**John R. Kasich**, Governor
**Mary Taylor**, Lt. Governor
**Craig W. Butler**, Director

Certified Mail

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

10/29/2014

Ralph Fearnley
Polyfill LLC
960 North Vandemark Road
Sidney, OH 45365

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0575015002
Permit Number: P0117743
Permit Type: OAC Chapter 3745-31 Modification
County: Shelby

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) 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. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

**How to appeal this permit**

The issuance of this PTIO 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
77 South High Street, 17th Floor
Columbus, OH 43215

**How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

**How to give us feedback on your permitting experience**

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

**How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Southwest District Office at (937)285-6357or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Erica R. Engel-Ishida, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-SWDO

# FINAL

# Division of Air Pollution Control
# Permit-to-Install and Operate
for
Polyfill LLC

| | |
|---|---|
| Facility ID: | 0575015002 |
| Permit Number: | P0117743 |
| Permit Type: | OAC Chapter 3745-31 Modification |
| Issued: | 10/29/2014 |
| Effective: | 10/29/2014 |
| Expiration: | 7/14/2020 |

**Division of Air Pollution Control**
**Permit-to-Install and Operate**
for
Polyfill LLC

**Table of Contents**


Authorization ..... 1

A. Standard Terms and Conditions ..... 3

1. What does this permit-to-install and operate ("PTIO") allow me to do? ..... 4
2. Who is responsible for complying with this permit? ..... 4
3. What records must I keep under this permit? ..... 4
4. What are my permit fees and when do I pay them? ..... 4
5. When does my PTIO expire, and when do I need to submit my renewal application? ..... 4
6. What happens to this permit if my project is delayed or I do not install or modify my source? ..... 5
7. What reports must I submit under this permit? ..... 5
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? ..... 5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ..... 5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? ..... 6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? ..... 6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? ..... 6
13. Can I transfer this permit to a new owner or operator? ..... 7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? ..... 7
15. What happens if a portion of this permit is determined to be invalid? ..... 7

B. Facility-Wide Terms and Conditions ..... 8

C. Emissions Unit Terms and Conditions ..... 10

1. P001, P001 ..... 11

# Authorization

| | |
|---|---|
| Facility ID: | 0575015002 |
| Application Number(s): | M0003030 |
| Permit Number: | P0117743 |
| Permit Description: | Chapter 31 modification permit due to maintenance improvements increasing unit reliability and increases in the pound per hour throughput of the unit. |
| Permit Type: | OAC Chapter 3745-31 Modification |
| Permit Fee: | $1,000.00 |
| Issue Date: | 10/29/2014 |
| Effective Date: | 10/29/2014 |
| Expiration Date: | 7/14/2020 |

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Polyfill LLC
960 North Vandemark Road
Sidney, OH 45365

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

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southwest District Office
401 East Fifth Street
Dayton, OH 45402
(937)285-6357

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

Craig W. Butler
Director

# Authorization (continued)

Permit Number: P0117743
Permit Description: Chapter 31 modification permit due to maintenance improvements increasing unit reliability and increases in the pound per hour throughput of the unit.

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

| | |
|---|---|
| **Emissions Unit ID:** | **P001** |
| Company Equipment ID: | P001 |
| Superseded Permit Number: | P0114571 |
| 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. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. 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 of this permit 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 [DO/LAA] 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 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 emission 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 beingpermanently shut down without first applying for and obtaining a permit pursuantto OAC Chapter 3745-31.

**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. P001, P001**

**Operations, Property and/or Equipment Description:**

Heavy Layer Line

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)c, b(1)h, b(2)b, and d(2).

(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 3745-31-05(A)(3) | 17.0 tons OC/VOC per 12 month rolling period. |
| b. | OAC Rule 3745-31-05(A)(3) | The rolling 12 month particulate emissions (PE) and $PM_{10}$ emissions from this emissions unit shall not exceed 0.26 tons, from production.<br><br>Emissions from natural gas combustion shall not exceed:<br><br>0.02 tons per 12 month rolling period for nitrogen oxides (NOx);<br>0.02 tons per 12 month rolling period for carbon monoxide (CO);<br>0.002 tons per 12 month rolling period for PE;<br>0.0002 tons per 12 month rolling period for VOC; and<br>0.0001 tons per year for sulfur dioxide |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | | (SO2) 12 month rolling period.<br><br>OAC Rule 3745-31-05(A)(3)(a)(ii)The 12 month rolling period individual and combined hazardous air pollutant (HAP) emissions from this emissions unit shall not exceed 0.82 tons, individual, and/or 0.85 tons, combined, from production.<br><br>See b(2)a., below. |
| c. | OAC Rule 3745-31-05(A)(3)(a)(ii) | The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NOx, CO, PE, VOC, and SO2 emissions from this air contaminant source since the potential to emit is less than 10 tons/year.<br><br>See b(2)b., below. |
| d. | OAC rule 3745-17-10(B)(1)<br>(Fuel combustion emissions) | 020 pound particulate emissions (PE) per million Btu of actual heat input. |
| e. | OAC rule 3745-17-11(B)(1) Table I<br>(Process production emissions) | The particulate emissions (PE) from this emissions unit shall not exceed 15.8 pounds per hour. |
| g. | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule. |
| h. | OAC rule 3745-114-01 | Ohio Air Toxics Rule |

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[OAC rule 3745-31-05(A)(3)]

b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

[OAC rule 3745-31-05(A)(3)(a)(ii)]

c) Operational Restrictions

(1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions units maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittee(s) to apply for and obtain a new or modified PTIO prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.

[ORC 3704.03(F)(3)(c) and F(4)]

(3) The permittee shall maintain records that document any time periods that this emissions unit was not maintained in accordance the manufacturers recommendation maintenance procedures and/or operational specifications.

e) Reporting Requirements

(1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

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. Emission Limitation:

17.0 tons of OC/VOC per 12 month rolling period

The above limitation is based on the following equation:

AER = {[(Hp x 8760) x (Ep)] x Ef}/2000

Where:

AER = Daily emission rate, in pounds of OC/VOC;

Hp = Hourly production rate, in pounds, (15,000, from PTIO EAC form);

Ep = Number of emission points where OC/VOC emissions are likely to be emitted from, (2, based on PTIO calculation sheet submitted with application, emission points are assumed to be mixing and extruder)*: and

Ef = Emission factor, in pounds OC/VOC emitted per $10^6$ pounds produced, (128.2, from "development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acrylate Copolymer Processing" Barlow et al., "Journal of Air and Waste Management Association," Volume 47, October 1997.

Applicable Compliance Method:

Compliance based on the maximum production rate is 15,000 pounds per hour and the emissions factors from "Development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acrylate Copolymer Processing" Barlow et al., "Journal of Air and Waste Management Association," Volume 47, October 1997.

Any changes in this emissions unit and/or the above equations that would cause an increase in the potential hourly emissions from this emissions unit will need to be reviewed by the appropriate office for possible additional air pollution permit requirements.

* Emissions are based on multiple emission points in the emissions unit with use of available emission factors. This represent worst case emission scenario and is consistent with previous air pollution permits. Future stack testing data and/or other studies may demonstrate possible increases and/or decreases, but at this point in time the above emission calculation represents the worst case emissions.

b. Emission Limitation:

0.020 pound per million Btu of actual heat input

Applicable Compliance Method:

Compliance based on the use of natural gas as fuel and the recordkeeping in section d) of these terms and conditions.

c. Emission Limitation:

15.8 pound PE/$PM_{10}$ per hour

The above limitation is based on the following equation:

$(E) = 4.10 \times (P)^{0.67}$

Where:

(E) = Allowable Rate of Particulate Emissions, in pounds per hour; and

(P) = Process Weight Rate at Maximum Capacity, in tons per hour.

Applicable Compliance Method:

Compliance based on the maximum production rate is 15,000 pounds per hour and the emissions factors from "Development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acrylate Copolymer Processing" Barlow et al., "Journal of Air and Waste Management Association," Volume 47, October 1997.

Any changes in this emissions unit and/or the above equations that would cause an increase in the potential hourly emissions from this emissions unit will need to be reviewed by the appropriate office for possible additional air pollution permit requirements.

d. Emission Limitation:

0.26 tons of $PE/PM_{10}$ per 12 month rolling period

The above limitation is based on the following equation:

$AER = \{[(Hp \times 8760) \times (Ep)] \times Ef\}/2000$

Where:

AER = Daily emission rate, in pounds of $PE/PM_{10}$;

Hp = Hourly production rate, in pounds, (15,000, from PTIO EAC form);

Ep = Number of emission points where $PE/PM_{10}$ emissions are likely to be emitted from, (4, based on PTIO calculation sheet submitted with application, emission points are assumed to be conveyor to mixer, mixing, calendar, and extruder): and

Ef = Emission factor, in pounds $PE/PM_{10}$ emitted per $10^6$ pounds produced, (1.0, from "development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acrylate Copolymer Processing" Barlow et al., "Journal of Air and Waste Management Association," Volume 47, October 1997.

Applicable Compliance Method:

Compliance based on the maximum production rate is 15,000 pounds per hour and the emissions factors from "Development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acrylate Copolymer Processing" Barlow et al., "Journal of Air and Waste Management Association," Volume 47, October 1997.

Any changes in this emissions unit and/or the above equations that would cause an increase in the potential hourly emissions from this emissions unit will need to be reviewed by the appropriate office for possible additional air pollution permit requirements.

* Emissions are based on multiple emission points in the emissions unit with use of available emission factors. This represent worst case emission scenario and is consistent with previous air pollution permits. Future stack testing data and/or other studies may demonstrate possible increases and/or decreases, but at this point in time the above emission calculation represents the worst case emissions.

e. Emission Limitation:

0.82 tons of individual HAP per 12 month rolling period; and

0.85 tons of combined HAP's per 12 month rolling period.

The above limitation is based on the following equation:

AER = {[(Hp x 8760) x (Ep)] x Ef}/2000

Where:

AER = Daily emission rate, in pounds of HAP;

Hp = Hourly production rate, in pounds, (15,000, from PTIO EAC form);

Ep = Number of emission points where HAP emissions are likely to be emitted from, (2, based on PTIO calculation sheet submitted with application, emission points are assumed to be mixing, and extruder): and

Ef = Emission factor, in pounds HAP emitted per $10^6$ pounds produced, (6.22 (individual HAP) and 6.47 (combined HAP's)), from "development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acrylate Copolymer Processing" Barlow et al., "Journal of Air and Waste Management Association," Volume 47, October 1997.

Applicable Compliance Method:

Compliance based on the maximum production rate is 15,000 pounds per hour and the emissions factors from "Development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acrylate Copolymer Processing" Barlow et al., "Journal of Air and Waste Management Association," Volume 47, October 1997.

Any changes in this emissions unit and/or the above equations that would cause an increase in the potential hourly emissions from this emissions unit will need to be reviewed by the appropriate office for possible additional air pollution permit requirements.

* Emissions are based on multiple emission points in the emissions unit with use of available emission factors. This represent worst case emission scenario and is consistent with previous air pollution permits. Future stack testing data and/or other studies may demonstrate possible increases and/or decreases, but at this point in time the above emission calculation represents the worst case emissions.

f. Emissions from natural gas combustion shall not exceed:

0.02 tons per 12 month rolling period for nitrogen oxides (NOx);

0.02 tons per 12 month rolling period for carbon monoxide (CO);

0.002 tons per 12 month rolling period for PE;

0.0002 tons per 12 month rolling period for VOC; and

0.0001 tons per 12 month rolling period for sulfur dioxide (SO2)

The above emission limits are based on the following equation:

HER = (NGu x Ef)

AER = (NGu x Ef) X (8760/2000)

Where:

HER = Hourly emissions rate, in pounds per hour;

AER = Annual emission rate, in tons per year;

NGu = Natural gas usage, in cubic feet per hour, (200), ((60,000 btu/hr x 2 burners / (1020 btu/cuft);

EF = Emission factor, in pounds of “X” per MM cubic feet of natural gas usage*:

i. 100 lbs. NOx/mm cu. ft.*;

ii. 84 lbs. CO/mm cu. ft.*;

iii. 7.6 lbs. PM/mm cu. ft.*;

iv. 5.5 lbs. VOC/mm cu. ft.*; and

v. 0.6 lbs. SO2/mm cu. ft*.

*"Compilation of Air Pollutant Emission Factors," AP-42, Tables 1.4-1, and 1.4-2., revised 7/98.

Applicable Compliance Method:

Compliance shall be assured based on the use of natural gas and maintenance and upkeep of the existing natural gas burners employed in this emissions unit.

If required, compliance shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5, 6, 7, 10, 25A.

g. Emission Limitation

Visible particulate emissions from any/the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If requested, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

[OAC rule 3745-17-03(B)(1)(a)]

g) Miscellaneous Requirements

(1) None.