PERMIT TO OPERATE EVALUATION
(BAGHOUSE OF TILE MANUFACTURING LINE)

Applicant's Name	**ARMSTRONG WORLD IDUSTRIES INC.**
Company I.D.	**12155**
Mailing Address	**5037 PATATA STREET, SOUTH GATE, CA 90280**
Equipment Address	**P. O. BOX 3016, SOUTH GATE, CA 90280**

EQUIPMENT DESCRIPTION

Application No. 561749 (Previous A/N 431620, Devices 56 to 97, 161 to 166, 192, 193)

MODIFICATION OF BAGHOUSE, C83, BY REPLACING FILTER BAGS WITH CARTRIDGE FILTERS WITH THE FOLLOWING EQUIPMENT DETAILS:

FLOOR TILE MANUFACTURING LINE CONSISTING OF:

1. MILL ROLL, FURNISH LINE. (D56
2. ROLL MILL, TILE LINE. (D57)
3. CUTTER, SLITTER, DICER, 50 H.P. (D58)
4. CONVEYOR, SCREW, SURGE HOPPER DISCHARGE. (D59)
5. CONVEYOR, BELT, MILL DISCHARGE. (D60)
6. CONVEYOR, BELT, DICER INFEED. (D61)
7. CONVEYOR, BELT, DICER DISCHARGE. (D62)
8. CONVEYOR, BELT, BLENDER FEED. (D63)
9. CONVEYOR, BELT, BLENDER DISCHARGE. (D64)
10. CONVEYOR, BELT, SURGE HOPPER. (D65)
11. CONVEYOR, BELT, SIFTER FEED. (D66)
12. CONVEYOR, BELT, SIFTER DISCHARGE. (D67)
13. CONVEYOR, BELT, STEADMAN MILL DISCHARGE. (D68)
14. CONVEYOR, BELT, LEAVING SIFTER. (D69)
15. MIXER, JAEGER BLENDER, 243 CU. FT. (D72)
16. MIXER, JAEGER BLENDER, 243 CU. FT. (D73)
17. HOPPER, SURGE, FINISH LINE. (D74)
18. HOPPER, CAGE MILL (D75)

19. HOPPER, HEATER, FEEDER & CONVEYOR. (D76)
20. HOPPER, MILL CHUTE (TILE). (D77)
21. HOPPER, REGRIDS & CONVEYOR. (D78)
22. BIN, SCRAP C. (D79)
23. BIN, SCRAP D. (D80)
24. BIN, REGRIND STATION. (D81)
25. BIN, FINES SYSTEM. (D82)
26. **DUST COLLECTOR, FINES SYSTEM, FLEX-KLEEN, MODEL NO. 84CTBC-24III, TWENTY-FOUR CARTRIDGE FILTERS, TOTAL 360 SQ. FT. FILTER AREA, WITH A PULSE-JET CLEANING SYSTEM. (C83)**
27. BIN, TILTER REGRINDS & CONVEYOR. (D84)
28. BIN, TILTER REGRINDS & CONVEYOR. (D85)
29. CHARGING WELL, GRANULATOR CHARGING CHUTE. (D89)
30. MILL, GRANULATOR (STEADMAN). (D90)
31. MILL, ROLL, FIRST PASS (CALENDAR #1). (D91)
32. MILL, ROLL, CALENDAR #2. (D92)
33. CYCLONE. (C93)
34. HEATER, CHIP, NATURAL GAS, (HEATER, FEEDER, NORTH BURNER), 2.2 MMBTU/HR. (D94)
35. HEATER, CHIP, NATURAL GAS, (HEATER, FEEDER, SOUTH BURNER), 2.2 MMBTU/HR. (D95)
36. HEATER,NO.1, NATURAL GAS, 1.8 MMBTU/HR. (D96)
37. HEATER,NO.2, NATURAL GAS, 1.3 MMBTU/HR. (D97)
38. CONVEYOR, BELT, FOR WILLIAMS CRUSHER. (D161)
39. CRUSHER, WILLIAMS, 75 H.P. (D162)
40. HOPPER, RECEIVING, WITH SUPER SACK (TITANIUM DIOXIDE) (D163)
41. WEIGH STATION, PIGMENT (TITANIUM DIOXIDE) (D164)
42. CONVEYOR, SCREW FEEDER. (D165)
43. CONVEYOR, BELT, DISCHARGE. (D166)
44. SCREEN, CLASIFYING, FINISH LINE SIFTER. (D193)
45. CONVEYOR, BELT, LEAVING SIFTER. (D192)

Application No.: 563698

MINOR TITLE V/RECLAIM PERMIT REVISION

BACKGROUND

Armstrong World Industries, Inc. is in the floor tile manufacturing business. The applicant operated this manufacturing operation at 5037 Patata Street, South Gate under I. D. # 12155 for a number of years. The facility has a number of active permits from the District to operate blenders, boiler, baghouses, conveyors, heaters, grinders, mills, etc.

The company submitted this application to upgrade an existing baghouse control device by replacing old filter bags with high efficiency cartridge filters with a pulse-jet cleaning system. With an automatic pulse-jet cleaning system and increased filter surface areas of the cartridges, the dust collector will improve particulate emission control from conveying of the materials.

The current Facility Permit describes the granulator (D90) as being connected to the dust collector (C83) and a baghouse (C135). The outlet of the granulator directly connects to a sifter (D193). The sifter (D193) then vents its exit/product streams to the dust collector (C83) and the baghouse (C135). The proposed Facility Permit will also be revised to correctly describe the process equipment and control equipment connections.

The current permit condition allows monthly material throughput of 30,000,000 pounds. The emissions from this line are particulates. The applicant has not requested any emission increases from this project. Also, all the outside conveyors are pneumatic and covered; and all other emission points are vented to a baghouse for particulate emission control. The manufacturing process is not going to change under this project. Thus, this project will comply with the current BACT requirements and no PM10 offsets will be needed.

The location of this facility is within an industrial zone; thus it is not expected to cause nuisance odor problems. The District database did not show any odor nuisance or visible emission complaints against this company. Also, the District database did not show any notices to comply or violations issued to this facility in the last two years. The facility is not located within 1000 feet from any school. Hence, this application will not require any public notification under Rule 212.

Armstrong World Industries is a RECLAIM and Title V facility. A Title V renewal permit was issued to this facility in October 14, 2010. The proposed project is considered as a "minor permit revision" to the renewed Title V permit, as described in the Regulation XXX evaluation. This is the third revision since the TV permit renewal was issued.

PROCESS DESCRIPTION

Armstrong World Industries, Inc. manufactures and distributes floor tiles for residential and industrial use. In brief, the floor tile manufacturing operation consists of mixing (in Banbury mixers) necessary ingredients (limestone, resins, plasticizers, and pigments) into a homogeneous mass that is formed into a blanket on tile manufacturing press. Various rollers and calendars are used to form the blanket. The blanket is cooled, polished, coated with an aqueous wax coating, and cut into 12" square tiles.

In one production line the blanket is laminated with a design pattern, which is coated with a protective material prior to cutting tile squares. The company crushes all the scrap material generated in the manufacturing process and reuses it as manufacturing ingredients.

The major emissions from this manufacturing process are expected to be particulates. The company operates a number of baghouse particulate control devices at this site. These control equipment vents various emission points throughout the system, with most of the pick-up points located in the weighing, conveying and mixing areas.

The scrap tile material comes from several parts of the plant and is fed into a granulator (D90, Steadman Granulator). The outlet of the granulator is directed to a sifter (D193). The sifter separates the granulated scrap tile into 3 size fractions: oversized particles (which are fed back to the granulator), correct size particles (which are fed forward on a belt conveyor (D67)), and the fine particles which drop into pneumatic conveyor connected to a dust collector (C83). After the fine particles are collected in the dust collector, they are released by gravity through a rotary valve into a bin station (D180).

The current Facility Permit describes the granulator (D90) as being connected to the dust collector (C83) and a baghouse (C135). The outlet of the granulator directly connects to a sifter (D193). The sifter (D193) vents it exit/product streams to the dust collector (C83) and the baghouse (C135). The proposed Facility Permit will also be revised to correctly describe the process equipment and control equipment connections.

DESIGN

The applicant already operates similar equipment for a number of years and has not received any notices of violation from the District. Thus, this equipment is expected to comply with the requirements of various rules and regulations. Also, this project will improve the overall control efficiency of the control device by replacing the existing bags with high efficiency cartridge filters with pulse jet cleaning system.

OPERATING HOURS

Average: 24 hr/day, 7 day/week, 52 weeks/year
Maximum: 24 hr/day, 7 day/week, 52 weeks/year

EMISSIONS

This is a control device application to modify and improve the control efficiency of the equipment. This equipment has been operating on this site for a number of years without any visible emission complaints. Also the applicant has not requested to increase the throughput under this project. Hence no further emission calculations are needed.

The existing equipment will be vented to the existing baghouse; only the filter bags will be replaced with state of the art new cartridge filters with following details.

Total Filter area:	360 sq. ft.
Air flow rate:	1185 cfm
Air to filter ratio:	3 to 1
Cleaning system:	Pulse-jet
Access door:	Yes
Pressure Gauge:	Yes

With a sufficient filter area and a state of the art pulsating jet cleaning system, the modified baghouse will control/reduce particulate emissions from the equipment vented to it.

RULES/REGULATION EVALUATION

¤ ***RULE 212, PUBLIC NOTIFICATION***
v***SECTION 212(c)(1):***
This section requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school. This source is not located within 1,000 feet from the outer boundary of a school. Therefore, public notice will not be required by this section.

v ***SECTION 212(c)(2):***
This section requires a public notice for all new or modified facilities which have on-site emission increases exceeding any of the daily maximums as specified in subdivision (g). As shown in the following table, the emission increases from this facility are below the daily maximum limits specified by Rule 212(g). Therefore, this application will not be subject to this section.

LB/DAY	CO	NOX	PM_{10}	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	0	0	0	0	0	0

v ***SECTION 212(c)(3):***
This section requires a public notice for all new or modified facilities with on-site toxic air contaminant emission increases, which will exceed individual cancer risk greater than I in a million. There are no emission increases from this project. Therefore, this application will not be subject to this section.

v ***SECTION 212(g):***
This section requires a public notice for all new or modified sources which undergo construction or modifications resulting an emissions increase exceeding any of the daily maximum specified in the table below. As shown in the following table, the emission increases from this project are below the daily maximum limits specified by Rule 212(g). Therefore, public notice will not be required by this section.

LB/DAY	CO	NOX	PM_{10}	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	0	0	0	0	0	0

¤ ***RULES 401 & 402, VISIBLE EMISSIONS & NUISANCE***
The District database has no records of any visible emissions or nuisance complaints against this company. Visible emission or nuisance complaints are not expected with proper operation of the equipment.

¤ ***RULES 404 & 405, PARTICULATE MATTER CONCENTRATION AND WEIGHT***
With proper operation and maintenance, this equipment is expected to comply with these requirements.

¤ ***RULE 1155, PARTICULATE MATTER (PM) CONTROL DEVICES***
The operator has other baghouses on site and observers for possible visible emissions. The facility had no visible emission complaints against it on the records. The modified baghouse has an automated pulse jet cleaning system. Thus, compliance with the rule requirements is expected.

¤ ***RULE 1401, NEW SOURCE REVIEW OF CARCINOGENIC AIR CONTAMINANTS***
There will be no change in the facility toxic emissions under this project. Hence, it is exempt from this rule.

REGULATION XX

The proposed project does not result in an increase or decrease in any RECLAIM contaminant. Continued compliance with Regulation XX is expected.

REGULATION XXX

The proposed project is considered as a “minor permit revision” to the current Title V permit for this facility since there is not an emission increase of pollutants subject to Reg. XIII or hazardous air

pollutants. Rule 3000(b)(12) defines a "minor permit revision" as any Title V permit revision that does not result in any of the following:

- Emission increase of RECLAIM pollutants over the facility starting Allocation plus nontradeable Allocations, or a higher Allocation amount which has previously undergone a significant permit revision process,
- Emission increase in hazardous air pollutants (HAPs) or pollutants subject to Reg. XIII, or
- Installation of a new permit unit or the modification or reconstruction of an existing permit unit subject to a New Source Performance Standard (NSPS) per 40 CFR Part 60 or a National Emission Standard for HAPs per 40 CFR Part 61 or Part 63.

Rule 3003(j) specifies that all proposed Title V permit revisions shall be submitted to EPA for review. This is the third permit revision requested by the facility. The cumulative emission increases resulting from this proposed permit revision are summarized as follows:

Revision	HAP	VOC	NOx*	PM_{10}	SOx	CO
1st Permit Revision. Modification of tile grinding line (A/N 517201), modification of baghouse (A/N 517202), modification of tile mfg. line (A/N 517204), install a new dust collector (A/N 517203) and baghouse (A/N 518893).	0	0	0*	0	0	0
2nd Permit Revision. Administrative to convert P/C to P/O of tile grinding line (A/N 517201), baghouse (A/N 517202), tile mfg. line (A/N 517204), and a new dust collector (A/N 517203).	0	0	0*	0	0	0
3rd Permit Revision. Modify Device No. C83.	0	0	0	0	0	0
Cumulative Total	0	0	0*	0	0	0
Maximum Daily	30	30	40*	30	60	220

* RECLAIM pollutant, not subject to emission accumulation requirements

RECLAIM Pollutants

Rule 3000(b)(12)(A)(v) defines a "minor permit revision" as any Title V permit revision that does not result in an emission increase of RECLAIM pollutants over the facility starting Allocation plus nontradeable Allocations, or higher Allocation amount which has previously undergone a significant permit revision process.

Since NOx is a RECLAIM pollutant for this facility, a separate analysis shall be made to determine if the proposed permit revision is considered a "minor permit revision" for RECLAIM pollutants. There are no NOx emissions associated with this project. As a result, this proposed project is considered as a "minor permit revision" for RECLAIM pollutants.

CONCLUSIONS/RECOMMENDATIONS

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "minor permit revision", it is exempt from the public participation requirements under Rule 3006 (b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit will be issued to this facility.