State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

**TELE:** (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

**RE: DRAFT PERMIT TO INSTALL**
**MIAMI COUNTY**
**Application No: 08-4085**

**CERTIFIED MAIL**

| | |
|---|---|
| | TOXIC REVIEW |
| | PSD |
| X | SYNTHETIC MINOR |
| | CEMS |
| | MACT |
| | NSPS |
| | NESHAPS |
| | NETTING |
| | MAJOR NON-ATTAINMENT |
| | MODELING SUBMITTED |
| | GASOLINE DISPENSING FACILITY |

**DATE: December 1, 1999**

ELM Packaging Company
Pete Murphy
1261 Brukner Drive
Troy, OH 45373

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed of final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **$ 1000** will be due. Please do not submit any payment now.

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. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo

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

cc: **USEPA**
**REGIONAL AIR POLLUTION CONTROL AGENCY**
**Indiana Office of Air Management**
**Miami Valley Regional Planning Commission**

**DRAFT PERMIT TO INSTALL 08-4085**

Application Number: 08-4085

APS Premise Number: 0855140332

Permit Fee: **To be entered upon final issuance**

Name of Facility: ELM Packaging Company

Person to Contact: Pete Murphy

Address: 1261 Brukner Drive
Troy, OH 45373

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1261 Brukner Drive**
**Troy**, **Ohio**

Description of proposed emissions unit(s):
**THREE POLYSTYRENE FOAM EXTRUDERS; TWO POLYSTYRENE PELLETIZERS WITH REGENERATIVE THERMAL OXIDIZER CONTROL.**

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 are inadequate 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 prove to be inadequate 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 |
|---|---|
| VOC | 47.77 |

## 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 |
|---|---|---|
| Polystyrene foam extruder #2 *modification | OAC rule 3745-31-05(A)(3) | 0.20 lb/hour and 4.91 lbs/day organic compounds;<br><br>0.90 TPY organic compounds |
| | OAC rule 3745-21-07(G)(2) | less stringent than the OC limit above |

**2. Additional Terms and Conditions**

**2.a** The 0.20 lb/hour limitation is being developed for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirement to ensure compliance with this limit.

**2.b** Fugitive emissions from the storage areas has been estimated to be 32.85 TPY OC based upon the maximum daily production rate and the maximum off-gassing of OC from the polystyrene foam during storage. The fugitive emissions are not included in the allowable emission rates for the emissions units identified in this PTI (P001, P004, P009, P007, and P008).

### B. Operational Restrictions

1. The permittee shall employ only isopentane as the blowing agent in this extruder.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for the extruding operation:

   a. The number of pounds of polystyrene foam produced.

b. The total organic compound emission rate, in pounds per day (see calculation methodology in E.1.b.).

2. For each day during which the permittee employs a blowing agent other than isopentane, the permittee shall maintain a record of the type and quantity of blowing agent employed in this emissions unit.

## D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which includes an identification of each day during which the organic compound emissions from the extruder exceeded 4.91 pounds per day, and the actual organic compound emissions for each such day.

2. The permittee shall submit deviation (excursion) reports that identify each day when a blowing agent other than isopentane was employed in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

## E. Testing Requirements

1. Compliance with the emission limitation(s) specified in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -

0.20 lb/hour organic compounds

Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly production rate of 750 lbs/hour by the engineering emission factor of 0.000273 lb OC/lb polystyrene foam produced.

b. Emission Limitation -

4.91 lbs/day organic compounds

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in C.1. and shall be the daily production rate multiplied by the engineering emission factor of 0.000273 lb OC/lb polystyrene foam produced.

c. Emission Limitation -

0.90 TPY organic compounds

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in C.1. and shall be the sum of the daily organic compound emissions for the calendar year, divided by 2,000 lbs/ton.

## F. Miscellaneous Requirements

1. *This modification reflects a change in the blowing agent employed in the extruders from 1,1-difluoroethane to isopentane and thus a change in the emissions from this emissions unit.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**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 |
|---|---|---|
| Polystyrene foam extruder #3 *modification | OAC rule 3745-31-05(A)(3) | 0.20 lb/hour and 4.91 lbs/day organic compounds;<br><br>0.90 TPY organic compounds |
| | OAC rule 3745-21-07(G)(2) | less stringent than the OC limit above |

**2. Additional Terms and Conditions**

**2.a** The 0.20 lb/hour limitation is being developed for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirement to ensure compliance with this limit.

**2.b** Fugitive emissions from the storage areas has been estimated to be 32.85 TPY OC based upon the maximum daily production rate and the maximum off-gassing of OC from the polystyrene foam during storage. The fugitive emissions are not included in the allowable emission rates for the emissions units identified in this PTI (P001, P004, P009, P007, and P008).

**B. Operational Restrictions**

1. The permittee shall employ only isopentane as the blowing agent in this extruder.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall collect and record the following information for each day for the extruding operation:

   a. The number of pounds of polystyrene foam produced.

b. The total organic compound emission rate, in pounds per day (see calculation methodology in E.1.b.).

2. For each day during which the permittee employs a blowing agent other than isopentane, the permittee shall maintain a record of the type and quantity of blowing agent employed in this emissions unit.

## D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which includes an identification of each day during which the organic compound emissions from the extruder exceeded 4.91 pounds per day, and the actual organic compound emissions for each such day.

2. The permittee shall submit deviation (excursion) reports that identify each day when a blowing agent other than isopentane was employed in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

## E. Testing Requirements

1. Compliance with the emission limitation(s) specified in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -

0.20 lb/hour organic compounds

Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly production rate of 750 lbs/hour by the engineering emission factor of 0.000273 lb OC/lb polystyrene foam produced.

b. Emission Limitation -

4.91 lbs/day organic compounds

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in C.1. and shall be the daily production rate multiplied by the engineering emission factor of 0.000273 lb OC/lb polystyrene foam produced.

c. Emission Limitation -

0.90 TPY organic compounds

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in C.1. and shall be the sum of the daily organic compound emissions for the calendar year, divided by 2,000 lbs/ton.

## F. Miscellaneous Requirements

1. *This modification reflects a change in the blowing agent employed in the extruders from 1,1-difluoroethane to isopentane and thus a change in the emissions from this emissions unit.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**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 |
|---|---|---|
| Polystyrene foam extruder #1 *modification | OAC rule 3745-31-05(A)(3) | 0.27 lb/hour and 6.55 lbs/day organic compounds;<br><br>1.20 TPY organic compounds |
| | OAC rule 3745-21-07(G)(2) | less stringent than the OC limit above |

**2. Additional Terms and Conditions**

**2.a** The 0.27 lb/hour limitation is being developed for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirement to ensure compliance with this limit.

**2.b** Fugitive emissions from the storage areas has been estimated to be 32.85 TPY OC based upon the maximum daily production rate and the maximum off-gassing of OC from the polystyrene foam during storage. The fugitive emissions are not included in the allowable emission rates for the emissions units identified in this PTI (P001, P004, P009, P007, and P008).

**B. Operational Restrictions**

1. The permittee shall employ only isopentane as the blowing agent in this extruder.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall collect and record the following information for each day for the extruding operation:

   a. The number of pounds of polystyrene foam produced.

b. The total organic compound emission rate, in pounds per day (see calculation methodology in E.1.b.).

2. For each day during which the permittee employs a blowing agent other than isopentane, the permittee shall maintain a record of the type and quantity of blowing agent employed in this emissions unit.

## D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which includes an identification of each day during which the organic compound emissions from the extruder exceeded 4.91 pounds per day, and the actual organic compound emissions for each such day.

2. The permittee shall submit deviation (excursion) reports that identify each day when a blowing agent other than isopentane was employed in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

## E. Testing Requirements

1. Compliance with the emission limitation(s) specified in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -

0.27 lb/hour organic compounds

Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly production rate of 1000 lbs/hour by the engineering emission factor of 0.000273 lb OC/lb polystyrene foam produced.

b. Emission Limitation -

6.55 lbs/day organic compounds

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in C.1. and shall be the daily production rate multiplied by the engineering emission factor of 0.000273 lb OC/lb polystyrene foam produced.

c. Emission Limitation -

1.20 TPY organic compounds

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in C.1. and shall be the sum of the daily organic compound emissions for the calendar year, divided by 2,000 lbs/ton.

## F. Miscellaneous Requirements

1. *This modification reflects a change in the blowing agent employed in the extruders from 1,1-difluoroethane to isopentane and thus a change in the emissions from this emissions unit.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**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 |
|---|---|---|
| Polystyrene foam repelletizer #27 with regenerative thermal oxidizer control *modification | OAC rule 3745-31-05(A)(3) | 1.36 lbs/hour and 5.96 TPY organic compound (OC); see A.2.c. |
| | OAC rule 3745-35-07(B) | see A.2.c. |
| | OAC rule 3745-21-07(G)(2) | The reduction efficiency limit based on this rule is less stringent than the limit established pursuant to 3745-31-05(A)(3) and 3745-35-07(B) above. |

**2. Additional Terms and Conditions**

**2.a** The 1.36 lb/hour limitation is being developed for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirement to ensure compliance with this limit.

**2.b** Fugitive emissions from the storage areas has been estimated to be 32.85 TPY OC based upon the maximum daily production rate and the maximum off-gassing of OC from the polystyrene foam during storage. The fugitive emissions are not included in the allowable emission rates for the emissions units identified in this PTI (P001, P004, P009, P007, and P008).

**2.c** The OC emissions from this emissions unit, shall be controlled through the application of a permanent total enclosure for 100 percent capture and a regenerative thermal oxidizer (RTO) system, operating at a minimum of 95% overall OC destruction efficiency.

## B. Operational Restrictions

1. The pelletizer identified as P007 shall be equipped with a permanent total enclosure (PTE) which shall be installed and operated in accordance with 40 CFR Part 51, Appendix M, Method 204. The PTE shall meet the following criteria:

   a. any "Natural Draft Opening" (NDO) shall be at least 4 equivalent diameters from each OC emission point;

   b. the total area of all NDOs shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;

   c. the average facial velocity (FV) of air through all NDOs shall be at least 3,600 m/hr (200 fpm) which corresponds to a pressure differential of 0.007 inches of water. The direction of air through all NDOs shall be into the enclosure;

   d. all access doors and windows whose area are not included in paragraph (b) and are not included in paragraph (c) shall be enclosed during routine operation; and,

   e. all OC emissions must be captured and contained for discharge through the OC control device.

   By satisfying the criteria above for establishing permanent total enclosure, the total organic capture efficiency shall be assumed to be 100%.

2. Definitions for PTE and NDO:

   Permanent Total Enclosure (PTE) - a permanently installed enclosure that completely surrounds a source of emissions such that all OC emissions are captured and contained for discharge through a control device.

   Natural Draft Opening (NDO) - any permanent opening in the enclosure that remains open during operation of the facility and is not connected to a duct to which a fan is installed.

3. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.007 inches of water, whenever the emissions unit is in operation.

4. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall install, maintain and operate monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

2. The permittee shall record and maintain the following information on a daily basis:

   a. The difference in pressure between the permanent total enclosure and the surrounding area(s).

   b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

4. The permittee shall collect and record the following information for each day:

   a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

   b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

5. The permittee shall maintain monthly records of the following information:

   a. The monthly production rate for the pelletizer, in pounds.

   b. The monthly OC emissions from the pelletizer, in pounds or tons (see calculation methodology in E.1.b.).

## D. Reporting Requirements

1. The permittee shall submit quarterly pressure differential deviation (excursion) reports that identify all periods of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.

2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the

emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

3. The permittee shall submit quarterly summaries which include a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. These summaries shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

4. The permittee shall submit deviation (excursion) reports in accordance with Section A.2. of the General Terms and Conditions of this permit.

## E. Testing Requirements

1. Compliance with the allowable emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitation -

   1.36 lbs/hour organic compounds

   Applicable Compliance Method -

   Compliance shall be determined by multiplying the maximum hourly processing rate of 800 lbs/hour by the maximum OC content of the polystyrene foam. This uncontrolled emission rate shall then be multiplied by the overall control efficiency of 95% (1 - 0.95). Compliance can also be based upon emissions testing as specified in Section E.2.

   b. Emission Limitation -

   5.96 TPY organic compounds

   Applicable Compliance Method -

   Compliance shall be based upon record keeping as specified in C.5. The monthly organic compound emission rate shall be calculated by multiplying the monthly production rate for the pelletizer by the OC content of the polystyrene foam. This uncontrolled monthly emission rate is then multiplied by the overall control efficiency of 95% (1 - 0.95). Compliance shall be determined by summing the twelve monthly OC emission rates for the calendar year.

   c. Emission Limitation -

   95% overall OC destruction efficiency of the regenerative thermal oxidizer

   Applicable Compliance Method -

   Compliance shall be based upon emissions testing as required in Section E.2.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. The emission testing shall be conducted within 90 days after start-up of this emissions unit.

   b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety-five percent destruction efficiency requirement for the thermal incinerator.

   c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal incinerator: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

   d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

   e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

      Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

      Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

## F. Miscellaneous Requirements

1. *This modification reflects a change in the blowing agent employed in the extruders from 1,1-difluoroethane to isopentane and thus a change in the emissions from this emissions unit.

2. Terms A.2.c., B.1., B.4., C.2., C.4., D.1., and D.2. are federally enforceable.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**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 |
|---|---|---|
| Polystyrene foam repelletizer #28 with regenerative thermal oxidizer control *modification | OAC rule 3745-31-05(A)(3) | 1.36 lbs/hour and 5.96 TPY organic compound (OC); see A.2.c. |
| | OAC rule 3745-35-07(B) | see A.2.c. |
| | OAC rule 3745-21-07(G)(2) | The reduction efficiency limit based on this rule is less stringent than the limit established pursuant to 3745-31-05(A)(3) and 3745-35-07(B) above. |

**2. Additional Terms and Conditions**

**2.a** The 1.36 lbs/hour limitation is being developed for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirement to ensure compliance with this limit.

**2.b** Fugitive emissions from the storage areas has been estimated to be 32.85 TPY OC based upon the maximum daily production rate and the maximum off-gassing of OC from the polystyrene foam during storage. The fugitive emissions are not included in the allowable emission rates for the emissions units identified in this PTI (P001, P004, P009, P007, and P008).

**2.c** The OC emissions from this emissions unit, shall be controlled through the application of a permanent total enclosure for 100 percent capture and a regenerative thermal oxidizer (RTO) system, operating at a minimum of 95% overall OC destruction efficiency.

## B. Operational Restrictions

1. The pelletizer identified as P008 shall be equipped with a permanent total enclosure (PTE) which shall be installed and operated in accordance with 40 CFR Part 51, Appendix M, Method 204. The PTE shall meet the following criteria:

   a. any "Natural Draft Opening" (NDO) shall be at least 4 equivalent diameters from each OC emission point;

   b. the total area of all NDOs shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;

   c. the average facial velocity (FV) of air through all NDOs shall be at least 3,600 m/hr (200 fpm) which corresponds to a pressure differential of 0.007 inches of water. The direction of air through all NDOs shall be into the enclosure;

   d. all access doors and windows whose area are not included in paragraph (b) and are not included in paragraph (c) shall be enclosed during routine operation; and,

   e. all OC emissions must be captured and contained for discharge through the OC control device.

   By satisfying the criteria above for establishing permanent total enclosure, the total organic capture efficiency shall be assumed to be 100%.

2. Definitions for PTE and NDO:

   Permanent Total Enclosure (PTE) - a permanently installed enclosure that completely surrounds a source of emissions such that all OC emissions are captured and contained for discharge through a control device.

   Natural Draft Opening (NDO) - any permanent opening in the enclosure that remains open during operation of the facility and is not connected to a duct to which a fan is installed.

3. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.007 inches of water, whenever the emissions unit is in operation.

4. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall install, maintain and operate monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

2. The permittee shall record and maintain the following information on a daily basis:

   a. The difference in pressure between the permanent total enclosure and the surrounding area(s).

   b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

4. The permittee shall collect and record the following information for each day:

   a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

   b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

5. The permittee shall maintain monthly records of the following information:

   a. The monthly production rate for the pelletizer, in pounds.

   b. The monthly OC emissions from the pelletizer, in pounds or tons (see calculation methodology in E.1.b.).

## D. Reporting Requirements

1. The permittee shall submit quarterly pressure differential deviation (excursion) reports that identify all periods of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.

2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the

emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

3. The permittee shall submit quarterly summaries which include a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. These summaries shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

4. The permittee shall submit deviation (excursion) reports in accordance with Section A.2. of the General Terms and Conditions of this permit.

## E. Testing Requirements

1. Compliance with the allowable emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitation -

   1.36 lbs/hour organic compounds

   Applicable Compliance Method -

   Compliance shall be determined by multiplying the maximum hourly processing rate of 800 lbs/hour by the maximum OC content of the polystyrene foam. This uncontrolled emission rate shall then be multiplied by the overall control efficiency of 95% (1 - 0.95). Compliance can also be based upon emissions testing as specified in Section E.2.

   b. Emission Limitation -

   5.96 TPY organic compounds

   Applicable Compliance Method -

   Compliance shall be based upon record keeping as specified in C.5. The monthly organic compound emission rate shall be calculated by multiplying the monthly production rate for the pelletizer by the OC content of the polystyrene foam. This uncontrolled monthly emission rate is then multiplied by the overall control efficiency of 95% (1 - 0.95). Compliance shall be determined by summing the twelve monthly OC emission rates for the calendar year.

   c. Emission Limitation -

   95% overall OC destruction efficiency of the regenerative thermal oxidizer

   Applicable Compliance Method -

   Compliance shall be based upon emissions testing as required in Section E.2.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. The emission testing shall be conducted within 90 days after start-up of this emissions unit.

   b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety-five percent destruction efficiency requirement for the thermal incinerator.

   c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal incinerator: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

   d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

   e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

      Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

      Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

## F. Miscellaneous Requirements

1. *This modification reflects a change in the blowing agent employed in the extruders from 1,1-difluoroethane to isopentane and thus a change in the emissions from this emissions unit.

2. Terms A.2.c., B.1., B.4., C.2., C.4., D.1., and D.2. are federally enforceable.