



SIP AIR PERMIT APPLICATION

EPD Use Only

Date Received: _____

Application No. _____

FORM 1.00: GENERAL INFORMATION

1. Facility Information

Facility Name: CARBO Ceramics, Inc.

AIRS No. (if known): _____

Facility Location: Street: _____

City: Millen Georgia Zip: _____ County: Jenkins

2. Facility Coordinates

Latitude: 32° 45' 52" **NORTH** Longitude: 81° 53' 58" **WEST**

UTM Coordinates: _____ **EAST** _____ **NORTH** **ZONE** _____

3. Facility Owner

Name of Owner: CARBO Ceramics, Inc.

Owner Address Street: 575 N. Dairy Ashford, Suite 300

City: Houston State: Texas Zip: 77079

4. Permitting Contact and Mailing Address

Contact Person: Jason Goodwin Title: EHS Director

Telephone No.: 281.921.6472 Ext. _____ Fax No.: 281.582.3170

Email Address: Jason.goodwin@carboceramics.com

Mailing Address: Same as: ☐ Facility Location: ☐ Owner Address: ☒ Other: ☐

If Other: Street Address: _____

City: _____ State: _____ Zip: _____

5. Authorized Official

Name: Jason Goodwin Title: EHS Director

Address of Official Street: 575 N. Dairy Ashford, Suite 300

City: Houston State: Texas Zip: 77079

This application is submitted in accordance with the provisions of the Georgia Rules for Air Quality Control and, to the best of my knowledge, is complete and correct.

Signature: _____

Date: August 10, 2011

6. Reason for Application: (Check all that apply)

- ☒ New Facility (to be constructed)
 ☐ Revision of Data Submitted in an Earlier Application
☐ Existing Facility (initial or modification application)
 Application No.: _____
☒ Permit to Construct
 Date of Original Submittal: _____
☒ Permit to Operate
☐ Change of Location
☐ Permit to Modify Existing Equipment:
 Affected Permit No.: _____

7. Permitting Exemption Activities (for permitted facilities only):

Have any exempt modifications based on emission level per Georgia Rule 391-3-1-.03(6)(i)(3) been performed at the facility that have not been previously incorporated in a permit?

- ☐ No
 ☐ Yes, please fill out the SIP Exemption Attachment (See Instructions for the attachment download)

8. Has assistance been provided to you for any part of this application?

- ☐ No
 ☐ Yes, SBAP
 ☒ Yes, a consultant has been employed or will be employed.

If yes, please provide the following information:

Name of Consulting Company: Smith Aldridge, Inc.

Name of Contact: Craig A. Smith, Ph.D.

Telephone No.: (404) 255-0928 ext. 112 Fax No.: (404) 255-0948

Email Address: csmith@smithaldridge.com

Mailing Address: Street: 6000 Lake Forrest Drive, Suite 385

City: Atlanta State: Georgia Zip: 30328

Describe the Consultant's Involvement:

Submittal and application preparation and regulatory analysis.

9. Submitted Application Forms: Select only the necessary forms for the facility application that will be submitted.

No. of Forms	Form
9	2.00 Emission Unit List
1	2.01 Boilers and Fuel Burning Equipment
	2.02 Storage Tank Physical Data
	2.03 Printing Operations
	2.04 Surface Coating Operations
	2.05 Waste Incinerators (solid/liquid waste destruction)
14	2.06 Manufacturing and Operational Data
5	3.00 Air Pollution Control Devices (APCD)
1	3.01 Scrubbers
5	3.02 Baghouses & Other Filter Collectors
	3.03 Electrostatic Precipitators
14	4.00 Emissions Data
3	5.00 Monitoring Information
	6.00 Fugitive Emission Sources
5	7.00 Air Modeling Information

10. Construction or Modification Date

Estimated Start Date: _____

11. If confidential information is being submitted in this application, were the guidelines followed in the "Procedures for Requesting that Submitted Information be treated as Confidential"?

☐ No ☐ Yes

12. New Facility Emissions Summary

Criteria Pollutant	New Facility	
	Potential (tpy)	Actual (tpy)
Carbon monoxide (CO)	1,046	1,046
Nitrogen oxides (NOx)	2,446	2,446
Particulate Matter (PM)	248	248
PM <10 microns (PM10)	248	248
PM <2.5 microns (PM2.5)	129	129
Sulfur dioxide (SO ₂)	618	618
Volatile Organic Compounds (VOC)	66.9	66.9
Total Hazardous Air Pollutants (HAPs)	232	232
Individual HAPs Listed Below:		

13. Existing Facility Emissions Summary

Criteria Pollutant	Current Facility		After Modification	
	Potential (tpy)	Actual (tpy)	Potential (tpy)	Actual (tpy)
Carbon monoxide (CO)				
Nitrogen oxides (NOx)				
Particulate Matter (PM)				
PM <10 microns (PM10)				
PM <2.5 microns (PM2.5)				
Sulfur dioxide (SO ₂)				
Volatile Organic Compounds (VOC)				
Total Hazardous Air Pollutants ⁴ (HAPs)				
Individual HAPs Listed Below:				

14. 4-Digit Facility Identification Code:

SIC Code: 1455 SIC Description: Kaolin and Ball Clay Processing
NAICS Code: _____ NAICS Description: _____

15. Description of general production process and operation for which a permit is being requested. If necessary, attach additional sheets to give an adequate description. Include layout drawings, as necessary, to describe each process. References should be made to source codes used in the application.

CARBO Ceramics is proposing to construct and operate a kaolin clay processing plant to be located in Jenkins County, which is classified as "attainment" for PM₁₀/PM_{2.5}, SO₂, NO_x, CO, and Ozone (as VOCs). The new facility will consist of four processing lines that manufacture ceramic proppants using kaolin clay. Proppants are formed in Spray Dryers where excess water is driven off and then processed through a Direct-fired Rotary Calciner where chemically bound water is removed. The facility will be considered a major source with respect to the Prevention of Significant Deterioration (PSD) program as NO_x, SO₂, CO, and particulate matter (PM) will be emitted at potential emission rates that exceed 250 tpy, Volatile Organic Compounds (VOCs) will be emitted at potential emission rates 40 tpy, PM₁₀ will be emitted at potential emission rates 15 tpy, PM_{2.5} will be emitted at potential emission rates 10 tpy, and potential Greenhouse Gas (GHG) emissions will exceed the 75,000 tpy CO₂e. As such, CARBO has prepared this PSD review permit application with respect to the construction and operation of Processing Lines 1 through 4 for the above NSR pollutants.

16. Additional information provided in attachments as listed below:

Attachment A - _____
Attachment B - _____
Attachment C - _____
Attachment D - _____
Attachment E - _____
Attachment F - _____

17. Additional Information: Unless previously submitted, include the following two items:

- ☒ Plot plan/map of facility location or date of previous submittal: _____
☒ Flow Diagram or date of previous submittal: _____

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated October 18, 2011

FORM 2.00 – EMISSION UNIT LIST

Emission Unit ID	Name	Manufacturer and Model Number	Description
DSB1	Spray Dryer No. 1 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 1 Feed Bin
DUB1	Spray Dryer No. 1 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 1 Unders Bin
DSB2	Spray Dryer No. 2 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 2 Feed Bin
DUB2	Spray Dryer No. 2 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 2 Unders Bin
OC01	Overflow Conveyor No. 1	Hendrik Group HGTAIR-24	Overflow Conveyor for Process Line No. 1
ABC1	Accepts Belt Conveyor No. 1	Hendrik Group HGTAIR-24	Accepts Belt Conveyor for Process Line No. 1
GPC1	Pellet Collection Conveyor No. 1	Hendrik Group HGTAIR-24	Pellet Connection Conveyor for Process Line No. 1
GPT1	Pellet Transfer Conveyor No. 1	Hendrik Group HGTAIR-24	Pellet Transfer Conveyor for Process Line No. 1
GPE1	Pellet Bucket Elevator No. 1	Strongco	Pellet Bucket Elevator for Process Line No. 1
GSH1	Screen Surge Hopper No. 1	Advanced Vessel & Alloy	Screen Surge Hopper for Process Line No. 1
GSC1	Pellet Screen No. 1-1	Rotex 5722-DAAMM	Pellet Screen No. 1-1
GSC2	Pellet Screen No. 1-2	Rotex 5722-DAAMM	Pellet Screen No. 1-2
GSC3	Pellet Screen No. 1-3	Rotex 5722-DAAMM	Pellet Screen No. 1-3
OBC1	Oversize Collection Belt Conveyor No. 1	Hendrik Group HGTAIR-24	Oversize Collection Belt Conveyor for Process Line No. 1
ORB1	Oversize Surge Bin No. 1	Advanced Vessel & Alloy	Oversize Surge Bin for Process Line No. 1
UBC1	Unders Collection Belt Conveyor No. 1	Hendrik Group HGTAIR-24	Unders Collection Belt Conveyor for Process Line No. 1
URC1	Unders Reversible Belt Conveyor No. 1	Hendrik Group HGTAIR-24	Unders Reversible Belt Conveyor for Process Line No. 1
KFE1	Calciner No. 1 Feed Bucket Elevator	Strongco	Calciner No. 1 Feed Bucket Elevator
KFB1	Calciner No. 1 Feed Bin	Columbian TecTank	Calciner No. 1 Feed Bin

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

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FORM 2.00 – EMISSION UNIT LIST

Emission Unit ID	Name	Manufacturer and Model Number	Description
KRB1	Calciner No. 1 Recycle Feed Bin	Advanced Vessel & Alloy	Calciner No. 1 Recycle Feed Bin
KRE1	Calciner No. 1 Recycle Feed Bin Bucket Elevator	Strongco	Calciner No. 1 Recycle Feed Bin Bucket Elevator
KFC1	Calciner No. 1 Feed Conveyor	Hendrik Group HGTAIR-24	Calciner No. 1 Feed Conveyor
KCE1	Calciner No. 1 Cooler Bucket Elevator	Strongco	Calciner No. 1 Cooler Bucket Elevator
KPS1	Calciner No. 1 Product Screen	Rotex 5722-DAAMM	Calciner No. 1 Product Screen
KFS1	Calciner No. 1 Fine Screen	Rotex 5722-DAAMM	Calciner No. 1 Fine Screen
KQC1	Calciner No. 1 Product QC Bin A	Advanced Vessel & Alloy	Calciner No. 1 Product QC Bin A
KQC2	Calciner No. 1 Product QC Bin B	Advanced Vessel & Alloy	Calciner No. 1 Product QC Bin B
KQC3	Calciner No. 1 Product QC Bin C	Advanced Vessel & Alloy	Calciner No. 1 Product QC Bin C
KQC4	Calciner No. 1 Product QC Bin D	Advanced Vessel & Alloy	Calciner No. 1 Product QC Bin D
KCS1	Calciner No. 1 Product Screen DPCS	Macawber Engineering 20/12	Calciner No. 1 Product Screen DPCS
KCS2	Calciner No. 1 Fines Screen DPCS	Macawber Engineering 20/12	Calciner No. 1 Fines Screen DPCS
BS01	Bulk Product Silo No. 1-1	Columbian TecTank	Bulk Product Silo No. 1-1
BS02	Bulk Product Silo No. 1-2	Columbian TecTank	Bulk Product Silo No. 1-2
BS03	Bulk Product Silo No. 1-3	Columbian TecTank	Bulk Product Silo No. 1-3
BS04	Bulk Product Silo No. 1-4	Columbian TecTank	Bulk Product Silo No. 1-4
DSB3	Spray Dryer No. 3 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 3 Feed Bin
DUB3	Spray Dryer No. 3 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 3 Unders Bin

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

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FORM 2.00 – EMISSION UNIT LIST

Emission Unit ID	Name	Manufacturer and Model Number	Description
DSB4	Spray Dryer No. 4 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 4 Feed Bin
DUB4	Spray Dryer No. 4 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 4 Unders Bin
OC02	Overflow Conveyor No. 2	Hendrik Group HGTAIR-24	Overflow Conveyor for Process Line No. 2
ABC2	Accepts Belt Conveyor No.2	Hendrik Group HGTAIR-24	Accepts Belt Conveyor No.2
GPC2	Pellet Collection Conveyor No. 2	Hendrik Group HGTAIR-24	Pellet Collection Conveyor for Process Line No. 2
GPT2	Pellet Transfer Conveyor No. 2	Hendrik Group HGTAIR-24	Pellet Transfer Conveyor for Process Line No. 2
GPE2	Pellet Bucket Elevator No. 2	Strongco	Pellet Bucket Elevator for Process Line No. 2
GSH2	Screen Surge Hopper No. 2	Advanced Vessel & Alloy	Screen Surge Hopper for Process Line No. 2
GSC4	Pellet Screen No. 2-1	Rotex 5722-DAAMM	Pellet Screen No. 2-1
GSC5	Pellet Screen No. 2-2	Rotex 5722-DAAMM	Pellet Screen No. 2-2
GSC6	Pellet Screen No. 2-3	Rotex 5722-DAAMM	Pellet Screen No. 2-3
OBC2	Oversize Collection Belt Conveyor No. 2	Hendrik Group HGTAIR-24	Oversize Collection Belt Conveyor for Process Line No. 2
ORB2	Oversize Surge Bin No. 2	Advanced Vessel & Alloy	Oversize Surge Bin for Process Line No. 2
UBC2	Unders Collection Belt Conveyor No. 2	Hendrik Group HGTAIR-24	Unders Collection Belt Conveyor for Process Line No. 2
URC2	Unders Reversible Belt Conveyor No. 2	Hendrik Group HGTAIR-24	Unders Reversible Belt Conveyor for Process Line No. 2
KFE2	Calciner No. 2 Feed Bin Bucket Elevator	Strongco	Calciner No. 2 Feed Bin Bucket Elevator
KFB2	Calciner No. 2 Feed Bin	Columbian TecTank	Calciner No. 2 Feed Bin
KRB2	Calciner No. 2 Recycle Feed Bin	Advanced Vessel & Alloy	Calciner No. 2 Recycle Feed Bin
KRE2	Calciner No. 2 Recycle Feed Bin Bucket Elevator	Strongco	Calciner No. 2 Recycle Feed Bin Bucket Elevator

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Emission Unit ID	Name	Manufacturer and Model Number	Description
KFC2	Calciner No. 2 Feed Conveyor	Hendrik Group HGTAIR-24	Calciner No. 2 Feed Conveyor
KCE2	Calciner No. 2 Cooler Bucket Elevator	Strongco	Calciner No. 2 Cooler Bucket Elevator
KPS2	Calciner No. 2 Product Screen	Rotex 5722-DAAMM	Calciner No. 2 Product Screen
KFS2	Calciner No. 2 Fine Screen	Rotex 5722-DAAMM	Calciner No. 2 Fine Screen
KQC5	Calciner No. 2 Product QC Bin A	Advanced Vessel & Alloy	Calciner No. 2 Product QC Bin A
KQC6	Calciner No. 2 Product QC Bin B	Advanced Vessel & Alloy	Calciner No. 2 Product QC Bin B
KQC7	Calciner No. 2 Product QC Bin C	Advanced Vessel & Alloy	Calciner No. 2 Product QC Bin C
KQC8	Calciner No. 2 Product QC Bin D	Advanced Vessel & Alloy	Calciner No. 2 Product QC Bin D
KCS3	Calciner No. 2 Product Screen DPCS	Macawber Engineering 20/12	Calciner No. 2 Product Screen DPCS
KCS4	Calciner No. 2 Fines Screen DPCS	Macawber Engineering 20/12	Calciner No. 2 Fines Screen DPCS
BS05	Bulk Product Silo No. 2-1	Columbian TecTank	Bulk Product Silo No. 2-1
BS06	Bulk Product Silo No. 2-2	Columbian TecTank	Bulk Product Silo No. 2-2
BS07	Bulk Product Silo No. 2-3	Columbian TecTank	Bulk Product Silo No. 2-3
BS08	Bulk Product Silo No. 2-4	Columbian TecTank	Bulk Product Silo No. 2-4
RRL1	Railcar Loading Operations No. 1	Custom	Railcar loadout system
RRL2	Railcar Loading Operations No. 2	Custom	Railcar loadout system
DSB5	Spray Dryer No. 5 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 5 Feed Bin
DUB5	Spray Dryer No. 5 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 5 Unders Bin

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Emission Unit ID	Name	Manufacturer and Model Number	Description
DSB6	Spray Dryer No. 6 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 6 Feed Bin
DUB6	Spray Dryer No. 6 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 6 Unders Bin
OC03	Overflow Conveyor No. 3	Hendrik Group HGTAIR-24	Overflow Conveyor for Process Line No. 3
ABC3	Accepts Belt Conveyor No.3	Hendrik Group HGTAIR-24	Accepts Belt Conveyor No.3
GPC3	Pellet Collection Conveyor No. 3	Hendrik Group HGTAIR-24	Pellet Collection Conveyor for Process Line No. 3
GPT3	Pellet Transfer Conveyor No. 3	Hendrik Group HGTAIR-24	Pellet Transfer Conveyor for Process Line No. 3
GPE3	Pellet Bucket Elevator No. 3	Strongco	Pellet Bucket Elevator for Process Line No. 3
GSH3	Screen Surge Hopper No. 3	Advanced Vessel & Alloy	Screen Surge Hopper for Process Line No. 3
GSC7	Pellet Screen No. 3-1	Rotex 5722-DAAMM	Pellet Screen No. 3-1
GSC8	Pellet Screen No. 3-2	Rotex 5722-DAAMM	Pellet Screen No. 3-1
GSC9	Pellet Screen No. 3-3	Rotex 5722-DAAMM	Pellet Screen No. 3-3
OBC3	Overs Collection Belt Conveyor No. 3	Hendrik Group HGTAIR-24	Oversize Collection Belt Conveyor for Process Line No. 3
ORB3	Overs Surge Bin No. 3	Advanced Vessel & Alloy	Oversize Surge Bin for Process Line No. 3
UBC3	Unders Collection Belt Conveyor No. 3	Hendrik Group HGTAIR-24	Unders Collection Belt Conveyor for Process Line No. 3
URC3	Unders Reversible Belt Conveyor No. 3	Hendrik Group HGTAIR-24	Unders Reversible Belt Conveyor for Process Line No. 3
KFE3	Calciner No. 3 Feed Bin Bucket Elevator	Strongco	Calciner No. 3 Feed Bin Bucket Elevator
KFB3	Calciner No. 3 Feed Bin	Columbian TecTank	Calciner No. 3 Feed Bin
KRB3	Calciner No. 3 Recycle Feed Bin	Advanced Vessel & Alloy	Calciner No. 3 Recycle Feed Bin
KRE3	Calciner No. 3 Recycle Feed Bin Bucket Elevator	Strongco	Calciner No. 3 Recycle Feed Bin Bucket Elevator

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Emission Unit ID	Name	Manufacturer and Model Number	Description
KFC3	Calciner No. 3 Feed Conveyor	Hendrik Group HGTAIR-24	Calciner No. 3 Feed Conveyor
PBC3	Calciner No. 3 Product Screen Belt Conveyor	Hendrik Group HGTAIR-24	Calciner No. 3 Product Screen Belt Conveyor
PBE3	Calciner No. 3 Product Screen Bucket Elevator	Strongco	Calciner No. 3 Product Screen Bucket Elevator
FBC3	Calciner No. 3 Fines Screen Belt Conveyor	Hendrik Group HGTAIR-24	Calciner No. 3 Fines Screen Belt Conveyor
FBE3	Calciner No. 3 Fines Screen Bucket Elevator	Strongco	Calciner No. 3 Fines Screen Bucket Elevator
KCE3	Calciner No. 3 Cooler Bucket Elevator	Strongco	Calciner No. 3 Cooler Bucket Elevator
KPS3	Calciner No. 3 Product Screen	Rotex 5722-DAAMM	Calciner No. 3 Product Screen
KFS3	Calciner No. 3 Fine Screen	Rotex 5722-DAAMM	Calciner No. 3 Fine Screen
KQC9	Calciner No. 3 Product QC Bin A	Advanced Vessel & Alloy	Calciner No. 3 Product QC Bin A
KQ10	Calciner No. 3 Product QC Bin B	Advanced Vessel & Alloy	Calciner No. 3 Product QC Bin B
KQ11	Calciner No. 3 Product QC Bin C	Advanced Vessel & Alloy	Calciner No. 3 Product QC Bin C
KQ12	Calciner No. 3 Product QC Bin D	Advanced Vessel & Alloy	Calciner No. 3 Product QC Bin D
KCS5	Calciner No. 3 Product Screen DPCS	Macawber Engineering 20/12	Calciner No. 3 Product Screen DPCS
KCS6	Calciner No. 3 Fines Screen DPCS	Macawber Engineering 20/12	Calciner No. 3 Fines Screen DPCS
BS09	Bulk Product Silo No. 3-1	Columbian TecTank	Bulk Product Silo No. 3-1
BS10	Bulk Product Silo No. 3-2	Columbian TecTank	Bulk Product Silo No. 3-2
BS11	Bulk Product Silo No. 3-3	Columbian TecTank	Bulk Product Silo No. 3-3
BS12	Bulk Product Silo No. 3-4	Columbian TecTank	Bulk Product Silo No. 3-4
DSB7	Spray Dryer No. 7 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 7 Feed Bin
DUB7	Spray Dryer No. 7 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 7 Unders Bin
DSB8	Spray Dryer No. 8 Feed Bin	Advanced Vessel & Alloy	Spray Dryer No. 8 Feed Bin
DUB8	Spray Dryer No. 8 Unders Bin	Advanced Vessel & Alloy	Spray Dryer No. 8 Unders Bin

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Emission Unit ID	Name	Manufacturer and Model Number	Description
OC04	Overflow Conveyor No. 4	Hendrik Group HGTAIR-24	Overflow Conveyor for Process Line No. 4
ABC4	Accepts Belt Conveyor No.4	Hendrik Group HGTAIR-24	Accepts Belt Conveyor No.4
GPC4	Pellet Collection Conveyor No. 4	Hendrik Group HGTAIR-24	Pellet Collection Conveyor for Process Line No. 4
GPT4	Pellet Transfer Conveyor No. 4	Hendrik Group HGTAIR-24	Pellet Transfer Conveyor for Process Line No. 4
GPE4	Pellet Bucket Elevator No. 4	Strongco	Pellet Bucket Elevator for Process Line No. 4
GSH4	Screen Surge Hopper No. 4	Advanced Vessel & Alloy	Screen Surge Hopper for Process Line No. 4
GS10	Pellet Screen No. 4-1	Rotex 5722-DAAMM	Pellet Screen No. 4-1
GS11	Pellet Screen No. 4-2	Rotex 5722-DAAMM	Pellet Screen No. 4-2
GS12	Pellet Screen No. 4-3	Rotex 5722-DAAMM	Pellet Screen No. 4-3
OBC4	Oversize Collection Belt Conveyor No. 4	Hendrik Group HGTAIR-24	Oversize Collection Belt Conveyor for Process Line No. 4
ORB4	Oversize Surge Bin No. 4	Advanced Vessel & Alloy	Oversize Surge Bin for Process Line No. 4
UBC4	Unders Collection Belt Conveyor No. 4	Hendrik Group HGTAIR-24	Unders Collection Belt Conveyor for Process Line No. 4
URC4	Unders Reversible Belt Conveyor No. 4	Hendrik Group HGTAIR-24	Unders Reversible Belt Conveyor for Process Line No. 4
KFE4	Calciner No. 4 Feed Bin Bucket Elevator	Strongco	Calciner No. 4 Feed Bin Bucket Elevator
KFB4	Calciner No. 4 Feed Bin	Columbian TecTank	Calciner No. 4 Feed Bin
KRB4	Calciner No. 4 Recycle Feed Bin	Advanced Vessel & Alloy	Calciner No. 4 Recycle Feed Bin
KRE4	Calciner No. 4 Recycle Feed Bin Bucket Elevator	Strongco	Calciner No. 4 Recycle Feed Bin Bucket Elevator
KFC4	Calciner No. 4 Feed Conveyor	Hendrik Group HGTAIR-24	Calciner No. 4 Feed Conveyor
KCE4	Calciner No. 4 Cooler Bucket Elevator	Strongco	Calciner No. 4 Cooler Bucket Elevator

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Emission Unit ID	Name	Manufacturer and Model Number	Description
KPS4	Calciner No. 4 Product Screen	Rotex 5722-DAAMM	Calciner No. 4 Product Screen
KFS4	Calciner No. 4 Fine Screen	Rotex 5722-DAAMM	Calciner No. 4 Fine Screen
KQ13	Calciner No. 4 Product QC Bin A	Advanced Vessel & Alloy	Calciner No. 4 Product QC Bin A
KQ14	Calciner No. 4 Product QC Bin B	Advanced Vessel & Alloy	Calciner No. 4 Product QC Bin B
KQ15	Calciner No. 4 Product QC Bin C	Advanced Vessel & Alloy	Calciner No. 4 Product QC Bin C
KQ16	Calciner No. 4 Product QC Bin D	Advanced Vessel & Alloy	Calciner No. 4 Product QC Bin D
KCS7	Calciner No. 4 Product Screen DPCS	Macawber Engineering 20/12	Calciner No. 4 Product Screen DPCS
KCS8	Calciner No. 4 Fines Screen DPCS	Macawber Engineering 20/12	Calciner No. 4 Fines Screen DPCS
BS13	Bulk Product Silo No. 4-1	Columbian TecTank	Bulk Product Silo No. 4-1
BS14	Bulk Product Silo No. 4-2	Columbian TecTank	Bulk Product Silo No. 4-2
BS15	Bulk Product Silo No. 4-3	Columbian TecTank	Bulk Product Silo No. 4-3
BS16	Bulk Product Silo No. 4-4	Columbian TecTank	Bulk Product Silo No. 4-4
PB04	Line No. 4 Product Belt	Hendrik Group HGTAIR-24	Product Belt
KLN1	Direct-Fired Rotary Calciner No. 1	Claudius Peters	Direct-Fired Rotary Calciner No. 1
KLN2	Direct-Fired Rotary Calciner No. 2	Claudius Peters	Direct-Fired Rotary Calciner No. 2
KLN3	Direct-Fired Rotary Calciner No. 3	Claudius Peters	Direct-Fired Rotary Calciner No. 3

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FORM 2.00 – EMISSION UNIT LIST

Emission Unit ID	Name	Manufacturer and Model Number	Description
KLN4	Direct-Fired Rotary Calciner No. 4	Claudius Peters	Direct-Fired Rotary Calciner No. 4
SD01	Spray Dryer No. 1	Niro	Spray Dryer No. 1
SD02	Spray Dryer No. 2	Niro	Spray Dryer No. 2
SD03	Spray Dryer No. 3	Niro	Spray Dryer No. 3
SD04	Spray Dryer No. 4	Niro	Spray Dryer No. 4
SD05	Spray Dryer No. 5	Niro	Spray Dryer No. 5
SD06	Spray Dryer No. 6	Niro	Spray Dryer No. 6
SD07	Spray Dryer No. 7	Niro	Spray Dryer No. 7
SD08	Spray Dryer No. 8	Niro	Spray Dryer No. 8
BLR1	Boiler No. 1	Cleaver-Brooks CBLE	Boiler No. 1
BLR2	Boiler No. 2	Cleaver-Brooks CBLE	Boiler No. 2
BLR3	Boiler No. 3	Cleaver-Brooks CBLE	Boiler No. 3
BLR4	Boiler No. 4	Cleaver-Brooks CBLE	Boiler No. 4
EDG1	Emergency Generator No. 1	MTU Detroit Diesel (Engine Model 16V4000 G43)	Emergency Generator No. 1
EDG2	Emergency Generator No. 2	MTU Detroit Diesel (Engine Model 16V4000 G43)	Emergency Generator No. 2
EDG3	Emergency Generator No. 3	MTU Detroit Diesel (Engine Model 16V4000 G43)	Emergency Generator No. 3
EDG4	Emergency Generator No. 4	MTU Detroit Diesel (Engine Model 16V4000 G43)	Emergency Generator No. 4

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated October 18, 2011

FORM 2.00 – EMISSION UNIT LIST

Emission Unit ID	Name	Manufacturer and Model Number	Description
BS17	Bulk Product Silo No. 1-5	Columbian TecTank	Bulk Product Silo No. 1-5
BS18	Bulk Product Silo No. 2-5	Columbian TecTank	Bulk Product Silo No. 2-5
BS19	Bulk Product Silo No. 3-5	Columbian TecTank	Bulk Product Silo No. 3-5
BS20	Bulk Product Silo No. 4-5	Columbian TecTank	Bulk Product Silo No. 4-5

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc. **Date of Application:** 18, 2011

Facility Name: CARBO Ceramics, Inc. **Date of Application:** 18, 2011

Facility Name: CARBO Ceramics, Inc. **Date of Application:** 18, 2011

FORM 2.01 – BOILERS AND FUEL BURNING EQUIPMENT

[illegible]

¹ This column does not have to be completed for natural gas only fired equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

FUEL DATA

Emission Unit ID	Fuel Type	Potential Annual Consumption				Hourly Consumption		Heat Content		Percent Sulfur		Percent Ash in Solid Fuel	
		Total Quantity		Percent Use by Season		Max.	Avg.	Min.	Avg.	Max.	Avg.	Max.	Avg.
		Amount	Units	Ozone Season May 1 - Sept 30	Non-ozone Season Oct 1 - Apr 30								
BLR1	Natural Gas	84,200,000	Cubic Feet	50	50	9,608	9,608	1020	1020	N/A	N/A	N/A	N/A
BLR1	Propane	938,230	Gal.	50	50	107.1	107.1	91,500	91,500	N/A	N/A	N/A	N/A
BLR2	Natural Gas	84,200,000	Cubic Feet	50	50	9,608	9,608	1020	1020	N/A	N/A	N/A	N/A
BLR2	Propane	938,230	Gal.	50	50	107.1	107.1	91,500	91,500	N/A	N/A	N/A	N/A
BLR3	Natural Gas	84,200,000	Cubic Feet	50	50	9,608	9,608	1020	1020	N/A	N/A	N/A	N/A
BLR3	Propane	938,230	Gal.	50	50	107.1	107.1	91,500	91,500	N/A	N/A	N/A	N/A
BLR4	Natural Gas	84,200,000	Cubic Feet	50	50	9,608	9,608	1020	1020	N/A	N/A	N/A	N/A
BLR4	Propane	938,230	Gal.	50	50	107.1	107.1	91,500	91,500	N/A	N/A	N/A	N/A

Fuel Supplier Information

Fuel Type	Name of Supplier	Phone Number	Supplier Location			
			Address	City	State	Zip

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
DSB1	Spray Dryer No. 1 Feed Bin	2011	Non-Metallic Mineral Slurry				
DUB1	Spray Dryer No. 1 Unders Bin	2011	Non-Metallic Mineral Slurry				
DSB2	Spray Dryer No. 2 Feed Bin	2011	Non-Metallic Mineral Slurry				
DUB2	Spray Dryer No. 2 Unders Bin	2011	Non-Metallic Mineral Slurry				
OC01	Overflow Conveyor No. 1	2011	Non-Metallic Mineral				
ABC1	Accepts Belt Conveyor No. 1	2011	Non-Metallic Mineral				
GPC1	Pellet Collection Conveyor No. 1	2011	Non-Metallic Mineral				
GPT1	Pellet Transfer Conveyor No. 1	2011	Non-Metallic Mineral				
GPE1	Pellet Bucket Elevator No. 1	2011	Non-Metallic Mineral				
GSH1	Screen Surge Hopper No. 1	2011	Non-Metallic Mineral				
GSC1	Pellet Screen No. 1-1	2011	Non-Metallic Mineral				
GSC2	Pellet Screen No. 1-2	2011	Non-Metallic Mineral				
GSC3	Pellet Screen No. 1-3	2011	Non-Metallic Mineral				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
OBC1	Oversize Collection Belt Conveyor No. 1	2011	Non-Metallic Mineral				
ORB1	Oversize Surge Bin No. 1	2011	Non-Metallic Mineral				
UBC1	Unders Collection Belt Conveyor No. 1	2011	Non-Metallic Mineral				
URC1	Unders Reversible Belt Conveyor No. 1	2011	Non-Metallic Mineral				
KFE1	Calciner No. 1 Feed Bucket Elevator	2011	Non-Metallic Mineral				
KFB1	Calciner No. 1 Feed Bin	2011	Non-Metallic Mineral				
KRB1	Calciner No. 1 Recycle Feed Bin	2011	Non-Metallic Mineral				
KRE1	Calciner No. 1 Recycle Feed Bin Bucket Elevator	2011	Non-Metallic Mineral				
KFC1	Calciner No. 1 Feed Conveyor	2011	Non-Metallic Mineral				
KCE1	Calciner No. 1 Cooler Bucket Elevator	2011	Non-Metallic Mineral				
KPS1	Calciner No. 1 Product Screen	2011	Non-Metallic Mineral				
KFS1	Calciner No. 1 Fine Screen	2011	Non-Metallic Mineral				
KQC1	Calciner No. 1 Product QC Bin A	2011	Non-Metallic Mineral				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
KQC2	Calciner No. 1 Product QC Bin B	2011	Non-Metallic Mineral				
KQC3	Calciner No. 1 Product QC Bin C	2011	Non-Metallic Mineral				
KQC4	Calciner No. 1 Product QC Bin D	2011	Non-Metallic Mineral				
KCS1	Calciner No. 1 Product Screen DPCS	2011	Non-Metallic Mineral				
KCS2	Calciner No. 1 Fines Screen DPCS	2011	Non-Metallic Mineral				
BS01	Bulk Product Silo No. 1-1	2011	Non-Metallic Mineral Slurry				
BS02	Bulk Product Silo No. 1-2	2011	Non-Metallic Mineral Slurry				
BS03	Bulk Product Silo No. 1-3	2011	Non-Metallic Mineral Slurry				
BS04	Bulk Product Silo No. 1-4	2011	Non-Metallic Mineral Slurry				
DSB3	Spray Dryer No. 3 Feed Bin	2011	Non-Metallic Mineral Slurry				
DUB3	Spray Dryer No. 3 Unders Bin	2011	Non-Metallic Mineral Slurry				
DSB4	Spray Dryer No. 4 Feed Bin	2011	Non-Metallic Mineral Slurry				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
DUB4	Spray Dryer No. 4 Unders Bin	2011	Non-Metallic Mineral Slurry				
OC02	Overflow Conveyor No. 2	2011	Non-Metallic Mineral				
ABC2	Accepts Belt Conveyor No.2	2011	Non-Metallic Mineral				
GPC2	Pellet Collection Conveyor No. 2	2011	Non-Metallic Mineral				
GPT2	Pellet Transfer Conveyor No. 2	2011	Non-Metallic Mineral				
GPE2	Pellet Bucket Elevator No. 2	2011	Non-Metallic Mineral				
GSH2	Screen Surge Hopper No. 2	2011	Non-Metallic Mineral				
GSC4	Pellet Screen No. 2-1	2011	Non-Metallic Mineral				
GSC5	Pellet Screen No. 2-2	2011	Non-Metallic Mineral				
GSC6	Pellet Screen No. 2-3	2011	Non-Metallic Mineral				
OBC2	Oversize Collection Belt Conveyor No. 2	2011	Non-Metallic Mineral				
ORB2	Oversize Surge Bin No. 2	2011	Non-Metallic Mineral				
UBC2	Unders Collection Belt Conveyor No. 2	2011	Non-Metallic Mineral				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
URC2	Unders Reversible Belt Conveyor No. 2	2011	Non-Metallic Mineral Slurry				
KFE2	Calciner No. 2 Feed Bin Bucket Elevator	2011	Non-Metallic Mineral				
KFB2	Calciner No. 2 Feed Bin	2011	Non-Metallic Mineral				
KRB2	Calciner No. 2 Recycle Feed Bin	2011	Non-Metallic Mineral				
KRE2	Calciner No. 2 Recycle Feed Bin Bucket Elevator	2011	Non-Metallic Mineral				
KFC2	Calciner No. 2 Feed Conveyor	2011	Non-Metallic Mineral				
KCE2	Calciner No. 2 Cooler Bucket Elevator	2011	Non-Metallic Mineral				
KPS2	Calciner No. 2 Product Screen	2011	Non-Metallic Mineral				
KFS2	Calciner No. 2 Fine Screen	2011	Non-Metallic Mineral				
KQC5	Calciner No. 2 Product QC Bin A	2011	Non-Metallic Mineral				
KQC6	Calciner No. 2 Product QC Bin B	2011	Non-Metallic Mineral				
KQC7	Calciner No. 2 Product QC Bin C	2011	Non-Metallic Mineral				
KQC8	Calciner No. 2 Product QC Bin D	2011	Non-Metallic Mineral				
KCS3	Calciner No. 2 Fines Screen DPCS	2011	Non-Metallic Mineral				

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
KCS4	Calciner No. 2 Fines Screen DPCS	2011	Non-Metallic Mineral				
BS05	Bulk Product Silo No. 2-1	2011	Non-Metallic Mineral Slurry				
BS06	Bulk Product Silo No. 2-2	2011	Non-Metallic Mineral Slurry				
BS07	Bulk Product Silo No. 2-3	2011	Non-Metallic Mineral Slurry				
BS08	Bulk Product Silo No. 2-4	2011	Non-Metallic Mineral Slurry				
RRL1	Railcar Loading Operations No. 1	2011	Non-Metallic Mineral				
RRL2	Railcar Loading Operations No. 2	2011	Non-Metallic Mineral				
DSB5	Spray Dryer No. 5 Feed Bin	2011	Non-Metallic Mineral				
DUB5	Spray Dryer No. 5 Unders Bin	2011	Non-Metallic Mineral				
DSB6	Spray Dryer No. 6 Feed Bin	2011	Non-Metallic Mineral				
DUB6	Spray Dryer No. 6 Unders Bin	2011	Non-Metallic Mineral				
OC03	Overflow Conveyor No. 3	2011	Non-Metallic Mineral				

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/week 52 weeks/yr
 Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
ABC3	Accepts Belt Conveyor No.3	2011	Non-Metallic Mineral				
GPC3	Pellet Collection Conveyor No. 3	2011	Non-Metallic Mineral				
GPT3	Pellet Transfer Conveyor No. 3	2011	Non-Metallic Mineral				
GPE3	Pellet Bucket Elevator No. 3	2011	Non-Metallic Mineral				
GSH3	Screen Surge Hopper No. 3	2011	Non-Metallic Mineral				
GSC7	Pellet Screen No. 3-1	2011	Non-Metallic Mineral				
GSC8	Pellet Screen No. 3-2	2011	Non-Metallic Mineral				
GSC9	Pellet Screen No. 3-3	2011	Non-Metallic Mineral				
OBC3	Overs Collection Belt Conveyor No. 3	2011	Non-Metallic Mineral				
ORB3	Overs Surge Bin No. 3	2011	Non-Metallic Mineral				
UBC3	Unders Collection Belt Conveyor No. 3	2011	Non-Metallic Mineral				
URC3	Unders Reversible Belt Conveyor No. 3	2011	Non-Metallic Mineral				
KFE3	Calciner No. 3 Feed Bin Bucket Elevator	2011	Non-Metallic Mineral				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
KFB3	Calciner No. 3 Feed Bin	2011	Non-Metallic Mineral				
KRB3	Calciner No. 3 Recycle Feed Bin	2011	Non-Metallic Mineral				
KRE3	Calciner No. 3 Recycle Feed Bin Bucket Elevator	2011	Non-Metallic Mineral				
KFC3	Calciner No. 3 Feed Conveyor	2011	Non-Metallic Mineral				
KCE3	Calciner No. 3 Cooler Bucket Elevator	2011	Non-Metallic Mineral				
KPS3	Calciner No. 3 Product Screen	2011	Non-Metallic Mineral				
KFS3	Calciner No. 3 Fine Screen	2011	Non-Metallic Mineral				
KQC9	Calciner No. 3 Product QC Bin A	2011	Non-Metallic Mineral				
KQ10	Calciner No. 3 Product QC Bin B	2011	Non-Metallic Mineral				
KQ11	Calciner No. 3 Product QC Bin C	2011	Non-Metallic Mineral				
KQ12	Calciner No. 3 Product QC Bin D	2011	Non-Metallic Mineral				
KCS5	Calciner No. 3 Product Screen DPCS	2011	Non-Metallic Mineral				

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
KCS6	Calciner No. 3 Fines Screen DPCS	2011	Non-Metallic Mineral				
BS09	Bulk Product Silo No. 3-1	2011	Non-Metallic Mineral Slurry				
BS10	Bulk Product Silo No. 3-2	2011	Non-Metallic Mineral Slurry				
BS11	Bulk Product Silo No. 3-3	2011	Non-Metallic Mineral Slurry				
BS12	Bulk Product Silo No. 3-4	2011	Non-Metallic Mineral Slurry				
DSB7	Spray Dryer No. 7 Feed Bin	2011	Non-Metallic Mineral				
DUB7	Spray Dryer No. 7 Unders Bin	2011	Non-Metallic Mineral				
DSB8	Spray Dryer No. 8 Feed Bin	2011	Non-Metallic Mineral				
DUB8	Spray Dryer No. 8 Unders Bin	2011	Non-Metallic Mineral				
OC04	Overflow Conveyor No. 4	2011	Non-Metallic Mineral				
ABC4	Accepts Belt Conveyor No.4	2011	Non-Metallic Mineral				
GPC4	Pellet Collection Conveyor No. 4	2011	Non-Metallic Mineral				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
GPT4	Pellet Transfer Conveyor No. 4	2011	Non-Metallic Mineral				
GPE4	Pellet Bucket Elevator No. 4	2011	Non-Metallic Mineral				
GSH4	Screen Surge Hopper No. 4	2011	Non-Metallic Mineral				
GS10	Pellet Screen No. 4-1	2011	Non-Metallic Mineral				
GS11	Pellet Screen No. 4-2	2011	Non-Metallic Mineral				
GS12	Pellet Screen No. 4-3	2011	Non-Metallic Mineral				
OBC4	Oversize Collection Belt Conveyor No. 4	2011	Non-Metallic Mineral				
ORB4	Oversize Surge Bin No. 4	2011	Non-Metallic Mineral				
UBC4	Unders Collection Belt Conveyor No. 4	2011	Non-Metallic Mineral				
URC4	Unders Reversible Belt Conveyor No. 4	2011	Non-Metallic Mineral				
KFE4	Calciner No. 4 Feed Bin Bucket Elevator	2011	Non-Metallic Mineral				
KFB4	Calciner No. 4 Feed Bin	2011	Non-Metallic Mineral				
KRB4	Calciner No. 4 Recycle Feed Bin	2011	Non-Metallic Mineral				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
KRE4	Calciner No. 4 Recycle Feed Bin Bucket Elevator	2011	Non-Metallic Mineral				
KFC4	Calciner No. 4 Feed Conveyor	2011	Non-Metallic Mineral				
KCE4	Calciner No. 4 Cooler Bucket Elevator	2011	Non-Metallic Mineral				
KPS4	Calciner No. 4 Product Screen	2011	Non-Metallic Mineral				
KFS4	Calciner No. 4 Fine Screen	2011	Non-Metallic Mineral				
KQ13	Calciner No. 4 Product QC Bin A	2011	Non-Metallic Mineral				
KQ14	Calciner No. 4 Product QC Bin B	2011	Non-Metallic Mineral				
KQ15	Calciner No. 4 Product QC Bin C	2011	Non-Metallic Mineral				
KQ16	Calciner No. 4 Product QC Bin D	2011	Non-Metallic Mineral				
KCS7	Calciner No. 4 Product Screen DPCS	2011	Non-Metallic Mineral				
KCS8	Calciner No. 4 Fines Screen DPCS	2011	Non-Metallic Mineral				

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
BS13	Bulk Product Silo No. 4-1	2011	Non-Metallic Mineral				
BS14	Bulk Product Silo No. 4-2	2011	Non-Metallic Mineral				
BS15	Bulk Product Silo No. 4-3	2011	Non-Metallic Mineral				
BS16	Bulk Product Silo No. 4-4	2011	Non-Metallic Mineral				
KLN1	Direct-Fired Rotary Calciner No. 1	2011	Non-Metallic Mineral				
KLN2	Direct-Fired Rotary Calciner No. 2	2011	Non-Metallic Mineral				
KLN3	Direct-Fired Rotary Calciner No. 3	2011	Non-Metallic Mineral				
KLN4	Direct-Fired Rotary Calciner No. 4	2011	Non-Metallic Mineral				
SD01	Spray Dryer No. 1	2011	Non-Metallic Mineral				
SD02	Spray Dryer No. 2	2011	Non-Metallic Mineral				

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/ week 52 weeks/yr

Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
SD03	Spray Dryer No. 3	2011	Non-Metallic Mineral				
SD04	Spray Dryer No. 4	2011	Non-Metallic Mineral				
SD05	Spray Dryer No. 5	2011	Non-Metallic Mineral				
SD06	Spray Dryer No. 6	2011	Non-Metallic Mineral				
SD07	Spray Dryer No. 7	2011	Non-Metallic Mineral				
SD08	Spray Dryer No. 8	2011	Non-Metallic Mineral				
BLR1	Boiler No. 1	2011	Natural Gas/Propane				
BLR2	Boiler No. 2	2011	Natural Gas/Propane				
BLR3	Boiler No. 3	2011	Natural Gas/Propane				
BLR4	Boiler No. 4	2011	Natural Gas/Propane				
EDG1	Emergency Generator No. 1	2011	Diesel Fuel				
EDG2	Emergency Generator No. 2	2011	Diesel Fuel				
EDG3	Emergency Generator No. 3	2011	Diesel Fuel				
EDG4	Emergency Generator No. 4	2011	Diesel Fuel				

1 ANNUAL AND HOURLY PROCESS INPUT RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011;
Updated
October
18, 2011

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: _____ 24 hours/day _____ 7 days/ week _____ 52 weeks/yr
Additional Data Attached? ☒ - No ☐ - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: None

Dates of Annually Occurring Shutdowns: None

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input ¹	Hourly Process Input Rate ¹		
					Design	Normal	Maximum
PBC3	Calciner No. 3 Product Screen Belt Conveyor	2011	Non-Metallic Mineral				
PBE3	Calciner No. 3 Product Screen Bucket Elevator	2011	Non-Metallic Mineral				
FBC3	Calciner No. 3 Fines Screen Belt Conveyor	2011	Non-Metallic Mineral				
FBE3	Calciner No. 3 Fines Screen Bucket Elevator	2011	Non-Metallic Mineral				
PB04	Line No. 4 Product Belt	2011	Non-Metallic Mineral				
BS17	Bulk Product Silo No. 1-5	2011	Non-Metallic Mineral				
BS18	Bulk Product Silo No. 2-5	2011	Non-Metallic Mineral				
BS19	Bulk Product Silo No. 3-5	2011	Non-Metallic Mineral				
BS20	Bulk Product Silo No. 4-5	2011	Non-Metallic Mineral				

PRODUCTS OF MANUFACTURING¹

Emission Unit ID	Description of Product	Production Schedule ¹		Hourly Production Rate ¹ (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units

1 PRODUCTION SCHEDULE AND HOURLY PRODUCTION RATES WILL BE PROVIDED TO GA EPD UPON REQUEST.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES - PART A: GENERAL EQUIPMENT INFORMATION

APCD Unit ID	Emission Unit ID	APCD Type (Baghouse, ESP, Scrubber etc)	Date Installed	Make & Model Number (Attach Mfg. Specifications & Literature)	Unit Modified from Mfg Specifications?	Gas Temp. °F		Inlet Gas Flow Rate (acfm)
						Inlet	Outlet	
SB01	SD01	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB02	SD01	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB03	SD01	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB04	SD01	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB05	SD02	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB06	SD02	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB07	SD02	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB08	SD02	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB09	SD03	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB10	SD03	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB11	SD03	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB12	SD03	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB13	SD04	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB14	SD04	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB15	SD04	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB16	SD04	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES – PART B: EMISSION INFORMATION

APCD Unit ID	Pollutants Controlled	Percent Control Efficiency		Inlet Stream To APCD ²		Exit Stream From APCD ¹		Pressure Drop Across Unit (Inches of water)
		Design	Actual	lb/hr	Method of Determination	lb/hr	Method of Determination	
SB01	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	TBD at NSPS UUU initial performance test
SB02	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB03	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB04	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB05	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB06	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB07	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB08	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB09	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB10	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB11	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB12	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB13	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB14	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB15	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB16	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	

1 PM outlet emissions as calculated based on proposed BACT limits as in Volume II, Attachment D.

2 PM inlet emissions calculated by dividing outlet emissions by 0.001 to represent a 99.9% control efficiency.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES - PART A: GENERAL EQUIPMENT INFORMATION

APCD Unit ID	Emission Unit ID	APCD Type (Baghouse, ESP, Scrubber etc)	Date Installed	Make & Model Number (Attach Mfg. Specifications & Literature)	Unit Modified from Mfg Specifications?	Gas Temp. °F		Inlet Gas Flow Rate (acfm)
						Inlet	Outlet	
SB17	SD05	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB18	SD05	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB19	SD05	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB20	SD05	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB21	SD06	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB22	SD06	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB23	SD06	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB24	SD06	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB25	SD07	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB26	SD07	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB27	SD07	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB28	SD07	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB29	SD08	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB30	SD08	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB31	SD08	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500
SB32	SD08	Baghouse	2011	Micropul 289S(6)-10-70-TRH-“C”	No	210	206	11,500

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES – PART B: EMISSION INFORMATION

APCD Unit ID	Pollutants Controlled	Percent Control Efficiency		Inlet Stream To APCD ²		Exit Stream From APCD ¹		Pressure Drop Across Unit (Inches of water)
		Design	Actual	lb/hr	Method of Determination	lb/hr	Method of Determination	
SB17	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	TBD at NSPS UUU initial performance test
SB18	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB19	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB20	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB21	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB22	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB23	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB24	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB25	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB26	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB27	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB28	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB29	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB30	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB31	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	
SB32	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1135/425	Mass Balance	1.135/0.425	Proposed BACT limit	

1 PM outlet emissions as calculated based on proposed BACT limits as in Volume II, Attachment D.

2 PM inlet emissions calculated by dividing outlet emissions by 0.001 to represent a 99.9% control efficiency.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES - PART A: GENERAL EQUIPMENT INFORMATION

APCD Unit ID	Emission Unit ID	APCD Type (Baghouse, ESP, Scrubber etc)	Date Installed	Make & Model Number (Attach Mfg. Specifications & Literature)	Unit Modified from Mfg Specifications?	Gas Temp. °F		Inlet Gas Flow Rate (acfm)
						Inlet	Outlet	
KB01	KLN1	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB02	KLN1	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB03	KLN1	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB04	KLN1	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB05	KLN2	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB06	KLN2	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB07	KLN2	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB08	KLN2	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB09	KLN3	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB10	KLN3	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB11	KLN3	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB12	KLN3	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB13	KLN4	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB14	KLN4	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB15	KLN4	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750
KB16	KLN4	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	425	400	15,750

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES – PART B: EMISSION INFORMATION

APCD Unit ID	Pollutants Controlled	Percent Control Efficiency		Inlet Stream To APCD ²		Exit Stream From APCD ¹		Pressure Drop Across Unit (Inches of water)
		Design	Actual	lb/hr	Method of Determination	lb/hr	Method of Determination	
KB01	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	TBD upon installation
KB02	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB03	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB04	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB05	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB06	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB07	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB08	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB09	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB10	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB11	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB12	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB13	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB14	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB15	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	
KB16	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	690/690	Mass Balance	0.690/0.690	Proposed BACT limit	

1 PM outlet emissions as calculated based on proposed BACT limits as in Volume II, Attachment D.

2 PM inlet emissions calculated by dividing outlet emissions by 0.001 to represent a 99.9% control efficiency.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES - PART A: GENERAL EQUIPMENT INFORMATION

APCD Unit ID	Emission Unit ID	APCD Type (Baghouse, ESP, Scrubber etc)	Date Installed	Make & Model Number (Attach Mfg. Specifications & Literature)	Unit Modified from Mfg Specifications?	Gas Temp. °F		Inlet Gas Flow Rate (acfm)
						Inlet	Outlet	
GPB1	GP01 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-256; S6	No	Ambient	Ambient	19,000
GPB2	GP02 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-256; S6	No	Ambient	Ambient	19,000
GPB3	GP03 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-256; S6	No	Ambient	Ambient	19,000
GPB4	GP04 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-256; S6	No	Ambient	Ambient	19,000
KNB1	KAE1 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	150	150	1,500
KNB2	KAE2 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	150	150	1,500
KNB3	KAE3 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	150	150	1,500
KNB4	KAE4 ¹	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	150	150	1,500
RCB1	RRL1	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	Ambient	Ambient	2,500
RCB2	RRL2	Baghouse	2011	Industrial Accessories Co. 120TB-BHWT-1216; S6	No	Ambient	Ambient	2,500
BB01	BS01	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB02	BS02	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB03	BS03	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB04	BS04	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB05	BS05	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000

¹ Emission Unit group name used for brevity.

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES – PART B: EMISSION INFORMATION

APCD Unit ID	Pollutants Controlled	Percent Control Efficiency		Inlet Stream To APCD ²		Exit Stream From APCD ¹		Pressure Drop Across Unit (Inches of water)
		Design	Actual	lb/hr	Method of Determination	lb/hr	Method of Determination	
GPB1	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1,630/814	Mass Balance	1.63/0.814	Proposed BACT limit	TBD at NSPS OOO initial performance test
GPB2	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1,630/814	Mass Balance	1.63/0.814	Proposed BACT limit	
GPB3	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1,630/814	Mass Balance	1.63/0.814	Proposed BACT limit	
GPB4	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	1,630/814	Mass Balance	1.63/0.814	Proposed BACT limit	
KNB1	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	129/64.0	Mass Balance	0.129/0.064	Proposed BACT limit	
KNB2	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	129/64.0	Mass Balance	0.129/0.064	Proposed BACT limit	
KNB3	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	129/64.0	Mass Balance	0.129/0.064	Proposed BACT limit	
KNB4	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	129/64.0	Mass Balance	0.129/0.064	Proposed BACT limit	
RCB1	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	300/150	Mass Balance	0.30/0.15	Proposed BACT limit	
RCB2	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	300/150	Mass Balance	0.30/0.15	Proposed BACT limit	
BB01	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB02	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB03	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB04	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB05	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10

1 PM outlet emissions as calculated based on proposed BACT limits as in Volume II, Attachment D.

2 PM inlet emissions calculated by dividing outlet emissions by 0.001 to represent a 99.9% control efficiency.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES - PART A: GENERAL EQUIPMENT INFORMATION

APCD Unit ID	Emission Unit ID	APCD Type (Baghouse, ESP, Scrubber etc)	Date Installed	Make & Model Number (Attach Mfg. Specifications & Literature)	Unit Modified from Mfg Specifications?	Gas Temp. °F		Inlet Gas Flow Rate (acfm)
						Inlet	Outlet	
BB06	BS06	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB07	BS07	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB08	BS08	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB09	BS09	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB10	BS10	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB11	BS11	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB12	BS12	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB13	BS13	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB14	BS14	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB15	BS15	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB16	BS16	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
SC01	KLN1	Scrubber	2011	Turbo-Sonic/Custom	No	405	160	63,000
SC02	KLN2	Scrubber	2011	Turbo-Sonic/Custom	No	405	160	63,000
SC03	KLN3	Scrubber	2011	Turbo-Sonic/Custom	No	405	160	63,000
SC04	KLN4	Scrubber	2011	Turbo-Sonic/Custom	No	405	160	63,000

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES – PART B: EMISSION INFORMATION

APCD Unit ID	Pollutants Controlled	Percent Control Efficiency		Inlet Stream To APCD ^{2,3}		Exit Stream From APCD ¹		Pressure Drop Across Unit (Inches of water)
		Design	Actual	lb/hr	Method of Determination	lb/hr	Method of Determination	
BB06	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB07	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB08	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB09	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB10	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB11	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB12	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB13	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB14	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB15	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB16	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
SC01	SO ₂	95.0	95.0	685	Mass Balance	34.25	Proposed BACT limit	TBD at NSPS UUU initial performance test
SC02	SO ₂	95.0	95.0	685	Mass Balance	34.25	Proposed BACT limit	
SC03	SO ₂	95.0	95.0	685	Mass Balance	34.25	Proposed BACT limit	
SC04	SO ₂	95.0	95.0	685	Mass Balance	34.25	Proposed BACT limit	

1 PM outlet emissions as calculated based on proposed BACT limits as in Attachment C.

2 PM inlet emissions calculated by dividing outlet emissions by 0.001 to represent a 99.9% control efficiency.

3 SO₂ inlet emissions calculated by dividing outlet emissions by 0.05 to represent a 95% control efficiency.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES - PART A: GENERAL EQUIPMENT INFORMATION

APCD Unit ID	Emission Unit ID	APCD Type (Baghouse, ESP, Scrubber etc)	Date Installed	Make & Model Number (Attach Mfg. Specifications & Literature)	Unit Modified from Mfg Specifications?	Gas Temp. °F		Inlet Gas Flow Rate (acfm)
						Inlet	Outlet	
BB17	BS17	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB18	BS18	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB19	BS19	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000
BB20	BS20	Bin Vent Filter	2011	Flex-Kleen 28/36-PVB1-16(IIG)	No	Ambient	Ambient	1,000

Manufacturer and model number information is tentative; the project will be constructed with equipment as listed or other similar equipment.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011; Updated
October 18, 2011

Form 3.00 – AIR POLLUTION CONTROL DEVICES – PART B: EMISSION INFORMATION

APCD Unit ID	Pollutants Controlled	Percent Control Efficiency		Inlet Stream To APCD ^{2,3}		Exit Stream From APCD ¹		Pressure Drop Across Unit (Inches of water)
		Design	Actual	lb/hr	Method of Determination	lb/hr	Method of Determination	
BB17	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB18	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB19	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10
BB20	PM/PM ₁₀ / PM _{2.5}	99.9	99.9	86.0/43.0	Mass Balance	0.086/0.043	Proposed BACT limit	0-10

- 1 PM outlet emissions as calculated based on proposed BACT limits as in Attachment C.
- 2 PM inlet emissions calculated by dividing outlet emissions by 0.001 to represent a 99.9% control efficiency.
- 3 SO₂ inlet emissions calculated by dividing outlet emissions by 0.05 to represent a 95% control efficiency.

Facility Name: Carbo Ceramics, Inc.Date of Application: August 10, 2011; Updated October 18, 2011**FORM 3.01 – SCRUBBERS**

APCD Unit ID	Scrubber Type	Materials of Construction (Plastic, 1040 steel, etc.)	Scrubbant	pH Range	Pressure Drop Range (inches of H ₂ O)	Minimum Scrubbant Flow Rate (Gal/min)	Is Scrubbant Recirculated?	Minimum Makeup Rate (Gal/min)	Size of Pond or Holding Tank (Acre-ft or gal)
SC01	Spray Tower + Venturi	FRP, AL6XN	NaOH soln.	TBD based on the initial performance test			TBD at time of purchase contract execution		
SC02	Spray Tower + Venturi	FRP, AL6XN	NaOH soln.	TBD based on the initial performance test			TBD at time of purchase contract execution		
SC03	Spray Tower + Venturi	FRP, AL6XN	NaOH soln.	TBD based on the initial performance test			TBD at time of purchase contract execution		
SC04	Spray Tower + Venturi	FRP, AL6XN	NaOH soln.	TBD based on the initial performance test			TBD at time of purchase contract execution		
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Technical specifications are tentative; the project may be constructed with other equipment with similar specifications.

Facility Name: CARBO Ceramics, Inc.

Date of Application: _____

August 10, 2011; Updated October 18, 2011**FORM 3.02 – BAGHOUSES & OTHER FILTER COLLECTORS**

APCD ID	Filter Surface Area (ft ²)	No. of Bags	Inlet Gas Dew Point Temp. (°F)	Inlet Gas Temp. (°F)	Bag or Filter Material	Pressure Drop (inches of water)	Cleaning Method	Gas Cooling Method	Leak Detection System Type
SB01	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB02	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB03	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB04	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB05	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB06	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB07	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB08	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB09	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB10	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB11	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB12	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB13	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB14	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB15	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB16	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A

Technical specifications are tentative; the project may be constructed with other equipment with similar specifications.

Facility Name: CARBO Ceramics, Inc.

Date of Application: _____

August 10, 2011; Updated October 18, 2011**FORM 3.02 – BAGHOUSES & OTHER FILTER COLLECTORS**

APCD ID	Filter Surface Area (ft ²)	No. of Bags	Inlet Gas Dew Point Temp. (°F)	Inlet Gas Temp. (°F)	Bag or Filter Material	Pressure Drop (inches of water)	Cleaning Method	Gas Cooling Method	Leak Detection System Type
SB17	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB18	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB19	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB20	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB21	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB22	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB23	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB24	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB25	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB26	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB27	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB28	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB29	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB30	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB31	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A
SB32	4,726	289	72	210	TBD	10	Pulse jet	N/A	N/A

Technical specifications are tentative; the project may be constructed with other equipment with similar specifications.

Facility Name: CARBO Ceramics, Inc.

Date of Application: _____

August 10, 2011; Updated October 18, 2011**FORM 3.02 – BAGHOUSES & OTHER FILTER COLLECTORS**

APCD ID	Filter Surface Area (ft ²)	No. of Bags	Inlet Gas Dew Point Temp. (°F)	Inlet Gas Temp. (°F)	Bag or Filter Material	Pressure Drop (inches of water)	Cleaning Method	Gas Cooling Method	Leak Detection System Type
KB01	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB02	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB03	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB04	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB05	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB06	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB07	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB08	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB09	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB10	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB11	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB12	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB13	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB14	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB15	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A
KB16	4,974	304	72	425	TBD	10	Pulse jet	N/A	N/A

Technical specifications are tentative; the project may be constructed with other equipment with similar specifications.

Facility Name: CARBO Ceramics, Inc.

Date of Application: _____

August 10, 2011; Updated October 18, 2011**FORM 3.02 – BAGHOUSES & OTHER FILTER COLLECTORS**

APCD ID	Filter Surface Area (ft ²)	No. of Bags	Inlet Gas Dew Point Temp. (°F)	Inlet Gas Temp. (°F)	Bag or Filter Material	Pressure Drop (inches of water)	Cleaning Method	Gas Cooling Method	Leak Detection System Type
GPB1	4,189	256	72	80	TBD	10	Pulse jet	N/A	N/A
GPB2	4,189	256	72	80	TBD	10	Pulse jet	N/A	N/A
GPB3	4,189	256	72	80	TBD	10	Pulse jet	N/A	N/A
GPB4	4,189	256	72	80	TBD	10	Pulse jet	N/A	N/A
KNB1	1,473	90	72	150	TBD	10	Pulse jet	N/A	N/A
KNB2	1,473	90	72	150	TBD	10	Pulse jet	N/A	N/A
KNB3	1,473	90	72	150	TBD	10	Pulse jet	N/A	N/A
KNB4	1,473	90	72	150	TBD	10	Pulse jet	N/A	N/A
RBC1	916	56	72	80	TBD	10	Pulse Jet	N/A	N/A
RBC2	916	56	72	80	TBD	10	Pulse Jet	N/A	N/A
BB01	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB02	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB03	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB04	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB05	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A

Technical specifications are tentative; the project may be constructed with other equipment with similar specifications.

Facility Name: CARBO Ceramics, Inc.

Date of Application: _____

August 10, 2011; Updated October 18, 2011**FORM 3.02 – BAGHOUSES & OTHER FILTER COLLECTORS**

APCD ID	Filter Surface Area (ft ²)	No. of Bags	Inlet Gas Dew Point Temp. (°F)	Inlet Gas Temp. (°F)	Bag or Filter Material	Pressure Drop (inches of water)	Cleaning Method	Gas Cooling Method	Leak Detection System Type
BB06	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB07	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB08	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB09	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB10	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB11	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB12	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB13	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB14	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB15	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB16	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB17	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB18	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB19	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A
BB20	448	16	72	80	TBD	10	Pulse Jet	N/A	N/A

Technical specifications are tentative; the project may be constructed with other equipment with similar specifications.

Facility Name: CARBO Ceramics, Inc.

Date of Application:

August 10, 2011

FORM 4.00 – EMISSION INFORMATION

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
SD01	SB01, SB02, SB03, and SB04	S001	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.
SD01	SB01, SB02, SB03, and SB04	S001	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.
SD01	SB01, SB02, SB03, and SB04	S001	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD01	SB01, SB02, SB03, and SB04	S001	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.
SD01	SB01, SB02, SB03, and SB04	S001	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit
SD01	SB01, SB02, SB03, and SB04	S001	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit
SD01	SB01, SB02, SB03, and SB04	S001	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
SD02	SB05 SB06, SB07, and SB08	S002	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.
SD02	SB05 SB06, SB07, and SB08	S002	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.
SD02	SB05 SB06, SB07, and SB08	S002	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD02	SB05 SB06, SB07, and SB08	S002	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
SD02	SB05 SB06, SB07, and SB08	S002	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit
SD02	SB05 SB06, SB07, and SB08	S002	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit
SD02	SB05 SB06, SB07, and SB08	S002	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
SD03	SB9, SB10, SB11, and SB12	S012	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.
SD03	SB9, SB10, SB11, and SB12	S012	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.
SD03	SDB9, SDB10, SDB11, and SDB12	S012	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD03	SB9, SB10, SB11, and SB12	S012	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.
SD03	SB9, SB10, SB11, and SB12	S012	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit
SD03	SB9, SB10, SB11, and SB12	S012	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit
SD03	SB9, SB10, SB11, and SB12	S012	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
SD04	SB13, SB14, SB15, and SB16	S013	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
SD04	SB13, SB14, SB15, and SB16	S013	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.
SD04	SB13, SB14, SB15, and SB16	S013	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD04	SB13, SB14, SB15, and SB16	S013	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.
SD04	SB13, SB14, SB15, and SB16	S013	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit
SD04	SB13, SB14, SB15, and SB16	S013	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit
SD04	SB13, SB14, SB15, and SB16	S013	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
SD05	SB17, SB18, SB19, and SB20	S022	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.
SD05	SB17, SB18, SB19, and SB20	S022	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.
SD05	SB17, SB18, SB19, and SB20	S022	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD05	SB17, SB18, SB19, and SB20	S022	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.
SD05	SB17, SB18, SB19, and SB20	S022	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
SD05	SB17, SB18, SB19, and SB20	S022	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit
SD05	SB17, SB18, SB19, and SB20	S022	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
SD06	SB21, SB22, SB23, and SB24	S023	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.
SD06	SB21, SB22, SB23, and SB24	S023	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.
SD06	SB21, SB22, SB23, and SB24	S023	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD06	SB21, SB22, SB23, and SB24	S023	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.
SD06	SB21, SB22, SB23, and SB24	S023	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit
SD06	SB21, SB22, SB23, and SB24	S023	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit
SD06	SB21, SB22, SB23, and SB24	S023	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
SD07	SB25, SB26, SB27, and SB28	S033	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.
SD07	SB25, SB26, SB27, and SB28	S033	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
SD07	SB25, SB26, SB27, and SB28	S033	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD07	SB25, SB26, SB27, and SB28	S033	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.
SD07	SB25, SB26, SB27, and SB28	S033	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit
SD07	SB25, SB26, SB27, and SB28	S033	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit
SD07	SB25, SB26, SB27, and SB28	S033	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
SD08	SB29, SB30, SB31, and SB32	S034	PM/PM ₁₀ PM _{2.5}	4.54 1.70	4.54 1.70	19.9 7.45	19.9 7.45	Calculated based on Proposed Grain Loading BACT limit.
SD08	SB29, SB30, SB31, and SB32	S034	NO _x	8.30	8.30	36.4	36.4	Proposed BACT limit.
SD08	SB29, SB30, SB31, and SB32	S034	CO	16.6	16.6	72.7	72.7	Proposed BACT limit.
SD08	SB29, SB30, SB31, and SB32	S034	SO ₂	0.5	0.5	2.19	2.19	Maximum estimated emissions from facility data.
SD08	SB29, SB30, SB31, and SB32	S034	VOC	1.56	1.56	6.83	6.83	AP-42 Factors and proposed methanol MACT limit
SD08	SB29, SB30, SB31, and SB32	S034	Combined HAP	1.23	1.23	5.40	5.40	AP-42 Factors and proposed methanol MACT limit

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
SD08	SB29, SB30, SB31, and SB32	S034	GHG	6,566	6,566	28,760	28,760	AP-42 Factors
KLN1	KB01, KB02, KB03, KB04, SC01	S005	PM/PM ₁₀ PM _{2.5}	2.76 2.76	2.76 2.76	12.1 12.1	12.1 12.1	Calculated based on Proposed Grain Loading BACT limit.
KLN1	KB01, KB02, KB03, KB04, SC01	S005	NO _x	121	121	530	530	Proposed BACT limit.
KLN1	KB01, KB02, KB03, KB04, SC01	S005	CO	24.7	24.7	108	108	Proposed BACT limit.
KLN1	KB01, KB02, KB03, KB04, SC01	S005	SO ₂	34.3	34.3	150	150	Proposed BACT limit.
KLN1	KB01, KB02, KB03, KB04, SC01	S005	VOC	0.525	0.525	2.30	2.30	AP-42 Factors
KLN1	KB01, KB02, KB03, KB04, SC01	S005	Combined HAP	10.7	10.7	47.1	47.1	AP-42 Factors and proposed HCL and HF MACT limits
KLN1	KB01, KB02, KB03, KB04, SC01	S005	GHG	8,382	8,382	36,715	36,715	AP-42 Factors
KLN1	KB01, KB02, KB03, KB04, SC01	S005	H ₂ SO ₄	0.390	0.390	1.71	1.71	Proposed PSD Avoidance Limit
KLN2	KB05, KB06, KB07, KBH8, and SC02	S016	PM/PM ₁₀ PM _{2.5}	2.76 2.76	2.76 2.76	12.1 12.1	12.1 12.1	Calculated based on Proposed Grain Loading BACT limit.
KLN2	KB05, KB06, KB07, KBH8, and SC02	S016	NO _x	121	121	530	530	Proposed BACT limit.

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
KLN2	KB05, KB06, KB07, KB08, and SC02	S016	CO	24.7	24.7	108	108	Proposed BACT limit.
KLN2	KB05, KB06, KB07, KB08, and SC02	S016	SO ₂	34.3	34.3	150	150	Proposed BACT limit.
KLN2	KB05, KB06, KB07, KB08, and SC02	S016	VOC	0.525	0.525	2.30	2.30	AP-42 Factors
KLN2	KB05, KB06, KB07, KB08, and SC02	S016	Combined HAP	10.7	10.7	47.1	47.1	AP-42 Factors and proposed HCL and HF MACT limits
KLN2	KB05, KB06, KB07, KB08, and SC02	S016	GHG	8,382	8,382	36,715	36,715	AP-42 Factors
KLN2	KB05, KB06, KB07, KB08, and SC02	S016	H ₂ SO ₄	0.390	0.390	1.71	1.71	Proposed PSD Avoidance Limit
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	PM/PM ₁₀ PM _{2.5}	2.76 2.76	2.76 2.76	12.1 12.1	12.1 12.1	Calculated based on Proposed Grain Loading BACT limit.
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	NO _x	121	121	530	530	Proposed BACT limit.
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	CO	24.7	24.7	108	108	Proposed BACT limit.
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	SO ₂	34.3	34.3	150	150	Proposed BACT limit.
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	VOC	0.525	0.525	2.30	2.30	AP-42 Factors

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	Combined HAP	10.7	10.7	47.1	47.1	AP-42 Factors and proposed HCL and HF MACT limits
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	GHG	8,382	8,382	36,715	36,715	AP-42 Factors
KLN3	KB09, KB10 KB11, KB12, and SC03	S026	H ₂ SO ₄	0.390	0.390	1.71	1.71	Proposed PSD Avoidance Limit
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	NO _x	121	121	530	530	Proposed BACT limit.
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	CO	24.7	24.7	108	108	Proposed BACT limit.
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	SO ₂	34.3	34.3	150	150	Proposed BACT limit.
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	PM/PM ₁₀ PM _{2.5}	2.76 2.76	2.76 2.76	12.1 12.1	12.1 12.1	Calculated based on Proposed Grain Loading BACT limit.
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	VOC	0.525	0.525	2.30	2.30	AP-42 Factors
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	Combined HAP	10.7	10.7	47.1	47.1	AP-42 Factors and proposed HCL and HF MACT limits
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	GHG	8,382	8,382	36,715	36,715	AP-42 Factors
KLN4	KB13, KB14 KB15, KB16, and SC04	S037	H ₂ SO ₄	0.390	0.390	1.71	1.71	Proposed PSD Avoidance Limit

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
BLR1	None	B001	PM/PM ₁₀ PM _{2.5}	0.075 0.075	0.075 0.075	0.328 0.328	0.328 0.328	AP-42 Factors
BLR1	None	B001	NO _x	0.140	0.140	0.613	0.613	Proposed BACT limit.
BLR1	None	B001	CO	0.807	0.807	3.53	3.53	AP-42 Factors
BLR1	None	B001	SO ₂	0.006	0.006	0.025	0.025	AP-42 Factors
BLR1	None	B001	VOC	0.086	0.086	0.375	0.375	AP-42 Factors
BLR1	None	B001	Combined HAP	0.018	0.018	0.079	0.079	AP-42 Factors
BLR1	None	B001	GHG	1,369	1,369	5,997	5,997	AP-42 Factors
BLR2	None	B002	PM/PM ₁₀ PM _{2.5}	0.075 0.075	0.075 0.075	0.328 0.328	0.328 0.328	AP-42 Factors
BLR2	None	B002	NO _x	0.140	0.140	0.613	0.613	Proposed BACT limit.
BLR2	None	B002	CO	0.807	0.807	3.53	3.53	AP-42 Factors
BLR2	None	B002	SO ₂	0.006	0.006	0.025	0.025	AP-42 Factors
BLR2	None	B002	VOC	0.086	0.086	0.375	0.375	AP-42 Factors
BLR2	None	B002	Combined HAP	0.018	0.018	0.079	0.079	AP-42 Factors
BLR2	None	B002	GHG	1,369	1,369	5,997	5,997	AP-42 Factors
BLR3	None	B003	PM/PM ₁₀ PM _{2.5}	0.075 0.075	0.075 0.075	0.328 0.328	0.328 0.328	AP-42 Factors
BLR3	None	B003	NO _x	0.140	0.140	0.613	0.613	Proposed BACT limit.
BLR3	None	B003	CO	0.807	0.807	3.53	3.53	AP-42 Factors
BLR3	None	B003	SO ₂	0.006	0.006	0.025	0.025	AP-42 Factors
BLR3	None	B003	VOC	0.086	0.086	0.375	0.375	AP-42 Factors
BLR3	None	B003	Combined HAP	0.018	0.018	0.079	0.079	AP-42 Factors

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
BLR3	None	B003	GHG	1,369	1,369	5,997	5,997	AP-42 Factors
BLR4	None	B004	PM/PM ₁₀ PM _{2.5}	0.075 0.075	0.075 0.075	0.328 0.328	0.328 0.328	AP-42 Factors
BLR4	None	B004	NO _x	0.140	0.140	0.613	0.613	Proposed BACT limit.
BLR4	None	B004	CO	0.807	0.807	3.53	3.53	AP-42 Factors
BLR4	None	B004	SO ₂	0.006	0.006	0.025	0.025	AP-42 Factors
BLR4	None	B004	VOC	0.086	0.086	0.375	0.375	AP-42 Factors
BLR4	None	B004	Combined HAP	0.018	0.018	0.079	0.079	AP-42 Factors
BLR4	None	B004	GHG	1,369	1,369	5,997	5,997	AP-42 Factors
EDG1	None	E001	PM/PM ₁₀ PM _{2.5}	0.371 0.371	0.371 0.371	0.093 0.093 (500 hours)	0.093 0.093 (500 hours)	Proposed BACT limit.
EDG1	None	E001	NO _x	32.4	32.4	8.09 (500 hours)	8.09 (500 hours)	Proposed BACT limit.
EDG1	None	E001	CO	17.5	17.5	4.38 (500 hours)	4.38 (500 hours)	Proposed BACT limit.
EDG1	None	E001	SO ₂	0.031	0.031	0.008 (500 hours)	0.008 (500 hours)	Proposed BACT limit.
EDG1	None	E001	VOC	1.65	1.65	0.413 (500 hours)	0.413 (500 hours)	AP-42 Factors
EDG1	None	E001	Combined HAP	0.088	0.088	0.022 (500 hours)	0.022 (500 hours)	AP-42 Factors
EDG1	None	E001	GHG	3,376	3,376	844 (500 hours)	844 (500 hours)	AP-42 Factors
EDG2	None	E002	PM/PM ₁₀ PM _{2.5}	0.371 0.371	0.371 0.371	0.093 0.093 (500 hours)	0.093 0.093 (500 hours)	Calculated based on Proposed Grain Loading BACT limit.
EDG2	None	E002	NO _x	32.4	32.4	8.09 (500 hours)	8.09 (500 hours)	Proposed BACT limit.

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011**FORM 4.00 – EMISSION INFORMATION**

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
EDG2	None	E002	CO	17.5	17.5	4.38 (500 hours)	4.38 (500 hours)	Proposed BACT limit.
EDG2	None	E002	SO ₂	0.031	0.031	0.008 (500 hours)	0.008 (500 hours)	Proposed BACT limit.
EDG2	None	E002	VOC	1.65	1.65	0.413 (500 hours)	0.413 (500 hours)	AP-42 Factors
EDG2	None	E002	Combined HAP	0.088	0.088	0.022 (500 hours)	0.022 (500 hours)	AP-42 Factors
EDG2	None	E002	GHG	3,376	3,376	844 (500 hours)	844 (500 hours)	AP-42 Factors
EDG3	None	E003	PM/PM ₁₀ PM _{2.5}	0.371 0.371	0.371 0.371	0.093 0.093 (500 hours)	0.093 0.093 (500 hours)	Calculated based on Proposed Grain Loading BACT limit.
EDG3	None	E003	NO _x	32.4	32.4	8.09 (500 hours)	8.09 (500 hours)	Proposed BACT limit.
EDG3	None	E003	CO	17.5	17.5	4.38 (500 hours)	4.38 (500 hours)	Proposed BACT limit.
EDG3	None	E003	SO ₂	0.031	0.031	0.008 (500 hours)	0.008 (500 hours)	Proposed BACT limit.
EDG3	None	E003	VOC	1.65	1.65	0.413 (500 hours)	0.413 (500 hours)	AP-42 Factors
EDG3	None	E003	Combined HAP	0.088	0.088	0.022 (500 hours)	0.022 (500 hours)	AP-42 Factors
EDG3	None	E003	GHG	3,376	3,376	844 (500 hours)	844 (500 hours)	AP-42 Factors
EDG4	None	E004	PM/PM ₁₀ PM _{2.5}	0.371 0.371	0.371 0.371	0.093 0.093 (500 hours)	0.093 0.093 (500 hours)	Calculated based on Proposed Grain Loading BACT limit.
EDG4	None	E004	NO _x	32.4	32.4	8.09 (500 hours)	8.09 (500 hours)	Proposed BACT limit.
EDG4	None	E004	CO	17.5	17.5	4.38 (500 hours)	4.38 (500 hours)	Proposed BACT limit.

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Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
EDG4	None	E004	SO ₂	0.031	0.031	0.008 (500 hours)	0.008 (500 hours)	Proposed BACT limit.
EDG4	None	E004	VOC	1.65	1.65	0.413 (500 hours)	0.413 (500 hours)	AP-42 Factors
EDG4	None	E004	Combined HAP	0.088	0.088	0.022 (500 hours)	0.022 (500 hours)	AP-42 Factors
EDG4	None	E004	GHG	3,376	3,376	844 (500 hours)	844 (500 hours)	AP-42 Factors
GP01	GPB1	S003	PM/PM ₁₀ PM _{2.5}	1.63 0.814	1.63 0.814	7.13 3.57	7.13 3.57	Calculated based on Proposed Grain Loading BACT limit.
GP02	GPB2	S014	PM/PM ₁₀ PM _{2.5}	1.63 0.814	1.63 0.814	7.13 3.57	7.13 3.57	Calculated based on Proposed Grain Loading BACT limit.
GP03	GPB3	S024	PM/PM ₁₀ PM _{2.5}	1.63 0.814	1.63 0.814	7.13 3.57	7.13 3.57	Calculated based on Proposed Grain Loading BACT limit.
GP04	GPB4	S035	PM/PM ₁₀ PM _{2.5}	1.63 0.814	1.63 0.814	7.13 3.57	7.13 3.57	Calculated based on Proposed Grain Loading BACT limit.
KAE1	KNB1	S006	PM/PM ₁₀ PM _{2.5}	0.129 0.064	0.129 0.064	0.563 0.282	0.563 0.282	Calculated based on Proposed Grain Loading BACT limit.
KAE2	KNB2	S017	PM/PM ₁₀ PM _{2.5}	0.129 0.064	0.129 0.064	0.563 0.282	0.563 0.282	Calculated based on Proposed Grain Loading BACT limit.
KAE3	KNB3	S027	PM/PM ₁₀ PM _{2.5}	0.129 0.064	0.129 0.064	0.563 0.282	0.563 0.282	Calculated based on Proposed Grain Loading BACT limit.
KAE4	KNB4	S038	PM/PM ₁₀ PM _{2.5}	0.129 0.064	0.129 0.064	0.563 0.282	0.563 0.282	Calculated based on Proposed Grain Loading BACT limit.

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Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
RRL1	RCB1	S011	PM/PM ₁₀ PM _{2.5}	0.300 0.150	0.300 0.150	1.314 0.657	1.314 0.657	Calculated based on Proposed Grain Loading BACT limit.
RRL2	RCB2	S032	PM/PM ₁₀ PM _{2.5}	0.300 0.150	0.300 0.150	1.314 0.657	1.314 0.657	Calculated based on Proposed Grain Loading BACT limit.
BS01	BB01	S007	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS02	BB02	S008	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS03	BB03	S009	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS04	BB04	S010	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS05	BB05	S018	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS06	BB06	S019	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS07	BB07	S020	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS08	BB08	S021	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS09	BB09	S028	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011

FORM 4.00 – EMISSION INFORMATION

Emission Unit /Emission Group ID ¹	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
BS10	BB10	S029	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS11	BB11	S030	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS12	BB12	S031	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS13	BB13	S039	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS14	BB14	S040	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS15	BB15	S041	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.
BS16	BB16	S042	PM/PM ₁₀ PM _{2.5}	0.086 0.043	0.086 0.043	0.375 0.188	0.375 0.188	Calculated based on Proposed Grain Loading BACT limit.

- 1 Actual hourly emission rates are considered equal to potential hourly emission rates. Hourly rates are determined by dividing annual actual emissions by 8,760 hours/year.
- 2 Hourly PM emission rates are estimated based on grain loading limits proposed as BACT.

**Facility
Name:**

CARBO Ceramics, Inc

Date of Application:

August 10,
2011

FORM 5.00 MONITORING INFORMATION

APCD ID	APCD Name	Monitored Parameter		Monitoring Frequency
		Parameter	Units	
SB01	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB02	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB03	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB04	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB05	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB06	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB07	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB08	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB09	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB10	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB11	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB12	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB13	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB14	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB15	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB16	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB17	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB18	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB19	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB20	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB21	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB22	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB23	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB24	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous

Comments:

**Facility
Name:**

CARBO Ceramics, Inc

Date of Application:

August 10,
2011

FORM 5.00 MONITORING INFORMATION

APCD ID	APCD Name	Monitored Parameter		Monitoring Frequency
		Parameter	Units	
SB25	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB26	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB27	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB28	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB29	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB30	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB31	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
SB32	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB01	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB02	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB03	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB04	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB05	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB06	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB07	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB08	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB09	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB10	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB11	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB12	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB13	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB14	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB15	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous
KB16	Baghouse	Opacity/ Temperature	% Opacity/ °F	COMS/ Continuous

Comments:

**Facility
Name:**

CARBO Ceramics, Inc

Date of Application:

August 10,
2011

FORM 5.00 MONITORING INFORMATION

APCD ID	APCD Name	Monitored Parameter		Monitoring Frequency
		Parameter	Units	
GPB1	Baghouse	Visible Emissions	% Opacity	Daily
GPB2	Baghouse	Visible Emissions	% Opacity	Daily
GPB3	Baghouse	Visible Emissions	% Opacity	Daily
GPB4	Baghouse	Visible Emissions	% Opacity	Daily
KNB1	Baghouse	Visible Emissions/ Temperature	% Opacity/ °F	Daily/ Continuous
KNB2	Baghouse	Visible Emissions/ Temperature	% Opacity/ °F	Daily/ Continuous
KNB3	Baghouse	Visible Emissions/ Temperature	% Opacity/ °F	Daily/ Continuous
KNB4	Baghouse	Visible Emissions/ Temperature	% Opacity/ °F	Daily/ Continuous
SC01	Wet Scrubber	Flow rate	gal/min	Continuous
SC01	Wet Scrubber	Pressure drop	in. water	Continuous
SC02	Wet Scrubber	Flow rate	gal/min	Continuous
SC02	Wet Scrubber	Pressure drop	in. water	Continuous
SC03	Wet Scrubber	Flow rate	gal/min	Continuous
SC03	Wet Scrubber	Pressure drop	in. water	Continuous
SC04	Wet Scrubber	Flow rate	gal/min	Continuous
SC04	Wet Scrubber	Pressure drop	in. water	Continuous
RCB1	Baghouse	Visible Emissions	% Opacity	Daily
RCB2	Baghouse	Visible Emissions	% Opacity	Daily

Comments:

The baghouses for the calciner systems, KNB1 – KNB4, will monitor inlet gas temperature to the baghouse for periodic monitoring.

Facility Name: CARBO Ceramics, Inc.Date of Application: August 10, 2011;
Updated October 18, 2011**FORM 7.00 – AIR MODELING INFORMATION: Stack Data**

Stack ID	Emission Unit ID(s)	Stack Information			Dimensions of largest Structure Near Stack		Exit Gas Conditions at Maximum Emission Rate			
		Height Above Grade (ft)	Inside Diameter (ft)	Exhaust Direction	Height (ft)	Longest Side (ft)	Velocity (ft/sec)	Temperature (°F)	Flow Rate ⁽²⁾ (acfm)	
									Average	Maximum
S001	SD01	180	3	UP	TBD	TBD	108.46	206	46000	46000
S002	SD02	180	3	UP	TBD	TBD	108.46	206	46000	46000
S003	GP01	160	2.3	UP	TBD	TBD	85.75	80	22000	22000
S005	KLN1/ SC01	245	4	UP	TBD	TBD	83.56	160	63000	63000
S006	KAE1	125	1.58	UP	TBD	TBD	16.93	150	2000	2000
S007	BS01	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S008	BS02	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S009	BS03	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S010	BS04	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S011	RRL1	65	1.17	UP	TBD	TBD	33.01	80	3500	3500
S012	SD03	180	3	UP	TBD	TBD	108.46	206	46000	46000
S013	SD04	180	3	UP	TBD	TBD	108.46	206	46000	46000

NOTE: If emissions are not vented through a stack, describe point of discharge below and, if necessary, include an attachment. List the attachment in Form 1.00 *General Information*, Item 16.

Facility Name: CARBO Ceramics, Inc.

Date of Application:

August 10, 2011;
Updated October 18, 2011

FORM 7.00 – AIR MODELING INFORMATION: Stack Data

Stack ID	Emission Unit ID(s)	Stack Information			Dimensions of largest Structure Near Stack		Exit Gas Conditions at Maximum Emission Rate			
		Height Above Grade (ft)	Inside Diameter (ft)	Exhaust Direction	Height (ft)	Longest Side (ft)	Velocity (ft/sec)	Temperature (°F)	Flow Rate ⁽²⁾ (acfm)	
									Average	Maximum
S014	GP02	160	2.3	UP	TBD	TBD	85.75	80	22000	22000
S016	KLN2/SC02	245	4	UP	TBD	TBD	83.56	160	63000	63000
S017	KAE2	125	1.58	UP	TBD	TBD	16.93	150	2000	2000
S018	BS05	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S019	BS06	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S020	BS07	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S021	BS08	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S022	SD05	180	3	UP	TBD	TBD	108.46	206	46000	46000
S023	SD06	180	3	UP	TBD	TBD	108.46	206	46000	46000
S024	GP03	160	2.3	UP	TBD	TBD	85.75	80	22000	22000
S026	KLN3/SC03	245	4	UP	TBD	TBD	83.56	160	63000	63000

NOTE: If emissions are not vented through a stack, describe point of discharge below and, if necessary, include an attachment. List the attachment in Form 1.00 *General Information*, Item 16.

Facility Name: CARBO Ceramics, Inc.

Date of Application:

August 10, 2011;
Updated October 18, 2011

FORM 7.00 – AIR MODELING INFORMATION: Stack Data

Stack ID	Emission Unit ID(s)	Stack Information			Dimensions of largest Structure Near Stack		Exit Gas Conditions at Maximum Emission Rate			
		Height Above Grade (ft)	Inside Diameter (ft)	Exhaust Direction	Height (ft)	Longest Side (ft)	Velocity (ft/sec)	Temperature (°F)	Flow Rate ⁽²⁾ (acfm)	
									Average	Maximum
S027	KAE3	125	1.58	UP	TBD	TBD	16.93	150	2000	2000
S028	BS09	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S029	BS10	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S030	BS11	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S031	BS12	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S032	RRL2	65	1.17	UP	TBD	TBD	54.74	80	3500	3500
S033	SD07	180	3	UP	TBD	TBD	108.46	206	46000	46000
S034	SD08	180	3	UP	TBD	TBD	108.46	206	46000	46000
S035	GP04	160	2.3	UP	TBD	TBD	85.75	80	22000	22000
S037	KLN4/ SC04	245	4	UP	TBD	TBD	83.56	160	63000	63000
S038	KAE4	125	1.58	UP	TBD	TBD	16.93	150	2000	2000
S039	BS13	116	1.7	UP	TBD	TBD	7.64	80	1000	1000

NOTE: If emissions are not vented through a stack, describe point of discharge below and, if necessary, include an attachment. List the attachment in Form 1.00 *General Information*, Item 16.

Facility Name: CARBO Ceramics, Inc.

Date of Application:

August 10, 2011;
Updated October 18, 2011

FORM 7.00 – AIR MODELING INFORMATION: Stack Data

Stack ID	Emission Unit ID(s)	Stack Information			Dimensions of largest Structure Near Stack		Exit Gas Conditions at Maximum Emission Rate			
		Height Above Grade (ft)	Inside Diameter (ft)	Exhaust Direction	Height (ft)	Longest Side (ft)	Velocity (ft/sec)	Temperature (°F)	Flow Rate ⁽²⁾ (acfm)	
									Average	Maximum
S040	BS14	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S041	BS15	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S042	BS16	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
B001	BLR1	29	1.5	UP	TBD	TBD	23.58	380	2500	2500
B002	BLR2	29	1.5	UP	TBD	TBD	23.58	380	2500	2500
B003	BLR3	29	1.5	UP	TBD	TBD	23.58	380	2500	2500
B004	BLR4	29	1.5	UP	TBD	TBD	23.58	380	2500	2500
S043	BS17	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S044	BS18	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S045	BS19	116	1.7	UP	TBD	TBD	7.64	80	1000	1000
S046	BS20	116	1.7	UP	TBD	TBD	7.64	80	1000	1000

NOTE: If emissions are not vented through a stack, describe point of discharge below and, if necessary, include an attachment. List the attachment in Form 1.00 *General Information*, Item 16.

Facility Name: CARBO Ceramics, Inc.

Date of Application: August 10, 2011;
Updated October 18, 2011

FORM 7.00 AIR MODELING INFORMATION: Chemicals Data

Chemical	Potential Emission Rate (lb/hr)	Toxicity	Reference	MSDS Attached
				☐
Hexane (CAS No. 2493-44-9)	1.16	700 ug/m ³ (annual)	IRIS RfC	☐
Methanol (CAS No. 67-56-1)	9.18	625 ug/m ³ (24-hr)	OSHA TWA	☐
		32,760 ug/m ³ (15-min)	ACGIH STEL	☐
Ammonia (CAS No. 7664-41-7)	308.2	100 ug/m ³ (annual)	IRIS RfC	☐
		2,440 ug/m ³ (15-min)	ACGIH STEL	☐
Hydrogen Fluoride (CAS No. 7664-39-3)	35.2	14 ug/m ³ (annual)	CARB REL	☐
		165 ug/m ³ (15-min)	ACGIH STEL	☐
Hydrogen Chloride (CAS No. 7647-61-0)	7.95	20 ug/m ³ (annual)	IRIS RfC	☐
		745 ug/m ³ (15-min)	OSHA	☐
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