TITLE V PERMIT APPLICATION
MARTINSBURG FACILITY
PLANT ID NO. 003-00002

Prepared for:

Continental Brick Company
154 Charles Town Road
Martinsburg, West Virginia 25405

Prepared by:

Potesta & Associates, Inc.
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Project No. 0101-07-0327

May, 2008

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SECTION I - VI

GENERAL FORMS

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.wvdep.org/daq

TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):** Continental Brick Company	**2. Facility Name or Location:** Martinsburg Facility
3. DAQ Plant ID No.: 003-00002	**4. Federal Employer ID No. (FEIN):** 54-1267012

5. **Permit Application Type:**

☒ Initial Permit — When did operations commence? 1984
☐ Permit Renewal — What is the expiration date of the existing permit? NA
☐ Update to Initial Permit Application

6. Type of Business Entity:

☒ Corporation ☐ Governmental Agency
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

_____
_____
_____

8. Number of onsite employees:

50

9. Governmental Code:

☒ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: 154 Charles Town Road		
City: Martinsburg	**State:** WV	**Zip:** 25405
Telephone Number: (304) 263-6974	**Fax Number:** (304) 263-0793	

12. Facility Location		
Street: 154 Charles Town Road	**City:** Martinsburg	**County:** Berkeley
UTM Easting: 245.4 km	**UTM Northing:** 4,368.7 km	**Zone:** ☐ 17 or ☒ 18
Directions: From Interstate 81 take Exit 12, travel east on State Route 9 approximately 1.5 miles. The facility is on the right side of State Route 9.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☐ Yes ☒ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☒ Yes ☐ No		**If yes, name the affected state(s).** Virginia, Pennsylvania, Maryland
Is facility located within 100 km of a Class I Area[1]? ☒ Yes ☐ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☐ No		**If yes, name the area(s).** Shenandoah National Park

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: Donald B. Sult		**Title:** Vice President - Operations
Street or P.O. Box: 154 Charles Town Road		
City: Martinsburg	**State:** WV	**Zip:** 25405
Telephone Number: (304) 263-6974	**Fax Number:** (304) 267-0793	
E-mail address: dsult@continentalbrick.com		
Environmental Contact: SAME		**Title:**
Street or P.O. Box:		
City:	**State:**	**Zip:** -
Telephone Number: ( ) -	**Fax Number:** ( ) -	
E-mail address:		
Application Preparer: Patrick E. Ward		**Title:** Senior Engineer
Company: Potesta & Associates, Inc.		
Street or P.O. Box: 7012 MacCorkle Avenue, S.E.		
City: Charleston	**State:** WV	**Zip:** 25304
Telephone Number: (304) 342-1400	**Fax Number:** (304) 343-9031	
E-mail address: peward@potesta.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Manufacturing	Face Brick	327121	3251

Provide a general description of operations.

The Martinsburg Facility is a face brick manufacturing operation which includes quarry to final brick production and storage. The weathered Martinsburg Shale is quarried by the use of pans, crushed, screened, wetted, mixed in a pug mill, vacuum extruded, trimmed and cut to form the final shape of the green face bricks. Green face bricks then pass through the warming room, drying room, and kiln to remove the moisture in a controlled manner. Fired bricks are sorted and packaged for sale. Bricks not meeting the specifications (waste bricks) are disposed on property.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS (**Subpart OOO)**	☐ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ NO_x Budget Trading Program Non-EGUs (45CSR1)	☐ NO_x Budget Trading Program EGUs (45CSR26)

19. Non Applicability Determinations

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

40CFR60, Subpart OOO, does not apply to the shale conveying and processing. The existing shale processing equipment known as the grinding building (excluding existing Crusher No. 1) was constructed in 1981. Therefore it does not meet the requirement of:

e) An affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after August 31, 1983 is subject to the requirements of this part.

The existing Crusher No. 1 was installed in 2006 as a replacement to the crusher that was located at the same point in the process. There were no process rate changes during the installation of the replacement crusher. This crusher also does not meet all of the requirements to be subject to 40CFR60, Subpart OOO due to the following section:

d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

40 CFR 60, Subpart Y, does not apply to the coal processing system since operational rates are below 200 tons per day.

☒ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

☐ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

1. Open burning. The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]

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, suffer, allow or permit 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. 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 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). A copy of this notice is required to be sent to the USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health. [40 C.F.R. 61]

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.]

5. Permanent shutdown. A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown. [45CSR§13-10.5.]

6. 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]

7. 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)(14)]

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]

9. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 45CSR_§7- 3.2 (See Section 3.1.11), 3.3, 3.4, 3.5, 3.6, and 3.7. (See Section 3.1.12). [45CSR_§7-3.1.]

10. The provisions of subsection 3.1 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.]

☒ Permit Shield

Facility-Wide Applicable Requirements (CONTINUED)

11. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR7 subsection 5.1 (Section 3.1.15.) is required to have a full enclosure and be equipped with a particulate matter control device. [45CSR§7-3.7.]

12. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in 45CSR7 Table 45-7A. [45CSR§7-4.1.]

13. 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.]

14. No person shall cause, suffer, allow, or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system to minimize the emissions of fugitive particulate matter. To minimize means that a particulate capture or suppression system shall be installed to ensure the lowest fugitive particulate emissions reasonably achievable. [45CSR§7-5.1.]

15. The owner or operator of a plant shall maintain dust 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 dust suppressants shall be applied in relation to stockpiling and general material handling to prevent dust generation and atmospheric entrainment. [45CSR§7-5.2.]

16. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in this rule may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. [45CSR§7-9.1.]

17. Maintenance operations (as defined in 45CSR7) shall be exempt from the provisions of 45CSR§7-4 provided that at all times the owner or operator shall conduct maintenance operations in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source. [45CSR§7-10.3.]

☒ Permit Shield

Facility-Wide Applicable Requirements (CONTINUED)

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1 & 2	NA	NA	NA	Notification
3	NA	NA	NA	Notification
4	NA	NA	Record Occurrences	NA
5	NA	NA	NA	Notification
6	NA	NA	NA	Prepare Plan if Requested
7	NA	NA	Maintain Record	EI Submission
8	NA	NA	NA	If Required
9-12, 14 & 15	Method 22 Monthly	Method 9 (Once Yearly)	Maintain Records of Results of Testing/Monitoring	Submit Protocol for Initial Testing
13	NA	Install as needed for Stack Testing	NA	NA
16 & 17	NA	NA	Record Malfunctions and Maintenance	NA

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-682*	02/25/1983	None
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* Permit issued to allow the firing of the brick kilns with coal and for the installation of coal handling and grinding equipment to prepare the coal for the kilns.		
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22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
NONE		
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	88.57
Nitrogen Oxides (NO_X)	33.43
Lead (Pb) – See Metal HAPS	
Particulate Matter ($PM_{2.5}$)[1]	42.97
Particulate Matter (PM_{10})[1]	110.41
Total Particulate Matter (TSP or PM)	157.83
Sulfur Dioxide (SO_2)	67.59
Volatile Organic Compounds (VOC)	1.87
Hazardous Air Pollutants[2]	Potential Emissions
VOC HAPS	0.69
Metal HAPS	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions
HF	26.74
HCL	12.28

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☒	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☒	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☒	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☒	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☒	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☒	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☒	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☒	26.	Fire suppression systems.
☒	27.	Firefighting equipment and the equipment used to train firefighters.
☒	28.	Flares used solely to indicate danger to the public.
☒	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☒	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☐	33.	Hydraulic and hydrostatic testing equipment.
☐	34.	Indoor or outdoor kerosene heaters.
☒	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☒	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant

24. Insignificant Activities (Check all that apply)		
		owners/operators must still get a permit if otherwise requested.)
☒	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☐	43.	Process water filtration systems and demineralizers.
☒	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☒	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☒	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☒	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☐	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☐	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☒	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Donald B. Sult	Title: Vice President - Operations

Responsible official's signature:

Signature: Donald B Sult Signature Date: 5-12-08

(Must be signed and dated in blue ink)

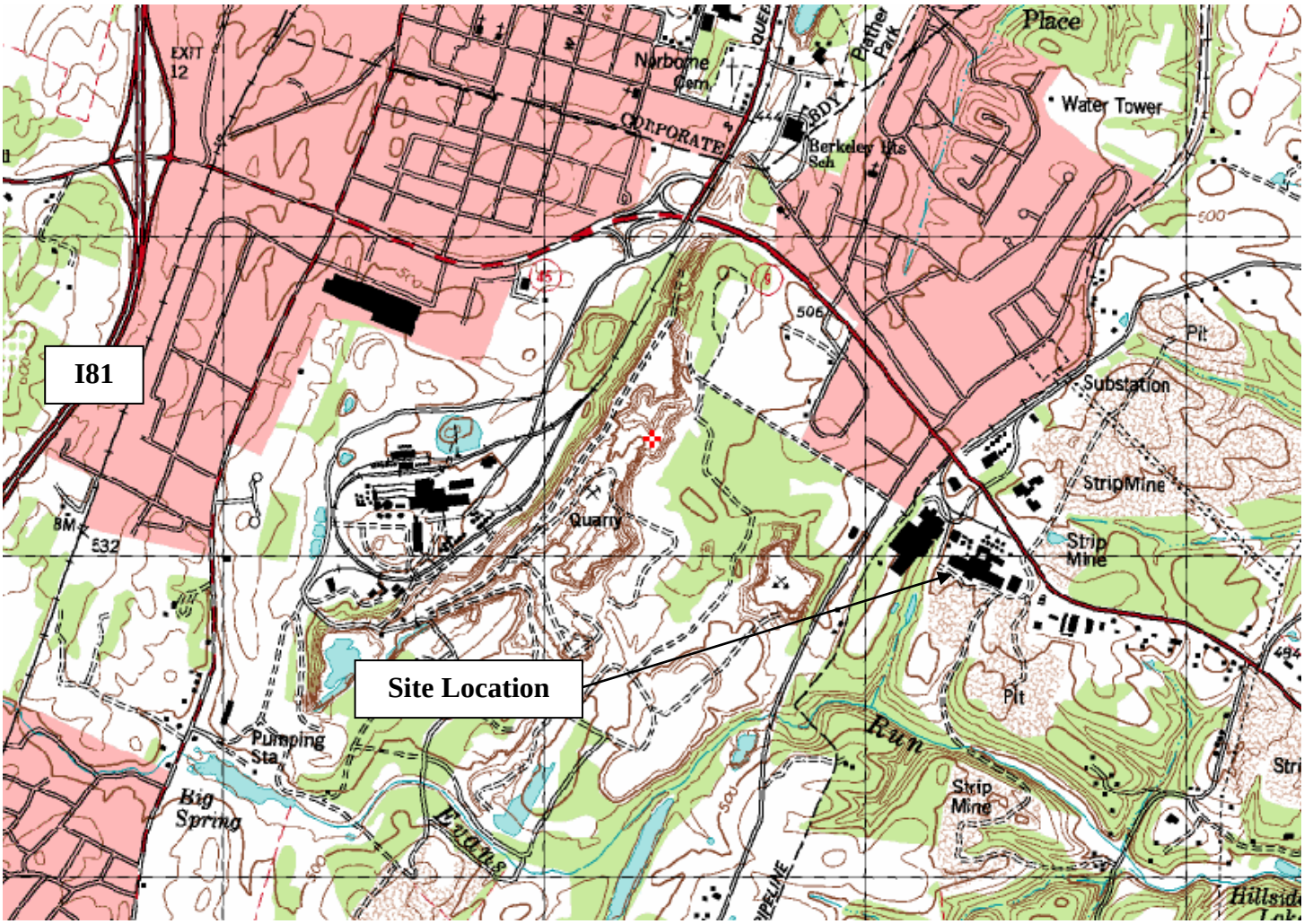
Note: Please check all applicable attachments included with this permit application:

☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☒	ATTACHMENT G: Air Pollution Control Device Form(s)
☒	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.wvdep.org/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT A

AREA MAP



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E-Mail: potesta@potesta.com

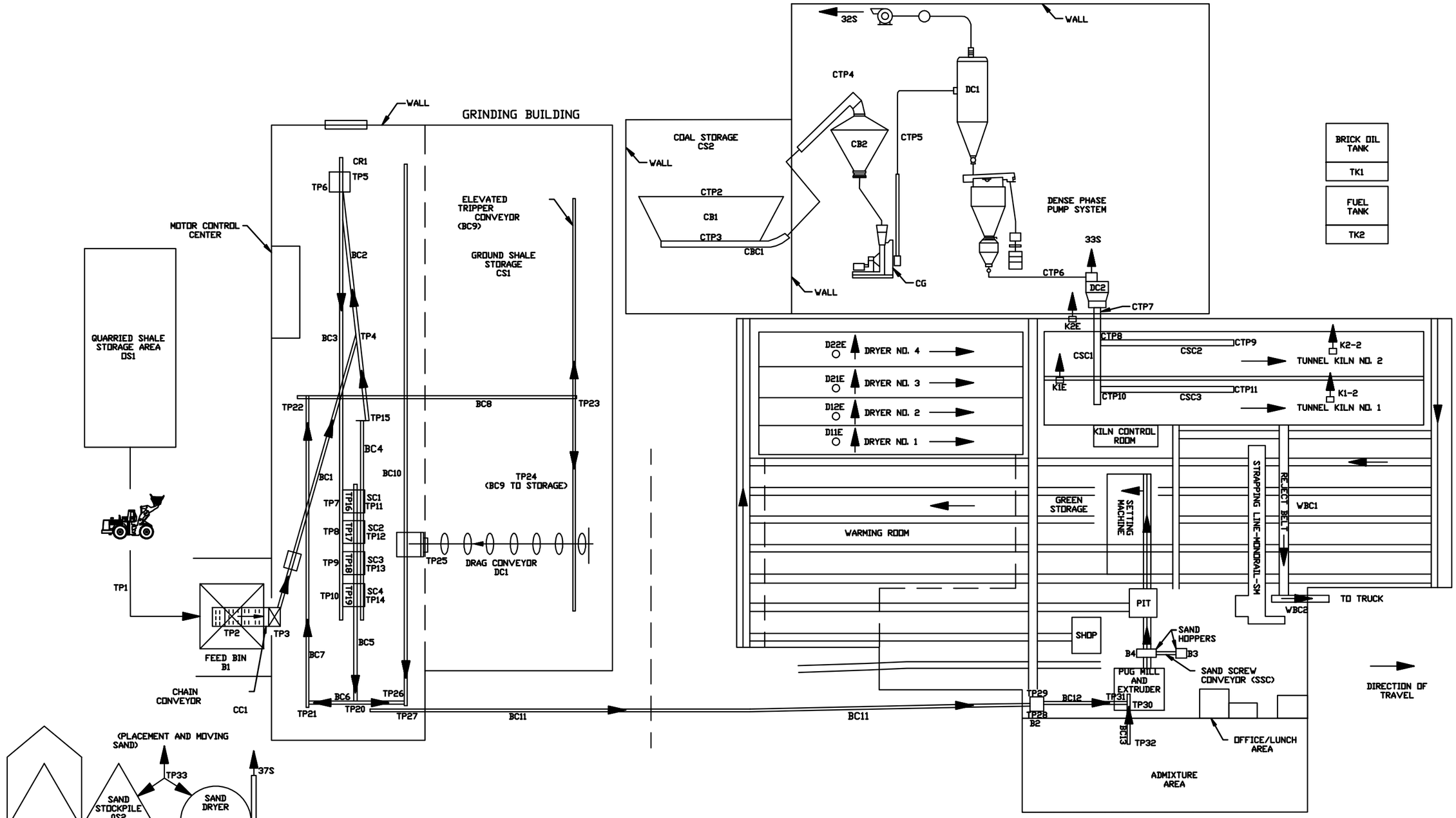
Martinsburg Facility
Continental Brick Company
Martinsburg, West Virginia
Project No. 0101-07-0327

ATTACHMENT B

PLOT PLAN

ATTACHMENT C

PROCESS FLOW DIAGRAM



PROJECT #: 07-0327 FILENAME: 07-0327-01

POTESTA

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Project
PROCESS FLOW DIAGRAM
CONTINENTAL BRICK COMPANY
MARTINSBURG, WEST VIRGINIA

Scale NO SCALE
Date MARCH 2008
Dwg. No. FIGURE 1

Plotted by: psbrown

ATTACHMENT D

EMISSION UNITS TABLE

ATTACHMENT D - Emission Units Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	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	N
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

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	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					
The Warming Room is heated by warm air from the operations of the Kilns and is not an emission source.					
NA	NA	Warming Room	1966	NA	NA
The Dryers are not sources on their own and are heated by cooling air from the Kilns					
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
* Emission points as identified in R13-682.					

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
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
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					
The Finished Brick Area includes the cooling, manual unloading of the brick cars, strapping, and waste brick conveyors. These are all fired brick being manually stacked and or conveyed on the waste brick conveyors. These are not considered sources due to the nature of the material.					
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	N
038	38S	Sand Stockpile – OS2	NA	150 tons	N
039	39S	Covered Sand Stockpile – CS3	NA	200 tons	PE
Sand is dried in an old round brick kiln with direct heat fired by natural gas.					
Emergency Generator					
040	40S	Emergency Generator	1984	0.159 MM Btu/hr	N

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
Vehicle Activity					
041	41S	Vehicle Activity	NA	NA	N
Tanks					
042	42S	Brick Oil Tank – TK1	NA	6,000 gallons	N
043	43S	Fuel Tank – TK2	NA	6,000 gallons	N

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E

EMISSION UNIT FORM(S)

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
026	Kiln No. 1, Dryers Nos. 1 and 2	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Tunnel Kiln for firing brick. Kiln also provides heat for Dryers No. 1 and No. 2.

Manufacturer:	**Model number:**	**Serial number:**
Constructed on Site	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1966	1966	1983

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 8.25 tons per hour of fired brick (TPH-F)

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
8.25 TPH-F	72,270 TPY-F	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel?	**If yes, is it?**
_X_ Yes ___ No	___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**
23.0 MM BTU/HR	30 North American Burners Model 4441-4-A at a rating of 525,000 BTU/Hr for Natural Gas 60 Coal Burners 300,000 BTU/HR

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuels are natural gas and coal.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	trace	NA	~1,000 BTU/CF
Coal	1%	4%	~14,441 BTU/LB

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	13.20	57.82
Nitrogen Oxides (NO_X)	4.21	18.43
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	7.18	31.44
Particulate Matter (PM_{10})	11.55	50.59
Total Particulate Matter (TSP)	14.85	65.04
Sulfur Dioxide (SO_2)	9.90	43.36
Volatile Organic Compounds (VOC)	1.49	6.50
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HF	3.05	13.37
HCL	1.40	6.14
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 11.3, Brick and Structural Clay Product Manufacturing.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. (45CSR7, Section 3.1)

2. The provisions of subsection 3.1 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. (45CSR7, Section 3.2)

3. Standards for Manufacturing Process Source Operations. 4.1. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in subdivisions 4.1.a through 4.1.e. (45CSR10 Section 4)

4. At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of sections 3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 CFR Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director 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. (45CSR10 Section 8.1.a.)

5. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with sections 3, 4 and 5 of this rule by testing and /or monitoring in accordance with one or more of the following: 40 CFR Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. (45CSR10 Section 8.2.c.)

6. Monitoring plans pursuant to subsection 8.2.c shall be submitted to the Director within six (6) months of the effective date of this rule. Approval or denial of such plans shall be within twelve (12) months of the effective date of this rule. (45CSR10 Section 8.2.c.2.)

7. A fuel sampling and analysis program, including a record of fuel consumption, may fulfill the requirements of a monitoring plan for a fuel burning unit(s). The minimum requirements for a fuel sampling and analysis program, including fuel consumption records, shall be established by the Director. (45CSR10 Section 8.2.c.3.)

_X___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1 and 2	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed.
3, 5, 6, 7	Prepare monitoring plan and keep records as required. See Regulation 10 Plan and requirements below.			
4	Conduct testing as required.			

45CSR10:

8.3.a. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to sections 3, 4 or 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to subdivision 8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years.

8.3.b. The owner or operator shall submit a periodic exception report 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.

8.3.c. The owner or operator of a fuel burning unit(s) or a combustion source(s) shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each unit in a manner specified by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.

Are you in compliance with all applicable requirements for this emission unit? __X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
027	Kiln No. 2, Dryer Nos. 3 and 4	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Tunnel Kiln for firing brick. Kiln also provides heat for Dryers No. 3 and No. 4.

Manufacturer:	**Model number:**	**Serial number:**
Constructed on Site	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1971	1971	1983

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 8.25 tons per hour of fired brick (TPH-F)

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
8.25 TPH-F	72,270 TPY-F	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel?	**If yes, is it?**
_X_ Yes ___ No	___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 23.0 MM BTU/HR	**Type and Btu/hr rating of burners:** North American Burners Model 4441-4-A at a rating of 525,000 BTU/Hr for Natural Gas 60 Coal Burners 300,000 BTU/HR

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuels are natural gas and coal.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	trace	NA	~1,000 BTU/CF
Coal	1%	4%	~14,441 BTU/LB

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	13.20	57.82
Nitrogen Oxides (NO_X)	4.21	18.43
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	7.18	31.44
Particulate Matter (PM_{10})	11.55	50.59
Total Particulate Matter (TSP)	14.85	65.04
Sulfur Dioxide (SO_2)	9.90	43.36
Volatile Organic Compounds (VOC)	1.49	6.50
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HF	3.05	13.37
HCL	1.40	6.14
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 11.3, Brick and Structural Clay Product Manufacturing.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. (45CSR7, Section 3.1)

2. The provisions of subsection 3.1 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. (45CSR7, Section 3.2)

3. Standards for Manufacturing Process Source Operations. 4.1. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in subdivisions 4.1.a through 4.1.e. (45CSR10 Section 4)

4. At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of sections 3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 CFR Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director 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. (45CSR10 Section 8.1.a.)

5. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with sections 3, 4 and 5 of this rule by testing and /or monitoring in accordance with one or more of the following: 40 CFR Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. (45CSR10 Section 8.2.c.)

6. Monitoring plans pursuant to subsection 8.2.c shall be submitted to the Director within six (6) months of the effective date of this rule. Approval or denial of such plans shall be within twelve (12) months of the effective date of this rule. (45CSR10 Section 8.2.c.2.)

7. A fuel sampling and analysis program, including a record of fuel consumption, may fulfill the requirements of a monitoring plan for a fuel burning unit(s). The minimum requirements for a fuel sampling and analysis program, including fuel consumption records, shall be established by the Director. (45CSR10 Section 8.2.c.3.)

_X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1 and 2	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed.
3, 5, 6, 7	Prepare monitoring plan and keep records as required. See Regulation 10 Plan and requirements below.			
4	Conduct testing as required.			

45CSR10:

8.3.a. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to sections 3, 4 or 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to subdivision 8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years.

8.3.b. The owner or operator shall submit a periodic exception report 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.

8.3.c. The owner or operator of a fuel burning unit(s) or a combustion source(s) shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each unit in a manner specified by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

***Emission Unit Description* Brick Forming**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
025	Brick Forming	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Brick forming includes the pug mill, vacuum extruder, brick trimming and cutting (including scrap brick belt conveyors returning wet trimmings to pug mill), Sand Hopper (B3), Sand Hopper (B4), Sand Screw Conveyor (SSC), and brick setting machine.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA

Construction date:	**Installation date:**	**Modification date(s):**
1970 1999 for brick setting machine	1970 1999 for brick setting machine	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 75 tph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
75 tph	153,300 tpy	8,760 hours per year

***Fuel Usage Data* (fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.18	0.77
Particulate Matter (PM_{10})	1.26	5.52
Total Particulate Matter (TSP)	2.52	11.04
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 11.3, Table 11.3.1.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. (45CSR7, Section 3.1)

2. The provisions of subsection 3.1 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. (45CSR7, Section 3.2)

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1 and 2	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Emergency Generator**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
040	Emergency Generator	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Generac 1.3 L natural gas fired emergency generator for operations of the control room for the tunnel kilns.

Manufacturer:	**Model number:**	**Serial number:**
Generac	1.3L	NA
Construction date:	**Installation date:**	**Modification date(s):**
1984	1984	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1.3 Liter

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
N/A	N/A	500 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? X Yes ___ No	**If yes, is it?** ___ Indirect Fired X Direct Fired
Maximum design heat input and/or maximum horsepower rating: 159,000 Btu/hr; 79.5 MMBtu/year	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Trace	NA	~1,000 Btu/cf

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.0504	0.0126
Nitrogen Oxides (NO_X)	0.6487	0.1622
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	NA	NA
Particulate Matter (PM_{10})	0.0016	0.0004
Total Particulate Matter (TSP)	0.0016	0.0004
Sulfur Dioxide (SO_2)	0.0001	0.0001
Volatile Organic Compounds (VOC)	0.0188	0.0047
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
VOC HAPS	0.00114	0.0029
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 3.2, Table 3.2-2.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. None
__X__ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) No proposed monitoring of this unit. It is located within the plant and vents its exhaust into the plant building.
Are you in compliance with all applicable requirements for this emission unit? __X_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Sand Dryer**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
037	Sand Dryer	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Sand is dried in an old round brick kiln to remove excess moisture prior to being utilized in the brick making operation.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
Early 1900's	Early 1900's	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): NA

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
NA	120 tons	8,760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? X Yes ___ No	**If yes, is it?** ___ Indirect Fired X Direct Fired
Maximum design heat input and/or maximum horsepower rating: 5 MM Btu/hr, 43,800 MMBtu/year	**Type and Btu/hr rating of burners:** 5 burners 1 MM Btu/hr each

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Trace	NA	~1,000 Btu/cf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.42	1.84
Nitrogen Oxides (NO_X)	0.50	2.19
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.04	0.17
Particulate Matter (PM_{10})	0.04	0.17
Total Particulate Matter (TSP)	0.04	0.17
Sulfur Dioxide (SO_2)	0.01	0.02
Volatile Organic Compounds (VOC)	0.03	0.13
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
VOC HAPS	0.01	0.05
Formaldehyde	0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 1.4, Table 1.4-1 and 1.4-2.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. (45CSR7, Section 3.1)

2. The provisions of subsection 3.1 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. (45CSR7, Section 3.2)

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Record Keeping	Reporting
1 and 2	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed.

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Shale Grinding and Screening**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
006, 008 to 011	Various (See Attachment D)	Enclosures

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Crusher and screens (4 screens) located in the grinding building which reduces the shale to approximately -6 mesh material size. Crusher is a Steadman Grand Slam Impact Crusher, Model GS 4860-AR/HC-T-H-A-X, Serial No. 89075. The screens are fine screens.

Manufacturer:	**Model number:**	**Serial number:**
Various, See Above	Various, See Above	Various, See Above
Construction date: 006 was replaced in 2006 008 to 011 - 1981	**Installation date:** 006 was replaced in 2006 008 to 011 - 1981	**Modification date(s):** NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 75 tph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
75 tph	153,300 tpy	4,160 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.60	0.61
Particulate Matter (PM_{10})	4.80	4.91
Total Particulate Matter (TSP)	9.30	9.50
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 11.3, Table 11.3.1.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. The following requirements are applicable to the crusher (006) only since the crusher is subject to 40CFR60 Subpart OOO - Standards of Performance for Nonmetallic Minerals Processing Plants

a. No owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity. (40 CFR 60.672(c)).

Note: The screens are not subject to 40CFR60 Subpart OOO since the screens were installed prior to the effective date of the subpart which is August 31, 1983.

2. The following requirements are applicable to the crusher (006) and the screens as they are subject to 45CSR7 - To Prevent and Control Particulate Air Pollution from Manufacturing Process and Associated Operations

a. Shall not cause, allow or permit emission of particulate matter into the open air from any process source operation which is darker in shade or appearance than twenty (20) percent opacity (45CSR7, Section 3.1);

b. The above shall not apply to 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 (45CSR7, Section 3.2);

c. 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. (45CSR7, Section 5.1);

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1 and 2	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed

Are you in compliance with all applicable requirements for this emission unit? __X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Conveyor and Equipment Transfer Points**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
003 to 005, 007, 012 to 017, 019 to 021, 023, and 024	Various Conveyors (See Attachment D)	Enclosures

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Conveyors on the raw feed, grinding building, and plant feed system and equipment transfer points for shale transfers.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1981	1981	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 75 tph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
75 tph	153,300 tpy	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.02	0.02
Particulate Matter (PM_{10})	0.16	0.16
Total Particulate Matter (TSP)	0.34	0.34
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 13.2.4.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. The following requirements are applicable to the conveyors as they are subject to 45CSR7 - To Prevent and Control Particulate Air Pollution from Manufacturing Process and Associated Operations

a. Shall not cause, allow or permit emission of particulate matter into the open air from any process source operation which is darker in shade or appearance than twenty (20) percent opacity (45CSR7, Section 3.1);

b. The above shall not apply to 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 (45CSR7, Section 3.2);

c. 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. (45CSR7, Section 5.1);

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Shale Storage**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001, 002, 018, 022	Various	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
001, Open Stockpile No. 1 for quarried shale storage; 002 Truck-Endloader Fed Bin; 018, Covered Stockpile in Grinding Building; and 022, Plant Bin.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1981	1981	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
001 - 9 Acres, 002 - 30 tons, 018 -100 tons, 022 – 20 tons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
75 tph	153,300	8,760

Fuel Usage Data **(fill out all applicable fields)** NA

Does this emission unit combust fuel? ___Yes ___ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.05	0.23
Particulate Matter (PM_{10})	0.34	1.50
Total Particulate Matter (TSP)	0.72	3.18
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Stockpile Equation, See attached calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. The following requirements are applicable to storage as it is subject to 45CSR7 - To Prevent and Control Particulate Air Pollution from Manufacturing Process and Associated Operations

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. (45CSR7, Section 5.2)

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1	None	None	None	None

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Coal Crushing**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
032	CG	DC1

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Coal crusher

Manufacturer:	**Model number:**	**Serial number:**
Atritor	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1984	1984	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 100 tph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1.5 tph	13,140 tpy	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	2.0	9.0
Particulate Matter (PM_{10})	2.0	9.0
Total Particulate Matter (TSP)	2.0	9.0
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section, Table 11.24-2

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. The following requirements are applicable to the coal crushing/grinding as it is subject to 45CSR7 - To Prevent and Control Particulate Air Pollution from Manufacturing Process and Associated Operations

a. Shall not cause, allow or permit emission of particulate matter into the open air from any process source operation which is darker in shade or appearance than twenty (20) percent opacity (45CSR7, Section 3.1);

b. The above shall not apply to 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 (45CSR7, Section 3.2);

c. 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. (45CSR7, Section 5.1);

Note: The coal processing equipment permitted by R13-682 is not subject to 40CFR60 Subpart Y because it does not processes more than 200 tons of coal per day.

_X_ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Coal Conveying and Equipment Transfer Points**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
030, 034, 035, 036	Various	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Coal drag conveyor that feeds the coal bin and transfer points for the coal equipment.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1984	1984	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 100 tph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1.5 to 100 tph	13,140 tpy	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.016	0.002
Particulate Matter (PM_{10})	0.10	0.01
Total Particulate Matter (TSP)	0.22	0.02
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 13.2.4.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. The following requirements are applicable to the conveyors as they are subject to 45CSR7 - To Prevent and Control Particulate Air Pollution from Manufacturing Process and Associated Operations

a. Shall not cause, allow or permit emission of particulate matter into the open air from any process source operation which is darker in shade or appearance than twenty (20) percent opacity (45CSR7, Section 3.1);

b. The above shall not apply to 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 (45CSR7, Section 3.2);

c. 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. (45CSR7, Section 5.1);

Note: The coal processing equipment permitted by R13-682 is not subject to 40CFR60 Subpart Y because it does not processes more than 200 tons of coal per day.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1	Method 22 Monthly	Method 9 Yearly	Maintain records of monitoring and testing for five (5) years.	Protocol as needed.

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Coal Storage**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
028, 029, 031	Coal Storage	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Coal stockpile and coal bins.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1984	1984	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1.5 to 100 tph

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1.5 to 100 tph	13,140 tpy	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	See Conveying and Transfer	
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. The following requirements are applicable to the coal storage as they are subject to 45CSR7 - To Prevent and Control Particulate Air Pollution from Manufacturing Process and Associated Operations

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. (45CSR7, Section 5.2)

Note: The coal processing equipment permitted by R13-682 is not subject to 40CFR60 Subpart Y because it does not processes more than 200 tons of coal per day.

_X_ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1	None	None	None	None

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Vehicle Activity**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
041	Vehicle Activity	Water Roadways

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Roadways at the site for quarry to stockpile (pit road), delivery of materials, shipment/sales of brick, and the endloader activity to feed the shale to the grinding building.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
NA	NA	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): NA

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
See Calculations	See Calculations	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.65	0.73
Particulate Matter (PM_{10})	6.45	7.11
Total Particulate Matter (TSP)	22.54	24.84
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, 13.2.2, Unpaved Roads.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. The following requirements are applicable to the coal storage as they are subject to 45CSR7 - To Prevent and Control Particulate Air Pollution from Manufacturing Process and Associated Operations

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. (45CSR7, Section 5.2)

_X_ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Reference No.	Monitoring	Testing	Recordkeeping	Reporting
1	None	None	Maintain records of the amount of watering conducted with water truck.	None

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Sand Storage**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
038 and 039	Sand Storage (OS2 and CS3)	OS2-N, CS3-FE

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Sand stockpiles

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
NA	NA	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): OS2 – 150 tons, CS3 – 200 tons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
100	200	8,760 hours per year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	Covered stockpiles and sand stockpiles are assumed to have no emissions.	
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

NA

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
_X_ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT G

CONTROL DEVICE FORM(S)

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: DC1	**List all emission units associated with this control device.** Coal Crusher and Separator	
Manufacturer: (installed by) Wagester, Walker, Throton & Co, Inc.	**Model number:** NA	**Installation date:** 1986

Type of Air Pollution Control Device:

__X_ Baghouse/Fabric Filter
___ Venturi Scrubber
___ Multiclone
___ Carbon Bed Adsorber
___ Packed Tower Scrubber
___ Single Cyclone
___ Carbon Drum(s)
___ Other Wet Scrubber
___ Cyclone Bank
___ Catalytic Incinerator
___ Condenser
___ Settling Chamber
___ Thermal Incinerator
___ Flare
___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator
___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter (Coal Dust)	100%	95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
9 Bags 39 Inches in length insulated singed polyester bags, approximately 2,500 cfm at 170 degrees Fahrenheit and 20 ounces of pressure (vacuum), 4:1 Air to Cloth Ratio.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes __X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Visual monitoring to check for holes in bags.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: DC2	**List all emission units associated with this control device.** Dense Phase System	
Manufacturer: (installed by) Wagester, Walker, Throton & Co, Inc.	**Model number:** NA	**Installation date:** 1986

Type of Air Pollution Control Device:

__X_ Baghouse/Fabric Filter
___ Venturi Scrubber
___ Multiclone
___ Carbon Bed Adsorber
___ Packed Tower Scrubber
___ Single Cyclone
___ Carbon Drum(s)
___ Other Wet Scrubber
___ Cyclone Bank
___ Catalytic Incinerator
___ Condenser
___ Settling Chamber
___ Thermal Incinerator
___ Flare
___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator
___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter (Coal Dust)	100%	95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
42Bags 96 Inches

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes __X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Visual monitoring to check for holes in bags.

ATTACHMENT H

COMPLIANCE ASSURANCE MONITORING FORM

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☐ YES ☒ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☐ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION

Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.

PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA			
Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation:	**4b) Pollutant:**	**4c) [a] Indicator No. 1:**	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:			
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:			
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:			
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:			
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):			
[d] Provide the MONITORING FREQUENCY:			
Provide the DATA COLLECTION PROCEDURES that will be used:			
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:			

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

APPENDIX

EMISSION CALCULATIONS

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Summary of Emissions					
Source	**Regulated**	**Potential (Uncontrolled)**		**Actual (Controlled)**	
Description	**Air Pollutant**	**Emissions**		**Emissions**	
		lb/hour	**tpy**	**lb/hour**	**tpy**
Shale Transfer Points	PM	0.96	0.96	0.34	0.34
	PM10	0.45	0.45	0.16	0.16
	PM2.5	0.07	0.07	0.02	0.02
Grinding and Screening	PM	46.50	47.52	9.30	9.50
	PM10	24.00	24.53	4.80	4.91
	PM2.5	3.00	3.07	0.60	0.61
Extrusion Line	PM	12.60	55.19	2.52	11.04
	PM10	6.30	27.59	1.26	5.52
	PM2.5	0.88	3.83	0.18	0.77
Kilns	PM	22.77	99.73	22.77	99.73
For Speciated	PM10	18.73	82.03	18.73	82.03
VOC/VOC HAPS See	PM2.5	7.18	31.44	7.18	31.44
Next Page	SO2	15.43	67.57	15.43	67.57
	NOx	7.10	31.08	7.10	31.08
	CO	19.80	86.72	19.80	86.72
	VOC	0.40	1.74	0.40	1.74
	HF	6.10	26.74	6.10	26.74
	HCL	2.80	12.28	2.80	12.28
	HAP VOCS	0.1448	0.6339	0.1448	0.6339
Coal Fuel System	PM	43.41	189.07	2.22	9.02
	PM10	39.19	171.03	2.10	9.01
	PM2.5	39.03	171.01	2.02	9.00
Natrual Gas Generator	PM	0.0016	0.0004	0.00	0.00
	PM10	0.0016	0.0004	0.00	0.00
	PM2.5	0.0000	0.0000	0.00	0.00
	SO2	0.0001	0.0000	0.00	0.00
	NOx	0.6487	0.1622	0.65	0.16
	CO	0.0504	0.0126	0.05	0.01
	VOC	0.0188	0.0047	0.02	0.00
	HAP VOCS	0.0114	0.0029	0.01	0.00
Sand Transfer	PM	0.9700	0.0060	0.9700	0.0060
	PM10	0.4588	0.0028	0.4588	0.0028
	PM2.5	0.0695	0.0004	0.0695	0.0004
Sand Dryer	PM	0.0400	0.1700	0.04	0.17
	PM10	0.0400	0.1700	0.04	0.17
	PM2.5	0.0400	0.1700	0.04	0.17
	SO2	0.0100	0.0200	0.01	0.02
	NOx	0.5000	2.1900	0.50	2.19
	CO	0.4200	1.8400	0.42	1.84
	VOC	0.0300	0.1300	0.03	0.13
	HAP VOCS	0.0100	0.0500	0.01	0.05
	HAP METALS	0.0100	0.0100	0.01	0.01
Point Sources	**PM**	**127.25**	**392.65**	**38.16**	**129.81**
	PM10	**89.17**	**305.81**	**27.55**	**101.80**
	PM2.5	**50.27**	**209.59**	**10.11**	**42.01**
	SO2	**15.44**	**67.59**	**15.44**	**67.59**
	NOx	**8.25**	**33.43**	**8.25**	**33.43**
	CO	**20.27**	**88.57**	**20.27**	**88.57**
	VOC	**0.45**	**1.87**	**0.45**	**1.87**
	HF	**6.10**	**26.74**	**6.10**	**26.74**
	HCL	**2.80**	**12.28**	**2.80**	**12.28**
	HAP VOCS	**0.17**	**0.69**	**0.17**	**0.69**
	HAP METALS	**0.01**	**0.01**	**0.01**	**0.01**
Stockpile	PM	0.72	3.18	0.72	3.18
	PM10	0.34	1.50	0.34	1.50
	PM2.5	0.05	0.23	0.05	0.23
Haulroads	PM	90.12	99.31	22.54	24.84
	PM10	25.73	28.42	6.45	7.11
	PM2.5	2.60	2.87	0.65	0.73
Fugitive Sources	PM	90.84	102.49	23.26	28.02
	PM10	26.07	29.92	6.79	8.61
	PM2.5	2.65	3.10	0.70	0.96
Facility Total	**Total PM =**	**218.09**	**495.14**	**61.42**	**157.83**
	Total PM10 =	**115.24**	**335.73**	**34.34**	**110.41**
	Total PM2.5 =	**52.92**	**212.69**	**10.81**	**42.97**

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Speciated VOC and VOC HAPS from Kilns				
Regulated	**Potential (Uncontrolled)**		**Actual (Controlled)**	
Air Pollutant	**Emissions**		**Emissions**	
	lb/hour	**tpy**	**lb/hour**	**tpy**
1,1-dichloroethane	8.00E-05	3.60E-04	8.00E-05	3.60E-04
1,1,1-trichloroethane	2.80E-04	1.22E-03	2.80E-04	1.22E-03
1,4-dichlorobenzene	8.00E-04	3.46E-03	8.00E-04	3.46E-03
2-butanone	4.12E-03	1.81E-02	4.12E-03	1.81E-02
2-hexanone (1)	1.40E-03	6.14E-03	1.40E-03	6.14E-03
2-methylnaphthalene	9.40E-04	4.12E-03	9.40E-04	4.12E-03
2-methylphenol	4.00E-05	1.60E-04	4.00E-05	1.60E-04
Acetone	2.81E-02	1.23E-01	2.81E-02	1.23E-01
Acrylonitrile	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	4.79E-02	2.10E-01	4.79E-02	2.10E-01
Benzoic acid	4.12E-03	1.81E-02	4.12E-03	1.81E-02
Bis(2-ethylhexy)phthalate	3.30E-02	1.45E-01	3.30E-02	1.45E-01
Bromomethane	4.00E-04	1.74E-03	4.00E-04	1.74E-03
Butylbenzylphthalate	3.00E-04	1.30E-03	3.00E-04	1.30E-03
Carbon disulfide	7.00E-04	3.10E-03	7.00E-04	3.10E-03
Carbon tetrachloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorine	2.15E-02	9.40E-02	2.15E-02	9.40E-02
Chlorobenzene	3.40E-04	1.52E-03	3.40E-04	1.52E-03
Chloroethane	9.40E-03	4.12E-02	9.40E-03	4.12E-02
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	1.11E-02	4.84E-02	1.11E-02	4.84E-02
Dibenzofuran	0.00E+00	2.00E-05	0.00E+00	2.00E-05
Di-n-butylphthalate	2.32E-03	1.01E-02	2.32E-03	1.01E-02
Di-n-octylphthalate	2.00E-04	8.60E-04	2.00E-04	8.60E-04
Diethylphthalate	3.96E-03	1.73E-02	3.96E-03	1.73E-02
Dimethylphthalate	2.00E-05	6.00E-05	2.00E-05	6.00E-05
Ethylbenzene	7.20E-04	3.18E-03	7.20E-04	3.18E-03
Iodomethane (2)	1.54E-03	6.72E-03	1.54E-03	6.72E-03
Isophorone	5.00E-04	2.16E-03	5.00E-04	2.16E-03
M-/p-xylene	2.14E-03	9.40E-03	2.14E-03	9.40E-03
Methylene chloride	2.00E-05	6.00E-05	2.00E-05	6.00E-05
Naphthalene	1.08E-03	4.70E-03	1.08E-03	4.70E-03
O-xylene	9.60E-04	4.20E-03	9.60E-04	4.20E-03
Phenol	1.42E-03	6.22E-03	1.42E-03	6.22E-03
Styrene	3.40E-04	1.44E-03	3.40E-04	1.44E-03
Tetrachloroethane	4.00E-05	2.00E-04	4.00E-05	2.00E-04
Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	4.12E-03	1.81E-02	4.12E-03	1.81E-02
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichlorofluoromethane	2.40E-04	1.02E-03	2.40E-04	1.02E-03
Total VOC	**1.84E-01**	**8.06E-01**	**1.84E-01**	**8.06E-01**
Non-HAP	**3.92E-02**	**1.72E-01**	**3.92E-02**	**1.72E-01**
HAP	**1.45E-01**	**6.34E-01**	**1.45E-01**	**6.34E-01**

HAP

(1) METHYL N-BUTYL KETONE
(2) METHYL IODIDE

Continental Brick **POTESTA & ASSOCIATES, INC.**
Martinsburg Facility **Project No.: 0101-07-0327**

By: PEW Checked By: JMC
Date: Janaury 18, 2007 Date: 3/5/2007

Batch or Continuous Drops: Shale Transfers

Defining transfer point empirical expression variables, where:

e =	?	lb/ton
k =	0.74	dimensionless
U =	7	mph
M =	10	%

Calculating transfer point emission factor using Equation 1:

E =	0.0004	lb/ton

Transfer Capacities	
tons/hour	**tons/year**
75	153,300

Rounding to = 2

ID	Control Device		Emissions			
			Uncontrolled		Controlled	
	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
TP1	MD	0	0.03	0.03	0.03	0.03
TP2	FE	80	0.03	0.03	0.01	0.01
TP3	FE	80	0.03	0.03	0.01	0.01
TP4	FE	80	0.03	0.03	0.01	0.01
TP5	FE	80	0.03	0.03	0.01	0.01
TP6	FE	80	0.03	0.03	0.01	0.01
TP7	FE	80	0.03	0.03	0.01	0.01
TP8	FE	80	0.03	0.03	0.01	0.01
TP9	FE	80	0.03	0.03	0.01	0.01
TP10	FE	80	0.03	0.03	0.01	0.01
TP11	FE	80	0.03	0.03	0.01	0.01
TP12	FE	80	0.03	0.03	0.01	0.01
TP13	FE	80	0.03	0.03	0.01	0.01
TP14	FE	80	0.03	0.03	0.01	0.01
TP15	FE	80	0.03	0.03	0.01	0.01
TP16	FE	80	0.03	0.03	0.01	0.01
TP17	FE	80	0.03	0.03	0.01	0.01
TP18	FE	80	0.03	0.03	0.01	0.01
TP19	FE	80	0.03	0.03	0.01	0.01
TP20	FE	80	0.03	0.03	0.01	0.01
TP21	FE	80	0.03	0.03	0.01	0.01
TP22	FE	80	0.03	0.03	0.01	0.01
TP23	FE	80	0.03	0.03	0.01	0.01
TP24	FE	80	0.03	0.03	0.01	0.01
TP25	FE	80	0.03	0.03	0.01	0.01
TP26	FE	80	0.03	0.03	0.01	0.01
TP27	FE	80	0.03	0.03	0.01	0.01

Continued on Next Page

Continental Brick **POTESTA & ASSOCIATES, INC.**
Martinsburg Facility **Project No.: 0101-07-0327**

By: PEW Checked By: JMC
Date: Janaury 18, 2007 Date: 3/5/2007

Batch or Continuous Drops: Shale Transfers

Defining transfer point empirical expression variables, where:

e =	?	lb/ton
k =	0.74	dimensionless
U =	7	mph
M =	10	%

Calculating transfer point emission factor using Equation 1:

E =	0.0004	lb/ton

Transfer Capacities	
tons/hour	**tons/year**
75	153,300

Rounding to = 2

ID	Control Device		Emissions			
			Uncontrolled		Controlled	
	Type	**Effic(%)**	**(lb/hr)**	**(tpy)**	**(lb/hr)**	**(tpy)**
TP28	FE	80	0.03	0.03	0.01	0.01
TP29	FE	80	0.03	0.03	0.01	0.01
TP30	FE	80	0.03	0.03	0.01	0.01
TP31	FE	80	0.03	0.03	0.01	0.01
TP32	FE	80	0.03	0.03	0.01	0.01
		PM	**0.96**	**0.96**	**0.34**	**0.34**
		PM10	**0.45**	**0.45**	**0.16**	**0.16**
		PM2.5	**0.07**	**0.07**	**0.02**	**0.02**

Reference: AP-42 13.2.4, Aggregate Handling and Storage Piles

K factor for equation:

PM (<30 micons) =	0.74
PM10 (<10 micons) =	0.35
PM2.5 (<2.5 micons) =	0.053

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

PM Grinding and Screening (CR1 and SC1-4)

Rounding to = 2

ID	Transfer Capacities		e	Control		Emissions			
				Device		Uncontrolled		Controlled	
	tons/hour	tons/year	lb/T	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	75.00	153,300	0.62	FE	80	46.50	47.52	9.30	9.50
PM10	75.00	153,300	0.32	FE	80	24.00	24.53	4.80	4.91
PM2.5	75.00	153,300	0.04	FE	80	3.00	3.07	0.60	0.61

Emission Factor Reference and Determination

The emission factor is based on AP-42, Table 11.3-1, for Grinding and Screening Operations with Fabric Filter. The reference states this is for material with a 6.5 percent moisture content. The estimated fabric filter control is deducted out of the stated emissions factor.

	PM	PM10	PM2.5
Grinding and Screening Operations with Fabric Filter	0.0062	0.0032	NA
Assumed Control Percentage for Fabric Filter	99		
Estimated Grinding and Screening Operations **without** Fabric Filter	0.62	0.32	0.04

Continental Brick **POTESTA & ASSOCIATES, INC.**
Martinsburg Facility **Project No.: 0101-07-0327**

By: PEW Checked By: JMC
Date: Janaury 18, 2007 Date: 3/5/2007

Brick Forming Rounding to = 2

ID	Transfer Capacities		e	Control		Emissions			
				Device		Uncontrolled		Controlled	
	tons/hour	tons/year	lb/T	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	17.50	153,300	0.72	FE	80	12.60	55.19	2.52	11.04
PM10	17.50	153,300	0.36	FE	80	6.30	27.59	1.26	5.52
PM2.5	17.50	153,300	0.05	FE	80	0.88	3.83	0.18	0.77

Emission Factor Reference and Determination

The emission factor is based on AP-42, Table 11.3-1, for Extrusion Line with Fabric Filter. The estimated fabric filter control is deducted out of the stated emissions factor.

	PM*	PM10	PM2.5
Extrusion Line with Fabric Filter	NA	0.0036	NA
Assumed Control Percentage for Fabric Filter	99		
Estimated Grinding and Screening Operations **without** Fabric Filter	0.72	0.36	0.05

*PM estimated at two times the PM10 value.

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Kiln No. 1

	TPH(1)	TPY
Tons Fired	8.25	72,270

Natural Gas Firing

Rounding to = 2

Pollutant	**EF**	**Emissions**				**EF Reference**	
		Uncontrolled		**Controlled**			
	lb/T	**(lb/hr)**	**(tpy)**	**(lb/hr)**	**(tpy)**		
PM	0.96	7.92	34.69	7.92	34.69	Table 11.3-2	
PM10	0.87	7.18	31.44	7.18	31.44	Table 11.3-2	
PM2.5	ND					Table 11.3-2	
SO2	0.67	5.53	24.21	5.53	24.21	Table 11.3-3	
NOx	0.35	2.89	12.65	2.89	12.65	Table 11.3-3	
CO	1.2	9.90	43.36	9.90	43.36	Table 11.3-3	
VOC	0.024	0.20	0.87	0.20	0.87	Table 11.3-5	
HF	0.37	3.05	13.37	3.05	13.37	Table 11.3-4	
HCL	0.17	1.40	6.14	1.40	6.14	Table 11.3-4	
Volitaile Organics	Rounded to	5					CAS No.
1,1-dichloroethane	ND						
1,1,1-trichloroethane	4.70E-06	0.00004	0.00017	0.00004	0.00017	Table 11.3-6	71-55-6
1,4-dichlorobenzene	4.80E-05	0.00040	0.00173	0.00040	0.00173	Table 11.3-6	106-46-7
2-butanone	2.20E-04	0.00182	0.00795	0.00182	0.00795	Table 11.3-6	78-93-3
2-hexanone	8.50E-05	0.00070	0.00307	0.00070	0.00307	Table 11.3-6	591-78-6
2-methylnaphthalene	5.70E-05	0.00047	0.00206	0.00047	0.00206	Table 11.3-6	91-57-6
2-methylphenol	ND						
Acetone	1.70E-03	0.01403	0.06143	0.01403	0.06143	Table 11.3-6	67-64-1
Acrylonitrile	ND						
Benzene	2.90E-03	0.02393	0.10479	0.02393	0.10479	Table 11.3-6	71-43-2
Benzoic acid	ND						
Bis(2-ethylhexy)phthalate	2.00E-03	0.01650	0.07227	0.01650	0.07227	Table 11.3-6	117-81-7
Bromomethane	ND						
Butylbenzylphthalate	1.80E-05	0.00015	0.00065	0.00015	0.00065	Table 11.3-6	85-68-7
Carbon disulfide	4.30E-05	0.00035	0.00155	0.00035	0.00155	Table 11.3-6	75-15-0
Carbon tetrachloride	ND						
Chlorine	1.30E-03	0.01073	0.04698	0.01073	0.04698	Table 11.3-6	7782-50-5
Chlorobenzene	ND						
Chloroethane	5.70E-04	0.00470	0.02060	0.00470	0.02060	Table 11.3-6	75-00-3
Chloroform	ND						
Chloromethane	6.70E-04	0.00553	0.02421	0.00553	0.02421	Table 11.3-6	74-87-3
Dibenzofuran	ND						
Di-n-butylphthalate	1.40E-04	0.00116	0.00506	0.00116	0.00506	Table 11.3-6	84-74-2
Di-n-octylphthalate	ND						
Diethylphthalate	2.40E-04	0.00198	0.00867	0.00198	0.00867	Table 11.3-6	84-66-2
Dimethylphthalate	ND						
Ethylbenzene	4.40E-05	0.00036	0.00159	0.00036	0.00159	Table 11.3-6	100-41-4
Iodomethane	9.30E-05	0.00077	0.00336	0.00077	0.00336	Table 11.3-6	74-88-4
Isophorone	ND						
M-/p-xylene	6.70E-05	0.00055	0.00242	0.00055	0.00242	Table 11.3-6	1330-20-7
Methylene chloride	ND						
Naphthalene	6.50E-05	0.00054	0.00235	0.00054	0.00235	Table 11.3-6	91-20-3
O-xylene	5.80E-05	0.00048	0.00210	0.00048	0.00210	Table 11.3-6	95-47-6
Phenol	8.60E-05	0.00071	0.00311	0.00071	0.00311	Table 11.3-6	108-95-2
Styrene	2.00E-05	0.00017	0.00072	0.00017	0.00072	Table 11.3-6	100-42-5
Tetrachloroethane	2.80E-06	0.00002	0.00010	0.00002	0.00010	Table 11.3-6	127-18-4
Trichloroethane	ND						
Toluene	1.60E-04	0.00132	0.00578	0.00132	0.00578	Table 11.3-6	108-88-3
Vinyl acetate	ND						
Trichlorofluoromethane	ND						
HAP							

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Kiln No. 1

Coal Firing

Rounding to = 2

Pollutant	**EF**	**Emissions**				**EF Reference**	
		Uncontrolled		**Controlled**			
	lb/T	**(lb/hr)**	**(tpy)**	**(lb/hr)**	**(tpy)**		
PM	1.8	14.85	65.04	14.85	65.04	Table 11.3-2	
PM10	1.40	11.55	50.59	11.55	50.59	Table 11.3-2	
PM2.5	0.87	7.18	31.44	7.18	31.44	Table 11.3-2	
SO2	1.2	9.90	43.36	9.90	43.36	Table 11.3-3	
NOx	0.51	4.21	18.43	4.21	18.43	Table 11.3-3	
CO	0.8	6.60	28.91	6.60	28.91	Table 11.3-3	
VOC	0.024	0.20	0.87	0.20	0.87	Table 11.3-5	
HF	0.17	1.40	6.14	1.40	6.14	Table 11.3-4	
HCL	0.17	1.40	6.14	1.40	6.14	Table 11.3-4	
Volitaile Organics	**Rounded to**	**5**					**CAS No.**
1,1-dichloroethane	5.00E-06	0.00004	0.00018	0.00004	0.00018	Table 11.3-6	75-34-3
1,1,1-trichloroethane	1.70E-05	0.00014	0.00061	0.00014	0.00061	Table 11.3-6	71-55-6
1,4-dichlorobenzene	3.20E-06	0.00003	0.00012	0.00003	0.00012	Table 11.3-6	106-46-7
2-butanone	2.50E-04	0.00206	0.00903	0.00206	0.00903	Table 11.3-6	78-93-3
2-hexanone	9.40E-07	0.00001	0.00003	0.00001	0.00003	Table 11.3-6	591-78-6
2-methylnaphthalene	1.70E-06	0.00001	0.00006	0.00001	0.00006	Table 11.3-6	91-57-6
2-methylphenol	2.20E-06	0.00002	0.00008	0.00002	0.00008	Table 11.3-6	95-48-7
Acetone	6.80E-04	0.00561	0.02457	0.00561	0.02457	Table 11.3-6	67-64-1
Acrylonitrile	ND						
Benzene	2.90E-04	0.00239	0.01048	0.00239	0.01048	Table 11.3-6	71-43-2
Benzoic acid	2.50E-04	0.00206	0.00903	0.00206	0.00903	Table 11.3-6	65-85-0
Bis(2-ethylhexy)phthalate	7.30E-05	0.00060	0.00264	0.00060	0.00264	Table 11.3-6	117-81-7
Bromomethane	2.40E-05	0.00020	0.00087	0.00020	0.00087	Table 11.3-6	74-83-9
Butylbenzylphthalate	1.20E-06	0.00001	0.00004	0.00001	0.00004	Table 11.3-6	85-68-7
Carbon disulfide	2.30E-06	0.00002	0.00008	0.00002	0.00008	Table 11.3-6	75-15-0
Carbon tetrachloride	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	56-23-5
Chlorine	ND						
Chlorobenzene	2.10E-05	0.00017	0.00076	0.00017	0.00076	Table 11.3-6	108-90-7
Chloroethane	1.10E-05	0.00009	0.00040	0.00009	0.00040	Table 11.3-6	75-00-3
Chloroform	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	67-66-3
Chloromethane	1.10E-04	0.00091	0.00397	0.00091	0.00397	Table 11.3-6	74-87-3
Dibenzofuran	3.60E-07	0.00000	0.00001	0.00000	0.00001	Table 11.3-6	132-64-9
Di-n-butylphthalate	ND						
Di-n-octylphthalate	1.20E-05	0.00010	0.00043	0.00010	0.00043	Table 11.3-6	NA
Diethylphthalate	1.40E-06	0.00001	0.00005	0.00001	0.00005	Table 11.3-6	84-66-2
Dimethylphthalate	7.80E-07	0.00001	0.00003	0.00001	0.00003	Table 11.3-6	131-11-3
Ethylbenzene	2.10E-05	0.00017	0.00076	0.00017	0.00076	Table 11.3-6	100-41-4
Iodomethane	ND						
Isophorone	3.00E-05	0.00025	0.00108	0.00025	0.00108	Table 11.3-6	78-59-1
M-/p-xylene	1.30E-04	0.00107	0.00470	0.00107	0.00470	Table 11.3-6	1330-20-7
Methylene chloride	8.00E-07	0.00001	0.00003	0.00001	0.00003	Table 11.3-6	75-09-2
Naphthalene	6.90E-06	0.00006	0.00025	0.00006	0.00025	Table 11.3-6	91-20-3
O-xylene	4.70E-05	0.00039	0.00170	0.00039	0.00170	Table 11.3-6	95-47-6
Phenol	3.50E-05	0.00029	0.00126	0.00029	0.00126	Table 11.3-6	108-95-2
Styrene	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	100-42-5
Tetrachloroethane	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	127-18-4
Trichloroethane	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	71-55-6
Toluene	2.50E-04	0.00206	0.00903	0.00206	0.00903	Table 11.3-6	108-88-3
Vinyl acetate	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	108-05-4
Trichlorofluoromethane	1.40E-05	0.00012	0.00051	0.00012	0.00051	Table 11.3-6	75-69-4
HAP							

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Kiln No. 1

Maximum Emissions

Pollutant	Emissions			
	Uncontrolled		Controlled	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	14.85	65.04	14.85	65.04
PM10	11.55	50.59	11.55	50.59
PM2.5	7.18	31.44	7.18	31.44
SO2	9.90	43.36	9.90	43.36
NOx	4.21	18.43	4.21	18.43
CO	9.90	43.36	9.90	43.36
VOC	0.20	0.87	0.20	0.87
HF	3.05	13.37	3.05	13.37
HCL	1.40	6.14	1.40	6.14
Volitaile Organics				
1,1-dichloroethane	0.00004	0.00018	0.00004	0.00018
1,1,1-trichloroethane	0.00014	0.00061	0.00014	0.00061
1,4-dichlorobenzene	0.00040	0.00173	0.00040	0.00173
2-butanone	0.00206	0.00903	0.00206	0.00903
2-hexanone	0.00070	0.00307	0.00070	0.00307
2-methylnaphthalene	0.00047	0.00206	0.00047	0.00206
2-methylphenol	0.00002	0.00008	0.00002	0.00008
Acetone	0.01403	0.06143	0.01403	0.06143
Acrylonitrile	0.00000	0.00000	0.00000	0.00000
Benzene	0.02393	0.10479	0.02393	0.10479
Benzoic acid	0.00206	0.00903	0.00206	0.00903
Bis(2-ethylhexy)phthalate	0.01650	0.07227	0.01650	0.07227
Bromomethane	0.00020	0.00087	0.00020	0.00087
Butylbenzylphthalate	0.00015	0.00065	0.00015	0.00065
Carbon disulfide	0.00035	0.00155	0.00035	0.00155
Carbon tetrachloride	0.00000	0.00000	0.00000	0.00000
Chlorine	0.01073	0.04698	0.01073	0.04698
Chlorobenzene	0.00017	0.00076	0.00017	0.00076
Chloroethane	0.00470	0.02060	0.00470	0.02060
Chloroform	0.00000	0.00000	0.00000	0.00000
Chloromethane	0.00553	0.02421	0.00553	0.02421
Dibenzofuran	0.00000	0.00001	0.00000	0.00001
Di-n-butylphthalate	0.00116	0.00506	0.00116	0.00506
Di-n-octylphthalate	0.00010	0.00043	0.00010	0.00043
Diethylphthalate	0.00198	0.00867	0.00198	0.00867
Dimethylphthalate	0.00001	0.00003	0.00001	0.00003
Ethylbenzene	0.00036	0.00159	0.00036	0.00159
Iodomethane	0.00077	0.00336	0.00077	0.00336
Isophorone	0.00025	0.00108	0.00025	0.00108
M-/p-xylene	0.00107	0.00470	0.00107	0.00470
Methylene chloride	0.00001	0.00003	0.00001	0.00003
Naphthalene	0.00054	0.00235	0.00054	0.00235
O-xylene	0.00048	0.00210	0.00048	0.00210
Phenol	0.00071	0.00311	0.00071	0.00311
Styrene	0.00017	0.00072	0.00017	0.00072
Tetrachloroethane	0.00002	0.00010	0.00002	0.00010
Trichloroethane	0.00000	0.00000	0.00000	0.00000
Toluene	0.00206	0.00903	0.00206	0.00903
Vinyl acetate	0.00000	0.00000	0.00000	0.00000
Trichlorofluoromethane	0.00012	0.00051	0.00012	0.00051
HAP				

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Kiln No. 2

	TPH(1)	TPY
Tons Fired	8.25	72,270

Natural Gas Firing

Rounding to = 2

Pollutant	**EF**	**Emissions**				**EF Reference**	
		Uncontrolled		**Controlled**			
	lb/T	**(lb/hr)**	**(tpy)**	**(lb/hr)**	**(tpy)**		
PM	0.96	7.92	34.69	7.92	34.69	Table 11.3-2	
PM10	0.87	7.18	31.44	7.18	31.44	Table 11.3-2	
PM2.5	ND					Table 11.3-2	
SO2	0.67	5.53	24.21	5.53	24.21	Table 11.3-3	
NOx	0.35	2.89	12.65	2.89	12.65	Table 11.3-3	
CO	1.2	9.90	43.36	9.90	43.36	Table 11.3-3	
VOC	0.024	0.20	0.87	0.20	0.87	Table 11.3-5	
HF	0.37	3.05	13.37	3.05	13.37	Table 11.3-4	
HCL	0.17	1.40	6.14	1.40	6.14	Table 11.3-4	
Volitaile Organics	Rounded to	5					CAS No.
1,1-dichloroethane	ND						
1,1,1-trichloroethane	4.70E-06	0.00004	0.00017	0.00004	0.00017	Table 11.3-6	71-55-6
1,4-dichlorobenzene	4.80E-05	0.00040	0.00173	0.00040	0.00173	Table 11.3-6	106-46-7
2-butanone	2.20E-04	0.00182	0.00795	0.00182	0.00795	Table 11.3-6	78-93-3
2-hexanone	8.50E-05	0.00070	0.00307	0.00070	0.00307	Table 11.3-6	591-78-6
2-methylnaphthalene	5.70E-05	0.00047	0.00206	0.00047	0.00206	Table 11.3-6	91-57-6
2-methylphenol	ND						
Acetone	1.70E-03	0.01403	0.06143	0.01403	0.06143	Table 11.3-6	67-64-1
Acrylonitrile	ND						
Benzene	2.90E-03	0.02393	0.10479	0.02393	0.10479	Table 11.3-6	71-43-2
Benzoic acid	ND						
Bis(2-ethylhexy)phthalate	2.00E-03	0.01650	0.07227	0.01650	0.07227	Table 11.3-6	117-81-7
Bromomethane	ND						
Butylbenzylphthalate	1.80E-05	0.00015	0.00065	0.00015	0.00065	Table 11.3-6	85-68-7
Carbon disulfide	4.30E-05	0.00035	0.00155	0.00035	0.00155	Table 11.3-6	75-15-0
Carbon tetrachloride	ND						
Chlorine	1.30E-03	0.01073	0.04698	0.01073	0.04698	Table 11.3-6	7782-50-5
Chlorobenzene	ND						
Chloroethane	5.70E-04	0.00470	0.02060	0.00470	0.02060	Table 11.3-6	75-00-3
Chloroform	ND						
Chloromethane	6.70E-04	0.00553	0.02421	0.00553	0.02421	Table 11.3-6	74-87-3
Dibenzofuran	ND						
Di-n-butylphthalate	1.40E-04	0.00116	0.00506	0.00116	0.00506	Table 11.3-6	84-74-2
Di-n-octylphthalate	ND						
Diethylphthalate	2.40E-04	0.00198	0.00867	0.00198	0.00867	Table 11.3-6	84-66-2
Dimethylphthalate	ND						
Ethylbenzene	4.40E-05	0.00036	0.00159	0.00036	0.00159	Table 11.3-6	100-41-4
Iodomethane	9.30E-05	0.00077	0.00336	0.00077	0.00336	Table 11.3-6	74-88-4
Isophorone	ND						
M-/p-xylene	6.70E-05	0.00055	0.00242	0.00055	0.00242	Table 11.3-6	1330-20-7
Methylene chloride	ND						
Naphthalene	6.50E-05	0.00054	0.00235	0.00054	0.00235	Table 11.3-6	91-20-3
O-xylene	5.80E-05	0.00048	0.00210	0.00048	0.00210	Table 11.3-6	95-47-6
Phenol	8.60E-05	0.00071	0.00311	0.00071	0.00311	Table 11.3-6	108-95-2
Styrene	2.00E-05	0.00017	0.00072	0.00017	0.00072	Table 11.3-6	100-42-5
Tetrachloroethane	2.80E-06	0.00002	0.00010	0.00002	0.00010	Table 11.3-6	127-18-4
Trichloroethane	ND						
Toluene	1.60E-04	0.00132	0.00578	0.00132	0.00578	Table 11.3-6	108-88-3
Vinyl acetate	ND						
Trichlorofluoromethane	ND						
HAP							

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Kiln No. 2

Coal Firing

Rounding to = 2

Pollutant	**EF**	**Emissions**				**EF Reference**	
		Uncontrolled		**Controlled**			
	lb/T	**(lb/hr)**	**(tpy)**	**(lb/hr)**	**(tpy)**		
PM	1.8	14.85	65.04	14.85	65.04	Table 11.3-2	
PM10	1.40	11.55	50.59	11.55	50.59	Table 11.3-2	
PM2.5	0.87	7.18	31.44	7.18	31.44	Table 11.3-2	
SO2	1.2	9.90	43.36	9.90	43.36	Table 11.3-3	
NOx	0.51	4.21	18.43	4.21	18.43	Table 11.3-3	
CO	0.8	6.60	28.91	6.60	28.91	Table 11.3-3	
VOC	0.024	0.20	0.87	0.20	0.87	Table 11.3-5	
HF	0.17	1.40	6.14	1.40	6.14	Table 11.3-4	
HCL	0.17	1.40	6.14	1.40	6.14	Table 11.3-4	
Volitaile Organics	Rounded to	5					CAS No.
1,1-dichloroethane	5.00E-06	0.00004	0.00018	0.00004	0.00018	Table 11.3-6	75-34-3
1,1,1-trichloroethane	1.70E-05	0.00014	0.00061	0.00014	0.00061	Table 11.3-6	71-55-6
1,4-dichlorobenzene	3.20E-06	0.00003	0.00012	0.00003	0.00012	Table 11.3-6	106-46-7
2-butanone	2.50E-04	0.00206	0.00903	0.00206	0.00903	Table 11.3-6	78-93-3
2-hexanone	9.40E-07	0.00001	0.00003	0.00001	0.00003	Table 11.3-6	591-78-6
2-methylnaphthalene	1.70E-06	0.00001	0.00006	0.00001	0.00006	Table 11.3-6	91-57-6
2-methylphenol	2.20E-06	0.00002	0.00008	0.00002	0.00008	Table 11.3-6	95-48-7
Acetone	6.80E-04	0.00561	0.02457	0.00561	0.02457	Table 11.3-6	67-64-1
Acrylonitrile	ND						
Benzene	2.90E-04	0.00239	0.01048	0.00239	0.01048	Table 11.3-6	71-43-2
Benzoic acid	2.50E-04	0.00206	0.00903	0.00206	0.00903	Table 11.3-6	65-85-0
Bis(2-ethylhexy)phthalate	7.30E-05	0.00060	0.00264	0.00060	0.00264	Table 11.3-6	117-81-7
Bromomethane	2.40E-05	0.00020	0.00087	0.00020	0.00087	Table 11.3-6	74-83-9
Butylbenzylphthalate	1.20E-06	0.00001	0.00004	0.00001	0.00004	Table 11.3-6	85-68-7
Carbon disulfide	2.30E-06	0.00002	0.00008	0.00002	0.00008	Table 11.3-6	75-15-0
Carbon tetrachloride	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	56-23-5
Chlorine	ND						
Chlorobenzene	2.10E-05	0.00017	0.00076	0.00017	0.00076	Table 11.3-6	108-90-7
Chloroethane	1.10E-05	0.00009	0.00040	0.00009	0.00040	Table 11.3-6	75-00-3
Chloroform	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	67-66-3
Chloromethane	1.10E-04	0.00091	0.00397	0.00091	0.00397	Table 11.3-6	74-87-3
Dibenzofuran	3.60E-07	0.00000	0.00001	0.00000	0.00001	Table 11.3-6	132-64-9
Di-n-butylphthalate	ND						
Di-n-octylphthalate	1.20E-05	0.00010	0.00043	0.00010	0.00043	Table 11.3-6	NA
Diethylphthalate	1.40E-06	0.00001	0.00005	0.00001	0.00005	Table 11.3-6	84-66-2
Dimethylphthalate	7.80E-07	0.00001	0.00003	0.00001	0.00003	Table 11.3-6	131-11-3
Ethylbenzene	2.10E-05	0.00017	0.00076	0.00017	0.00076	Table 11.3-6	100-41-4
Iodomethane	ND						
Isophorone	3.00E-05	0.00025	0.00108	0.00025	0.00108	Table 11.3-6	78-59-1
M-/p-xylene	1.30E-04	0.00107	0.00470	0.00107	0.00470	Table 11.3-6	1330-20-7
Methylene chloride	8.00E-07	0.00001	0.00003	0.00001	0.00003	Table 11.3-6	75-09-2
Naphthalene	6.90E-06	0.00006	0.00025	0.00006	0.00025	Table 11.3-6	91-20-3
O-xylene	4.70E-05	0.00039	0.00170	0.00039	0.00170	Table 11.3-6	95-47-6
Phenol	3.50E-05	0.00029	0.00126	0.00029	0.00126	Table 11.3-6	108-95-2
Styrene	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	100-42-5
Tetrachloroethane	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	127-18-4
Trichloroethane	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	71-55-6
Toluene	2.50E-04	0.00206	0.00903	0.00206	0.00903	Table 11.3-6	108-88-3
Vinyl acetate	1.00E-07	0.00000	0.00000	0.00000	0.00000	Table 11.3-6	108-05-4
Trichlorofluoromethane	1.40E-05	0.00012	0.00051	0.00012	0.00051	Table 11.3-6	75-69-4
HAP							

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Kiln No. 2

Maximum Emissions

Pollutant	Emissions			
	Uncontrolled		Controlled	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	14.85	65.04	14.85	65.04
PM10	11.55	50.59	11.55	50.59
PM2.5	7.18	31.44	7.18	31.44
SO2	9.90	43.36	9.90	43.36
NOx	4.21	18.43	4.21	18.43
CO	9.90	43.36	9.90	43.36
VOC	0.20	0.87	0.20	0.87
HF	3.05	13.37	3.05	13.37
HCL	1.40	6.14	1.40	6.14
Volitaile Organics				
1,1-dichloroethane	0.00004	0.00018	0.00004	0.00018
1,1,1-trichloroethane	0.00014	0.00061	0.00014	0.00061
1,4-dichlorobenzene	0.00040	0.00173	0.00040	0.00173
2-butanone	0.00206	0.00903	0.00206	0.00903
2-hexanone	0.00070	0.00307	0.00070	0.00307
2-methylnaphthalene	0.00047	0.00206	0.00047	0.00206
2-methylphenol	0.00002	0.00008	0.00002	0.00008
Acetone	0.01403	0.06143	0.01403	0.06143
Acrylonitrile	0.00000	0.00000	0.00000	0.00000
Benzene	0.02393	0.10479	0.02393	0.10479
Benzoic acid	0.00206	0.00903	0.00206	0.00903
Bis(2-ethylhexy)phthalate	0.01650	0.07227	0.01650	0.07227
Bromomethane	0.00020	0.00087	0.00020	0.00087
Butylbenzylphthalate	0.00015	0.00065	0.00015	0.00065
Carbon disulfide	0.00035	0.00155	0.00035	0.00155
Carbon tetrachloride	0.00000	0.00000	0.00000	0.00000
Chlorine	0.01073	0.04698	0.01073	0.04698
Chlorobenzene	0.00017	0.00076	0.00017	0.00076
Chloroethane	0.00470	0.02060	0.00470	0.02060
Chloroform	0.00000	0.00000	0.00000	0.00000
Chloromethane	0.00553	0.02421	0.00553	0.02421
Dibenzofuran	0.00000	0.00001	0.00000	0.00001
Di-n-butylphthalate	0.00116	0.00506	0.00116	0.00506
Di-n-octylphthalate	0.00010	0.00043	0.00010	0.00043
Diethylphthalate	0.00198	0.00867	0.00198	0.00867
Dimethylphthalate	0.00001	0.00003	0.00001	0.00003
Ethylbenzene	0.00036	0.00159	0.00036	0.00159
Iodomethane	0.00077	0.00336	0.00077	0.00336
Isophorone	0.00025	0.00108	0.00025	0.00108
M-/p-xylene	0.00107	0.00470	0.00107	0.00470
Methylene chloride	0.00001	0.00003	0.00001	0.00003
Naphthalene	0.00054	0.00235	0.00054	0.00235
O-xylene	0.00048	0.00210	0.00048	0.00210
Phenol	0.00071	0.00311	0.00071	0.00311
Styrene	0.00017	0.00072	0.00017	0.00072
Tetrachloroethane	0.00002	0.00010	0.00002	0.00010
Trichloroethane	0.00000	0.00000	0.00000	0.00000
Toluene	0.00206	0.00903	0.00206	0.00903
Vinyl acetate	0.00000	0.00000	0.00000	0.00000
Trichlorofluoromethane	0.00012	0.00051	0.00012	0.00051
HAP				

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Batch or Continuous Drops: Coal Fuel System

Max Hours = 8760 hrs/yr

Defining transfer point empirical expression variables, where:

e =	?	lb/ton
k =	0.74	dimensionless
U =	7	mph
M =	5	%

Calculating transfer point emission factor using Equation 1:

E = 0.0010 lb/ton

Rounding to = 5

ID	Transfer Capacities		Control		Emissions			
			Device		Uncontrolled		Controlled	
	tons/hour	tons/year	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
CTP1	100	13,140	MD	0	0.1000	0.0066	0.1000	0.0066
CTP2	100	13,140	PE	50	0.1000	0.0066	0.0500	0.0033
CTP3	100	13,140	PE	50	0.1000	0.0066	0.0500	0.0033
CTP4	100	13,140	FE	80	0.1000	0.0066	0.0200	0.0013
CTP5	1.5	13,140	BAG	95	0.0015	0.0066	0.00008	0.0003
CTP6	1.5	13,140	BAG	95	0.0015	0.0066	0.00008	0.0003
CTP7	1.5	13,140	FE	80	0.0015	0.0066	0.0003	0.0013
CTP8	1.5	13,140	FE	80	0.0015	0.0066	0.0003	0.0013
CTP9	1.5	13,140	FE	80	0.0015	0.0066	0.0003	0.0013
CTP10	1.5	13,140	FE	80	0.0015	0.0066	0.0003	0.0013
CTP11	1.5	13,140	FE	80	0.0015	0.0066	0.0003	0.0013
				PM	**0.41050**	**0.07227**	**0.22166**	**0.02167**
				PM10	**0.19416**	**0.03418**	**0.10484**	**0.01025**
				PM2.5	**0.02940**	**0.00518**	**0.01588**	**0.00155**

Reference: AP-42 13.2.4, Aggregate Handling and Storage Piles

K factor for equation:

PM (<30 micons) =	0.74
PM10 (<10 micons) =	0.35
PM2.5 (<2.5 micons) =	0.053

Coal Dry Grinding

Rounding to = 2

ID	Transfer Capacities		e	Control		Emissions			
				Device		Uncontrolled		Controlled	
	tons/hour	tons/year	lb/T	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	1.50	13,140	28.80	BAG	95	43.00	189.00	2.00	9.00
PM10	1.50	13,140	26.00	BAG	95	39.00	171.00	2.00	9.00
PM2.5	1.50	13,140	26.00	BAG	95	39.00	171.00	2.00	9.00

Emission Factor Reference

The emission factor is based on AP-42, Table 11.24-2, Dry Grinding with Air Conveying and/or Classification.

	PM	PM10	PM2.5*
Dry Grinding with Air Conveying and/or Classification	28.8	26	26

* PM2.5 assumed to be equal to PM10.

Coal Fuel System Total Emissions

	Emissions			
	Uncontrolled		Controlled	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	43.41	189.07	2.22	9.02
PM10	39.19	171.03	2.10	9.01
PM2.5	39.03	171.01	2.02	9.00

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Emergency Generator

Specifications

Manufacturer =	Generac		
Displacement =	1.3	L	Provided
Fuel Consumption =	159	cfh	Provided
Assumed Heating Value of Diesel Fuel=	1,000	Btu/cubic ft.	Standard
Maximum Fuel Input=	0.159	MMBtu/hour	Calculated
Hours Per Year =	500	Hrs/yr	Allowable

Rounding to = 4

Regulated Pollutant	Emission Factor (lb/MMBtu)	Hourly Emissions (lbs/hour)	Annual Emissions (tons/year) 500 hrs	EF Reference AP-42
PM (equal to PM10)	9.99E-03	0.0016	0.0004	Table 3.2-2
PM10	9.99E-03	0.0016	0.0004	Table 3.2-2
PM2.5(1)	7.71E-05	0.0000	0.0000	Table 3.2-2
SO2	5.88E-04	0.0001	0.0000	Table 3.2-2
NOX	4.08E+00	0.6487	0.1622	Table 3.2-2
CO	3.17E-01	0.0504	0.0126	Table 3.2-2
VOC	1.18E-01	0.0188	0.0047	Table 3.2-2
Hazardous Air Pollutants (HAPS)				
HAPS- VOC(2)	7.20E-02	0.0114	0.0029	Table 3.2-2

Notes:
1 - It is assumed that PM10 and PM2.5 are equal. PM is total of PM Condensable and PM10.
2 - Total VOC HAPS as listed in Table 3.2-2 (AP-42).

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Sand Dryer (Natural Gas Fueled)

Fuel Use =	5,000	cf/hr	Estimated
Heat Content of Fuel =	1,000	BTU/scf	Standard
BTU of Total System =	5,000,000	Btu/hr	Estimated
No. of Burners =	5		Counted
Burner Rating =	1,000,000	MM Btu/hr	Estimated
Hours of Operation =	8,760	hrs/year	
Fuel Usage =	0.0050	10^6 scf per hour	
	43.80	10^6 scf/year	

Note: the flames do not have any controls for emissions: therefore, uncontrolled is equal to potential maximum emissions.

Rounding to = 2

Emission Type	EF[a] lb/10^6 scf	Emissions lb/hr	Emissions tons/year	EF Reference
PM	7.6	0.04	0.17	Table 1.4-2
PM10[1]	7.6	0.04	0.17	See Note 1
PM2.5[1]	7.6	0.04	0.17	See Note 1
SO_2	0.6	0.01	0.02	Table 1.4-2
NOx	100	0.50	2.19	Table 1.4-1
CO	84	0.42	1.84	Table 1.4-1
VOC	5.5	0.03	0.13	Table 1.4-2
Hazardous Air Pollutants				
HAPS- VOC[2]	1.88	0.01	0.05	Table 1.4-3
HAPS - METAL[3]	0.00556	0.01	0.01	Table 1.4-4

Notes:
1 - It is assumed that PM10 and PM2.5 are equal to TSP (PM).
2 - Total VOC HAPS as listed in Table 1.4-3 (AP-42).
3 - Total METAL HAPS as listed in Table 1.4-4 (AP-42).

Batch or Continuous Drops: Sand into Stockpiles and Moved Around Site (i.e. to dryer or into plant)

Defining transfer point empirical expression variables, where:

e =	?	lb/ton
k =	0.74	dimensionless
U =	7	mph
M =	1	%

Calculating transfer point emission factor using Equation 1:

E = 0.0097 lb/ton

Transfer Capacities	
tons/hour	**tons/year**
100	1,200

Rounding to = 3

ID	Control Device Type	Control Device Effic(%)	Emissions Uncontrolled (lb/hr)	Emissions Uncontrolled (tpy)	Emissions Controlled (lb/hr)	Emissions Controlled (tpy)
TP33	MD	0	0.970	0.006	0.970	0.006
		PM	**0.970**	**0.006**	**0.970**	**0.006**
		PM10	**0.46**	**0.0028**	**0.46**	**0.0028**
		PM2.5	**0.069**	**0.0004**	**0.069**	**0.0004**

Reference: AP-42 13.2.4, Aggregate Handling and Storage Piles
K factor for equation:

PM (<30 micons) =	0.74
PM10 (<10 micons) =	0.35
PM2.5 (<2.5 micons) =	0.053

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Stockpiles

Defining open stockpile empirical expression variables, where:

Shale/Sand

e =	?	lb/day/acre
s =	1	%
p =	148	days
f =	25	%

Calculating open stockpile emission factor using Equation 2:

Rounding to = 2

e = **1.74** lb/day/acre

Stockpile		Control		Emissions			
ID	Area	Device		Uncontrolled		Controlled	
	(square feet)	Type	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
OS1	392,040	N	0	0.65	2.86	0.65	2.86
OS2	43,560	N	0	0.07	0.32	0.07	0.32
			Totals				
			PM	**0.72**	**3.18**	**0.72**	**3.18**
			PM10	**0.34**	**1.50**	**0.34**	**1.50**
			PM2.5	**0.05**	**0.23**	**0.05**	**0.23**

OS1 estimated at 9 acres and OS2 estimated at 1 acre max. Covered coal and sand stockpiles are assumed to not have emissions.

Continental Brick
Martinsburg Facility

POTESTA & ASSOCIATES, INC.
Project No.: 0101-07-0327

By: PEW
Date: Janaury 18, 2007

Checked By: JMC
Date: 3/5/2007

Vehicle Activity

Rounding to = 2

Vehicle Roadway	No. of Vehicles Per Hour	No. of Vehicles Per Year	Miles Per Trip (mi)	Control Device Type	Control Device Effic(%)		Emissions Uncontrolled (lb/hr)	Emissions Uncontrolled (tpy)	Emissions Controlled (lb/hr)	Emissions Controlled (tpy)
1	5	10,220	1	RWMW	75	PM	39.90	40.78	9.98	10.20
					75	PM10	11.35	11.60	2.84	2.90
					75	PM2.5	1.15	1.18	0.29	0.30
2	1	365	0.5	RWMW	75	PM	4.12	0.75	1.03	0.19
					75	PM10	1.22	0.22	0.31	0.06
					75	PM2.5	0.12	0.02	0.03	0.01
3	1	7,227	0.5	RWMW	75	PM	4.12	14.87	1.03	3.72
					75	PM10	1.22	4.39	0.31	1.10
					75	PM2.5	0.12	0.43	0.03	0.11
4	21	43,013	0.25	RWMW	75	PM	41.98	42.91	10.50	10.73
					75	PM10	11.94	12.21	2.99	3.05
					75	PM2.5	1.21	1.24	0.30	0.31

Estimated Vehicle Travel Per Year				
Roadway	1	2	3	4
	Pit Road	Delivery Road	Sales Exit	Endloader
Trips per Hour	5	1	1	21.0
Load Weight	15	20	20	4
Total Weight/Yr	153,300	7,300	144,540	153,300
Total Trips	10,220	365	7,227	43,013

Totals				
PM	90.12	99.31	22.54	24.84
PM10	25.73	28.42	6.45	7.11
PM2.5	2.60	2.87	0.65	0.73

AP-42, 13.2.2, Unpaved Roads

$E=k(s/12)^a(W/3)^b[(365-P)/365)]$ Rounding to = 2

PM					
	1	2	3	4	
Input	Pit Road	Delivery Road	Sales Exit	Endloader	Reference
k	4.9	4.9	4.9	4.9	Table 13.2.2-2
s	8.3	10	10	8.3	Table 13.2.2-1
a	0.7	0.7	0.7	0.7	Table 13.2.2-2
W	50	40	40	50	Estimate
b	0.45	0.45	0.45	0.45	Table 13.2.2-2
P	148	148	148	148	DAQ (GP Ref)
E =	7.98	8.23	8.23	7.98	Calc.

PM10					
	1	2	3	4	
Input	Pit Road	Delivery Road	Sales Exit	Endloader	
k	1.5	1.5	1.5	1.5	Table 13.2.2-2
s	8.3	10	10	8.3	Table 13.2.2-1
a	0.9	0.9	0.9	0.9	Table 13.2.2-2
W	50	40	40	50	Estimate
b	0.45	0.45	0.45	0.45	Table 13.2.2-2
P	148	148	148	148	DAQ (GP Ref)
E =	2.27	2.43	2.43	2.27	Calc.

PM2.5					
	1	2	3	4	
Input	Pit Road	Delivery Road	Sales Exit	Endloader	
k	0.15	0.15	0.15	0.15	Table 13.2.2-2
s	8.3	10	10	8.3	Table 13.2.2-1
a	0.9	0.9	0.9	0.9	Table 13.2.2-2
W	50	40	40	50	Estimate
b	0.45	0.45	0.45	0.45	Table 13.2.2-2
P	148	148	148	148	DAQ (GP Ref)
E =	0.23	0.24	0.24	0.23	Calc.

Potesta & Associates, Inc. Engineers and Environmental Consultants
2300 MacCorkle Avenue, S.E., Cox Hall, Charleston, West Virginia 25304-1099
Telephone: (304) 342-1400 Fax: (304) 343-9031 E-mail: potesta@potesta.com

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Ms. Laura Crowder, Enforcement
WVDEP, Division of Air Quality
7012 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304

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

Dear Ms. Crowder:

Potesta & Associates, Inc. (POTESTA), on behalf of Continental Brick Company (Continental), is submitting a 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 Division of Air Quality 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 calculation of in-stack sulfur dioxide concentration 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 SO_2 concentration calculation results

Plant	Unit	Result (ppm)
Continental Brick Company	Tunnel Kiln No. 1	53.30
Continental Brick Company	Tunnel Kiln No. 2	53.30

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 for the initial test as they are a reliable indication of Continental's ability to meet the standard.

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 given, permitted fuels are shown below in Table 2:

Table 2: Maximum sulfur content percentages

Plant	Unit	Fuel Type	Max. Sulfur Content (%)
Continental Brick Company	Tunnel Kiln No. 1	natural gas	trace S (pipeline quality)
		coal	1.0
Continental Brick Company	Tunnel Kiln No. 2	natural gas	trace S (pipeline quality)
		coal	1.0

By utilizing fuels that do not exceed the maximum sulfur content percentages 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) 342-1400.

Sincerely,

Scott R. Kisner
Senior Engineer

Attachments: SO_2 in-stack concentration calculations

c: Mr. C. L. Christian, III
President
Continental Brick Company

Unit Name:	Tunnel Kiln No. 2
Unit ID No.:	TK-2
Emission ID No.:	E-TK-2
Max. Heat Input:	23 MMBtu/hour
SO_2 Limit:	9.5 lbs/hour (from permit application associated with R13-682)
Fuel Source(s):	coal and natural gas (approximately 30%/70% ratio)
Max. S Content:	1% coal, negligible natural gas
Max. Stack Temp:	340 F
Max. Stack Flow:	27,100 ACFM

SO_2 in-stack concentration based on the existing hourly SO_2 mass limitation:

Hourly SO_2 Mass Limit = 9.50 lbs/hour

1. Converting hourly SO_2 mass limit to gram moles of SO_2 using MW of sulfur dioxide = 62 grams/mole:

n_{SO2} = 67.33 moles SO_2 /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/in^2
Stack temperature =	340	F
Stack flow rate =	27,100	ft^3/minute

Converting to required units for the ideal gas law equation:

Stack pressure =	1.00	atmosphere (1 atmosphere = 14.7 lbs/in^2)
Stack temperature =	444.26	K [K = ((F-32)/1.8) + 273.15]
Stack flow rate =	46,048,320	L/hr (L/hr = ft^3/minute x 28.32 L/ft^3 x 60 minute/hr)

n_{stack} = 1,263,121 moles/hour

3. Calculating the SO_2 in-stack concentration in parts per million (ppm):

SO_2 concentration = 53.30 ppm