

West Virginia Department of Environmental Protection

Harold D. Ward

Cabinet Secretary

Permit to Operate



Pursuant to

Title V

of the Clean Air Act

Issued to:

Continental Brick Company

Martinsburg Facility/Martinsburg, WV

R30-00300002-2024

Laura M. Crowder

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Director, Division of Air Quality

Issued: December 10, 2024 • Effective: December 24, 2024
Expiration: December 10, 2029 • Renewal Application Due: June 10, 2029

Permit Number: **R30-00300002-2024**
Permittee: **Continental Brick Company**
Facility Name: **Martinsburg Facility**
Permittee Mailing Address: **154 Charles Town Road, Martinsburg, WV 25405**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Martinsburg, Berkeley County, West Virginia
Facility Mailing Address:	Same as above
Telephone Number:	(304) 263-6974
Type of Business Entity:	Corporation
Facility Description:	The Martinsburg Facility is a face brick manufacturing operation which includes quarry to final brick production and storage.
SIC Code:	Primary 3251
UTM Coordinates:	245.4 km Easting • 4,368.7 km Northing • Zone 18

Permit Writer: Nikki B. Moats

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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APPENDIX A-45CSR10 Monitoring Plan

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device ¹
Raw Feed, Grinding Building, and Plant Feed System					
001	1S	Open Stockpile No. 1 – OS1	1981	75 tph/153,300 tpy	W
002	2S	Truck-Endloader Fed Bin – B1	1981	75 tph/153,300 tpy	FE
003	3S	Chain Conveyor No. 1 – CC1	1981	75 tph/153,300 tpy	FE
004	4S	Belt Conveyor No. 1 – BC1	1981	75 tph/153,300 tpy	FE
005	5S	Belt Conveyor No. 2 – BC2	1981	75 tph/153,300 tpy	FE
006	6S	Crusher No. 1 – CR1	2006	75 tph/153,300 tpy	FE
007	7S	Belt Conveyor No. 3 – BC3	1981	75 tph/153,300 tpy	FE
008	8S	Screen No. 1 – SC1	1981	75 tph/153,300 tpy	FE
009	9S	Screen No. 2 – SC2	1981	75 tph/153,300 tpy	FE
010	10S	Screen No. 3 – SC3	1981	75 tph/153,300 tpy	FE
011	11S	Screen No. 4 – SC4	1981	75 tph/153,300 tpy	FE
012	12S	Belt Conveyor No. 4 – BC4	1981	75 tph/153,300 tpy	FE
013	13S	Belt Conveyor No. 5 – BC5	1981	75 tph/153,300 tpy	FE
014	14S	Belt Conveyor No. 6 – BC6	1981	75 tph/153,300 tpy	FE
015	15S	Belt Conveyor No. 7 – BC7	1981	75 tph/153,300 tpy	FE
016	16S	Belt Conveyor No. 8 – BC8	1981	75 tph/153,300 tpy	FE
017	17S	Belt Conveyor No. 9 – BC9	1981	75 tph/153,300 tpy	FE
018	18S	Covered Stockpile – CS1	1981	1,600 tons	FE
019	19S	Drag Conveyor No. 1 – DC1	1981	75 tph/153,300 tpy	FE
020	20S	Belt Conveyor No. 10 – BC10	1981	75 tph/153,300 tpy	FE
021	21S	Belt Conveyor No. 11 – BC11	1981	75 tph/153,300 tpy	FE
022	22S	Plant Bin - B2	1981	75 tph/153,300 tpy	FE
023	23S	Belt Conveyor No. 12 – BC12	1981	75 tph/153,300 tpy	FE
024	24S	Belt Conveyor No. 13 – BC13	1981	75 tph/153,300 tpy	FE

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device ¹
Brick Forming					
025	25S	Pug Mill	1970	75 tph/153,300 tpy	FE (Located inside building)
		Vacuum Extruder	1970	75 tph/153,300 tpy	
		Brick Trimming and Cutting	1970	75 tph/153,300 tpy	
		Brick Setting Machine	1999	75 tph/153,300 tpy	
		Sand Hopper – B3	1970	75 tph/153,300 tpy	
		Sand Hopper – B4	1970	75 tph/153,300 tpy	
		Sand Screw Conveyor - SSC	1970	75 tph/153,300 tpy	
Brick Warming, Drying, and Firing					
NA	NA	Warming Room	1966	NA	NA
026	K1E	Kiln No. 1	1966	8.25 tph fired/72,270 tpy fired	NA
	D11E	Dryer No. 1	1966	NA	NA
	D12E	Dryer No. 2	1966	NA	NA
027	K2E	Kiln No. 2	1971/1983	8.25 tph fired/72,270 tpy fired	NA
	D21E	Dryer No. 3	1971/1983	NA	NA
	D22E	Dryer No. 4	1971/1983	NA	NA
P-Kiln	P-K3E	Periodic Kiln	2010	1 tpd fired/72 tpy fired	NA
RSD	RSD	Rotary Sand Dryer	2013	1.0 tph and 1.0 MMBtu/hr	NA
Coal Handling, Grinding and Firing System					
028	28S	Covered Stockpile No. 2 – CS2	1984	500 tons	PE
029	29S	Coal Bin No. 1 – CB1	1984	30 tons	PE
030	30S	Coal Belt Conveyor No. 1 – CBC1	1984	100 tph/13,140 tpy	PE
031	31S	Coal Bin No. 2 – CB2	1984	12 tons	FE
032	32S	Coal Grinder/Pulverizer - CG	1984	1.5 tph/13,140 tpy	BAG

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device ¹
033	33S	Dense Phase Pump System - DPPS	1984	1.5 tph/13,140 tpy	BAG
034	34S	Coal Screw Conveyor No. 1 – CSC1	1984	1.5 tph/13,140 tpy	FE
035	35S	Coal Screw Conveyor No. 2 – CSC2	1984	1.5 tph/13,140 tpy	FE
036	36S	Coal Screw Conveyor No. 3 – CSC3	1984	1.5 tph/13,140 tpy	FE
Finished Brick Area					
NA	SM	Brick Cube Strapping Machine	1991	50 tph/144,540 tpy	NA
NA	WBC1	Waste Belt Conveyor No. 1	1991	50 tph/144,540 tpy	NA
NA	WBC2	Waste Belt Conveyor No. 2	1991	50 tph/144,540 tpy	NA
NA	VAC	Duovac PL52 Portable Vacuum	1991	850 ICFM	NA
Sand Dryer					
037	37S	Sand Dryer	NA	5 MM Btu/hr	NA
038	38S	Sand Stockpile – OS2	NA	150 tons	W
039	39S	Covered Sand Stockpile – CS3	NA	200 tons	PE
Vehicle Activity					
041	41S	Vehicle Activity	NA	NA	W
Tanks					
042	42S	Brick Oil Tank – TK1	NA	6,000 gallons	NA
043	43S	Fuel Tank – TK2	NA	6,000 gallons	NA
Veneer Saw					
NA ²	NA	ThinStone TXS-2600 Whisper Veneer Saw	2016	10 GPM of water at 40 psi	NA

¹W=Water Truck, FE=Full Enclosure, PE=Partial Enclosure, BAG=Baghouse

²No Operating Emissions

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-0682B	April 4, 2014

2.0 General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NSPS	New Source Performance
CBI	Confidential Business Information		Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM₁₀	Particulate Matter less than 10µm in diameter
C.F.R. or CFR	Code of Federal Regulations		
CO	Carbon Monoxide	pph	Pounds per Hour
C.S.R. or CSR	Codes of State Rules	ppm	Parts per Million
DAQ	Division of Air Quality	PSD	Prevention of Significant Deterioration
DEP	Department of Environmental Protection	psi	Pounds per Square Inch
FOIA	Freedom of Information Act	SIC	Standard Industrial Classification
HAP	Hazardous Air Pollutant		
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr or lb/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
m	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
		USEPA	United States Environmental Protection Agency
mm	Million		
mmBtu/hr	Million British Thermal Units per Hour	UTM	Universal Transverse Mercator
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour	VEE	Visual Emissions Evaluation
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards	VOC	Volatile Organic Compounds
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
 - a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
 - c. The change shall not qualify for the permit shield.
 - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.
- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
 - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
 - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Reserved

2.18. Federally-Enforceable Requirements

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
- [45CSR§30-5.2.a.]
- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

- 2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
- [45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

- 2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

- 2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

- 2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

- 2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B.]

2.23. Severability

- 2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

- 2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.

[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.
- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
 - b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
 - c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1 Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(15)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

- 3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

[40 C.F.R. 68]

- 3.1.9. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

[45CSR§7-5.1.]

- 3.1.10. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

[45CSR§7-5.2.]

3.2. Monitoring Requirements

- 3.2.1. Reserved.

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements

which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.

- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(15-16) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.; 45CSR13, R13-0682 (Condition 4.3.1)]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]
- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]
- 3.4.4. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility. The permittee shall also inspect all fugitive dust control systems monthly to ensure that they are operated and maintained in conformance with their designs. The permittee shall maintain records of all scheduled and non-scheduled maintenance and shall state any maintenance or corrective actions taken as a result of the monthly inspections, the times the fugitive dust control system(s) were inoperable and any corrective actions taken.
[45CSR§30-5.1.c.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. and 5.1.c.3.D.]
- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]
- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE

US EPA:

Section Chief
U. S. Environmental Protection Agency, Region III
Enforcement and Compliance Assurance Division
Air, RCRA and Toxics Branch (3ED21)

Charleston, WV 25304 Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

- 3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 45CSR§30-8.
[45CSR§30-8.]

- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:
DEPAirQualityReports@wv.gov

US EPA:
R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

- 3.5.7. **Reserved.**

- 3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
1. Reserved.
 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or email. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective

actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

- 3.6.1. None.

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.
 - a. 45CSR5—The coal handling operations are regulated by 45CSR7 and therefore are exempt in accordance with 45CSR§§5-2.5.2. & 2.14.
 - b. 45CSR17—The facility is regulated by 45CSR7 and therefore exempt in accordance with 45CSR§7-10.2 and 45CSR§17-6.
 - c. 40 CFR Part 60, Subpart Y—The coal handling facility processes less than 200 tons per day.
 - d. 40 CFR Part 60, Subpart OOO—Excluding existing Crusher No. 1, all the other shale processing equipment known as the grinding building commenced construction prior to August 31, 1983 and have not been reconstructed or modified. Crusher No.1 was replaced with a crusher of equal size in 2006, therefore in accordance with 40 CFR §60.670(d)(1) it is exempt from the provisions of 40 CFR§§60.672, 60.674, and 60.675.

- e. 40 C.F.R. Part 64—There are no pollutant specific emissions units (PSEU) at this facility that satisfy all of the applicability criteria requirements of 40 CFR §64.2(a), i.e., that: 1) have pre-control device regulated pollutant potential emissions (PTE) equal to or greater than the “major” threshold limits to be classified as a major source; 2) are subject to an emission limitation or standard and; 3) have a control device to achieve compliance with such emission limitation or standard. Therefore, the facility is not subject to the Compliance Assurance Monitoring (CAM) rule.

4.0 Kilns, Periodic Kiln, and Rotary Sand Dryer [emission point ID(s):K1E, K2E, P-K3E, and RSD]

4.1. Limitations and Standards

- 4.1.1. Visible Emissions from each kiln stack shall not exceed twenty (20) percent opacity except as noted in 4.1.2. below.
[45CSR§7-3.1.]
- 4.1.2. The provisions of 4.1.1. above, shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§7-3.2.]
- 4.1.3. The provisions of 45CSR7 shall not be circumvented by adding additional gas to any exhaust or group of exhausts for the purpose of reducing the stack gas concentration.
[45CSR§7-4.3.]
- 4.1.4. The increase of the operating process weight rate of any manufacturing process source operation or duplicate source operation by the operation of new, replacement, reactivated and/or altered source operation(s) shall be considered as an expansion and the allowable emission rates from the source operation(s) which resulted in the increase shall be determined as per 45CSR§7-4.4.
[45CSR§7-4.7.]
- 4.1.5. Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR§7-4.12.]
- 4.1.6. **Potential Hazardous Material Emissions**--Persons responsible for manufacturing process source operations from which hazardous particulate matter material may be emitted such as, but not limited to, lead, arsenic, beryllium and other such materials shall give the utmost care and consideration to the potential harmful effects of the emissions resulting from such activities. Evaluations of these facilities as to adequacy, efficiency and emission potential will be made on an individual basis by the Director working in conjunction with other appropriate governmental agencies.
[45CSR§7-4.13.]
- 4.1.7. Sulfur Dioxide emissions from each Kiln shall not exceed an in-stack concentration of 2000 ppm by volume.
[45CSR§10-4.1.]
- 4.1.8. Compliance with the allowable sulfur dioxide concentration limitations shall be based on a block three (3) hour averaging time.
[45CSR§10-4.2.]

4.1.9. Emissions from the kilns and rotary sand dryer shall not exceed the following:

	Tunnel Kiln 1 (K1E)		Tunnel Kiln 2 (K2E)		Periodic Kiln (P-K3E)		Rotary Sand Dryer (RSD)	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lbs/hr	tpy
PM	9.5	65.04	9.5	65.04	0.1	0.03	2.01	1.21
PM ₁₀	9.5	50.59	9.5	50.59	0.1	0.03	2	1.2
PM _{2.5}	7.18	31.44	7.18	31.44	0.1	0.03	2	1.2
SO ₂	13.93	61.07	13.93	61.07	1.34	0.02	0.01	0.01
NO _x	4.21	18.43	4.21	18.43	0.7	0.01	0.1	0.44
CO	9.9	43.36	9.9	43.36	2.4	0.04	0.09	0.37
VOC	0.2	0.87	0.2	0.87	0.05	0.01	0.01	0.03
Non HF/HCl HAPs	0.07	0.32	0.07	0.32	0.02	0.01	0.02	0.02
HF	18.98	83.11	18.98	83.11	4.6	0.08	n/a	n/a
HCl	1.4	6.14	1.4	6.14	0.34	0.01	n/a	n/a

Compliance with 45CSR13, Permit No. R13-0682 (Condition 4.1.1.) will also show compliance with the particulate matter limits given in 45CSR§§7-4.1. and 4.8.

[45CSR13, Permit No. R13-0682 (Condition 4.1.1.)]

4.1.10. Total emissions from the facility shall not exceed the following:

	lb/hr	tpy
PM	61.74	189.88
PM ₁₀	38.30	130.33
PM _{2.5}	21.68	75.18
SO ₂	29.22	122.19
NO _x	10.37	39.66
CO	22.76	88.98
VOC	0.51	1.91
HF	42.56	166.30
HCl	3.14	12.29
Non HF/HCl HAPs	0.23	0.72

[45CSR13, Permit No. R13-0682 (Condition 4.1.2.)]

4.1.11. Production from Tunnel Kiln 1 (K1E) shall not exceed 8.25 tons per hour nor 72,270 tons per year.

[45CSR13, Permit No. R13-0682 (Condition 4.1.3.)]

- 4.1.12. Production from Tunnel Kiln 2 (K2E) shall not exceed 8.25 tons per hour nor 72,270 tons per year.
[45CSR13, Permit No. R13-0682 (Condition 4.1.4.)]
- 4.1.13. Production from Periodic Kiln (P-K3E) shall not exceed 2 tons per cycle (72 hours) nor 72 tons per year.
[45CSR13, Permit No. R13-0682 (Condition 4.1.5.)]
- 4.1.14. Sulfur content of the coal used as fuel in the tunnel kilns shall not exceed 1%.
[45CSR13, Permit No. R13-0682 (Condition 4.1.6.)]
- 4.1.15. HF emissions from the Kilns shall not exceed 1,150 micrograms of HF per gram of material fired. Compliance with this condition shall be demonstrated by testing the fluoride concentration of a brick both before and after firing. The concentration after firing shall be subtracted from the concentration before firing. This result shall then be multiplied by (18.998 +1.008)/18.998 in order to get the equivalent HF emissions. Compliance with this condition shall be determined by averaging all required tests from the previous 12 months (12 month rolling average).
[45CSR13, Permit No. R13-0682 (Condition 4.1.7.)]
- 4.1.16. The permittee shall use only natural gas as a fuel for the Rotary Sand Dryer [RSD].
[45CSR13, Permit No. R13-0682 (Condition 4.1.9.)]
- 4.1.17. Visible emissions from the Rotary Sand Dryer [RSD] shall not exceed ten (10) percent opacity based on a six minute block average.
[45CSR §2-3.1; 45CSR13, Permit No. R13-0682 (Condition 4.1.10)]
- 4.1.18. The permittee must meet each applicable emission limit in Table 1 to 40CFR63, Subpart JJJJ:

Table 1 to Subpart JJJJ of Part 63—Emission Limits

For each . . .	The permittee must meet the following emission limits . . .	Or the permittee must comply with the following . . .
1. Collection of all tunnel kilns at facility, including all process streams	HF, HCl, and Cl ₂ emissions must not exceed 26 kg/hr (57 lb/hr) HCl equivalent, under the health-based standard, as determined using Equations 2 and 3	Not applicable.
3. Existing small tunnel kiln (design capacity <10 tph of fired product), including all process streams	a. PM emissions must not exceed 0.19 kg/Mg (0.37 lb/ton) of fired product	i. PM emissions must not exceed 4.8 mg/dscm (0.0021 gr/dscf) at 17% O ₂ ; or ii. Non-Hg HAP metals emissions must not exceed 0.047 kg/hr (0.11 lb/hr).
	b. Hg emissions must not exceed 1.7 E-04 kg/Mg (3.3 E-04 lb/ton) of fired product	i. Hg emissions must not exceed 91 µg/dscm at 17% O ₂ ; or ii. Hg emissions must not exceed 8.5 E-04 kg/hr (0.0019 lb/hr).

[45CSR34; 40CFR§63.8405(a); Table 1 of 40CFR63, Subpart JJJJJ]

4.1.19. The permittee must meet each applicable operating limit in Table 2 to 40CFR63, Subpart JJJJ:

Table 2 to Subpart JJJJ of Part 63—Operating Limits

For each . . .	The permittee must . . .
5. Tunnel kiln with no add-on control	a. Maintain no VE from the stack. ¹ b. Maintain the kiln process rate at or below the kiln process rate determined according to §63.8445(g)(1).

¹This limit ensures compliance with condition 4.1.1.

[45CSR34; 40CFR§63.8405(b); Table 2 of 40CFR63, Subpart JJJJ]

4.1.20. The permittee must meet each applicable work practice standard in Table 3 to 40CFR63, Subpart JJJJ:

Table 3 to Subpart JJJJ of Part 63—Work Practice Standards

For each . . .	The permittee must . . .	According to the following requirements . . .
1. Existing, new or reconstructed periodic kiln	a. Minimize HAP emissions	i. Develop and use a designed firing time and temperature cycle for each periodic kiln. The permittee must either program the time and temperature cycle into the permittee's kiln or track each step on a log sheet; and
		ii. Label each periodic kiln with the maximum load (in tons) of product that can be fired in the kiln during a single firing cycle; and
		iii. For each firing load, document the total tonnage of product placed in the kiln to ensure that it is not greater than the maximum load identified in item 1b; and
		iv. Develop and follow maintenance procedures for each kiln that, at a minimum, specify the frequency of inspection and maintenance of temperature monitoring devices, controls that regulate air-to-fuel ratios, and controls that regulate firing cycles; and
		v. Develop and maintain records for each periodic kiln, as specified in §63.8490.
2. Existing, new or reconstructed tunnel kiln	a. Minimize dioxin/furan emissions	i. Maintain and inspect the burners and associated combustion controls (as applicable); and
		ii. Tune the specific burner type to optimize combustion.
3. Existing, new or reconstructed tunnel kiln during periods of startup	a. Minimize HAP emissions	i. Establish the startup push rate for each kiln, the minimum APCD inlet temperature for each APCD, and temperature profile for each kiln without an APCD and include them in the permittee's first compliance report, as specified in §63.8485(c)(8); and
		ii. After initial charging of the kiln with loaded kiln cars, remain at or below the startup push rate for the kiln until the kiln exhaust reaches the minimum APCD inlet temperature for a kiln with an APCD or until the kiln temperature profile is attained for a kiln with no APCD; and

For each . . .	The permittee must . . .	According to the following requirements . . .
4. Existing, new or reconstructed tunnel kiln during periods of shutdown	a. Minimize HAP emissions	i. Do not push loaded kiln cars into the kiln once the kiln exhaust temperature falls below the minimum APCD inlet temperature if the kiln is controlled by an APCD or when the kiln temperature profile is no longer maintained for an uncontrolled kiln; and
5. Existing, new or reconstructed tunnel kiln during periods of routine control device maintenance	a. Minimize HAP emissions.	i. Develop and use a temperature profile for each kiln; and ii. Develop and follow maintenance procedures for each kiln that, at a minimum, specify the frequency of inspection and maintenance of temperature monitoring devices and controls that regulate air-to-fuel ratios; and iii. Develop and maintain records for each kiln, as specified in §63.8490(a)(3).

[45CSR34; 40CFR§63.8405(c) and 40CFR§§63.8410(b), (c), and (d); Table 3 of 40CFR63, Subpart JJJJ]

4.1.21. *Process changes.* Use low-HAP raw materials or implement manufacturing process changes and demonstrate that the resulting emissions or emissions reductions meet the emission limits in condition 4.1.18.

[45CSR34; 40CFR§63.8410(a)(2)]

4.1.22. General Requirements for Complying with 40CFR63, Subpart JJJJ:

- a. The permittee must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of start-up and shutdown, at which time the permittee must comply with the applicable work practice standard specified in condition 4.1.20.
- b. At all times, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. During the period between the compliance date specified for the affected source in §63.8395 and the date upon which continuous monitoring systems (CMS) (e.g., continuous parameter monitoring systems) have been installed and verified and any applicable operating limits have been set, the permittee must maintain a log detailing the operation and maintenance of the process and emissions control equipment.
- c. The permittee must be in compliance with the work practice standards in 40CFR63, Subpart JJJJ at all times.
- d. The permittee must be in compliance with the provisions of 40CFR63, subpart A, except as noted in Table 10 to 40CFR63, Subpart JJJJ.

[45CSR34; 40CFR§§63.8420(a), (b), (e), and (f)]

4.1.23. Operation, Maintenance, and Monitoring Plan:

- a. For each affected kiln that is subject to the emission limits specified in Table 1 to 40CFR63, Subpart JJJJJ, the permittee must prepare, implement, and revise as necessary an OM&M plan that includes the information in paragraph (b) of this section. The OM&M plan must be available for inspection by the delegated authority upon request.
- b. The OM&M plan must include, as a minimum, the following information:
 1. Each process and APCD to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.
 2. A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.
 3. The limits for each parameter that represent continuous compliance with the emission limitations in §63.8405. The limits must be based on values of the monitored parameters recorded during performance tests.
 4. Procedures for installing the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.*, on or downstream of the last APCD).
 5. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system.
 6. Continuous monitoring system performance evaluation procedures and acceptance criteria (*e.g.*, calibrations).
 7. Procedures for the proper operation and maintenance of monitoring equipment consistent with the requirements in §§63.8450 and 63.8(c)(1), (3), (7), and (8).
 8. Continuous monitoring system data quality assurance procedures consistent with the requirements in §63.8(d)(1) and (2). The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan in §63.8(d)(2) is revised, the owner or operator shall keep previous (*i.e.*, superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under §63.8(d)(2).
 9. Continuous monitoring system recordkeeping and reporting procedures consistent with the requirements in §§63.8485 and 63.8490.
 10. Procedures for responding to operating parameter deviations, including the procedures in paragraphs (b)(10)(i) through (iii) of this section.
 - i. Procedures for determining the cause of the operating parameter deviation.
 - ii. Actions necessary for correcting the deviation and returning the operating parameters to the allowable limits.
 - iii. Procedures for recording the times that the deviation began and ended and corrective actions were initiated and completed.

11. Procedures for keeping records to document compliance.

- c. Changes to the operating limits in the OM&M plan require a new performance test. If the permittee is revising an operating limit parameter value, the permittee must meet the requirements in paragraphs (c)(1) and (2) of this section.

1. Submit a notification of performance test to the Administrator as specified in §63.7(b).

2. After completing the performance tests to demonstrate that compliance with the emission limits can be achieved at the revised operating limit parameter value, the permittee must submit the performance test results and the revised operating limits as part of the Notification of Compliance Status required under §63.9(h).

- d. If the permittee is revising the inspection and maintenance procedures in the OM&M plan, the permittee does not need to conduct a new performance test.

[45CSR34; 40CFR§63.8420(c); 40CFR§§63.8425(a), (b)(1)-(b)(3), (b)(5)-(b)(12), (c), and (d)]

4.1.24. Initial Compliance with the Emission Limitations and Work Practice Standards

- a. The permittee must demonstrate initial compliance with each applicable emission limitation and work practice standard according to Table 5 to 40CFR63, Subpart JJJJJ.

Table 5 to Subpart JJJJJ of Part 63—Initial Compliance with Emission Limitations and Work Practice Standards

For each . . .	For the following . . .	The permittee has demonstrated initial compliance if . . .
1. Collection of all tunnel kilns at the facility, including all process streams	a. HF, HCl, and Cl ₂ emissions must not exceed 26 kg/hr (57 lb/hr) HCl equivalent	i. The permittee measures HF, HCl, and Cl ₂ emissions for each kiln using Method 26 or 26A of 40 CFR part 60, appendix A-8 or its alternative, ASTM D6735-01 (Reapproved 2009) (incorporated by reference, see §63.14); or Method 320 of appendix A of this part or its alternative, ASTM D6348-03 (Reapproved 2010) (incorporated by reference, see §63.14); and
		ii. The permittee calculates the HCl-equivalent emissions for each kiln using Equation 2 to 40CFR63, Subpart JJJJJ; and
		iii. The permittee sums the HCl-equivalent values for all kilns at the facility using Equation 3 to 40CFR63, Subpart JJJJJ; and
		iv. The facility total HCl-equivalent does not exceed 26 kg/hr (57 lb/hr).
3. Existing small tunnel kiln (design capacity <10 tph of fired product), including all process streams	a. PM emissions must not exceed 0.19 kg/Mg (0.37 lb/ton) of fired product or 4.8 mg/dscm (0.0021 gr/dscf) at 17% O ₂ ; or	i. The PM emissions measured using Method 5 of 40 CFR part 60, appendix A-3 or Method 29 of 40 CFR part 60, appendix A-8, over the period of the initial performance test, according to the calculations in §63.8445(f)(1), do not exceed 0.19 kg/Mg (0.37 lb/ton) of fired product or 4.8 mg/dscm (0.0021 gr/dscf) at 17% O ₂ ; and
		ii. The permittee establishes and has a record of the applicable operating limits listed in Table 2 to 40CFR63, Subpart JJJJJ over the 3-hour performance test during which PM emissions did not exceed

For each . . .	For the following . . .	The permittee has demonstrated initial compliance if . . .
		0.19 kg/Mg (0.37 lb/ton) of fired product or 4.8 mg/dscm (0.0021 gr/dscf) at 17% O ₂ .
	b. Non-Hg HAP metals emissions must not exceed 0.047 kg/hr (0.11 lb/hr)	i. The non-Hg HAP metals emissions measured using Method 29 of 40 CFR part 60, appendix A-8, over the period of the initial performance test, do not exceed 0.047 kg/hr (0.11 lb/hr); and ii. The permittee establishes and has a record of the applicable operating limits listed in Table 2 to 40CFR63, Subpart JJJJJ over the 3-hour performance test during which non-Hg HAP metals emissions did not exceed 0.047 kg/hr (0.11 lb/hr).
	c. Hg emissions must not exceed 1.7 E-04 kg/Mg (3.3 E-04 lb/ton) of fired product or 91 µg/dscm at 17% O ₂ or 8.5 E-04 kg/hr (0.0019 lb/hr)	i. The Hg emissions measured using Method 29 of 40 CFR part 60, appendix A-8 or its alternative, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see §63.14), over the period of the initial performance test, do not exceed 1.7 E-04 kg/Mg (3.3 E-04 lb/ton) of fired product or 91 µg/dscm at 17% O₂ or 8.5 E-04 kg/hr (0.0019 lb/hr); and ii. The permittee establishes and has a record of the applicable operating limits listed in Table 2 to 40CFR63, Subpart JJJJJ over the 3-hour performance test during which Hg emissions did not exceed 1.7 E-04 kg/Mg (3.3 E-04 lb/ton) of fired product or 91 µg/dscm at 17% O₂ or 8.5 E-04 kg/hr (0.0019 lb/hr).
6. Existing, new or reconstructed periodic kiln	a. Minimize HAP emissions	i. Develop a designed firing time and temperature cycle for each periodic kiln. The permittee must either program the time and temperature cycle into the kiln or track each step on a log sheet; and ii. Label each periodic kiln with the maximum load (in tons) of product that can be fired in the kiln during a single firing cycle; and iii. Develop maintenance procedures for each kiln that, at a minimum, specify the frequency of inspection and maintenance of temperature monitoring devices, controls that regulate air-to-fuel ratios, and controls that regulate firing cycles.
7. Existing, new or reconstructed tunnel kiln	a. Minimize dioxin/furan emissions	i. Conduct initial inspection of the burners and associated combustion controls (as applicable); and ii. Tune the specific burner type to optimize combustion.

- b. The permittee must establish each applicable site-specific operating limit in Table 2 to 40CFR63, Subpart JJJJJ that applies according to the requirements in §63.8445 and Table 4 to 40CFR63, Subpart JJJJJ.

[45CSR34; 40CFR§§63.8455(a) and (b); Table 5 of 40CFR63, Subpart JJJJJ]

- 4.1.25. The permittee must demonstrate continuous compliance with each applicable emission limit, operating limit, and work practice standard in Tables 1, 2, and 3 to 40CFR63, Subpart JJJJJ according to the methods specified in Table 6 to 40CFR63, Subpart JJJJJ.

Table 6 to Subpart JJJJ of Part 63—Continuous Compliance with Emission Limitations and Work Practice Standards

For each . . .	For the following . . .	The permittee must demonstrate continuous compliance by . . .
5. Tunnel kiln with no add-on control	a. Each emission limit in Table 1 to 40CFR63, Subpart JJJJ and each operating limit in Item 5 of Table 2 to 40CFR63, Subpart JJJJ for tunnel kilns with no add-on control	i. Performing VE observations of the stack at the frequency specified in §63.8470(e) using Method 22 of 40 CFR part 60, appendix A-7; and maintaining no VE from the stack.
		ii. If the permittee's last calculated total facility maximum potential HCl-equivalent was not at or below the health-based standard in Table 1 to 40CFR63, Subpart JJJJ, collecting the kiln process rate data according to §63.8450(a); reducing the kiln process rate data to 3-hour block averages according to §63.8450(a); maintaining the average kiln process rate for each 3-hour block period at or below the kiln process rate determined according to §63.8445(g)(1).
6. Periodic kiln	a. Minimize HAP emissions	i. Using a designed firing time and temperature cycle for each periodic kiln; and
		ii. For each firing load, documenting the total tonnage of product placed in the kiln to ensure that it is not greater than the maximum load identified in Item 1.a.ii of Table 3 to 40CFR63, Subpart JJJJ; and
		iii. Following maintenance procedures for each kiln that, at a minimum, specify the frequency of inspection and maintenance of temperature monitoring devices, controls that regulate air-to-fuel ratios, and controls that regulate firing cycles; and
		iv. Developing and maintaining records for each periodic kiln, as specified in §63.8490.
7. Tunnel kiln	a. Minimize dioxin/furan emissions	i. Maintaining and inspecting the burners and associated combustion controls (as applicable) and tuning the specific burner type to optimize combustion no later than 36 calendar months after the previous tune-up; and
		ii. Maintaining records of burner tune-ups used to demonstrate compliance with the dioxin/furan work practice standard; and
		iii. Submitting a report of most recent tune-up conducted with compliance report.

[45CSR34; 40CFR§63.8470(a); Table 6 of 40CFR63, Subpart JJJJ]

- 4.1.26. Table 10 to 40CFR63, Subpart JJJJ shows which parts of the General Provisions in 40CFR§§63.1 through 63.16 apply to the permittee.

[45CSR34; 40CFR§63.8505]

4.2. Monitoring Requirements

4.2.1. Compliance with the sulfur dioxide limitations shall be determined by not exceeding the maximum sulfur content percentages as listed in Table 2 of the DAQ approved “45CSR10 Monitoring Plan” attached in Appendix A of this permit and through fuel analysis as outlined in the aforementioned monitoring plan.

[45CSR§10-8.2.c.]

4.2.2. Monitoring Installation, Operation, and Maintenance

a. The permittee must install, operate, and maintain each CMS according to the OM&M plan and the following requirements:

1. Conduct a performance evaluation of each CMS according to the OM&M plan.
2. The CMS must complete a minimum of one cycle of operation for each successive 15-minute period. To have a valid hour of data, the permittee must have at least three of four equally spaced data values (or at least 75 percent if the permittee collects more than four data values per hour) for that hour (not including startup, shutdown, malfunction, out-of-control periods, or periods of routine control device maintenance covered by the routine control device maintenance alternative standard as specified in §63.8420(d)).
3. Determine and record the 3-hour block averages of all recorded readings, calculated after every 3 hours of operation as the average of the previous 3 operating hours. To calculate the average for each 3-hour average period, the permittee must have at least 75 percent of the recorded readings for that period (not including startup, shutdown, malfunction, out-of-control periods, or periods of routine control device maintenance covered by the routine control device maintenance alternative standard as specified in §63.8420(d)).
4. Record the results of each inspection, calibration, and validation check.
5. At all times, maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

b. For each temperature measurement device, the permittee must meet the requirements in paragraphs (a)(1) through (5) and paragraphs (b)(1) through (3):

1. Locate the measurement device in a position that provides a representative temperature.
2. Use a measurement device with a minimum sensitivity of 1 percent of the temperature being measured.
3. At least semiannually, conduct a calibration check.
 - i. Requests for approval of alternate monitoring procedures must meet the requirements in §§63.8445(h) and 63.8(f).

[45CSR34; 40CFR§§63.8450(a) and (h)]

4.2.3. Monitoring and Data Collection to Demonstrate Continuous Compliance

- a. The permittee must monitor and collect data according to this section.
- b. Except for periods of monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating. This includes periods of startup, shutdown, malfunction, and routine control device maintenance as specified in §63.8420(d) when the affected source is operating.
- c. The permittee may not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities for purposes of calculating data averages. The permittee must use all the valid data collected during all other periods in assessing compliance. Any averaging period for which the permittee does not have valid monitoring data and such data are required constitutes a deviation from the monitoring requirements.

[45CSR34; 40CFR§63.8465]

4.3. Testing Requirements

- 4.3.1. To demonstrate compliance with the opacity limits, visible emission checks shall be conducted to determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each kiln stack for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of facility operation and appropriate weather conditions. If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.
[45CSR§7A-2.1., 45CSR§30-5.1.c.] (K1E, K2E, P-K3E)

- 4.3.2. Tests to determine the compliance of Kiln No.1 (K1E), Kiln No. 2 (K2E), and Periodic Kiln (P-K3E) with the particulate matter (PM) weight emission standards (in lbs/hr) shall be conducted at least once in every five (5) year period. Such tests shall be conducted in accordance with the appropriate method set forth in 45CSR§7A-3. – “Mass Emission Test Procedures” or other equivalent EPA testing method approved by the Secretary and in accordance with section 3.3. of this permit. Unless tests have been completed within one (1) year prior to the issuance date of this permit, initial tests shall be conducted and completed within one hundred eighty (180) days of the effective date of this permit. The results of such tests shall be submitted within sixty (60) days from conducting the stack testing.
[45CSR§7-8.1., 45CSR§7A-3.1.]

- 4.3.3. In order to determine compliance with condition 4.1.15 of this permit, the permittee shall perform or have performed appropriate laboratory tests to determine the fluoride content of the bricks both before and after firing at least once for every 12,000 tons of production.
[45CSR13, Permit No. R13-0682 (Condition 4.2.1)]
- 4.3.4. In order to determine compliance with condition 4.1.14 of this permit, the permittee shall maintain statements made by fuel suppliers guaranteeing that the sulfur content of the coal is less than or equal to 1%.
[45CSR13, Permit No. R13-0682 (Condition 4.2.2)]
- 4.3.5. For the purpose of determining compliance with the opacity limits of 45CSR2, the permittee shall conduct visible emission checks and / or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.
- a. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.
 - b. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at the rotary sand dryer [RSD] for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of facility operation and appropriate weather conditions.
 - c. If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.
- [45CSR§2-3.2; 45CSR13, Permit No. R13-0682 (Condition 4.2.3)] (RSD)**
- 4.3.6. For each affected kiln that is subject to the emission limits specified in Table 1 to 40CFR63, subpart JJJJ, the permittee must conduct performance tests within 180 calendar days after the compliance date that is specified for the source in §63.8395 and according to the provisions in §63.7(a)(2).
[45CSR34; 40CFR§63.8435]
- 4.3.7. Subsequent Performance Testing:
- a. For each affected kiln that is subject to the emission limits specified in Table 1 to 40CFR63, Subpart JJJJ, the permittee must conduct a performance test before renewing the 40 CFR part 70 operating permit or at least every 5 years following the initial performance test.
 - b. The permittee must conduct a performance test when the permittee wants to change the parameter value for any operating limit specified in the OM&M plan.
[45CSR34; 40CFR§63.8440]

4.3.8. Performance Testing and Establishing Operating Limits

- a. The permittee must conduct each applicable performance test in Table 4 to 40CFR63, Subpart JJJJ.

Table 4 to Subpart JJJJ of Part 63—Requirements for Performance Tests

For each . . .	The permittee must . . .	Using . . .	According to the following requirements . . .
1. Tunnel kiln	a. Select locations of sampling ports and the number of traverse points	Method 1 or 1A of 40 CFR part 60, appendix A-1	Sampling sites must be located at the outlet of the APCD and prior to any releases to the atmosphere for all affected sources.
	b. Determine velocities and volumetric flow rate	Method 2 of 40 CFR part 60, appendix A-1	The permittee may use Method 2A, 2C, 2D, or 2F of 40 CFR part 60, appendix A-1, or Method 2G of 40 CFR part 60, appendix A-2, as appropriate, as an alternative to using Method 2 of 40 CFR part 60, appendix A-1.
	c. Conduct gas molecular weight analysis	Method 3 of 40 CFR part 60, appendix A-2	The permittee may use Method 3A or 3B of 40 CFR part 60, appendix A-2, as appropriate, as an alternative to using Method 3 of 40 CFR part 60, appendix A-2. ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §63.14) may be used as an alternative to the manual procedures (but not the instrumental procedures) in Methods 3A and 3B.
	d. Measure moisture content of the stack gas	Method 4 of 40 CFR part 60, appendix A-3	
	e. Measure HF, HCl and Cl ₂ emissions	i. Method 26A of 40 CFR part 60, appendix A-8; or	The permittee may use Method 26 of 40 CFR part 60, appendix A-8, as an alternative to using Method 26A of 40 CFR part 60, appendix A-8, when no acid PM (<i>e.g.</i> , HF or HCl dissolved in water droplets emitted by sources controlled by a WS) is present. ASTM D6735-01 (Reapproved 2009) (incorporated by reference, see §63.14) may be used as an alternative to Methods 26 and 26A.

For each . . .	The permittee must . . .	Using . . .	According to the following requirements . . .
		ii. Method 320 of appendix A of this part	When using Method 320 of appendix A of this part, the permittee must follow the analyte spiking procedures of section 13 of Method 320 of appendix A of this part, unless the permittee can demonstrate that the complete spiking procedure has been conducted at a similar source. ASTM D6348-03 (Reapproved 2010) (incorporated by reference, see §63.14) may be used as an alternative to Method 320 if the test plan preparation and implementation in Annexes A1-A8 are mandatory and the %R in Annex A5 is determined for each target analyte.
	f. Measure PM emissions or non-Hg HAP metals	i. For PM only: Method 5 of 40 CFR part 60, appendix A-3; or	
		ii. For PM or non-Hg HAP metals: Method 29 of 40 CFR part 60, appendix A-8	
	g. Measure Hg emissions	Method 29 of 40 CFR part 60, appendix A-8	ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see §63.14) may be used as an alternative to Method 29 (portion for Hg only).
2. Tunnel kiln with no add-on control	Establish the operating limit(s) for kiln process rate if the total facility maximum potential HCl-equivalent emissions are greater than the HCl-equivalent limit in Table 1 to 40CFR63, Subpart JJJJ	HCl-equivalent limit in Table 1 to 40CFR63, Subpart JJJJ and emissions and production data from the HF/HCl/Cl ₂ performance test	Using the procedures in §63.8445(g)(1), the permittee must determine the maximum process rate(s) for the permittee's kiln(s) that would ensure total facility maximum potential HCl-equivalent emissions remain at or below the HCl-equivalent limit in Table 1 to 40CFR63, Subpart JJJJ. The maximum process rate(s) would become the permittee's site-specific process rate operating limit(s).
3. Tunnel kiln that is complying with PM and/or Hg production-	Determine the production rate during each PM/Hg test run in order to determine compliance with PM	Production data collected during the PM/Hg performance tests (e.g., no. of pushes per hour, no. of bricks	The permittee must measure and record the production rate, on a fired-product basis, of the affected source for each of the three test runs.

For each . . .	The permittee must . . .	Using . . .	According to the following requirements . . .
based emission limits	and/or Hg production-based emission limits	per kiln car, weight of a typical fired brick)	

- b. Before conducting the performance test, the permittee must install and calibrate all monitoring equipment.
- c. Each performance test must be conducted according to the requirements in §63.7 and under the specific conditions in Table 4 to 40CFR63, Subpart JJJJ.
- d. Performance tests shall be conducted under such conditions as the Administrator specifies to the permittee based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown. The permittee may not conduct performance tests during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
- e. The permittee must conduct at least three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.
- f. The permittee must use the data gathered during the performance test and the equations in paragraphs (f)(1) and (2) to determine compliance with the emission limitations.
 1. To determine compliance with the production-based particulate matter (PM) and mercury (Hg) emission limits in Table 1 to 40CFR63, Subpart JJJJ, the permittee must calculate the mass emissions per unit of production for each test run using Equation 1:

$$MP = \frac{ER}{P} \quad (Eq. 1)$$

Where:

MP = mass per unit of production, kilograms (pounds) of pollutant per megagram (ton) of fired product

ER = mass emission rate of pollutant (PM or Hg) during each performance test run, kilograms (pounds) per hour

P = production rate during each performance test run, megagrams (tons) of fired product per hour.

2. To determine compliance with the health-based standard for acid gas HAP for BSCP manufacturing facilities in Table 1 to 40CFR63, Subpart JJJJJ, the permittee must:

- i. Calculate the HCl-equivalent emissions for HF, HCl, and Cl₂ for each tunnel kiln at the permittee's facility using Equation 2:

$$E_i = E_{HCl} + \left[E_{HF} \left(\frac{RfC_{HCl}}{RfC_{HF}} \right) \right] + \left[E_{Cl_2} \left(\frac{RfC_{HCl}}{RfC_{Cl_2}} \right) \right] \quad (Eq. 2)$$

Where:

E_i = HCl-equivalent emissions for kiln i, kilograms (pounds) per hour

E_{HCl} = emissions of HCl, kilograms (pounds) per hour

E_{HF} = emissions of HF, kilograms (pounds) per hour

E_{Cl₂} = emissions of Cl₂, kilograms (pounds) per hour

RfC_{HCl} = reference concentration for HCl, 20 micrograms per cubic meter

RfC_{HF} = reference concentration for HF, 14 micrograms per cubic meter

RfC_{Cl₂} = reference concentration for Cl₂, 0.15 micrograms per cubic meter

- ii. If the permittee has multiple tunnel kilns at the facility, sum the HCl-equivalent values for all tunnel kilns at the facility using Equation 3:

$$E_{total} = \sum_{i=1}^n E_i \quad (Eq. 3)$$

Where:

E_{total} = HCl-equivalent emissions for total of all kilns at facility, kilograms (pounds) per hour

E_i = HCl-equivalent emissions for kiln i, kilograms (pounds) per hour

n = number of tunnel kilns at facility

- iii. Compare this value to the health-based standard in Table 1 to 40CFR63, Subpart JJJJJ.

- g. The permittee must establish each site-specific operating limit in Table 2 to 40CFR63, Subpart JJJJJ that applies as specified in paragraph (g)(1) and in Table 4 to 40CFR63, Subpart JJJJJ.

1. If the permittee does not have an APCD installed on the kiln, calculate the maximum potential HCl-equivalent emissions for HF, HCl, and Cl₂ for each tunnel kiln at the facility using Equation 4:

$$E_{max i} = (Cap_i) \left[(MP_{iHCl}) + (MP_{iHF}) \left(\frac{RfC_{HCl}}{RfC_{HF}} \right) + (MP_{iCl_2}) \left(\frac{RfC_{HCl}}{RfC_{Cl_2}} \right) \right] \quad (Eq. 4)$$

Where:

$E_{\max i}$ = maximum potential HCl-equivalent emissions for kiln i, kilograms (pounds) per hour

Cap_i = design capacity for kiln i, megagrams (tons) of fired product per hour

MP_{iHCl} = mass of HCl per unit of production for kiln i, kilograms (pounds) of HCl per megagram (ton) of fired product

MP_{iHF} = mass of HF per unit of production for kiln i, kilograms (pounds) of HF per megagram (ton) of fired product

MP_{iCl_2} = mass of Cl_2 per unit of production for kiln i, kilograms (pounds) of Cl_2 per megagram (ton) of fired product

RfC_{HCl} = reference concentration for HCl, 20 micrograms per cubic meter

RfC_{HF} = reference concentration for HF, 14 micrograms per cubic meter

RfC_{Cl_2} = reference concentration for Cl_2 , 0.15 micrograms per cubic meter

[45CSR34; 40CFR§§63.8445(a)-(f) and (g)(1); Table 4 of 40CFR63, Subpart JJJJJ]

4.3.9. VE Testing

- a. *VE testing.* The permittee must demonstrate continuous compliance with the operating limits in Table 2 to 40CFR63, Subpart JJJJJ for visible emissions (VE) from tunnel kilns that are uncontrolled or equipped with DLA, dry lime injection fabric filter (DIFF), dry lime scrubber/fabric filter (DLS/FF), or other dry control device by monitoring VE at each kiln stack according to the following requirements:
1. Perform daily VE observations of each kiln stack according to the procedures of Method 22 of 40 CFR part 60, appendix A-7. The permittee must conduct the Method 22 test while the affected source is operating under normal conditions. The duration of each Method 22 test must be at least 15 minutes.
 2. If VE are observed during any daily test conducted using Method 22 of 40 CFR part 60, appendix A-7, the permittee must promptly conduct an opacity test, according to the procedures of Method 9 of 40 CFR part 60, appendix A-4. If opacity greater than 10 percent is observed, the permittee must initiate and complete corrective actions according to the OM&M plan.
 3. The permittee may decrease the frequency of Method 22 testing from daily to weekly for a kiln stack if one of the conditions in 4.3.9.a.3.i or ii of this section is met.
 - i. No VE are observed in 30 consecutive daily Method 22 tests for any kiln stack; or
 - ii. No opacity greater than 10 percent is observed during any of the Method 9 tests for any kiln stack.
 4. If VE are observed during any weekly test and opacity greater than 10 percent is observed in the subsequent Method 9 test, the permittee must promptly initiate and complete corrective actions according to the OM&M plan, resume testing of that kiln stack following Method 22 of 40 CFR part 60, appendix A-7, on a daily basis, as described in condition 4.3.9.a.1., and maintain that schedule

until one of the conditions in conditions 4.3.9.a.3.i. or ii. is met, at which time the permittee may again decrease the frequency of Method 22 testing to a weekly basis.

5. If greater than 10 percent opacity is observed during any test conducted using Method 9 of 40 CFR part 60, appendix A4, the permittee must report these deviations by following the requirements in §63.8485.
- b. *Alternative to VE testing.* In lieu of meeting the requirements under paragraph (a) of 4.3.9., the permittee may conduct a PM test at least once every year following the initial performance test, according to the procedures of Method 5 of 40 CFR part 60, appendix A-3, and the provisions of 40CFR§§63.8445(e) and (f)(1).

[45CSR34; 40CFR§63.8470(e)]

4.4. Recordkeeping Requirements

- 4.4.1. Records of all monitoring data required by condition 4.3.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned shall be maintained. The permittee shall also record the general weather conditions (e.g., sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in 45CSR7A, the data records of each observation shall be maintained per the requirements of 45CSR7A. For an emission unit out of service during the normal monthly evaluation, the record of observation may note “out of service” (O/S) or equivalent.
[45CSR§30-5.1.c.]
- 4.4.2. A record of all required monitoring data as established in the 45CSR10A monitoring plan shall be maintained on-site. Such records shall be made available to the Director or his duly authorized representative upon request and shall be retained on-site for a minimum of five years.
[45CSR§10-8.3.a.]
- 4.4.3. Records of the operating schedule and the quantity and quality of fuel consumed in each kiln shall be maintained on-site and made available to the Director or his duly authorized representative upon request. Such records may be maintained in electronic form and at a minimum for coal shall include but not limited to an ash, BTU, and sulfur analysis of each shipment.
[45CSR§§10-8.3.c. & 8.3.d., 45CSR§30-5.1.c.]
- 4.4.4. In order to determine compliance with Conditions 4.1.9 through 4.1.13, the Permittee shall monitor and record the production of each of the three kilns on a monthly basis.
[45CSR13, Permit No. R13-0682 (Condition 4.3.4.)]
- 4.4.5. In order to determine compliance with the rotary sand dryer [RSD] emissions in condition 4.1.9, the permittee shall record the amount of sand processed through the rotary sand dryer on a monthly basis.
[45CSR13, Permit No. R13-0682 (Condition 4.3.5.)]
- 4.4.6. In order to determine compliance with the fuel type limitation in condition 4.1.16, the permittee shall maintain records of the fuel usage for the RSD. At a minimum, the records shall indicate the type of fuel used.
[45CSR13, Permit No. R13-0682 (Condition 4.3.6.)]

- 4.4.7. The permittee shall maintain records of all monitoring data required by condition 4.3.5 documenting the date and time of each visible emission check, the emission point or equipment / source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.

[45CSR13, Permit No. R13-0682 (Condition 4.3.7.)]

4.4.8. 40CFR63, Subpart JJJJ Recordkeeping Requirements

- a. The permittee must keep the following records:
1. A copy of each notification and report that the permittee submitted to comply with 40CFR63, Subpart JJJJ, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted, according to the requirements in 40CFR§63.10(b)(2)(xiv).
 2. Records of performance tests as required in 40CFR§63.10(b)(2)(viii).
- b. The permittee must keep the records required in Table 6 to 40CFR63, Subpart JJJJ to show continuous compliance with each emission limitation and work practice standard that apply.
- c. The permittee must also maintain the following records:
1. For each deviation, record the following:
 - i. The date, time, and duration of the deviation.
 - ii. A list of the affected sources or equipment.
 - iii. An estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.
 - iv. Actions taken to minimize emissions in accordance with §63.8420(b) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
 2. For each affected source, records of production rates on a fired-product basis.
 3. Records for any approved alternative monitoring or test procedures.
 4. Current copies of the OM&M plan, including any revisions, with records documenting conformance.
 5. Logs of the information required in the following paragraphs to document proper operation of the periodic kiln.

- i. Records of the firing time and temperature cycle for each product produced in each periodic kiln. If all periodic kilns use the same time and temperature cycles, one copy may be maintained for each kiln. Reference numbers must be assigned to use in log sheets.
 - ii. For each periodic kiln, a log that details the type of product fired in each batch, the corresponding time and temperature protocol reference number, and an indication of whether the appropriate time and temperature cycle was fired.
 - iii. For each periodic kiln, a log of the actual tonnage of product fired in the periodic kiln and an indication of whether the tonnage was below the maximum tonnage for that specific kiln.
6. Logs of the maintenance procedures used to demonstrate compliance with the maintenance requirements of the periodic kiln work practice standards specified in Table 3 to 40CFR63, Subpart JJJJ.
7. Records of burner tune-ups used to comply with the dioxin/furan work practice standard for tunnel kilns.
8. For periods of startup and shutdown, records of the following information:
 - i. The date, time, and duration of each startup and/or shutdown period, recording the periods when the affected source was subject to the standard applicable to startup and shutdown.
 - ii. For periods of startup, the kiln push rate and kiln exhaust temperature prior to the time the kiln exhaust reaches the minimum APCD inlet temperature (for a kiln with an APCD) or the kiln temperature profile is attained (for a kiln with no APCD).
 - iii. For periods of shutdown, the kiln push rate and kiln exhaust temperature after the time the kiln exhaust falls below the minimum APCD inlet temperature (for a kiln with an APCD) or the kiln temperature profile is no longer maintained (for a kiln with no APCD).
9. All site-specific parameters, temperature profiles, and procedures required to be established or developed according to the applicable work practice standards in Table 3 to 40CFR63, Subpart JJJJ.

[45CSR34; 40CFR§§63.8490(a)(1), (a)(2), (b), (c)(2)-(4), (c)(6)-(11)]

4.4.9. 40CFR63, Subpart JJJJ Recordkeeping Requirements

- a. Records must be in a form suitable and readily available for expeditious review, according to 40CFR§63.10(b)(1).
- b. As specified in 40CFR§63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- c. The permittee must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40CFR§63.10(b)(1). The permittee may keep the records offsite for the remaining 3 years.

[45CSR34; 40CFR§63.8495]

4.5. Reporting Requirements

- 4.5.1. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 45CSR7A, must be reported in writing to the Director of the Division of Air Quality as soon as practicable but within ten (10) calendar days of the occurrence. The report shall include at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR§30-5.1.c.]
- 4.5.2. A periodic exception report shall be submitted to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken.
[45CSR§10-8.3.b.]
- 4.5.3. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A (Method 22) or Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, Permit No. R13-0682 (Condition 4.4.1.)]
- 4.5.4. The permittee must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.8480(c).
[45CSR34; 40CFR§63.8455(c)]
- 4.5.5. The permittee must report each instance in which the permittee did not meet each emission limit and each operating limit in 40CFR63, Subpart JJJJ that applies. These instances are deviations from the emission limitations in 40CFR63, Subpart JJJJ. These deviations must be reported according to the requirements in 40CFR§63.8485(c)(9).
[45CSR34; 40CFR§63.8470(c)]
- 4.5.6. Notifications Required by 40CFR63, Subpart JJJJ
- The permittee must submit all of the applicable notifications in 40CFR§§63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e), (g)(1), and (h), by the dates specified.
 - The permittee must submit all of the applicable notifications specified in Table 8 to 40CFR63, Subpart JJJJ, by the dates specified.

Table 8 to Subpart JJJJJ of Part 63—Deadlines for Submitting Notifications

If the permittee . . .	The permittee must . . .	No later than . . .	As specified in . . .
1. Start up the permittee's affected source before December 28, 2015	Submit an Initial Notification	June 22, 2016	§63.9(b)(2).

If the permittee . . .	The permittee must . . .	No later than . . .	As specified in . . .
3. Is required to conduct a performance test	Submit a notification of intent to conduct a performance test	60 calendar days before the performance test is scheduled to begin	§63.7(b)(1).
4. Is required to conduct a compliance demonstration that includes a performance test according to the requirements in Table 4 to 40CFR63, Subpart JJJJJ	Submit a Notification of Compliance Status, including the performance test results	60 calendar days following the completion of the performance test, by the close of business	§63.9(h) and §63.10(d)(2).
5. Is required to conduct a compliance demonstration required in Table 5 to 40CFR63, Subpart JJJJJ that does not include a performance test (i.e., compliance demonstrations for the work practice standards)	Submit a Notification of Compliance Status	30 calendar days following the completion of the compliance demonstrations, by the close of business	§63.9(h).

- c. If the permittee is required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to 40CFR63, Subpart JJJJJ, the Notification of Compliance Status as specified in Table 8 to 40CFR63, Subpart JJJJJ must include the following information:
1. The requirements in 40CFR§63.9(h)(2)(i).
 2. The operating limit parameter values established for each affected source with supporting documentation and a description of the procedure used to establish the values.

[45CSR34; 40CFR§§63.8480(a), (b), and (c)(1) and (2); Table 8 of 40CFR63, Subpart JJJJJ]

4.5.7. Reporting Required by 40CFR63, Subpart JJJJ

- a. The permittee must submit each applicable report in Table 9 to 40CFR63, Subpart JJJJ:

Table 9 to Subpart JJJJ of Part 63—Requirements for Reports

The permittee must submit . . .	The report must contain . . .	The permittee must submit the report . . .
1. A compliance report.	a. If there are no deviations from any emission limitations (emission limits, operating limits) that apply, a statement that there were no deviations from the emission limitations during the reporting period. If there were no periods during which the CMS was out-of-control as specified in the OM&M plan, a statement that there were no periods during which the CMS was out-of-control during the reporting period	Semiannually according to the requirements in §63.8485(b).
	b. If the permittee has a deviation from any emission limitation (emission limit, operating limit) during the reporting period, the report must contain the information in §63.8485(c)(9). If there were periods during which the CMS was out-of-control, as specified in the OM&M plan, the report must contain the information in §63.8485(d)	Semiannually according to the requirements in §63.8485(b)

- b. Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), the permittee must submit each report by the date in 4.5.7.a. and as specified in 4.5.7.b.1.
- For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of the dates in paragraphs 40CFR§§63.8485(b)(1) through (4).
- c. The compliance report must contain the following information:
- Company name and address.
 - Statement by a responsible official with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - Date of report and beginning and ending dates of the reporting period.
 - A report of the most recent burner tune-up conducted to comply with the dioxin/furan work practice standard in Table 3 to this subpart.
 - If there are no deviations from any emission limitations (emission limits or operating limits) that apply, the compliance report must contain a statement that there were no deviations from the emission limitations during the reporting period.

6. If there were no periods during which the CMS was out-of-control as specified in the OM&M plan, the compliance report must contain a statement that there were no periods during which the CMS was out-of-control during the reporting period.
7. The first compliance report must contain the startup push rate for each kiln, the minimum APCD inlet temperature for each APCD, and the temperature profile for each kiln without an APCD.
8. For each deviation that occurs at an affected source, report such events in the compliance report by including the following information:
 - i. The date, time, and duration of the deviation.
 - ii. A list of the affected sources or equipment for which the deviation occurred.
 - iii. An estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.
- d. For each deviation from an emission limitation (emission limit or operating limit) occurring at an affected source where the permittee is using a CMS to comply with the emission limitations in this subpart, the permittee must include the information in 4.5.7.c.1 through 3 and c.8, and the following paragraphs. This includes periods of startup, shutdown, and routine control device maintenance.
 1. The total operating time of each affected source during the reporting period.
 2. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.
 3. The date, time, and duration that each CMS was out-of-control, including the pertinent information in the OM&M plan.
 4. Whether each deviation occurred during routine control device maintenance covered in the approved routine control device maintenance alternative standard or during another period, and the cause of each deviation (including unknown cause, if applicable).
 5. A description of any corrective action taken to return the affected unit to its normal or usual manner of operation.
 6. A breakdown of the total duration of the deviations during the reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
 7. A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.
 8. A brief description of the process units.
 9. A brief description of the CMS.
 10. The date of the latest CMS certification or audit.

11. A description of any changes in CMS, processes, or control equipment since the last reporting period.
- e. If the permittee has obtained a title V operating permit according to 40 CFR part 70 or 40 CFR part 71, the permittee must report all deviations as defined in 40CFR63, Subpart JJJJJ in the semiannual monitoring report required by 40CFR§70.6(a)(3)(iii)(A) or 40CFR§71.6(a)(3)(iii)(A). If the permittee submits a compliance report according to Table 9 to 40CFR63, Subpart JJJJJ along with, or as part of, the semiannual monitoring report required by 40CFR§70.6(a)(3)(iii)(A) or 40CFR§71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), then submitting the compliance report will satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submitting a compliance report will not otherwise affect any obligation the permittee may have to report deviations from permit requirements to the permitting authority.
- f. Within 60 calendar days after the date of completing each performance test (as defined in §63.2) required by 40CFR63, Subpart JJJJJ, the permittee must submit the results of the performance test following the procedure specified in either of the following paragraphs:
 1. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (<http://www.epa.gov/ttn/chief/ert/index.html>) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<http://cdx.epa.gov/>.) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.
 2. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

[45CSR34; 40CFR§§63.8485(a), (b)(5), (c)(1)-(3), (c)(5)-(9), (d), (e), and (f); Table 9 of 40CFR63, Subpart JJJJJ]

4.6. Compliance Plan

- 4.6.1. None.

APPENDIX A

45CSR10 Monitoring Plan

Continental Brick Company

154 Charles Town Road
Martinsburg, West Virginia 25405

Phone: 304-263-6974

Fax: 304-267-0793

July 9, 2014

Director
Division of Air Quality
West Virginia Department of Environmental Protection
601 57th Street
Charleston, West Virginia 25304

RE: Continental Brick Company
45CSR10 Monitoring Plan for Manufacturing Processes
Plant ID No.: 003-00002

Dear Sir:

Continental Brick Company (Continental) is submitting this revised monitoring plan, in accordance with 45CSR10, for Continental's two (2) tunnel kilns located at the Martinsburg, West Virginia plant. This plan is being submitted to the West Virginia Department of Environmental Protection (WVDEP), Division of Air Quality (DAQ), to address the natural gas and coal-fired tunnel kilns used to cure and fire face brick.

Regulation 10 Testing Requirements

Continental hereby petitions the Director for an alternative to stack testing and requests that fuel analysis for sulfur and the corresponding calculations of in-stack sulfur dioxide concentrations be used as a substitute in demonstrating compliance with the 2,000 ppm standard from 45CSR10, Section 4. The attached calculations, based on existing permit limits, demonstrate that each affected unit operated by Continental has maintained, and will continue to maintain, compliance with the in-stack sulfur dioxide concentration. The results of the in-stack concentration calculations are shown in Table 1.

Table 1 – In-Stack SO₂ Concentration Calculation Results

Unit	Result (ppm)
Tunnel Kiln No. 1	69
Tunnel Kiln No. 2	69

By maintaining compliance with existing permit conditions and limitations, it can be reasonably expected that the in-stack sulfur dioxide concentration will be well below the 2,000 ppm standard. Continental requests that the Director accept these results as they are a reliable indication of Continental's ability to meet the standard.

Director, Division of Air Quality
Reg. 10 Monitoring Plan

Regulation 10 Monitoring Requirements

Continental proposes to monitor the sulfur content percentage of permitted fuels in the affected units by obtaining sulfur content statements from the fuel supplier. Operating these permitted units as they were intended, while utilizing fuels with sulfur contents at or below existing permitted levels, will assure that Continental continues to maintain compliance with the 2,000 ppm standard from 45CSR10, Section 4. Maximum sulfur content percentages for each affected unit for the permitted fuels are shown in Table 2.

Table 2 – Maximum Sulfur Content Percentages

Unit	Fuel Type	Maximum Sulfur Content (%)
Tunnel Kiln No. 1	Natural Gas	Trace S (pipeline quality)
	Coal	1.0
Tunnel Kiln No. 2	Natural Gas	Trace S (pipeline quality)
	Coal	1.0

By utilizing fuels that do not exceed the maximum sulfur content listed in Table 2, which maintains compliance with existing permit conditions and limitations, it can be reasonably expected that the in-stack sulfur dioxide concentration will be well below the 2,000 ppm standard as indicated in Table 1. Continental requests that the Director accept fuel sulfur content as the trackable basis of a Regulation 10 monitoring plan for the affected units.

Regulation 10 Recordkeeping and Reporting Requirements

Continental will maintain sulfur content statements from the fuel suppliers on site at the affected facility for a period of at least five (5) years in accordance with 45CSR10A, Section 7. Upon approval of this monitoring plan by the Director, Continental will submit a “Monitoring Summary Report” and an “Excursion and Monitoring Plan Performance Report”. In accordance with 45CSR10A, Section 7.2 b., Continental will submit these reports on a quarterly basis to the Director by the 30th day of the month following the calendar quarter. The purpose of these reports is to provide the Director with sulfur content statements for the fuels utilized during the quarter and to report any excursions in accordance with 45CSR10A, Section 7.2.b.3.

If you have any questions, or require additional information, please contact me at (304) 263-6974.

Sincerely,

CONTINENTAL BRICK COMPANY



Donald B. Sult
Vice President

**Director, Division of Air Quality
Reg. 10 Monitoring Plan**

Attachment

c: Patrick Ward, Potesta & Associates, Inc.

Continental Brick Company
Martinsburg Plant (Plant ID No.: 003-00002)

POTESTA & ASSOCIATES, INC.
Project No: 0101-13-0410-001

By: ADM
Date: July 2, 2014

Checked By: PEW
Date: July 7, 2014

Unit Name: Tunnel Kilm No. 1 and No. 2
Unit ID No.: TK-1 and -2
Emission ID No.: E-TK -1 and -2
Max. Heat Input: 30 MMBtu/hour
SO₂ Limit: 13.93 lbs/hour (from permit application associated with R13-682A)
Fuel Source(s): coal and natural gas
Max. S Content: 1% coal | negligible natural gas
Max. Stack Temp: 340 F
Max. Stack Flow: 30,699 ACFM Based on Blue Mountain Environmental Corporation Stack Test (September 23, 2009)

SO₂ in-stack concentration based on the existing hourly SO₂ mass limitation:

Hourly SO₂ Mass Limit = 13.93 lbs/hour

1. Converting hourly SO₂ mass limit to gram moles of SO₂ using MW of sulfur dioxide = 64 grams/mole:

$n_{SO_2} = 98.73$ moles SO₂ /hour

2. Using the ideal gas law to calculate the number of moles of stack gas per hour:

$n = P V / R T$ n = number of moles of stack gas per hour
 P = stack pressure (atm)
 V = stack volumetric flow rate (L/hr)
 R = ideal gas constant (0.08206 L atm / mole K)
 T = stack gas temperature (K)

Input Plant Parameters:

Stack pressure = 14.7 lbs/in²
Stack temperature = 340 F
Stack flow rate = 30,699 ft³/minute

Converting to required units for the ideal gas law equation:

Stack pressure = 1.00 atmosphere (1 atmosphere = 14.7 lbs/in²)
Stack temperature = 444.26 K [$K = ((F-32)/1.8) + 273.15$]
Stack flow rate = 52,163,741 L/hr (L/hr = ft³/minute x 28.32 L/ft³ x 60 minute/hr)

$n_{stack} = 1,430,869$ moles/hour

3. Calculating the SO₂ in-stack concentration in parts per million (ppm):

SO₂ concentration = 69 ppm