Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Certified Mail

1/18/2012

AronGawne
ARMSTRONG WORLD INDUSTRIES INC
4241 LEAP RD
HILLIARD, OH 43026

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0125121829
Permit Number: P0109346
Permit Type: OAC Chapter 3745-31 Modification
County: Franklin

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to “Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General’s Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-CDO

Ohio | Environmental Protection Agency

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
ARMSTRONG WORLD INDUSTRIES INC

Facility ID:	0125121829
Permit Number:	P0109346
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	1/18/2012
Effective:	1/18/2012
Expiration:	2/10/2021

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install and Operate
for
ARMSTRONG WORLD INDUSTRIES INC

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Authorization

Facility ID: 0125121829
Application Number(s): A0042736, A0043301
Permit Number: P0109346
Permit Description: Chapter 31 modification for spray booth R001.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: $500.00
Issue Date: 1/18/2012
Effective Date: 1/18/2012
Expiration Date: 2/10/2021
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

ARMSTRONG WORLD INDUSTRIES INC
4241 LEAP RD
Hilliard, OH 43026

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0109346
Permit Description: Chapter 31 modification for spray booth R001.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**R001**
Company Equipment ID:	Line #1 Coating Operations
Superseded Permit Number:	01-7426
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

  You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Central District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting[1] a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

[1]Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) None.

C. Emissions Unit Terms and Conditions

1. R001, Line #1 Coating Operations

Operations, Property and/or Equipment Description:

Line #1 Coating Operations

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)d. and b)(1)e.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-11(C)	See c)(1), c)(2) and d)(1) through (5) below.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate emissions (PE) shall not exceed 1.06 lb/hr and 4.64 ton/yr. See b)(2)a., b)(2)c., c)(1), c)(2) and d)(1) through (5) below.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.
d.	OAC rule 3745-31-05(E) [State-only enforceable restriction to avoid state modeling]	The toxic air contaminant (TAC) emissions from R001, R002 and R004combined shall not exceed 3.03 ton/yr for any individual TAC. See d)(6) below.
e.	ORC 3704.03(T) [Best Available Technology]	Volatile organic compound (VOC) emissions shall not exceed 77.7 ton/yrfrom coating and clean-up material usage based upon a rolling, 12-month summation of the emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See d)(6) below.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. The following rule paragraphs will apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE from this air contaminant source since the potential to emit taking into consideration the control requirements established under OAC rule 3745-17-11(C) is less than 10 tons per year.

c. The hourly and annual PE limitations were established to reflect the potential to emit for this emissions unit taking into consideration the control requirements established under OAC rule 3745-17-11(C) and in accordance with the information provided in the PTIO application. The monitoring, recordkeeping, reporting, and testing requirements for the PE control system as established in the following terms and conditions are sufficient to demonstrate compliance with these PE limitations.

c) Operational Restrictions

(1) The permittee shall operate the dry particulate filter for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.

(2) In the event the dry particulate filter is not operating in accordance with the manufacturer's recommendations, instructions, or operating manual, with any modifications deemed necessary by the permittee, the control device shall be expeditiously repaired or otherwise returned to these documented operating conditions.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Ohio EPA, Central District Office upon request.

(2) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.

(3) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.

(4) The permittee shall document each inspection (periodic and annual) of the dry particulate filter and shall maintain the following information:

a. the date of the inspection;
b. a description of each/any problem identified and the date it was corrected;
c. a description of any maintenance and repairs performed; and
d. the name of person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the Ohio EPA, Central District Office upon request.

(5) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit was in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

(6) The permittee shall collect and record the following information on a monthly basis:

a. The name and identification number of each coating and clean-up material employed.

b. The total volume, in gallons, of each coating and clean-up material employed.

c. The VOC content and individual TAC contents of each coating and clean-up material in pounds per gallon.

d. The VOC and individual TAC emissions from all coatings and clean-up materials employed, in pounds or tons.*

e. The rolling, 12-month summation of VOC emissions (i.e., the VOC emissions from the current month added to the summation of the VOC emissions from the previous 11 months).*

f. The year-to-date summation of the TAC emissions for each individual TAC from all coatings and clean-up materials.*

* For clean-up materials, VOC/TAC emission rates calculated based on purchasing records are assumed to represent the worst case actual emissions and may be used to demonstrate compliance with the above VOC/TAC emission limitations in section b)(1).

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA, Central District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation</u>

Particulate emissions (PE) shall not exceed 1.06 lb/hr and 4.64 ton/yr(as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

<u>Applicable Compliance Method</u>

The hourly PE limit was established by the following equation.

PE = coating usage x solids density x (1 – TE) x (1 – CE), where:

Maximum coating usage = 177 gal/hr
Maximum solids density of the coatings = 12 lb solids/gal coating
TE = transfer efficiency = 50%
CE = control efficiency of the particulate filter = 99.9%

The annual limit was developed by multiplying the hourly limit by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation

The toxic air contaminant (TAC) emissions from R001, R002 and R004 combined shall not exceed 3.03 ton/yr for any individual TAC.

Applicable Compliance Method

Compliance with the annual individual TAC limit shall be determined through the recordkeeping requirements in d)(6) and the following equations for each individual TAC.

$TAC = TAC_{R001} + TAC_{R002} + TAC_{R004}$, where:

TAC_{R001} = (coating usage x TAC content) + (clean-up material usage x TAC content)

The annual TAC emissions from R002 and R004 are calculated in accordance with PTIO permit P0109146.

c. Emission Limitation

Volatile organic compound (VOC) emissions shall not exceed 77.7 ton/yr from coating and clean-up material usage based upon a rolling, 12-month summation of the emissions.

Applicable Compliance Method

Compliance with the rolling, 12-month VOC limit shall be determined through the recordkeeping requirements in d)(6).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25 or 25A.

g) Miscellaneous Requirements

(1) None.