Part 70 Operating Permit Amendment

Permit Amendment No.: **3295-319-0029-V-02-1** **Effective Date:**

Facility Name: **Carbo Ceramics, Inc. – Toomsboro Plant**

Facility Address: 1880 Dent Road
Toomsboro, Georgia 31090 (Wilkinson County)

Mailing Address: 1880 Dent Road
Toomsboro, Georgia 31090

Parent/Holding Company: Carbo Ceramics, Inc.

Facility AIRS Number: 04-13-319-00029

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

> Construction and operation of kaolin clay process line Nos. 3 and 4 and implementation of best available control technology (BACT) and maximum achievable control technology (MACT) on kaolin clay process line Nos. 1, 2, 3 and 4 and associated natural gas fired boilers, stationary emergency diesel generators and materials handling, storage, packaging and shipping operations.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 3295-319-0029-V-02-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 18293 dated August 19, 2008 and revised on February 9, 2009 and August 14, 2009; any other applications upon which this Permit Amendment or Permit No. 3295-319-0029-V-02-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **40** pages.

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Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

Carbo Ceramics, Inc. – Toomsboro Plant operates a ceramic pellet manufacturing facility. In Application 18293, the company proposes to add two kaolin clay process lines (Process Line Nos. 3 and 4) to the facility. The facility expansion also includes two new 9.8 MMBtu/hr natural gas-fired boilers, two new stationary emergency diesel generators, a truck loadout system, and a bagging system. These two new process lines will be almost identical to the two existing kaolin clay process lines (Process Line Nos. 1 and 2) in terms of process nature, production capacity, and configurations of process and pollution control equipment, as described in detail in the current Air Quality Permit No. 3295-319-0029-V-02-0 issued to the facility.

This application also proposes to apply best achievable control technology (BACT) to CO, NO_x, PM/PM_{10} and SO_2 emissions from existing Process Line Nos. 1 and 2, because results of emission tests conducted in 2006 indicated that the emission rates of these criteria pollutants exceed either the corresponding major source thresholds or significant increase levels under NSR/PSD rules.

The same BACT will apply to the CO, NO_x, PM/PM_{10} and SO_2 emissions from the two new process lines because these emissions also exceed either the corresponding major source thresholds or significant increase levels under NSR/PSD rules and thus make these new process lines major sources under PSD/NSR regulations.

In addition, case-by-case MACT standards applicable to the existing and new spray dryers, calciners/kilns, boilers and stationary emergency diesel generators have been determined per Section 112(g) of Clean Air Act (CAA) Amendment of 1990 because the facility at this site is a major HAP emission source due mainly to methanol emissions from the spray dryers, and hydrogen fluoride (HF) and hydrogen chloride (HCl) emissions from rotary ceramic kilns.

PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY

2.1 Facility Wide Emission Caps and Operating Limits

None applicable.

2.2 Facility Wide Federal Rule Standards

New Conditions

2.2.2 The Permittee shall implement measures, including fencing, sign postings, and routine patrols to restrict public access along the entire Source Boundary utilized in the ambient impact assessment/modeling. Signs shall be posted along the property boundary no further than 100 feet apart, and patrols shall be conducted at least once weekly on boundaries that have public access. The Permittee shall maintain a written plan outlining such measures, and shall be updated as required. The Division reserves the right to require enhancement of the plan.
[40 CFR 52.21-PSD/BACT]

2.3 Facility Wide SIP Rule Standards

New Conditions

2.3.1 If any of the emission standards or requirements in this Permit is revised by EPA or the state after the issuance of this Permit, the Permittee shall comply with the revised standard(s) or requirement(s) on and after any applicable compliance date(s).
[391-3-1-.03(2)(c)]

2.4 Facility Wide Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

None applicable.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1 Updated Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
Existing Equipment					
Process Line No. 1					
DFC1 SH1 SBC1 BFC1 LFB1 LFC1	Feed Conveyor No. 1 Shredder No. 1 Shredder Belt Conveyor No. 1 Bin Feed Conveyor No. 1 Blunger Feeder Bin No. 1 Blunger Feeder Conveyor No. 1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 4.2.5, 4.2.6, 5.2.5, 6.2.1, 6.2.2, 6.2.9	None	None
DDC1	Collection Drag Chain Conveyor No. 1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.2, 4.2.1, 4.2.5, 4.2.6, 5.2.5, 6.2.1, 6.2.2, 6.2.9	None	None
MM1 MM2 RMM1	Media Mill No. 1 Media Mill No. 2 Regrind Media Mill No. 1				
SC1 SC2 SC3 SC4 SC5 SC6	Screen No. 1-1 Screen No. 1-2 Screen No. 1-3 Screen No. 1-4 Screen No. 1-5 Screen No. 1-6				
SD01	Spray Dryer #1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8,	Baghouses (Stack S002)	SB01, SB02, SB03, SB04
SD02	Spray Dryer #2			Baghouses (Stack S003)	SB05, SB06, SB07, SB08

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
DSB1 DUB1 DSB2 DUB2 ABC1 OC1 GPC1 GPT1 GPE1 GSH1 GSC1 GSC2 GSC3 OBC1 ORB1 UBC1 URC1 KFE1 KFB1 KRB1 KRE1 KFC1	Spray Dryer #1 Feed Bin Spray Dryer #1 Unders Bin Spray Dryer #2 Feed Bin Spray Dryer #2 Unders Bin Accepts Belt Conveyor No. 1 Overflow Conveyor No. 1 Pellet Collection Conveyor No. 1 Pellet Transfer Conveyor No. 1 Pellet Bucket Elevator No. 1 Screen Surge Hopper No. 1 Pellet Screen 1-1 Pellet Screen 1-2 Pellet Screen 1-3 Oversize Collection Belt Conveyor No. 1 Oversize Surge Bin No. 1 Unders Collection Belt Conveyor No. 1 Unders Reversible Belt Conveyor No. 1 Kiln #1 Feed Bin Bucket Elevator Kiln #1 Feed Bin Kiln #1 Recycle Feed Bin Kiln #1 Rec. Feed Bin B Elevator Kiln #1 Feed Conveyor	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Baghouse (Stack S004)	GPB1
KLN1	Calciner/Kiln No. 1 & Cooler	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.2, 4.2.9, 4.2.10, 4.2.11, 4.2.12, 4.2.14, 5.2.1, 5.2.2, 5.2.9, 6.1.7, 6.2.1, 6.2.4, 6.2.7, 6.2.8, 6.2.16, 6.2.17, 6.2.18, 6.2.19	Baghouses (Stack S005)	KBH1, KBH2, KBH3, KBH4,
KCE1 KPS1 KFS1 KQC1 KQC2 KQC3 KQC4 KCS1 KCS2	Kiln #1 Cooler Bucket Elevator Kiln #1 Product Screen Kiln #1 Fine Screen Kiln #1 Product QC Bin A Kiln #1 Product QC Bin B Kiln #1 Product QC Bin C Kiln #1 Product QC Bin D Kiln #1 Product Screen DPCS Kiln #1 Fines Screen DPCS	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Baghouse (Stack S006)	KNB1
RWB1	Recycle Weigh Bin No. 1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Bin Vent Filter	RBF1
BSS1	Bulk Storage Silo 1-1			Bin Vent Filter	BB01
BSS2	Bulk Storage Silo 1-2			Bin Vent Filter	BB02
BSS3	Bulk Storage Silo 1-3			Bin Vent Filter	BB03
BSS4	Bulk Storage Silo 1-4			Bin Vent Filter	BB04
BSS5	Bulk Storage Silo 1-5			Bin Vent Filter	BB05

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
RRL1	Railcar Loading Operations No. 1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Baghouse (S008)	RCB1
EDG1	Emergency Diesel Generator No. 1 (MTU Detroit Diesel 1820 DSEB; Engine Model No. 16V4000G41)	391-3-1-.03(6)(b)(11)(v)(1) 40 CFR 52.21 – PSD/BACT 40 CFR Part 63, Subpart ZZZZ	2.2.2, 2.3.1, 3.2.4, 3.2.6, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.10, 3.3.12, 5.2.7, 6.1.7, 6.2.11, 6.2.12, 6.2.13	None	None
BLR1	Boiler No. 1	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.2, 2.3.1, 3.2.2, 3.2.3, 3.2.4, 3.3.3, 3.3.7, 3.4.3, 3.4.4, 3.4.5, 6.1.7, 6.2.4, 6.2.8, 6.2.9,	None	None
Process Line No. 2					
DDC2	Collection Drag Chain Conveyor No. 2	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 4.2.5, 4.2.6, 5.2.5, 6.2.1, 6.2.2, 6.2.9	None	None
LFC2	Blunger Feeder Conveyor No. 2				
SC7	Screen No.2-1				
SC8	Screen No.2-2				
SC9	Screen No.2-3				
SC10	Screen No.2-4				
SC11	Screen No.2-5				
SC12	Screen No.2-6				
SD03	Spray Dryer #3	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.2, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8,	Baghouses (Stack S010)	SB09, SB10, SB11, SDB12
SD04	Spray Dryer #4			Baghouses (Stack S011)	SB13, SB14, SB15, SB16

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
DSB3 DUB3 DSB4 DUB4 ABC2 OC2 GPC2 GPT2 GPE2 GSH2 GSC4 GSC5 GSC6 OBC2 ORB2 UBC2 URC2 KFE2 KFB2 KRB2 KRE2 KFC2	Spray Dryer #3 Feed Bin Spray Dryer #3 Unders Bin Spray Dryer #4 Feed Bin Spray Dryer #4 Unders Bin Accepts Belt Conveyor No. 2 Overflow Conveyor No. 2 Pellet Collection Conveyor No. 2 Pellet Transfer Conveyor No. 2 Pellet Bucket Elevator No. 2 Screen Surge Hopper No. 2 Pellet Screen 2-1 Pellet Screen 2-2 Pellet Screen 2-3 Oversize Collection Belt Conveyor No. 2 Oversize Surge Bin No. 2 Unders Collection Belt Conveyor No. 2 Unders Reversible Belt Conveyor No. 2 Kiln No. 2 Feed Bin Bucket Elevator Kiln No.2 Feed Bin Kiln No. 2 Recycle Feed Bin Kiln No. 2 Rec. Feed Bin B Elevator Kiln No. 2 Feed Conveyor	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Baghouse (Stack S012)	GPB2
KLN2	Calciner/Kiln No. 2 & Cooler	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.2, 4.2.9, 4.2.10, 4.2.11, 4.2.12, 4.2.14, 5.2.1, 5.2.2, 5.2.9, 6.1.7, 6.2.1, 6.2.4, 6.2.7, 6.2.8, 6.2.16, 6.2.17, 6.2.18, 6.2.19	Baghouses (Stack S013)	KBH5, KBH6, KBH7, KBH8,
KCE2 KPS2 KFS2 KQC5 KQC6 KQC7 KQC8 KCS3 KCS4	Kiln #2 Cooler Bucket Elevator Kiln #2 Product Screen Kiln #2 Fine Screen Kiln #2 Product QC Bin A Kiln #2 Product QC Bin B Kiln #2 Product QC Bin C Kiln #2 Product QC Bin D Kiln #2 Product Screen DPCS Kiln #2 Fines Screen DPCS	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Baghouse (Stack S014)	KNB2
BSS6	Bulk Storage Silo 2-1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Bin Vent Filter	BB06
BSS7	Bulk Storage Silo 2-2			Bin Vent Filter	BB07
BSS8	Bulk Storage Silo 2-3			Bin Vent Filter	BB08
BSS9	Bulk Storage Silo 2-4			Bin Vent Filter	BB09
BS10	Bulk Storage Silo 2-5			Bin Vent Filter	BB10

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
RRL2	Railcar Loading Operations No. 2	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.1, 3.3.3, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10	Baghouse (Stack S022)	RCB2
BLR2	Boiler No. 2	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.2, 2.3.1, 3.2.2, 3.2.3, 3.2.4, 3.3.3, 3.3.7, 3.4.3, 3.4.4, 3.4.5, 6.1.7, 6.2.4, 6.2.8, 6.2.9,	None	None
EDG2	Emergency Diesel Generator No. 2 (MTU Detroit Diesel 1820 DSEB; Engine Model No. 16V4000G41)	391-3-1-.03(6)(b)(v)(11)(1) 40 CFR 52.21 – PSD/BACT 40 CFR Part 63, Subpart ZZZZ 40 CFR Part 60, Subpart IIII	2.1.1, 2.2.2, 2.3.1, 3.2.4, 3.2.6, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.10, 3.3.11, 3.3.12, 5.2.7, 6.1.7, 6.2.11, 6.2.12, 6.2.13, 6.2.14	N/A	N/A
New Equipment					
Process Line No. 3					
DDC3	Collection Drag Chain Conveyor No. 3	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.5, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	None	N/A
LFC3	Blunger Feeder Conveyor No. 3				
LFC4	Blunger Feeder Conveyor No. 4				
SC13	Screen No. 3-1				
SC14	Screen No. 3-2				
SC15	Screen No. 3-3				
SC16	Screen No. 3-4				
SC17	Screen No. 3-5				
SC18	Screen No. 3-6				
SD05	Spray Dryer No. 5	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.15	Spray Dryer No. 5 Baghouses A,B,C,D (Stack S017)	SB17, SB18, SB19, SB20
SD06	Spray Dryer No. 6			Spray Dryer No. 6 Baghouses A, B,C,D (Stack S018)	SB21, SB22, SB23, SB24

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
ABC3	Accepts Belt Conveyor No. 3	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.3, 5.2.4, 5.2.8, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	Pallet Nuisance Baghouse #3 (Stack S019)	GPB3
DSB5	Spray Dryer No. 5 Feed Bin				
DUB5	Spray Dryer No. 5 Unders Bin				
DSB6	Spray Dryer No. 6 Feed Bin				
DUB6	Spray Dryer No. 6 Unders Bin				
OC3	Overflow Conveyor No. 3				
GPC3	Pellet Collection Conveyor No. 3				
GPT3	Pellet Transfer Conveyor No. 3				
GPE3	Pellet Bucket Elevator No. 3				
GSH3	Screen Surge Hopper No. 3				
GSC7	Pellet Screen No. 3-1				
GSC8	Pellet Screen No. 3-2				
GSC9	Pellet Screen No. 3-3				
OBC3	Oversize Collection Belt Conveyor No. 3				
ORB3	Oversize Surge Bin No. 3				
UBC3	Unders Collection Belt Conveyor No. 3				
URC3	Unders Reversible Belt Conveyor No. 3				
KFE3	Kiln No. 3 Feed Bin				
KFB3	Kiln No. 3 Feed Bin				
KRE3	Kin No. 3 Recycle Feed Bin Bucket Elevator				
KFC3	Kiln No. 3 Feed Conveyor				
KRB3	Kiln No. 3 Recycle Feed Bin				
ML03	Mill No. 3			Mill Baghouse (Stack S031)	MB03
ML04	Mill No. 4				
KLN3	Direct-Fired Rotary Calciner/Kiln No. 3 & Cooler (Calciner/Kiln No. 3)	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.10, 4.2.11, 4.2.12, 4.2.14, 5.2.1, 5.2.2, 5.2.9, 6.1.7, 6.2.1, 6.2.4, 6.2.7, 6.2.8, 6.2.15, 6.2.16, 6.2.17, 6.2.18, 6.2.19	Kiln No. 3 Baghouses A,B, C,D (Stack S020)	KBH9, KB10, KB11, KB12
KCE3	Kiln No. 3 Cooler Bucket Elevator	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.3, 5.2.4, 5.2.8, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	Kiln No. 3 Nuisance Baghouse (StackS021)	KNB3
KPS3	Kiln No. 3 Product Screen				
KFS3	Kiln No. 3 Fine Screen				
KQC9	Kiln No. 3 Product QC Bin A				
KQ10	Kiln No. 3 Product QC Bin B				
KQ11	Kiln No. 3 Product QC Bin C				
KQ12	Kiln No. 3 Product QC Bin D				
KCS5	Kiln No. 3 Product Screen DPCS				
KCS6	Kiln No. 3 Product Screen DPCS				

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
PBC3	Kiln No. 3 Product Screen belt Conveyor	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.5, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	None	N/A
PBE3	Kiln No. 3 Product Screen Bucket Elevator				
FBC3	Kiln No. 3 Fines Screen Belt Conveyor				
FBE3	Kiln No. 3 Fines Screen Bucket Elevator				
BS11	Bulk Product Silo No. 3-1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.4, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.3, 5.2.4, 5.2.8, 6.1.7, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	Baghouse (Stack BV14)	BB11
BS12	Bulk Product Silo No. 3-2			Baghouse (Stack BV15)	BB12
BS13	Bulk Product Silo No. 3-3			Baghouse (Stack BV16)	BB13
BS14	Bulk Product Silo No. 3-4			Baghouse (Stack BV17)	BB14
BS15	Bulk Product Silo No. 3-5			Baghouse (Stack BV18)	BB15
EDG3	Emergency Diesel Generator No. 3 (MTU Detroit Diesel V2000S6F or equal; Engine Model 16V4000G43 or equal)-	391-3-1-.03(6)(b)(11)(v)(1) 40 CFR 52.21 – PSD/BACT 40 CFR Part 63, Subpart ZZZZ 40 CFR Part 60, Subpart IIII	2.1.1, 2.2.2, 2.3.1, 3.2.4, 3.2.6, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.10, 3.3.11, 3.3.12, 5.2.7, 6.1.7, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.15	N/A	N/A
BLR3	9.8 MMBtu/Hr Boiler No. 3	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.2, 2.3.1, 3.2.2, 3.2.3, 3.2.4, 3.3.3, 3.3.7, 3.4.3, 3.4.4, 3.4.5, 6.1.7, 6.2.4, 6.2.8, 6.2.9, 6.2.15	None	N/A
Process Line No. 4					
DDC4	Collection Drag Chain Conveyor No. 4	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.5, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	None	N/A
LFC4	Blunger feeder Conveyor No. 4				
SC19	Screen No. 4-1				
SC20	Screen No. 4-2				
SC21	Screen No. 4-3				
SC22	Screen No. 4-4				
SC23	Screen No. 4-5				
SC24	Screen No. 4-6				
SD07	Spray Dryer No. 7	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.15	Spray Dryer No. 7 Baghouses A,B,C,D (Stack S024)	SB25, SB26, SB27, SB28
SD08	Spray Dryer No. 8			Spray Dryer No. 8 Baghouses A,B,C,D (Stack S025)	SB29, SB30, SB31, SB32

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
ABC4	Accepts Belt Conveyor No. 4	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.15	Pellet Nuisance Baghouse #4 (Stack S026)	GPB4
DSB7	Spray Dryer No. 7 Feed Bin				
DUB7	Spray Dryer No. 7 Unders Bin				
DSB8	Spray Dryer No. 8 Feed Bin				
DUB8	Spray Dryer No. 8 Unders Bin				
OC4	Overflow Conveyor No. 4				
GPC4	Pellet Collection Conveyor No. 4				
GPT4	Pellet Transfer Conveyor No. 4				
GPE4	Pellet Bucket Elevator No. 4				
GSH4	Screen Surge Hopper No. 4				
GS10	Pellet Screen No. 4-1				
GS11	Pellet Screen No. 4-2				
GS12	Pellet Screen No. 4-3				
OBC4	Oversize Collection Belt Conveyor No. 4				
ORB4	Oversize Surge Bin No. 4				
UBC4	Unders Collection Belt Conveyor No. 4				
URC4	Unders Reversible Belt Conveyor No. 4				
KFE4	Kiln No. 4 Feed Bin Bucket Elevator				
KFB4	Kiln No. 4 Feed Bin				
KRE4	Kin No. 4 Recycle Feed Bucket Elevator				
KFC4	Kiln No. 4 Feed Conveyor				
KRB4	Kiln No. 4 Recycle Feed Bin				
DDC3	Collection Drag Chain Conveyor No. 3	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.5, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	None	N/A
PB03	Line 3 Product Belt				
DDC4	Collection Drag Chain Conveyor No. 4				
PB04	Line 4 Product Belt				
FBS1	Finished Goods Bagging System	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3,	Bagging System Dust Collector	BSDC

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
TL01	Truck Loadout System	40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.15	Truck Loadout Baghouse	TLB1
KLN4	Direct-Fired Rotary Calciner/Kiln No. 4 & Cooler (Calciner/Kiln No. 4)	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.10, 4.2.11, 4.2.12, 4.2.14, 5.2.1, 5.2.2, 5.2.9, 6.1.7, 6.2.1, 6.2.4, 6.2.7, 6.2.8, 6.2.15, 6.2.16, 6.2.17, 6.2.18, 6.2.19	Kiln No. 4 Baghouses A, B, C D (Stack S027)	KB13, KB14, KB15, KB16
KCE4	Kiln No. 4 Cooler Bucket Elevator	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.15	Kiln No. 4 Nuisance Baghouse (StackS028)	KNB4
KPS4	Kiln No. 4 Product Screen				
KFS4	Kiln No. 4 Fine Screen				
KQ13	Kiln No. 4 Product QC Bin A				
KQ14	Kiln No. 4 Product QC Bin B				
KQ15	Kiln No. 4 Product QC Bin C				
KQ16	Kiln No. 4 Product QC Bin D				
KCS7	Kiln No. 4 Product Screen 1 DPCS				
KCS8	Kiln No. 4 Fines Screen 2 DPCS				
PBC4	Kiln No. 4 Product Screen belt Conveyor	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.4, 3.3.1, 3.3.3, 3.3.9, 3.4.1, 3.4.2, 4.2.1, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.5, 6.2.1, 6.2.2, 6.2.9, 6.2.10, 6.2.15	None	N/A
PBE4	Kiln No. 4 Product Screen Bucket Elevator				
FBC4	Kiln No. 4 Fines Screen Belt Conveyor				
FBE4	Kiln No. 4 Fines Screen Bucket Elevator				
BS16	Bulk Product Silo No. 4-1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	2.2.1, 2.2.2, 2.3.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.3.2, 3.3.3, 3.3.7, 3.3.8, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 4.2.3, 4.2.8, 4.2.9, 4.2.12, 4.2.13, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.15	Baghouse (Stack BV20)	BB16
BS17	Bulk Product Silo No. 4-2			Baghouse (Stack BV21)	BB17
BS18	Bulk Product Silo No. 4-3			Baghouse (Stack BV22)	BB18
BS19	Bulk Product Silo No. 4-4			Baghouse (Stack BV23)	BB19
BS20	Bulk Product Silo No. 4-5			Baghouse (Stack BV24)	BB20

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**Description**	**ID No.**
EDG4	Emergency Diesel Generator No. 4 (MTU Detroit Diesel V2000S6F or equal; Engine Model 16V4000G43 or equal)	391-3-1-.03(6)(b)(v)(11)(1) 40 CFR 52.21 – PSD/BACT 40 CFR Part 63, Subpart ZZZZ 40 CFR Part 60, Subpart IIII	2.1.1, 2.2.2, 2.3.1, 3.2.4, 3.2.6, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.10, 3.3.11, 3.3.12, 5.2.7, 6.1.7, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.15	N/A	N/A
BLR4	9.8 MMBtu/Hr Boiler No. 4	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	2.2.2, 2.3.1, 3.2.2, 3.2.3, 3.2.4, 3.3.3, 3.3.7, 3.4.3, 3.4.4, 3.4.5, 6.1.7, 6.2.4, 6.2.8, 6.2.9, 6.2.15	None	N/A

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards and corresponding permit conditions are intended as a compliance tool and may not be definitive.

3.2 Equipment Emission Caps and Operating Limits

Modified Condition

3.2.2 The Permittee shall fire boilers, spray dryers and calciners/kilns with natural gas or propane only.
[40 CFR 52.21-PSD/BACT, 391-3-1-.02(2)(g) subsumed]

New Conditions

3.2.3 VOC emissions from the existing process lines combined and from the new process lines combined shall not equal or exceed the following limits:
[Avoidance of 40 CFR 52.21]

Table 3.2.3-1: Annual VOC Emission Limits for Existing & New Process Lines

Source Description	Emission Unit ID No.	VOC Emission Limit, tons per 12 consecutive months
Process Line Nos. 1 and 2	(refer to Table 3.1 of this permit amendment)	40
Process Line Nos. 3 and 4	(refer to Table 3.1 of this permit amendment)	40

3.2.4 The Permittee shall use the following technologies and/or procedures to comply with the relevant BACT emission limits:
[40 CFR 52.21-PSD/BACT]

a. NO_x emissions:

i. Good Combustion Techniques (e.g., those such as equipment design, maintenance, and combustion process control such as appropriate combustion temperature, air to fuel ratio, staged and/or controlled combustion that can lower the NO_x emissions.);

ii. Low NO_x burner;

iii. Use of "clean fuels", i.e., natural gas and propane.

b. Stack PM emissions:

i. Fabric filters/baghouses

c. Fugitive Emissions:

i. Wet suppression or timely cleanup;

ii. Enclosure if applicable;

iii. Covering if applicable.

d. SO_2 emissions:

i. Use of "clean fuels", i.e., natural gas and propane.

e. CO emissions

i. Equipment design, maintenance and combustion process control with good operating practices (i.e., adequate combustion temperature, residence time and/or excess air, etc.) that can lower the CO emissions.

The Permittee shall develop written operation, inspection and maintenance procedures and work practice requirements/plans with regard to paragraphs a, b, c, d and e of this condition. These procedures and requirements/plans shall be developed and implemented to ensure the satisfaction of the applicable operating requirements in this condition. All inspection and maintenance activities shall be recorded in a permanent form suitable for inspection and submission to the Division.

3.2.5 The Permittee shall implement measures to remove kaolin residue from plant roads, including, at a minimum, cleaning the roads at least weekly. The Permittee may use a vacuum street sweeper(s) and a truck washing station(s) to prevent accumulation of fugitive dusts on paved roads used to haul raw materials into the facility.
[40 CFR 52.21 - PSD/BACT]

3.2.6 The accumulated annual operating time for each of the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emissions Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) shall not exceed 500 hours per year.
[40 CFR 52.21(j) – PSD/BACT, 391-3-1-.03(6)(b)(11)(v)(l)]

3.3 Equipment Federal Rule Standards

Modified Condition

3.3.2 The Permittee shall comply with the provisions of 40 CFR, Part 60, Subpart UUU, *"Standards of Performance for Calciners and Dryers in Mineral Industries,"* for all subject equipment {for reference, see listing in Section 3.1 above}. In particular, sources subject to Subpart UUU, the Permittee shall comply with the following conditions for each calciner and dryer:
[40 CFR 60.732(a) & (b)]

The Permittee shall not discharge or cause the discharge into the atmosphere, from each of the processing equipment subject to 40 CFR, Part 60, Subpart UUU, any gases which:

a. Contain particulate matter in excess of 0.04 grains/dscf (0.092 grams/dscm) for calciners and dryers installed in series.

b. Contain particulate matter in excess of 0.025 grains/dscf (0.057 grams/dscm) for dryers.

c. Exhibit greater than 10 percent opacity.

New Conditions

3.3.3 Emissions from each of the listed process units shall not exceed the following pertinent BACT limits:
[40 CFR 52.21 - PSD/BACT]

TABLE 3.3.3-1: BACT Emission Limits for Process Units

Operation	Emission	Emission Limit	Compliance Method	Averaging Time
Each calciner/kiln	PM/PM_{10}	0.010 gr/dscf, not to exceed 3.09 lbs/hr	Method 5 (Method 201 or 201A, in conjunction with Method 202 if necessary)	3 hours

Operation	Emission	Emission Limit	Compliance Method	Averaging Time
Each spray dryer	PM/PM_{10}	0.020 gr/dscf, not to exceed 4.54 lbs/hr	Method 5 (Method 201 or 201A in conjunction with Method 202 if necessary)	3 hours
Each spray dryer and calciner/kiln	Visible	10% opacity	COMS	6-minute average
All emission units with baghouse control excluding spray dryers and calciners/kilns	PM/PM_{10}	0.010 gr/dscf	Method 5 (Method 201 or 201A in conjunction with Method 202 if necessary) if required	3 hours
	Visible	7% opacity	Method 9	6-minute average
All fugitive sources	Fugitive	10% opacity	Method 22 and/or Method 9	Per Method 22 or Method 9
Each calciner/kiln	SO_2	34.2 lb/hr	Method 6 or 6C; Daily Analyzing of Kaolin Clay Sulfur Content	3 hours; daily average
	NO_x	121 lbs/hr	Method 7 or 7E	3 hours
	CO	24.7 lbs/hr	Method 10	3 hours
Each spray dryer	NO_x	8.3 lbs/hr	Method 7 or 7E	3 hours
	CO	16.6 lbs/hr	Method 10	3 hours
9.8 MMBtu/hr natural gas fired boiler No. 1, 2, 3 and 4	NO_x	12 ppmv@ 3% O_2 at dry standard conditions	Manufacturer's written guarantee	N/A

a. The following applicable State rules or emission limits are subsumed by the applicable and more stringent BACT or NSPS emission limits:

- Georgia Air Quality Rule 391-3-1-.02(2)(b): *"Visible Emissions"*
- Georgia Air Quality Rule 391-3-1-.02(2)(p): *"Particulate Emission from Kaolin and Fuller's Earth Processes"*
- Georgia Rule 391-3-1-.02(2)(g): *"Sulfur Dioxide"*
- Georgia Air Quality Rule 391-3-1-.02(2)(n)2: *"Fugitive Dust"*

b. Method 201 or 201A in conjunction with Method 202 shall be used to demonstrate compliance with the PM_{10} emission limits during the performance testing. As an alternative to the PM_{10} testing, the Permittee may assume that 100% of the PM emissions from the baghouses as determined via Method 5 are PM_{10} in the emission compliance demonstration.

3.3.4 Each of the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emissions Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) shall be operated and maintained according to the manufacturer's written specifications/instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engines. [40 CFR 52.21 – PSD /BACT, , 40 CFR 60.4206 & 60.4211(a)]

3.3.5 Each of the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emissions Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) shall be certified for emission standards from new nonroad compression ignition engines specified in 40 CFR 89.112 and 40 CFR 89.113 for the applicable model year and engine rated power
[40 CFR 52.21 PSD/BACT, 40 CFR 60.4205 subsumed, 60.4211(b)(1) and 60.4211(c)]

3.3.6 The Permittee shall operate each of the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emissions Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) using diesel fuel that has a maximum sulfur content of 500 parts per million (ppm) (0.05% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent. Beginning on October 1, 2010, the Permittee shall only use diesel fuel that has a maximum sulfur content of 15 ppm (0.0015% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent.
[40 CFR 60.4207(a) & 60.4207(b)]

3.3.7 The Permittee shall comply with all applicable provisions of the National Emission Standard for hazardous Air Pollutants (NESHAP) as found in 40 CFR Part 63, Subpart B – *"Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections 112(g)"*.
[40 CFR 63, Subpart B]

3.3.8 Emissions of hazardous air pollutants (HAPs) shall not exceed the following 112(g) case-by-case MACT emission standards:
[40 CFR 63.40 through 63.44/112(g) case-by-case MACT]

Table 3.3.8-1: 112(g) Case-By-Case MACT Emission Limit

Affected Source	HAP	Emission Limit	Averaging Time	Compliance Method
Spray Dryer Nos. 1 & 2	Methanol	0.057 lbs/ton of kiln feed, not to exceed 10.04 tons per 12-rolling months	Monthly 12-month rolling	Mass balance based on kiln feed and methanol-containing additive input records and MSDS
Spray Dryer Nos. 3 & 4		0.057 lbs/ton of kiln feed, not to exceed 10.04 tons per 12-rolling months		
Spray Dryer Nos. 5 & 6		0.057 lbs/ton of kiln feed, not to exceed 10.04 tons per 12-rolling months		
Spray Dryer Nos. 7 & 8		0.057 lbs/ton of kiln feed, not to exceed 10.04 tons per 12-rolling months		
Each Kiln/Calciner	HCl	0.099 lbs/ton of kiln feed	3 hours	Method 26 or 26A of 40 CFR Part 60, Appendix A or Method 320 of 40 CFR Part 63, Appendix A
		8.70 tons per year	12-month rolling	Calculation based on annual testing result & production records
	HF	0.433 lbs/ton of kiln feed	3 hours	Method 26 or 26A of 40 CFR Part 60, Appendix A or Method 320 of 40 CFR Part 63, Appendix A
		37.92 tons per year	12-month rolling	Calculation based on annual testing result & production records

3.3.9 The Permittee shall comply with the provisions of 40 CFR, Part 60, Subpart OOO, *"Standards of Performance for Nonmetallic Mineral Processing Plants"* as amended on April 28, 2009 for all subject equipment {for reference, see listing in Section 3.1}. In particular, for sources subject to Subpart OOO, the Permittee shall comply with the following for each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, silo, enclosed truck or railcar loading station:
[40 CFR 60.672 (a) thru (f)]

The Permittee shall not discharge or cause the discharge into the atmosphere, from each of the processing equipment subject to 40 CFR 60 Subpart OOO, any

a. fugitive emissions greater than 7 percent opacity except for any crusher that does not use a capture system, which shall not exhibit fugitive emissions greater than 12 percent opacity.

b. stack emissions which:

i. Contain particulate matter in excess of 0.032 g/dscm (0.014 grains/dscf) except for any storage bin utilizing a dedicated bin vent.

ii. Exhibit greater than 7 percent opacity.

For processing equipment subject to the 40 CFR Part 60 Subpart OOO located inside a building, the Permittee shall comply with the above process equipment limits (a and b), or shall not discharge or cause the discharge into the atmosphere, any

c. visible fugitive emissions from the building.

d. emissions from a powered building vent which:

i. Contain particulate matter in excess of 0.032 g/dscm (0.014 grains/dscf).
ii. Exhibit greater than 7 percent opacity.

3.3.10 The accumulated maintenance checks and readiness testing time for <u>each</u> of the stationary emergency diesel generators/engines shall not exceed 100 hours per year. The Permittee may petition the Division for approval of additional hours for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of the new emergency stationary diesel engine/generator beyond 100 hours per year. Any operation other than emergency power generation, and maintenance check and readiness testing is prohibited.
[40 CFR Part 52.21 and 40 CFR 60.4211(e)]

3.3.11 <u>Each</u> of the stationary emergency diesel generators/engines Nos. 2, 3 and 4 (Emissions Unit ID Nos. EDG2, EDG3 and EDG4) and any associated control devices if applicable, shall be installed and configured according to the manufacturer's written instructions.
[40 CFR 60.4211(c)]

3.3.12 The Permittee shall operate each of the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emissions Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) only in an emergency situation such as to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility is interrupted, or to pump water in the case of fire or flood, etc. It may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine.
[40 CFR 63.6590(b)(i)]

3.3.13 The Permittee shall submit an Initial Notification for each of the stationary emergency diesel generators/engines Nos. 3 and 4 (Emissions Unit ID Nos. EDG3 and EDG4) no later than 120 days after the engines become subject to 40 CFR Part 63, Subpart ZZZZ. The notification shall include the information required in 40 CFR 63.9(b)(2)(i) through (v), and a statement that the engine has no additional requirements and explain the basis of the exclusion.
[40 CFR 63.6590(b)(i), 63.6645(f)]

3.4 Equipment SIP Rule Standards

Modified Conditions

3.4.3 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler Nos. BLR1, BLR2, BLR3 or BLR4 any gases which exhibit 20% opacity or greater, except for one six-minute period per hour of not more than 27% opacity.
[391-3-1-.02(2)(d)]

3.4.4 The Permittee shall not cause, let, suffer, permit or allow the emission of fly ash and/or other particulate matter from Boiler Nos. BLR1, BLR2, BLR3 or BLR4 in amounts equal to or exceeding the allowable rate specified in Georgia Rule 391-3-1-.02(2)(d).

3.5 Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

None Applicable.

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 which pertain to the emission units listed in Section 3.1 are as follows:

k. Method 201 or 201 A in conjunction with Method 202 (if required) for the determination of PM_{10} emissions. As an alternative, the Permittee may assume that 100% of the PM emissions from the baghouses determined by Method 5 are PM_{10}.

l. Method 19, when applicable, to convert if necessary PM, CO, SO_2 and NO_x concentrations (e.g., gr./dscf for PM, ppm for gaseous pollutants), as determined using other methods specified in this section, to emission rates (e.g., lb/MMBtu).

m. Method 26 or 26A of 40 CFR part 60, Appendix A or Method 320 of 40 CFR Part 63, Appendix A for the determination of HCl and HF emissions.

n. Method 5I for determination of Particulate Matter concentration for sources operating less than 1 hour for sources as allowed by NSPS 40 CFR 60 Subpart OOO.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.
[391-3-1-.02(3)(a)]

4.2 Specific Testing Requirements

Modified Condition

4.2.2 Within 180 days after the issuance of this permit amendment, the Permittee shall conduct performance tests as specified in the following table:
[391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

Table 4.2.2-1: Initial BACT & Case-By-Case MACT Performance Test for the Existing Plant/Process Line Nos. 1 and 2

Emission Unit	Emission Unit ID	Emissions	Testing Method
Calciner/Kiln No. 1	KLN1	NO_x, HCl, HF	Method 6 or 6C, Method 7 or 7E, Method 10, Method 26/26A or Method 320
Calciner/Kiln No. 2	KLN2	CO, NO_x, SO_2, HCl, HF	

Emission Unit	Emission Unit ID	Emissions	Testing Method
Spray Dryer No. 1	SD01	N/A	Method 10, Method 7 or 7E, Method 5 or Method 201/201A with Method 202
Spray Dryer No. 2	SD02	N/A	
Spray Dryer No. 3	SD03	CO, NO_x	
Spray Dryer No. 4	SD04	CO, NO_x	
Stack emission sources constructed prior to this modification excluding calciners/kilns, and silos with dedicated bin vents	(refer to Table 3.1 of this permit amendment)	Visible Emissions, PM/PM_{10}	Method 9 or COMS, Method 5, Method 201/201A with Method 202
Silos with dedicated bin vents	(refer to Table 3.1 of this permit amendment)	Visible emissions	Method 9
All existing fugitive emission sources	(refer to Table 3.1 of this permit amendment)	Visible Emissions	Method 22 or Method 9

a. Suitable methods shall be used to determine the calciner/kiln feed rate for each run.

b. The visible emissions from each spray dryer and calciner/kiln during the Method 5 performance tests shall be determined using COMS following the requirements of 40 CFR 60.11(e) or of relevant State rules.

c. The duration of the Method 9 test shall be 3 hours (thirty 6-minute averages), except that the duration of the test may be reduced to 1 hour provided that:

   i. There are no individual readings greater than 7% opacity;

   ii. There are no more than 3 readings of 7% for the first 1-hour period.

d. Methods 201 (or 201A) and 202 tests are not required if all the PM emissions as determined using Method 5 are assumed as PM_{10}.

e. For the purpose of this condition, calciner/kiln operating day means a 24-hour period between 12:00 midnight and the following midnight during which the calciner/kiln is operated.

f. Emissions control technologies, procedures and measurements utilized by any source(s) during the performance testing shall be recorded in detail and included with the pertinent test report(s).

g. If a listed source has been tested previously and the testing result(s) has been accepted by the Division, this source is exempt from the testing requirement(s) in this condition for the same pollutants.

New Conditions

4.2.3 Within 60 days after achieving the maximum production rate at which each of the new spray dryers (Emission Unit ID Nos. SD05 thru SD08) and the new calciners/kilns (Emission Unit ID Nos. KLN3 and KLN4) will be operated, but no later than 180 days of the initial startup of the sources, the Permittee shall determine compliance with the NSPS Subpart UUU PM and visible emission limits in Condition 3.3.2 under 40 CFR 60.732 as follows:
[40 CFR 60.736]

a. Method 5 or Method 17 shall be used to determine the PM concentration. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm (60 dscf).

b. Method 9 and the procedures in 40 CFR 60.11, including the use of COMS in lieu of Method 9 if preferred, shall be used to determine opacity from stack emissions.

4.2.4 Within 60 days after achieving the maximum production rate at which Process Line Nos. 3 and 4 will be operated, but no later than 180 days of the initial startup of the affected source(s), the Permittee shall conduct performance tests as required below:
[40 CFR 60.675(a), (b), (c), (d) and (e)]

a. Determining compliance with the NSPS Subpart OOO visible emission standards in Condition 3.3.9 using Method 9 and the procedures 40 CFR 60.11, with the following additions:

i. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

ii. The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) shall be followed.

iii. When a water mist caused by wet dust suppression/water spray is present, the observation of fugitive emissions is to be made at a point in the plume where the mist is no longer visible.

iv. In determining compliance with the opacity limit for stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under 40 CFR §60.672(f) using Method 9, the duration of the testing shall be 1 hour (ten 6-minute averages).

v. The duration of the Method 9 testing may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

b. To demonstrate compliance with the fugitive emission limits for buildings specified in Condition 3.3.9, the Permittee shall complete the testing specified below. Performance tests must be conducted while all affected facilities inside the building are operating.

i. If the building encloses any affected facility constructed, modified, or reconstructed on or after April 22, 2008, the Permittee shall conduct an initial Method 9 according to this condition and §60.11.

ii. If the building encloses only affected facilities constructed, modified, or reconstructed before April 22, 2008, and the Permittee has previously conducted an initial Method 22 test showing zero visible emissions, then the Permittee has demonstrated compliance with the opacity limit in Condition 3.3.9. If the Permittee has not conducted an initial performance test for the building before April 22, 2008, then the Permittee shall conduct an initial Method 9 test according to this condition and §60.11 to show compliance with the opacity limit in Condition 3.3.9.

c. Subsequent testing shall be performed as required by Table 3 to 40 CFR 60 Subpart OOO as applicable.

4.2.5 When determining compliance with the fugitive emissions standard for any affected facility described under Conditions 3.3.1 and 3.3.9, the duration of the Method 9 observations shall be 30 minutes (five 6-minute average). Compliance with the applicable fugitive emission limits shall be based on the average of the five 6-minute averages.
[40 CFR 60.675(c)(3)]

4.2.6 The Permittee may use the following as alternatives to the reference methods and procedures specified in Conditions 4.2.4 and 4.2.5:
[40 CFR 60.675(e)]

a. If the fugitive emissions from two or more facilities continuously interfere so that the opacity from an individual affected facility cannot be read, the Permittee may use either the following as alternatives to the reference methods and procedures specified in Conditions 4.2.4 and 4.2.5.

i. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

ii. Separate the emissions so that the opacity of emissions from each affected facility can be read.

b. A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

i. No more than three emission points may be read concurrently.

ii. All three emission points shall be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

iii. If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer shall stop taking readings for the other two points and continue reading just that single point.

c. Method 5I may be used to determine the PM concentration as an alternative to method 5 or method 17 for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

d. In case velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 [i.e., velocity head <1.3 mm H_2O (0.05 in. H_2O)] and referred to in Method 5, the Permittee may determine the average gas flow rate produced by the power fans (e.g., from vendor-supplied fan curves) to the building vent. The Permittee may calculate the average gas velocity at the building vent measurement site using the following and use this average velocity in determining and maintaining isokinetic sampling rates.

$$V_e = Q_f/A_e$$

Where:

V_e = average building vent velocity (feet per minute);

Q_f = average fan flow rate (cubic feet per minute); and

A_e = area of building vent and measurement location (square feet).

4.2.7 For performance tests required in Condition 4.2.4 involving only Method 9 testing, the Permittee may reduce the 30-day advance notification of performance test to a 7-day advance notification.
[40 CFR 60.675(g)]

4.2.8 Within 180 days after the initial startup of the source, the Permittee shall conduct performance tests as specified in the Table 4.2.8-1 to demonstrate initial compliance with the BACT, MACT and SIP emissions limits using applicable test methods and/or procedures specified in Section 4. The tests shall be conducted under the conditions that exist when the affected source(s) is operating at the representative performance conditions. In lieu of the testing required by this condition, the appropriate testing results from Conditions 4.2.3, 4.2.4, 4.2.5 and 4.2.6 can be used to demonstrate initial compliance with the PM and visible emission limits for the same affected sources under the pertinent PSD/BACT and State rules in Sections 3.3 and 3.4 of this permit.
[391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

Table 4.2.8-1: Initial BACT & Case-By-Case MACT Performance Test for New Process Line Nos. 3 and 4

Emission Unit	Emission Unit ID	Emissions
Calciner/Kiln No. 3	KLN3	Visible Emissions, CO, NO_x, PM/PM_{10}, SO_2, HCl, HF
Calciner/Kiln No. 4	KLN4	
Spray Dryer No. 5	SD05	Visible Emissions, CO, NO_x, PM/PM_{10}
Spray Dryer No. 6	SD06	
Spray Dryer No. 7	SD07	
Spray Dryer No. 8	SD08	
Stack emission sources constructed as parts of this modification excluding spray dryers, calciners/kilns and silos with dedicated bin vents.	(refer to Table 3.1 this permit amendment)	Visible Emissions, PM/PM_{10}
Silos with dedicated bin vents.	(refer to Table 3.1 this permit amendment)	Visible Emissions

4.2.9 The visible emissions from each spray dryer and calciner/kiln during the Method 5 performance tests required by Conditions 4.2.2 and 4.2.8 shall be determined using COMS following the requirements of 40 CFR 60.11(e) or applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The COMS readings from a Division-approved test(s) conducted following the requirements of 40 CFR 60.11(e), as required by Condition 4.2.3 may be used in lieu of the visible emission determination using Method 9.
[391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

4.2.10 The Permittee shall conduct annual HCl and HF emission performance tests on each calciner/kiln to demonstrate that the calciner/kiln is in compliance with the case-by-case MACT emission limits in Condition 3.3.8.
[391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

4.2.11 The CO performance tests required for kilns under Conditions 4.2.2 and 4.2.8 shall be repeated annually.
[391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

4.2.12 Every three years the Permittee shall conduct PM/PM_{10} emission performance tests on each calciner/kiln and on one of the spray dryers on each kaolin clay processing line to demonstrate compliance with the BACT emission limits in Condition 3.3.3. The spray dryers shall be tested on a rotating schedule.
[391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

4.2.13 Every three years the Permittee shall conduct NO_x and CO emission performance tests on one of the spray dryers on each kaolin clay processing line to demonstrate compliance with the BACT emission limits in Condition 3.3.3. The spray dryers shall be tested on a rotating schedule.
[391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

4.2.14 The Permittee shall conduct annual NO_x and SO_2 emission performance tests on each calciner/ kiln to demonstrate compliance with the BACT emission limits in Condition 3.3.3.
[40 CFR 52.21, 391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.1 General Monitoring Requirements

5.1.1 Any continuous monitoring system required by the Division and installed by the Permittee shall be in continuous operation and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Monitoring system response, relating only to calibration checks and zero and span adjustments, shall be measured and recorded during such periods. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.
[391-3-1-.02(6)(b)1]

5.2 Specific Monitoring Requirements

Modified Conditions

5.2.1 By the deadlines specified in the table below, the Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated emissions or parameters on the following equipment listed. Each system shall meet the applicable performance specification(s) of the Division's monitoring requirements and be operated in a manner sufficient to demonstrate continuous compliance with the applicable emission standards in this permit.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

Emission Unit	Emission Unit ID	Emissions or Parameters	Deadline to install	COMS Installation Location
Kiln No. 1	KLN1	Visible	installed	Outlet of the Kiln No. 1 Baghouses (KBH1, KBH2, KBH3 and KBH4)/Stack S005
Kiln No. 2	KLN2	Visible	installed	Outlet of the Kiln No. 2 Baghouses (KBH5, KBH6, KBH7 and KBH8)/Stack S013
Spray Dryer No. 1	SD01	Visible	installed	Outlet of the Spray Dryer No. 1 Baghouses (SB01, SB02, SB03 and SB04)/Stack S002
Spray Dryer No. 2	SD02	Visible	installed	Outlet of the Spray Dryer No. 2 Baghouses (SB05, SB06, SB07 and SB08)/Stack S003
Spray Dryer No. 3	SD03	Visible	installed	Outlet of the Spray Dryer No. 3 Baghouses (SB09, SB10, SB11 and SB12)/Stack S010
Spray Dryer No. 4	SD04	Visible	installed	Outlet of the Spray Dryer No. 4 Baghouses (SB13, SB14, SB15 and SB16)/Stack S011
Kiln No. 3	KLN3	Visible	Upon startup	Outlet of the Kiln No. 3 Baghouses (KBH9, KBH10, KBH11 and KBH12)/Stack S020

Emission Unit	Emission Unit ID	Emissions or Parameters	Deadline to install	COMS Installation Location
Kiln No. 4	KLN4	Visible	Upon startup	Outlet of the Kiln No. 4 Baghouses (KBH13, KBH14, KBH15 and KBH16)/Stack S027
Spray Dryer No. 5	SD05	Visible	Upon startup	Outlet of the Spray Dryer No. 5 Baghouses (SB17, SB18, SB19 and SB20)/Stack S017
Spray Dryer No. 6	SD06	Visible	Upon startup	Outlet of the Spray Dryer No. 6 Baghouses (SB21, SB22, SB23 and SB24)/Stack S018
Spray Dryer No. 7	SD07	Visible	Upon startup	Outlet of the Spray Dryer No. 7 Baghouses (SB25, SB26, SB27 and SB28)/Stack S024
Spray Dryer No. 8	SD08	Visible	Upon startup	Outlet of the Spray Dryer No. 8 Baghouses (SB29, SB30, SB31 and SB32)/Stack S025

a. The sources shall be maintained such that the 6-minute average opacity for any 6-minute period for any COMS does not exceed the visible emission limit in Conditions 3.3.2 or 3.3.3. If the average opacity for any 6-minute period exceeds any of the opacity limits in these conditions, this shall constitute a violation of the visible emission standard.

5.2.3 The Permittee shall perform a check of visible emissions from all baghouses (including process baghouses) controlling emissions from sources listed in Section 3.1 of this permit amendment, and from sources added or replaced in accordance with this permit and Rule 391-3-1-.03. Emission units monitored using COMS are exempt from this condition. Additionally, baghouses controlling emissions from silos with dedicated bin vents, wet screening operations, bucket elevators, screw conveyors, bagging operations, and pneumatic conveyors are exempt from this condition. The Permittee shall retain a record in a daily visible emissions (VE) log suitable for inspection or submittal. The check shall be conducted at least once for each day or portion of each day of operation using procedures a through d below except when atmospheric conditions or sun positioning prevents any opportunity to perform the daily VE check. Any operational day when atmospheric conditions or sun position prevents a daily reading shall be reported as monitor downtime in the report required by Condition 6.1.4. The Permittee shall schedule a daily VE check only when an emission unit is in operation.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Determine, in accordance with the procedures specified in paragraph d of this condition, if visible emissions are present at the discharge point to the atmosphere from each of the sources and record the results in the daily VE log. For sources that exhibit visible emissions, the Permittee shall comply with paragraph b or c of this condition.

b. For each source determined to be emitting visible emissions, the Permittee shall determine whether the emissions equal or exceed the opacity action level using the procedure specified in paragraph d of this condition, except that the person performing the determination shall have received additional training acceptable to the Division to recognize the appropriate opacity level and the determination shall cover a period of 3 minutes. The opacity action level is 5 percent. The results shall be recorded in the daily VE log. For sources that exhibit visible emissions of greater than or equal to the opacity action level, the Permittee shall comply with paragraph c of this condition.

c. For each source that requires action in accordance with paragraphs a or b of this condition, the Permittee shall determine the cause of the visible emissions and correct the problem in the most expedient manner possible. The Permittee shall note the cause of the visible emissions, the pressure drop, any other pertinent operating parameters, and the corrective action taken in the maintenance log.

d. The person performing the determination shall stand at a distance of at least 15 feet which is sufficient to provide a clear view of the plume against a contrasting background with the sun in the 140° sector at his/her back. Consistent with this requirement, the determination shall be made from a position such that the line of vision is approximately perpendicular to the plume direction. Only one plume shall be in the line of sight at any time when multiple stacks are in proximity to each other.

e. When a quarterly 30-minute visible emissions inspection required by Condition 5.2.8 has been conducted on any affected baghouse during the day, no daily VE check on the same baghouse is necessary for that day.

New Conditions

5.2.6 When controlling fugitive dust via weekly cleaning, the use of a vacuum street sweeper(s) or a truck washing station(s) as specified in Condition 3.2.5, the Permittee shall keep daily operation records of the control equipment involved. Description of inspection, maintenance, malfunction and corrections taken shall be included with the records.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

5.2.7 Each of the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emissions Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) shall be equipped with a non-resettable hour meter to track the number of hours operated during any type of operation and during each calendar month. The Permittee shall record the time of operation and the reason the engine/generator was in operation during that time.
[40 CFR 60.4209(c), 60.4214(b) and 40 CFR 52.21]

5.2.8 The Permittee shall conduct quarterly 30-minute visible emissions inspections using EPA Method 22 for any affected facility that is subject to 40 CFR Part 60, Subpart OOO, constructed, modified, or reconstructed on or after April 22, 2008, and uses a baghouse to control emissions. The Method 22 test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the Permittee shall initiate corrective action within 24 hours to return the baghouse to normal operation. The Permittee shall record each Method 22 test, including the date and any corrective actions taken, in the logbook required under 40 CFR 60.676(b).

The Permittee may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to Condition 4.2.4 per 40 CFR 60.675(b) simultaneously with a Method 22 to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Condition 3.3.9 per Table 2 of 40 CFR part 60, Subpart OOO as amended on April 28, 2009. Once established , the revised visible emissions success level shall be incorporated into the permit for the affected facility.

As an alternative to the quarterly Method 22 inspections, the Permittee may use a bag leak detection system that is installed, operated, and maintained according to per 40 CFR 60.674(d).
[40 CFR 60.674(c) and (d)]

5.2.9 The Permittee shall monitor emissions of nitrogen oxides from the exhaust gases from each kiln stack for each week or portion of week of operation of each calciner/kiln using the following procedures:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Within 60 days of the issuance of this permit, the Permittee shall begin to conduct measurements of NO_x and oxygen (O_2) concentration in the exhaust gas of each existing calciner/kiln. Same measurements shall be conducted on each new calciner/kiln within 60 days of the commence of operation of the calciner/kiln. The initial measurement period shall consist of three (3) test runs each thirty (30) minutes in duration. Subsequent measurement periods shall consist of one (1) test run thirty minutes in duration.

b. Measurements of NO_x and O_2 shall be conducted using the procedures of the American Society for Testing and Materials Standard (ASTM) Test Method for Determination of NO_x, Carbon Monoxide(CO), and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, ASTM D 6522; or procedures of Gas Research Institute Method GRI-96/0008, EPA/EMC Conditional Test Method (CTM-30) Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers, or Procedures of EPA Reference Methods 7E and 3A.

c. NO_x emissions rate (pounds per hour) for all emissions units shall be determined using the following equation;
where:

$$E = K \times C_d \times Q_{std} \times \left(\frac{20.9}{20.9 - O_2} \right)$$

E = Mass emissions of nitrogen oxides (lb/hr);

K = Conversion factor for NO_x = 1.194 x 10-7 ([lb/scf]/ppm)

C_d = Concentration of NO_x (ppm by volume, dry basis)

Q_{std} = Standard hourly flow rate from kiln exhaust as measured by Method 2, dscfh

O_2 = Exhaust Gas Oxygen Concentration (percent by volume, dry basis)

d. Following the initial measurement, the Permittee shall conduct a measurement each calendar week or portion of calendar week for each kiln/calciner. Weekly measurements shall continue until three (3) consecutive weekly measurements are each less 90 lbs/hr. Following three (3) consecutive weekly measurements that are each less than 90 lbs/hr, the measurements may be performed at a frequency of one per calendar quarter (quarters ending March 31, June 30, September 30, and December 31).

e. Following any quarterly measurement that is greater than 90 lbs/hr, the Permittee shall conduct a new measurement within one unit operating day. Following this measurement, subsequent measurements shall be conducted weekly and quarterly measurements may be resumed as prescribed by Condition 5.2.9(d).

f. A record of NO_x monitoring shall be kept in a form suitable for inspection or submittal for a period of five (5) years. The record shall at a minimum contain the cause and corrective action for all excursions and, for each test run, the mass emission rate and concentration of NO_x, the concentration of oxygen, measured stack gas flow rate.

g. A unit operating day shall be defined as any day that the unit is operated for more than 30 minutes between 12:00 midnight and the following midnight.

h. Any measured NO_x emissions exceeding 121 lbs/hr shall be reported to the Division in writing with 5 working days of measurement. The report shall include calciner/kiln exhaust flow rate and kiln feed rate during the NO_x measurement.

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

Modified Condition

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[40 CFR 52.21, 40 CFR 391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

None.

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Each exceedance of the SO_2 emission standard/limit in Condition 3.3.3 for calciners/kilns as determined via Condition 6.2.17.

ii. Each exceedance of visible emission standard/limit of 10% opacity in Condition 3.3.3 for calciners/kilns and spray dryers, as indicated by COMS required by Condition 5.2.1.

iii. Firing any of the boilers, spray dryers and calciners/kilns with fuel(s) other than natural gas and propane.

iv. Any 12-month rolling total of VOC emissions from Process Line Nos. 1 and 2 combined or from Process Line Nos. 3 and 4 combined that equals or exceeds the 40 tons limit in Condition 3.2.3.

v. Any 12-month rolling total of methanol emissions from any of the Process Line No. 1, 2, 3 or 4 that exceeds the 10.04 tons limit in Condition 3.3.8.

vi. Any monthly average of methanol emissions from any of the Process Line No. 1, 2, 3 or 4 that exceeds the 0.057 lbs/ton of kiln feed limit in Condition 3.3.8.

vii. Any 12-month rolling total of HCl emissions from any of the Kiln Nos. 1, 2, 3 or 4 that exceeds the 8.70 tons limit in Condition 3.3.8.

viii. Any 12-month rolling total of HF emissions from any of the Kiln Nos. 1, 2, 3 or 4 that exceeds the 37.92 tons limit in Condition 3.3.8.

ix. Any instance of firing any of the stationary emergency diesel generators/engines subject to Condition 3.3.6 with diesel fuel that:

- Contains more than 0.05% sulfur by weight; contains either more than 35% by volume of aromatic content or has a cetane index of less than 40; or
- Contains more than 0.0015% sulfur by weight; contains either more than 35% by volume of aromatic content **or** has a cetane index of less than 40 on and after October 1, 2010.

x. Any instance of operating any of the stationary emergency diesel generators/engines for more than 500 hours during any period of 12 rolling/consecutive months as limited by Condition 3.2.6.

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

i Any 3-hour rolling average temperature at the inlet of any baghouse specified in Condition 5.2.2 that exceeds the filter bag design temperature or the equivalent filter bag design temperature, as recorded in accordance with Condition 5.2.2.

ii. For the sources specified in Condition 5.2.3, any two consecutive required daily determinations of visible emissions from the same source for which visible emissions are equal to or exceed the opacity action level.

iii Any visible emissions or mechanical failure or malfunction discovered by the walk through described in Condition 5.2.5 that are not eliminated or corrected within 24 hours of first discovering the visible emissions or mechanical failure or malfunction.

iv. Each event that the quarterly 30-minute visible emissions inspection required by Condition 5.2.8 was not conducted.

d. In addition to the excess emissions, exceedances and excursions specified above, the following should also be included with the report required in Condition 6.1.4:

i. The results of all NO_x monitoring conducted per Condition 5.2.9 during the semiannual reporting period.

6.2 Specific Record Keeping and Reporting Requirements

Modified Condition

6.2.3 The Permittee shall maintain a record of all actions taken in accordance with Conditions 3.2.5 and/or Section 8.22.1 to control fugitive dust from roads, storage piles, or any other source of fugitive dust. Such record shall include, but not to be limited to, the following information if applicable:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Inspection and maintenance activities taken;

b. Daily operating log of each of the dust/fugitive control systems;

c. The sources (e.g. sections of the roads) that were controlled;

d. Ambient conditions (dry, wet, precipitation, temperature, etc.).

New Conditions

6.2.4 To demonstrate compliance with the limitations specified in this permit, the Permittee shall maintain the following records on site:
[40 CFR 52.21 and 391-3-1-.02(6)(b)1]

a. Daily and monthly calciner/kiln feed input rates for each of the calciners/kilns.

b. Monthly usage rate of additive(s)/chemical(s) containing methanol and/or VOC compounds used for each of the Process Line Nos. 1, 2, 3, and 4. Such records shall also include MSDS, Product Data Certification Sheet or other manufacturer/supplier certified records indicating the methanol and/or VOC content(s) of the additive(s) or chemical(s) used.

c. Monthly fuel usage rate for each process line.

d. Daily and monthly operating hours of each process line.

Unless otherwise specified, all records required above shall be recorded in a permanent form suitable for inspection and submission to the Division and to the EPA. The records shall be retained for at least five (5) years following the date of entry.

6.2.5 The Permittee shall utilize the appropriate records in Condition 6.2.4 and mass balance to calculate the methanol emission rates for each of the Process Line Nos. 1, 2, 3, and 4 during each calendar month. For the purpose of this condition, 100% of the methanol contained in the chemicals added to the clay slurry is assumed to be emitted into the atmosphere from the spray dryers. The Permittee shall notify the Division in writing if any monthly average methanol emission rate exceeds 0.057 lbs/ton of kiln feed or any monthly total methanol emissions exceed the notification level of 0.84 tons, i.e. 1/12 of the annual emission limit in Condition 3.3.8. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain or maintain compliance with the emission limit.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

6.2.6 The Permittee shall use the monthly methanol emission data in Condition 6.2.5 to calculate the 12-month rolling total of methanol emissions from each of the Process Line Nos. 1, 2, 3, and 4. The Permittee shall notify the Division in writing if any 12-month rolling total exceeds the annual methanol emission limit of 10.04 tons in Condition 3.3.8. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the annual emission limit involved.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

6.2.7 The Permittee shall utilize the appropriate records in Condition 6.2.4 and mass balance to calculate the monthly total of VOC emissions from Process Line Nos. 1 and 2 combined and from Process Line Nos. 3 and 4 combined during each calendar month. For the purpose of this condition, 100% of the VOC compounds contained in the additive(s) or chemical(s) added to the clay slurry are assumed to be emitted into the atmosphere from the spray dryers. The emission calculation shall sum the VOC emissions from the use of all VOC-containing chemicals and from the fuel combustion. All the emission calculations, including any Division-approved emission factors used, shall be kept as part of the records required in Condition 6.2.4. The Permittee shall notify the Division in writing if any 12-monthly rolling total exceeds the notification level of 3.33 tons, i.e. 1/12 of the annual emission limit of 40 tons in Condition 3.2.3. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit specified in Condition 3.2.3.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

6.2.8 The Permittee shall use the monthly VOC emission data in Condition 6.2.7 to calculate total VOC emissions from Process Line Nos. 1 and 2 combined and from Process Line Nos. 3 and 4 combined for each period of 12 consecutive months. The Permittee shall notify the Division in writing if any 12-month rolling total exceeds any of the annual VOC emission limit(s) in Condition 3.2.3. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the annual emission limit.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

6.2.9 The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the applicable NSPS Subpart OOO standards in Condition 3.3.1 or 3.3.9 per 40 CFR 60.672, including reports of opacity observations made using Method 9 or Method 22 to demonstrate compliance with Condition 3.3.1.
[40 CFR 60.676(f)]

6.2.10 For all the new or modified sources subject to NSPS Subpart OOO, the Permittee shall submit to the Division a written notification of the actual date of initial startup of each affected facility, or a single notification of startup for a combination of affected facilities in a production line that begin actual initial startup on the same day. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.
[40 CFR 60.676(i) and (l)(1)]

6.2.11 The Permittee shall maintain monthly operating records of each of the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emissions Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) subject to Conditions 3.3.10 and/or 3.2.6, including operating hours and reasons of the operation, e.g., emergency power generation and/or fire distinguishing, readiness testing and/or maintenance check. These records shall be kept available for inspection or submittal for 5 years from the date of record.
[40 CFR 60.4211(e) & 391-3-1-.03(6)(b)11(v)(l)]

6.2.12 The Permittee shall use monthly operating time records required by Condition 6.2.11 to calculate the 12 month rolling total of the operating and/or maintenance check and readiness testing time for each generator/engine specified in Condition 6.2.11 for each calendar month. All the calculations shall be kept as part of the records required in Condition 6.2.11. The Permittee shall notify the Division in writing if any of the 12 month rolling total of maintenance check and readiness testing time or operating time exceeds 100 or 500 hours. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with Condition 3.3.10 or 3.2.6.
[40 CFR 60.4211(e) & 391-3-1-.03(6)(b)11(v)(l)]

6.2.13 The Permittee shall keep records verifying that each shipment of diesel fuel received for firing the stationary emergency diesel generators/engines Nos. 1, 2, 3 and 4 (Emission Unit ID Nos. EDG1, EDG2, EDG3 and EDG4) complies with the applicable requirements in Condition 3.3.6. Verification shall consist of the fuel oil receipts and fuel supplier certifications or results of analyses of the fuel oils conducted by methods of sampling and analysis which have been specified or approved by the EPA or the Division. These records shall be kept available for inspection or submittal for 5 years from the date of record.
[40 CFR 60.4207 and 40 CFR 52.21 – PSD/BACT]

6.2.14 The Permittee shall comply with all the applicable requirements of the General Provisions of 40 CFR Part 60 as listed in Table 8 to 40 CFR Part 60, Subpart IIII.
[40 CFR 60.4218]

6.2.15 The Permittee shall furnish the Division written notification of the date of the initial startup of the Process Line Nos. 3 and 4, including associated boilers and emergency stationary diesel generators within 15 days after such date.
[391-3-1-.03(2)(c)]

6.2.16 The Permittee shall maintain a record of the operating hours and the hourly input rate of kiln feed to each of the calciners/kilns (Emission Unit ID No. KLN1, KLN2, KLN3, and KLN4). The Permittee shall obtain a representative sample daily from each kaolin clay slurry tank or each calciner/kiln's feed stream feeding any calciner/kiln and analyze the sample for the sulfur in percent by weight. The daily samples shall be acquired and analyzed for sulfur content by methods acceptable to the Division. The sulfur content results shall be used to determine SO_2 emissions as required by Condition 6.2.17.
[391-3-I-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

6.2.17 The Permittee shall use the equation below to determine the daily-averaged hourly SO_2 emissions from each calciner/kiln:

$$E_{SO2,i} = \frac{(2)(M_{KF,i})(C_{S,i})(2000)}{(100)(T_i)}$$

where:

$E_{SO2, i}$ = Daily-averaged hourly SO_2 emission rate from the i^{th} calciner/kiln, lbs/hr;

2 = Mass conversion constant from sulfur to sulfur dioxide;

$M_{kf, i}$ = Quantity of the kaolin clay slurry or kiln feed processed by the i^{th} calciner/kiln during the calendar day, ton/day;

$C_{S, i}$ = Sulfur content of the kaolin slurry or calciner/kiln feed processed by the i^{th} calciner/kiln during the calendar day, percent by weight;

2000 = Conversion constant from ton to pound;

100 = Conversion constant from mass percentage to mass ratio;

T_i = Total operating time of the i^{th} calciner/kiln during the calendar day, hour.

The Permittee shall notify the Division in writing if any of daily averaged hourly SO_2 emissions exceeds 34.2 pounds for any calendar day. This notification shall be submitted within 5 working days of the calculation and shall include an plan(s) of how the Permittee intends to attain future compliance with the SO_2 emission limit as specified in Condition 3.3.3.
[40 CFR 52.21-PSD/BACT, 391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

6.2.18 The Permittee shall utilize the monthly calciner/kiln feed input rate records (ton per month) in Condition 6.2.4 and the HCl and HF emission factors (ponds of HCl or HF emitted per ton of kiln feed) established during the most recent Division-approved performance tests to calculate the monthly HCl and HF emission rates for each of the Kiln Nos. 1, 2, 3, and 4 during each calendar month. The Permittee shall notify the Division in writing if any monthly HCl or HF emission rate exceeds the notification level of one- twelfth (1/12) of the annual HCl or HF emission limit in Condition 3.3.8. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain or maintain compliance with the emission limit.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

6.2.19 The Permittee shall use the monthly HCl and HF emission data in Condition 6.2.18 to calculate total HCl and HF emissions from each of the Kiln Nos. 1, 2, 3 and 4 during each period of 12 consecutive months. The Permittee shall notify the Division in writing if any 12-month rolling total of the HCl or HF emissions exceed the 8.70 tons or 37.92 tons limit in Condition 3.3.8. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the annual HCl or HF emission limit.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.7 Compliance Schedule/Progress Reports Associated with this Amendment
[391-3-1-.03(10)(d)3 and 40 CFR 70.6(c)(4)]

Not Applicable

7.14 Specific Conditions Associated with this Amendment

7.14.1 Approval to construct Process Line Nos. 3 and 4 by this permit amendment shall become invalid for any of the following reasons:

a. The construction is not commenced within 18 months after issuance of this permit amendment;

b. The construction is discontinued for a period of 18 months or more.; or

c. The construction is not completed within a reasonable time.

The Division may extend the 18-month period upon a satisfactory showing that an extension is justified. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Division may require the Permittee to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for emissions units regulated by the project. For good cause, the Permittee may request that this permit be extended in writing at least 60 days prior to the expiration of the 18 month period. For purposes of this permit amendment, the definition of "commence" is given in 40 CFR 52.21(b)(9).
[40 CFR 52.21(r)]

Attachments

A. List of Standard Abbreviations and List of Permit Specific Abbreviations
B. Insignificant Activities Checklist, Insignificant Activities Based on Emission Levels and Generic Emission Groups
C. List of References

ATTACHMENT A

List Of Standard Abbreviations

AIRS	Aerometric Information Retrieval System
APCD	Air Pollution Control Device
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BTU	British Thermal Unit
CAAA	Clean Air Act Amendments
CEMS	Continuous Emission Monitoring System
CERMS	Continuous Emission Rate Monitoring System
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System(s)
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring Stystem
dscf/dscm	Dry Standard Cubic Foot / Dry Standard Cubic Meter
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
gr	Grain(s)
GPM (gpm)	Gallons per minute
H_2O (H2O)	Water
HAP	Hazardous Air Pollutant
HCFC	Hydro-chloro-fluorocarbon
MACT	Maximum Achievable Control Technology
MMBtu	Million British Thermal Units
MMBtu/hr	Million British Thermal Units per hour
MVAC	Motor Vehicle Air Conditioner
MW	Megawatt
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x (NOx)	Nitrogen Oxides
NSPS	New Source Performance Standards
OCGA	Official Code of Georgia Annotated

PM	Particulate Matter
PM_{10} (PM10)	Particulate Matter less than 10 micrometers in diameter
PPM (ppm)	Parts per Million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RMP	Risk Management Plan
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2 (SO2)	Sulfur Dioxide
USC	United States Code
VE	Visible Emissions
VOC	Volatile Organic Compound

List of Permit Specific Abbreviations

None	N/A

ATTACHMENT B

NOTE: Attachment B contains information regarding insignificant emission units/activities and groups of generic emission units/activities in existence at the facility at the time of Permit issuance. Future modifications or additions of insignificant emission units/activities and equipment that are part of generic emissions groups may not necessarily cause this attachment to be updated.

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
Mobile Sources	1. Cleaning and sweeping of streets and paved surfaces	
Combustion Equipment	1. Fire fighting and similar safety equipment used to train fire fighters or other emergency personnel.	
	2. Small incinerators that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act and are not considered a "designated facility" as specified in 40 CFR 60.32e of the Federal emissions guidelines for Hospital/Medical/Infectious Waste Incinerators, that are operating as follows: i) Less than 8 million BTU/hr heat input, firing types 0, 1, 2, and/or 3 waste.	
	ii) Less than 8 million BTU/hr heat input with no more than 10% pathological (type 4) waste by weight combined with types 0, 1, 2, and/or 3 waste.	
	iii) Less than 4 million BTU/hr heat input firing type 4 waste. (Refer to 391-3-1-.03(10)(g)2.(ii) for descriptions of waste types)	
	3. Open burning in compliance with Georgia Rule 391-3-1-.02 (5).	
	4. Stationary engines burning: i) Natural gas, LPG, gasoline, dual fuel, or diesel fuel which are used exclusively as emergency generators;	2
	ii) Natural gas, LPG, and/or diesel fueled generators used for emergency, peaking, and/or standby power generation, where the combined peaking and standby power generation do not exceed 200 hours per year.	
	iii) Natural gas, LPG, and/or diesel fuel used for other purposes, provided that the output of each engine does not exceed 400 horsepower and that no individual engine operates for more than 2,000 hours per year.	
	iv) Gasoline used for other purposes, provided that the output of each engine does not exceed 100 horsepower and that no individual engine operates for more than 500 hours per year.	
Trade Operations	1. Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities whose emissions of hazardous air pollutants (HAPs) fall below 1,000 pounds per year.	6
Maintenance, Cleaning, and Housekeeping	1. Blast-cleaning equipment using a suspension of abrasive in water and any exhaust system (or collector) serving them exclusively.	
	2. Portable blast-cleaning equipment.	
	3. Non-Perchloroethylene Dry-cleaning equipment with a capacity of 100 pounds per hour or less of clothes.	
	4. Cold cleaners having an air/vapor interface of not more than 10 square feet and that do not use a halogenated solvent.	
	5. Non-routine clean out of tanks and equipment for the purposes of worker entry or in preparation for maintenance or decommissioning.	
	6. Devices used exclusively for cleaning metal parts or surfaces by burning off residual amounts of paint, varnish, or other foreign material, provided that such devices are equipped with afterburners.	
	7. Cleaning operations: Alkaline phosphate cleaners and associated cleaners and burners.	

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
Laboratories and Testing	1. Laboratory fume hoods and vents associated with bench-scale laboratory equipment used for physical or chemical analysis.	2
	2. Research and development facilities, quality control testing facilities and/or small pilot projects, where combined daily emissions from all operations are not individually major or are support facilities not making significant contributions to the product of a collocated major manufacturing facility.	3
Pollution Control	1. Sanitary waste water collection and treatment systems, except incineration equipment or equipment subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act..	
	2. On site soil or groundwater decontamination units that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	3. Bioremediation operations units that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	4. Landfills that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
Industrial Operations	1. Concrete block and brick plants, concrete products plants, and ready mix concrete plants producing less than 125,000 tons per year.	
	2. Any of the following processes or process equipment which are electrically heated or which fire natural gas, LPG or distillate fuel oil at a maximum total heat input rate of not more than 5 million BTU's per hour: i) Furnaces for heat treating glass or metals, the use of which do not involve molten materials or oil-coated parts.	
	ii) Porcelain enameling furnaces or porcelain enameling drying ovens.	
	iii) Kilns for firing ceramic ware.	
	iv) Crucible furnaces, pot furnaces, or induction melting and holding furnaces with a capacity of 1,000 pounds or less each, in which sweating or distilling is not conducted and in which fluxing is not conducted utilizing free chlorine, chloride or fluoride derivatives, or ammonium compounds.	
	v) Bakery ovens and confection cookers.	
	3. Carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, shot blasting, shot peening, or polishing; ceramics, glass, leather, metals, plastics, rubber, concrete, paper stock or wood, also including roll grinding and ground wood pulping stone sharpening, provided that: i) Activity is performed indoors; & ii) No significant fugitive particulate emissions enter the environment; & iii) No visible emissions enter the outdoor atmosphere.	
	4. Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy (e.g., blueprint activity, photographic developing and microfiche).	
	5. Grain, food, or mineral extrusion processes	
	6. Equipment used exclusively for sintering of glass or metals, but not including equipment used for sintering metal-bearing ores, metal scale, clay, fly ash, or metal compounds.	
	7. Equipment for the mining and screening of uncrushed native sand and gravel.	
	8. Ozonization process or process equipment.	
	9. Electrostatic powder coating booths with an appropriately designed and operated particulate control system.	
	10. Activities involving the application of hot melt adhesives where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	
	11. Equipment used exclusively for the mixing and blending water-based adhesives and coatings at ambient temperatures.	
	12. Equipment used for compression, molding and injection of plastics where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	
	13. Ultraviolet curing processes where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
Storage Tanks and Equipment	1. All petroleum liquid storage tanks storing a liquid with a true vapor pressure of equal to or less than 0.50 psia as stored.	
	2. All petroleum liquid storage tanks with a capacity of less than 40,000 gallons storing a liquid with a true vapor pressure of equal to or less than 2.0 psia as stored that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	3. All petroleum liquid storage tanks with a capacity of less than 10,000 gallons storing a petroleum liquid.	3
	4. All pressurized vessels designed to operate in excess of 30 psig storing petroleum fuels that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	5. Gasoline storage and handling equipment at loading facilities handling less than 20,000 gallons per day or at vehicle dispensing facilities that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	6. Portable drums, barrels, and totes provided that the volume of each container does not exceed 550 gallons.	15
	7. All chemical storage tanks used to store a chemical with a true vapor pressure of less than or equal to 10 millimeters of mercury (0.19 psia).	3

INSIGNIFICANT ACTIVITIES BASED ON EMISSION LEVELS

Description of Emission Units / Activities	Quantity
None	

ATTACHMENT B (continued)

GENERIC EMISSION GROUPS

Emission units/activities appearing in the following table are subject only to one or more of Georgia Rules 391-3-1-.02 (2) (b), (e) &/or (n). Potential emissions of particulate matter, from these sources based on TSP, are less than 25 tons per year per process line or unit in each group. Any emissions unit subject to a NESHAP, NSPS, or any specific Air Quality Permit Condition(s) are not included in this table.

Description of Emissions Units / Activities	Number of Units (if appropriate)	Applicable Rules		
		Opacity Rule (b)	PM from Mfg Process Rule (e)	Fugitive Dust Rule (n)
None	N/A			

The following table includes groups of fuel burning equipment subject only to Georgia Rules 391-3-1-.02 (2) (b) & (d).Any emissions unit subject to a NESHAP, NSPS, or any specific Air Quality Permit Condition(s) are not included in this table.

Description of Fuel Burning Equipment	Number of Units
Fuel burning equipment with a rated heat input capacity of less than 10 million BTU/hr burning only natural gas and/or LPG.	0
Fuel burning equipment with a rated heat input capacity of less than 5 million BTU/hr, burning only distillate fuel oil, natural gas and/or LPG.	4
Any fuel burning equipment with a rated heat input capacity of 1 million BTU/hr or less.	2

ATTACHMENT C

LIST OF REFERENCES

1. The Georgia Rules for Air Quality Control Chapter 391-3-1. All Rules cited herein which begin with 391-3-1 are State Air Quality Rules.

2. Title 40 of the Code of Federal Regulations; specifically 40 CFR Parts 50, 51, 52, 60, 61, 63, 64, 68, 70, 72, 73, 75, 76 and 82. All rules cited with these parts are Federal Air Quality Rules.

3. ***Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, Procedures for Testing and Monitoring Sources of Air Pollutants.***

4. ***Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, Procedures for Calculating Air Permit Fees***.

5. Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources. This information may be obtained from EPA's TTN web site at *www.epa.gov/ttn/chief/ap42.html*.

6. The latest properly functioning version of EPA's **TANKS** emission estimation software. The software may be obtained from EPA's TTN web site at *www.epa.gov/ttn/chief/tanks.html*.

7. The Clean Air Act (42 U.S.C. 7401 et seq).

8. White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995 (White Paper #1).

9. White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program, March 5, 1996 (White Paper #2).