State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
LORAIN COUNTY

Street Address:
122 S. Front Street
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 02-16163

DATE: 3/7/2002

PolyOne Corporation
Denny Lugar
Moore and Walker Rds
Avon Lake, OH 44012

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

CC: **USEPA** **NEDO**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 3/7/2002**
Terms and Conditions	**Effective Date: 3/7/2002**

FINAL PERMIT TO INSTALL 02-16163

Application Number:	02-16163
APS Premise Number:	0247030884
Permit Fee:	**$1200**
Name of Facility:	PolyOne Corporation
Person to Contact:	Denny Lugar
Address:	Moore and Walker Rds Avon Lake, OH 44012

Location of proposed air contaminant source(s) [emissions unit(s)]:
Moore and Walker Rds
Avon Lake, **Ohio**

Description of proposed emissions unit(s):
New (L extruder line) and modifications (M and N extruder lines). Terms in this permit supercede those identified in PTI 02-4404 issued 4/05/89 and PTI 02-5515 issued 4/18/90.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PE	10.38
OC	6.03

Emissions Unit ID: **P007**

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P007 - M Extruder Line, Bldg 452, conversion of PVC resin with pigments/additives to thermoplastic PVC pellets through an extrusion process. Terms in this permit supercede those identified in PTI 02-4404 issued 4/5/89. (see section A.2.a below)	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.86 lb/hr and 3.46 tons per year (tpy). Organic Compounds (OC) emissions shall not exceed 0.46 lb/hr and 2.01 tpy. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The emission unit consists of the following emission points:

Air Pollution Emission Unit Description	Control Device Type / ID
i. Resin Transfer (VFR-2M)	fabric filter / (VFR-2M)

ii.	Hopper (HPR-2M)	fabric filter / (SED-3M)
iii.	Impact Modifier Transfer (VFR-1M)	fabric filter / (VFR-1M)
iv.	Hopper (HPR-1M)	fabric filter / (SED-2M)
v.	Mixer (MI-3M), Cooler (CLR-1M) and Weigh Hopper (LW-1M)	fabric filter / (SED-1M)
vi.	Extruder (EXT-1M)	none
vii.	Pellet Separator (SED-4M), SED-5M, Pellet Cooler (CLR-2M), Pellet Separator (SED-5M) and Impingment Plate (SED-1/BL-3M)	cyclones, other / (SED-4M, SED-1/BL-3M)

B. Operational Restrictions

1. The pressure drop across each control device listed below shall be maintained within the allowable pressure drop operating range while the emissions unit is in operation.

Air Pollution Device (I.D.)		Control Device Type	Allowable Pressure Drop Operating Range, in H20
a.	(VFR-2M)	fabric filter	1-7
b.	(VFR-1M)	fabric filter	1-7
c.	(SED-1M)	fabric filter	1-7

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across each control device while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendation, instructions, and operating manual(s). The permittee shall record the pressure drop across each control device on a daily basis.

2. The permit to install for this emissions unit P007 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case"

pollutant(s):

Pollutant: Vinyl Chloride

TLV (ug/m3): 2556.2

Maximum Hourly Emission Rate (lbs/hr): 0.33 lb/hr from emission units P007, P009 and P013
Vinyl Chloride emissions have been combined from emission units P007, P009 and P013.

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 12.68

MAGLC (ug/m3): 61

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior

to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across each control device did not comply with the allowable range specified.

E. Testing Requirements

1. Compliance with the allowable emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:
0.86 lb/hr and 3.46 tpy of PE

Applicable Compliance Method:
Compliance shall be based upon the use of a grain loading emission limit, stack temperatures, stack pressures and correction factors (bottlenecks) supplied by the company and the following equations:

<u>Group 1 emission points:</u>

i. Resin Transfer (VFR-2M)
ii. Hopper (SED-3M)
iii. Impact Modifier Transfer (VFR-1M)
iv. Hopper (SED-2M)
v. Mixer, Cooler and Weigh Hopper (SED-1M)

PE (lb/hr) = (0.02 grains/dscf)(exhaust gas flow rate, acfm)(standard temperature/stack temperature)(stack pressure/standard pressure)(60 min/hr)(1 lb/7000 gr)

Apply the above equation to each Group 1 emission point, and subtotal Group 1 emission points (lb/hr).

Tons per year shall be calculated by multiplying pounds per hour (obtained from the above equation for each Group 1 emission point) by the hours of operation per year for each emissions point, and dividing by 2000. For the Resin Transfer (VFR-2M) emissions point, the calculated result (tons per year) shall be multiplied by a correction factor of 0.842 (ton corrected/ton uncorrected). For the Impact Modifier Transfer (VFR-1M) emissions point, the calculated result (tons per year) shall be multiplied by a correction factor of 0.158 (ton corrected/ton uncorrected), subtotal Group 1 emission points (tpy).

Group 2 emission point:

i. Pellet separator (SED-4M), Pellet cooler (CLR-2M), Pellet separator (SED-5M) and
Impingment Plate (SED-1/BL-3M)

Pounds per hour emission rate for the above emission point shall be based upon the use of material balance equations for each piece of equipment contained in the Group 2 emission point.

Tons per year shall be calculated by multiplying pounds per hour (obtained from material balances above) by the hours of operation per year, and dividing by 2000.

Calculate Total PE (lb/hr and tpy) by the following equations:
Total maximum PE (lb/hr) = subtotal (Group 1) emissions + subtotal (Group 2) emissions
Total maximum PE (tpy) = subtotal (Group 1) emissions + subtotal (Group 2) emissions

If required pursuant to OAC 3745-15-04, the permittee shall demonstrate compliance with the hourly particulate emission limit of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5, and in OAC rule 3745-17-03(B)(10).

c. Emission Limitation:
20 % opacity as a six-minute average

Compliance shall be demonstrated by using Method 9 as outlined in 40 CFR 60, Appendix A, if required by the Ohio EPA.

d. Emissions Limitation:
0.46 lb/hr and 2.01 tpy OC

Applicable Compliance Method:
Compliance shall be based upon the use of an emission factor as supplied by the company and the maximum capacity of this emissions unit. Tons per year shall be calculated by multiplying pounds per hour by the hours of operation per year, and dividing by 2000.

If required pursuant to OAC 3745-15-04, the permittee shall demonstrate compliance with the hourly OC emission limit of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 25, 25(A) or an alternative test method, approved by the Director.

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P009 - N Extruder Line, Bldg 452, conversion of PVC resin with pigments/additives to thermoplastic PVC pellets through an extrusion process. Terms in this permit supercede those identified in PTI 02-5155 issued 4/18/90. (see section A.2.a below)	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.86 lb/hr and 3.46 tons per year (tpy). Organic Compounds (OC) emissions shall not exceed 0.46 lb/hr and 2.01 tpy. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The emission unit consists of the following emission points:

Air Pollution Emission Unit Description		Control Device Type Type / ID
i.	Resin Transfer (VFR-2N)	fabric filter / (VFR-2N)
ii.	Hopper (HPR-2N)	fabric filter / (SED-2N)
iii.	Impact Modifier Transfer (VFR-1N)	fabric filter / (VFR-1N)
iv.	Hopper (HPR-1N)	fabric filter / (VFR-1N)
v.	Mixer (MI-1N), Cooler (CLR-1N) and Weigh Hopper (LW-1N)	fabric filter / (SED-3N)
vi.	Extruder (EXT-1N)	none
vii.	Pellet Separator (SED-4N), Pellet Cooler (CLR-2N), Pellet Separator (SED-5N) and Impingment Plate (SED-1/BL-5N)	cyclones, other / (SED-4N, SED-5N, SED-1/BL-5N)

B. Operational Restrictions

1. The pressure drop across each control device listed below shall be maintained within the allowable pressure drop operating range while the emissions unit is in operation.

Air Pollution Device (I.D.)		Control Device Type	Allowable Pressure Drop Operating Range, in H20
a.	(VFR-2N)	fabric filter	1-7
b.	(VFR-1N)	fabric filter	1-7
c.	(SED-3N)	fabric filter	1-7

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across each control device while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendation, instructions, and operating manual(s). The permittee shall record the pressure drop across each control device on a daily basis.

2. The permit to install for this emissions unit P009 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using

data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Vinyl Chloride

TLV (ug/m3): 2556.2

Maximum Hourly Emission Rate (lbs/hr): 0.33 lb/hr from emission units P007, P009 and P013
Vinyl Chloride emissions have been combined from emission units P007, P009 and P013.

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 12.68

MAGLC (ug/m3): 61

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior

to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across each control device did not comply with the allowable range specified.

E. Testing Requirements

1. Compliance with the allowable emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:
0.86 lb/hr and 3.46 tpy of PE

Applicable Compliance Method:
Compliance shall be based upon the use of a grain loading emission limit, stack temperatures, stack pressures and correction factors (bottlenecks) supplied by the company and the following equations:

<u>Group 1 emission points:</u>

i. Resin Transfer (VFR-2N)
ii. Hopper (SED-2N)
iii. Impact Modifier Transfer (VFR-1N)
iv. Hopper (SED-1N)
v. Mixer, Cooler and Weigh Hopper (SED-3N)

PE (lb/hr) = (0.02 grains/dscf)(exhaust gas flow rate, acfm)(standard temperature/stack temperature)(stack pressure/standard pressure)(60 min/hr)(1 lb/7000 gr)

Apply the above equation to each Group 1 emission point, and subtotal Group 1 emission points (lb/hr).

Tons per year shall be calculated by multiplying pounds per hour (obtained from the above equation for each Group 1 emission point) by the hours of operation per year for each emissions point, and dividing by 2000. For the Resin Transfer (VFR-2N) emissions point, the calculated result (tons per year) shall be multiplied by a correction factor of 0.842 (ton corrected/ton uncorrected). For the Impact Modifier Transfer (VFR-1N) emissions point, the calculated result (tons per year) shall be multiplied by a correction factor of 0.158 (ton corrected/ton uncorrected), subtotal Group 1 emission points (tpy).

Group 2 emission point:

i. Pellet separator (SED-4N), Pellet cooler (CLR-2N), Pellet separator (SED-5N) and Impingment Plate (SED-1/BL-5N)

Pounds per hour emission rate for the above emission point shall be based upon the use of material balance equations for each piece of equipment contained in the Group 2 emission point.

Tons per year shall be calculated by multiplying pounds per hour (obtained from material balances above) by the hours of operation per year, and dividing by 2000.

Calculate Total PE (lb/hr and tpy) by the following equations:
Total maximum PE (lb/hr) = subtotal (Group 1) emissions + subtotal (Group 2) emissions
Total maximum PE (tpy) = subtotal (Group 1) emissions + subtotal (Group 2) emissions

If required pursuant to OAC 3745-15-04, the permittee shall demonstrate compliance with the hourly particulate emission limit of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5, and in OAC rule 3745-17-03(B)(10).

c. Emission Limitation:
20 % opacity as a six-minute average

Compliance shall be demonstrated by using Method 9 as outlined in 40 CFR 60, Appendix A, if required by the Ohio EPA.

d. Emissions Limitation:
0.46 lb/hr and 2.01 tpy OC

Applicable Compliance Method:
Compliance shall be based upon the use of an emission factor as supplied by the company and the maximum capacity of this emissions unit. Tons per year shall be calculated by multiplying pounds per hour by the hours of operation per year, and dividing by 2000.

If required pursuant to OAC 3745-15-04, the permittee shall demonstrate compliance with the hourly OC emission limit of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 25, 25(A)

or an alternative test method, approved by the Director.

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P013 - L Extruder Line, Bldg 452, conversion of PVC resin with pigments/additives to thermoplastic PVC pellets through an extrusion process.(see section A.2.a below)	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.86 lb/hr and 3.46 tons per year (tpy). Organic Compounds (OC) emissions shall not exceed 0.46 lb/hr and 2.01 tpy. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The emission unit consists of the following emission points:

Air Pollution Emission Unit Description		Control Device Type / ID
i.	Resin Transfer (VFR-2L)	fabric filter / (VFR-2L)
ii.	Hopper (HPR-2L)	fabric filter / (SED-2L)
iii.	Impact Modifier Transfer (VFR-1L)	fabric filter / (VFR-1L)
iv.	Hopper (HPR-1L)	fabric filter / (SED-1L)
v.	Mixer (MI-1L), Cooler (CLR-1L) and Weigh Hopper(LW-1L)	fabric filter / (SED-3L)
vi.	Extruder (EXT-1L)	none
vii.	Pellet Separator (SED-4L), Pellet Cooler (CLR-2L), Pellet Separator (SED-5L) and Impingment Plate (SED-1/BL-5L)	cyclones, other / (SED-4L, SED-5L, SED-1/BL-5L)

B. Operational Restrictions

1. The pressure drop across each control device listed below shall be maintained within the allowable pressure drop operating range while the emissions unit is in operation.

Air Pollution Device (I.D.)		Control Device Type	Allowable Pressure Drop Operating Range, in H20
a.	(VFR-2L)	fabric filter	1-7
b.	(VFR-1L)	fabric filter	1-7
c.	(SED-3L)	fabric filter	1-7

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across each control device while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendation, instructions, and operating manual(s). The permittee shall record the pressure drop across each control device on a daily basis.

2. The permit to install for this emissions unit P013 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using

data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Vinyl Chloride

TLV (ug/m3): 2556.2

Maximum Hourly Emission Rate (lbs/hr): 0.33 lb/hr from emission units P007, P009 and P013
Vinyl Chloride emissions have been combined from emission units P007, P009 and P013.

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 12.68

MAGLC (ug/m3): 61

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the

Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across each control device did not comply with the allowable range specified.

E. Testing Requirements

1. Compliance with the allowable emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:
0.86 lb/hr and 3.46 tpy of PE

Applicable Compliance Method:
Compliance shall be based upon the use of a grain loading emission limit, stack temperatures, stack pressures and correction factors (bottlenecks) supplied by the company and the following equations:

<u>Group 1 emission points:</u>

i. Resin Transfer (VFR-2L)
ii. Hopper (SED-2L)
iii. Impact Modifier Transfer (VFR-1L)
iv. Hopper (SED-1L)
v. Mixer, Cooler and Weigh Hopper (SED-3L)

PE (lb/hr) = (0.02 grains/dscf)(exhaust gas flow rate, acfm)(standard temperature/stack temperature)(stack pressure/standard pressure)(60 min/hr)(1 lb/7000 gr)

Apply the above equation to each Group 1 emission point, and subtotal Group 1 emission points (lb/hr).

Tons per year shall be calculated by multiplying pounds per hour (obtained from the above equation for each Group 1 emission point) by the hours of operation per year for each emissions point, and dividing by 2000. For the Resin Transfer (VFR-2L) emissions point, the calculated result (tons per year) shall be multiplied by a correction factor of 0.842 (ton corrected/ton uncorrected). For the Impact Modifier Transfer (VFR-1L) emissions point, the calculated result (tons per year) shall be multiplied by a correction factor of 0.158 (ton corrected/ton uncorrected), subtotal Group 1 emission points (tpy).

Group 2 emission point:

i. Pellet separator (SED-4L), Pellet cooler (CLR-2L), Pellet separator (SED-5L) and Impingment Plate (SED-1/BL-5L)

Pounds per hour emission rate for the above emission point shall be based upon the use of material balance equations for each piece of equipment contained in the Group 2 emission point.

Tons per year shall be calculated by multiplying pounds per hour (obtained from material balances above) by the hours of operation per year, and dividing by 2000.

Calculate Total PE (lb/hr and tpy) by the following equations:
Total maximum PE (lb/hr) = subtotal (Group 1) emissions + subtotal (Group 2) emissions
Total maximum PE (tpy) = subtotal (Group 1) emissions + subtotal (Group 2) emissions

If required pursuant to OAC 3745-15-04, the permittee shall demonstrate compliance with the hourly particulate emission limit of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5, and in OAC rule 3745-17-03(B)(10).

c. Emission Limitation:
20 % opacity as a six-minute average

Compliance shall be demonstrated by using Method 9 as outlined in 40 CFR 60, Appendix A, if required by the Ohio EPA.

d. Emissions Limitation:
0.46 lb/hr and 2.01 tpy OC

Applicable Compliance Method:
Compliance shall be based upon the use of an emission factor as supplied by the company and the maximum capacity of this emissions unit. Tons per year shall be calculated by multiplying pounds per hour by the hours of operation per year, and dividing by 2000.

If required pursuant to OAC 3745-15-04, the permittee shall demonstrate compliance with the hourly OC emission limit of this permit by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 25, 25(A) or an alternative test method, approved by the Director.

F. Miscellaneous Requirements

None