the conditions as set forth in this permit. These records shall include, but are not limited to, records of individual raw material loadout from barges compiled on a monthly basis and inspections and maintenance on the equipment including air pollution control equipment. The Permittee shall keep these records for a period of three years and make them available for inspection and copying by the Illinois EPA upon request.

If you have any questions on this, please call Minesh V. Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:jar

cc: Region 3  
USEPA

217/782-2113

"REVISED"  
OPERATING PERMIT -- NSPS SOURCES

PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

<u>Application No.:</u> 98080093	<u>I.D. No.:</u> 127855AAA
<u>Applicant's Designation:</u> #2 FM HES	<u>Date Received:</u> January 20, 2000
<u>Subject:</u> #2 FM HE Separator	
<u>Date Issued:</u> March 23, 2000	<u>Operating Permit Expiration</u>
	<u>Date:</u> March 23, 2005
<u>Location:</u> 2500 Portland Road, Grand Chain	

Permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of a new #2 finish mill air separator and baghouse; and convert the existing air separator to the service of a cement fringe bin for temporary cement storage with the existing baghouse as its control that will also control the #15 and #16 clinker tanks that were previously controlled by other baghouses as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. The new #2 finish mill air separator with baghouse and cement fringe bin with baghouse are subject to the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart A and F. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Emissions of particulate matter from each emission point of the new #2 finish mill air separator with baghouse and cement fringe bin shall not exceed 10 percent opacity, pursuant to 40 CFR 60.62(c).
- c. At all times, the Permittee shall maintain and operate the new #2 finish mill air separator with baghouse and cement fringe bin with baghouse, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11 (d).
- 2a. Emissions of PM from the cement fringe bin and baghouse shall not exceed 0.48 pounds per hour and 2.10 tons per year. This limit is based on the maximum hourly cement production capacity of the #2 finish mill of 200 tons per

hour, the USEPA/AIRS PM uncontrolled emission factor for cement load-out of 0.24 pounds per ton cement, overall control efficiency of 99 percent, and 8760 hours per year operation.

- b. Emissions of PM<sub>10</sub> from the cement fringe bin and baghouse shall not exceed 0.40 pounds per hour and 1.75 tons per year. This limit is based on the maximum hourly cement production capacity of the #2 finish mill of 200 tons per hour, the USEPA/AIRS PM<sub>10</sub> uncontrolled emission factor for cement load-out of 0.20 pounds per ton cement, overall control efficiency of 99 percent, and 8760 hours per year operation.
3. The Permittee shall keep all records necessary to demonstrate compliance with the conditions as set forth in this permit. These records shall include, but are not limited to, records of #2 finish mill production rates compiled on a monthly basis and inspections and maintenance on the equipment including air pollution control equipment. The Permittee shall keep these records for a period of three years and make them available for inspection and copying by the Illinois EPA upon request.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:psj

cc: Region 3  
USEPA

217/782-2113

January 11, 2001

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

I.D. No.: 1278555AAA

Dear Mr. Ryan:

Enclosed is a revised permit letter which reflects only a change of name. Please note that if you have changed or intend to change this operation it will be necessary to apply for revision of your air pollution permit(s).

If you have any questions or require any assistance concerning these matters, contact Karen Luparell at 217/782-2113.

Very truly yours,

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:KJL:98080093:jar

Enclosure

cc: Region 3  
I.D. File  
Permit File

217/782-2113

"REVISED"  
OPERATING PERMIT -- NSPS SOURCE

PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 98060060      I.D. No.: 127855AAA  
Applicant's Designation:      Date Received: May 18, 1999  
Subject: Synthetic Gypsum Storage and Handling  
Date Issued: August 9, 1999      Expiration Date: August 9, 2004  
Location: County Line Road 1000N and 300E, Joppa

Permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of a new synthetic gypsum storage and handling system that includes a new reclaim hopper that is loaded by a front-end loader, a new conveyor belt that transfers synthetic gypsum from the new reclaim hopper to a new bucket elevator, a new bucket elevator that loads synthetic gypsum to an existing storage tank, a new feeder that loads synthetic gypsum from the existing storage tank onto a new cross belt, a new cross belt that transfers synthetic gypsum from the synthetic storage tank feeder to an existing conveyor belt that transfers the synthetic gypsum to the existing #2 finish mill as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. The new synthetic gypsum storage and handling system is subject to the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart A and F. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Emissions of particulate matter from each emission point on the new synthetic gypsum storage and handling system shall not exceed 10 percent opacity, pursuant to 40 CFR 60.62(c).
- c. At all times, the Permittee shall maintain and operate the new synthetic gypsum storage and handling system, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11 (d).
- 2a. This permit is issued based on the new synthetic gypsum storage and handling system working in conjunction with the current system with no net increase in overall emissions of particulate matter (PM) emissions and

particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) emissions.

- b. Combined emissions of PM from all emission points on the new synthetic gypsum storage and handling system shall not exceed 0.32 pound per hour and 0.10 ton per year. This limit is based on the maximum hourly synthetic gypsum transfer from the storage pile to the storage tank of 250 tons per hour, the maximum hourly synthetic gypsum transfer from the storage tank to the #2 finish mill of 10 tons per hour, the maximum annual transfer of synthetic gypsum through the whole system of 150,000 tons per year, a combined emission factor for PM emissions from synthetic gypsum transfer from the storage pile to the storage tank derived from AP-42 emission factors of 0.00128 pound per ton, a combined emission factor for PM emissions from synthetic gypsum transfer from the storage tank to the #2 finish mill derived from AP-42 emission factors of 0.0000622 pound per ton, and a 50 percent control efficiency on transfer points where enclosures exist.
- c. Combined emissions of PM<sub>10</sub> from all emission points on the new synthetic gypsum storage and handling system shall not exceed 0.11 pound per hour and 0.04 ton per year. This limit is based on the maximum hourly synthetic gypsum transfer from the storage pile to the storage tank of 250 tons per hour, the maximum hourly synthetic gypsum transfer from the storage tank to the #2 finish mill of 10 tons per hour, the maximum annual transfer of synthetic gypsum through the whole system of 150,000 tons per year, a combined emission factor for PM<sub>10</sub> emissions from synthetic gypsum transfer from the storage pile to the storage tank derived from AP-42 emission factors of 0.000449 pound per ton, a combined emission factor for PM<sub>10</sub> emissions from synthetic gypsum transfer from the storage tank to the #2 finish mill derived from AP-42 emission factors of 0.0000218 pound per ton, and a 50 percent control efficiency on transfer points where enclosures exist.
3. The Permittee shall keep all records necessary to demonstrate compliance with the conditions as set forth in this permit. These records shall include, but are not limited to, records of synthetic gypsum throughput compiled on a monthly basis. The Permittee shall keep these records for a period of three years and make them available for inspection and copying by the Illinois EPA upon request.

If you have any questions on this, please call Minesh V. Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:jar



- b. Emissions of PM and PM<sub>10</sub> from the new bulk cement barge loading system shall not exceed 2.4 pounds per hour and 3.00 tons per year. This limit is based on 100 percent of PM emissions as PM<sub>10</sub>, the maximum hourly cement loading of 600 tons per hour to the surge bin and 300 tons per hour to each air slide/loading chute, the maximum annual cement loading of 1,500,000 tons per year to the surge bin and 750,000 tons per year to each air slide/loading chute, an AIRS/FIRE 5.0 uncontrolled emission factor of 0.2 pound per ton of cement load out, and an overall control efficiency of 99 percent.
  
- 3. The Permittee shall keep all records necessary to demonstrate compliance with the conditions as set forth in this permit. These records shall include, but are not limited to, records of cement loading into barges compiled on a monthly basis and inspections and maintenance on the equipment including air pollution control equipment. The Permittee shall keep these records for a period of three years and make them available for inspection and copying by the Illinois EPA upon request.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:psj

cc: Region 3

"REVISED"  
JOINT CONSTRUCTION AND OPERATING PERMIT - NSPS SOURCE

PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 98010026      I.D. No.: 127855AAA  
Applicant's Designation:      Date Received: January 13, 1998  
Subject: Portable Clinker Stacker  
Date Issued: January 27, 1998      Expiration Date: January 27, 2003  
Location: County Line Roads 1000N and 300E, Joppa

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and/or air pollution control equipment consisting of a clinker stacker as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Operation of the emission source(s) included in this permit shall not begin until all associated air pollution control equipment has been constructed and is operational.
  
- 2a. The transfer points of the clinker stacker are subject to the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart A and F. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
  
- b. Emissions of particulate matter from the transfer points of the clinker stacker shall not exceed 10 percent opacity, pursuant to 40 CFR 60.62(c).
  
- c. At all times, the Permittee shall maintain and operate the clinker stacker, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11 (d).
  
- 3a. Emissions of particulate matter (PM) from the clinker stacker shall not exceed 26.4 lbs/hour and 19.8 tons per year. This limit is based on the maximum hourly rated capacity of the stacker of 750 tons/hour, an emission factor of 0.0176 lb/ton derived from Equation 1 of AP-42, 5th ed., Section 13.2.4, 1500 hours of operation per year, and the information provided in the permit application.
  
- b. Emissions of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) from the clinker stacker shall not exceed 9.2 lbs/hour and 6.9 tons per

year. This limit is based on the maximum hourly rated capacity of the stacker of 750 tons/hour, an emission factor of 0.0061 lb/ton derived from Equation 1 of AP-42, 5th ed., Section 13.2.4, 1500 hours of operation per year, and the information provided in the permit application.

4. The Permittee shall comply with one of the following:
  - a. Within 60 days after achieving maximum production rate but no later than 180 days after initial startup, the opacity of the particulate matter emissions from the transfer points of the clinker stacker shall be measured in accordance with USEPA Reference Method 9 and the procedures of 40 CFR 60.11, pursuant to 40 CFR 60.8 and 60.64(4); or
  - b. Have documentation of past testing of the equipment as mentioned above.
5. The Permittee shall keep all records necessary to demonstrate compliance with the conditions as set forth in this permit. These records shall include, but are not limited to, records displaying hours of operation and the results of any opacity test(s). The Permittee shall keep these records for a period of three years and make them available for inspection and copying by the Illinois EPA upon request.

It should be noted that this equipment replaced the equipment of permit number 97080050 that is now in the service of raw material handling.

If you have any questions on this, please call Darin Clutts at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:DCC:psj

cc: Region 3  
USEPA



OPERATING PERMIT - NSPS SOURCE - "REVISED"

PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 97080050      I.D. No.: 127855AAA  
Applicant's Designation:      Date Received: February 20, 1998  
Subject: Raw Material Stacker  
Date Issued: March 30, 1998      Expiration Date: January 28, 2003  
Location: County Line Roads 1000N and 300E, Joppa

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of a raw material stacker as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. The transfer points of the raw material stacker are subject to the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart A and F. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
  - b. Emissions of particulate matter from the transfer points of the raw material stacker shall not exceed 10 percent opacity, pursuant to 40 CFR 60.62(c).
  - c. At all times, the Permittee shall maintain and operate the raw material stacker, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11 (d).
- 2a. Emissions of particulate matter (PM) from the raw material stacker shall not exceed 1.5 lbs/hour and 6.6 tons per year. This limit is based on the maximum hourly rated capacity of the stacker of 400 tons/hour, an emission factor of 0.0037 lb/ton derived from Equation 1 of AP-42, 5th ed., Section 13.2.4 using an average material moisture content of 5%, 8,760 hours of operation per year, and the information provided in the permit application.
  - b. Emission of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) from the raw material stacker shall not exceed 0.5 lbs/hour and 2.3 tons per year. This limit is based on the maximum hourly rated capacity of the stacker of 400 tons/hour, an emission factor of 0.0013 lb/ton derived from Equation 1 of AP-42,

5th ed., Section 13.2.4 using an average material moisture content of 5%, 8,760 hours of operation per year, and the information provided in the permit application.

3. The Permittee shall comply with one of the following:
  - a. Within 60 days after achieving maximum production rate but no later than 180 days after initial startup, the opacity of the particulate matter emissions from the transfer points of the raw material stacker shall be measured in accordance with USEPA Reference Method 9 and the procedures of 40 CFR 60.11, pursuant to 40 CFR 60.8 and 60.64(4); or
  - b. Have documentation of past testing of the equipment as mentioned above.
4. The Permittee shall keep all records necessary to demonstrate compliance with the conditions as set forth in this permit. These records shall include, but are not limited to, records displaying the results of any opacity test(s) and moisture content test(s). The Permittee shall keep these records for a period of three years and make them available for inspection and copying by the Illinois EPA upon request.

It should be noted that this permit has been revised to show a higher moisture content of the material transferred based on the submittal of new data, a decrease of the hourly PM and PM<sub>10</sub> emission rates due to the higher moisture content, an increase of the annual PM and PM<sub>10</sub> emission rates due to the increased allowable hours of operation and the removal of the hours of operation recordkeeping requirement since revised emission rates are based on the maximum rated capacity of 400 tph and continuous operation of 8,760 hrs/yr.

If you have any questions on this, please call Darin Clutts at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:DCC:jar

cc: Region 3  
USEPA

217/782-2113

JOINT CONSTRUCTION AND OPERATION PERMIT - "REVISED"  
PERMITTEE

LaFarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No: 96100061                      I.D. No.: 127855AAA  
Applicants Designation: 7353WDTLOS      Date Received: October 18, 1996  
Subject: Kiln #2 Dust Return System  
Date Issued: December 17, 1996              Expiration Date: December 16, 2001  
Location: Rural 1000N & 300E, Joppa

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and /or air pollution control equipment consisting of loadout spout controlled by baghouse, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1.        Operation of the emission source(s) included in this permit shall not begin until all associated air pollution control equipment has been constructed and is operational.
2.        No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.
3.        This permit is issued based on negligible emissions of particulate matter from the loadout spout with baghouse control. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.

If you have any questions concerning this letter, please contact Bruce Rodely at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:BDR:jar

cc:        Region 3

JOINT CONSTRUCTION AND OPERATION PERMIT - "REVISED"

PERMITTEE

Lafarge Midwest, Inc.  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 96060037                      I.D. No.: 127855AAA  
Applicant=s Designation: 7353#2kDRS   Date Received: May 18, 1999  
Subject: Kiln #2 Dust Return System  
Date Issued: August 9, 1999                Expiration Date: June 26, 2001  
Location: Rural 1000N and 300E, Joppa

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and /or air pollution control equipment consisting of dust storage tank, bucket elevator, and associated conveyors all controlled by baghouse, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Throughput (Lb/Hour)</u>	<u>Particulate Matter Emissions (Lb/Hour)</u>	<u>Emissions (Ton/Year)</u>
Kiln #2 Dust Return System	100,000	0.5	2.25

These limits are based on the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

2. In the event that the operation of this facility results in an odor nuisance or any other nuisance due to process operating conditions, raw materials usage or any other cause, the Permittee shall take all appropriate and necessary actions, including but not limited to, changes in process conditions, raw materials, or installation of emission controls, in order to eliminate the nuisance.
3. Operation of the emission source(s) included in this permit shall not begin until all associated air pollution control equipment has been constructed and is operational.
4. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

It should be noted that this permit has been revised to show maximum throughput in Condition 1.

If you have any questions concerning this letter, please contact Minesh V. Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:jar

cc: Region 3

CONSTRUCTION PERMIT GRANT -- OPERATING PERMIT DENIAL -- NESHAP SOURCE

PERMITTEE

Lafarge Corporation  
Attn: Ron Ryan  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 00050016                      I.D. No.: 127855AAA  
Applicant's Designation: STORAGEOPT   Date Received: May 5, 2000  
Subject: Material Storage Optimization  
Date Issued: September 6, 2000  
Location: 2500 Portland Road, Grand Chain

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission unit(s) and/or air pollution control equipment consisting of modification to the river belt conveyor system; modification to the material handling system within the existing material storage hall; construction of three silos to store clinker in an enclosed manner; construction of two process tanks to handle hot and off-spec clinker; construction of conveyor systems to transfer the clinker to the new silos; construction of a new solid fuels outside storage area; and construction of conveyor systems for transfer of fuel to and from the new storage location as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1.0        Modification to existing Material Handling and Storage

1.1        Material Handling and Storage System

1.1.1     Description

Portland cement manufacturing plant includes facilities for receipt of raw materials and fuels by barge, rail and truck; facilities for loading barge and trucks; conveying systems to transfer raw materials and fuels to and from loading and unloading facilities; a covered storage hall for clinker and raw materials; two raw mill grinding systems; two dry process cement kilns; tow finish mill grinding systems; cement storage silos; and outdoor storage piles for raw materials and clinker.

To improve the facility's ability to produce quality cement in an economical manner, facility intends to undertake several changes in the plant's material storage and handling systems. These changes will provide benefits to the facility and to the environment. The

time and labor required transferring materials from the river barge unloading facility to their storage locations would be reduced. The emissions of particulate matter from material transfer and storage operation will be reduced. Less material will be exposed to the environmental elements because of the increased capacity to store and handle material in sheltered locations.

Implementation of the material handling and storage projects will not increase the plant's production capacity. The changes will include modification to the river belt conveyor system; modification to the material handling system within the existing material storage hall; construction of three silos to store clinker in an enclosed manner; construction of two process tanks to handle hot and off-spec clinker; construction of conveyor systems to transfer the clinker to the new silos; construction of a new solid fuels outside storage area; and construction of conveyor systems for transfer of fuel to and from the new storage location.

1.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
01	Clinker silo tanks and conveyors	Eighteen new or relocated DCs (DCB002-010, 012, 014-016, 018-020, 022, and 023) and one existing DC (DCB024)
02	Fuel storage and conveyors	None
03	Storage haul and reclaim system	None
04	Raw material conveyor system	None

1.1.3 Applicability Provisions and Applicable Regulations

- a. This material handling and storage system for Portland cement manufacturing facility is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) From the Portland Cement Manufacturing Industry, 40 CFR 63, Subpart A and LLL. The Illinois EPA is administering NESHAP in Illinois on

behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 63.1348, the owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer points; bagging system; and bulk loading and unloading system; and each existing raw material dryer, at a facility shall not cause to be discharged any gases from affected sources which exhibit opacity in excess of ten percent.

1.1.4 Non-Applicability of Regulations of Concern

- a. Pursuant to 40 CFR 63.1356, the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart F is not applicable since the facility is subject to the NESHAP regulation.
- b. As a consequence of the limits in Condition 1.1.6, this permit is issued based upon the modification of material handling and storage system not constituting a new major source or major modification subject to Prevention of Significant Deterioration (PSD), 40 CFR 52.21.

1.1.5 Operational and Production Limits and Work Practices

- a. Fuel stock piles of coke shall not exceed 10,000 tons for fuel stock piles.

1.1.6 Emission Limitations

- a. Emissions and operation shall not exceed the following limits:

Process Area	PM EMISSION	
	(Tons/Mo)	(Tons/Yr)
Barged Raw Material	1.08	12.87
Raw Material Reclaim from Storage Hall	0.04	0.51
Haul Roads for Fuel	0.36	4.22
Fuel Reclaim	0.02	0.13
Fuel Receiving	0.13	1.50
Fuel Stockpiles	1.25	11.21
Clinker Handling	13.56	162.76
Outdoor Manufactured Clinker Stockpile	0.56	6.71

These limits are based on the raw material throughput, number of the emission points in storage area, control efficiency, and the emission factors using the AP-42. Compliance with the annual limits shall be determined from the running total of 12 months of data.

As a result of the above limits, modification to material handling and storage system does not constitute a major modification for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 because, the net increase in PM emissions is 19.48 ton/yr after modification. Emissions of PM-10 are below their PSD significance threshold.

#### 1.1.7 Testing Requirements

Permittee shall demonstrate initial compliance with the emission limits Condition 1.1.3(b) using the test method and procedures described in 40 CFR 63.1349(b).

#### 1.1.8 Monitoring Requirements

The Permittee shall prepare for each affected sources a written operations and maintenance plan pursuant to 40 CFR 63.1350. The plan shall be submitted for review and approval as part of the application for part 70 permit and shall include the information required in 40 CFR 63.1350(a)(1) through (10).

#### 1.1.9 Recordkeeping Requirements

- a. Permittee shall maintain the following records for affected sources:
  - i. Each raw material throughput (tons)
  - ii. Emission factor calculation for each process using the AP-42 equations.
  - iii. PM emissions from each source and aggregate for the material handling as limited in Condition 1.1.6 with supporting calculation.
- b. Permittee shall maintain all the records required by the 40 CFR 63.1355.

1.1.10 Reporting Requirements

The Permittee shall fulfill all applicable notification and reporting requirements of the 40 CFR 63 Subpart LLL.

1.1.11 Compliance Procedures

The Permittee shall use the records required by the Condition 1.1.9 along with the emission factors from the AP-42, control efficiency (if applicable) to show compliance with the emission limits.

2.0 In order to insure that material handling system will be operated in compliance with 40 CFR 63, Subpart LLL. Tests must be conducted to measure opacity levels of affected source. The tests must be performed by an approved testing service in accordance with USEPA test methods.

The OPERATING permit application is DENIED because the Illinois Environmental Protection Act, Section 9, and 35 Ill. Adm. Code 201.160 might be violated.

Pursuant to Section 201.160, an operating permit may not be issued until the equipment has been constructed or modified in accordance with applicable conditions in this construction permit. The Illinois EPA suggests that you reapply for the operating permit after the construction is completed in accordance with the construction permit. This information must be submitted in duplicate and should reference the application and I.D. numbers assigned above.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MVP:psj

cc: Region 3

217/782-2113

OPERATING PERMIT -- NSPS SOURCE

PERMITTEE

Lafarge Corporation - Joppa Plant  
Attn: Hans Schrama, Environmental Manager  
Route 1, Box 84A  
Grand Chain, Illinois 62941

Application No.: 77070038                    I.D. No.: 127855AAA  
Applicant's Designation: #2 Clinker Cooler  
Date Received: December 19, 1994  
Operating Permit Expiration Date: May 30, 1999  
Subject: Clinker Cooler #2  
Date Issued: August 5, 1998  
Location: County Roads 1000N & 300E, Joppa

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of clinker cooler #2 controlled by gravel bed filter with water spray, and an air-to-air heat exchanger for baghouse as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1. This clinker cooler is subject to a New Source Performance Standard (NSPS), 40 CFR 60, Subpart F. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
2. The particulate matter (TSP) from the clinker cooler shall not exceed 0.10 lb per ton feed (dry basis) to the kiln and 10 percent opacity pursuant to the New Source Performance Standard.
3. At all times, the Permittee shall also, to the extent practicable, maintain and operate the Portland Cement Plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
4. The Permittee shall fulfill applicable recordkeeping requirements of the NSPS, 40 CFR 60.63.
5. Operation in excess of the applicable emission standards during startup is allowed.
6. Operation in excess of the applicable emission standards is allowed during malfunction and breakdown.
7. Applicant shall keep a log of each malfunction, breakdown and startup resulting in excess emissions, and submit a copy of the log to the Agency's regional office on or

before the 45th day of each calendar quarter, starting on the date of issuance of this permit. This log shall contain all pertinent data such as production rate, date, time, cause, duration, cooler baghouse pressure drop, and efforts made to minimize duration and excess emissions.

8. The Clinker cooler baghouse shall be thoroughly inspected on a two month basis and any bags exhibiting sub-standard characteristics during said inspection be replaced before that section of the baghouse is returned to service. Records of all inspection and maintenance work conducted on the cooler's control will be kept and made available for Agency review upon request.
9. The Permittee shall maintain and operate a continuous opacity monitoring system on the above-referenced equipment. On or before the 45th day of each calendar quarter, the Permittee shall submit to the Agency a report for the last preceding calendar quarter of any and all opacity measurements which exceed 10 percent, averaged over a six minute period. These "excess opacity" reports shall provide, for each such incident, the percent opacity measured as well as the date and span of such incident. These reports shall also specify for each incident whether it occurred during startup, shut-down, or malfunction. If a malfunction is indicated in the report, all corrective actions taken, if any, shall be reported. The reports shall also specify, for each calendar quarter, the date of those periods during which the continuous monitoring system was not in operation.
10. This permit is issued based upon installation of air-to-air heat exchanger for existing clinker cooler #2 with no net increase in emissions above that previously allowed.
- 11a. Prior to operation of the #2 clinker cooler at a raw feed rate in excess of 150 tons per hour (including fuel), the Permittee must demonstrate to the satisfaction of the Illinois EPA that a higher raw feed rate (up to 175 tons per hour) will comply with the applicable provisions of the 35 Ill. Adm. Code for Portland Cement Plants.
  - b. The #2 clinker cooler may be operated on a limited time basis at a raw feed rate of up to 175 tph (including fuel) for the purpose of emission testing pursuant to a special written testing plan submitted to the Illinois EPA at least 30 days before beginning operation at a higher feed rate.

It should be noted that this permit is issued to incorporate information submitted in company's letter dated March 3, 1998.

If you have any questions on this, please call Shashi Shah at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:SRS:psj

cc: IEPA, FOS, Region 3  
IEPA, Compliance Section  
IEPA, Source Monitoring Unit

217/782-2113

OPERATING PERMIT -- NSPS SOURCE - REVISED

PERMITTEE

Lafarge Corporation  
Attn: Hans Schrama, Environmental Manager  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 77070037

I.D. No.: 127855AAA

Applicant's Designation: 7353-1  
1995

Date Received: August 14,

Subject: No. 2 Rotary Kiln

Date Issued: August 5, 1998

Expiration Date: May 30, 1999

Location: Country Roads 1000N and 300E, Joppa

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of Rotary Kiln #2 with particulate emissions controlled by 2 cyclones, modified gasconditioning water spray tower, and a baghouse, and equipment consisting of introduction of whole tires at mid kiln and/or shredded tires as supplemental fuel, and petroleum coke as supplemental fuel as described in the above referenced application and in letters submitted to the Illinois EPA February 22, May 14, and May 26, 1993 and November 30, 1994. This Permit is subject to standard conditions attached hereto and the following special conditions:

1. This Portland Cement Plant Rotary Kiln #2 is subject to a New Source Performance Standard (NSPS), 40 CFR 60, Subpart F. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
2. The particulate matter from the #2 kiln shall not exceed 0.3 pound particulate per ton of dry feed and 20% opacity, pursuant to the New Source Performance Standard.
3. At all times, the Permittee shall also, to the extent practicable, maintain and operate the Portland Cement Plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
- 4a. The raw feed rate to the #2 kiln shall not exceed 175 tons per hour (not including fuel). The raw feed rate to the #2 kiln shall include fresh feed from the kiln feed system as well as any net transfer of cement kiln dust between the #1 kiln and #2 kiln systems.
- b. The raw feed rate (not including fuel) to the #2 kiln shall not exceed 150 tons per hour until such time as the Permittee demonstrates to the satisfaction of the Illinois EPA that a higher raw feed rate (up to 175 tons per hours)

will comply with the applicable emission limits specified in Special Condition 1 and 2 of this permit and as covered in the Construction Permit 93100068.

5. Kiln #2 shall operate only when the baghouse is operating with all components functioning properly and when visible emissions are not greater than 20% opacity, except during allowed malfunction conditions.
6. The Permittee shall maintain and operate a continuous opacity monitoring system on #2 kiln stack. On or before the 45th day of each calendar quarter, the Permittee shall submit to the Illinois EPA a report for the preceding calendar quarter of any and all opacity measurements which exceed 20 percent, averaged over a six minute period. These "excess opacity" reports shall provide, for each such incident, the percent opacity measured as well as the date and span of such incident. These reports shall also specify for each incident whether it occurred during startup, breakdown, or malfunction. If a malfunction is indicated in the report, all corrective actions taken, if any, shall be reported. The reports shall also specify, for each calendar quarter, the date of those periods during which the continuous monitoring system was not in operation.
- 7a. The particulate matter and opacity limitations in accordance with special condition #2 shall apply under supplemental fuel use for TDF and petroleum coke.
- b. This Permit is issued for the construction, if necessary, and substitution of TDF and petroleum coke as fuel to the Kiln without a net significant increase in emissions.
- 8a. Within 180 days from the date of completion of tire feed system (either from front end or at mid-kiln) for #2 kiln, and/or the petroleum coke feed system the effluent stream of #2 cement kiln shall be measured for pollutants, and as indicated in proposal plan dated February 22, May 14, and May 26, 1993 and November 30, 1994 submitted to the Illinois EPA.
- b.
  - i. The emission testing or continuous emission monitoring shall be performed for three modes of operation, namely: I, baseline stack test while burning coal; II, petroleum coke substitution with a minimum of 40% coal by weight; and III, TDF substitution with the petroleum coke substitution, and a 15% coal by weight, as indicated in the application.
  - ii. The test shall be conducted during circumstances which are representative of maximum emissions, and equipment data and material usage during the test shall be recorded.

- c. USEPA test methods 40 CFR 60, Appendix A shall be used for the following testing by an approved testing service unless another method is approved by the Illinois EPA or it is monitored by continuous emission monitoring system.
- i. Particulate Matter (Method 5)
  - ii. Sulfur Dioxide (Method 6)
  - iii. Carbon Monoxide (Method 10)
  - iv. Opacity (Method 9)
- d. Prior to carrying out these tests, the Illinois EPA's regional office and the Illinois EPA's Source Emission Test Specialist shall be notified a minimum of thirty (30) days prior to the expected date of these tests and further notified a minimum of five (5) working days prior to the test, of the exact date, time and place of these tests to enable the Illinois EPA to witness these tests sent to the following addresses.
- Illinois Environmental Protection Agency  
Division of Air Pollution Control  
2009 Mall Street  
Collinsville, Illinois 62234
- Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276
- e. Three (3) copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized, prior to or accompanying the operating permit application.
- Satisfactory completion of these tests and compliance with the limitations of this Permit shall be a prerequisite to the issuance of an operating permit for these supplemental fuels.
- f. A copy of the Summary of Results, General Information, and Conclusions, as contained in the Final Report, shall also be submitted to the Source Emission Test Specialist.
- g. The Final Report shall include records of laboratory analyses for the coal, coke and TDF, and the maximum TDF and petroleum coke substitution rate for the test plan.
- h. Fourteen days after test results are compiled and finalized, the Final Report shall include as a minimum:

- i. A summary of results.
  - ii. General information.
  - iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.
  - iv. Detailed description of test conditions, including:
    - A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel, raw material consumption and clinker production;
    - B. Control equipment information, i.e., equipment condition and operating parameters during testing; and
    - C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair.
  - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
  - vi. An explanation of any discrepancies among individual tests or anomalous data.
- 9a. The use of a TDF shall be limited to normal mode of operation for the cement kiln.
- b. The use of TDF shall not be allowed during start up, malfunction and breakdown of the cement kiln or control equipment.
  - c. The quantity of TDF use for this test plan shall not exceed 25% for TDF. After the Permittee satisfactorily completes the required testing showing compliance at a maximum of 60 percent petroleum coke, the Permittee may fire up to 60 percent petroleum coke during routine operation.
  - d. The Permittee shall keep records of the days and quantity of TDF and petroleum coke used and submit it to the Field Engineer at Marion Office on a monthly basis during the 180 day period specified in Special Condition 8(a).
  - e. The Permittee shall provide updated information on how shredded tires and/or whole tire and petroleum coke feed system handling to insure a consistent TDF/petroleum coke/coal mixture as the information becomes available.
  - f. The Permittee may increase pet coke firing above 60 percent, provided that testing at that higher level is

performed with a 180 days after the Permittee commences firing petroleum coke above the 60% limit. After the Permittee satisfactorily completes the required testing showing compliance at the higher level, the Permittee may fire coke at that higher percentage during routine operation. Testing at the higher percent coke shall follow the requirements outlined under Condition 8 of this permit, except that the mode of operation tested shall consider a higher firing percentage of coke.

It should be noted that this permit is revised to incorporate operation of a new baghouse at the process weight rate as reflected in Special Condition 4 and to clarify requirements of the permit per company's letter dated March 3, 1998.

If you have any questions on this, please call Shashi Shah at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:SRS:jar

cc: IEPA, FOS Region 3  
IEPA, Compliance Section  
IEPA, Source Monitoring Unit  
USEPA

217/782-2113

OPERATING PERMIT -- NSPS SOURCE - REVISED

PERMITTEE

Lafarge Corporation - Joppa Plant  
Attn: Hans Schrama, Env. Mgr.  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 72121106                      I.D. No.: 127855AAA  
Applicant's Designation: 7353 #KFFS   Date Received: December 19, 1994  
Operating Permit Expiration Date: May 30, 1999  
Subject: Portland Cement Manufacture  
Date Issued: August 5, 1998  
Location: County Line Roads 1000N and 300E, Joppa Plant

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of #1 finish mill, covered conveyor belts, #1 raw mill, blending silo, #1 kiln feed bucket elevator, #1 kiln feed storage tank, #1 kiln feed air slides, #1 kiln feed system belt feeder and DC, a #2 kiln feed system controlled by two baghouses, raw material transfer from #12A belt to #14 belt and to outside storage, reclaim of outside material at receiving hopper, #1 and #2 kiln feed backup system as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. This #1 kiln weigh feed system is subject to a New Source Performance Standard (NSPS), 40 CFR 60, Subpart F. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The particulate matter from the above equipment shall not exceed 10% opacity, pursuant to the New Source Performance Standard.
- c. At all times, the Permittee shall also, to the extent practicable, maintain and operate the Portland Cement Plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
- d. Daily production rates and kiln feed rates shall be recorded in accordance with the provisions of 40 CFR 60.63.

2. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hrs/Yr)</u>	<u>Process Rate (T/Hr)</u>	<u>Particulate Matter Emissions (Lb/Hr) (T/Yr)</u>	
#2 Kiln Feed Flowmeter with JK22570 Baghouse	8,400	175	0.1	0.44
#2 Kiln Feed Tank with JK22560 Baghouse	8,400	175	0.17	0.72

These limits are based on the maximum emission rate and hours of operation indicated in the permit application. The annual limit is the product of the hourly limit and the maximum hours of operation. Compliance with annual limits shall be determined from a running total of 12 months of data.

3. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.
4. No person shall cause or allow the emission of smoke or other particulate matter from any Portland cement kiln feed system into the atmosphere having an opacity greater than 10 percent.
5. This permit is issued based upon addition of four new baghouses and upgrading one existing baghouse for #1 Raw Mill system and #1 Finish Mill system without any increase in emissions above those previously allowed.
- 6a. This permit is issued based upon improvements to two existing baghouses for #1 raw mill without any increase in emissions of particulate matter to the atmosphere.
- b. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hour/Year)</u>	<u>Particulate Matter Emissions (Lb/Hour) (Ton/Yr)</u>	
#1 Raw Mill Baghouse (JR12520)	8,400	1.46	6.1
#1 Raw Mill Baghouse (JR12510)	8,400	1.75	7.4

These limits are based on the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

It should be noted that this permit has been revised only to include operation of the equipment described in company's letter dated August 29, 1995 and July 15, 1996.

If you have any questions on this, please call Shashi Shah at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:SRS:jar

cc: IEPA, FOS, Region 3  
IEPA, Compliance Section  
IEPA, Source Monitoring Unit

217/782-2113

OPERATING PERMIT

PERMITTEE

Lafarge Corporation  
Attn: Hans Schrama, Env. Mgr.  
Route 1, Box 84A  
Grand Chain, Illinois 62941

Application No.: 75100050                      I.D. No.: 127855AAA  
Applicant's Designation: #1 KILN              Date Received: August 4, 1995  
Subject: Kiln #1  
Date Issued: August 5, 1998                  Expiration Date: May 30, 1999  
Location: County Line Roads 1000N and 300E, Joppa

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of Kiln #1, a spray curtain, 2 cyclones in parallel, a settling chamber, ESP, and equipment consisting of introduction of whole tires at mid kiln and/or shredded tires as supplemental fuel, and petroleum coke as supplemental fuel as described in the above-referenced application and in letters submitted to the Illinois EPA February 22, May 14, and May 26, 1993 and November 30, 1994. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. The raw feed rate to the #1 kiln shall not exceed 145 tons per hour (including fuel). The raw feed rate to the #1 kiln shall include fresh feed from the kiln feed system as well as fuel and any net transfer of cement kiln dust between the #1 kiln and #2 kiln systems.
- 2a. Kiln #1 shall only operate when electrostatic precipitator is operating and when visible emissions are not greater than 30% opacity, except during startup, malfunction and breakdown conditions.
- b. The opacity from the ESP shall not exceed 30 percent except for a period or periods aggregating eight-minutes in any 60 minute period and not more than 60 percent opacity at any time and is limited to three times in any 24 hour period pursuant to 35 Ill. Adm. Code Section 212.123. This limit applies at all times except during startup, breakdown, or malfunction.
3. Operation during startup, when exceeding allowable emissions, is granted for a period of 6 hours.
4. Operation during malfunction and breakdown, when exceeding allowable emissions, is granted for a period of 6 hours.
5. The Permittee shall maintain and operate a continuous opacity monitoring system on #1 Kiln stack. On or before

the 45th day of each calendar quarter, the Permittee shall submit to the Agency a report for the preceding calendar quarter of any and all opacity measurements which exceed 30 percent, averaged over a one minute period. These "excess opacity" reports shall provide, for each such incident, the percent opacity measured as well as the date and span of such incident. These reports shall also specify for each incident whether it occurred during startup, breakdown, or malfunction. If a malfunction is indicated in the report, all corrective actions taken, if any, shall be reported. The reports shall also specify, for each calendar quarter, the date of those periods during which the continuous monitoring system was not in operation.

6. Applicant shall keep a log of each malfunction, breakdown and startup resulting in excess emissions and submit a copy of the log to the Agency Regional Office quarterly. This log shall consist of all pertinent data such as production rate, date, time, cause, duration, and efforts made to minimize duration and excess emissions.
- 7a. The particulate matter and opacity limitations in accordance with applicable regulation shall apply under TDF and petroleum coke use as supplemental fuel.
- b. This Permit is issued for the construction, if necessary, and substitution of TDF and petroleum coke as fuel to the kiln without a net significant increase in emissions.
- 8a. Prior to operation of the #1 kiln at a raw feed rate in excess of 130 tons per hour (including fuel), the Permittee must demonstrate to the satisfaction of the Illinois EPA that a higher raw feed rate (up to 145 tons per hour) will comply with the applicable provisions of the 35 Ill. Adm. Code for Portland Cement Plants.
- b. The #1 kiln may be operated on a limited time basis at a raw feed rate of up to 145 tph (including fuel) for the purpose of emission testing pursuant to a special written testing plan submitted to the Illinois EPA at least 30 days before beginning operation at a higher feed rate.
- 9a. Within 180 days from the date of completion of tire delivery system (either from front end or at mid-kiln) for #1 kiln, and/or the petroleum coke feed system, the effluent stream of #1 cement kiln shall be measured for pollutants, as indicated in proposed plan dated February 22, May 14, and May 26, 1993 and November 30, 1994 submitted to the Illinois Environmental Protection Agency.
- b. i. The emission testing or continuous emission monitoring shall be performed for three modes of

operation, namely: I, baseline stack test at the maximum raw feed rate while burning coal; II, optimum successful TDF substitution rate established from progressive feed rates; and, III, petroleum coke substitution with a minimum of 15% coal by weight, as indicated in the application.

- ii. The tests shall be conducted during circumstances which are representative of maximum processed weight rate, equipment data and material usage during the test shall be recorded.
  - iii. Satisfactory completion of these tests so as to demonstrate compliance with applicable emission limits (i.e., the kiln shall be tested at maximum rated load in order that the kiln can be approved to operate up to maximum rated load) is a prerequisite to revising or renewing of an operating permit, pursuant to 35 Ill. Adm. Code 210.160(a), (b) and (c).
- c. USEPA test methods 40 CFR 60, Appendix A shall be used for the following testing by an approved testing service unless another method is approved by the Agency or it is monitored by continuous emission monitoring system.
- i. Particulate Matter (Method 5)
  - ii. Sulfur Dioxide (Method 6)
  - iii. Carbon Monoxide (Method 10)
  - iv. Opacity (Method 9)
- d. All reports, notifications, etc., required by this permit shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control - Regional Office  
2009 Mall Street  
Collinsville, Illinois 62234  
Telephone 618/346-5120

and

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
Telephone 217/782-5811

- e. Three (3) copies of the Final Report(s) for these tests shall be submitted to the Agency within 14 days after the

test results are compiled and finalized, prior to or accompanying the operating permit application. Satisfactory completion of these tests and compliance with the limitations of this Permit shall be a prerequisite to the issuance of an operating permit for these supplemental fuels.

- f. The Final Report shall include records of laboratory analyses for the coal, coke and TDF, and the maximum TDF substitution rate for the test plan.
- g. Fourteen days after test results are compiled and finalized, the Final Report shall include as a minimum:
  - i. A summary of results.
  - ii. General information.
  - iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.
  - iv. Detailed description of test conditions, including:
    - A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption and clinker production;
    - B. Control equipment information, i.e., equipment condition and operating parameters during testing; and
    - C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair.
  - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
  - vi. An explanation of any discrepancies among individual tests or anomalous data.
- 10a. The use of a TDF shall be limited to normal mode of operation for the cement kiln.
- b. The use of TDF shall not be allowed during start up, malfunction and breakdown of the cement kiln or control equipment.
- c. The quantity of TDF and/or petroleum coke use for this test plan shall not exceed 25% for TDF and 60% for petroleum coke on a weight basis.

- d. After the Permittee satisfactorily completes the required testing at a maximum of 60 percent petroleum coke, the Permittee may upon Illinois EPA approval fire up to 60 percent petroleum coke during routine operation.
- e. The Permittee may increase pet coke firing above 60 percent, provided that testing at that higher level is performed within a 180 days after the Permittee commences firing petroleum coke above the 60% limit. The Illinois EPA and field office shall be notified in writing prior to substituting petroleum coke above 60% limit. After the Permittee satisfactorily completes the required testing at the higher level, the Permittee may fire coke at that higher percentage during routine operation upon Illinois EPA approval. Testing at the higher percent coke shall follow the requirements outlined under Condition 9 of this permit, except that the mode of operation tested shall consider a higher firing percentage of coke.
- f. The Permittee shall keep records of the days and quantity of TDF and petroleum coke used and submit it to the Field Engineer at Marion Office on a monthly basis during the 180 day period specified in special condition 9(a).
- g. The Permittee shall provide and update the information on how the shredded tires and/or whole tire feed system handling to insure a consistent TDF/petroleum coke/coal mixture as the information becomes available.

It should be noted that this permit is issued to incorporate operation of ESP TIE-IN to #1 Kiln (#2 Kiln's ESP is connected to #1 Kiln replacing #1 Kiln's old ESP, #2 Kiln now has new baghouse) as indicated in the application and company's letter dated March 3, 1998.

If you have any questions on this, please call Shashi Shah at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:SRS:jar

cc: Region 3  
USEPA Region V

217/782-2113

OPERATING PERMIT -- NSPS SOURCE - REVISED

PERMITTEE

Lafarge Corporation - Joppa Plant  
Attn: Hans Schrama, Env. Mgr.  
2500 Portland Road  
Grand Chain, Illinois 62941

Application No.: 72121106

I.D. No.: 127855AAA

Applicant's Designation: 7353 #KFFS Date Received: December 19, 1994

Operating Permit Expiration Date: May 30, 1999

Subject: Portland Cement Manufacture

Date Issued: August 5, 1998

Location: County Line Roads 1000N and 300E, Joppa Plant

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of #1 finish mill, covered conveyor belts, #1 raw mill, blending silo, #1 kiln feed bucket elevator, #1 kiln feed storage tank, #1 kiln feed air slides, #1 kiln feed system belt feeder and DC, a #2 kiln feed system controlled by two baghouses, raw material transfer from #12A belt to #14 belt and to outside storage, reclaim of outside material at receiving hopper, #1 and #2 kiln feed backup system as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. This #1 kiln weigh feed system is subject to a New Source Performance Standard (NSPS), 40 CFR 60, Subpart F. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The particulate matter from the above equipment shall not exceed 10% opacity, pursuant to the New Source Performance Standard.
- c. At all times, the Permittee shall also, to the extent practicable, maintain and operate the Portland Cement Plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
- d. Daily production rates and kiln feed rates shall be recorded in accordance with the provisions of 40 CFR 60.63.

2. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hrs/Yr)</u>	<u>Process Rate (T/Hr)</u>	<u>Particulate Emissions (Lb/Hr)</u>	<u>Matter Emissions (T/Yr)</u>
#2 Kiln Feed Flowmeter with JK22570 Baghouse	8,400	175	0.1	0.44
#2 Kiln Feed Tank with JK22560 Baghouse	8,400	175	0.17	0.72

These limits are based on the maximum emission rate and hours of operation indicated in the permit application. The annual limit is the product of the hourly limit and the maximum hours of operation. Compliance with annual limits shall be determined from a running total of 12 months of data.

3. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.
4. No person shall cause or allow the emission of smoke or other particulate matter from any Portland cement kiln feed system into the atmosphere having an opacity greater than 10 percent.
5. This permit is issued based upon addition of four new baghouses and upgrading one existing baghouse for #1 Raw Mill system and #1 Finish Mill system without any increase in emissions above those previously allowed.
- 6a. This permit is issued based upon improvements to two existing baghouses for #1 raw mill without any increase in emissions of particulate matter to the atmosphere.
- b. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hour/Year)</u>	<u>Particulate Emissions (Lb/Hour)</u>	<u>Matter Emissions (Ton/Yr)</u>
#1 Raw Mill Baghouse (JR12520)	8,400	1.46	6.1
#1 Raw Mill Baghouse (JR12510)	8,400	1.75	7.4

These limits are based on the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

It should be noted that this permit has been revised only to include operation of the equipment described in company's letter dated August 29, 1995 and July 15, 1996.

If you have any questions on this, please call Shashi Shah at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:SRS:jar

cc: IEPA, FOS, Region 3  
IEPA, Compliance Section

10.5 Attachment 5 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Official Title: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Date Signed: \_\_\_\_\_

## 10.6 Attachment 6 - Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;
2. Minor Permit Modification; and
3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment
  - Corrects typographical errors;
  - Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - Requires more frequent monitoring or reporting by the Permittee;
  - Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA;
  - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits; or
  - Incorporates into the CAAPP permit revised limitations or other requirements resulting from the application of an approved economic incentives rule, marketable permits rule, or generic emissions trading rule.
2. Minor Permit Modification
  - Do not violate any applicable requirement;

- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
  - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA; and
- Are not required to be processed as a significant permit modification.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source's suggested draft permit/conditions;
- Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
- Information as contained on form 271-CAAPP for the Illinois EPA to use to notify USEPA and affected States.

### 3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;

- Applications requesting a significant change in existing monitoring permit terms or conditions;
- Applications requesting a relaxation of reporting or recordkeeping requirements; and
- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or
- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or
- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

Application forms can be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms>.

Note that the request to revise the permit must be certified for truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require the Illinois EPA to deny the application. The Illinois EPA reserves the right to require that additional information be submitted as needed to evaluate or take final action on applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC 270.305.



Illinois Environmental Protection Agency  
Division Of Air Pollution Control -- Permit Section  
P.O. Box 19506  
Springfield, Illinois 62794-9506

<b>Application For Construction Permit (For CAAPP Sources Only)</b>	<b>For Illinois EPA use only</b>
	I.D. number:
	Permit number:
	Date received:

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

<b>Source Information</b>		
1. Source name:		
2. Source street address:		
3. City:	4. Zip code:	
5. Is the source located within city limits?		<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Township name:	7. County:	8. I.D. number:

<b>Owner Information</b>		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

<b>Operator Information (if different from owner)</b>		
14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

<b>Applicant Information</b>	
19. Who is the applicant? <input type="checkbox"/> Owner <input type="checkbox"/> Operator	20. All correspondence to: (check one) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Source
21. Attention name and/or title for written correspondence:	
22. Technical contact person for application:	23. Contact person's telephone number:

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

<b>Summary Of Application Contents</b>		
24.	Does the application address whether the proposed project would constitute a new major source or major modification under each of the following programs: a) Non-attainment New Source Review – 35 IAC Part 203; b) Prevention of Significant Deterioration (PSD) – 40 CFR 52.21; c) Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources – 40 CFR Part 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
25.	Does the application identify and address all applicable emissions standards, including those found in the following: a) Board Emission Standards – 35 IAC Chapter I, Subtitle B; b) Federal New Source Performance Standards – 40 CFR Part 60; c) Federal Standards for Hazardous Air Pollutants – 40 CFR Parts 61 and 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
26.	Does the application include a process flow diagram(s) showing all emission units and control equipment, and their relationship, for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
27.	Does the application include a complete process description for the emission units and control equipment for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
28.	Does the application include the information as contained in completed CAAPP forms for all appropriate emission units and air pollution control equipment, listing all applicable requirements and proposed exemptions from otherwise applicable requirements, and identifying and describing any outstanding legal actions by either the USEPA or the Illinois EPA? Note: The use of "APC" application forms is not appropriate for applications for CAAPP sources. CAAPP forms should be used to supply information.	<input type="checkbox"/> Yes <input type="checkbox"/> No
29.	If the application contains TRADE SECRET information, has such information been properly marked and claimed, and have two separate copies of the application suitable for public inspection and notice been submitted, in accordance with applicable rules and regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Not Applicable, No TRADE SECRET information in this application

Note 1: Answering "No" to any of the above may result in the application being deemed incomplete.

<b>Signature Block</b>							
This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.							
30.	I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete. Authorized Signature:     _____						
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center;">AUTHORIZED SIGNATURE</td> <td style="width: 50%; text-align: center;">TITLE OF SIGNATORY</td> </tr> <tr> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____ / _____ / _____</td> </tr> <tr> <td style="text-align: center;">TYPED OR PRINTED NAME OF SIGNATORY</td> <td style="text-align: center;">DATE</td> </tr> </table>	AUTHORIZED SIGNATURE	TITLE OF SIGNATORY	_____	_____ / _____ / _____	TYPED OR PRINTED NAME OF SIGNATORY	DATE
AUTHORIZED SIGNATURE	TITLE OF SIGNATORY						
_____	_____ / _____ / _____						
TYPED OR PRINTED NAME OF SIGNATORY	DATE						

Note 2: An operating permit for the construction/modification permitted in a construction permit must be obtained by applying for the appropriate revision to the source's CAAPP permit, if necessary.

10.8 Attachment 8 - Guidance on Renewing This Permit

Timeliness - Pursuant to Section 39.5(5)(n) of the Act and 35 IAC 270.301(d), a source must submit to the Illinois EPA a complete CAAPP application for the renewal of a CAAPP permit not later than 9 months before the date of permit expiration of the existing CAAPP permit in order for the submittal to be deemed timely. Note that the Illinois EPA typically sends out renewal notices approximately 18 months prior to the expiration of the CAAPP permit.

The CAAPP application must provide all of the following information in order for the renewal CAAPP application to be deemed complete by the Illinois EPA:

1. A completed renewal application form 200-CAAPP, APPLICATION FOR CAAPP PERMIT.
2. A completed compliance plan form 293-CAAPP, COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE FOR CAAPP PERMIT.
3. A completed compliance certification form 296-CAAPP, COMPLIANCE CERTIFICATION, signed by the responsible official.
4. Any applicable requirements that became effective during the term of the permit and that were not included in the permit as a reopening or permit revision.
5. If this is the first time this permit is being renewed and this source has not yet addressed CAM, the application should contain the information on form 464-CAAPP, COMPLIANCE ASSURANCE MONITORING (CAM) PLAN.
6. Information addressing any outstanding transfer agreement pursuant to the ERMS.
7. a. If operations of an emission unit or group of emission units remain unchanged and are accurately depicted in previous submittals, the application may contain a letter signed by a responsible official that requests incorporation by reference of existing information previously submitted and on file with the Illinois EPA. This letter must also include a statement that information incorporated by reference is also being certified for truth and accuracy by the responsible official's signing of the form 200-CAAPP, APPLICATION FOR CAAPP PERMIT and the form 296-CAAPP, COMPLIANCE CERTIFICATION. The boxes should be marked yes on form 200-CAAPP, APPLICATION FOR CAAPP PERMIT,

as existing information is being incorporated by reference.

- b. If portions of current operations are not as described in previous submittals, then in addition to the information above for operations that remain unchanged, the application must contain the necessary information on all changes, e.g., discussion of changes, new or revised CAAPP forms, and a revised fee form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT, if necessary.
8. Information about all off-permit changes that were not prohibited or addressed by the permit to occur without a permit revision and the information must be sufficient to identify all applicable requirements, including monitoring, recordkeeping, and reporting requirements, for such changes.
9. Information about all changes made under 40 CFR 70.4(b)(12)(i) and (ii) that require a 7-day notification prior to the change without requiring a permit revision.

The Illinois EPA will review all applications for completeness and timeliness. If the renewal application is deemed both timely and complete, the source shall continue to operate in accordance with the terms and conditions of its CAAPP permit until final action is taken on the renewal application.

Notwithstanding the completeness determination, the Illinois EPA may request additional information necessary to evaluate or take final action on the CAAPP renewal application. If such additional information affects your allowable emission limits, a revised form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT must be submitted with the requested information. The failure to submit to the Illinois EPA the requested information within the time frame specified by the Illinois EPA, may force the Illinois EPA to deny your CAAPP renewal application pursuant to Section 39.5 of the Act.

Application forms may be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms.html>.

If you have any questions regarding this matter, please contact a permit analyst at 217/782-2113.

Mail renewal applications to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section (MC 11)

Printed on Recycled Paper  
199-CAAPP

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P.O. Box 19506  
Springfield, Illinois 62794-9506

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