

**TITLE V PERMIT RENEWAL APPLICATION  
FOR THE MARTINSBURG, WEST VIRGINIA  
PORTLAND CEMENT PLANT**

**Prepared by:**

Capitol Cement Corporation  
Martinsburg Plant  
1826 S. Queen Street  
Martinsburg, WV 25401

**Submitted to:**

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

**JUNE 2010**

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## 1.0 INTRODUCTION

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This Title V Permit Renewal Application (Application) is being submitted to the West Virginia Department of Environmental Protection (WVDEP) Division of Air Quality (DAQ) to request the renewal of the Part 70 Permit Number R30-00300006-2006 issued to the Capitol Cement Corporation's Martinsburg Plant (Plant). The Plant is located in Martinsburg, West Virginia and currently operates a preheater/precalciner (PH/PC) kiln system and associated equipment.

The Plant's operations include quarrying and crushing of raw materials, raw material handling and storage, raw material grinding, kiln pyroprocessing, solid fuel grinding and handling, clinker cooling, clinker handling and storage, finish mill systems, and cement storage loadout. The Plant began construction of its modified facility prior to December 2, 2005 and began operation of the PH/PC kiln system and associated equipment on October 20, 2009.

The three wet process kilns which the Plant previously operated were permanently shut down in 2009. This Application includes only those existing sources which continue to be operated as part of the major modification and all new and modified sources associated with the operation of the new PH/PC kiln system.

On May 21, 2010, Capitol Cement Corporation met with representatives from the WVDEP-DAQ regarding the content of this Application. As agreed upon during the meeting, this Application will incorporate by reference information previously submitted by the Capitol Cement Corporation in their September 2009 Application for NSR Permit.

Section 2 of this Application includes the WVDEP-DAQ General Form for an Initial/Renewal Title V Application. Also included in Section 2 is a list of all Attachments included with this Application.

## **2.0 TITLE V RENEWAL APPLICATION GENERAL FORM**

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Following the Initial/Renewal Title V Permit Application General Form the following attachments are included with this Application:

ATTACHMENT A – Area Map

ATTACHMENT B – Plot Plan

ATTACHMENT C – Process Flow Diagrams

ATTACHMENT D – Title V Equipment Table

ATTACHMENT E – Emission Unit Forms

ATTACHMENT F – Schedule of Compliance Forms

ATTACHMENT G – Air Pollution Control Device Forms

ATTACHMENT H – Compliance Assurance Monitoring (CAM) Forms

ATTACHMENT I – Federal and State Regulatory Analysis

ATTACHMENT J – Operation & Maintenance Plan

ATTACHMENT K – Electronic Copy of the Title V Renewal Application



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

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 numbered sections: 1. Name of Applicant (Capitol Cement Corporation), 2. Facility Name (Martinsburg Plant), 3. DAQ Plant ID No. (003-00006), 4. Federal Employer ID No. (541239056), 5. Permit Application Type (Renewal), 6. Type of Business Entity (Corporation), 7. Is the Applicant the: (Both), 8. Number of onsite employees (150), 9. Governmental Code (Privately owned), 10. Business Confidentiality Claims (No).

<b>11. Mailing Address</b>		
Street or P.O. Box: 1826 South Queen Street		
City: Martinsburg	State: WV	Zip: 25401
Telephone Number: (304) 260-1800	Fax Number: (304) 267-6571	
<b>12. Facility Location</b>		
Street: 1826 South Queen Street	City: Martinsburg	County: Berkeley
UTM Easting: 243.50 km	UTM Northing: 4,369.00 km	Zone: <input type="checkbox"/> 17 or <input checked="" type="checkbox"/> 18
<b>Directions:</b> Take Queen Street exit off Route 45 at Martinsburg; go south on Queen Street to plant.		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, for what air pollutants? PM2.5	
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s). Maryland, Virginia, Pennsylvania	
Is facility located within 100 km of a Class I Area <sup>1</sup> ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  If no, do emissions impact a Class I Area <sup>1</sup> ? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the area(s). Otter Creek WA Dolly Sods WA Shenandoah National Park James River Face WA	
<sup>1</sup> 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.		

<b>13. Contact Information</b>		
<b>Responsible Official:</b> Gennaro Puppo		<b>Title:</b> Plant Manager
<b>Street or P.O. Box:</b> 1826 South Queen Street		
<b>City:</b> Martinsburg	<b>State:</b> WV	<b>Zip:</b> 25401
<b>Telephone Number:</b> (304) 260-1800	<b>Fax Number:</b> (304) 267-6571	
<b>E-mail address:</b> Gennaro.Puppo@essroc.com		
<b>Environmental Contact:</b> Lisa Hunt		<b>Title:</b> Environmental Manager
<b>Street or P.O. Box:</b> 1826 South Queen Street		
<b>City:</b> Martinsburg	<b>State:</b> WV	<b>Zip:</b> 25401
<b>Telephone Number:</b> (304) 260-1827	<b>Fax Number:</b> (304) 267-2617	
<b>E-mail address:</b> lisa.hunt@essroc.com		
<b>Application Preparer:</b> Miranda Brown		<b>Title:</b> Environmental Scientist
<b>Company:</b> Spectrum Environmental Sciences, Inc.		
<b>Street or P.O. Box:</b> 97 Thomas Johnson Drive, Suite 200		
<b>City:</b> Frederick	<b>State:</b> MD	<b>Zip:</b> 21702
<b>Telephone Number:</b> (301) 620-1200	<b>Fax Number:</b> (301) 620-4118	
<b>E-mail address:</b> mbrown@spectrumenv.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
Cement Manufacturing	Portland Cement	327310	3241

**Provide a general description of operations.**

The Plant’s operations include quarrying and crushing of raw materials, raw material handling and storage, raw material grinding, kiln pyroprocessing, solid fuel grinding and handling, clinker cooling, clinker handling and storage, finish mill systems, and cement storage loadout.

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**

<b>18. Applicable Requirements Summary</b>	
Instructions: Mark all applicable requirements.	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input type="checkbox"/> Minor source NSR (45CSR13)	<input checked="" type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR15)	<input checked="" type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input checked="" type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input checked="" type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input checked="" type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO <sub>x</sub> Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO <sub>x</sub> Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO <sub>2</sub> Trading Program (45CSR41)	

<b>19. Non Applicability Determinations</b>
<p><b>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.</b></p> <p>40 CFR Part 60 Subpart F (12/14/1988) – Standards of Performance for Portland Cement Plants do not apply since the Plant is regulated under 40 CFR Part 63 Subpart LLL.</p> <p>40 CFR Part 60 Subpart LL (2/21/84) – Standards of Performance for Metallic Mineral Processing do not apply because lime or limestone is not a metallic mineral.</p> <p>40 CFR Part 60 Subpart UUU (9/28/92) – Standards of Performance for Calciners and Dryers in Mineral Industries do not apply because the lime or limestone is not listed as a mineral processed or produced in a mineral processing plant.</p>
<p><input checked="" type="checkbox"/> Permit Shield</p>

**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.**

40 CFR Part 64 (10/22/1997) – Compliance Assurance Monitoring does not apply to Capitol Cement Corporation as demonstrated by Attachment H of this Application as no emission unit meets all three applicability criteria.

40 CFR Part 72 (01/11/93) – Acid Rain Program General Provisions does not apply to Capitol Cement Corporation because it is not considered a Title IV (Acid Rain) Source.

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).

See Section I – Federal and State Regulatory Analysis

Permit Shield

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.)

See Section I – Federal and State Regulatory Analysis

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 <i>(if any)</i>
R30-00300006-2006	01/04/2006	
R14-026D	03/26/2010	
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**Section 3: Facility-Wide Emissions**

<b>23. Facility-Wide Emissions Summary [Tons per Year]</b>	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	4,435.98
Nitrogen Oxides (NO <sub>x</sub> )	4,005.09
Lead (Pb)	0.08
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	217.89
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	569.84
Total Particulate Matter (TSP)	893.63
Sulfur Dioxide (SO <sub>2</sub> )	7,873.60
Volatile Organic Compounds (VOC)	155.96
Hazardous Air Pollutants <sup>2</sup>	Potential Emissions
Fluorides	1.02
Regulated Pollutants other than Criteria and HAP	Potential Emissions
CO <sub>2</sub>	1,921,943.00

<sup>1</sup>PM<sub>2.5</sub> and PM<sub>10</sub> are components of TSP.  
<sup>2</sup>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**

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	7. Blacksmith forges.
<input type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO <sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	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.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO <sub>x</sub> , SO <sub>2</sub> , 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:  _____  _____  _____  _____  _____  _____  _____  _____

<b>24. Insignificant Activities (Check all that apply)</b>	
<input type="checkbox"/>	<p>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.</p> <p>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:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input checked="" type="checkbox"/>	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

<b>24. Insignificant Activities (Check all that apply)</b>	
	owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input checked="" type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input checked="" type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

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

<b>25. Equipment Table</b>
Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b> .
<b>26. Emission Units</b>
For each emission unit listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b> .
For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b> .
<b>27. Control Devices</b>
For each control device listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b> .
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 <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b> .

**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: Gennaro Puppo	Title: Plant Manager
---------------------	----------------------

**Responsible official's signature:**

Signature: \_\_\_\_\_ Signature Date: \_\_\_\_\_  
 (Must be signed and dated in blue ink)

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

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input checked="" type="checkbox"/>	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](http://www.wvdep.org/daq), requested by phone (304) 926-0475, and/or obtained through the mail.**

## **ATTACHMENT A – AREA MAP**

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An Area Map of the Plant can be found in Attachment B of Appendix A of the Capitol Cement Corporation's September 2009 Application for NSR Permit.

## **ATTACHMENT B – PLOT PLAN**

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A Plot Plan of the Plant can be found in Attachment E of Appendix A of the Capitol Cement Corporation's September 2009 Application for NSR Permit.

## **ATTACHMENT C – PROCESS FLOW DIAGRAMS**

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Process Flow Diagrams of the Plant can be found in Appendix D of the Capitol Cement Corporation's September 2009 Application for NSR Permit.

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## **ATTACHMENT D – TITLE V EQUIPMENT TABLE**

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All information required by the Attachment D – Title V Equipment Table was previously submitted as part of the Capitol Cement Corporation’s September 2009 Application for NSR Permit. Provided below is a crosswalk table for Attachment D which denotes the location of all requested information.

<b>Attachment D – Title V Equipment Table Required Information</b>	<b>Location of Information</b>
Emission Point ID	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 1 <sup>st</sup> Column
Control Device	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 7 <sup>th</sup> Column
Emission Unit ID	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 2 <sup>nd</sup> Column
Emission Unit Description	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 3 <sup>rd</sup> Column
Design Capacity	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 5 <sup>th</sup> Column
Year Installed/Modified	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 4 <sup>th</sup> Column

Following this page is a blank copy of the Attachment D – Title V Equipment Table for reference.



## **ATTACHMENT E – EMISSION UNIT FORMS**

Some of the information required by the Attachment E – Emission Unit Form was previously submitted as part of the Capitol Cement Corporation’s September 2009 Application for NSR Permit. Provided below is a crosswalk table for Attachment E which denotes the location of all requested information.

<b>Attachment E – Emission Unit Form Required Information</b>	<b>Location of Information</b>
Emission Unit ID Number	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 2 <sup>nd</sup> Column
Emission Unit Name	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 3 <sup>rd</sup> Column
Control Device Associated with Emission Unit	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 7 <sup>th</sup> Column
Description of the Emission Unit	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 3 <sup>rd</sup> Column
Manufacturer	Provided in Table E-1 of this section
Model Number	Provided in Table E-1 of this section
Serial Number	Provided in Table E-1 of this section
Construction Date	Provided in Table E-1 of this section
Installation Date	Provided in Table E-1 of this section
Modification Date	Provided in Table E-1 of this section
Design Capacity	September 2009 Application for NSR Permit Attachment I of Appendix A Emission Unit Table – 5 <sup>th</sup> Column
Maximum Hourly Throughput	Provided in Table E-1 of this section
Maximum Annual Throughput	Provided in Table E-1 of this section
Maximum Operating Schedule	Provided in Table E-1 of this section
Emission Units which Combust Fuel	Provided in Table E-2 of this section
Type of Firing	Provided in Table E-2 of this section
Maximum Design Heat Input and/or Maximum Horsepower Rating	Provided in Table E-2 of this section
Type and BTU/hr Rating of Burners	Provided in Table E-2 of this section
Primary and Secondary Fuel Types and Maximum Hourly and Annual Fuel Usage	Provided in Table E-2 of this section
All Fuels to be used during term of the Permit and BTU value	Provided in Table E-2 of this section

<b>Attachment E – Emission Unit Form Required Information</b>	<b>Location of Information</b>
Sulfur and Ash Content of Fuels	September 2009 Application for NSR Permit Attachment L of Appendix A Kiln System Fuel Analysis Table included with General EUDS – Kiln System
BTU Value of Fuel	September 2009 Application for NSR Permit Appendix E – Tables E-19
TSP, PM10, PM2.5 Potential Emissions (lb/hr and tpy)	Provided in Table E-1 of this section
All other Criteria, HAP, and Regulated Pollutants Potential Emissions	September 2009 Application for NSR Permit Appendix E Tables E-11 through E-14
Methods Used to Calculate Potential Emissions	September 2009 Application for NSR Permit Appendix E – Tables E-10 through E-20
Applicable Regulatory Requirements and method used to demonstrate compliance	Provided in Attachment I of this Application

Following this page is a blank copy of Attachment E – Emission Unit Form for reference and Tables E-1 and E-2 which contain all information not previously provided in the September 2009 Application for NSR Permit. In instances where the required information was located in multiple locations in the September 2009 Application for NSR Permit the information has been provided again here in Tables E-1 and E-2 to assist the WVDEP with their review.

## ATTACHMENT E - Emission Unit Form

*Emission Unit Description*

<b>Emission unit ID number:</b>	<b>Emission unit name:</b>	<b>List any control devices associated with this emission unit:</b>
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

<b>Manufacturer:</b>	<b>Model number:</b>	<b>Serial number:</b>
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<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> MM/DD/YYYY	<b>Modification date(s):</b> MM/DD/YYYY
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**

<b>Maximum Hourly Throughput:</b>	<b>Maximum Annual Throughput:</b>	<b>Maximum Operating Schedule:</b>
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***Fuel Usage Data (fill out all applicable fields)***

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

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO <sub>2</sub> )		
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.

\_\_\_\_ 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.)

Are you in compliance with all applicable requirements for this emission unit? \_\_\_Yes \_\_\_No

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

TABLE E-1

P=Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Equipment Manufacturer	Equipment Model Number	Equipment Serial Number	Construction Date	Start-Up (Installation) Date	Modification Date	Maximum Hourly Throughput	Maximum Annual Throughput	Throughput Unit	Future Potential TSP Emissions (lb/hr)	Future Potential TSP Emissions (tpy)	Future Potential PM10 Emissions (lb/hr)	Future Potential PM10 Emissions (tpy)	Future Potential PM2.5 Emissions (lb/hr)	Future Potential PM2.5 Emissions (tpy)
<b>GROUP 1 - QUARRYING AND CRUSHING</b>																				
F	E	EP0X.01		EP0X.01	Quarry drilling	See Note 1	See Note 1	See Note 1	N/A	N/A		2205	4,490,653	stons	0.07	0.28	0.04	0.13	0.04	0.13
F	E	EP0X.02		EP0X.02	Quarry blasting	See Note 1	See Note 1	See Note 1	N/A	N/A		2205	4,490,653	stons	0.07	0.28	0.04	0.13	0.04	0.13
F	E	EP0X.03.01		EP0X.03.01	Loader to truck (good rock)	See Note 1	See Note 1	See Note 1	N/A	N/A		3307	4,276,812	stons	2.10	8.07	0.99	3.82	0.15	0.58
F	E	EP0X.03.02		EP0X.03.02	Loader to truck (waste rock)	See Note 1	See Note 1	See Note 1	N/A	N/A		3307	213,841	stons	0.11	0.40	0.05	0.19	0.01	0.03
F	E	EP0X.03.03		EP0X.03.03	Truck to waste pile	See Note 1	See Note 1	See Note 1	N/A	N/A		3307	213,841	stons	0.11	0.40	0.05	0.19	0.01	0.03
F	E	EP0X.03.04		EP0X.03.04	Truck to crusher pile	See Note 1	See Note 1	See Note 1	N/A	N/A		3307	150,879	stons	0.07	0.28	0.04	0.13	0.01	0.02
F	E	EP0X.03.05		EP0X.03.05	Truck or loader to crusher dump	See Note 1	See Note 1	See Note 1	N/A	N/A		3307	150,879	stons	0.07	0.28	0.04	0.13	0.01	0.02
P	E	CD01.01	Primary Crusher D/C	EP01.01	Primary crusher	See Note 1	See Note 1	See Note 1	N/A	1943	1982	1102	150,879	stons	0.58	2.25	0.50	1.91	0.18	0.67
P	E			EP01.02	Crusher to belt conveyor 1013	See Note 1	See Note 1	See Note 1	N/A	1943	1982	1102	150,879	stons						
F	E	EP01.03		EP01.03	Belt conveyor 1013 to 40 T bin	See Note 1	See Note 1	See Note 1	N/A	1943	1982	1102	150,879	stons	0.05	0.19	0.02	0.09	0.00	0.01
F	E	EP01.04		EP01.04	40 T bin to feeder	See Note 1	See Note 1	See Note 1	N/A	1943	1982	1102	150,879	stons	0.05	0.19	0.02	0.09	0.00	0.01
F	E	EP01.05.01		EP01.05.01	Feeder to belt conveyor 1011	See Note 1	See Note 1	See Note 1	N/A	1943	1982	1102	150,879	stons	0.05	0.19	0.02	0.09	0.00	0.01
F	E	EP01.05.02		EP01.05.02	Belt conveyor 1011 to belt conveyor 1007	See Note 1	See Note 1	See Note 1	N/A	1943	1982	1102	150,879	stons	0.07	0.28	0.04	0.13	0.01	0.02
P	E	CD02.01	Secondary Crusher D/C	EP01.06.01	Belt conveyor 1007 to screen 1009	See Note 1	See Note 1	See Note 1	N/A	1955	1971	1102	150,879	stons	4.27	16.40	3.63	13.94	1.28	4.92
P	E			EP01.06.02	Screen 1009	See Note 1	See Note 1	See Note 1	N/A	1955	1971	1102	150,879	stons						
P	E			EP01.06.03	Screen 1009 to belt conveyor 1009-B	See Note 1	See Note 1	See Note 1	N/A	1955	1971	276	75,439	stons						
P	E			EP01.06.04	Screen 1009 to feeder 1009-A	See Note 1	See Note 1	See Note 1	N/A	1955	1971	827	75,439	stons						
P	E			EP02.01.01	Feeder 1009-A to hammermill 1006	See Note 1	See Note 1	See Note 1	N/A	1966	1982	827	75,439	stons						
P	E			EP02.01.02	Hammermill 1006	See Note 1	See Note 1	See Note 1	N/A	1966	1982	1102	113,159	stons						
P	E			EP02.01.03	Hammermill 1006 to belt conveyor 1005	See Note 1	See Note 1	See Note 1	N/A	1966	1982	1102	113,159	stons						
F	E	EP02.01.04		EP02.01.04	Belt conveyor 1005 to belt conveyor 1004	See Note 1	See Note 1	See Note 1	N/A	1966	1982	1102	113,159	stons	0.06	0.21	0.03	0.10	0.00	0.02
P	E	CD02.01	Secondary Crusher D/C	EP02.01.05	Belt conveyor 1004 to screen 1003	See Note 1	See Note 1	See Note 1	N/A	1966	1982	1102	113,159	stons	CD.02.01	CD.02.01	CD.02.01	CD.02.01	CD.02.01	CD.02.01
P	E			EP02.01.06	Screen 1003	See Note 1	See Note 1	See Note 1	N/A	1966	1982	1102	113,159	stons						
F	E	EP02.01.07		EP02.01.07	Screen 1003 to belt conveyor 1002	See Note 1	See Note 1	See Note 1	N/A	1966	1982	827	37,720	stons	0.01	0.05	0.01	0.02	0.00	0.00
P	E	CD02.01	Secondary Crusher D/C	EP02.01.08	Belt conveyor 1002 to hammermill 1006	See Note 1	See Note 1	See Note 1	N/A	1966	1982	827	37,720	stons	CD.02.01	CD.02.01	CD.02.01	CD.02.01	CD.02.01	CD.02.01
P	E			EP02.01.09	Screen 1003 to belt conveyor 1001	See Note 1	See Note 1	See Note 1	N/A	1966	1982	827	75,439	stons						
P	E			EP02.01.10	Belt conveyor 1009-B to belt conveyor 1001	See Note 1	See Note 1	See Note 1	N/A	1966	1982	827	75,439	stons						
F	E	EP02.02		EP02.02	Belt conveyor 1001 to belt conveyor 1000	See Note 1	See Note 1	See Note 1	N/A	1965	1982	1102	150,879	stons	0.05	0.19	0.02	0.09	0.00	0.01
F	E	EP02.03.01		EP02.03.01	Belt conveyor 1000 to belt conveyor 999	See Note 1	See Note 1	See Note 1	N/A	1965	1982	1102	150,879	stons	0.07	0.28	0.04	0.13	0.01	0.02
F	E	EP02.03.02		EP02.03.02	Belt conveyor 999 to shuttle conveyor 998	See Note 1	See Note 1	See Note 1	N/A	1965	1982	1102	150,879	stons	0.07	0.28	0.04	0.13	0.01	0.02
F	E	EP03.02		EP03.02	Shuttle conveyor 998 to raw bins	See Note 1	See Note 1	See Note 1	N/A	1971		1102	150,879	stons	0.05	0.19	0.02	0.09	0.00	0.01
F	N	EP37.02.01		EP37.02.01	Truck to large bin	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons	2.03	7.79	0.96	3.68	0.15	0.56
F	N	EP37.02.02		EP37.02.02	Large bin to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons	0.68	2.60	0.32	1.23	0.05	0.19
P	N	CD37.03	New Primary Crusher D/C	EP37.03.01	Conveyor to feeder	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons	1.91	7.35	1.63	6.24	0.57	2.20
P	N			EP37.03.02	Conveyor to Hammermill	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons						
P	N			EP37.03.03	Hammermill to feeder	Hazemag Crusher	2025	None	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons						
P	N			EP37.03.04	Feeder to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons						
P	N	CD37.04	New Crushing System D/C1	EP37.04.01	Conveyor to split	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons	0.10	0.38	0.08	0.32	0.03	0.11
P	N			EP37.04.02	Split to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons						
F	N	EP37.05		EP37.05	Split to surge pile	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	412,593	stons	0.27	1.04	0.13	0.49	0.02	0.07
P	N	CD37.06	Premix Conveying D/C	EP37.06.01	Conveyor to split	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons	0.62	2.39	0.53	2.03	0.19	0.72
P	N			EP37.06.02	Split to top conveyor	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	3,395,680	stons						
P	N			EP37.06.03	Split to bottom conveyor	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	4,125,933	stons						
P	N	CD38.01	Premix Storage Feeding D/C	EP38.01.01	Top conveyor to swing conveyor	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	3,395,680	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N			EP38.01.02	Swing conveyor to Limestone pile	See Note 1	See Note 1	See Note 1	November 2005	Initial - July 1, 2009 Max Operation - October 15, 2009		1653	3,395,680	stons						

TABLE E-1

P=Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Equipment Manufacturer	Equipment Model Number	Equipment Serial Number	Construction Date	Start-Up (Installation) Date	Modification Date	Maximum Hourly Throughput	Maximum Annual Throughput	Throughput Unit	Future Potential TSP Emissions (lb/hr)	Future Potential TSP Emissions (tpy)	Future Potential PM10 Emissions (lb/hr)	Future Potential PM10 Emissions (tpy)	Future Potential PM2.5 Emissions (lb/hr)	Future Potential PM2.5 Emissions (tpy)
<b>GROUP 2 - RAW MATERIAL PREPARATION</b>																				
F	E	EP04.01.01		EP04.01.01	Raw bins to feeders East Tunnel	See Note 1	See Note 1	See Note 1	N/A	1965	Sept. 15, 2009	276	150,879	stons	0.02	0.09	0.01	0.04	0.00	0.01
F	E	EP04.01.02		EP04.01.02	Feeders to belt conveyor East 917	See Note 1	See Note 1	See Note 1	N/A	1965	Sept. 15, 2009	276	150,879	stons	0.02	0.09	0.01	0.04	0.00	0.01
P	M	CD04.03	Limestone Conveying to #1 Stone Belt D/C	EP04.03.01	Belt conveyor 917 to elevator East 915	See Note 1	See Note 1	See Note 1	N/A	1966	Sept. 14, 2009	276	150,879	stons	1.00	3.85	0.85	3.27	0.30	1.16
P	M			EP04.03.02	Elevator 915 to screens East 914/913	See Note 1	See Note 1	See Note 1	N/A	1966	Sept. 14, 2009	276	150,879	stons						
P	M			EP04.03.03	Screens East 914/913	See Note 1	See Note 1	See Note 1	N/A	1966	Sept. 14, 2009	276	150,879	stons						
P	M			EP04.03.04	Screens East 914/913 to #1 stone system belt	See Note 1	See Note 1	See Note 1	N/A	1966	Sept. 14, 2009	276	150,879	stons						
P	M			EP04.04.01	Shuttle conveyor 998 to new chute	See Note 1	See Note 1	See Note 1	N/A	1966	Sept. 14, 2009	1102	150,879	stons						
P	M			EP04.04.02	New chute to #1 stone system belt	See Note 1	See Note 1	See Note 1	November 2005	Sept. 14, 2009		1102	150,879	stons						
F	M	EP04.04.03		EP04.04.03	#1 stone system belt to limestone pile in craneway	See Note 1	See Note 1	See Note 1	November 2005	Sept. 14, 2009		1102	150,879	stons	0.03	0.11	0.01	0.05	0.00	0.01
P	N	CD38.02	Premix Storage Discharge D/C	EP38.02.01	Pile to feeder 1	See Note 1	See Note 1	See Note 1	November 2005	Sept. 14, 2009		606	3,395,680	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N			EP38.02.02	Feeder 1 to bottom conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 14, 2009		606	3,395,680	stons						
P	N			EP38.02.03	Pile to feeder 2	See Note 1	See Note 1	See Note 1	November 2005	Sept. 14, 2009		606	3,395,680	stons						
P	N			EP38.02.04	Feeder 2 to bottom conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 14, 2009		606	3,395,680	stons						
P	N	CD39.05	Additive Delivery System D/C	EP39.05	Additives truck to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 05, 2009		1653	219,076	stons	2.88	11.05	2.45	9.39	0.86	3.31
P	N			EP39.04.04	Conveyor to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 05, 2009		1653	219,076	stons						
F	N	EP40.03		EP40.03	Split to (surge)pile	See Note 1	See Note 1	See Note 1	November 2005	Sept. 14, 2009		1653	0	stons	0.00	0.00	0.00	0.00	0.00	0.00
P	N	CD39.01	Additive Feeding System D/C	EP39.01.01	Conveyor to split	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		1653	949,330	stons	0.73	2.78	0.62	2.37	0.22	0.84
P	N			EP39.01.02	Split to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		1653	949,330	stons						
P	N			EP39.03.02	Conveyor to shale bin	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		1653	730,254	stons						
P	N			EP39.04.01	Conveyor to shale bin 2	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		1653	730,254	stons						
P	N			EP39.07.01	Split to pyrite silo	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		1653	36,513	stons						
P	N			EP39.08.01	Split to sand silo	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		1653	182,563	stons						
P	N	CD39.02	Limestone Bin D/C	EP39.03.01	Conveyor to limestone mix bin	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		606	3,395,680	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N	CD39.03	Raw Material Discharge D/C 1	EP39.03.03	Shale bin to feeder	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		114.10	730,254	stons	0.41	1.59	0.35	1.35	0.12	0.48
P	N			EP39.03.04	Shale bin feeder to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		114.10	730,254	stons						
P	N			EP39.02.01	Limestone mix bin to feeder	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		530.57	3,395,680	stons						
P	N			EP39.02.02	Limestone mix feeder to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		530.57	3,395,680	stons						
P	N			EP39.08.02	Sand silo to feeder	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		28.53	182,563	stons						
P	N			EP39.08.03	Sand silo feeder to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		28.53	182,563	stons						
P	N			EP39.07.02	Pyrite silo to feeder	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		5.71	36,513	stons						
P	N			EP39.07.03	Pyrite silo feeder to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		5.71	36,513	stons						
P	N	CD39.04	Raw Material Discharge D/C 2	EP39.04.02	Shale silo 2 to feeder	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		114.10	730,254	stons	0.31	1.19	0.26	1.01	0.09	0.36
P	N	EP39.04.03	Shale silo 2 feeder to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		114.10	730,254	stons								
P	N	CD39.06	Raw Mill Feeding D/C	EP39.06.01	Raw Mill Feed Conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N	CD40.01	Raw Mill High Zone D/C	EP40.01.01	RM Feed Conveyor to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons	0.78	2.98	0.66	2.54	0.23	0.89
P	N			EP40.01.02	Conveyor to split	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons						
P	N			EP40.01.03	Split to hopper	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons						
P	N			EP40.02.03	Elevator to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons						
P	N			EP40.04.01	Split to Raw Mill	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons						
P	N	CD40.02	Raw Mill Low Zone D/C	EP40.02.01	Conveyor to split	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons	0.73	2.78	0.62	2.37	0.22	0.84
P	N			EP40.02.02	Split to bucket elevator	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons						
P	N			EP40.04.02	Raw Mill to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons						
P	N			EP40.02.04	Conveyor to bucket elevator	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons						
P	N	CD40.05	Raw Meal Air Slide D/C	EP40.05	Raw Meal Conveying Equipment	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons	0.62	2.39	0.53	2.03	0.19	0.72
P	N	CD40.06	Homo Silo Feeding D/C	EP40.06	Homogenizing Silo Feeding Equipment	See Note 1	See Note 1	See Note 1	November 2005	Sept. 15, 2009		570.51	3,651,268	stons	0.52	1.99	0.44	1.69	0.16	0.60
P	N	CD40.07	Homo Silo Discharge D/C	EP40.07	Homogenizing Silo Discharging Equipment	See Note 1	See Note 1	See Note 1	November 2005	October 24, 2009		570.51	3,651,268	stons	0.41	1.59	0.35	1.35	0.12	0.48
<b>GROUP 3 - PRYOPROCESSING</b>																				
P	N	CD42.02	Kiln Feeding Bucket Elevator D/C	EP42.02	Kiln Feeding Bucket Elev DC	See Note 1	See Note 1	See Note 1	November 2005	October 24, 2009		570.51	3,651,268	stons	0.52	1.99	0.44	1.69	0.16	0.60
P	N	CD42.03	Kiln Feeding D/C 1	EP42.03	Kiln Feed Belt	See Note 1	See Note 1	See Note 1	November 2005	October 24, 2009		570.51	3,651,268	stons	1.24	4.77	1.06	4.06	0.37	1.43
P	N	CD42.05	Kiln Feeding D/C 2	EP42.05	Kiln Feed Belt	See Note 1	See Note 1	See Note 1	November 2005	October 24, 2009		570.51	3,651,268	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N	CD42.04	Inline Raw Mill / PH/PC Kiln / Clinker Cooler & Bypass & Coal Mill D/Cs	EP42.04	Kiln System - Inline Raw Mill / PH/PC Kiln / Clinker Cooler	FLS Rotax	See Note 1	See Note 1	November 2005	October 24, 2009		345.76	2,212,890	stons clinker	69.80	268.05	58.64	225.16	31.41	120.62
P	N			EP42.08	Kiln Bypass Baghouse DC	Redecam	See Note 1	See Note 1	November 2005	February 20, 2010		Not Applicable	Not Applicable	Not Applicable						
P	N			EP41.03.01	Coal Mill	Loesche	See Note 1	See Note 1	November 2005	October 4, 2009		45.64	292,110	stons coal						
P	N	CD43.02	Cooler Discharge D/C	EP43.02	New Cooler Discharge DC	See Note 1	See Note 1	See Note 1	November 2005	October 24, 2009		345.76	2,212,890	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N	CD42.01	Kiln Bypass Dust D/C	EP42.01	Bypass Dust Transfer to Existing Cement Silos	See Note 1	See Note 1	See Note 1	November 2005	May 15, 2010		27.56	176,368	stons	0.87	3.36	0.74	2.85	0.26	1.01
P	N	CD42.06	Lime Storage D/C	EP42.06	Lime Storage for Scrubber System	See Note 1	See Note 1	See Note 1	November 2005	December 1, 2009		12.06	77,161	stons	1.44	5.52	1.22	4.70	0.43	1.66
P	N	CD42.07	Bypass Truck Spout Dedusting	EP42.07	Bypass Truck Spout Dedusting	See Note 1	See Note 1	See Note 1	November 2005	February 20, 2010		Not Applicable	Not Applicable	Not Applicable	0.29	1.10	0.24	0.94	0.09	0.33

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P=Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Equipment Manufacturer	Equipment Model Number	Equipment Serial Number	Construction Date	Start-Up (Installation) Date	Modification Date	Maximum Hourly Throughput	Maximum Annual Throughput	Throughput Unit	Future Potential TSP Emissions (lb/hr)	Future Potential TSP Emissions (tpy)	Future Potential PM10 Emissions (lb/hr)	Future Potential PM10 Emissions (tpy)	Future Potential PM2.5 Emissions (lb/hr)	Future Potential PM2.5 Emissions (tpy)	
<b>GROUP 4 - CLINKER HANDLING AND STORAGE</b>																					
P	N	CD43.03	Clinker Storage Feeding D/C	EP43.05	Clinker conveyor to big clinker silo	See Note 1	See Note 1	See Note 1	November 2005	October 24, 2009		345.76	2,212,890	stons	0.52	1.99	0.44	1.69	0.16	0.60	
P	N	CD43.04	Small Clinker Storage Feeding D/C	EP43.04	Clinker conveyor to clinker silo	See Note 1	See Note 1	See Note 1	November 2005	October 24, 2009		345.76	2,212,890	stons	0.31	1.19	0.26	1.01	0.09	0.36	
P	N	CD43.06	Small Clinker Storage Discharge D/C	EP43.06.01	Low Alkali Clinker Silo to upper conveyors	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons	0.02	0.08	0.02	0.07	0.01	0.02	
P	N			EP43.06.02	Upper conveyors to lower conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons							
P	N	CD43.07	Clinker Storage Discharge D/C	EP43.06.03	Low Alkali Clinker silo to lower conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons	0.02	0.08	0.02	0.07	0.01	0.02	
P	N			EP43.07.01	Big clinker silo to upper conveyor1	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons							
P	N			EP43.07.02	Big clinker silo to upper conveyor2	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons							
P	N			EP43.07.03	Big clinker silo to lower conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons							
P	N			EP43.07.04	Big clinker silo to short conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons							
P	N			EP43.07.05	Short conveyor to lower conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons							
P	N	CD43.08	Finish Mill Conveying D/C1	EP43.08	Upper conveyor 1 to FM feed hoppers belt	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons	0.02	0.08	0.02	0.07	0.01	0.02	
P	N	CD43.09	Finish Mill Conveying D/C2	EP43.09	Lower conveyor to FM feed hoppers belt	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons	0.02	0.08	0.02	0.07	0.01	0.02	
P	N	CD43.13	Finish Mill Conveying D/C3	EP43.13	Upper conveyor 2 to FM feed hoppers belt	See Note 1	See Note 1	See Note 1	November 2005	November 15, 2009		345.76	2,212,890	stons	0.02	0.08	0.02	0.07	0.01	0.02	
<b>GROUP 5 - FUEL HANDLING</b>																					
F	E	EP15.01.01		EP15.01.01	Rail unloading to petcoke hopper	See Note 1	See Note 1	See Note 1	N/A	1966	Sept. 20, 2009	18.26	116,844	stons	0.00	0.01	0.00	0.01	0.00	0.00	
F	E	EP15.01.02		EP15.01.02	Petcoke hopper to feeders	See Note 1	See Note 1	See Note 1	N/A	1966	Sept. 20, 2009	18.26	116,844	stons	0.00	0.00	0.00	0.00	0.00	0.00	
F	N	EP41.01.01		EP41.01.01	Petcoke feeders to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		18.26	116,844	stons	0.00	0.01	0.00	0.00	0.00	0.00	
F	N	EP41.01.02		EP41.01.02	Petcoke Conveyor to split to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		18.26	116,844	stons	0.00	0.01	0.00	0.00	0.00	0.00	
F	N	EP41.01.03		EP41.01.03	Petcoke Conveyor to CSH fuel bins or pile	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		18.26	116,844	stons	0.00	0.01	0.00	0.00	0.00	0.00	
F	N	EP41.01.04		EP41.01.04	Coal Truck unloading to storage hall	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		27.39	175,266	stons	0.01	0.03	0.00	0.01	0.00	0.00	
F	N	EP41.01.05		EP41.01.05	Clam bucket to coal pile	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		27.39	175,266	stons	0.01	0.03	0.00	0.01	0.00	0.00	
F	N	EP41.01.06		EP41.01.06	Pile to clam bucket	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		45.64	292,110	stons	0.01	0.05	0.01	0.02	0.00	0.00	
F	N	EP41.01.07		EP41.01.07	Clam bucket to CSH fuel bins	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		45.64	292,110	stons	0.01	0.05	0.01	0.02	0.00	0.00	
F	N	EP41.02.01		EP41.02.01	CSH fuel bins to feeders	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		45.64	292,110	stons	0.01	0.04	0.00	0.02	0.00	0.00	
F	N	EP41.02.02		EP41.02.02	Feeders to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		45.64	292,110	stons	0.02	0.08	0.01	0.04	0.00	0.01	
F	N	EP41.02.03		EP41.02.03	Conveyor to split to conveyor	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		45.64	292,110	stons	0.02	0.08	0.01	0.04	0.00	0.01	
P	N	CD42.04		EP41.02.04	Conveyor to Coal Mill	See Note 1	See Note 1	See Note 1	November 2005	Sept. 20, 2009		45.64	292,110	stons	CD42.04	CD42.04	CD42.04	CD42.04	CD42.04	CD42.04	
<b>GROUP 6 - CEMENT PRODUCTION</b>																					
P	N	CD43.14	Finish Mill 1 & 2 Hoppers D/C	EP43.14	Conveyor to clinker feeding hoppers (FM1 & 2)	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		345.76	2,212,890	stons	0.52	1.99	0.44	1.69	0.16	0.60	
P	N			EP43.15	Conveyor to lower conveyor (FM3)	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		345.76	2,212,890	stons							
P	N	CD43.16	Finish Mill 3 Hopper D/C	EP43.16	Lower conveyor to clinker feeding hopper (FM3)	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		345.76	2,212,890	stons	0.52	1.99	0.44	1.69	0.16	0.60	
F	M	EP26.06.03		EP26.06.03	Gypsum/Synthetic Gypsum truck unloading to storage hall	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons	0.02	0.07	0.01	0.03	0.00	0.01	
F	M	EP26.06.04		EP26.06.04	Clam bucket to gypsum/synthetic gypsum pile	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons	0.01	0.02	0.00	0.01	0.00	0.00	
F	M	EP26.06.05		EP26.06.05	Gypsum/synthetic gypsum pile to clam bucket	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons	0.01	0.02	0.00	0.01	0.00	0.00	
F	M	EP26.06.06		EP26.06.06	Clam bucket to gypsum/synthetic gypsum bin (FM1/2/3)	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons	0.01	0.02	0.00	0.01	0.00	0.00	
F	M	EP26.07.01		EP26.07.01	Limestone Pile to clam bucket	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons	0.03	0.11	0.01	0.05	0.00	0.01	
F	M	EP26.07.02		EP26.07.02	Clam bucket to limestone bin (FM1/2/3)	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons	0.03	0.11	0.01	0.05	0.00	0.01	
F	M	EP27.01		EP27.01	Conveyor to clinker hopper	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		3.91	25,000	stons	0.57	2.21	0.27	1.04	0.04	0.16	
F	M	EP27.02		EP27.02	Clinker hopper to crane	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		3.91	25,000	stons	0.57	2.21	0.27	1.04	0.04	0.16	
F	M	EP27.03		EP27.03	Crane to clinker pile	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		3.91	25,000	stons	0.57	2.21	0.27	1.04	0.04	0.16	
F	M	EP27.04		EP27.04	Clinker pile to crane	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		3.91	25,000	stons	0.57	2.21	0.27	1.04	0.04	0.16	
F	M	EP27.05		EP27.05	Crane to clinker bins (FM1/2/3)	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		3.91	25,000	stons	0.57	2.21	0.27	1.04	0.04	0.16	
P	N	CD44.01	Finish Mill 2 Feeding D/C1	EP44.01	L.A. clinker bin to FM2 conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		345.76	2,212,890	stons	0.31	1.19	0.26	1.01	0.09	0.36	
P	N	CD44.02	Finish Mill 1 Feeding D/C1	EP44.02	Clinker bin to FM1 conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		345.76	2,212,890	stons	0.31	1.19	0.26	1.01	0.09	0.36	
P	N	CD44.03	Finish Mill 2 Feeding D/C2	EP44.03	Clinker bin to FM2 conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		345.76	2,212,890	stons	0.21	0.80	0.18	0.68	0.06	0.24	
P	N	CD44.04	Finish Mill 2 Feeding D/C3	EP44.04.01	Limestone bin to FM2 conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		23.57	150,879	stons	0.31	1.19	0.26	1.01	0.09	0.36	
P	N			EP44.04.02	Gypsum/synthetic gypsum bin to FM2 conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		23.57	150,879	stons							
P	N	CD44.05	Finish Mill 1 Feeding D/C2	EP44.05.01	Limestone bin to FM1 conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons	0.31	1.19	0.26	1.01	0.09	0.36	
P	N			EP44.05.02	Gypsum/synthetic gypsum bin to FM1 conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		23.57	150,879	stons							
P	E	CD19.02	Finish Mill 3 Baghouse D/C	EP19.01Pb	No. 3 Finish Mill Separator (Existing FM 10)	See Note 1	See Note 1	See Note 1	N/A	1965	1986	108.63	695,243	stons	12.08	46.40	10.27	39.44	3.63	13.92	
P	E	CD19.01	Finish Mill 3 Norblo D/C	EP19.01U	FM3 Feed bins to feeders	See Note 1	See Note 1	See Note 1	N/A	1965	February 1, 2010	108.63	695,243	stons	3.91	15.02	3.32	12.76	1.17	4.51	
P	E			EP19.01Pa.01	FM3 Feeders to belt conveyor 650	See Note 1	See Note 1	See Note 1	N/A	1965	February 1, 2010	108.63	695,243	stons							
P	E			EP19.01Pa.02	Belt conveyor 650 to FM3	See Note 1	See Note 1	See Note 1	N/A	1965	February 1, 2010	108.63	695,243	stons							
P	E			EP19.02	Finish Mill 3	See Note 1	See Note 1	See Note 1	N/A	1965	February 2, 2010	108.63	695,243	stons							
P	N	CD44.06	Finish Mill 1 Conveying D/C	EP44.06	FM1 Conveyor to conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.31	1.19	0.26	1.01	0.09	0.36	
P	N	CD44.07	Finish Mill 1 High Zone D/C	EP44.07.01	Elevator to FM1 conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.73	2.78	0.62	2.37	0.22	0.84	
P	N			EP44.07.02	FM1 Conveyor to bin	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons							
P	N			EP44.07.03	Conveyor to Finish Mill 1	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons							

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P=Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Equipment Manufacturer	Equipment Model Number	Equipment Serial Number	Construction Date	Start-Up (Installation) Date	Modification Date	Maximum Hourly Throughput	Maximum Annual Throughput	Throughput Unit	Future Potential TSP Emissions (lb/hr)	Future Potential TSP Emissions (tpy)	Future Potential PM10 Emissions (lb/hr)	Future Potential PM10 Emissions (tpy)	Future Potential PM2.5 Emissions (lb/hr)	Future Potential PM2.5 Emissions (tpy)
P	N	CD44.08	Finish Mill 1 Low Zone D/C	EP44.08.01	Finish Mill 1 to Conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.41	1.59	0.35	1.35	0.12	0.48
P	N			EP44.08.02	Bin to FM1 conveyor	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons						
P	N			EP44.08.03	FM1 Conveyor to bucket elevator	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons						
P	N	CD44.09	Finish Mill 1 D/C	EP44.09	Finish Mill 1	Loesche	53.3+3	None	November 2005	November 13, 2009		287.44	1,839,600	stons	7.48	28.73	6.36	24.42	2.24	8.62
P	N	CD44.13	Finish Mill 1 Discharge D/C	EP44.13	Finish Mill 1 Conveying	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N	CD44.14	Finish Mill 2 Conveying D/C	EP44.14	FM2 Conveyor to conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons	0.31	1.19	0.26	1.01	0.09	0.36
P	N	CD44.10	Finish Mill 2 High Zone D/C	EP44.10.01	FM2 Elevator to conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons	0.73	2.78	0.62	2.37	0.22	0.84
P	N			EP44.10.02	FM2 Conveyor to bin	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons						
P	N			EP44.10.03	Conveyor to Finish Mill 2	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons						
P	N	CD44.11	Finish Mill 2 Low Zone D/C	EP44.11.01	Finish Mill 2 to conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons	0.41	1.59	0.35	1.35	0.12	0.48
P	N			EP44.11.02	Bin to FM2 conveyor	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons						
P	N			EP44.11.03	FM2 Conveyor to bucket elevator	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons						
P	N	CD44.12	Finish Mill 2 D/C	EP44.12	Finish Mill 2	Loesche	53.3+3	None	November 2005	December 16, 2009		287.44	1,839,600	stons	7.48	28.73	6.36	24.42	2.24	8.62
P	N	CD44.15	Finish Mill 2 Discharge D/C	EP44.15	Finish Mill 2 Conveying	See Note 1	See Note 1	See Note 1	November 2005	December 16, 2009		287.44	1,839,600	stons	0.21	0.80	0.18	0.68	0.06	0.24
P	N	EP44.16	Finish Mill 1/2 Air Heater	EP44.16	Finish Mill 1/2 Air Heater	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		141.73	1,241,518	Gallons Diesel	CD44.09 CD44.12	CD44.09 CD44.12	CD44.09 CD44.12	CD44.09 CD44.12	CD44.09 CD44.12	CD44.09 CD44.12
<b>GROUP 7 - SHIPPING</b>																				
P	N	CD45.01	Finish Mill 1 Airslides D/C	EP45.01	Finish Mill 1 airslides	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.41	1.59	0.35	1.35	0.12	0.48
P	N	CD45.02	Finish Mill 2 Airslides D/C	EP45.02	Finish Mill 2 airslides	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.41	1.59	0.35	1.35	0.12	0.48
P	N	CD45.03	Cement Silos Feeding D/C1	EP45.03	Finish Mill 1 to cement silos	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.31	1.19	0.26	1.01	0.09	0.36
P	N	CD45.04	Cement Silos Feeding D/C2	EP45.04	Finish Mill 2 to cement silos	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		287.44	1,839,600	stons	0.31	1.19	0.26	1.01	0.09	0.36
P	N	CD45.05	Cement Silo A1 & A2 D/C	EP45.05	Cement Silo A1 & A2	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		282.90	1,810,546	stons	0.49	1.90	0.42	1.62	0.15	0.57
P	N	CD45.06	Cement Silo B1 & B2 D/C	EP45.06	Cement Silo B1 & B2	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		282.90	1,810,546	stons	0.49	1.90	0.42	1.62	0.15	0.57
P	N	CD45.07	Cement Silo C1 & C2 D/C	EP45.07	Cement Silo C1 & C2	See Note 1	See Note 1	See Note 1	November 2005	November 13, 2009		282.90	1,810,546	stons	0.52	1.99	0.44	1.69	0.16	0.60
P	N	CD45.08	Truck Loadout 1 D/C	EP45.08	Bulk lane loadout 1	See Note 1	See Note 1	See Note 1	November 2005	December 15, 2009		282.90	1,810,546	stons	0.28	1.06	0.23	0.90	0.08	0.32
P	N	CD45.09	Truck Loadout 2 D/C	EP45.09	Bulk lane loadout 2	See Note 1	See Note 1	See Note 1	November 2005	December 15, 2009		282.90	1,810,546	stons	0.28	1.06	0.23	0.90	0.08	0.32
P	N	CD45.10	Truck Loadout 3 D/C	EP45.10	Bulk lane loadout 3	See Note 1	See Note 1	See Note 1	November 2005	December 15, 2009		282.90	1,810,546	stons	0.28	1.06	0.23	0.90	0.08	0.32
P	N	CD45.11	Truck Loadout 4 D/C	EP45.11	Bulk lane loadout 4	See Note 1	See Note 1	See Note 1	November 2005	December 15, 2009		282.90	1,810,546	stons	0.28	1.06	0.23	0.90	0.08	0.32
P	N	CD45.14	Cement Analyzer D/C	EP45.14	Cement Analyzer	See Note 1	See Note 1	See Note 1	November 2005	June 21, 2010		282.90	1,810,546	stons	0.14	0.55	0.12	0.47	0.04	0.17
P	M	CD21.05	Middle Bank Silos 1 D/C	EP21.05	Middle Bank Silos 1 DC	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.59	2.25	0.50	1.92	0.18	0.68
P	M	CD21.06	Middle Bank Silos 2 D/C	EP21.06	Middle Bank Silos 2 DC	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.59	2.25	0.50	1.92	0.18	0.68
P	M	CD21.07	Middle Bank Silos 3 D/C	EP21.07	Middle Bank Silos 3 DC	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.59	2.25	0.50	1.92	0.18	0.68
P	M	CD21.08	Middle Bank Silos 4 D/C	EP21.08	Middle Bank Silos 4 DC	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.59	2.25	0.50	1.92	0.18	0.68
P	M	CD21.09	Middle Bank Silos 5 D/C	EP21.09	Middle Bank Silos 5 DC	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.59	2.25	0.50	1.92	0.18	0.68
P	N	CD21.10	Middle Bank Vent 1 D/C	EP21.10	Middle Bank Bin Vent 1 - Silos Inlet	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.10	0.38	0.08	0.32	0.03	0.11
P	N	CD21.11	Middle Bank Vent 2 D/C	EP21.11	Middle Bank Bin Vent 2 - Silos Inlet	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.10	0.38	0.08	0.32	0.03	0.11
P	N	CD21.12	Middle Bank Vent 3 D/C	EP21.12	Middle Bank Bin Vent 3 - Silos Discharge	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.10	0.38	0.08	0.32	0.03	0.11
P	N	CD21.13	Middle Bank Vent 4 D/C	EP21.13	Middle Bank Bin Vent 4 - Silos Discharge	See Note 1	See Note 1	See Note 1	November 2005	August 9, 2009		392.91	2,514,648	stons	0.10	0.38	0.08	0.32	0.03	0.11
P	N	CD45.12	Rail Loadout 1 D/C	EP45.12	Bulk rail loadout 1	See Note 1	See Note 1	See Note 1	November 2005	March 30, 2010		392.91	2,514,648	stons	0.12	0.44	0.10	0.38	0.03	0.13
P	N	CD45.13	Rail Loadout 2 D/C	EP45.13	Bulk rail loadout 2	See Note 1	See Note 1	See Note 1	November 2005	March 30, 2010		392.91	2,514,648	stons	0.12	0.44	0.10	0.38	0.03	0.13
P	M	CD46.01	Truck Loadout Silo 1 D/C	EP46.01	Truck Loadout Silo 1	See Note 1	See Note 1	See Note 1	Not Yet Constructed			282.90	1,810,546	stons	0.23	0.88	0.20	0.75	0.07	0.27
P	M	CD46.02	Truck Loadout Silo 2 D/C	EP46.02	Truck Loadout Silo 2	See Note 1	See Note 1	See Note 1	Not Yet Constructed			282.90	1,810,546	stons	0.23	0.88	0.20	0.75	0.07	0.27
P	M	CD46.03	Truck Loadout Silo 3 D/C	EP46.03	Truck Loadout Silo 3	See Note 1	See Note 1	See Note 1	Not Yet Constructed			282.90	1,810,546	stons	0.23	0.88	0.20	0.75	0.07	0.27
P	M	CD46.04	Truck Loadout Silo 4 D/C	EP46.04	Truck Loadout Silo 4	See Note 1	See Note 1	See Note 1	Not Yet Constructed			282.90	1,810,546	stons	0.23	0.88	0.20	0.75	0.07	0.27
P	M	CD46.05	Truck Loadout Silo 5 D/C	EP46.05	Truck Loadout Silo 5	See Note 1	See Note 1	See Note 1	Not Yet Constructed			282.90	1,810,546	stons	0.23	0.88	0.20	0.75	0.07	0.27
P	M	CD46.06	Truck Loadout 5 D/C	EP46.06	Bulk loadout 5 - Truck Loadout Silos	See Note 1	See Note 1	See Note 1	Not Yet Constructed			282.90	1,810,546	stons	0.20	0.75	0.17	0.64	0.06	0.23
P	M	CD46.07	Truck Loadout 6 D/C	EP46.07	Bulk loadout 6 - Truck Loadout Silos	See Note 1	See Note 1	See Note 1	Not Yet Constructed			282.90	1,810,546	stons	0.20	0.75	0.17	0.64	0.06	0.23
P	M	CD20.04	East Bank Silos 1 D/C	EP20.04	East Bank Silos 1	See Note 1	See Note 1	See Note 1	November 2005	August 28, 2009		108.63	695,243	stons	0.47	1.80	0.40	1.53	0.14	0.54
P	M	CD20.05	East Bank Silos 2 D/C	EP20.05	East Bank Silos 2	See Note 1	See Note 1	See Note 1	November 2005	August 28, 2009		108.63	695,243	stons	0.47	1.80	0.40	1.53	0.14	0.54
P	M	CD20.06	East Bank Silos 3 D/C	EP20.06	East Bank Silos 3	See Note 1	See Note 1	See Note 1	November 2005	August 28, 2009		108.63	695,243	stons	0.47	1.80	0.40	1.53	0.14	0.54
P	M	CD48.01	Packhouse D/C	EP48.01	Packhouse	See Note 1	See Note 1	See Note 1	November 2005	May 10, 2009		39.29	251,465	stons	1.38	5.30	1.17	4.51	0.41	1.59
<b>GROUP 8 - MISCELLANEOUS</b>																				
P	M	CD31.01	Flyash Tank No.1 D/C	EP31.01	Fly Ash Tank #1	See Note 1	See Note 1	See Note 1	N/A	1995	February 28, 2010	7.86	50,293	stons	0.23	0.90	0.20	0.77	0.07	0.27
P	M	CD31.02	Bypass Dust Tank D/C	EP31.02	Bypass Dust Tank	See Note 1	See Note 1	See Note 1	N/A	1995		7.86	50,293	stons	0.23	0.90	0.20	0.77	0.07	0.27
P	M	CD31.03	Bypass Dust Loadout D/C	EP31.03	Bypass Dust silo/loadout	See Note 1	See Note 1	See Note 1	N/A	1995		7.86	50,293	stons	0.29	1.10	0.24	0.94	0.09	0.33
P	M	CD22.04	Dry Flyash Unloading D/C	EP22.04	Dry Flyash Unloading to West Bank Silos	See Note 1	See Note 1	See Note 1	Not Yet Constructed			41.34	264,552	stons	0.88	3.38	0.75	2.87	0.26	1.01
P	M	CD22.05	Dry Flyash Silo #71 D/C	EP22.05	Dry Flyash Silo #71	See Note 1	See Note 1	See Note 1	Not Yet Constructed			41.34	264,552	stons	0.07	0.28	0.06	0.24	0.02	0.08
P	M	CD22.06	Dry Flyash Silo #72 D/C	EP22.06	Dry Flyash Silo #72	See Note 1	See Note 1	See Note 1	Not Yet Constructed			41.34	264							

TABLE E-1

P=Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Equipment Manufacturer	Equipment Model Number	Equipment Serial Number	Construction Date	Start-Up (Installation) Date	Modification Date	Maximum Hourly Throughput	Maximum Annual Throughput	Throughput Unit	Future Potential TSP Emissions (lb/hr)	Future Potential TSP Emissions (tpy)	Future Potential PM10 Emissions (lb/hr)	Future Potential PM10 Emissions (tpy)	Future Potential PM2.5 Emissions (lb/hr)	Future Potential PM2.5 Emissions (tpy)
P	N	EPOB.01	Administrative Boiler 1	EPOB.01	Administrative Boiler 1	See Note 1	See Note 1	See Note 1	November 2005	October 1, 2009		18.14	158,921	Gallons LP Gas	0.01	0.05	0.01	0.05	0.01	0.05
P	N	EPOB.02	Administrative Boiler 2	EPOB.02	Administrative Boiler 2	See Note 1	See Note 1	See Note 1	November 2005	October 2, 2009		18.14	158,921	Gallons LP Gas	0.01	0.05	0.01	0.05	0.01	0.05
P	N	EPOG.01	Emergency Generator	EPOG.01	Emergency Generator	See Note 1	See Note 1	See Note 1	November 2005	October 3, 2009		N/A	N/A	N/A	0.94	0.23	0.77	0.19	0.75	0.19
F	E	EPOX.04		EPOX.04	Crusher feed pile	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	1	Acres	0.11	0.50	0.06	0.25	0.06	0.25
F	E	EPOX.05		EPOX.05	Quarry waste pile	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	3.1	Acres	0.47	2.07	0.24	1.04	0.24	1.04
F	N	EPOX.06		EPOX.06	New Crusher feed pile	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	2	Acres	0.23	1.00	0.11	0.50	0.11	0.50
F	E	EP03.01		EP03.01	Stone Storage Bays - (5 piles)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	1.06	Acres	0.03	0.15	0.02	0.07	0.02	0.07
F	M	EP26.05		EP26.05	Gypsum/Synthetic Gypsum storage pile (Craneway)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	0.25	Acres	0.01	0.05	0.01	0.03	0.01	0.03
F	N	EP26.08		EP26.08	Limestone Storage pile (Craneway)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	0.25	Acres	0.01	0.05	0.01	0.03	0.01	0.03
F	M	EP15.04.03		EP15.04.03	Coal storage pile (Craneway)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	0.25	Acres	0.01	0.03	0.00	0.01	0.00	0.01
F	N	EP15.04.04		EP15.04.04	Petcoke Storage Pile (Craneway)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	0.25	Acres	0.01	0.03	0.00	0.01	0.00	0.01
F	E	EP14.08		EP14.08	Clinker stockpile (Craneway)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	0.1	Acres	0.00	0.02	0.00	0.01	0.00	0.01
F	M	EP25.01		EP25.01	Quarry haul roads (new crusher)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	4,125,933	stons hauled	53.10	203.90	15.67	60.18	1.57	6.02
F	M	EP25.02		EP25.02	Quarry haul roads (old crusher)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	150,879	stons hauled	2.08	7.99	0.61	2.36	0.06	0.24
F	M	EP25.03		EP25.03	Quarry haul roads (waste)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	213,841	stons hauled	3.93	15.10	1.16	4.46	0.12	0.45
F	M	EP25.04.02		EP25.04.02	Cement shipments	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	2,062,011	stons hauled	1.95	7.47	0.38	1.46	0.06	0.22
F	M	EP25.05.01		EP25.05.01	Additive trucks (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	219,076	stons hauled	0.00	0.00	0.00	0.00	0.00	0.00
F	M	EP25.05.02		EP25.05.02	Additive trucks (paved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	219,076	stons hauled	0.11	0.42	0.02	0.08	0.00	0.01
F	M	EP25.06.01		EP25.06.01	Fuel deliveries (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	175,266	stons hauled	0.00	0.00	0.00	0.00	0.00	0.00
F	M	EP25.06.02		EP25.06.02	Fuel deliveries (paved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	175,266	stons hauled	0.18	0.67	0.03	0.13	0.01	0.02
F	M	EP25.07		EP25.07	Waste dust trucks (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	90,801	stons hauled	7.98	30.63	2.35	9.04	0.24	0.90
F	M	EP25.08		EP25.08	Misc. plant vehicles (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	-	stons hauled	1.80	6.90	0.53	2.04	0.05	0.20
F	M	EP25.09.01		EP25.09.01	Dry Flyash trucks (For Cement) (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	50,293	stons hauled	0.25	0.98	0.08	0.29	0.01	0.03
F	M	EP25.09.02		EP25.09.02	Dry Flyash trucks (For Cement) (paved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	50,293	stons hauled	0.16	0.61	0.03	0.12	0.00	0.02
F	N	EP25.09.03		EP25.09.03	Dry Flyash trucks (For Calciner) (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	264,552	stons hauled	3.75	14.39	1.11	4.25	0.11	0.42
F	N	EP25.09.04		EP25.09.04	Dry Flyash trucks (For Calciner) (paved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	264,552	stons hauled	0.12	0.48	0.02	0.09	0.00	0.01
F	M	EP25.10.01		EP25.10.01	Waste dust customer trucks (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	35,274	stons hauled	0.89	3.43	0.26	1.01	0.03	0.10
F	M	EP25.10.02		EP25.10.02	Waste dust customer trucks (paved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	35,274	stons hauled	0.06	0.21	0.01	0.04	0.00	0.01
F	M	EP25.14		EP25.14	Gypsum/Synthetic Gypsum haul road (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	150,879	stons hauled	3.87	14.86	1.14	4.39	0.11	0.44
F	M	EP25.12		EP25.12	Gypsum/Synthetic Gypsum haul road (paved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	150,879	stons hauled	0.06	0.25	0.01	0.05	0.00	0.01
F	N	EP42.06.01		EP42.06.01	Lime deliveries (unpaved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	77,161	stons hauled	0.00	0.00	0.00	0.00	0.00	0.00
F	N	EP42.06.02		EP42.06.02	Lime deliveries (paved)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable		Not Applicable	77,161	stons hauled	0.09	0.35	0.02	0.07	0.00	0.01
F	E	EP50.01		EP50.01	Quarry Diesel Tank (Tank 56 - 15,000 gal)	See Note 1	See Note 1	See Note 1	November 2005	November 20, 2009		45	390,500	Gallons	N/A	N/A	N/A	N/A	N/A	N/A
F	N	EP50.02		EP50.02	Light Oil Tank (Tank 73 - 64,500 gal)	See Note 1	See Note 1	See Note 1	November 2005	August 31, 2009		13,200	115,632,000	Gallons	N/A	N/A	N/A	N/A	N/A	N/A
F	N	EP50.03		EP50.03	Grinding Aid Tank (Tank 74 - 10,600 gal)	See Note 1	See Note 1	See Note 1	November 2005	February 15, 2010		26	231,264	Gallons	N/A	N/A	N/A	N/A	N/A	N/A
F	N	EP50.04		EP50.04	Air Entrainment Tank (Tank 75 - 5,300 gal)	See Note 1	See Note 1	See Note 1	November 2005	February 15, 2010		26	231,264	Gallons	N/A	N/A	N/A	N/A	N/A	N/A

Note 1 - Per call with Denton McDerment of WV DEP-DAQ on June 9, 2010, Manufacturer, Model, and Serial Numbers will only be provided where readily available for major pieces of equipment.

TABLE E-2

PSD Permit EP ID	EU ID	EU Description	Type of Firing (Indirect or Direct Fired)	Maximum Design Heat Input and/or Maximum HP Rating	Type & BTU/Hr Rating of Burners	All Fuels Permitted to be Used	Primary and Secondary Fuel		
							Primary and Secondary Fuel Types	Maximum Hourly Fuel Usage	Maximum Annual Fuel Usage
CD42.04	EP42.04	Kiln System - Inline Raw Mill / PH/PC Kiln / Clinker Cooler	Indirect	1396 MMBTU/hr	Burner 1 - Duoflex 91MW Burner 2 - Single Pipe 100MW	Bituminous Coal Petroleum Coke Coal Fines Diesel Contaminated Soil	Primary Fuel - Coal/Coke Blend  Secondary Fuel - Diesel	Coal/Coke Blend - 22mtons per burner (x2)  Diesel - 10 cubic meters	Coal/Coke Blend - 292,110 Ston/year  Diesel - 100,000 cubic meters
EP44.16	EP44.16	Finish Mill 1/2 Air Heater	Direct	19.84 MMBTU/hr	19.84 MMBTU/hr	Diesel Natural Gas	Primary Fuel - Diesel  Secondary Fuel - Natural Gas	Diesel - 141.73 gal/hr  Natural Gas - 1.95E-2 MMscf/hr	Diesel - 1,241,518 gal/yr  Natural Gas - 170.40 MMscf/yr
EPOB.01	EPOB.01	Administrative Boiler 1	Direct	1.66 MMBTU/hr	1.66 MMBTU/hr	Liquid Propane Gas	Liquid Propane Gas	18.14 gal/hr	158,921 gal/yr
EPOB.02	EPOB.02	Administrative Boiler 2	Direct	1.66 MMBTU/hr	1.66 MMBTU/hr	Liquid Propane Gas	Liquid Propane Gas	18.14 gal/hr	158,921 gal/yr
EPOG.01	EPOG.01	Emergency Generator	Direct	1341 HP	3.42 MMBTU/hr	Diesel	Diesel	Data Not Available	Data Not Available

## **ATTACHMENT F – SCHEDULE OF COMPLIANCE FORMS**

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Included in this section is an Attachment F – Schedule of Compliance Form for each non-compliance issue identified in Attachment I – Federal and State Regulatory Analysis.

As mentioned in Attachment I, the Initial Performance Test Report dated May 26, 2010 reported that the Plant had a VOC non-compliance with its 0.14 lbs/ton clinker VOC limit. However, per the Permit R14-026D, the Plant is required to demonstrate compliance with its 0.14 lbs/ton clinker VOC limit on a 12-month rolling average. The Initial Performance Test Report only represented a 3-hour average time period. Following this page is the current report from the Plant which provides the 12-month rolling average of Total Organic Compounds (TOC) of which Volatile Organic Compounds (VOC) is a subset. This report shows that the Plant currently has a 12-month rolling average TOC value of 0.08 lbs/ton clinker which is in compliance with the VOC limit.



Emission = CAPITOL Cement Corp. -  
Martinsburg WV - USA

## Main Stack

### 12 Month Rolling Average

June-2010

Name	TOC (as C)
Units	lbs/ton clinker
June-09	-
July-09	-
August-09	-
September-09	-
October-09	0.00
November-09	0.00
December-09	0.00
January-10	0.14
February-10	0.01
March-10	0.11
April-10	0.07
May-10	0.11
<b>12 Month</b>	<b>0.07</b>

**Limits**                    **0.14**  
% reached                    48.4%

June-10	0.14
<b>Future</b>	<b>0.08</b>

% future                    59.8%

6/25/10 8:05

**ATTACHMENT F - Schedule of Compliance Form**

Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.

**1. Applicable Requirement 40 CFR 60.255 and 60.254 (Subpart Y)**

**Unit(s):** EP41.01.02

**Applicable Requirement:** Conduct Initial Method 9 Performance Testing within 180 days of start-up to demonstrate compliance with 20% opacity limit.

**2. Reason for Noncompliance:**

Emission unit was found to be out of compliance during the Initial Performance Testing conducted in March and April of 2010.

**3. How will Compliance be Achieved?**

The Plant is currently addressing the out of compliance issue and will conduct Initial Method 9 Performance Testing on the source once repairs are completed.

**4. Consent Order Number (if applicable):**

Not Applicable

**5. Schedule of Compliance.** Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved
Conduct Initial Method 9 Performance Testing	09/31/2010

**6. Submittal of Progress Reports.** A Test Results Report will be submitted within 60 days of testing completion.

**Content of Progress Report:**  
Not Applicable

**Report starting date:** MM/DD/YYYY

**Submittal frequency:**

**ATTACHMENT F - Schedule of Compliance Form**

Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.

**7. Applicable Requirement 40 CFR 60.255 and 60.254 (Subpart Y)**

**Unit(s):** EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

**Applicable Requirement:** Conduct Initial Method 9 Performance Testing within 180 days of start-up to demonstrate compliance with 20% opacity limit.

**8. Reason for Noncompliance:**

The affected sources listed above started operation on September 20, 2009. However, Initial Method 9 Performance Tests to demonstrate opacity compliance were conducted on March 27 through April 1, 2010 which was more than 180 days from the start of operation. The Plant experienced significant issues with maintaining a period of continuous operation of the kiln system until Spring of 2010, and due to this factor had difficulty operating other attending sources for a continuous period to allow for performance testing to be conducted within the 180 day time period.

**9. How will Compliance be Achieved?**

All sources demonstrated compliance with their 20% opacity limit during the Initial Method 9 Performance Testing conducted on March 27 through April 1, 2010.

**10. Consent Order Number (if applicable):**

Not Applicable

**11. Schedule of Compliance.** Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved
None Required	

**12. Submittal of Progress Reports.** A Compliance Test Report was submitted to WV DEP dated May 26, 2010 which documented these sources compliance with the opacity limit.

**Content of Progress Report:**

Not Applicable

**Report starting date:** MM/DD/YYYY

**Submittal frequency:**

**ATTACHMENT F - Schedule of Compliance Form**

Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.

**13. Applicable Requirement 40 CFR 60.672(a) and 60.675(b)(1) (Subpart OOO)**

**Unit(s):** CD37.03, CD37.04, CD37.06, CD38.01, CD04.03, CD38.02, CD39.05, CD39.01

**Applicable Requirement:** All affected sources equipped with a capture system must conduct an Initial Method 5 or Method 17 Performance Testing within 60 days after achieving maximum production, but not later than 180 days after initial start-up to demonstrate compliance with their particulate limit of 0.0022 gr/dscf.

**14. Reason for Noncompliance:**

The Plant was unaware of this requirement during start-up of Plant operations.

**15. How will Compliance be Achieved?**

The Plant will conduct Initial Method 5 Performance Testing on all sources.

**16. Consent Order Number (if applicable):**

Not Applicable

**17. Schedule of Compliance.** Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved
Conduct Initial Method 5 Performance Testing	09/31/2010

**18. Submittal of Progress Reports.** A Test Results Report will be submitted within 60 days of testing completion.

**Content of Progress Report:**

Not Applicable

**Report starting date:** MM/DD/YYYY

**Submittal frequency:**

**ATTACHMENT F - Schedule of Compliance Form**

Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.

**19. Applicable Requirement 40 CFR 60.672(a) (Subpart OOO)**

**Unit(s):** CD37.03, CD37.04, CD37.06, CD38.01, CD04.03, CD38.02, CD39.05, CD39.01, CD39.02

**Applicable Requirement:** All affected sources equipped with a capture system must conduct an Initial Method 9 Performance Test within 60 days after achieving maximum production, but not later than 180 days after initial start-up to demonstrate compliance with their 7% opacity limit.

**20. Reason for Noncompliance:**

The affected sources listed above achieved maximum production between September 5 and October 15, 2009. However, Initial Method 9 Performance Tests to demonstrate opacity compliance were conducted on March 27 through April 1, 2010 which was more than 60 days after achieving maximum production. The Plant experienced significant issues with maintaining a period of continuous operation of the kiln system until Spring of 2010, and due to this factor had difficulty operating other attending sources for a continuous period to allow for performance testing to be conducted within the 180 day time period.

**21. How will Compliance be Achieved?**

All sources demonstrated compliance with their 7% opacity limit during the Initial Method 9 Performance Testing conducted on March 27 through April 1, 2010.

**22. Consent Order Number (if applicable):**

Not Applicable

**23. Schedule of Compliance.** Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved
None Required	

**24. Submittal of Progress Reports.** A Compliance Test Report was submitted to WV DEP dated May 26, 2010 which documented these sources compliance with the opacity limit.

**Content of Progress Report:**

Not Applicable

**Report starting date:** MM/DD/YYYY

**Submittal frequency:**

<b>ATTACHMENT F - Schedule of Compliance Form</b>	
<p>Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.</p>	
<b>25. Applicable Requirement 40 CFR 60.672(b) (Subpart OOO)</b>	
<b>Unit(s):</b> EP37.02.02, EP37.05, EP40.03;	<b>Applicable Requirement:</b> All affected sources equipped with a capture system must conduct an Initial Method 9 Performance Test within 60 days after achieving maximum production, but not later than 180 days after initial start-up to demonstrate compliance with their 10% opacity limit.
<b>26. Reason for Noncompliance:</b> The affected sources listed above achieved maximum production between September 14 and October 15, 2009. However, Initial Method 9 Performance Tests to demonstrate opacity compliance were conducted on April 1, 2010 which was more than 60 days after achieving maximum production. The Plant experienced significant issues with maintaining a period of continuous operation of the kiln system until Spring of 2010, and due to this factor had difficulty operating other attending sources for a continuous period to allow for performance testing to be conducted within the 180 day time period.	
<b>27. How will Compliance be Achieved?</b> All sources demonstrated compliance with their 10% opacity limit during the Initial Method 9 Performance Testing conducted on April 1, 2010.	
<b>28. Consent Order Number (if applicable):</b> Not Applicable	
<b>29. Schedule of Compliance.</b> Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.	
Remedial Measure or Action	Date to be Achieved
None Required	
<b>30. Submittal of Progress Reports.</b> A Compliance Test Report was submitted to WV DEP dated May 26, 2010 which documented these sources compliance with the opacity limit.	
<b>Content of Progress Report:</b>  Not Applicable	<b>Report starting date:</b> MM/DD/YYYY  <b>Submittal frequency:</b>

**ATTACHMENT F - Schedule of Compliance Form**

Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.

**31. Applicable Requirement 40 CFR 63.1349(b)(2) (Subpart LLL)**

**Unit(s):** CD43.14, CD45.03, CD45.04, CD45.05, CD45.06, CD45.07, CD45.09, CD21.05, CD21.06, CD21.07, CD21.08, CD21.09, CD21.10, CD21.11, CD21.12, CD21.13, CD45.12, CD45.13, CD46.07, CD20.04, CD20.05, CD20.06, CD31.03

**Applicable Requirement:** All affected sources shall conduct Initial Method 9 Performance Testing within 180 days of start-up to demonstrate compliance with their 10% opacity limit.

**32. Reason for Noncompliance:**

Emission sources were either not in operation during the time period in March and April 2010 when the Initial Performance Testing was conducted or were found to be out of compliance during the testing.

**33. How will Compliance be Achieved?**

The Plant is currently addressing all out of compliance issues and will conduct Initial Method 9 Performance Testing on all remaining sources once they either begin operation or when repairs are completed.

**34. Consent Order Number (if applicable):**

Not Applicable

**35. Schedule of Compliance.** Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved
Conduct Initial Method 9 Performance Testing	09/31/2010

**36. Submittal of Progress Reports.** A Test Results Report will be submitted within 60 days of testing completion.

**Content of Progress Report:**

Not Applicable

**Report starting date:** MM/DD/YYYY

**Submittal frequency:**

**ATTACHMENT F - Schedule of Compliance Form**

Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.

**37. Applicable Requirement 40 CFR 63.1349(b)(2) (Subpart LLL)**

**Unit(s):** EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD48.01

**Applicable Requirement:** All affected sources shall conduct Initial Method 9 Performance Testing within 180 days of start-up to demonstrate compliance with their 10% opacity limit.

**38. Reason for Noncompliance:**

The affected sources listed above started operation on May 10<sup>th</sup>, 2009 (CD48.01) or September 15, 2009 (all other affected sources listed). However, Initial Method 9 Performance Tests to demonstrate opacity compliance were conducted on March 27 through April 5, 2010 which was more than 180 days from the start of operation. The Plant experienced significant issues with maintaining a period of continuous operation of the kiln system until Spring of 2010, and due to this factor had difficulty operating other attending sources for a continuous period to allow for performance testing to be conducted within the 180 day time period.

**39. How will Compliance be Achieved?**

All sources demonstrated compliance with their 10% opacity limit during the Initial Method 9 Performance Testing conducted on March 27 through April 5, 2010.

**40. Consent Order Number (if applicable):**

Not Applicable

**41. Schedule of Compliance.** Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved
Not Required	

**42. Submittal of Progress Reports.** A Compliance Test Report was submitted to WV DEP dated May 26, 2010 which documented these sources compliance with the opacity limit.

**Content of Progress Report:**

Not Applicable

**Report starting date:** MM/DD/YYYY

**Submittal frequency:**

## **ATTACHMENT G – AIR POLLUTION CONTROL DEVICE FORMS**

Most of the information required by the Attachment G – Air Pollution Control Device Forms was previously submitted as part of the Capitol Cement Corporation’s September 2009 Application for NSR Permit. Provided below is a crosswalk table for Attachment G which denotes the location of all requested information.

<b>Attachment G – Air Pollution Control Device Forms</b>	<b>Location of Information</b>
Control Device ID Number	September 2009 Application for NSR Permit Attachment M (Baghouse) of Appendix A Supporting Table Row 1  September 2009 Application for NSR Permit Attachment M (Scrubber) of Appendix A
Manufacturer	September 2009 Application for NSR Permit Attachment M (Baghouse) of Appendix A Supporting Table Row 3  September 2009 Application for NSR Permit Attachment M (Scrubber) of Appendix A
Model Number	September 2009 Application for NSR Permit Attachment M (Baghouse) of Appendix A Supporting Table Row 4  September 2009 Application for NSR Permit Attachment M (Scrubber) of Appendix A
Installation Date	Provided in Table E-1 of this Application
Type of Air Pollution Control Device	September 2009 Application for NSR Permit Preface to Attachment M of Appendix A (Page A-15)
Pollutant Capture Efficiency/Control Efficiency	All baghouses have 100% capture efficiency for particulate. Particulate control efficiencies listed as Collection Efficiency’s in: September 2009 Application for NSR Permit Attachment M (Baghouse) of Appendix A Supporting Table Row 19  September 2009 Application for NSR Permit Attachment M (Scrubber) of Appendix A
Design Parameters of Control Device	September 2009 Application for NSR Permit Attachment M (Baghouse) of Appendix A Supporting Table  September 2009 Application for NSR Permit Attachment M (Scrubber) of Appendix A
Control Device Subject to CAM	No Control Devices are subject to CAM, see Attachment H for justification.
Parameters Monitored and or Methods Used to Indicate Performance of Control Device	Provided in Attachment J – Operating and Maintenance Plan and Attachment I – Federal and State Regulatory Analysis of this Application

Following this page is a blank copy of the Attachment G – Air Pollution Control Device Forms for reference.

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b>	<b>List all emission units associated with this control device.</b>
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<b>Manufacturer:</b>	<b>Model number:</b>	<b>Installation date:</b> MM/DD/YYYY
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**Type of Air Pollution Control Device:**

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> 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

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

**Is this device subject to the CAM requirements of 40 C.F.R. 64?**  Yes  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.**

# ATTACHMENT H – COMPLIANCE ASSURANCE MONITORING (CAM) FORMS

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As denoted on the Attachment H form included in this section the Plant does not have any Pollutant-Specific Emission Units which are subject to CAM. Provided below is a CAM Applicability Analysis which includes the Plant’s justification.

## **Particulate CAM Applicability Analysis**

A CAM Applicability Analysis was conducted to evaluate the applicability of each emission unit at the Plant. Table H-1 addresses each emission unit and specifically all of the particulate control devices permitted at the Plant. Per 40 CFR 64.2(a), requirements of 40 CFR 64 shall only apply to emission units at a major source that satisfies all three of the following applicability criteria:

### Criteria 1

40 CFR 64.2(a)(1) - *"The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section."*

As presented in Table H-1, all emission units at the Plant are subject to one of the following federal regulations:

- NSPS Subpart OOO (Final Rule 4/28/09)
- NSPS Subpart Y (Final Rule 10/8/09)
- NSPS Subpart F (Proposed 5/30/08)
- NESHAP Subpart LLL (Final Rule 6/14/99)

40 CFR 64.2(b)(1)(i) exempts all *"emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Act."* Therefore, all emission units at the Plant are subject to an emission standard which was proposed after the exemption date of November 15, 1990.

### Criteria 2

40 CFR 64.2(a)(2) – *"The unit uses a control device to achieve compliance with any such emission limitation or standard."*

An economic analysis of all emission units that operate with a control device was performed to demonstrate that the emission units serve primarily as product recovery units (PRUs), and not as a control device to meet an emission limitation. The amount of material recovered by each unit was determined and then multiplied by the current Plant cost for the material as listed below:

<u>Material</u>	<u>Cost of a Short Ton</u>
Limestone	\$ 5.51
Coal	\$ 50.43
Kiln Feed	\$ 12.13
Clinker	\$ 46.30
Cement	\$ 58.42

As shown by Table H-1, the economic saving of capturing and returning the material back to the process for each emission unit is significant and demonstrates that each unit serves primarily as a PRU and not a control device, and therefore, is not subject to 40 CFR 64.

### Criteria 3

40 CFR 64.2(a)(3) – *“The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. For purposes of this paragraph, “potential pre-control device emissions” shall have the same meaning as “potential to emit,” as defined in §64.1, except that emission reductions achieved by the applicable control device shall not be taken into account.”*

As shown by Table H-1, all of the emission units at the facility have a potential uncontrolled annual emission rate of greater than 100 tons per year (the “major source” threshold). The potential controlled emission rate was calculated using the permitted outlet grain loading for each source and assuming 8,760 hours of operation per year. The potential uncontrolled emission rate for each source was then calculated by determining the control efficiency for each source based on the industry standard inlet grain loading of 20 gr/scf. For those emission units that share a control device, the total uncontrolled emissions from the device was calculated and then split equally among the emission units.

### Conclusion

No particulate emission unit at the Plant meets all three of the required criteria for determining applicability of 40 CFR 64, therefore none of the sources at the Plant are subject to the requirements of 40 CFR 64.

### **Sulfur Dioxide CAM Applicability Analysis**

The SO<sub>2</sub> scrubber is an air pollution control device; however, the SO<sub>2</sub> scrubber is part of the kiln system which is regulated by 40 CFR 63 Subpart LLL, and therefore, exempt from CAM Rule requirements. Additionally, the kiln system exhausts to the Main Stack which is equipped with a SO<sub>2</sub> Continuous Emission Monitor (CEM).

## 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) <sup>a</sup> 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	<sup>b</sup> EMISSION LIMITATION or STANDARD	<sup>c</sup> MONITORING REQUIREMENT
<u>EXAMPLE</u> 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

<sup>a</sup> 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).

<sup>b</sup> 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).

<sup>c</sup> 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) <sup>a</sup> Indicator No. 1:	4d) <sup>a</sup> Indicator No. 2:
<b>5a) GENERAL CRITERIA</b> Describe the <u>MONITORING APPROACH</u> used to measure the indicators:			
<sup>b</sup> Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:			
<b>5b) PERFORMANCE CRITERIA</b> Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:			
<sup>c</sup> For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:			
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):			
<sup>d</sup> Provide the <u>MONITORING FREQUENCY</u> :			
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:			
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:			

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> 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:

**TABLE H-1  
CAM APPLICABILITY ANALYSIS FOR PARICULATE EMISSIONS  
CAPITAL CEMENT PORTLAND CEMENT PLANT**

P= Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Hours of Operation (hours/year)	Flowrate (dscfm)	TSP Emissions Factor	Units	Building Control Efficiency (%)	Baghouse Control Efficiency (%)	Future Potential TSP Controlled Emissions (tpy)	Future Potential TSP Uncontrolled Emissions (tpy)	Criteria 3	Criteria 1	Criteria 2	
														PM Uncontrolled Emissions Per Source (tons)	Subject to NSPS or NESHAP?	Amount of Material Recovered by Unit (tons)	Economic Saving For Capturing Material
<b>GROUP 1 - QUARRYING AND CRUSHING</b>																	
F	E	EP0X.01		EP0X.01	Quarry drilling										NSPS Subpart 000	N/A	N/A
F	E	EP0X.02		EP0X.02	Quarry blasting										NSPS Subpart 000	N/A	N/A
F	E	EP0X.03.01		EP0X.03.01	Loader to truck (good rock)										NSPS Subpart 000	N/A	N/A
F	E	EP0X.03.02		EP0X.03.02	Loader to truck (waste rock)										NSPS Subpart 000	N/A	N/A
F	E	EP0X.03.03		EP0X.03.03	Truck to waste pile										NSPS Subpart 000	N/A	N/A
F	E	EP0X.03.04		EP0X.03.04	Truck to crusher pile										NSPS Subpart 000	N/A	N/A
F	E	EP0X.03.05		EP0X.03.05	Truck or loader to crusher dump										NSPS Subpart 000	N/A	N/A
P	E	CD01.01	Primary Crusher D/C	EP01.01	Primary crusher	4,160	6,298	0.020	gr/dscf	-31388.91%	99.90%	2.25	2,245.61	1,122.80	NSPS Subpart 000	2243.36	\$ 12,364.42
P	E			EP01.02	Crusher to belt conveyor 1013									1,122.80			
F	E	EP01.03		EP01.03	Belt conveyor 1013 to 40 T bin										NSPS Subpart 000	N/A	N/A
F	E	EP01.04		EP01.04	40 T bin to feeder										NSPS Subpart 000	N/A	N/A
F	E	EP01.05.01		EP01.05.01	Feeder to belt conveyor 1011										NSPS Subpart 000	N/A	N/A
F	E	EP01.05.02		EP01.05.02	Belt conveyor 1011 to belt conveyor 1007										NSPS Subpart 000	N/A	N/A
P	E	CD02.01	Secondary Crusher D/C	EP01.06.01	Belt conveyor 1007 to screen 1009	4,160	45,997	0.0200	gr/dscf	-229886.79%	99.90%	16.40	16,401.34	1,366.78	NSPS Subpart 000	16,384.94	\$90,306.51
P	E			EP01.06.02	Screen 1009									1,366.78			
P	E			EP01.06.03	Screen 1009 to belt conveyor 1009-B									1,366.78			
P	E			EP01.06.04	Screen 1009 to feeder 1009-A									1,366.78			
P	E			EP02.01.01	Feeder 1009-A to hammermill 1006									1,366.78			
P	E			EP02.01.02	Hammermill 1006									1,366.78			
P	E			EP02.01.03	Hammermill 1006 to belt conveyor 1005									1,366.78			
P	E			EP02.01.05	Belt conveyor 1004 to screen 1003									1,366.78			
P	E			EP02.01.06	Screen 1003									1,366.78			
P	E			EP02.01.08	Belt conveyor 1002 to hammermill 1006									1,366.78			
P	E			EP02.01.09	Screen 1003 to belt conveyor 1001									1,366.78			
P	E			EP02.01.10	Belt conveyor 1009-B to belt conveyor 1001									1,366.78			
F	E			EP02.01.04										EP02.01.04			
F	E	EP02.01.07		EP02.01.07	Screen 1003 to belt conveyor 1002									NSPS Subpart 000	N/A	N/A	
F	E	EP02.02		EP02.02	Belt conveyor 1001 to belt conveyor 1000									NSPS Subpart 000	N/A	N/A	
F	E	EP02.03.01		EP02.03.01	Belt conveyor 1000 to belt conveyor 999									NSPS Subpart 000	N/A	N/A	
F	E	EP02.03.02		EP02.03.02	Belt conveyor 999 to shuttle conveyor 998									NSPS Subpart 000	N/A	N/A	
F	E	EP03.02		EP03.02	Shuttle conveyor 998 to raw bins									NSPS Subpart 000	N/A	N/A	
F	N	EP37.02.01		EP37.02.01	Truck to large bin									NSPS Subpart 000	N/A	N/A	
F	N	EP37.02.02		EP37.02.02	Large bin to conveyor									NSPS Subpart 000	N/A	N/A	
P	N	CD37.03	New Primary Crusher D/C	EP37.03.01	Conveyor to feeder	4,160	41,200	0.0100	gr/dscf		99.95%	7.35	14,690.90	3,672.73	NSPS Subpart 000	14,683.56	\$ 80,929.23
P	N			EP37.03.02	Conveyor to Hammermill									3,672.73			
P	N			EP37.03.03	Hammermill to feeder									3,672.73			
P	N			EP37.03.04	Feeder to conveyor									3,672.73			
P	N	CD37.04	New Crushing System D/C1	EP37.04.01	Conveyor to split	4,160	2,119	0.010	gr/dscf		99.95%	0.38	755.53	377.77	NSPS Subpart 000	755.15	\$ 4,162.07
P	N			EP37.04.02	Split to conveyor									377.77			
F	N	EP37.05		EP37.05	Split to surge pile									NSPS Subpart 000	N/A	N/A	

**TABLE H-1  
CAM APPLICABILITY ANALYSIS FOR PARTICULATE EMISSIONS  
CAPITAL CEMENT PORTLAND CEMENT PLANT**

P= Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Hours of Operation (hours/year)	Flowrate (dscfm)	TSP Emissions Factor	Units	Building Control Efficiency (%)	Baghouse Control Efficiency (%)	Future Potential TSP Controlled Emissions (tpy)	Future Potential TSP Uncontrolled Emissions (tpy)	Criteria 3	Criteria 1	Criteria 2	
														PM Uncontrolled Emissions Per Source (tons)	Subject to NSPS or NESHAP?	Amount of Material Recovered by Unit (tons)	Economic Saving For Capturing Material
P	N	CD37.06	Premix Conveying D/C	EP37.06.01	Conveyor to split	8,760	6,357	0.010	gr/dscf		99.95%	2.39	4,772.93	1,590.98	NSPS Subpart OOO	4,770.54	\$ 26,293.11
P	N			EP37.06.02	Split to top conveyor									1,590.98			
P	N			EP37.06.03	Split to bottom conveyor									1,590.98			
P	N	CD38.01	Premix Storage Feeding D/C	EP38.01.01	Top conveyor to swing conveyor	8,760	2,119	0.010	gr/dscf		99.95%	0.80	1,590.98	795.49	NSPS Subpart OOO	1,590.18	\$ 8,764.37
P	N			EP38.01.02	Swing conveyor to Limestone pile									795.49			
<b>GROUP 2 - RAW MATERIAL PREPARATION</b>																	
F	E	EP04.01.01		EP04.01.01	Raw bins to feeders East Tunnel	Fugitive Source - Control device not required to meet emission limitations.									NSPS Subpart OOO	N/A	N/A
F	E	EP04.01.02		EP04.01.02	Feeders to belt conveyor East 917	Fugitive Source - Control device not required to meet emission limitations.									NSPS Subpart OOO	N/A	N/A
P	M	CD04.03	Limestone Conveying to #1 Stone Belt D/C	EP04.03.01	Belt conveyor 917 to elevator East 915	4,160	10,800	0.020	gr/dscf		99.90%	3.85	3,850.97	641.83	NSPS Subpart OOO	3,847.12	\$ 21,203.62
P	M			EP04.03.02	Elevator 915 to screens East 914/913									641.83			
P	M			EP04.03.03	Screens East 914/913									641.83			
P	M			EP04.03.04	Screens East 914/913 to #1 stone system belt									641.83			
P	M			EP04.04.01	Shuttle conveyor 998 to new chute									641.83			
P	M			EP04.04.02	New chute to #1 stone system belt									641.83			
F	M	EP04.04.03		EP04.04.03	#1 stone system belt to limestone pile in craneway	Fugitive Source - Control device not required to meet emission limitations.									NSPS Subpart OOO	N/A	N/A
P	N	CD38.02	Premix Storage Discharge D/C	EP38.02.01	Pile to feeder 1	8,760	2,119	0.010	gr/dscf		99.95%	0.80	1,590.98	397.74	NSPS Subpart OOO	1,590.18	\$ 8,764.37
P	N			EP38.02.02	Feeder 1 to bottom conveyor									397.74			
P	N			EP38.02.03	Pile to feeder 2									397.74			
P	N			EP38.02.04	Feeder 2 to bottom conveyor									397.74			
P	N	CD39.05	Additive Delivery System D/C	EP39.05	Additives truck to conveyor	8,760	29,429	0.010	gr/dscf		99.95%	11.05	22,096.89	11,048.45	NSPS Subpart OOO	22,085.85	\$ 121,727.35
P	N			EP39.04.04	Conveyor to conveyor									11,048.45			
F	N	EP40.03		EP40.03	Split to (surge)pile	Fugitive Source - Control device not required to meet emission limitations.									NSPS Subpart OOO	N/A	N/A
P	N	CD39.01	Additive Feeding System D/C	EP39.01.01	Conveyor to split	8,760	7,416	0.010	gr/dscf		99.95%	2.78	5,568.42	928.07	NSPS Subpart OOO	5,565.63	\$ 30,675.29
P	N			EP39.01.02	Split to conveyor									928.07			
P	N			EP39.03.02	Conveyor to shale bin									928.07			
P	N			EP39.04.01	Conveyor to shale bin 2									928.07			
P	N			EP39.07.01	Split to pyrite silo									928.07			
P	N			EP39.08.01	Split to sand silo									928.07			
P	N	CD39.02	Limestone Bin D/C	EP39.03.01	Conveyor to limestone mix bin	8,760	2,119	0.010	gr/dscf		99.95%	0.80	1,590.98	1590.98	NSPS Subpart OOO	1,590.18	\$ 8,764.37
P	N	CD39.03	Raw Material Discharge D/C 1	EP39.03.03	Shale bin to feeder	8,760	4,238	0.01	gr/dscf		99.95%	1.59	3,181.95	397.74	NESHAP Subpart LLL	3,180.36	\$ 17,528.74
P	N			EP39.03.04	Shale bin feeder to conveyor									397.74			
P	N			EP39.02.01	Limestone mix bin to feeder									397.74			
P	N			EP39.02.02	Limestone mix feeder to conveyor									397.74			
P	N			EP39.08.02	Sand silo to feeder									397.74			
P	N			EP39.08.03	Sand silo feeder to conveyor									397.74			
P	N			EP39.07.02	Pyrite silo to feeder									397.74			
P	N			EP39.07.03	Pyrite silo feeder to conveyor									397.74			
P	N	CD39.04	Raw Material Discharge D/C 2	EP39.04.02	Shale silo 2 to feeder	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2,386.46	1,193.23	NESHAP Subpart LLL	2,385.27	\$ 13,146.55
P	N			EP39.04.03	Shale silo 2 feeder to conveyor									1,193.23			
P	N	CD39.06	Raw Mill Feeding D/C	EP39.06.01	Raw Mill Feed Conveyor	8,760	2,119	0.01	gr/dscf		99.95%	0.80	1,590.98	1590.98	NESHAP Subpart LLL	1,590.18	\$ 19,281.61

**TABLE H-1  
CAM APPLICABILITY ANALYSIS FOR PARICULATE EMISSIONS  
CAPITAL CEMENT PORTLAND CEMENT PLANT**

P= Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Hours of Operation (hours/year)	Flowrate (dscfm)	TSP Emissions Factor	Units	Building Control Efficiency (%)	Baghouse Control Efficiency (%)	Future Potential TSP Controlled Emissions (tpy)	Future Potential TSP Uncontrolled Emissions (tpy)	Criteria 3	Criteria 1	Criteria 2	
														PM Uncontrolled Emissions Per Source (tons)	Subject to NSPS or NESHAP?	Amount of Material Recovered by Unit (tons)	Economic Saving For Capturing Material
P	N	CD40.01	Raw Mill High Zone D/C	EP40.01.01	RM Feed Conveyor to conveyor	8,760	7,946	0.01	gr/dscf		99.95%	2.98	5,966.16	1,193.23	NESHAP Subpart LLL	5,963.18	\$ 72,306.05
P	N			EP40.01.02	Conveyor to split									1,193.23			
P	N			EP40.01.03	Split to hopper									1,193.23			
P	N			EP40.02.03	Elevator to conveyor									1,193.23			
P	N			EP40.04.01	Split to Raw Mill									1,193.23			
P	N	CD40.02	Raw Mill Low Zone D/C	EP40.02.01	Conveyor to split	8,760	7,416	0.01	gr/dscf		99.95%	2.78	5,568.42	1,392.10	NESHAP Subpart LLL	5,565.63	\$ 67,485.64
P	N			EP40.02.02	Split to bucket elevator									1,392.10			
P	N			EP40.04.02	Raw Mill to conveyor									1,392.10			
P	N			EP40.02.04	Conveyor to bucket elevator									1,392.10			
P	N	CD40.05	Raw Meal Air Slide D/C	EP40.05	Raw Meal Conveying Equipment	8,760	6,357	0.01	gr/dscf		99.95%	2.39	4,772.93	4,772.93	NESHAP Subpart LLL	4,770.54	\$ 57,844.84
P	N	CD40.06	Homo Silo Feeding D/C	EP40.06	Homogenizing Silo Feeding Equipment	8,760	5,297	0.01	gr/dscf		99.95%	1.99	3,977.44	3,977.44	NESHAP Subpart LLL	3,975.45	\$ 48,204.03
P	N	CD40.07	Homo Silo Discharge D/C	EP40.07	Homogenizing Silo Discharging Equipment	8,760	4,238	0.01	gr/dscf		99.95%	1.59	3,181.95	3,181.95	NESHAP Subpart LLL	3,180.36	\$ 38,563.22
<b>GROUP 3 - PRYOPROCESSING</b>																	
P	N	CD42.02	Kiln Feeding Bucket Elevator D/C	EP42.02	Kiln Feeding Bucket Elev DC	8,760	5,297	0.01	gr/dscf		99.95%	1.99	3,977.44	3,977.44	NESHAP Subpart LLL	3,975.45	\$ 48,204.03
P	N	CD42.03	Kiln Feeding D/C 1	EP42.03	Kiln Feed Belt	8,760	12,713	0.01	gr/dscf		99.95%	4.77	9,545.86	9,545.86	NESHAP Subpart LLL	9,541.09	\$ 115,689.67
P	N	CD42.05	Kiln Feeding D/C 2	EP42.05	Kiln Feed Belt	8,760	2,119	0.01	gr/dscf		99.95%	0.80	1,590.98	1,590.98	NESHAP Subpart LLL	1,590.18	\$ 19,281.61
P	N	CD42.04	Inline Raw Mill / PH/PC Kiln / Clinker Cooler & Bypass & Coal Mill D/Cs <sup>11</sup>	EP42.04	Kiln System - Inline Raw Mill / PH/PC Kiln / Clinker Cooler	8,760	713,986	0.01	gr/dscf		99.95%	268.05	536,101.57	389,824.68	NESHAP Subpart LLL	535,833.52	\$ 24,807,517.77
P	N			EP42.08	Kiln Bypass Baghouse DC	8,760								101,725.50			
P	N			EP41.03.01	Coal Mill	8,760								44,551.39			
P	N	CD43.02	Cooler Discharge D/C	EP43.02	New Cooler Discharge DC	8,760	2,119	0.01	gr/dscf		99.95%	0.80	1,590.98	1,590.98	NESHAP Subpart LLL	1,590.18	\$ 73,620.70
P	N	CD42.01	Kiln Bypass Dust D/C	EP42.01	Bypass Dust Transfer to Existing Cement Silos	8,760	8,946	0.01	gr/dscf		99.95%	3.36	6,717.46	6,717.46	NESHAP Subpart LLL	6,714.10	\$ 310,842.96
P	N	CD42.06	Lime Storage D/C	EP42.06	Lime Storage for Scrubber System	8,760	14,714	0.01	gr/dscf		99.95%	5.52	11,048.45	11,048.45	NESHAP Subpart LLL	11,042.92	\$ 511,254.87
P	N	CD42.07	Bypass Truck Spout Dedusting	EP42.07	Bypass Truck Spout Dedusting	8,760	2,943	0.01	gr/dscf		99.95%	1.10	2,209.69	2,209.69	NESHAP Subpart LLL	2,208.58	\$ 102,250.97
<b>GROUP 4 - CLINKER HANDLING AND STORAGE</b>																	
P	N	CD43.03	Clinker Storage Feeding D/C	EP43.05	Clinker conveyor to big clinker silo	8,760	5,297	0.01	gr/dscf		99.95%	1.99	3977.44	3977.44	NESHAP Subpart LLL	3,975.45	\$ 184,051.75
P	N	CD43.04	Small Clinker Storage Feeding D/C	EP43.04	Clinker conveyor to clinker silo	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2386.46	2386.46	NESHAP Subpart LLL	2,385.27	\$ 110,431.05
P	N	CD43.06	Small Clinker Storage Discharge D/C	EP43.06.01	Low Alkali Clinker Silo to upper conveyors	8,760	2,119	0.01	gr/dscf	90.00%	99.95%	0.0795	1590.98	530.33	NESHAP Subpart LLL	1590.90	\$ 73,653.85
P	N			EP43.06.02	Upper conveyors to lower conveyor	8,760								530.33			
P	N			EP43.06.03	Low Alkali Clinker silo to lower conveyor	8,760								530.33			
P	N	CD43.07	Clinker Storage Discharge D/C	EP43.07.01	Big clinker silo to upper conveyor1	8,760	2,119	0.01	gr/dscf	90.00%	99.95%	0.0795	1590.98	318.20	NESHAP Subpart LLL	1590.90	\$ 73,653.85
P	N			EP43.07.02	Big clinker silo to upper conveyor2	8,760								318.20			
P	N			EP43.07.03	Big clinker silo to lower conveyor	8,760								318.20			
P	N			EP43.07.04	Big clinker silo to short conveyor	8,760								318.20			
P	N			EP43.07.05	Short conveyor to lower conveyor	8,760								318.20			
P	N	CD43.08	Finish Mill Conveying D/C1	EP43.08	Upper conveyor 1 to FM feed hoppers belt	8,760	2,119	0.01	gr/dscf	90.00%	99.95%	0.0795	1590.98	1590.98	NESHAP Subpart LLL	1590.90	\$ 73,653.85
P	N	CD43.09	Finish Mill Conveying D/C2	EP43.09	Lower conveyor to FM feed hoppers belt	8,760	2,119	0.01	gr/dscf	90.00%	99.95%	0.0795	1590.98	1590.98	NESHAP Subpart LLL	1590.90	\$ 73,653.85
P	N	CD43.13	Finish Mill Conveying D/C3	EP43.13	Upper conveyor 2 to FM feed hoppers belt	8,760	2,119	0.01	gr/dscf	90.00%	99.95%	0.0795	1590.98	1590.98	NESHAP Subpart LLL	1590.90	\$ 73,653.85
<b>GROUP 5 - FUEL HANDLING</b>																	
F	E	EP15.01.01		EP15.01.01	Rail unloading to petcoke hopper										NESHAP Subpart Y	N/A	N/A
F	E	EP15.01.02		EP15.01.02	Petcoke hopper to feeders										NESHAP Subpart Y	N/A	N/A
F	N	EP41.01.01		EP41.01.01	Petcoke feeders to conveyor										NESHAP Subpart Y	N/A	N/A

**TABLE H-1  
CAM APPLICABILITY ANALYSIS FOR PARICULATE EMISSIONS  
CAPITAL CEMENT PORTLAND CEMENT PLANT**

P= Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Hours of Operation (hours/year)	Flowrate (dscfm)	TSP Emissions Factor	Units	Building Control Efficiency (%)	Baghouse Control Efficiency (%)	Future Potential TSP Controlled Emissions (tpy)	Future Potential TSP Uncontrolled Emissions (tpy)	Criteria 3	Criteria 1	Criteria 2		
														PM Uncontrolled Emissions Per Source (tons)	Subject to NSPS or NESHAP?	Amount of Material Recovered by Unit (tons)	Economic Saving For Capturing Material	
F	N	EP41.01.02		EP41.01.02	Petcoke Conveyor to split to conveyor											N/PS Subpart Y	N/A	N/A
F	N	EP41.01.03		EP41.01.03	Petcoke Conveyor to CSH fuel bins or pile											N/PS Subpart Y	N/A	N/A
F	N	EP41.01.04		EP41.01.04	Coal Truck unloading to storage hall											N/PS Subpart Y	N/A	N/A
F	N	EP41.01.05		EP41.01.05	Clam bucket to coal pile											N/PS Subpart Y	N/A	N/A
F	N	EP41.01.06		EP41.01.06	Pile to clam bucket											N/PS Subpart Y	N/A	N/A
F	N	EP41.01.07		EP41.01.07	Clam bucket to CSH fuel bins											N/PS Subpart Y	N/A	N/A
F	N	EP41.02.01		EP41.02.01	CSH fuel bins to feeders											N/PS Subpart Y	N/A	N/A
F	N	EP41.02.02		EP41.02.02	Feeders to conveyor											N/PS Subpart Y	N/A	N/A
F	N	EP41.02.03		EP41.02.03	Conveyor to split to conveyor											N/PS Subpart Y	N/A	N/A
P	N	CD42.04		EP41.02.04	Conveyor to Coal Mill											N/PS Subpart Y	N/A	N/A
<b>GROUP 6 - CEMENT PRODUCTION</b>																		
P	N	CD43.14	Finish Mill 1 & 2 Hoppers D/C	EP43.14	Conveyor to clinker feeding hoppers (FM1 &2)	8,760	5,297	0.01	gr/dscf		99.95%	1.99	3,977.44	1,988.72	NESHAP Subpart LLL	3975.45	\$	184,051.75
				EP43.15	Conveyor to lower conveyor (FM3)	8,760								1,988.72				
P	N	CD43.16	Finish Mill 3 Hopper D/C	EP43.16	Lower conveyor to clinker feeding hopper (FM3)	8,760	5,297	0.01	gr/dscf		99.95%	1.99	3,977.44	3,977.44	NESHAP Subpart LLL	3,975.45	\$	184,051.75
F	M	EP26.06.03		EP26.06.03	Gypsum/Synthetic Gypsum truck unloading to storage hall											NESHAP Subpart LLL	N/A	N/A
F	M	EP26.06.04		EP26.06.04	Clam bucket to gypsum/synthetic gypsum pile											NESHAP Subpart LLL	N/A	N/A
F	M	EP26.06.05		EP26.06.05	Gypsum/synthetic gypsum pile to clam bucket											NESHAP Subpart LLL	N/A	N/A
F	M	EP26.06.06		EP26.06.06	Clam bucket to gypsum/synthetic gypsum bin (FM1/2/3)											NESHAP Subpart LLL	N/A	N/A
F	M	EP26.07.01		EP26.07.01	Limestone Pile to clam bucket											NESHAP Subpart LLL	N/A	N/A
F	M	EP26.07.02		EP26.07.02	Clam bucket to limestone bin (FM1/2/3)											NESHAP Subpart LLL	N/A	N/A
F	M	EP27.01		EP27.01	Conveyor to clinker hopper											NESHAP Subpart LLL	N/A	N/A
F	M	EP27.02		EP27.02	Clinker hopper to crane											NESHAP Subpart LLL	N/A	N/A
F	M	EP27.03		EP27.03	Crane to clinker pile											NESHAP Subpart LLL	N/A	N/A
F	M	EP27.04		EP27.04	Clinker pile to crane											NESHAP Subpart LLL	N/A	N/A
F	M	EP27.05		EP27.05	Crane to clinker bins (FM1/2/3)											NESHAP Subpart LLL	N/A	N/A
P	N	CD44.01	Finish Mill 2 Feeding D/C1	EP44.01	L.A. clinker bin to FM2 conveyor	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2,386.46	2,386.46	NESHAP Subpart LLL	2,385.27	\$	110,431.05
P	N	CD44.02	Finish Mill 1 Feeding D/C1	EP44.02	Clinker bin to FM1 conveyor	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2,386.46	2,386.46	NESHAP Subpart LLL	2,385.27	\$	110,431.05
P	N	CD44.03	Finish Mill 2 Feeding D/C2	EP44.03	Clinker bin to FM2 conveyor	8,760	2,119	0.01	gr/dscf		99.95%	0.80	1,590.98	1,590.98	NESHAP Subpart LLL	1,590.18	\$	73,620.70
P	N	CD44.04	Finish Mill 2 Feeding D/C3	EP44.04.01	Limestone bin to FM2 conveyor	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2,386.46	1,193.23	NESHAP Subpart LLL	2,385.27	\$	13,146.55
P	N			EP44.04.02	Gypsum/synthetic gypsum bin to FM2 conveyor	8,760								1,193.23				
P	N	CD44.05	Finish Mill 1 Feeding D/C 2	EP44.05.01	Limestone bin to FM1 conveyor	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2,386.46	1,193.23	NESHAP Subpart LLL	2,385.27	\$	13,146.55
P	N			EP44.05.02	Gypsum/synthetic gypsum bin to FM1 conveyor	8,760								1,193.23				
P	E	CD19.02	Finish Mill 3 Baghouse D/C	EP19.01Pb	No. 3 Finish Mill Separator (Existing FM 10)	8,760	61,801	0.02	gr/dscf		99.90%	46.40	46,403.48	46,403.48	NESHAP Subpart LLL	46,357.07	\$	2,708,295.30
P	E	CD19.01	Finish Mill 3 Norblo D/C	EP19.01U	FM3 Feed bins to feeders	8,760	20,000	0.02	gr/dscf		99.90%	15.02	15,017.05	3,754.26	NESHAP Subpart LLL	15,002.03	\$	876,455.95
P	E			EP19.01Pa.01	FM3 Feeders to belt conveyor 650									3,754.26				
P	E			EP19.01Pa.02	Belt conveyor 650 to FM3									3,754.26				
P	E			EP19.02	Finish Mill 3									3,754.26				
P	N	CD44.06	Finish Mill 1 Conveying D/C	EP44.06	FM1 Conveyor to conveyor	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2,386.46	2,386.46	NESHAP Subpart LLL	2,385.27	\$	139,353.47
P	N	CD44.07	Finish Mill 1 High Zone D/C	EP44.07.01	Elevator to FM1 conveyor	8,760	7,416	0.01	gr/dscf		99.95%	2.78	5,568.42	1,856.14	NESHAP Subpart LLL	5,565.63	\$	325,158.10
P	N			EP44.07.02	FM1 Conveyor to bin	8,760								1,856.14				
P	N			EP44.07.03	Conveyor to Finish Mill 1	8,760								1,856.14				

**TABLE H-1  
CAM APPLICABILITY ANALYSIS FOR PARTICULATE EMISSIONS  
CAPITAL CEMENT PORTLAND CEMENT PLANT**

P= Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Hours of Operation (hours/year)	Flowrate (dscfm)	TSP Emissions Factor	Units	Building Control Efficiency (%)	Baghouse Control Efficiency (%)	Future Potential TSP Controlled Emissions (tpy)	Future Potential TSP Uncontrolled Emissions (tpy)	Criteria 3	Criteria 1	Criteria 2	
														PM Uncontrolled Emissions Per Source (tons)	Subject to NSPS or NESHAP?	Amount of Material Recovered by Unit (tons)	Economic Saving For Capturing Material
P	N	CD44.08	Finish Mill 1 Low Zone D/C	EP44.08.01	Finish Mill 1 to Conveyor	8,760	4,238	0.01	gr/dscf		99.95%	1.59	3,181.95	1,060.65	NESHAP Subpart LLL	3,180.36	\$ 185,804.63
P	N			EP44.08.02	Bin to FM1 conveyor	8,760								1,060.65			
P	N			EP44.08.03	FM1 Conveyor to bucket elevator	8,760								1,060.65			
P	N	CD44.09	Finish Mill 1 D/C	EP44.09	Finish Mill 1	8,760	76,515	0.01	gr/dscf		99.95%	28.73	57,451.92	57,451.92	NESHAP Subpart LLL	57,423.20	\$ 3,354,805.76
P	N	CD44.13	Finish Mill 1 Discharge D/C	EP44.13	Finish Mill 1 Conveying	8,760	2,119	0.01	gr/dscf		99.95%	0.80	1,590.98	1,590.98	NESHAP Subpart LLL	1,590.18	\$ 92,902.31
P	N	CD44.14	Finish Mill 2 Conveying D/C	EP44.14	FM2 Conveyor to conveyor	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2,386.46	2,386.46	NESHAP Subpart LLL	2,385.27	\$ 139,353.47
P	N	CD44.10	Finish Mill 2 High Zone D/C	EP44.10.01	FM2 Elevator to conveyor	8,760	7,416	0.01	gr/dscf		99.95%	2.78	5,568.42	1,856.14	NESHAP Subpart LLL	5,565.63	\$ 325,158.10
P	N			EP44.10.02	FM2 Conveyor to bin	8,760								1,856.14			
P	N			EP44.10.03	Conveyor to Finish Mill 2	8,760								1,856.14			
P	N	CD44.11	Finish Mill 2 Low Zone D/C	EP44.11.01	Finish Mill 2 to conveyor	8,760	4,238	0.01	gr/dscf		99.95%	1.59	3,181.95	1,060.65	NESHAP Subpart LLL	3,180.36	\$ 185,804.63
P	N			EP44.11.02	Bin to FM2 conveyor	8,760								1,060.65			
P	N			EP44.11.03	FM2 Conveyor to bucket elevator	8,760								1,060.65			
P	N	CD44.12	Finish Mill 2 D/C	EP44.12	Finish Mill 2	8,760	76,515	0.01	gr/dscf		99.95%	28.73	57,451.92	57,451.92	NESHAP Subpart LLL	57,423.20	\$ 3,354,805.76
P	N	CD44.15	Finish Mill 2 Discharge D/C	EP44.15	Finish Mill 2 Conveying	8,760	2,119	0.01	gr/dscf		99.95%	0.80	1,590.98	1,590.98	NESHAP Subpart LLL	1,590.18	\$ 92,902.31
P	N	EP44.16	Finish Mill 1/2 Air Heater	EP44.16	Finish Mill 1/2 Air Heater							2.05	4,100.00	4,100.00	NESHAP Subpart LLL	4,097.95	\$ 239,412.41
<b>GROUP 7 - SHIPPING</b>																	
P	N	CD45.01	Finish Mill 1 Airslides D/C	EP45.01	Finish Mill 1 airslides	8,760	4,238	0.01	gr/dscf		99.95%	1.59	3181.95	3,181.95	NESHAP Subpart LLL	3,180.36	\$ 185,804.63
P	N	CD45.02	Finish Mill 2 Airslides D/C	EP45.02	Finish Mill 2 airslides	8,760	4,238	0.01	gr/dscf		99.95%	1.59	3181.95	3,181.95	NESHAP Subpart LLL	3,180.36	\$ 185,804.63
P	N	CD45.03	Cement Silos Feeding D/C1	EP45.03	Finish Mill 1 to cement silos	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2386.46	2,386.46	NESHAP Subpart LLL	2,385.27	\$ 139,353.47
P	N	CD45.04	Cement Silos Feeding D/C2	EP45.04	Finish Mill 2 to cement silos	8,760	3,178	0.01	gr/dscf		99.95%	1.19	2386.46	2,386.46	NESHAP Subpart LLL	2,385.27	\$ 139,353.47
P	N	CD45.05	Cement Silo A1 & A2 D/C	EP45.05	Cement Silo A1 & A2	8,760	5,062	0.01	gr/dscf		99.95%	1.90	3800.67	3,800.67	NESHAP Subpart LLL	3,798.77	\$ 221,933.30
P	N	CD45.06	Cement Silo B1 & B2 D/C	EP45.06	Cement Silo B1 & B2	8,760	5,062	0.01	gr/dscf		99.95%	1.90	3800.67	3,800.67	NESHAP Subpart LLL	3,798.77	\$ 221,933.30
P	N	CD45.07	Cement Silo C1 & C2 D/C	EP45.07	Cement Silo C1 & C2	8,760	5,297	0.01	gr/dscf		99.95%	1.99	3977.44	3,977.44	NESHAP Subpart LLL	3,975.45	\$ 232,255.78
P	N	CD45.08	Truck Loadout 1 D/C	EP45.08	Bulk lane loadout 1	8,760	2,825	0.01	gr/dscf		99.95%	1.06	2121.30	2,121.30	NESHAP Subpart LLL	2,120.24	\$ 123,869.75
P	N	CD45.09	Truck Loadout 2 D/C	EP45.09	Bulk lane loadout 2	8,760	2,825	0.01	gr/dscf		99.95%	1.06	2121.30	2,121.30	NESHAP Subpart LLL	2,120.24	\$ 123,869.75
P	N	CD45.10	Truck Loadout 3 D/C	EP45.10	Bulk lane loadout 3	8,760	2,825	0.01	gr/dscf		99.95%	1.06	2121.30	2,121.30	NESHAP Subpart LLL	2,120.24	\$ 123,869.75
P	N	CD45.11	Truck Loadout 4 D/C	EP45.11	Bulk lane loadout 4	8,760	2,825	0.01	gr/dscf		99.95%	1.06	2121.30	2,121.30	NESHAP Subpart LLL	2,120.24	\$ 123,869.75
P	N	CD45.14	Cement Analyzer D/C	EP45.14	Cement Analyzer	8,760	1,471	0.01	gr/dscf		99.95%	0.55	1104.84	1,104.84	NESHAP Subpart LLL	1,104.29	\$ 64,515.50
P	M	CD21.05	Middle Bank Silos 1 D/C	EP21.05	Middle Bank Silos 1 DC	8,760	6,003	0.01	gr/dscf		99.95%	2.25	4507.77	4,507.77	NESHAP Subpart LLL	4,505.51	\$ 263,223.22
P	M	CD21.06	Middle Bank Silos 2 D/C	EP21.06	Middle Bank Silos 2 DC	8,760	6,003	0.01	gr/dscf		99.95%	2.25	4507.77	4,507.77	NESHAP Subpart LLL	4,505.51	\$ 263,223.22
P	M	CD21.07	Middle Bank Silos 3 D/C	EP21.07	Middle Bank Silos 3 DC	8,760	6,003	0.01	gr/dscf		99.95%	2.25	4507.77	4,507.77	NESHAP Subpart LLL	4,505.51	\$ 263,223.22
P	M	CD21.08	Middle Bank Silos 4 D/C	EP21.08	Middle Bank Silos 4 DC	8,760	6,003	0.01	gr/dscf		99.95%	2.25	4507.77	4,507.77	NESHAP Subpart LLL	4,505.51	\$ 263,223.22
P	M	CD21.09	Middle Bank Silos 5 D/C	EP21.09	Middle Bank Silos 5 DC	8,760	6,003	0.01	gr/dscf		99.95%	2.25	4507.77	4,507.77	NESHAP Subpart LLL	4,505.51	\$ 263,223.22
P	N	CD21.10	Middle Bank Vent 1 D/C	EP21.10	Middle Bank Bin Vent 1 - Silos Inlet	8,760	1,001	0.01	gr/dscf		99.95%	0.38	751.29	751.29	NESHAP Subpart LLL	750.92	\$ 43,870.54
P	N	CD21.11	Middle Bank Vent 2 D/C	EP21.11	Middle Bank Bin Vent 2 - Silos Inlet	8,760	1,001	0.01	gr/dscf		99.95%	0.38	751.29	751.29	NESHAP Subpart LLL	750.92	\$ 43,870.54
P	N	CD21.12	Middle Bank Vent 3 D/C	EP21.12	Middle Bank Bin Vent 3 - Silos Discharge	8,760	1,001	0.01	gr/dscf		99.95%	0.38	751.29	751.29	NESHAP Subpart LLL	750.92	\$ 43,870.54
P	N	CD21.13	Middle Bank Vent 4 D/C	EP21.13	Middle Bank Bin Vent 4 - Silos Discharge	8,760	1,001	0.01	gr/dscf		99.95%	0.38	751.29	751.29	NESHAP Subpart LLL	750.92	\$ 43,870.54
P	N	CD45.12	Rail Loadout 1 D/C	EP45.12	Bulk rail loadout 1	8,760	1,177	0.01	gr/dscf		99.95%	0.44	883.88	883.88	NESHAP Subpart LLL	883.43	\$ 51,612.40
P	N	CD45.13	Rail Loadout 2 D/C	EP45.13	Bulk rail loadout 2	8,760	1,177	0.01	gr/dscf		99.95%	0.44	883.88	883.88	NESHAP Subpart LLL	883.43	\$ 51,612.40
P	M	CD46.01	Truck Loadout Silo 1 D/C	EP46.01	Truck Loadout Silo 1	8,760	2,354	0.01	gr/dscf		99.95%	0.88	1767.75	1,767.75	NESHAP Subpart LLL	1,766.87	\$ 103,224.79
P	M	CD46.02	Truck Loadout Silo 2 D/C	EP46.02	Truck Loadout Silo 2	8,760	2,354	0.01	gr/dscf		99.95%	0.88	1767.75	1,767.75	NESHAP Subpart LLL	1,766.87	\$ 103,224.79

**TABLE H-1  
CAM APPLICABILITY ANALYSIS FOR PARICULATE EMISSIONS  
CAPITAL CEMENT PORTLAND CEMENT PLANT**

P= Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Hours of Operation (hours/year)	Flowrate (dscfm)	TSP Emissions Factor	Units	Building Control Efficiency (%)	Baghouse Control Efficiency (%)	Future Potential TSP Controlled Emissions (tpy)	Future Potential TSP Uncontrolled Emissions (tpy)	Criteria 3	Criteria 1	Criteria 2	
														PM Uncontrolled Emissions Per Source (tons)	Subject to NSPS or NESHAP?	Amount of Material Recovered by Unit (tons)	Economic Saving For Capturing Material
P	M	CD46.03	Truck Loadout Silo 3 D/C	EP46.03	Truck Loadout Silo 3	8,760	2,354	0.01	gr/dscf		99.95%	0.88	1767.75	1,767.75	NESHAP Subpart LLL	1,766.87	\$ 103,224.79
P	M	CD46.04	Truck Loadout Silo 4 D/C	EP46.04	Truck Loadout Silo 4	8,760	2,354	0.01	gr/dscf		99.95%	0.88	1767.75	1,767.75	NESHAP Subpart LLL	1,766.87	\$ 103,224.79
P	M	CD46.05	Truck Loadout Silo 5 D/C	EP46.05	Truck Loadout Silo 5	8,760	2,354	0.01	gr/dscf		99.95%	0.88	1767.75	1,767.75	NESHAP Subpart LLL	1,766.87	\$ 103,224.79
P	M	CD46.06	Truck Loadout 5 D/C	EP46.06	Bulk loadout 5 - Truck Loadout Silos	8,760	2,001	0.01	gr/dscf		99.95%	0.75	1502.59	1,502.59	NESHAP Subpart LLL	1,501.84	\$ 87,741.07
P	M	CD46.07	Truck Loadout 6 D/C	EP46.07	Bulk loadout 6 - Truck Loadout Silos	8,760	2,001	0.01	gr/dscf		99.95%	0.75	1502.59	1,502.59	NESHAP Subpart LLL	1,501.84	\$ 87,741.07
P	M	CD20.04	East Bank Silos 1 D/C	EP20.04	East Bank Silos 1	8,760	4,803	0.01	gr/dscf		99.95%	1.80	3606.21	3,606.21	NESHAP Subpart LLL	3,604.41	\$ 210,578.58
P	M	CD20.05	East Bank Silos 2 D/C	EP20.05	East Bank Silos 2	8,760	4,803	0.01	gr/dscf		99.95%	1.80	3606.21	3,606.21	NESHAP Subpart LLL	3,604.41	\$ 210,578.58
P	M	CD20.06	East Bank Silos 3 D/C	EP20.06	East Bank Silos 3	8,760	4,803	0.01	gr/dscf		99.95%	1.80	3606.21	3,606.21	NESHAP Subpart LLL	3,604.41	\$ 210,578.58
P	M	CD48.01	Packhouse D/C	EP48.01	Packhouse	8,760	14,126	0.01	gr/dscf		99.95%	5.30	10606.51	10,606.51	NESHAP Subpart LLL	10,601.21	\$ 619,348.76
<b>GROUP 8 - MISCELLANEOUS</b>																	
P	M	CD31.01	Flyash Tank No.1 D/C	EP31.01	Fly Ash Tank #1	8,760	2,401	0.01	gr/dscf		99.95%	0.90	1803.11	1,803.11	NESHAP Subpart LLL	1,802.20	\$ 105,289.29
P	M	CD31.02	Bypass Dust Tank D/C	EP31.02	Bypass Dust Tank	8,760	2,401	0.01	gr/dscf		99.95%	0.90	1803.11	1,803.11	NESHAP Subpart LLL	1,802.20	\$ 105,289.29
P	M	CD31.03	Bypass Dust Loadout D/C	EP31.03	Bypass Dust silo/loadout	8,760	2,943	0.01	gr/dscf		99.95%	1.10	2209.69	2,209.69	NESHAP Subpart LLL	2,208.58	\$ 129,030.99
P	M	CD22.04	Dry Flyash Unloading D/C	EP22.04	Dry Flyash Unloading to West Bank Silos	8,760	9,000	0.01	gr/dscf		99.95%	3.38	6757.71	6,757.71	NESHAP Subpart LLL	6,754.34	\$ 394,605.05
P	M	CD22.05	Dry Flyash Silo #71 D/C	EP22.05	Dry Flyash Silo #71	8,760	750	0.01	gr/dscf		99.95%	0.28	563.14	563.14	NESHAP Subpart LLL	562.86	\$ 32,883.75
P	M	CD22.06	Dry Flyash Silo #72 D/C	EP22.06	Dry Flyash Silo #72	8,760	750	0.01	gr/dscf		99.95%	0.28	563.14	563.14	NESHAP Subpart LLL	562.86	\$ 32,883.75
P	M	CD22.07	Dry Flyash Silo #82 D/C	EP22.07	Dry Flyash Silo #82	8,760	750	0.01	gr/dscf		99.95%	0.28	563.14	563.14	NESHAP Subpart LLL	562.86	\$ 32,883.75
P	M	CD22.08	Dry Flyash Silo #83 D/C	EP22.08	Dry Flyash Silo #83	8,760	750	0.01	gr/dscf		99.95%	0.28	563.14	563.14	NESHAP Subpart LLL	562.86	\$ 32,883.75
P	N	CD22.09	Dry Flyash Weigh Bin D/C	EP22.09	Dry Flyash Weigh Bin/Alleviator	8,760	7,500	0.01	gr/dscf		99.95%	2.82	5631.43	5,631.43	NESHAP Subpart LLL	5,628.61	\$ 328,837.54
P	N	EP0B.01		EP0B.01	Administrative Boiler 1										N/A	N/A	N/A
P	N	EP0B.02		EP0B.02	Administrative Boiler 2										N/A	N/A	N/A
P	N	EP0G.01		EP0G.01	Emergency Generator										N/A	N/A	N/A
F	E	EP0X.04		EP0X.04	Crusher feed pile										NSPS Subpart OOO	N/A	N/A
F	E	EP0X.05		EP0X.05	Quarry waste pile										NSPS Subpart OOO	N/A	N/A
F	N	EP0X.06		EP0X.06	New Crusher feed pile										NSPS Subpart OOO	N/A	N/A
F	E	EP03.01		EP03.01	Stone Storage Bays - (5 piles)										NSPS Subpart OOO	N/A	N/A
F	M	EP26.05		EP26.05	Gypsum/Synthetic Gypsum storage pile (Craneway)										NESHAP Subpart LLL	N/A	N/A
F	N	EP26.08		EP26.08	Limestone Storage pile (Craneway)										NESHAP Subpart LLL	N/A	N/A
F	M	EP15.04.03		EP15.04.03	Coal storage pile (Craneway)										NSPS Subpart Y	N/A	N/A
F	N	EP15.04.04		EP15.04.04	Petcoke Storage Pile (Craneway)										NSPS Subpart Y	N/A	N/A
F	E	EP14.08		EP14.08	Clinker stockpile (Craneway)										NESHAP Subpart LLL	N/A	N/A
F	M	EP25.01		EP25.01	Quarry haul roads (new crusher)										N/A	N/A	N/A
F	M	EP25.02		EP25.02	Quarry haul roads (old crusher)										N/A	N/A	N/A
F	M	EP25.03		EP25.03	Quarry haul roads (waste)										N/A	N/A	N/A
F	M	EP25.04.02		EP25.04.02	Cement shipments										N/A	N/A	N/A
F	M	EP25.05.01		EP25.05.01	Additive trucks (unpaved)										N/A	N/A	N/A
F	M	EP25.05.02		EP25.05.02	Additive trucks (paved)										N/A	N/A	N/A
F	M	EP25.06.01		EP25.06.01	Fuel deliveries (unpaved)										N/A	N/A	N/A
F	M	EP25.06.02		EP25.06.02	Fuel deliveries (paved)										N/A	N/A	N/A
F	M	EP25.07		EP25.07	Waste dust trucks (unpaved)										N/A	N/A	N/A
F	M	EP25.08		EP25.08	Misc. plant vehicles (unpaved)										N/A	N/A	N/A

**TABLE H-1  
CAM APPLICABILITY ANALYSIS FOR PARICULATE EMISSIONS  
CAPITAL CEMENT PORTLAND CEMENT PLANT**

P= Point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Hours of Operation (hours/year)	Flowrate (dscfm)	TSP Emissions Factor	Units	Building Control Efficiency (%)	Baghouse Control Efficiency (%)	Future Potential TSP Controlled Emissions (tpy)	Future Potential TSP Uncontrolled Emissions (tpy)	Criteria 3	Criteria 1	Criteria 2	
														PM Uncontrolled Emissions Per Source (tons)	Subject to NSPS or NESHAP?	Amount of Material Recovered by Unit (tons)	Economic Saving For Capturing Material
F	M	EP25.09.01		EP25.09.01	Dry Flyash trucks (For Cement) (unpaved)										N/A	N/A	N/A
F	M	EP25.09.02		EP25.09.02	Dry Flyash trucks (For Cement) (paved)										N/A	N/A	N/A
F	N	EP25.09.03		EP25.09.03	Dry Flyash trucks (For Calciner) (unpaved)										N/A	N/A	N/A
F	N	EP25.09.04		EP25.09.04	Dry Flyash trucks (For Calciner) (paved)										N/A	N/A	N/A
F	M	EP25.10.01		EP25.10.01	Waste dust customer trucks (unpaved)										N/A	N/A	N/A
F	M	EP25.10.02		EP25.10.02	Waste dust customer trucks (paved)										N/A	N/A	N/A
F	M	EP25.14		EP25.14	Gypsum/Synthetic Gypsum haul road (unpaved)										N/A	N/A	N/A
F	M	EP25.12		EP25.12	Gypsum/Synthetic Gypsum haul road (paved)										N/A	N/A	N/A
F	N	EP42.06.01		EP42.06.01	Lime deliveries (unpaved)										N/A	N/A	N/A
F	N	EP42.06.02		EP42.06.02	Lime deliveries (paved)										N/A	N/A	N/A
F	E	EP50.01		Tank 56	Quarry Diesel Tank										N/A	N/A	N/A
F	N	EP50.02		Tank 73	Light Oil Tank										N/A	N/A	N/A
F	N	EP50.03		Tank 74	Grinding Aid Tank										N/A	N/A	N/A
F	N	EP50.04		Tank 75	Air Entrainment Tank										N/A	N/A	N/A
															<b>TOTAL</b>		<b>\$46,727,355.54</b>

## **ATTACHMENT I – FEDERAL AND STATE REGULATORY ANALYSIS**

The Title V Renewal Application General Form and Attachment E – Emission Unit Form require that a Title V Renewal Application address all applicable regulatory requirements for individual emission units and facility-wide. This Attachment I – Federal and State Regulatory Analysis is intended to meet the regulatory requirements of the General Form and Attachment E Form.

Capitol Cement Corporation initiated construction of the Plant prior to December 2, 2005. Table I-1 has been provided following this analysis and contains a summary of all Plant emission sources and their applicable federal regulatory standard. The table identifies each source individually and also identifies the sources in groups; these groups are referenced below in order to simplify listing all affected sources. It should be noted that the following sources listed in Table I-1 have not yet begun construction: CD46.01, CD46.02, CD46.03, CD46.04, CD46.05, CD46.06, CD46.07, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, and CD22.09.

### **New Source Performance Standards (NSPS) – 40 CFR Part 60**

#### *Subpart Y – Standards of Performance for Coal Preparation Plants (40 CFR 60.250-258)*

The Plant processes a blend of pet coke and coal as fuel in the Portland Cement manufacturing process; therefore the coal handling equipment is subject to NSPS Subpart Y. Construction of the coal processing and conveying system commenced prior to April 28, 2008. The Coal Mill baghouse is not subject to NSPS Subpart Y since its emissions co-mingle and are vented out the Main Stack along with the kiln/raw-mill/clinker cooler emissions and alkali bypass emissions. Therefore, the Coal Mill baghouse and all coal conveying sources which are vented to the baghouse are subject to the more stringent standards of 40 CFR 63 Subpart LLL.

40 CFR 60.254 Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.

- The opacity from affected sources is limited to 20%. [40 CFR 60.254(a)]  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

40 CFR 60.255 Performance tests and other compliance requirements

- An Initial Method 9 Performance Test is required to be conducted within 180 days of the affected source starting operation. [40 CFR 60.255(a)]  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

#### 40 CFR 60.257 Test methods and procedures

- Method 9 and the procedures in 40 CFR 60.11 are required to determine opacity. [40 CFR 257(a)(1-3)]  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

#### 40 CFR 60.258 Reporting and Recordkeeping

- The results of the Initial Performance Test are required to be provided to the Administrator and WVDEP within 60 days of testing completion. [40 CFR 258(c)]  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

#### Subpart Y Compliance Status:

One emission unit, EP41.01.02, demonstrated non-compliance during its Initial Method 9 Performance Test and an Attachment F Form has been completed to address this non-compliance. All other affected sources demonstrated compliance with their opacity limits during their Initial Method 9 Performance Testing; however, the testing was conducted more than 180 days from start of operation. An Attachment F Form has also been completed to address this non-compliance. The Subpart Y applicable emission units at the Plant are in compliance with all other regulations listed above.

#### *Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR 60.670 –676)*

The processing of limestone (e.g., crushers, screens, conveyor transfer points [except to a pile], and storage bins) from the Quarry up to but not including the Raw Mill Storage Bins are subject to PM and opacity standards established under NSPS Subpart OOO which became effective on April 28, 2009. It should be noted that the Plant also has an additional separate quarry operation (sources EP0X.03.01 through EP03.02 on Table I-1) which is exempt from NSPS Subpart OOO since all sources were constructed prior to August 31, 1983.

#### 40 CFR 60.672 Standard for particulate matter

- All affected sources equipped with a capture system are required to meet a PM limit of 0.022 gr/dscf and an opacity limit of 7% within 60 days after achieving maximum production, but not later than 180 days after initial start-up. [40 CFR 60.672(a)]  
Affected Sources: CD37.03, CD37.04, CD37.06, CD38.01, CD04.03, CD38.02, CD39.05, CD39.01, CD39.02; (CD39.02 is subject to the Opacity Limit Only)
- The fugitive emission limit for grinding mills, screening operations, bucket elevators, and transfer points is 10% opacity which must be met within 60 days after achieving maximum production, but not later than 180 days after initial start-up. [40 CFR 60.672(b)]

Affected Sources: EP37.02.02, EP37.05, EP40.03

- Truck dumping of materials into any screening operation, feed hopper, or crusher is exempt from the requirements of this section. [40 CFR 60.672(d)]  
Affected Sources: EP37.02.01
- Any baghouse that controls emissions for an individual storage bin is exempt from the applicable stack PM concentration limit, but must meet the 7% opacity limit. [40 CFR 60.672(f)]  
Affected Sources: CD39.02

#### 40 CFR 60.675 Test methods and procedures

- Compliance with PM standards of 60.672(a) shall be determined by an Initial Performance Test using either Method 5 of Appendix A-4 of Part 60 or Method 17 of Appendix A-6 of Part 60. [40 CFR 60.675(b)(1)]  
Affected Sources: CD37.03, CD37.04, CD37.06, CD38.01, CD04.03, CD38.02, CD39.05, CD39.01
- Compliance with opacity limits shall be determined by conduct of an Initial Method 9 of Appendix A-4 of Part 60. [40 CFR 60.675(b)(1) and 40 CFR 60.675(c)]  
Affected Sources: CD37.03, CD37.04, CD37.06, CD38.01, CD04.03, CD38.02, CD39.05, CD39.01, CD39.02, EP37.02.02, EP37.05, EP40.03

#### 40 CFR 60.676 Reporting and recordkeeping

- Written reports of the results of all performance tests are required to be submitted. [40CFR 60.676(f)]  
Affected Sources: CD37.03, CD37.04, CD37.06, CD38.01, CD04.03, CD38.02, CD39.05, CD39.01, CD39.02, EP37.02.02, EP37.05, EP40.03

#### Subpart OOO Compliance Status:

All affected sources subject to 40 CFR 60.672(a) and 60.675(b)(1) are currently out of compliance, no Initial Method 5 Performance Test has been conducted and the Initial Method 9 Performance Testing was conducted more than 60 days after achieving maximum production. All affected sources subject to 40 CFR 60.672(b) are out of compliance since their Initial Method 9 Performance Testing was conducted more than 60 days after achieving maximum production. Attachment F Forms have been completed for all non-compliance issues. The Subpart OOO applicable emission units at the Plant are in compliance with all other regulations listed above.

### **National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR 63**

The Plant will be a major source of hazardous air pollutants (HAP) and therefore subject to NESHAP 40 CFR 63 Subpart LLL (Portland Cement Manufacturing Plants.)

#### 40 CFR 63.1343 Standards for kilns and in-line kilns/raw mills

- Particulate - The combined gases from the inline kiln/raw mill and the alkali bypass have a particulate matter emission limit of 0.30 lb/ton of dry kiln feed. [40 CFR 63.1343(b)(1)]  
Affected sources: CD42.04
- Dioxins and Furans (D/F) – The kiln/raw mill emissions are limited to:
  - 0.20 ng per dscm (8.7x10<sup>-11</sup> gr per dscf) (TEQ) corrected to 7% oxygen; or
  - 0.40 ng per dscm (1.7x10<sup>-10</sup> gr per dscf) (TEQ) corrected to 7% oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter dust collector is 204 °C (400 °F) or less.  
[40 CFR 63.1343(b)(3)]  
Affected sources: CD42.04
- Opacity – 40 CFR 63.1343 limits opacity emissions from the kiln/raw mill to 20%. However, the main stack includes emissions from the kiln/raw mill and also the clinker cooler. 40 CFR 63.1345 limits opacity emissions from the clinker cooler to 10%. The Plant has accepted the more stringent limit of 10% opacity for the main stack. [40 CFR 63.1343(b)(2) and 40 CFR 1345(a)(2)]  
Affected sources: CD42.04

#### 40 CFR 63.1344 Operating limits for kilns and in-line kiln/raw mills

- For all in-line kiln/raw mills subject to a D/F limit, the facility is required to operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and the alkali bypass PMCD do not exceed the applicable temperature limits that were established during the most recent D/F performance test. [40 CFR 63.1344(a)]  
Affected sources: CD42.04
- The Plant is required to implement good combustion practices (GCP) designed to minimize THC from combustion. This requirement includes training all kiln operators and supervisors which operate and maintain the kiln and calciner, and the pollution control systems in accordance with good engineering practices. [40 CFR 63.1344(f)]  
Affected sources: CD42.04

#### 40 CFR 63.1347 Standards for raw and finish mills

- All new and existing raw and finish mills are subject to a 10% opacity limit. [40 CFR 63.1347(a)]  
Affected Sources: CD19.01, CD19.02, CD44.09, CD44.12

#### 40 CFR 63.1348 Standards for affected sources other than kilns; in-line kiln/raw mills; clinker coolers; and raw and finish mills

- All raw material, clinker, or finished product storage bins; conveying system transfer points; bagging systems; and bulk loading and unloading systems are subject to a 10% opacity limit. [40 CFR 63.1348]

Affected Sources: Group 4, Group 6 (except CD 19.01, CD19.02, CD44.09 and CD 44.12), Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD42.02, CD42.03, CD42.05, CD43.02, CD42.01, CD42.06, CD42.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09

#### 40 CFR 63.1349 Performance testing requirements

- All performance testing shall be conducted per the requirements of 40 CFR 63.1349 and 40 CFR 63.7. [40 CFR 63.1349(a)]
- A kiln subject to a particulate matter limit shall demonstrate initial compliance by conducting a Method 5 of Appendix A to Part 60 within 180 days of initial start-up. [40 CFR 63.1349(b)(1)]  
Affected sources: CD42.04
- The opacity exhibited during the Method 5 test for a kiln shall be determined by the use of a COM. The maximum 6-minute average opacity during each of the three Method 5 test runs shall be used to demonstrate initial compliance with the applicable opacity limit. [40 CFR 63.1349(b)(1)(v)]  
Affected Sources: CD42.04
- Affected sources subject to an opacity limit that are not subject to 40 CFR 63.1349(b)(1) shall demonstrate initial compliance with the opacity limit by conducting a test in accordance with Method 9 of Appendix A to Part 60 per 40 CFR 63.1349(b)(2). [40 CFR 63.1349(b)(2)]  
Affected Sources: Group 4, Group 6, Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD42.02, CD42.03, CD42.05, CD43.02, CD42.01, CD42.06, CD42.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09
- An affected source subject to a D/F emission limit shall demonstrate initial compliance by conducted a performance test using Method 23 of Appendix A to Part 60. Kilns and inline kiln/raw mills equipped with an alkali bypass shall conduct simultaneous performance tests of the kiln or inline kiln/raw mill exhaust and the alkali bypass. [40 CFR 63.1349(b)(3)]  
Affected Sources: CD42.04
- Performance tests required under 40 CFR 63.1349(b)(1) and (2) shall be repeated every five years except that the kiln, inline kiln/raw mill or clinker cooler is not required to repeat the initial performance test for opacity. [40 CFR 63.1349(c)]  
Affected Sources: Group 3, Group 4, Group 6, Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09
- Performance tests required under 40 CFR 63.1349(b)(3) shall be repeated every 30 months. [40 CFR 63.1349(d)]

Affected Sources: CD42.04

40 CFR 63.1350 Monitoring requirements

- The Plant is required to prepare a written Operation and Maintenance Plan for each source applicable to Subpart LLL per 40 CFR 63.1350(a). [40 CFR 63.1350(a)]
- All affected sources subject to opacity standards under 40 CFR 63.1348 must periodically monitor opacity by conducting monthly 1-minute visible emissions test in accordance with Method 22 of Appendix A to Part 60. The tests shall be conducted as specified in 40 CFR 63.1350(a)(4)(i) to (vii). [40 CFR 63.1350(a)(4)]  
Affected Sources: Group 4, Group 6 (except CD 19.01, CD19.02, CD44.09 and CD 44.12), Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD42.02, CD42.03, CD42.05, CD43.02, CD42.01, CD42.06, CD42.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09
- A kiln or inline kiln/raw mill shall monitor opacity by installing, calibrating, maintaining, and continuously operating a Continuous Opacity Monitor (COM) (according to PS-1 specifications at the outlet of the PMCDs. [40 CFR 63.1350(c)]  
Affected Sources: CD42.04
- The Finish Mills are required to be monitored for opacity by conducting daily visible emission observation of the mill sweep and air separator PMCD in accordance with Method 22 of Appendix A to Part 60 and 40 CFR 63.1350(e). [40 CFR 63.1350(e)]  
Affected Sources: CD19.01, CD19.02, CD44.09, CD44.12
- An affected source subject to a D/F limit is required to continuously record the temperature of exhaust gases from the in-line kiln/raw mill and alkali bypass at the inlet to or upstream of the in-line kiln/raw mill and/or alkali bypass PMCD per 40 CFR 63.1350(f). [40 CFR 63.1350(f)]  
Affected Sources: CD42.04
- The calibration of all thermocouples and other temperature sensors shall be verified at least quarterly. [40 CFR 63.1350(f)(6)]  
Affected Sources: CD42.04
- An affected source subject to a D/F limit is required to conduct annual inspections of the components of the combustion system of the in-line kiln/raw mill. [40 CFR 63.1350(i)]  
Affected Sources: CD42.04
- The requirements of 40 CFR 63.1350(e) to conduct daily Method 22 testing shall not apply to any finish mill equipped with a COM.[40 CFR 63.1350(m)]  
Affected Sources: CD44.09, CD44.12

#### 40 CFR 63.1353 Notification requirements

- All notifications are required to be submitted as per the requirements set forth in §63.9. [40 CFR 63.1353(b)]  
Affected Sources: Group 3, Group 4, Group 6, Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09

#### 40 CFR 63.1354 Reporting requirements

- Reporting is required to be submitted per the requirements set forth in §63.10. [40 CFR 63.1354(b)]  
Affected Sources: Group 3, Group 4, Group 6, Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09

#### 40 CFR 63.1355 Recordkeeping requirements

- All information required under §63.1355 must be maintained in a format readily available for inspection and review. The information must be maintained for five years. [40 CFR 63.1355(a)]  
Affected Sources: Group 3, Group 4, Group 6, Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09

#### Subpart LLL Compliance Status

The following sources are currently not in compliance with 63.1349(b)(2), as no Initial Method 9 Performance Test has been conducted to demonstrate compliance with their opacity limits: CD43.14, CD45.03, CD45.04, CD45.05, CD45.06, CD45.07, CD45.09, CD21.05, CD21.06, CD21.07, CD21.08, CD21.09, CD21.10, CD21.11, CD21.12, CD21.13, CD45.12, CD45.13, CD46.07, CD20.04, CD20.05, CD20.06, and CD31.03. An Attachment F Form has been completed for this non-compliance issue.

The following sources are currently not in compliance with 63.1349(b)(2), as their Initial Method 9 Performance Tests conducted to demonstrate compliance with their opacity were conducted more than 180 days after start of operation: EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, and CD48.01. An Attachment F Form has been completed for this non-compliance issue.

The Subpart LLL applicable emission units at the Plant are in compliance with all other regulations listed above.

## **WEST VIRGINIA CODE OF STATE RULES**

The air quality regulations for the State of West Virginia are codified in Title 45 of the Code of State Rules (45CSR). Title 45 is divided into series, each covering a specific aspect of the state's air pollution regulatory program. The series that contain requirements that are applicable to the Plant are discussed in the following paragraphs.

### ***SERIES 5 - 45CSR5 To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas***

#### **45CSR§5-3 Emission of Particulate Matter Prohibited and Standards of Measurement**

- The opacity from any point is required to be less than 20%, except for a period or periods aggregating no more than 5 minutes in any 60-minute period during operation in which the opacity must be less than 60%. [45CSR§5-3.1 and 3.2]  
Affected Sources: CD42.04 (Coal Mill Baghouse Only)
- The opacity from a fugitive dust control system is required to be no more than 20%. [45CSR§5-3.4]  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

#### **45CSR§5-6 Control and Prohibition of Fugitive Dust Emissions From Coal Handling Operations and Preparation Plants.**

- The Plant is required to operate all coal handling equipment with fugitive dust control systems in good operating conditions. [45CSR§5-6.1]  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03
- The Plant is required to implement good operating practices to control particulate matter by paving or other dust suppression measures. [45CSR§5-6.2]  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

#### **Series 5 Compliance Status:**

All sources subject to Series 5 are currently in compliance with all regulations listed above.

### ***SERIES 7 - 45CSR7 To Prevent & Control Particulate Matter Air Pollution from Manufacturing Processes & Associated Operations***

#### **45CSR§7-3 Emission of Smoke and/or Particulate Matter Prohibited and Standards of Measurement**

- The emission of smoke and/or particulate matter into the open air from any process source operation is required to be no more than 20% except as provided in 45CSR§7-3.2 through 45CSR§7-3.7. [45CSR§7-3.1]  
Affected Sources: Groups 1, 2, 3, 4, 6, 7, 8, EP41.02.04
- The provisions of 45CSR§7-3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than 40% for any period or periods aggregating no more than five minutes in any sixty minute period. [45CSR§7-3.2]  
Affected Sources: Groups 1, 2, 3, 4, 6, 7, 8, EP41.02.04
- No visible emissions are allowed from any storage structure associated with any manufacturing process that is required by 45CSR§7-5.1 to have a full enclosure and be equipped with a particulate matter control device. [45CSR§7-3.7]  
Affected Sources: Groups 1, 2, 3, 4, 6, 7, 8, EP41.02.04

#### 45CSR§7-4 Control and Prohibition of Particulate Emissions by Weight from Manufacturing Process Source Operations

- No particulate matter is allowed 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 Table 45-7A of this rule. [45CSR§7-4.1]  
Affected Sources: Groups 1, 2, 3, 4, 6, 7, 8, EP41.02.04
- 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]  
Affected Sources: Groups 1, 2, 3, 4, 6, 7, 8, EP41.02.04

#### 45CSR§7-5 Control of Fugitive Particulate Matter

- The Plant is required to be equipped with fugitive dust control systems for all sources of fugitives (manufacturing or storage). [45CSR§7-5.1]  
Affected Sources: Groups 1, 2, 3, 4, 6, 7, 8, EP41.02.04
- The Plant is required to implement good operating practices to control particulate matter by paving or other dust suppression measures. [45CSR§7-5.2]  
Affected Sources: Groups 1, 2, 3, 4, 6, 7, 8, EP41.02.04

#### 45CSR§7-10 Exemptions

- Provisions of 45CSR§7 shall not apply to particulate matter emissions regulated by Title 45, Series 2, 3, or 5 or to mobile internal combustion engines. [45CSR§7-10.1]

Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03

- Maintenance operations 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. [45CSR§7-10.3]  
Affected Sources: Facility-Wide

Series 7 Compliance Status:

All sources subject to Series 7 are currently in compliance with all regulations listed above.

**SERIES 7A - 45CSR7A Compliance Test Procedures for 45CSR7 – “To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations”**

45CSR§7A-2 Visible Emission Test Procedures

- All visible emission tests are required to follow the procedures outlined in this Series.  
Affected Sources: Facility-Wide

45CSR§7A-3 Mass Emission Test Procedures

- All stack testing to determine particulate mass emissions are required to be performed following the procedures outlined in this Series.  
Affected Sources: Facility-Wide

Series 7A Compliance Status:

All sources subject to Series 7A are currently in compliance with all regulations listed above.

**SERIES 8 - 45CSR8 Ambient Air Quality Standards**

45CSR§8-4 Ambient Air Quality Standards

- The plant is prohibited from allowing emissions of sulfur oxides to the ambient air in any manner which causes or significantly contributes to an exceedence of the primary and secondary ambient air quality standards outlined in this Series. [45CSR§8-4.1]  
Affected Sources: Facility-Wide
- The plant is prohibited from allowing emissions of particulate matter to the ambient air in any manner which causes or significantly contributes to an exceedence of the primary and secondary ambient air quality standards outlined in this Series. [45CSR§8-4.2]  
Affected Sources: Facility-Wide
- The plant is prohibited from allowing emissions of Carbon Monoxide to the ambient air in any manner which causes or significantly contributes to an exceedence of the primary and secondary ambient air quality standards outlined in this Series. [45CSR§8-4.3]

Affected Sources: Facility-Wide

- The plant is prohibited from allowing emissions of ozone to the ambient air in any manner which causes or significantly contributes to an exceedence of the primary and secondary ambient air quality standards outlined in this Series. [45CSR§8-4.4]  
Affected Sources: Facility-Wide
- The plant is prohibited from allowing emissions of nitrogen dioxide to the ambient air in any manner which causes or significantly contributes to an exceedence of the primary and secondary ambient air quality standards outlined in this Series. [45CSR§8-4.5]  
Affected Sources: Facility-Wide
- The plant is prohibited from allowing emissions of lead to the ambient air in any manner which causes or significantly contributes to an exceedence of the primary and secondary ambient air quality standards outlined in this Series. [45CSR§8-4.6]  
Affected Sources: Facility-Wide

Series 8 Compliance Status:

All sources subject to Series 8 are currently in compliance with all regulations listed above.

**SERIES 10 - 45CSR10 To Prevent and Control Air Pollution From the Emission of Sulfur Oxides**

45CSR§10-4 Standards for Manufacturing Process Source Operations

- The emissions into the open air from any source operation cannot exceed an in-stack SO<sub>2</sub> concentration of 2,000 parts per million by volume (ppmv). [45CSR§10-4.1]  
Any manufacturing source operation which has the potential to emit less than 500 pounds per year of sulfur dioxides is exempt from this requirement. [45CSR§10-4.1.e]  
Affected Sources: CD42.04
- Compliance with allowable sulfur dioxide concentration limits of this rule shall be based on the average of three one-hour stack tests following EPA test methodologies. [45CSR§10-4.2]  
Affected Sources: CD42.04

45CSR§10-8 Testing Monitoring, Recordkeeping and Reporting

- Prior to the installation of calibrated stack gas monitoring devices, sulfur dioxide emission rates shall be calculated on an equivalent fuel sulfur content basis. [45CSR§10-8.2.b]  
Affected Sources: CD42.04
- The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with 45CSR§10-3, 4 and 5 (Sections 5.1.34 and 5.1.35) by testing and /or monitoring in accordance with one or

more of the following: 40 C.F.R. 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. [45CSR§10-8.2.c]  
Affected Sources: CD42.04

- The installation, operation and maintenance of a continuous monitoring system meeting the requirements of 40 CFR 60, Appendix B, Performance Specification 2 (PS2) or Performance Specification 7 (PS7) shall be deemed to fulfill the requirements of a monitoring plan for a fuel burning unit(s), manufacturing process source(s) or combustion source(s). The use of a CEM requires the Plant to follow the quality assurance requirements set forth in 40 CFR 60, Appendix F. [45CSR§10-8.2.c.1]  
Affected Sources: CD42.04
- The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to 45CSR§§10-3, 4 or 5 (Sections 5.1.34 and 5.1.35) shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to 45CSR§10-8.2.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. [45CSR§10-8.3.a]  
Affected Sources: CD42.04
- The Plant is required to submit periodic exception report to the Director which provides the details of all excursions outside the range or monitored parameters established in the Monitoring Plan. [45CSR§10-8.3.b]  
Affected Sources: CD42.04
- 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. [45CSR§10-8.3.c]  
Affected Sources: CD42.04

Series 10 Compliance Status:

All sources subject to Series 10 are currently in compliance with all regulations listed above.

**SERIES 10A** – 45CSR10A *Testing, Monitoring, Recordkeeping, and Reporting Requirements under 45CSR10*

- For sources employing a CEMS for an approved monitoring plan, a CEMS Summary Report and/or CEMS Excursion and Monitoring System Performance Report must be submitted quarterly to the Secretary. The reports are required to be postmarked no later than 45 days following the end of each calendar quarter. The CEMS Summary Report shall contain the information and be in the format shown in Appendix A of this series. [45CSR§10A-7.2.a]

Affected Sources: CD42.04

- If the total duration of excursions for the reporting period is 4% or greater of the total operating time for the reporting period or the total monitoring method downtime for the reporting period is 5% or greater of the total operating time for the reporting period, the CEMS Summary Report and the CEMS Excursion and Monitoring System Performance Report shall both be submitted to the Secretary. [45CSR§10A-7.2.a.3]  
Affected Sources: CD42.04

- The CEMS Excursion and Monitoring System Performance Report shall include the following:
  - The magnitude of each excursion, and the date and time, including starting and ending times, of each excursion;
  - Specific identification of each excursion that occurs during start-ups, shutdowns, and malfunctions of the facility;
  - The nature and cause of any malfunction (if known), and the corrective action taken and preventive measures adopted;
  - The date and time identifying each period during which quality controlled monitoring data was unavailable, except for zero and span checks, and the reason for data unavailability and the nature of the repairs or adjustments to the monitoring system; and
  - When no excursions have occurred or there were no periods of quality controlled data unavailability, and no monitoring systems were inoperative, repaired, or adjusted, such information shall be stated in the report.

[45CSR§10A-7.2.a.4]

Affected Sources: CD42.04

Series 10A Compliance Status:

All sources subject to Series 10A are currently in compliance with all regulations listed above.

**SERIES 13** - *45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

**45CSR§13-5 Permit Application and Reporting Requirements for Construction of and Modifications to Stationary Sources**

- The Plant is required to obtain a permit to construct, modify, relocate and operate a stationary source. Construction of a major stationary source or a major modification is subject to the pre-construction requirements of 45CSR14. The source may not be constructed, modified, relocated or operated until the Secretary issues a permit approving the construction, modification, relocation or operation. [45CSR§13-5.1]  
Affected Sources: Facility Wide
- All permit applications are required to be signed by a responsible official of the entity which will own or operate the stationary source. [45CSR§13-5.6]

Affected Sources: Facility Wide

45CSR§13-15 Hazardous Air Pollutants

- The nature and extent of any emission of hazardous air pollutants (an emission inventory) is required to be included in any application for construction, modification, relocation and operation of a stationary source. [45CSR§13-15.1]  
Affected Sources: Facility-Wide

Series 13 Compliance Status:

All sources subject to Series 13 are currently in compliance with all regulations listed above.

**SERIES 14 - 45CSR14 Permits for Construction & Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration**

- All conditions of Permit R14-026D are applicable and are to be incorporated into the Title V Permit.  
Affected Sources: Facility-Wide

Series 14 Compliance Status:

All sources subject to Series 14 are currently in compliance with all requirements of the Permit R14-026D. The Initial Performance Test Report dated May 26, 2010 reported that the Plant had a VOC non-compliance; however this was incorrect and an explanation is included in Attachment F for this issue.

**SERIES 16 - 45CSR16 Standards of Performance for New Stationary Sources**

- The state incorporates by reference the provision of 40 CFR Parts 60 and 65.  
Affected Sources: EP15.01.01, EP15.01.02, EP15.04.03, EP15.04.04, EP41.01.01, EP41.01.02, EP41.01.03, EP41.01.04, EP41.01.05, EP41.01.06, EP41.01.07, EP41.02.01, EP41.02.02, EP41.02.03, CD37.03, CD37.04, CD37.06, CD38.01, CD04.03, CD38.02, CD39.05, CD39.01, CD39.02, EP37.02.02, EP37.05, EP40.03

Series 16 Compliance Status:

Compliance with 40 CFR Part 60 is addressed in sections 40 CFR 60 Subpart Y and 40 CFR 60 Subpart OOO.

**SERIES 30 - 45CSR30 Requirements for Operating Permits**

The Title V Permit shall incorporate all applicable sections of Series 30 including the sections below which are specifically listed to address the Plant's compliance.

45CSR§30-5 Permit Content

- The Plant is required to submit semiannual reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. [45CSR§30-5.1.c.3.A]

Affected Sources: Facility-Wide

45CSR§30-8 Fees

- The Plant is required to submit a Certified Emission Statement from a responsible official by July 1 of each year and pay Title V Operating Permit Fees for all stationary sources based on an accurate accounting of the actual emissions of all regulated air pollutants from the most recent calendar year. [45CSR§30-8.7]  
Affected Sources: Facility-Wide

Series 30 Compliance Status:

All sources subject to Series 30 are currently in compliance with all regulations listed above.

**SERIES 34 - 45CSR34 Emission Standards for Hazardous Air Pollutants**

45CSR§34-3 Requirements

- The Plant is required to obtain the Secretary's determination that the maximum achievable control technology emission limitation has been met prior to construction or reconstruction of a major source of hazardous air pollutants (as required under 40 CFR 63 and this rule). [45CSR§34-3.2]  
Affected Sources: Group 3, Group 4, Group 6, Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09
- Prior to constructing, reconstructing or modifying any facility subject to Series 34, the Plant is required to obtain the appropriate permit. [45CSR§34-3.4]  
Affected Sources: Group 3, Group 4, Group 6, Group 7, EP04.04.03, CD39.03, CD39.04, CD39.06, CD40.01, CD40.02, CD40.05, CD40.06, CD40.07, CD31.01, CD31.02, CD31.03, CD22.04, CD22.05, CD22.06, CD22.07, CD22.08, CD22.09

Series 34 Compliance Status:

All sources subject to Series 34 are currently in compliance with all regulations listed above.

TABLE I-1 - REGULATORY APPLICABILITY

P=point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Applicable Regulation
<b>GROUP 1 - Quarrying and Crushing</b>						
F	E	EP0X.01		EP0X.01	Quarry drilling	N/A
F	E	EP0X.02		EP0X.02	Quarry blasting	N/A
F	E	EP0X.03.01		EP0X.03.01	Loader to truck (good rock)	N/A
F	E	EP0X.03.02		EP0X.03.02	Loader to truck (waste rock)	N/A
F	E	EP0X.03.03		EP0X.03.03	Truck to waste pile	N/A
F	E	EP0X.03.04		EP0X.03.04	Truck to crusher pile	N/A
F	E	EP0X.03.05		EP0X.03.05	Truck or loader to crusher dump	N/A
P	E	CD01.01	Primary Crusher D/C	EP01.01	Primary crusher	N/A
P	E			EP01.02	Crusher to belt conveyor 1013	
F	E	EP01.03		EP01.03	Belt conveyor 1013 to 40 T bin	N/A
F	E	EP01.04		EP01.04	40 T bin to feeder	N/A
F	E	EP01.05.01		EP01.05.01	Feeder to belt conveyor 1011	N/A
F	E	EP01.05.02		EP01.05.02	Belt conveyor 1011 to belt conveyor 1007	N/A
P	E	CD02.01	Secondary Crusher D/C	EP01.06.01	Belt conveyor 1007 to screen 1009	N/A
P	E			EP01.06.02	Screen 1009	
P	E			EP01.06.03	Screen 1009 to belt conveyor 1009-B	
P	E			EP01.06.04	Screen 1009 to feeder 1009-A	
P	E			EP02.01.01	Feeder 1009-A to hammermill 1006	
P	E			EP02.01.02	Hammermill 1006	
P	E			EP02.01.03	Hammermill 1006 to belt conveyor 1005	
F	E	EP02.01.04		EP02.01.04	Belt conveyor 1005 to belt conveyor 1004	N/A
P	E	CD02.01	Secondary Crusher D/C	EP02.01.05	Belt conveyor 1004 to screen 1003	N/A
P	E			EP02.01.06	Screen 1003	
F	E	EP02.01.07		EP02.01.07	Screen 1003 to belt conveyor 1002	N/A
P	E	CD02.01	Secondary Crusher D/C	EP02.01.08	Belt conveyor 1002 to hammermill 1006	N/A
P	E			EP02.01.09	Screen 1003 to belt conveyor 1001	
P	E			EP02.01.10	Belt conveyor 1009-B to belt conveyor 1001	
F	E	EP02.02		EP02.02	Belt conveyor 1001 to belt conveyor 1000	N/A
F	E	EP02.03.01		EP02.03.01	Belt conveyor 1000 to belt conveyor 999	N/A
F	E	EP02.03.02		EP02.03.02	Belt conveyor 999 to shuttle conveyor 998	N/A
F	E	EP03.02		EP03.02	Shuttle conveyor 998 to raw bins	N/A
F	N	EP37.02.01		EP37.02.01	Truck to large bin	Exempt
F	N	EP37.02.02		EP37.02.02	Large bin to conveyor	NSPS Subpart OOO
P	N	CD37.03	New Primary Crusher D/C	EP37.03.01	Conveyor to feeder	NSPS Subpart OOO
P	N			EP37.03.02	Conveyor to Hammermill	
P	N			EP37.03.03	Hammermill to feeder	
P	N			EP37.03.04	Feeder to conveyor	
P	N	CD37.04	New Crushing System D/C1	EP37.04.01	Conveyor to split	NSPS Subpart OOO
P	N			EP37.04.02	Split to conveyor	
F	N	EP37.05		EP37.05	Split to surge pile	NSPS Subpart OOO
P	N	CD37.06	Premix Conveying D/C	EP37.06.01	Conveyor to split	NSPS Subpart OOO
P	N			EP37.06.02	Split to top conveyor	
P	N			EP37.06.03	Split to bottom conveyor	
P	N	CD38.01	Premix Storage Feeding D/C	EP38.01.01	Top conveyor to swing conveyor	NSPS Subpart OOO
P	N			EP38.01.02	Swing conveyor to Limestone pile	
<b>GROUP 2 - Raw Material Preparation</b>						
F	E	EP04.01.01		EP04.01.01	Raw bins to feeders East Tunnel	N/A
F	E	EP04.01.02		EP04.01.02	Feeders to belt conveyor East 917	N/A
P	M	CD04.03	Limestone Conveying to #1 Stone Belt D/C	EP04.03.01	Belt conveyor 917 to elevator East 915	NSPS Subpart OOO
P	M			EP04.03.02	Elevator 915 to screens East 914/913	
P	M			EP04.03.03	Screens East 914/913	
P	M			EP04.03.04	Screens East 914/913 to #1 stone system belt	
P	M			EP04.04.01	Shuttle conveyor 998 to new chute	
P	M			EP04.04.02	New chute to #1 stone system belt	
F	M	EP04.04.03		EP04.04.03	#1 stone system belt to limestone pile in craneway	NESHAP Subpart LLL
P	N	CD38.02	Premix Storage Discharge D/C	EP38.02.01	Pile to feeder1	NSPS Subpart OOO
P	N			EP38.02.02	Feeder1 to bottom conveyor	
P	N			EP38.02.03	Pile to feeder2	
P	N			EP38.02.04	Feeder2 to bottom conveyor	
P	N	CD39.05	Additive Delivery System D/C	EP39.05	Additives truck to conveyor	NSPS Subpart OOO
P	N			EP39.04.04	Conveyor to conveyor	
F	N	EP40.03		EP40.03	Split to (surge)pile	NSPS Subpart OOO

TABLE I-1 - REGULATORY APPLICABILITY

P=point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Applicable Regulation
P	N	CD39.01	Additive Feeding System D/C	EP39.01.01	Conveyor to split	NSPS Subpart OOO
P	N			EP39.01.02	Split to conveyor	
P	N			EP39.03.02	Conveyor to shale bin	
P	N			EP39.04.01	Conveyor to shale bin 2	
P	N			EP39.07.01	Split to pyrite silo	
P	N			EP39.08.01	Split to sand silo	
P	N	CD39.02	Limestone Bin D/C	EP39.03.01	Conveyor to limestone mix bin	NSPS Subpart OOO
P	N	CD39.03	Raw Material Discharge D/C 1	EP39.03.03	Shale bin to feeder	NESHAP Subpart LLL
P	N			EP39.03.04	Shale bin feeder to conveyor	
P	N			EP39.02.01	Limestone mix bin to feeder	
P	N			EP39.02.02	Limestone mix feeder to conveyor	
P	N			EP39.08.02	Sand silo to feeder	
P	N			EP39.08.03	Sand silo feeder to conveyor	
P	N			EP39.07.02	Pyrite silo to feeder	
P	N			EP39.07.03	Pyrite silo feeder to conveyor	
P	N	CD39.04	Raw Material Discharge D/C 2	EP39.04.02	Shale silo 2 to feeder	NESHAP Subpart LLL
P	N			EP39.04.03	Shale silo 2 feeder to conveyor	
P	N	CD39.06	Raw Mill Feeding D/C	EP39.06.01	Raw Mill Feed Conveyor	NESHAP Subpart LLL
P	N	CD40.01	Raw Mill High Zone D/C	EP40.01.01	RM Feed Conveyor to conveyor	NESHAP Subpart LLL
P	N			EP40.01.02	Conveyor to split	
P	N			EP40.01.03	Split to hopper	
P	N			EP40.02.03	Elevator to conveyor	
P	N			EP40.04.01	Split to Raw Mill	
P	N	CD40.02	Raw Mill Low Zone D/C	EP40.02.01	Conveyor to split	NESHAP Subpart LLL
P	N			EP40.02.02	Split to bucket elevator	
P	N			EP40.04.02	Raw Mill to conveyor	
P	N			EP40.02.04	Conveyor to bucket elevator	
P	N	CD40.05	Raw Meal Air Slide D/C	EP40.05	Raw Meal Conveying Equipment	NESHAP Subpart LLL
P	N	CD40.06	Homo Silo Feeding D/C	EP40.06	Homogenizing Silo Feeding Equipment	NESHAP Subpart LLL
P	N	CD40.07	Homo Silo Discharge D/C	EP40.07	Homogenizing Silo Discharging Equipment	NESHAP Subpart LLL
<b>GROUP 3 - Pyroprocessing</b>						
P	N	CD42.02	Kiln Feeding Bucket Elevator D/C	EP42.02	Kiln Feeding Bucket Elev DC	NESHAP Subpart LLL
P	N	CD42.03	Kiln Feeding D/C 1	EP42.03	Kiln Feed Belt	NESHAP Subpart LLL
P	N	CD42.05	Kiln Feeding D/C 2	EP42.05	Kiln Feed Belt	NESHAP Subpart LLL
P	N	CD42.04	Inline Raw Mill / PH/PC Kiln / Clinker Cooler & Bypass & Coal Mill D/Cs	EP42.04	Kiln System - Inline Raw Mill / PH/PC Kiln / Clinker Cooler	NESHAP Subpart LLL
P	N			EP42.08	Kiln Bypass Baghouse DC	NESHAP Subpart LLL
P	N			EP41.03.01	Coal Mill	NESHAP Subpart LLL
P	N	CD43.02	Cooler Discharge D/C	EP43.02	New Cooler Discharge DC	NESHAP Subpart LLL
P	N	CD42.01	Kiln Bypass Dust D/C	EP42.01	Bypass Dust Transfer to Existing Cement Silos	NESHAP Subpart LLL
P	N	CD42.06	Lime Storage D/C	EP42.06	Lime Storage for Scrubber System	NESHAP Subpart LLL
P	N	CD42.07	Bypass Truck Spout Dedusting	EP42.07	Bypass Truck Spout Dedusting	NESHAP Subpart LLL
<b>GROUP 4 - Clinker Handling and Storage</b>						
P	N	CD43.03	Clinker Storage Feeding D/C	EP43.05	Clinker conveyor to big clinker silo	NESHAP Subpart LLL
P	N	CD43.04	Small Clinker Storage Feeding D/C	EP43.04	Clinker conveyor to clinker silo	NESHAP Subpart LLL
P	N	CD43.06	Small Clinker Storage Discharge D/C	EP43.06.01	Low Alkali Clinker Silo to upper conveyors	NESHAP Subpart LLL
P	N			EP43.06.02	Upper conveyors to lower conveyor	NESHAP Subpart LLL
P	N			EP43.06.03	Low Alkali Clinker silo to lower conveyor	NESHAP Subpart LLL
P	N	CD43.07	Clinker Storage Discharge D/C	EP43.07.01	Big clinker silo to upper conveyor1	NESHAP Subpart LLL
P	N			EP43.07.02	Big clinker silo to upper conveyor2	NESHAP Subpart LLL
P	N			EP43.07.03	Big clinker silo to lower conveyor	NESHAP Subpart LLL
P	N			EP43.07.04	Big clinker silo to short conveyor	NESHAP Subpart LLL
P	N			EP43.07.05	Short conveyor to lower conveyor	NESHAP Subpart LLL
P	N	CD43.08	Finish Mill Conveying D/C1	EP43.08	Upper conveyor 1 to FM feed hoppers belt	NESHAP Subpart LLL
P	N	CD43.09	Finish Mill Conveying D/C2	EP43.09	Lower conveyor to FM feed hoppers belt	NESHAP Subpart LLL
P	N	CD43.13	Finish Mill Conveying D/C3	EP43.13	Upper conveyor 2 to FM feed hoppers belt	NESHAP Subpart LLL
<b>GROUP 5 - Fuel Handling</b>						
F	E	EP15.01.01	-	EP15.01.01	Rail unloading to petcoke hopper	NSPS Subpart Y
F	E	EP15.01.02	-	EP15.01.02	Petcoke hopper to feeders	NSPS Subpart Y
F	N	EP41.01.01	-	EP41.01.01	Petcoke feeders to conveyor	NSPS Subpart Y
F	N	EP41.01.02	-	EP41.01.02	Petcoke Conveyor to split to conveyor	NSPS Subpart Y
F	N	EP41.01.03	-	EP41.01.03	Petcoke Conveyor to CSH fuel bins or pile	NSPS Subpart Y
F	N	EP41.01.04	-	EP41.01.04	Coal Truck unloading to storage hall	NSPS Subpart Y
F	N	EP41.01.05	-	EP41.01.05	Clam bucket to coal pile	NSPS Subpart Y
F	N	EP41.01.06	-	EP41.01.06	Pile to clam bucket	NSPS Subpart Y
F	N	EP41.01.07	-	EP41.01.07	Clam bucket to CSH fuel bins	NSPS Subpart Y
F	N	EP41.02.01	-	EP41.02.01	CSH fuel bins to feeders	NSPS Subpart Y

TABLE I-1 - REGULATORY APPLICABILITY

P=point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Applicable Regulation
F	N	EP41.02.02	-	EP41.02.02	Feeders to conveyor	NSPS Subpart Y
F	N	EP41.02.03	-	EP41.02.03	Conveyor to split to conveyor	NSPS Subpart Y
F	N	CD42.04	-	EP41.02.04	Conveyor to Coal Mill	NESHAP Subpart LLL
<b>GROUP 6 - Cement Production</b>						
P	N	CD43.14	Finish Mill 1 & 2 Hoppers D\C	EP43.14	Conveyor to clinker feeding hoppers (FM1 &2)	NESHAP Subpart LLL
				EP43.15	Conveyor to lower conveyor (FM3)	
P	N	CD43.16	Finish Mill 3 Hopper D\C	EP43.16	Lower conveyor to clinker feeding hopper (FM3)	NESHAP Subpart LLL
F	E	EP26.06.03	-	EP26.06.03	Gypsum/Synthetic Gypsum truck unloading to storage hall	NESHAP Subpart LLL
F	E	EP26.06.04	-	EP26.06.04	Clam bucket to gypsum/synthetic gypsum pile	NESHAP Subpart LLL
F	E	EP26.06.05	-	EP26.06.05	Gypsum/synthetic gypsum pile to clam bucket	NESHAP Subpart LLL
F	E	EP26.06.06	-	EP26.06.06	Clam bucket to gypsum/synthetic gypsum bin (FM1/2/3)	NESHAP Subpart LLL
F	E	EP26.07.01	-	EP26.07.01	Limestone Pile to clam bucket	NESHAP Subpart LLL
F	E	EP26.07.02	-	EP26.07.02	Clam bucket to limestone bin (FM1/2/3)	NESHAP Subpart LLL
F	E	EP27.01	-	EP27.01	Conveyor to clinker hopper	NESHAP Subpart LLL
F	E	EP27.02	-	EP27.02	Clinker hopper to crane	NESHAP Subpart LLL
F	E	EP27.03	-	EP27.03	Crane to clinker pile	NESHAP Subpart LLL
F	E	EP27.04	-	EP27.04	Clinker pile to crane	NESHAP Subpart LLL
F	E	EP27.05	-	EP27.05	Crane to clinker bins (FM1/2/3)	NESHAP Subpart LLL
P	N	CD44.01	Finish Mill 2 Feeding D\C1	EP44.01	L.A. clinker bin to FM2 conveyor	NESHAP Subpart LLL
P	N	CD44.02	Finish Mill 1 Feeding D\C1	EP44.02	Clinker bin to FM1 conveyor	NESHAP Subpart LLL
P	N	CD44.03	Finish Mill 2 Feeding D\C2	EP44.03	Clinker bin to FM2 conveyor	NESHAP Subpart LLL
P	N	CD44.04	Finish Mill 2 Feeding D\C3	EP44.04.01	Limestone bin to FM2 conveyor	NESHAP Subpart LLL
P	N			EP44.04.02	Gypsum/synthetic gypsum bin to FM2 conveyor	NESHAP Subpart LLL
P	N	CD44.05	Finish Mill 1 Feeding D\C 2	EP44.05.01	Limestone bin to FM1 conveyor	NESHAP Subpart LLL
P	N			EP44.05.02	Gypsum/synthetic gypsum bin to FM1 conveyor	NESHAP Subpart LLL
P	E	CD19.02	Finish Mill 3 Baghouse D\C	EP19.01Pb	No. 3 Finish Mill Separator (Existing FM 10)	NESHAP Subpart LLL
F	E	CD19.01	Finish Mill 3 Norblo D\C	EP19.01U	FM3 Feed bins to feeders	NESHAP Subpart LLL
P	E			EP19.01Pa.01	FM3 Feeders to belt conveyor 650	NESHAP Subpart LLL
P	E			EP19.01Pa.02	Belt conveyor 650 to FM3	NESHAP Subpart LLL
P	E			EP19.02	Finish Mill 3	NESHAP Subpart LLL
P	N	CD44.06	Finish Mill 1 Conveying D\C	EP44.06	FM1 Conveyor to conveyor	NESHAP Subpart LLL
P	N	CD44.07	Finish Mill 1 High Zone D\C	EP44.07.01	Elevator to FM1 conveyor	NESHAP Subpart LLL
P	N			EP44.07.02	FM1 Conveyor to bin	NESHAP Subpart LLL
P	N			EP44.07.03	Conveyor to Finish Mill 1	NESHAP Subpart LLL
P	N	CD44.08	Finish Mill 1 Low Zone D\C	EP44.08.01	Finish Mill 1 to Conveyor	NESHAP Subpart LLL
P	N			EP44.08.02	Bin to FM1 conveyor	NESHAP Subpart LLL
P	N			EP44.08.03	FM1 Conveyor to bucket elevator	NESHAP Subpart LLL
P	N	CD44.09	Finish Mill 1 D\C	EP44.09	Finish Mill 1	NESHAP Subpart LLL
P	N	CD44.13	Finish Mill 1 Discharge D\C	EP44.13	Finish Mill 1 Conveying	NESHAP Subpart LLL
P	N	CD44.14	Finish Mill 2 Conveying D\C	EP44.14	FM2 Conveyor to conveyor	NESHAP Subpart LLL
P	N	CD44.10	Finish Mill 2 High Zone D\C	EP44.10.01	FM2 Elevator to conveyor	NESHAP Subpart LLL
P	N			EP44.10.02	FM2 Conveyor to bin	NESHAP Subpart LLL
P	N			EP44.10.03	Conveyor to Finish Mill 2	NESHAP Subpart LLL
P	N	CD44.11	Finish Mill 2 Low Zone D\C	EP44.11.01	Finish Mill 2 to conveyor	NESHAP Subpart LLL
P	N			EP44.11.02	Bin to FM2 conveyor	NESHAP Subpart LLL
P	N			EP44.11.03	FM2 Conveyor to bucket elevator	NESHAP Subpart LLL
P	N	CD44.12	Finish Mill 2 D\C	EP44.12	Finish Mill 2	NESHAP Subpart LLL
P	N	CD44.15	Finish Mill 2 Discharge D\C	EP44.15	Finish Mill 2 Conveying	NESHAP Subpart LLL
P	N	CD44.16	Finish Mill 1/2 Air Heater	EP44.16	Finish Mill 1/2 Air Heater	NESHAP Subpart LLL
<b>GROUP 7 - Shipping</b>						
P	N	CD45.01	Finish Mill 1 Airslides D\C	EP45.01	Finish Mill 1 airslides	NESHAP Subpart LLL
P	N	CD45.02	Finish Mill 2 Airslides D\C	EP45.02	Finish Mill 2 airslides	NESHAP Subpart LLL
P	N	CD45.03	Cement Silos Feeding D\C1	EP45.03	Finish Mill 1 to cement silos	NESHAP Subpart LLL
P	N	CD45.04	Cement Silos Feeding D\C2	EP45.04	Finish Mill 2 to cement silos	NESHAP Subpart LLL
P	N	CD45.05	Cement Silo A1 & A2 D\C	EP45.05	Cement Silo A1 & A2	NESHAP Subpart LLL
P	N	CD45.06	Cement Silo B1 & B2 D\C	EP45.06	Cement Silo B1 & B2	NESHAP Subpart LLL
P	N	CD45.07	Cement Silo C1 & C2 D\C	EP45.07	Cement Silo C1 & C2	NESHAP Subpart LLL
P	N	CD45.08	Truck Loadout 1 D\C	EP45.08	Bulk lane loadout 1	NESHAP Subpart LLL
P	N	CD45.09	Truck Loadout 2 D\C	EP45.09	Bulk lane loadout 2	NESHAP Subpart LLL
P	N	CD45.10	Truck Loadout 3 D\C	EP45.10	Bulk lane loadout 3	NESHAP Subpart LLL
P	N	CD45.11	Truck Loadout 4 D\C	EP45.11	Bulk lane loadout 4	NESHAP Subpart LLL
P	N	CD45.14	Cement Analyzer D\C	EP45.14	Cement Analyzer	NESHAP Subpart LLL

TABLE I-1 - REGULATORY APPLICABILITY

P=point F=Fugitive	Status	PSD Permit EP ID	CD Description	EU ID	EU Description	Applicable Regulation
P	M	CD21.05	Middle Bank Silos 1 D\C	EP21.05	Middle Bank Silos 1 DC	NESHAP Subpart LLL
P	M	CD21.06	Middle Bank Silos 2 D\C	EP21.06	Middle Bank Silos 2 DC	NESHAP Subpart LLL
P	M	CD21.07	Middle Bank Silos 3 D\C	EP21.07	Middle Bank Silos 3 DC	NESHAP Subpart LLL
P	M	CD21.08	Middle Bank Silos 4 D\C	EP21.08	Middle Bank Silos 4 DC	NESHAP Subpart LLL
P	M	CD21.09	Middle Bank Silos 5 D\C	EP21.09	Middle Bank Silos 5 DC	NESHAP Subpart LLL
P	M	CD21.10	Middle Bank Vent 1 D\C	EP21.10	Middle Bank Bin Vent 1 - Silos Inlet	NESHAP Subpart LLL
P	M	CD21.11	Middle Bank Vent 2 D\C	EP21.11	Middle Bank Bin Vent 2 - Silos Inlet	NESHAP Subpart LLL
P	M	CD21.12	Middle Bank Vent 3 D\C	EP21.12	Middle Bank Bin Vent 3 - Silos Discharge	NESHAP Subpart LLL
P	M	CD21.13	Middle Bank Vent 4 D\C	EP21.13	Middle Bank Bin Vent 4 - Silos Discharge	NESHAP Subpart LLL
P	N	CD45.12	Rail Loadout 1 D\C	EP45.12	Bulk rail loadout 1	NESHAP Subpart LLL
P	N	CD45.13	Rail Loadout 2 D\C	EP45.13	Bulk rail loadout 2	NESHAP Subpart LLL
P	M	CD46.01	Truck Loadout Silo 1 D\C	EP46.01	Truck Loadout Silo 1	NESHAP Subpart LLL
P	M	CD46.02	Truck Loadout Silo 2 D\C	EP46.02	Truck Loadout Silo 2	NESHAP Subpart LLL
P	M	CD46.03	Truck Loadout Silo 3 D\C	EP46.03	Truck Loadout Silo 3	NESHAP Subpart LLL
P	M	CD46.04	Truck Loadout Silo 4 D\C	EP46.04	Truck Loadout Silo 4	NESHAP Subpart LLL
P	M	CD46.05	Truck Loadout Silo 5 D\C	EP46.05	Truck Loadout Silo 5	NESHAP Subpart LLL
P	M	CD46.06	Truck Loadout 5 D\C	EP46.06	Bulk loadout 5 - Truck Loadout Silos	NESHAP Subpart LLL
P	M	CD46.07	Truck Loadout 6 D\C	EP46.07	Bulk loadout 6 - Truck Loadout Silos	NESHAP Subpart LLL
P	M	CD20.04	East Bank Silos 1 D\C	EP20.04	East Bank Silos 1	NESHAP Subpart LLL
P	M	CD20.05	East Bank Silos 2 D\C	EP20.05	East Bank Silos 2	NESHAP Subpart LLL
P	M	CD20.06	East Bank Silos 3 D\C	EP20.06	East Bank Silos 3	NESHAP Subpart LLL
P	M	CD48.01	Packhouse D\C	EP48.01	Packhouse	NESHAP Subpart LLL
<b>GROUP 8 - Miscellaneous (All Piles, Roads, Fly Ash and Bypass Dust Sources)</b>						
P	E	CD31.01	Flyash Tank No.1 D\C	EP31.01	Fly Ash Tank #1	NESHAP Subpart LLL
P	E	CD31.02	Bypass Dust Tank D\C	EP31.02	Bypass Dust Tank	NESHAP Subpart LLL
P	E	CD31.03	Bypass Dust Loadout D\C	EP31.03	Bypass Dust silo/loadout	NESHAP Subpart LLL
P	M	CD22.04	Dry Flyash Unloading D\C	EP22.04	Dry Flyash Unloading to West Bank Silos	NESHAP Subpart LLL
P	M	CD22.05	Dry Flyash Silo #71 D\C	EP22.05	Dry Flyash Silo #71	NESHAP Subpart LLL
P	M	CD22.06	Dry Flyash Silo #72 D\C	EP22.06	Dry Flyash Silo #72	NESHAP Subpart LLL
P	M	CD22.07	Dry Flyash Silo #82 D\C	EP22.07	Dry Flyash Silo #82	NESHAP Subpart LLL
P	M	CD22.08	Dry Flyash Silo #83 D\C	EP22.08	Dry Flyash Silo #83	NESHAP Subpart LLL
P	N	CD22.09	Dry Flyash Weigh Bin D\C	EP22.09	Dry Flyash Weigh Bin/Alleviator	NESHAP Subpart LLL
P	N	EPOB.01	Administrative Boiler 1	EPOB.01	Administrative Boiler 1	N/A
P	N	EPOB.02	Administrative Boiler 2	EPOB.02	Administrative Boiler 2	N/A
P	N	EPOG.01	Emergency Generator	EPOG.01	Emergency Generator	N/A
F	E	EPOX.04		EPOX.04	Crusher feed pile	N/A
F	E	EPOX.05		EPOX.05	Quarry waste pile	N/A
F	N	EPOX.06		EPOX.06	New Crusher feed pile	N/A
F	E	EP03.01		EP03.01	Stone Storage Bays - (5 piles)	N/A
F	M	EP26.05		EP26.05	Gypsum/Synthetic Gypsum storage pile (Craneway)	N/A
F	N	EP26.08		EP26.08	Limestone Storage pile (Craneway)	N/A
F	M	EP15.04.03		EP15.04.03	Coal storage pile (Craneway)	NSPS Subpart Y
F	N	EP15.04.04		EP15.04.04	Petcoke Storage Pile (Craneway)	NSPS Subpart Y
F	E	EP14.08		EP14.08	Clinker stockpile (Craneway)	N/A
F	M	EP25.01		EP25.01	Quarry haul roads (new crusher)	N/A
F	M	EP25.02		EP25.02	Quarry haul roads (old crusher)	N/A
F	M	EP25.03		EP25.03	Quarry haul roads (waste)	N/A
F	M	EP25.05.01		EP25.05.01	Additive trucks (unpaved)	N/A
F	M	EP25.05.02		EP25.05.02	Additive trucks (paved)	N/A
F	M	EP25.14		EP25.14	Gypsum/Synthetic Gypsum haul road (unpaved)	N/A
F	M	EP25.12		EP25.12	Gypsum/Synthetic Gypsum haul road (paved)	N/A
F	M	EP25.04.02		EP25.04.02	Cement shipments	N/A
F	M	EP25.06.01		EP25.06.01	Fuel deliveries (unpaved)	N/A
F	M	EP25.06.02		EP25.06.02	Fuel deliveries (paved)	N/A
F	M	EP25.09.01		EP25.09.01	Dry Flyash trucks (For Cement) (unpaved)	N/A
F	M	EP25.09.02		EP25.09.02	Dry Flyash trucks (For Cement) (paved)	N/A
F	N	EP25.09.03		EP25.09.03	Dry Flyash trucks (For Calciner) (unpaved)	N/A
F	N	EP25.09.04		EP25.09.04	Dry Flyash trucks (For Calciner) (paved)	N/A
F	M	EP25.10.01		EP25.10.01	Waste dust customer trucks (unpaved)	N/A
F	M	EP25.10.02		EP25.10.02	Waste dust customer trucks (paved)	N/A
F	M	EP25.08		EP25.08	Misc. plant vehicles (unpaved)	N/A
F	M	EP25.07		EP25.07	Waste dust trucks (unpaved)	N/A
F	N	EP42.06.01		EP42.06.01	Lime deliveries (unpaved)	N/A
F	N	EP42.06.02		EP42.06.02	Lime deliveries (paved)	N/A
F	E	EP50.01		Tank 56	Quarry Diesel Tank	N/A
F	N	EP50.02		Tank 73	Light Oil Tank	N/A
F	N	EP50.03		Tank 74	Grinding Aid Tank	N/A
F	N	EP50.04		Tank 75	Air Entrainment Tank	N/A

## **ATTACHMENT J – OPERATION & MAINTENANCE PLAN**

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Per 40 CFR 63.1350(a) a copy of the Plant's Operation & Maintenance Plan is included as part of this Application.

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**OPERATIONS  
&  
MAINTENANCE  
PLAN**

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**Essroc Italcementi Group  
Capitol Cement Corporation**

**Martinsburg Plant**

**April 2010**

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**ATTACHMENT A LIST OF ALL AFFECTED SOURCES UNDER THE O&M PLAN**  
**ATTACHMENT B SAMPLE METHOD 22 OBSERVATION RECORDS**

**History of Document Revision and/or Modification**

<b>Revision</b>	<b>Revision Date</b>	<b>Reason for Revision/Modification</b>
1.0	3-20-02	Original Plan for Plant (Long Dry Kilns)
2.0	9/25/08	Update to Plan
3.0	April 2010	Update of Plan to reflect Modified Plant - New Preheater/ Precalciner Kiln System and all new associated equipment

## 1.0 **INTRODUCTION**

### 1.1 **Scope**

This Operations and Maintenance Plan (O&M Plan) for the Capitol Cement Corporation - Martinsburg Plant (Plant) was prepared to meet the requirements of the following Federal regulations for the development of operation and maintenance procedures:

- National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry (PC MACT, 40 CFR Part 63, Subpart LLL)
- National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions (40 CFR Part 63, Subpart A)

On June 14, 1999, the United States Environmental Protection Agency (USEPA) promulgated Maximum Available Control Technology National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the Portland Cement Manufacturing Industry. The regulations are found in 40 CFR Part 63, Subpart LLL. By promulgation of this regulation, the affected facilities also become subject to 40 CFR Part 63, Subpart A, General Provisions.

The NESHAP for the Portland Cement Manufacturing Industry (hereinafter referred to as “PC MACT standards” or “PC MACT”) require that an O&M Plan be in place for the process equipment and air pollution control devices regulated by the PC MACT standards. The purpose of the O&M Plan is to identify the manner in which equipment must be operated and maintained to facilitate compliance with specific emission standards and operating requirements mandated for affected emission sources under the applicable standards. This O&M Plan is intended to address *only* the processes and systems regulated under the PC MACT standards, and is not intended to function as a compliance tool for all environmental standards or all other plant processes which contain sources that are not applicable to the PC MACT.

### 1.2 **Objective**

The objective of this O&M Plan is to comply with the requirements of 40 CFR 63.1350(a) and 40 CFR 63.6(e) by providing Plant personnel with operational and maintenance procedures designed to maintain Plant compliance.

Section 2.0 provides tables of the applicable emission limits and monitoring requirements for all affected sources. Section 3.0 contains a description of affected emission sources subject to this O&M Plan. Sections 4.0 through 6.0 describe the specific emission units and, in some cases, groups of units whose operation and maintenance will be guided by numerical emission limits, operation instructions, maintenance instructions, inspection schedules, monitoring requirements, and corrective action measures. Section 7.0 provides the inspection program and Sections 8.0 and 9.0 present the recordkeeping and reporting requirements for all affected sources.

## **2.0 AFFECTED EQUIPMENT AND SYSTEMS**

The PC MACT affected sources that have been included in this document are as follows:

- Kiln System – The main stack vents emissions from three baghouses. One baghouse controls the In-Line Raw Mill, Preheater/Precalciner Kiln, and Clinker Cooler. The second baghouse controls the Alkali Bypass. The third baghouse controls the Solid Fuel Grinding Mill
- Finish Mills
- Materials Handling Processes (which include raw material, clinker, and finished product storage bins; conveying system transfer points; bagging systems; and bulk loading and unloading systems)

Attachment A provides a list of all affected sources at the Plant. Per 40 CFR 63.1340(c), the first affected source is defined:

“For Portland cement plants with on-site nonmetallic mineral processing facilities, the first affected source in the sequence of materials handling operations subject to this subpart is the raw material storage, which is just prior to the raw mill. Any equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage is not subject to this subpart. In addition, the primary and secondary crushers of the on-site nonmetallic mineral processing plant, regardless of whether they precede the raw material storage, are not subject to this subpart. Furthermore, the first conveyor transfer point subject to this subpart is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.”

Based on this definition, the first affected sources at the Plant are the transfer points from the raw material storage to the mill feed belt (CD39.03 and CD39.04).

**2.1 Emission Limits & Monitoring Requirements**

A summary of applicable emissions limits for each affected source group at the Plant is summarized in Table 1.

**TABLE 1 – SUMMARY OF EMISSION LIMITS FOR AFFECTED SOURCES**

<b>Affected Source</b>	<b>Pollutant</b>	<b>Emission Limit</b>
Kiln System (Inline Raw Mill / Preheater/Precalciner Kiln / Clinker Cooler; Alkali Bypass, and Solid Fuel Mill)	PM	0.15 kg/Mg feed (dry basis)
	Opacity	10%
	D/F	0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm (PM control device operating at ≤ 400 °F)
Finish Mills	Opacity	10%
Materials Handling Processes (Including Solid Fuel Mill)	Opacity	10%

A summary of the compliance monitoring requirements for each affected source group at the Plant is summarized in Table 2. The tests must be conducted while the sources are in normal operation.

**TABLE 2 – SUMMARY OF MONITORING REQUIREMENTS FOR AFFECTED SOURCES**

<b>Affected Source</b>	<b>Pollutant</b>	<b>Monitoring Requirement</b>
Kiln System (Inline Raw Mill / Preheater/Precalciner Kiln / Clinker Cooler; Alkali Bypass, and Solid Fuel Mill)	Opacity	Continuous Opacity Monitor or; Daily 30-minute Method 9
	Temperature	Inlet to Main Baghouse (Inline Raw Mill / Preheater/Precalciner Kiln / Clinker Cooler) Inlet to Alkali Bypass Baghouse
Finish Mills	Opacity	Continuous Opacity Monitor or; Daily 6–Minute Method 22; If visible emission is observed, initiate corrective action within 1-hour, and then conduct a follow-up 6-minute Method 22 within 24 hours. If visible emission is still observed, conduct a 30-minute Method 9 within 1-hour.
Materials Handling Processes (Including Solid Fuel Mill)	Opacity	Monthly 1–minute Method 22; If visible emission is observed, conduct a 6-minute Method 9 within 1-hour.

### **3.0 AFFECTED EQUIPMENT AND SYSTEMS**

The following is a description of the various plant processes that are regulated by the PC MACT standards. All affected sources are listed in Attachment A.

#### **3.1 Raw Material Handling**

As discussed in Section 2.0, the first affected sources under this O&M Plan are the weigh feeder systems that meter quantities of the various raw materials, including limestone, shale, pyrite, and sand, from their raw material storage bins onto the conveying system for transfer to the in-line raw grinding system. The raw materials are selectively withdrawn from the raw material feed bins to the mill feed belt. From the mill feed belt the raw materials are conveyed via a system of belt conveyors and elevators to the in-line raw grinding system. The existing West Bank Silos, previously used for cement storage, have been modified and will be used for a fly ash handling and storage system. The fly ash will be conveyed from the modified silos directly to the raw mill to be inter-ground with the other raw materials. All affected sources are enclosed and vent to a dust collector. All dust collectors are closed circuit and recovered particulates are returned back to the process.

The affected sources to be monitored for compliance within the raw material handling system include:

- Miscellaneous dust collector stacks/vents

#### **3.2 Raw Grinding and Kiln Feed**

Raw materials consisting of limestone, shale, flyash, bottom ash, iron-rich materials, silica-bearing materials, and other materials are processed into kiln feed using an in-line raw grinding system. The kiln feed is then transferred via a system of conveyors and elevators to the raw meal silo. The raw mill is of the in-line design where hot combustion gases from the kiln system are forced into the raw grinding system with the dual function of drying the materials during grinding and to sweep the finely ground particles from the grinding system, carrying them through a dynamic separator system. In the dynamic separator, the hot air stream is forced through sets of rotating blades that remove oversized particles that are subsequently returned to the mill system for further grinding. The off-gases from the in-line mill system are combined with the vent air from the clinker cooler and preheater/precalciner kiln and directed to a fabric filter baghouse. All material collected by the baghouse is conveyed to the homogenizing silo via air gravity feeders and elevators, while the clean gases leaving the fabric filters are vented to atmosphere through the main stack.

The affected sources to be monitored for compliance within the in-line raw grinding and kiln feed system include:

- Miscellaneous dust collector stacks/vents

- Main Stack (Inline Raw Mill / Preheater/Precalciner Kiln / Clinker Cooler; Alkali Bypass; and Solid Fuel Mill)

### **3.3 Preheater/Precalciner Kiln and Clinker Cooler**

From the homogenizing silo, kiln feed is conveyed via a system of air gravity conveyors and elevators to the preheater/precalciner kiln system. The kiln feed is introduced at the top of preheater tower that supports a vertically stacked series of cyclones. The kiln feed travels counter-current to the upward flow of the combustion gases from the kiln. Heat is transferred from the kiln gases to the kiln feed as the kiln feed moves downward through each cyclone. Upon exiting the bottom-most cyclone vessel, the partially calcined feed enters the rotary kiln. Rotation and gravity conveys the material along the entire length of the kiln where the calcination and sintering processes are completed. When the kiln feed reaches the hot end of the kiln it has undergone a chemical transformation into Portland cement clinker nodules.

The kiln gases exit the upper end of the preheater tower and are forced through the Raw Grinding system, when this system is operating, or they by-pass the Raw Grinding system. In either case, the kiln gases are routed to a mixing chamber where they are combined with the vent air from the clinker cooler. This occurs prior to the kiln gases being treated by a fabric filter control device that vents to the atmosphere through the main stack.

The preheater/precalciner kiln system is equipped with an Alkali Removal System (ARS). The ARS allows the kiln to manufacture low alkali clinker and reduces the potential for physical blockages within the preheater tower. The ARS operates by diverting a small portion of the kiln exhaust gas which is laden with high alkali material out of the pyroprocessing system. These diverted kiln exhaust gases are quickly cooled or quenched with air and/or water. This allows for condensation of the volatile alkali constituents contained in the diverted kiln exhaust gas to form particulate matter. The particulate matter is then removed by a fabric filter dust collector. The gas stream that exits the fabric filter dust collector is then returned to the main kiln stack for discharge to the atmosphere. The collected dust containing high alkali material will be conveyed to a storage tank or silos and will either be loaded out to trucks and shipped offsite or conveyed back into the system for the manufacture of masonry cement product.

The preheater/precalciner kiln system is also equipped with a SO<sub>2</sub> scrubber to help reduce the emissions of SO<sub>2</sub> from the system. A scrubber reagent, consisting of calcium hydroxide lime (i.e., hydrated lime), will be brought in by truck and offloaded to a hydrated lime storage silo. The silo will be equipped with its own baghouse to control fugitive particulate emissions. The scrubber reagent will then be pumped to a mixing vessel where it will be mixed with water to create a slurry and then piped to the Gas Conditioning Tower where spray nozzles will inject droplets of the reagent into the kiln exhaust gas stream. These droplets will absorb SO<sub>2</sub> before the water droplets evaporate and form dry particulate matter which will then be removed by the kiln fabric filter baghouse.

Coal/petroleum coke, or other solid fuel, is fired simultaneously in the precalciner vessel, the lowest stage of the cyclone tower, and at the hot end of the kiln to provide the required energy for the burning process. The kiln system can also be fired with fuel oil. This fuel is typically only used during kiln start-up or during upsets as supplemental fuel.

Clinker discharged from the kiln passes through a forced-air, reciprocating Clinker Cooler. The majority of the spent cooling air is forced into the hot end of the kiln to provide oxygen for combustion. Excess spent air is combined with air from the kiln and raw mill and treated in fabric filters before venting to the atmosphere through the main stack. The cooled clinker is conveyed to one of two clinker storage silos that feed the Finish Grinding process.

The affected sources to be monitored for compliance within the kiln and clinker cooler system include:

- Miscellaneous dust collector stacks/vents
- Main Stack (Inline Raw Mill / Preheater/Precalciner Kiln / Clinker Cooler; Alkali Bypass; and Solid Fuel Mill)

### **3.4 Solid Fuel Grinding System**

Petroleum Coke is delivered to the Plant by rail car and transferred to the enclosed solid fuel storage area of the craneway building. Coal is delivered to the Plant by truck and deposited directly into the enclosed solid fuel storage area of the craneway building. The crane within the craneway building is used to transfer the petroleum coke and coal to feed bins where the fuel is fed onto a series of conveyor belts to a tubular-type ball mill for drying and grinding. Process air from the mill system is treated by fabric filters prior to release into the atmosphere via the main stack. The finely ground fuel is conveyed to, and collected in, two pulverized fuel storage tanks, one for the kiln system and one for the precalciner vessel. The pulverized fuel is metered from the storage tanks and is conveyed to the burners via pneumatic conveying. The mix of fuel and conveying air is deployed through the burner into the kiln's combustion zone. All of the conveyance equipment used to transfer coal/coke from the mill to the kiln and precalciner is vented to the solid fuel mill baghouse which then vents out the main stack. It should be noted that the only affected sources under this O&M Plan are the solid fuel mill, pulverized fuel storage silos, and conveying equipment from the solid fuel mill to the kiln system. The solid fuel conveying transfer points which lead up to the solid fuel mill are subject to the 40 CFR 60 Supart Y opacity standard for coal preparation plants.

The affected sources to be monitored for compliance within the solid fuel system include:

- Main Stack (Inline Raw Mill / Preheater/Precalciner Kiln / Clinker Cooler; Alkali Bypass, and Solid Fuel Mill)

### **3.5 Clinker/Gypsum/Finish Mill Additive Handling and Storage**

In the Finish Grinding process, gypsum and other finish mill additives are inter-ground with clinker to produce cement. Gypsum and synthetic gypsum are received at the plant via trucks to an enclosed storage area in the craneway building. Gypsum/synthetic gypsum is then moved via crane to a storage bin for transfer to the finish mills.

Limestone which is quarried using the old quarry crushers and conveying system is conveyed by the #1 stone system belt to an enclosed storage area within the craneway building. The limestone is then moved via crane to a storage bin for transfer to the finish mills.

Clinker is transported from the clinker coolers to one of two clinker storage silos by a series of drag conveyors and bucket elevators. The clinker is then conveyed to clinker feed bins in the craneway building. In the event that no storage capacity is available in the clinker storage silos, clinker may be conveyed to an enclosed clinker stockpile area in the craneway building. Clinker that is routed to the stockpile is reclaimed via crane and transferred to the clinker feed bins in the craneway building.

The clinker storage silos, clinker conveying, and clinker feed bins are enclosed and vent to a dust collector. All dust collectors are closed circuit and recovered particulates are returned back to the process. The gypsum/synthetic gypsum stockpile, clinker stockpile, limestone stockpile, and crane operations are fugitive transfer points which are enclosed within the craneway building.

The affected sources to be monitored for compliance within the clinker, gypsum, and finish mill additive handling system include:

- Miscellaneous dust collector stacks/vents
- Gypsum/Synthetic Gypsum, Limestone, and Clinker Fugitive Transfer Points within the Craneway Building

### **3.6 Finish Mill Systems**

The Finish Grinding process includes three separate milling systems that grind the clinker along with gypsum/synthetic gypsum and other finish mill additives to form the finished cement product.

Clinker, gypsum/synthetic gypsum, and finish mill additives are extracted from their respective storage bins, metered, and fed in pre-determined proportions into either a tubular-type mill (Finish Mill #3) or a vertical-type mill (Finish Mill #1 and #2). A high-molecular weight organic compound solution is also injected into the mill to aid in the grinding process. The clinker/gypsum/additive blend is introduced to the mill where it is pulverized. Sweep air is introduced to the mill to entrain ground cement particles and carry them to the cement separator system. In the separator, the air stream passes through sets of rotating blades that remove over-sized particles of clinker and return them

to the mill system for further grinding. Sufficiently ground particles of clinker and gypsum are transported by the air stream into fabric filters: the clean air passes through the fabric filter and is released into the atmosphere, while the material particles get trapped on the outside of the fibers of the fabric filters. Jet-pulses of compressed air are periodically forced inside the fabric filter, causing the material particles to dislodge and fall into the fabric filter hopper, where they are collected and conveyed via rotating screw conveyors to a pneumatic conveying system. The mixture of ground clinker and gypsum particles (Portland cement) are processed for cooling through a cement cooler for temperature control, and are then pneumatically conveyed to cement storage silos. All finish grinding affected sources, including weigh feeders, conveying systems, elevators, pumps, etc., are enclosed and vent to a dust collector. All dust collectors are closed circuit and recovered particulates are returned back to the process.

The affected sources to be monitored for compliance within the finish mill grinding system include:

- Miscellaneous dust collector stacks/vents
- Finish Mill Baghouse Stacks

### **3.7 Cement Distribution**

Finished cement is pneumatically conveyed from the finish mill systems to the cement storage silos. Cement loadout from the storage silos consists of pneumatically transferring the material through a series of air slides to a loading spout. Trucks and railcars can be loaded from the silos. Cement can also be pneumatically transferred to the Packhouse where it is packaged and loaded by pallet onto trucks for export.

During loadout, the transport vehicles are positioned on weigh scales, and the loading spout is inserted into the top hatch of the vehicle. The transport vehicles are loaded to the proper weight as measured by the scales. Transport vehicle hatches are closed upon the completion of cement loading.

The affected sources to be monitored for compliance within the cement distribution system include:

- Miscellaneous dust collector stacks/vents

## **4.0 MATERIAL HANDLING PROCESSES PROCEDURES**

As identified in Section 2.0, Material Handling Processes (MHPs) include Raw Material, Kiln Feed, Clinker, Finished Product Storage Bins; Conveying System Transfer Points (excluding totally enclosed conveying system transfer points); Bagging Systems; and Bulk Loading and Unloading Systems.

This section outlines the applicable PC MACT emission limitations for all MHP affected sources as identified in Section 3.0. The operating and maintenance techniques, control equipment, and monitoring systems for affected sources are also addressed in this section. Attachment A lists the relevant PC MACT affected sources at the Plant.

### **4.1 Regulatory Standards**

#### **4.1.1 Opacity**

40 CFR 63.1348 - Opacity from each material handling process is limited to 10 percent based on a six-minute Method 9 average.

### **4.2 Equipment Description**

#### **4.2.1 Raw Material Handling**

All affected sources associated with raw material handling vent to dust collectors for emission control, this includes the limestone bin, shale bin, sand bin, pyrite bin, and fly ash silos weigh feeders and the raw mill feed conveyor.

#### **4.2.2 Raw Grinding and Kiln Feed**

The raw grinding and kiln feed MHP affected sources include conveying equipment, the Homogenizing Silo, elevators, and the kiln feed belt. All affected sources vent to dust collectors for emission control.

#### **4.2.3 Preheater/Precalciner Kiln and Clinker Cooler**

The Preheater/Precalciner Kiln and Clinker Cooler MHP affected sources include the cooler discharge, bypass dust conveying and storage, and lime storage. All affected sources vent to dust collectors for emission control.

#### **4.2.4 Solid Fuel Grinding Mill**

There are no MHP affected sources within the solid fuel grinding mill area.

#### **4.2.5 Clinker/Gypsum/Finish Mill Additives Handling and Storage**

All affected sources associated with conveying to, storage in, and feeding from the clinker storage silos are equipped with dust collectors for emission control.

The affected sources within the Craneway Building include gypsum, synthetic gypsum, limestone, and clinker delivery, conveying, crane operations, storage piles, and transport to the finish mill feed bins. All of the affected sources within the Craneway Building are fugitive sources; however the Craneway Building is partially enclosed to control fugitive emissions.

#### **4.2.6 Finish Mill Systems**

The finish grinding MHP affected sources include clinker and finish mill additive feeders, elevators, and conveying systems. All affected sources vent to dust collectors for emission control.

#### **4.2.7 Cement Distribution**

The cement distribution affected sources include airslides, conveying systems, cement silos, truck loadouts, rail loadouts, and the packhouse. All affected sources vent to dust collectors for emission control.

### **4.3 Operating Procedures**

Effective control of emissions from all MHPs equipped with a dust collector consists of the proper operation of the associated dust collector. The dust collectors will be operated such that the magnehelic gauge reading for the dust collectors will be inspected for a pressure drop reading of 3 to 5 inches. Furthermore, the dust collectors' fans and cleaning systems will be inspected for proper operation. Inspection program details are provided in Section 7.0.

Effective control of emissions from the fugitive affected sources consists of the use of enclosures for the Craneway Building.

For the cement loadout locations, seals between the moving and stationary portions of the cement handling systems are used to ensure that emissions are contained. Proper maintenance of the enclosures and seals assures compliance with the standard. In addition, the loadout spouts are advanced deeply within the loading port of the transport vehicle. By design, the components of the cement handling system are totally enclosed.

### **4.4 Maintenance Techniques**

An integral part of the maintenance program at the Plant is the performance of periodic inspections of all equipment subject to PC MACT standards. All inspections will be

conducted according to the Martinsburg Plant Standard Operating Procedure (SOP). Section 7.0 provides the inspection procedures for all affected equipment.

#### **4.4.1 Raw Material Handling**

The skirting, drop chutes, conveyor belts, enclosures, and dust collectors used in the raw material handling system are periodically inspected for placement, excessive wear, and damage, and are repaired or replaced as necessary.

Associated dust collectors are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags.

#### **4.4.2 Raw Grinding and Kiln Feed**

The housing structures of the associated raw mill transfer equipment (air slides, bucket elevators, and conveyors) are periodically inspected for excessive wear and damage, and are repaired or replaced as necessary.

Associated dust collectors are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags.

#### **4.4.3 Preheater/Precalciner Kiln and Clinker Cooler**

Associated dust collectors are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags.

#### **4.4.4 Solid Fuel Mill**

No affected sources.

#### **4.4.5 Clinker/Gypsum/Finish Mill Additives Handling and Storage**

The skirting, drop chutes, and dust collectors used in the clinker, gypsum, and finish mill additives system are periodically inspected for placement, excessive wear, and damage, and are repaired or replaced as necessary to ensure that they remain in good repair.

Associated dust collectors are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags.

#### **4.4.6 Finish Mill Systems**

The affected seals and housing structures of the associated the finish mill transfer equipment (air slides, bucket elevators, and piping systems) are periodically inspected for excessive wear and damage, and are repaired or replaced as necessary.

Associated dust collectors are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags.

#### **4.4.7 Cement Distribution**

The seals between the moving and stationary portions of the cement handling system, enclosures, cement loading spouts and all transfer equipment including air slides, cement pumps, and piping are periodically inspected for proper placement, excessive wear, and damage, and are repaired or replaced as appropriate.

Associated dust collectors are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags.

#### **4.5 Monitoring Procedures**

Periodic visual emissions observations, performed in accordance with 40 CFR 63.1350(a), are required for each affected source described above subject that are subject to the provisions of 40 CFR 63.1348. The test must be conducted under normal operating conditions. The periodic monitoring procedures outlined below are consistent with Subpart LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(a)(4).

Opacity (i.e., visual emissions) is measured at the previously noted affected sources in accordance with EPA Method 22 of Appendix A to 40 CFR Part 60 and Method 9 of Appendix A to 40 CFR Part 60 visible emission evaluation methods. Method 22 and Method 9 evaluations are conducted as described below. Sample Method 22 observation records are included as Attachment B.

- Monthly 1-minute visible emissions tests of each affected source are conducted in accordance with Method 22 while the affected sources are in operation. Results will be documented on forms similar to that in Attachment B.
- If visible emissions are observed during any Method 22 test, the Plant will conduct a 6-minute test of opacity in accordance with Method 9 within one hour of the observation of visible emissions during the Method 22 test.
- If no visible emissions are observed in six consecutive monthly tests for any affected source, the frequency of Method 22 testing may be decreased from monthly to semi-annually for that affected source.
- If no visible emissions are observed during the semi-annual test for any affected source, the frequency of Method 22 testing may be decreased from semi-annually to annually for that affected source.
- If visible emissions are observed during any semi-annual or annual test, visible emissions observations of that affected source must resume on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

Visible emissions monitoring will not be conducted for totally enclosed conveying system transfer points (i.e., transfer points that are enclosed on all sides, top, and bottom). Buildings containing partially enclosed or unenclosed conveying system transfer points will be subject to visible emissions monitoring conducted as previously described. However, emissions from each side, roof, and vent of the building will be evaluated in lieu of the individual transfer points. In addition, if several affected sources are controlled by a single pollution control device, monitoring at the outlet of the device will demonstrate compliance for all covered sources.

## **4.6 Corrective Actions**

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350(a)(2).

### **4.6.1 Response Procedures**

The following response procedures will be initiated if the Method 9 test conducted as a result of a visual emission observation indicates an exceedance of the opacity limit:

- (1) Initiate all relevant inspection procedures listed in Section 7.0;
- (2) Based on the results of the inspection, initiate maintenance as appropriate;  
and
- (3) Record duration of excess emissions event and maintenance performed on the baghouse as required by 40 CFR 63.10(b)(2).

## 5.0 **KILN SYSTEM PROCEDURES**

The Plant operates a kiln system which consists of an In-Line Raw Mill, Preheater/Precalciner Kiln, Clinker Cooler, and associated equipment as described in Section 3.3. All exhaust gases from the kiln system components will be combined and directed to a fabric filter baghouse. The clean gases exiting the fabric filter will be vented to the atmosphere through a common main stack. As described in Section 3.3 the kiln system is equipped with an ARS which has its own dedicated baghouse which vents to the main stack.

The Plant also operates a Solid Fuel Mill System which consists of a the mill itself, the pulverized fuel storage silos, and all conveying equipment used to convey the pulverized fuel from the mill to the kiln and precalciner. The Solid Fuel Mill System has a dedicated baghouse to control emissions which also vents to the main stack.

### 5.1 **Regulatory Standards**

Standards affecting the main stack include limits on particulate matter (PM), opacity, and dioxins and furans (D/F).

#### 5.1.1 **Particulate Matter (PM)**

40 CFR 63.1343(c)(1) - PM emissions from the main stack are limited to 0.15 kg per Mg (0.30 lb per ton) of kiln feed (dry basis).

#### 5.1.2 **Opacity**

40 CFR 63.1343(c)(2) and 63.1345(a)(2) – Due to the main stack exhausting emissions from both a Preheater/Precalciner Kiln and Clinker Cooler, opacity from the main stack is limited to 10 percent based on a six-minute block average.

#### 5.1.3 **Dioxins and Furans (D/F)**

40 CFR 63.1343(c)(3) - D/F emissions from the main stack are limited to:

- 0.20 ng per dscm ( $8.7 \times 10^{-11}$  gr per dscf) (TEQ) corrected to seven percent oxygen; or
- 0.40 ng per dscm ( $1.7 \times 10^{-10}$  gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter dust collector is 204 °C (400 °F) or less.

#### 5.1.4 **Temperature**

The temperature of the kiln system and ARS exhaust gases at the inlet to their respective baghouses is limited according to the average of the run average temperatures measured during the most recent performance test conducted in accordance with 40 CFR 63.1349(b)(3). This performance testing must be repeated every 30 months using Method 23.

During performance testing, temperature limits are established. Compliance with the temperature limits are based on a three-hour rolling average temperatures using 180 successive one-minute averages.

## **5.2 Equipment Description**

Particulate and opacity emissions are controlled through the use of the three baghouses which vent to the main stack as described in Section 3.3.

Temperature (i.e., D/F emissions) is continuously monitored at the inlet to the kiln system baghouse and the inlet to the ARS baghouse as the kiln operates. Operation parameters are constantly adjusted to maintain the temperature below the limit set during performance testing.

## **5.3 Operating Techniques**

The operation of the kiln system is conducted in accordance with the equipment vendor and in-house guidelines. The detailed procedures for the kiln system operation are contained in the Plant's SOP.

### **5.3.1 Particulate Matter**

The affected source will ensure on-going compliance with the particulate matter limit by properly operating the three baghouses, which vent to the main stack, at all times while their associated sources are in operation. The baghouses operate under negative pressure with a pulse jet cleaning mechanism.

### **5.3.2 Opacity**

On-going compliance with the opacity limit will be determined by continuous monitoring of opacity from the main stack using a continuous opacity monitor (COM) per 40 CFR 63.1350(c)(1).

### **5.3.3 Dioxin / Furan and Temperature at Baghouse Inlet**

On-going compliance with the D/F limit will be achieved by operating the kiln system and ARS below the maximum temperature measured at the inlet to their respective baghouses set during the most recent D/F performance test. The temperature of the kiln system and ARS exhaust gases at the inlet to their respective baghouses is continuously monitored as required by 40 CFR 63.1350(f)(1).

#### **5.4 Maintenance Techniques**

The three baghouses which vent to the main stack are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags. Inspection program details are provided in Section 7.0.

Inspections will be conducted according to the Martinsburg Plant SOP.

The COM and temperature monitor will be maintained per the manufacturer's specifications and procedures for their operation are contained in the Plant's SOP and QA/QC plan.

#### **5.5 Monitoring Procedures**

The monitoring procedures outlined below are consistent with 40 CFR 63 Subpart A and Subpart LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(c), (d), (f), and (h).

##### **5.5.1 Continuous Opacity Monitor (COM)**

As required by 40 CFR 63.1350(c)(1) and 40 CFR 63.1350(d)(1), a continuous opacity monitor system is used as an indicator of compliance with the opacity standards for the kiln system. The COM is calibrated, operated, and maintained in accordance with the provisions of 40 CFR Part 63 Subpart A and PS-1 of Appendix B to Part 60.

- If the continuous opacity monitor system is not operational, perform daily visual opacity observations of the stack in accordance with the procedures of Method 9 of Appendix A of 40 CFR Part 60. The Method 9 test shall be conducted while the affected source is operating at the representative performance conditions in accordance with 40 CFR 63.7(e). The duration of the Method 9 test shall be at least 30 minutes each day the COM is not operational.
- Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

### **5.5.2 Temperature Monitor**

As required by 40 CFR 63.1350(f)(1), a continuous monitor must be installed, calibrated, maintained, and continuously operated to record the temperature of kiln exhaust gases at the inlet to the main baghouse and the inlet to the ARS baghouse. The following guidelines should be adhered to when determining compliance with the temperature limit (3-hour rolling average) on the kiln exhaust gases at the inlet to the main baghouse and the inlet to the ARS baghouse:

- (1) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in 40 CFR 63.1349(b)(3)(iv).
- (2) The calibration reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system.
- (3) The three-hour rolling average is calculated as the average of 180 successive one-minute average temperatures.
- (4) Periods of time when one-minute averages are not available are ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
- (5) When the operating status of the in-line raw mill is changed from off to on, or from on to off, the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.
- (6) Calibration of the thermocouple used to monitor compliance with the 40 CFR Part 63, Subpart LLL operating limits must be verified at least once every three months.

## **5.6 Corrective Actions**

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350(a)(2). The procedures outlined below must be initiated, upon discovery, when a 6-minute block period exceeds 10% opacity or when a 3-hour rolling average temperature exceeds the limitations established during the most recent D/F testing.

### **5.6.1 Response Procedures**

- (1) The deviation should be noted and a written explanation describing the cause should be provided.
- (2) Initiate process changes in accordance with proper procedures to bring the kiln system back into compliance (i.e., the opacity below the 10% limit or the kiln system or ARS baghouse inlet temperature below the 3-hour rolling average temperature limit).
- (3) When the process does not allow changes to be made to bring the kiln system back into compliance, shut the appropriate process down and initiate maintenance as appropriate.
  - (a) Record the maintenance performed on the process and/or baghouse as required by 40 CFR 63.10(b)(2).
  - (b) Once maintenance repairs are complete and a thorough inspection of the completed work has shown it to be satisfactory, the process can be put back on line.

In the event the COM is not operating, perform a Method 9 test to determine if the opacity is back in compliance once the process is back on line.

## **6.0 FINISH MILL SYSTEM PROCEDURES**

Cement is produced by grinding clinker, gypsum, and finish mill additives in the three finish mill systems as described in Section 3.6.

### **6.1 Emission Standard**

Standards affecting the finish mill systems include limits on the opacity of discharges from the air pollution control devices.

#### **6.1.1 Opacity**

40 CFR 63.1347 - Opacity from the finish mill system baghouse stacks are limited to 10 percent based on a six-minute block average.

### **6.2 Equipment Description**

Each finish mill uses two separate systems to control emissions. The first uses feed and discharge seals that ensure fine particulate are retained within the mill. The second is a dust collector that controls particulate from the finish mill. The ground cement is transferred from the mill by an air slide to a bucket elevator. The cement is elevated to an air separator where it is segregated. Oversized materials are returned to the finish mill via an air slide system for further grinding. The air used for conveyance and separation is vented through a dust collector system.

### **6.3 Operating Techniques**

Effective control of emissions from the finish mill systems and associated transfer equipment and air separators consist of the proper operation of all associated dust collectors. Seals between the moving and stationary components of the finish mill feed and discharge locations ensure that emissions are contained within the mill. By design, the components of the finish mill systems are totally enclosed.

The dust collectors will be operated such that the magnehelic gauge reading for the dust collectors will be inspected for a pressure drop reading of 3 to 5 inches. Furthermore, the dust collectors' fans and cleaning systems will be inspected for proper operation.

#### **6.3.1 Opacity**

On-going compliance with the opacity limit will be determined by continuous monitoring of opacity from the Finish Mills #1 and #2 stacks using a COM per 40 CFR 63.1350(m).

#### **6.4 Maintenance Techniques**

The affected seals and housing structures of the associated finish mill transfer equipment (air slides, bucket elevators, and piping systems) are periodically inspected for excessive wear and damage, and are repaired or replaced as necessary. Inspections will be conducted according to the Martinsburg Plant SOP.

Associated dust collectors are periodically inspected for damage to the dust collector skeleton, equipment associated with cleaning, collection hopper(s), and dust collection bags. Inspection program details are provided in Section 7.0. Inspections will be conducted according to the Martinsburg Plant SOP.

The Finish Mill #1 and Finish Mill #2 COMs will be maintained per the manufacturer's specifications and procedures for their operation are contained in the Plant's SOP and QA/QC plan.

#### **6.5 Monitoring Procedures**

The visual emissions observation and COM monitoring procedures provided in this section were developed to satisfy the requirements of 40 CFR Part 63.1350(e) and (m). Finish Mills #1 and #2 are equipped with COM systems and will be measuring opacity per 40 CFR 63.1350(m). Finish Mill #3 is not equipped with a COM system and will be measuring opacity using the daily visual emission observation procedures per 40 CFR 63.1350(e).

##### **6.5.1 Continuous Opacity Monitor (COM)**

Per 40 CFR 63.1350(m), a continuous opacity monitor system can be used as an indicator of compliance with the opacity standards for the finish mill systems. Finish Mill #1 and #2 are each equipped with a COM which is calibrated, operated, and maintained in accordance with the provisions of 40 CFR Part 63 Subpart A and PS-1 of Appendix B to Part 60.

- If the COMs are not operational, perform daily visual opacity observations of the Finish Mill #1 and #2 stacks as outlined in Section 6.5.2.

##### **6.5.2 Daily Visual Emission Observations**

Opacity (i.e., visual emissions) is measured for Finish Mill #3 using EPA Method 22 of Appendix A to 40 CFR Part 60 and Method 9 of Appendix A to 40 CFR Part 60, visible emission evaluation methods. In the event of COMs being non-operational, Finish Mill #1 and #2 opacity will also be measured using the methods outlined below. Method 22 and Method 9 evaluations are conducted as

described below. Sample Method 22 observation records are included as Attachment B.

- Conduct a daily 6-minute Method 22 visual emissions observation of each finish mill baghouse each day the affected source is in operation.
- If visible emissions are observed, initiate corrective actions within 1-hour. Subsequently, within 24-hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow up 6-minute Method 22 test of each stack from which visible emissions were observed during the previous 6-minute Method 22 test.
- If visible emissions are observed during the follow-up Method 22 test, conduct a 30-minute Method 9 test within 1-hour.

## **6.6 Corrective Actions**

### **6.6.1 Visual Emission Observation Response Procedures**

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350(a)(2) and 40 CFR 63.1350(e)(1). The procedures outlined below must be initiated within one-hour of observing visual emissions as outlined in 40 CFR 63.1350(e).

#### **6.6.1.1 Immediate Response Procedures**

The following actions will be taken within one-hour of observing visual emissions following the Method 22 procedures:

- (1) Record the time and location of the visual emissions observation;
- (2) Inform the Environmental Manager (or other responsible personnel) of the occurrence of a visual emissions observation, including the time and location;
- (3) If possible, attempt to immediately identify the cause and take the appropriate action to eliminate the visible emissions.
- (4) Within 24 hours of observing visible emissions, conduct a follow-up Method 22 reading.
- (5) If visible emissions are observed during the follow-up Method 22, an opacity reading must be taken by a certified reader using Method 9 of Appendix A of 40 CFR Part 60. The duration of the Method 9 test shall be thirty minutes. If none of the 6-minute

average opacity values exceed 10%, the unit may continue to operate as normal.

#### **6.6.1.2 Subsequent Response Procedures**

The following response procedures will be initiated if the visual emissions observation (Method 9) test conducted indicates an exceedance of the opacity limit:

- (1) If readings in excess of the criteria listed above are determined, inspection of the APCD will be initiated to determine the cause of the visible emissions. The inspections will include systematically isolating dust collector compartment(s) in order to identify and locate the cause of the emissions. If necessary, after system shutdown, the dust collector will be shut down and an internal inspection conducted in order to identify and locate the cause of emissions.
- (2) Based on the results of the inspection, initiate maintenance as appropriate.
- (3) Record the duration of the excess emissions event and the maintenance performed on the baghouse, as required by 40 CFR 63.10(b)(2).

Once determined, the cause(s) of the visible emissions will be corrected as expeditiously as possible.

#### **6.6.2 COM Deviation Response Procedures**

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350(a)(2). The procedures outlined below must be initiated, upon discovery, when a 6-minute block period exceeds 10% opacity.

- (1) The deviation should be noted and a written explanation describing the cause should be provided.
- (2) Initiate process changes in accordance with proper procedures to bring the finish mill back into compliance (i.e., the opacity below the 10% limit).
- (3) When the process does not allow changes to be made to bring the finish mill back into compliance, shut the appropriate process down and initiate maintenance as appropriate.

- (a) Record the maintenance performed on the process and/or baghouse as required by 40 CFR 63.10(b)(2).
- (b) Once maintenance repairs are complete and a thorough inspection of the completed work has shown it to be satisfactory, the process can be put back on line.

In the event the COM is not operating, perform a daily 6-minute Method 22 test, as specified in Section 6.5.2, to determine if the opacity is back in compliance once the process is back on line.

## 7.0 INSPECTION PROGRAM

The inspection program addresses the inspection of all equipment critical to Plant compliance with applicable PC MACT standards. The following paragraphs set forth inspection procedures for affected equipment.

### 7.1 Solid Material Weigh Feeders

**Equipment Locations:** Raw material, clinker storage silos, and finish mill feed bins; and kiln feed scales and flow meters.

**Equipment:** Weigh belt feeders and cabling.

**Inspection Procedure:** Check the weigh belt for obstructions, alignment, and rips/tears in belting; skirting damage; and cable damage.

### 7.2 Transfer Points – Housing and Skirting Only

**Equipment Locations:** Raw material, raw feed, solid fuel, and clinker/gypsum.

**Equipment:** Housing and skirting.

**Inspection Procedure:** Check housing and skirting for damage, leaks, gaps, missing pieces, inadequate sealing, and corrosion.

### 7.3 Screw Conveyor Transfer Points

**Equipment Locations:** Kiln feed storage and handling system, solid fuel, clinker/gypsum, and finish mill systems.

**Equipment:** Screw conveyors and drop chutes.

**Inspection Procedure:** Check screw housing and covers for damage, leaks, gaps, missing pieces, inadequate sealing, and excessive corrosion.

### 7.4 Pneumatic Equipment

**Equipment Locations:** Raw feed, kiln feed, cement handling, and solid fuel handling systems.

**Equipment:** Pump feed hopper, transfer pump, and transfer lines.

**Inspection Procedure:** Check hopper housing and transfer connections for damage, leaks, gaps, missing pieces, inadequate sealing, and corrosion. Check the transfer pump seals for leaks. Check transfer lines, piping supports, and associated flanges for leaks, damage, and excessive corrosion.

## 7.5 Dust Collectors

**Equipment Locations:** See Attachment A.

**Equipment:** Damper system and motor, dust collector structure, and fabric filters.

**Inspection Procedure:** Check the dust collector skeleton, bag/filter cleaning equipment (e.g., blowers/jets, poppets, solenoids, etc.), collection hopper, and dust collection bag attachment structure and bags for damage, excessive corrosion, gaps, leaks, and seals.

## 7.6 Air Slides

**Equipment Locations:** Kiln feed, raw mill, finish mill, and cement transfer systems.

**Equipment:** Air slide housing, fabric, blower, and dust collector connections.

**Inspection Procedure:** Check air slide housing and dust collector connections for damage, corrosion, and leaks.

## 7.7 Cement Kiln Combustion System Components

**Equipment Locations:** Kiln system.

**Equipment:** Fuel burner pipe and assembly and primary combustion air supply.

**Inspection Procedure:** Check burner pipe housings and fuel delivery equipment for damage, leaks, gaps, missing pieces, inadequate sealing, and corrosion.

## **8.0 RECORDKEEPING REQUIREMENTS**

Appropriate records of the operating, maintenance, monitoring and inspection activities conducted pursuant to this O&M Plan will be maintained on file at the Plant in accordance with 40 CFR 63.1355. The relevant files will be recorded in a suitable form and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site.

## 9.0 **REPORTING REQUIREMENTS**

Per 40 CFR 63.1354(b)(9), the owner or operator shall submit a summary report semiannually which contains the following information:

- All exceedences of maximum control device inlet gas temperature limits.
- All failures to calibrate thermocouples and other temperature sensors as required.
- The results of any combustion system component inspections conducted within the reporting period.
- All failures to comply with any provision of the O&M Plan. Per 40 CFR 63.1350(b), failure to comply with any provision of the O&M Plan shall be considered a violation of the standard.

The Summary Report shall be titled “Summary Report—Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance” and shall also include the following information as specified in 40 CFR 63.10(e)(3)(vi):

- Company name and address of the affected source;
- An identification of each hazardous air pollutant monitored at the affected source;
- The beginning and ending dates of the reporting period;
- A brief description of the process units;
- The emission and operating parameter limitations specified in the relevant standard(s);
- The monitoring equipment manufacturer(s) and model number(s);
- The date of the latest compliance monitoring system (CMS) certification or audit;
- The total operating time of the affected source during the reporting period;
- An emission data summary (for each COM or Thermocouple), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
- A CMS performance summary (for each COM or Thermocouple), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment

malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

- Per 40 CFR 63.1354(b)(10) an Excess Emission and CMS Performance Report is only required to be submitted for continuous monitors that experience downtime >10% of the total operating time during the reporting period.
- A description of any changes in CMS, processes, or controls since the last reporting period;
- The name, title, and signature of the responsible official who is certifying the accuracy of the report; and
- The date of the report.

**ATTACHMENT A**

**LIST OF ALL AFFECTED SOURCES UNDER THE O&M PLAN**

**MARTINSBURG PLANT**  
**PC MACT O&M Plan Affected Sources Summary**

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
<b>RAW MATERIAL HANDLING</b>							
CD39.03	Raw Material Discharge D\C 1	EP39.03.03	Shale bin to feeder	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP39.03.04	Shale bin feeder to conveyor				
		EP39.02.01	Limestone mix bin to feeder				
		EP39.02.02	Limestone mix feeder to conveyor				
		EP39.08.02	Sand silo to feeder				
		EP39.08.03	Sand silo feeder to conveyor				
		EP39.07.02	Pyrite silo to feeder				
		EP39.07.03	Pyrite silo feeder to conveyor				
CD39.04	Raw Material Discharge D\C 2	EP39.04.02	Shale silo 2 to feeder	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP39.04.03	Shale silo 2 feeder to conveyor				
CD39.06	Raw Mill Feeding D\C	EP39.06.01	Raw Mill Feed Conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD31.01	Flyash Tank No.1 D\C	EP31.01	Fly Ash Tank #1	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD22.04	Dry Flyash Unloading D\C	EP22.04	Dry Flyash Unloading to West Bank Silos	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD22.05	Dry Flyash Silo #71 D\C	EP22.05	Dry Flyash Silo #71	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD22.06	Dry Flyash Silo #72 D\C	EP22.06	Dry Flyash Silo #72	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD22.07	Dry Flyash Silo #82 D\C	EP22.07	Dry Flyash Silo #82	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD22.08	Dry Flyash Silo #83 D\C	EP22.08	Dry Flyash Silo #83	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD22.09	Dry Flyash Weigh Bin D\C	EP22.09	Dry Flyash Weigh Bin/Alleviator	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
<b>RAW GRINDING AND KILN FEED</b>							
CD40.01	Raw Mill High Zone D\C	EP40.01.01	RM Feed Conveyor to conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP40.01.02	Conveyor to split				
		EP40.01.03	Split to hopper				
		EP40.02.03	Elevator to conveyor				
		EP40.04.01	Split to Raw Mill				
CD40.02	Raw Mill Low Zone D\C	EP40.02.01	Conveyor to split	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP40.02.02	Split to bucket elevator				
		EP40.04.02	Raw Mill to conveyor				

**MARTINSBURG PLANT**  
**PC MACT O&M Plan Affected Sources Summary**

<b>PSD Permit EP ID</b>	<b>CD Description</b>	<b>EU ID</b>	<b>EU Description</b>	<b>SOURCE TYPE</b>	<b>POINT OF COMPLIANCE</b>	<b>MONITORING FREQUENCY</b>	<b>MONITORING METHOD</b>
		EP40.02.04	Conveyor to bucket elevator				
CD40.05	Raw Meal Air Slide D\C	EP40.05	Raw Meal Conveying Equipment	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD40.06	Homo Silo Feeding D\C	EP40.06	Homogenizing Silo Feeding Equipment	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD40.07	Homo Silo Discharge D\C	EP40.07	Homogenizing Silo Discharging Equipment	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD42.02	Kiln Feeding Bucket Elevator D\C	EP42.02	Kiln Feeding Bucket Elev DC	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD42.03	Kiln Feeding D\C 1	EP42.03	Kiln Feed Belt	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD42.05	Kiln Feeding D\C 2	EP42.05	Kiln Feed Belt	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
<b>PREHEATER/PRECALCINER KILN AND CLINKER COOLER &amp; SOLID FUEL GRINDING SYSTEM</b>							
CD42.04	Inline Raw Mill / PH/PC Kiln / Clinker Cooler & Bypass & Coal Mill D\Cs	EP42.04	Kiln System - Inline Raw Mill / PH/PC Kiln / Clinker Cooler	BAGHOUSE	Main Stack	Continuous	COM
		EP42.08	Kiln Bypass Baghouse DC	BAGHOUSE			
		EP41.03.01	Coal Mill	BAGHOUSE			
CD43.02	Cooler Discharge D\C	EP43.02	New Cooler Discharge DC	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD42.01	Kiln Bypass Dust D\C	EP42.01	Bypass Dust Transfer to Existing Cement Silos	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD42.06	Lime Storage D\C	EP42.06	Lime Storage for Scrubber System	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD42.07	Bypass Truck Spout Dedusting	EP42.07	Bypass Truck Spout Dedusting	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD31.02	Bypass Dust Tank D\C	EP31.02	Bypass Dust Tank	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD31.03	Bypass Dust Loadout D\C	EP31.03	Bypass Dust silo/loadout	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
<b>CLINKER/GYPSUM/FM ADDITIVE HANDLING AND STORAGE</b>							
CD43.03	Clinker Storage Feeding D\C	EP43.05	Clinker conveyor to big clinker silo	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD43.04	Small Clinker Storage Feeding D\C	EP43.04	Clinker conveyor to clinker silo	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD43.06	Small Clinker Storage Discharge D\C	EP43.06.01	Low Alkali Clinker Silo to upper conveyors	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP43.06.02	Upper conveyors to lower conveyor				

**MARTINSBURG PLANT**  
**PC MACT O&M Plan Affected Sources Summary**

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
		EP43.06.03	Low Alkali Clinker silo to lower conveyor				
CD43.07	Clinker Storage Discharge D\C	EP43.07.01	Big clinker silo to upper conveyor1	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP43.07.02	Big clinker silo to upper conveyor2				
		EP43.07.03	Big clinker silo to lower conveyor				
		EP43.07.04	Big clinker silo to short conveyor				
		EP43.07.05	Short conveyor to lower conveyor				
CD43.08	Finish Mill Conveying D\C1	EP43.08	Upper conveyor 1 to FM feed hoppers belt	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD43.09	Finish Mill Conveying D\C2	EP43.09	Lower conveyor to FM feed hoppers belt	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD43.13	Finish Mill Conveying D\C3	EP43.13	Upper conveyor 2 to FM feed hoppers belt	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD43.14	Finish Mill 1 & 2 Hoppers D\C	EP43.14	Conveyor to clinker feeding hoppers (FM1 &2)	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP43.15	Conveyor to lower conveyor (FM3)	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD43.16	Finish Mill 3 Hopper D\C	EP43.16	Lower conveyor to clinker feeding hopper (FM3)	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
EP04.04.03	-	EP04.04.03	#1 stone system belt to limestone pile in craneway	FUGITIVE	Building Sides/Roof Vent	Monthly	1 Minute Method 22
EP26.06.03	-	EP26.06.03	Gypsum/Synthetic Gypsum truck unloading to storage hall	FUGITIVE	Building Sides/Roof/Vent	Monthly	1 Minute Method 22
EP26.06.04	-	EP26.06.04	Clam bucket to gypsum/synthetic gypsum pile	FUGITIVE			
EP26.06.05	-	EP26.06.05	Gypsum/synthetic gypsum pile to clam bucket	FUGITIVE			
EP26.06.06	-	EP26.06.06	Clam bucket to gypsum/synthetic gypsum bin (FM1/2/3)	FUGITIVE			
EP26.07.01	-	EP26.07.01	Limestone Pile to clam bucket	FUGITIVE			
EP26.07.02	-	EP26.07.02	Clam bucket to limestone bin (FM1/2/3)	FUGITIVE			
EP27.01	-	EP27.01	Conveyor to clinker hopper	FUGITIVE			

**MARTINSBURG PLANT**  
**PC MACT O&M Plan Affected Sources Summary**

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
EP27.02	-	EP27.02	Clinker hopper to crane	FUGITIVE			
EP27.03	-	EP27.03	Crane to clinker pile	FUGITIVE			
EP27.04	-	EP27.04	Clinker pile to crane	FUGITIVE	Building Sides/Roof/Vent	Monthly	1 Minute Method 22
EP27.05	-	EP27.05	Crane to clinker bins (FM1/2/3)	FUGITIVE	Building Sides/Roof/Vent	Monthly	1 Minute Method 22
<b>FINISH MILL SYSTEMS</b>							
CD44.01	Finish Mill 2 Feeding D\C1	EP44.01	L.A. clinker bin to FM2 conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD44.02	Finish Mill 1 Feeding D\C1	EP44.02	Clinker bin to FM1 conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD44.03	Finish Mill 2 Feeding D\C2	EP44.03	Clinker bin to FM2 conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD44.04	Finish Mill 2 Feeding D\C3	EP44.04.01	Limestone bin to FM2 conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP44.04.02	Gypsum/synthetic gypsum bin to FM2 conveyor	BAGHOUSE			
CD44.05	Finish Mill 1 Feeding D\C 2	EP44.05.01	Limestone bin to FM1 conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP44.05.02	Gypsum/synthetic gypsum bin to FM1 conveyor	BAGHOUSE			
CD19.02	Finish Mill 3 Baghouse D\C	EP19.01Pb	No. 3 Finish Mill Separator (Existing FM 10)	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
CD19.01	Finish Mill 3 Norblo D\C	EP19.01U	FM3 Feed bins to feeders	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
		EP19.01Pa.01	FM3 Feeders to belt conveyor 650	BAGHOUSE			
		EP19.01Pa.02	Belt conveyor 650 to FM3	BAGHOUSE			
		EP19.02	Finish Mill 3	BAGHOUSE			
CD44.06	Finish Mill 1 Conveying D\C	EP44.06	FM1 Conveyor to conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD44.07	Finish Mill 1 High Zone D\C	EP44.07.01	Elevator to FM1 conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP44.07.02	FM1 Conveyor to bin	BAGHOUSE			
		EP44.07.03	Conveyor to Finish Mill 1	BAGHOUSE			
CD44.08	Finish Mill 1 Low Zone D\C	EP44.08.01	Finish Mill 1 to Conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP44.08.02	Bin to FM1 conveyor	BAGHOUSE			
		EP44.08.03	FM1 Conveyor to bucket elevator	BAGHOUSE			
CD44.09	Finish Mill 1 D\C	EP44.09	Finish Mill 1	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22

**MARTINSBURG PLANT**  
**PC MACT O&M Plan Affected Sources Summary**

<b>PSD Permit EP ID</b>	<b>CD Description</b>	<b>EU ID</b>	<b>EU Description</b>	<b>SOURCE TYPE</b>	<b>POINT OF COMPLIANCE</b>	<b>MONITORING FREQUENCY</b>	<b>MONITORING METHOD</b>
CD44.13	Finish Mill 1 Discharge D\C	EP44.13	Finish Mill 1 Conveying	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD44.14	Finish Mill 2 Conveying D\C	EP44.14	FM2 Conveyor to conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD44.10	Finish Mill 2 High Zone D\C	EP44.10.01	FM2 Elevator to conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP44.10.02	FM2 Conveyor to bin	BAGHOUSE			
		EP44.10.03	Conveyor to Finish Mill 2	BAGHOUSE			
CD44.11	Finish Mill 2 Low Zone D\C	EP44.11.01	Finish Mill 2 to conveyor	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
		EP44.11.02	Bin to FM2 conveyor	BAGHOUSE			
		EP44.11.03	FM2 Conveyor to bucket elevator	BAGHOUSE			
CD44.12	Finish Mill 2 D\C	EP44.12	Finish Mill 2	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
CD44.15	Finish Mill 2 Discharge D\C	EP44.15	Finish Mill 2 Conveying	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD44.09 CD44.12	Finish Mill 1/2 Air Heater	EP44.16	Finish Mill 1/2 Air Heater	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
<b>CEMENT DISTRIBUTION</b>							
CD45.01	Finish Mill 1 Airslides D\C	EP45.01	Finish Mill 1 airslides	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.02	Finish Mill 2 Airslides D\C	EP45.02	Finish Mill 2 airslides	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.03	Cement Silos Feeding D\C1	EP45.03	Finish Mill 1 to cement silos	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.04	Cement Silos Feeding D\C2	EP45.04	Finish Mill 2 to cement silos	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.05	Cement Silo A1 & A2 D\C	EP45.05	Cement Silo A1 & A2	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.06	Cement Silo B1 & B2 D\C	EP45.06	Cement Silo B1 & B2	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.07	Cement Silo C1 & C2 D\C	EP45.07	Cement Silo C1 & C2	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.08	Truck Loadout 1 D\C	EP45.08	Bulk lane loadout 1	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.09	Truck Loadout 2 D\C	EP45.09	Bulk lane loadout 2	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.10	Truck Loadout 3 D\C	EP45.10	Bulk lane loadout 3	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.11	Truck Loadout 4 D\C	EP45.11	Bulk lane loadout 4	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.14	Cement Analyzer D\C	EP45.14	Cement Analyzer	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.05	Middle Bank Silos 1 D\C	EP21.05	Middle Bank Silos 1 DC	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.06	Middle Bank Silos 2 D\C	EP21.06	Middle Bank Silos 2 DC	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22

**MARTINSBURG PLANT**  
**PC MACT O&M Plan Affected Sources Summary**

<b>PSD Permit EP ID</b>	<b>CD Description</b>	<b>EU ID</b>	<b>EU Description</b>	<b>SOURCE TYPE</b>	<b>POINT OF COMPLIANCE</b>	<b>MONITORING FREQUENCY</b>	<b>MONITORING METHOD</b>
CD21.07	Middle Bank Silos 3 D\C	EP21.07	Middle Bank Silos 3 DC	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.08	Middle Bank Silos 4 D\C	EP21.08	Middle Bank Silos 4 DC	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.09	Middle Bank Silos 5 D\C	EP21.09	Middle Bank Silos 5 DC	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.10	Middle Bank Vent 1 D\C	EP21.10	Middle Bank Bin Vent 1 - Silos Inlet	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.11	Middle Bank Vent 2 D\C	EP21.11	Middle Bank Bin Vent 2 - Silos Inlet	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.12	Middle Bank Vent 3 D\C	EP21.12	Middle Bank Bin Vent 3 - Silos Discharge	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD21.13	Middle Bank Vent 4 D\C	EP21.13	Middle Bank Bin Vent 4 - Silos Discharge	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.12	Rail Loadout 1 D\C	EP45.12	Bulk rail loadout 1	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD45.13	Rail Loadout 2 D\C	EP45.13	Bulk rail loadout 2	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD46.01	Truck Loadout Silo 1 D\C	EP46.01	Truck Loadout Silo 1	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD46.02	Truck Loadout Silo 2 D\C	EP46.02	Truck Loadout Silo 2	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD46.03	Truck Loadout Silo 3 D\C	EP46.03	Truck Loadout Silo 3	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD46.04	Truck Loadout Silo 4 D\C	EP46.04	Truck Loadout Silo 4	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD46.05	Truck Loadout Silo 5 D\C	EP46.05	Truck Loadout Silo 5	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD46.06	Truck Loadout 5 D\C	EP46.06	Bulk loadout 5 - Truck Loadout Silos	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD46.07	Truck Loadout 6 D\C	EP46.07	Bulk loadout 6 - Truck Loadout Silos	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD20.04	East Bank Silos 1 D\C	EP20.04	East Bank Silos 1	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD20.05	East Bank Silos 2 D\C	EP20.05	East Bank Silos 2	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD20.06	East Bank Silos 3 D\C	EP20.06	East Bank Silos 3	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22
CD48.01	Packhouse D\C	EP48.01	Packhouse	BAGHOUSE	DC Outlet	Monthly	1 Minute Method 22

**ATTACHMENT B**

**SAMPLE METHOD 22 OBSERVATION RECORDS**

## FINISH MILL DAILY METHOD 22 FORM

Week of \_\_\_\_\_ to \_\_\_\_\_

**For each source circle YES or NO for if emissions were observed, or not operating if the source did not operate for the given day.  
Initial for each day's observations.**

Permit ID	Description	MON	TUES	WED	THURS	FRI	SAT	SUN
CD19.02	Finish Mill 3 Baghouse D\C	YES NO Not Operating						
CD19.01	Finish Mill 3 Norblo D\C	YES NO Not Operating						
CD44.09	Finish Mill 1 D\C	YES NO Not Operating						
CD44.12	Finish Mill 2 D\C	YES NO Not Operating						
<b>Observer's Initials</b>								

**Observer's Name** \_\_\_\_\_

### Instructions:

- 1. Conduct a Daily 6-Minute Method 22 visual emissions observation on each source listed above that is in operation.**
- 2. If visible emissions are observed, initiate corrective actions within 1 hour.**
- 3. If visible emissions are observed, a second 6-Minute Method 22 observation must be conducted within 24 hours. If visible emissions are observed during the second Method 22 observation, a 30-Minute Method 9 Test must be conducted within 1 hour of the second observation.**

**MONTHLY PC MACT METHOD 22 FORM**

MONTH \_\_\_\_\_ YEAR \_\_\_\_\_

**INSTRUCTIONS:**

- 1. Conduct a monthly 1-minute visible emission observation for each source listed below while the source is in normal operation.**
- 2. Record the Date of the observation, observer’s initials, and indicate YES or NO for if emissions were observed.**
- 3. If emissions are observed, conduct and document a 6-Minute Method 9 within one hour of observing emissions.**
- 4. In lieu of individual transfer points the each side, roof, and vent of a building may be evaluated.**
- 5. If a source does not operate during a given month, indicate so in the Emissions Observed Column above.**

Permit EP ID	CD Description	EU ID	EU Description	DATE	INIT.	EMISSIONS OBSERVED?
CD39.03	Raw Material Discharge D\C 1	EP39.03.03	Shale bin to feeder			
		EP39.03.04	Shale bin feeder to conveyor			
		EP39.02.01	Limestone mix bin to feeder			
		EP39.02.02	Limestone mix feeder to conveyor			
		EP39.08.02	Sand silo to feeder			
		EP39.08.03	Sand silo feeder to conveyor			
		EP39.07.02	Pyrite silo to feeder			
		EP39.07.03	Pyrite silo feeder to conveyor			
CD39.04	Raw Material Discharge D\C 2	EP39.04.02	Shale silo 2 to feeder			
		EP39.04.03	Shale silo 2 feeder to conveyor			
CD39.06	Raw Mill Feeding D\C	EP39.06.01	Raw Mill Feed Conveyor			
CD31.01	Flyash Tank No.1 D\C	EP31.01	Fly Ash Tank #1			
CD22.04	Dry Flyash Unloading D\C	EP22.04	Dry Flyash Unloading to West Bank Silos			
CD22.05	Dry Flyash Silo #71 D\C	EP22.05	Dry Flyash Silo #71			
CD22.06	Dry Flyash Silo #72 D\C	EP22.06	Dry Flyash Silo #72			
CD22.07	Dry Flyash Silo #82 D\C	EP22.07	Dry Flyash Silo #82			
CD22.08	Dry Flyash Silo #83 D\C	EP22.08	Dry Flyash Silo #83			
CD22.09	Dry Flyash Weigh Bin D\C	EP22.09	Dry Flyash Weigh Bin/Alleviator			
CD40.01	Raw Mill High Zone D\C	EP40.01.01	RM Feed Conveyor to conveyor			
		EP40.01.02	Conveyor to split			
		EP40.01.03	Split to hopper			
		EP40.02.03	Elevator to conveyor			
		EP40.04.01	Split to Raw Mill			

**MONTHLY PC MACT METHOD 22 FORM**

<b>Permit EP ID</b>	<b>CD Description</b>	<b>EU ID</b>	<b>EU Description</b>	<b>DATE</b>	<b>INIT.</b>	<b>EMISSIONS OBSERVED?</b>
CD40.02	Raw Mill Low Zone D\C	EP40.02.01	Conveyor to split			
		EP40.02.02	Split to bucket elevator			
		EP40.04.02	Raw Mill to conveyor			
		EP40.02.04	Conveyor to bucket elevator			
CD40.05	Raw Meal Air Slide D\C	EP40.05	Raw Meal Conveying Equipment			
CD40.06	Homo Silo Feeding D\C	EP40.06	Homogenizing Silo Feeding Equipment			
CD40.07	Homo Silo Discharge D\C	EP40.07	Homogenizing Silo Discharging Equipment			
CD42.02	Kiln Feeding Bucket Elevator D\C	EP42.02	Kiln Feeding Bucket Elev DC			
CD42.03	Kiln Feeding D\C 1	EP42.03	Kiln Feed Belt			
CD42.05	Kiln Feeding D\C 2	EP42.05	Kiln Feed Belt			
CD43.02	Cooler Discharge D\C	EP43.02	New Cooler Discharge DC			
CD42.01	Kiln Bypass Dust D\C	EP42.01	Bypass Dust Transfer to Existing Cement Silos			
CD42.06	Lime Storage D\C	EP42.06	Lime Storage for Scrubber System			
CD42.07	Bypass Truck Spout Dedusting	EP42.07	Bypass Truck Spout Dedusting			
CD31.02	Bypass Dust Tank D\C	EP31.02	Bypass Dust Tank			
CD31.03	Bypass Dust Loadout D\C	EP31.03	Bypass Dust silo/loadout			
CD43.03	Clinker Storage Feeding D\C	EP43.05	Clinker conveyor to big clinker silo			
CD43.04	Small Clinker Storage Feeding D\C	EP43.04	Clinker conveyor to clinker silo			
CD43.06	Small Clinker Storage Discharge D\C	EP43.06.01	Low Alkali Clinker Silo to upper conveyors			
		EP43.06.02	Upper conveyors to lower conveyor			
		EP43.06.03	Low Alkali Clinker silo to lower conveyor			
CD43.07	Clinker Storage Discharge D\C	EP43.07.01	Big clinker silo to upper conveyor1			
		EP43.07.02	Big clinker silo to upper conveyor2			
		EP43.07.03	Big clinker silo to lower conveyor			
		EP43.07.04	Big clinker silo to short conveyor			
		EP43.07.05	Short conveyor to lower conveyor			
CD43.08	Finish Mill Conveying D\C1	EP43.08	Upper conveyor 1 to FM feed hoppers belt			
CD43.09	Finish Mill Conveying D\C2	EP43.09	Lower conveyor to FM feed hoppers belt			

**MONTHLY PC MACT METHOD 22 FORM**

Permit EP ID	CD Description	EU ID	EU Description	DATE	INIT.	EMISSIONS OBSERVED?
CD43.13	Finish Mill Conveying D\C3	EP43.13	Upper conveyor 2 to FM feed hoppers belt			
CD43.14	Finish Mill 1 & 2 Hoppers D\C	EP43.14	Conveyor to clinker feeding hoppers (FM1 &2)			
		EP43.15	Conveyor to lower conveyor (FM3)			
CD43.16	Finish Mill 3 Hopper D\C	EP43.16	Lower conveyor to clinker feeding hopper (FM3)			
EP04.04.03	All Fugitives located within Craneway Building	EP04.04.03	#1 stone system belt to limestone pile in craneway			Side N _____ Side E _____ Side S _____ Side W _____ Top _____ Vents _____
EP26.06.03		EP26.06.03	Gypsum/Synthetic Gypsum truck unloading to storage hall			
EP26.06.04		EP26.06.04	Clam bucket to gypsum/synthetic gypsum pile			
EP26.06.05		EP26.06.05	Gypsum/synthetic gypsum pile to clam bucket			
EP26.06.06		EP26.06.06	Clam bucket to gypsum/synthetic gypsum bin (FM1/2/3)			
EP26.07.01		EP26.07.01	Limestone Pile to clam bucket			
EP26.07.02		EP26.07.02	Clam bucket to limestone bin (FM1/2/3)			
EP27.01		EP27.01	Conveyor to clinker hopper			
EP27.02		EP27.02	Clinker hopper to crane			
EP27.03		EP27.03	Crane to clinker pile			
EP27.04		EP27.04	Clinker pile to crane			
EP27.05		EP27.05	Crane to clinker bins (FM1/2/3)			
CD44.01		Finish Mill 2 Feeding D\C1	EP44.01	L.A. clinker bin to FM2 conveyor		
CD44.02	Finish Mill 1 Feeding D\C1	EP44.02	Clinker bin to FM1 conveyor			
CD44.03	Finish Mill 2 Feeding D\C2	EP44.03	Clinker bin to FM2 conveyor			
CD44.04	Finish Mill 2 Feeding D\C3	EP44.04.01	Limestone bin to FM2 conveyor			
		EP44.04.02	Gypsum/synthetic gypsum bin to FM2 conveyor			
CD44.05	Finish Mill 1 Feeding D\C 2	EP44.05.01	Limestone bin to FM1 conveyor			
		EP44.05.02	Gypsum/synthetic gypsum bin to FM1 conveyor			
CD44.06	Finish Mill 1 Conveying D\C	EP44.06	FM1 Conveyor to conveyor			
CD44.07	Finish Mill 1 High Zone D\C	EP44.07.01	Elevator to FM1 conveyor			
		EP44.07.02	FM1 Conveyor to bin			
		EP44.07.03	Conveyor to Finish Mill 1			
CD44.08	Finish Mill 1 Low Zone D\C	EP44.08.01	Finish Mill 1 to Conveyor			
		EP44.08.02	Bin to FM1 conveyor			
		EP44.08.03	FM1 Conveyor to bucket elevator			

**MONTHLY PC MACT METHOD 22 FORM**

<b>Permit EP ID</b>	<b>CD Description</b>	<b>EU ID</b>	<b>EU Description</b>	<b>DATE</b>	<b>INIT.</b>	<b>EMISSIONS OBSERVED?</b>
CD44.13	Finish Mill 1 Discharge D\C	EP44.13	Finish Mill 1 Conveying			
CD44.14	Finish Mill 2 Conveying D\C	EP44.14	FM2 Conveyor to conveyor			
CD44.10	Finish Mill 2 High Zone D\C	EP44.10.01	FM2 Elevator to conveyor			
		EP44.10.02	FM2 Conveyor to bin			
		EP44.10.03	Conveyor to Finish Mill 2			
CD44.11	Finish Mill 2 Low Zone D\C	EP44.11.01	Finish Mill 2 to conveyor			
		EP44.11.02	Bin to FM2 conveyor			
		EP44.11.03	FM2 Conveyor to bucket elevator			
CD44.15	Finish Mill 2 Discharge D\C	EP44.15	Finish Mill 2 Conveying			
CD45.01	Finish Mill 1 Airslides D\C	EP45.01	Finish Mill 1 airslides			
CD45.02	Finish Mill 2 Airslides D\C	EP45.02	Finish Mill 2 airslides			
CD45.03	Cement Silos Feeding D\C1	EP45.03	Finish Mill 1 to cement silos			
CD45.04	Cement Silos Feeding D\C2	EP45.04	Finish Mill 2 to cement silos			
CD45.05	Cement Silo A1 & A2 D\C	EP45.05	Cement Silo A1 & A2			
CD45.06	Cement Silo B1 & B2 D\C	EP45.06	Cement Silo B1 & B2			
CD45.07	Cement Silo C1 & C2 D\C	EP45.07	Cement Silo C1 & C2			
CD45.08	Truck Loadout 1 D\C	EP45.08	Bulk lane loadout 1			
CD45.09	Truck Loadout 2 D\C	EP45.09	Bulk lane loadout 2			
CD45.10	Truck Loadout 3 D\C	EP45.10	Bulk lane loadout 3			
CD45.11	Truck Loadout 4 D\C	EP45.11	Bulk lane loadout 4			
CD45.14	Cement Analyzer D\C	EP45.14	Cement Analyzer			
CD21.05	Middle Bank Silos 1 D\C	EP21.05	Middle Bank Silos 1 DC			
CD21.06	Middle Bank Silos 2 D\C	EP21.06	Middle Bank Silos 2 DC			
CD21.07	Middle Bank Silos 3 D\C	EP21.07	Middle Bank Silos 3 DC			
CD21.08	Middle Bank Silos 4 D\C	EP21.08	Middle Bank Silos 4 DC			
CD21.09	Middle Bank Silos 5 D\C	EP21.09	Middle Bank Silos 5 DC			
CD21.10	Middle Bank Vent 1 D\C	EP21.10	Middle Bank Bin Vent 1 - Silos Inlet			
CD21.11	Middle Bank Vent 2 D\C	EP21.11	Middle Bank Bin Vent 2 - Silos Inlet			
CD21.12	Middle Bank Vent 3 D\C	EP21.12	Middle Bank Bin Vent 3 - Silos Discharge			

**MONTHLY PC MACT METHOD 22 FORM**

<b>Permit EP ID</b>	<b>CD Description</b>	<b>EU ID</b>	<b>EU Description</b>	<b>DATE</b>	<b>INIT.</b>	<b>EMISSIONS OBSERVED?</b>
CD21.13	Middle Bank Vent 4 D\C	EP21.13	Middle Bank Bin Vent 4 - Silos Discharge			
CD45.12	Rail Loadout 1 D\C	EP45.12	Bulk rail loadout 1			
CD45.13	Rail Loadout 2 D\C	EP45.13	Bulk rail loadout 2			
CD46.01	Truck Loadout Silo 1 D\C	EP46.01	Truck Loadout Silo 1			
CD46.02	Truck Loadout Silo 2 D\C	EP46.02	Truck Loadout Silo 2			
CD46.03	Truck Loadout Silo 3 D\C	EP46.03	Truck Loadout Silo 3			
CD46.04	Truck Loadout Silo 4 D\C	EP46.04	Truck Loadout Silo 4			
CD46.05	Truck Loadout Silo 5 D\C	EP46.05	Truck Loadout Silo 5			
CD46.06	Truck Loadout 5 D\C	EP46.06	Bulk loadout 5 - Truck Loadout Silos			
CD46.07	Truck Loadout 6 D\C	EP46.07	Bulk loadout 6 - Truck Loadout Silos			
CD20.04	East Bank Silos 1 D\C	EP20.04	East Bank Silos 1			
CD20.05	East Bank Silos 2 D\C	EP20.05	East Bank Silos 2			
CD20.06	East Bank Silos 3 D\C	EP20.06	East Bank Silos 3			
CD48.01	Packhouse D\C	EP48.01	Packhouse			

**Name of Observer(s)** \_\_\_\_\_

**NOTE: If a source does not operate during a given month, indicate so in the Emissions Observed Column above.**

## **ATTACHMENT K – ELECTRONIC COPY OF THE TITLE V RENEWAL APPLICATION**

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Provided on the enclosed CD is a complete electronic copy of the Title V Renewal Application and a red-line of the current Title V Permit which has been updated to reflect this Application. Also provided on the enclosed CD is an electronic copy of the Capitol Cement Corporation's September 2009 Application for NSR Permit which is referenced in this Application.