

October 12, 2017



Mr. Steve Pursley
West Virginia Department of Environmental Protection
Division of Air Quality – Permitting Section
601 57th Street, SE
Charleston, WV 25304

**Subject: Permit Determination for the Replacement of the Main Kiln Baghouse, Argos USA LLC
Martinsburg Plant**

Dear Mr. Pursley:

Argos USA LLC (Argos) is submitting for your consideration this Permit Determination Application (Application) for the replacement of the main kiln baghouse located at its Martinsburg, WV Portland cement Plant (Plant).

Included with this Application is the completed Permit Determination Form (PDF) and the following associated attachments:

Attachment A – Map to Site

Attachment B – Detailed Process Flow Diagram

Attachment C – Detailed Process Description

Attachment D – Material Safety Data Sheets

Attachment E – Supporting Calculations

A completed Attachment M – Air Pollution Control Device Sheet has also been included.

Per discussions at our 9/21/17 meeting on this Application, Argos believes that no permit is required for the proposed project and requests that WV DEP provide written concurrence.

Please contact me if you have any questions.

Sincerely,



Andrew Frye
Plant Environmental Manager

W/Enclosure

Permit Determination Form



WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

**PERMIT DETERMINATION FORM
(PDF)**

FOR AGENCY USE ONLY: PLANT I.D. # _____

PDF # _____ PERMIT WRITER: _____

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE): Argos USA LLC		
2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE): Martinsburg Plant		3. NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) CODE: 327310
4A. MAILING ADDRESS: 1826 South Queen Street Martinsburg, West Virginia 25401		4B. PHYSICAL ADDRESS: 1826 South Queen Street Martinsburg, West Virginia 25401
5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE MAP AS ATTACHMENT A): Take I-79 N to exit 148 for I-68 towards Cumberland. Continue onto I-68 E to exit 82A-82B to merge onto I-70 E towards Hagerstown. Take exit 26 to merge onto I-81 S towards Roanoke. Take exit 12 for WV-45 E. Take the Queen Street exit.		
5B. NEAREST ROAD: Queen Street	5C. NEAREST CITY OR TOWN: Martinsburg	5D. COUNTY: Berkeley
5E. UTM NORTHING (KM): 4369.00	5F. UTM EASTING (KM): 243.50	5G. UTM ZONE: 18S
6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED: Andrew Frye		6B. TITLE: Plant Environmental Manager
6C. TELEPHONE: 304-260-1827	6D. FAX: 304-267-2617	6E. E-MAIL: afrye@argos-us.com
7A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY): 003 - 00006	7B. PLEASE LIST ALL CURRENT 45CSR13, 45CSR14, 45CSR19 AND/OR TITLE V (45CSR30) PERMIT NUMBERS ASSOCIATED WITH THIS PROCESS (FOR AN EXISTING FACILITY ONLY): R14-0026M and R30-00300006-2012(MM05 and MM06)	
7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST: NO		
8A. TYPE OF EMISSION SOURCE (CHECK ONE): <input type="checkbox"/> NEW SOURCE <input type="checkbox"/> ADMINISTRATIVE UPDATE <input checked="" type="checkbox"/> MODIFICATION <input type="checkbox"/> OTHER (PLEASE EXPLAIN IN 11B)		8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE APPLICANT'S CONSENT TO UPDATE THE EXISTING PERMIT WITH THE INFORMATION CONTAINED HEREIN? <input type="checkbox"/> YES <input type="checkbox"/> NO
9. IS DEMOLITION OR PHYSICAL RENOVATION AT AN EXISTING FACILITY INVOLVED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE: 12/01/2018		10B. DATE OF ANTICIPATED START-UP: 02/01/2019
11A. PLEASE PROVIDE A DETAILED PROCESS FLOW DIAGRAM SHOWING EACH PROPOSED OR MODIFIED PROCESS EMISSION POINT AS ATTACHMENT B.		
11B. PLEASE PROVIDE A DETAILED PROCESS DESCRIPTION AS ATTACHMENT C.		
12. PLEASE PROVIDE MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL MATERIALS PROCESSED, USED OR PRODUCED AS ATTACHMENT D. FOR CHEMICAL PROCESSES, PLEASE PROVIDE A MSDS FOR EACH COMPOUND EMITTED TO AIR.		

13A. REGULATED AIR POLLUTANT EMISSIONS:

⇒ **FOR A NEW FACILITY**, PLEASE PROVIDE PLANT WIDE EMISSIONS BASED ON THE POTENTIAL TO EMIT (PTE) FOR THE FOLLOWING AIR POLLUTANTS INCLUDING ALL PROCESSES.

⇒ **FOR AN EXISTING FACILITY**, PLEASE PROVIDE THE PROPOSED CHANGE IN EMISSIONS BASED ON THE PTE OF ALL PROCESS CHANGES FOR THE FOLLOWING AIR POLLUTANTS.

PTE FOR A GIVEN POLLUTANT IS TYPICALLY BEFORE AIR POLLUTION CONTROL DEVICES AND IS COLLECTED BASED ON THE MAXIMUM DESIGN CAPACITY OF PROCESS EQUIPMENT.

POLLUTANT	HOURLY PTE (LB/HR)	YEARLY PTE (TON/YR) (HOURLY PTE MULTIPLIED BY 8760 HR/YR DIVIDED BY 2000 LB/TON)
PM	See Attachment E	See Attachment E
PM₁₀	See Attachment E	See Attachment E
VOCs	See Attachment E	See Attachment E
CO	See Attachment E	See Attachment E
NO_x	See Attachment E	See Attachment E
SO₂	See Attachment E	See Attachment E
Pb	See Attachment E	See Attachment E
HAPs (AGGREGATE AMOUNT)	See Attachment E	See Attachment E
TAPs (INDIVIDUALLY)*	See Attachment E	See Attachment E
OTHER (INDIVIDUALLY)*	See Attachment E	See Attachment E

* ATTACH ADDITIONAL PAGES AS NEEDED

13B. PLEASE PROVIDE ALL SUPPORTING CALCULATIONS AS ATTACHMENT E.

CALCULATE AN HOURLY AND YEARLY PTE OF EACH PROCESS EMISSION POINT (SHOWN IN YOUR DETAILED PROCESS FLOW DIAGRAM) FOR ALL AIR POLLUTANTS LISTED ABOVE INCLUDING INDIVIDUAL HAP'S (LISTED IN SECTION 112[b] OF THE 1990 CAAA), TAP'S (LISTED IN 45CSR27), AND OTHER AIR POLLUTANTS (E.G. POLLUTANTS LISTED IN TABLE 45-13A OF 45CSR13, MINERAL ACIDS PER 45CSR7, ETC.).

14. CERTIFICATION OF DATA

I, HEINZ KNOPFEL (TYPE NAME) ATTEST THAT ALL THE REPRESENTATIONS CONTAINED IN THIS APPLICATION, OR APPENDED HERETO, ARE TRUE, ACCURATE, AND COMPLETE TO THE BEST OF MY KNOWLEDGE BASED ON INFORMATION AND BELIEF AFTER REASONABLE INQUIRY, AND THAT I AM A **RESPONSIBLE OFFICIAL**** (PRESIDENT, VICE PRESIDENT, SECRETARY OR TREASURER, GENERAL PARTNER OR SOLE PROPRIETOR) OF THE APPLICANT.

SIGNATURE OF RESPONSIBLE OFFICIAL: _____



TITLE: PLANT MANAGER

DATE: 10 / 12 / 2017

** THE DEFINITION OF THE PHRASE 'RESPONSIBLE OFFICIAL' CAN BE FOUND AT 45CSR13, SECTION 2.23.

NOTE: PLEASE CHECK ENCLOSED ATTACHMENTS:

ATTACHMENT A ATTACHMENT B ATTACHMENT C ATTACHMENT D ATTACHMENT E

RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

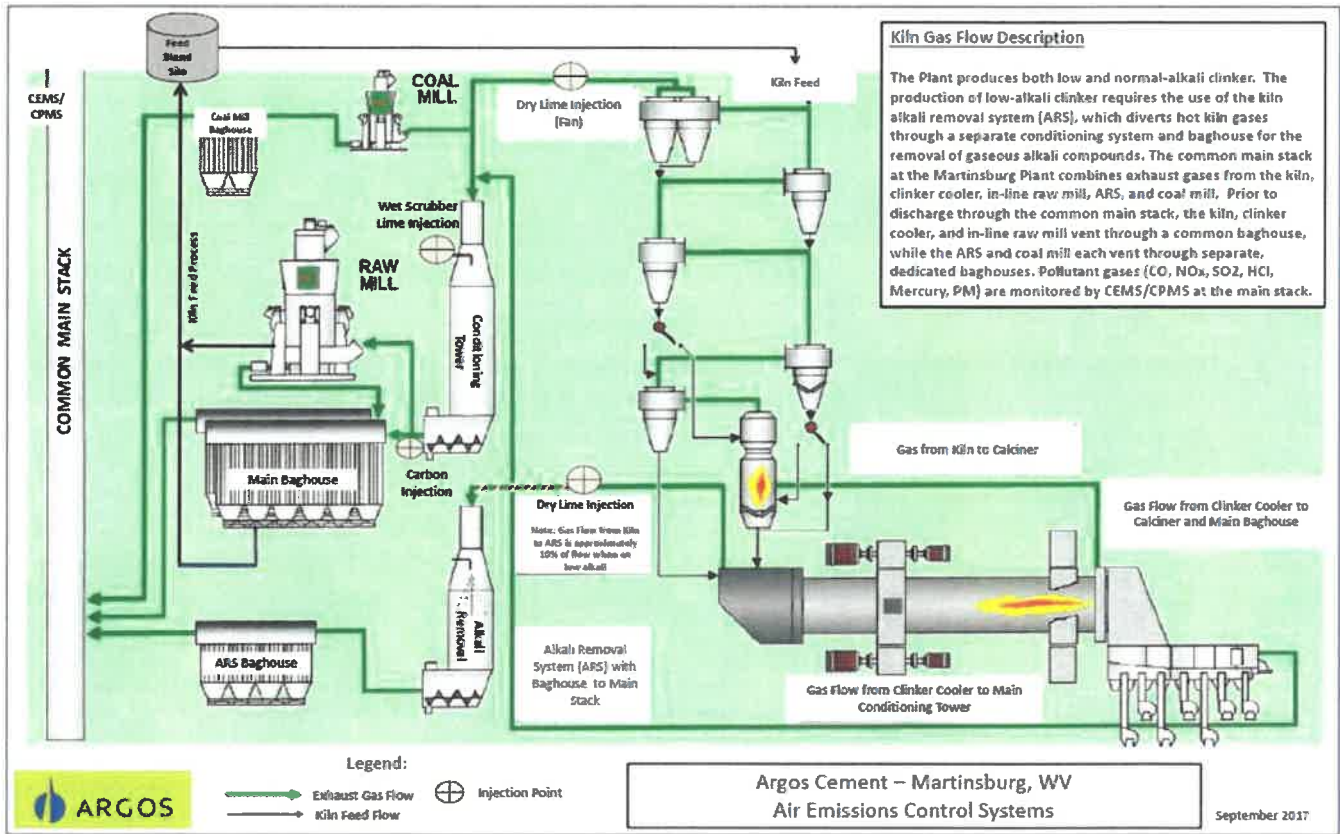
THE PERMIT DETERMINATION FORM WITH THE INSTRUCTIONS CAN BE FOUND ON DAQ'S PERMITTING SECTION WEB SITE:

www.dep.wv.gov/daq

Attachment A – Map to Site



Attachment B – Detailed Process Flow Diagram



Attachment C – Detailed Process Description

Emissions from the Kiln System at the Plant are controlled by three separate baghouses that all vent out the main Kiln Stack. The Main Kiln Baghouse controls emissions associated with the in-line raw mill and kiln operations. The Alkali Bypass Baghouse and the Coal Mill Baghouse control emissions from alkali bypass operations and coal mill operations, respectively.

The Plant is proposing to replace the Main Kiln Baghouse due to problems with the existing single compartment design. With the current design, if one bag breaks or develops a leak the Plant must shut down the entire Kiln System in order to remain in compliance with the 0.07 lb/ton clinker particulate matter limit established by the revised Maximum Available Control Technology (MACT) National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the Portland Cement Manufacturing Industry. Additionally, the filter bag life for the existing baghouse is less than two years, thereby necessitating annual replacement of all bags at considerable cost to the Plant.

To alleviate these issues, the Plant is proposing to replace the Main Kiln Baghouse structure and utilize a new multi-compartment structure. The proposed replacement baghouse structure will be modified to be taller and will have compartment separators added to form a minimum of ten individual compartments. The new, taller bags that will be utilized will have a longer filter life of four years. In the event of a bag break, the compartment containing the affected bag will be isolated, allowing the Kiln System to continue to operate at peak performance while necessary maintenance is performed. Additionally, bag compartments will be isolated on an as-needed basis for routine maintenance and filter bag replacement as necessary, ensuring continued environmental compliance with minimal Kiln System downtime and maintenance costs.

There will be no change to any other Kiln System components. The existing ID fan will remain unchanged, so the maximum flow rate from the replacement Main Kiln Baghouse will also be unchanged. With no change to the ID fan, there will also be no change to the potential emissions from the Kiln System as a result of the replacement project. No change is being requested in any existing kiln emission limit or clinker production throughput limit as specified in the Plant's current PSD Construction Permit No. R14-0026M, last updated on April 8, 2016. Additionally, there will be no change required to any emission unit IDs, descriptions, or permit conditions.

The proposed schedule for the Main Kiln Baghouse is to complete engineering and order equipment by the Summer of 2018. Pre-assembly activities will take place from September through early December 2018. Construction will be completed between mid-December 2018 and January 2019. Commissioning and startup is proposed to occur during February 2019.

Attachment D – Material Safety Data Sheets

There are no materials processed, used, or produced in association with the proposed project; therefore, no material safety data sheets are included with this Application.

Attachment E – Supporting Calculations

The proposed physical changes to the Main Kiln Baghouse will result in no change to the inlet or outlet flowrate of the Main Kiln Baghouse. Therefore, there will be no increase in potential emissions associated with the proposed project. Since there is no change in potential emissions, no supporting calculations are included with this Application.

Attachment M – Air Pollution Control Device Sheet

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): CD42.04 (Main Kiln Baghouse)

Equipment Information and Filter Characteristics

1. Manufacturer: SCHEUCH Model No. fipp 18t-9x-50		2. Total number of compartments: 10	
		3. Number of compartment online for normal operation: 9	
4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency. Detailed diagrams are not currently available, but can be provided at WV DEP's request once final engineering is completed.			
5. Baghouse Configuration: <input type="checkbox"/> Open Pressure <input type="checkbox"/> Closed Pressure <input checked="" type="checkbox"/> Closed Suction (check one) <input type="checkbox"/> Electrostatically Enhanced Fabric <input type="checkbox"/> Other, Specify			
6. Filter Fabric Bag Material: <input type="checkbox"/> Nomex nylon <input type="checkbox"/> Wool <input type="checkbox"/> Polyester <input type="checkbox"/> Polypropylene <input type="checkbox"/> Acrylics <input type="checkbox"/> Ceramics <input checked="" type="checkbox"/> Fiber Glass <input type="checkbox"/> Cotton Weight oz./sq.yd <input type="checkbox"/> Teflon Thickness in <input checked="" type="checkbox"/> Others, specify PTFE membrane		7. Bag Dimension: Diameter 6.5 in. Length 29.5 ft.	
		8. Total cloth area: 225,977.5 ft ²	
		9. Number of bags: 4,500	
		10. Operating air to cloth ratio: 3.13 ft/min	
11. Baghouse Operation: <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Automatic <input type="checkbox"/> Intermittent			
12. Method used to clean bags: <input type="checkbox"/> Mechanical Shaker <input type="checkbox"/> Sonic Cleaning <input type="checkbox"/> Reverse Air Jet <input type="checkbox"/> Pneumatic Shaker <input type="checkbox"/> Reverse Air Flow <input checked="" type="checkbox"/> Other: Low pressure pulse jet (EMC) <input type="checkbox"/> Bag Collapse <input type="checkbox"/> Pulse Jet <input type="checkbox"/> Manual Cleaning <input type="checkbox"/> Reverse Jet			
13. Cleaning initiated by: <input checked="" type="checkbox"/> Timer <input type="checkbox"/> Frequency if timer actuated <input checked="" type="checkbox"/> Expected pressure drop range 4.82 in. of water <input type="checkbox"/> Other			
14. Operation Hours: Max. per day: 24 Max. per yr: 8,760		15. Collection efficiency: Rating: 99.95 % Guaranteed minimum: %	

Gas Stream Characteristics

16. Gas flow rate into the collector: 745,139 ACFM at 302 °F and -1.42 PSIA ACFM: Design: -2.27 PSIA Maximum: N/A PSIA Average Expected: N/A PSIA			
17. Water Vapor Content of Effluent Stream: up to 15% by volume lb. Water/lb. Dry Air			
18. Gas Stream Temperature: 302 °F		19. Fan Requirements: hp OR 762,849 ft ³ /min	
20. Stabilized static pressure loss across baghouse. Pressure Drop: High 5.9 in. H ₂ O Low -3.10 in. H ₂ O			
21. Particulate Loading: Inlet: 20 grain/scf Outlet: 0.01 grain/scf			

22. Type of Pollutant(s) to be collected (if particulate give specific type): PM10, PM2.5, TSP				
23. Is there any SO ₃ in the emission stream? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes SO ₃ content: _____ ppmv				
24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:				
Pollutant	IN		OUT	
	lb/hr	grains/acf	lb/hr	grains/acf
PM/PM10/PM2.5		20		0.01
25. Complete the table:				
Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector		Fraction Efficiency of Collector	
	Weight % for Size Range		Weight % for Size Range	
0 – 2	Based on the 2016 Stack Test Results PM10 emissions are approximately 60% of TSP and PM2.5 emissions are approximately 30% of TSP.		99.95%	
2 – 4				
4 – 6				
6 – 8				
8 – 10				
10 – 12				
12 – 16				
16 – 20				
20 – 30				
30 – 40				
40 – 50				
50 – 60				
60 – 70				
70 – 80				
80 – 90				
90 – 100				
>100				

26. How is filter monitored for indications of deterioration (e.g., broken bags)?

- Continuous Opacity
- Pressure Drop
- Alarms-Audible to Process Operator
- Visual opacity readings, Frequency:
- Other, specify: broken bag detector, PM CPMS continuous monitoring

27. Describe any recording device and frequency of log entries:

PM CPMS maintained per 40 CFR 63, Subpart LLL

28. Describe any filter seeding being performed:

Limestone or hydrated lime: 150 g/m² filter area

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):

N/A

30. Describe the collection material disposal system:

Airslides and rotary air lock

31. Have you included **Baghouse Control Device** in the Emissions Points Data Summary Sheet?

N/A

32. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:

As specified in 40 CFR 63 Subpart LLL

RECORDKEEPING:

As specified in 40 CFR 63 Subpart LLL

REPORTING:

As specified in 40 CFR 63 Subpart LLL

TESTING:

As specified in 40 CFR 63 Subpart LLL

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
100% - TSP, PM10. PM2.5

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99.95% - TSP, PM10. PM2.5

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

Maximum O₂ gas content: 16%
Maximum temperature: 302 °F