Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

FINAL PERMIT

PERMITTEE

Carpenter Co.
5100 Frontage Road South
Lakeland, FL 33815

Authorized Representative:
Mr. Tracy Lane, Operations Manager

Air Permit No. 1050192-013-AC
Permit Expires: 04/01/2012
Site Name: Carpenter Co.
Minor Air Construction Permit
Project Name: Addition of Pentane as an Auxiliary Blowing Agent

This is the final air construction permit, which authorizes the usage of pentane as an auxiliary blowing agent in the foam production process. The proposed work will be conducted at the Carpenter Co. facility (Standard Industrial Classification No. 3086). The facility is located in Polk County at 5100 and 5150 Frontage Road South in Lakeland, Florida. The UTM coordinates are Zone 17, 397.0 km East and 3101.4 km North (5100 Frontage Road South), and 396.7 km East and 3101.4 km North (5150 Frontage Road South). As noted in the Final Determination provided with this final permit, no changes or only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements and Facility-wide Specific Conditions

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by

the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Hillsborough County, Florida

_____ _____

Mara Grace Nasca Effective Date
District Air Program Administrator
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permit and the Appendices) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on _____ to the persons listed below.

Mr. Tracy Lane, Carpenter Co. (tracy.lane@carpenter.com)
Mr. Jason Jarrett, Carpenter Co. (jason.jarrett@carpenter.com)
Mr. Michael Ballenger, P.E., Trinity Consultants (mballeng@trinityconsultants.com)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Carpenter Co.

This facility is comprised of two independent manufacturing processes located in adjacent plant buildings. These two processes are: expandable polystyrene products manufacturing and flexible foam manufacturing and fabrication. The independent manufacturing processes are supported by other operations, including the calcium carbonate additive storage and handling process, as well as miscellaneous insignificant activities.

The existing facility consists of the following emissions units.

Facility ID No. 1050192	
ID No.	Emissions Unit Description
001	Expandable Polystyrene Products Manufacturing Facility
002	Flexible Foam Manufacturing and Fabrication Facility
003	Calcium Carbonate Storage Silo

Project Description and Affected Emissions Units

In the flexible foam production line, Carpenter Co. can utilize a blowing agent to produce different grades of foam. Currently, Carpenter uses carbon dioxide (CO_2) as the only blowing agent. Carpenter is proposing to use pentane as an auxiliary blowing agent. The use of pentane will improve the production of certain grades of foam that are difficult to produce with consistent quality with the use of CO_2 as the only blowing agent. No physical modifications to the foam production line are necessary to accommodate the use of an auxiliary blowing agent other than the addition of storage and handling equipment. The maximum expected short term pentane usage will be approximately 600 pounds per hour, not to exceed 39 tons per year.

This project will modify the following emissions unit.

Facility ID No. 1050192	
ID No.	Emissions Unit Description
002	Flexible Foam Manufacturing and Fabrication Facility

NOTE: *Please reference the Permit No., Facility ID, and Emissions Unit ID in all correspondence, test report submittals, applications, etc.*

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

PERMIT HISTORY/AFFECTED PERMITS

Modifies Permit No. 1050192-011-AV.

SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC CONDITIONS (FINAL)

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District's Air Resource Management Section. The Southwest District's mailing address and phone number is:

   Florida Department of Environmental Protection
   Southwest District Office
   Air Resource Management Section
   13051 North Telecom Parkway
   Temple Terrace, Florida 33637-0926
   Telephone: 813-632-7600

   All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office's Air Resource Management Section (see above mailing address and phone number).

3. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;
   b. Appendix B. General Conditions;
   c. Appendix C. Common Conditions;
   d. Appendix D. Common Testing Requirements;
   e. Appendix E. 40 CFR 63 Subpart A; and
   f. Appendix F. 40 CFR 63 Subpart OOOOOO.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.
   [Rule 62-4.080, F.A.C.]

6. Modifications: Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emissions unit or facility.
   [Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Source Obligation:

   a. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

8. Actual Emissions Reporting: This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for VOC emissions. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

   a. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.

   b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

      1) The name, address and telephone number of the owner or operator of the major stationary source;

      2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

      3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

      4) Any other information that the owner or operator wishes to include in the report.

   c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

   For this project, the Department requires the annual reporting of actual VOC emissions from usage of pentane as an auxiliary blowing agent for the following unit: EU 002 – Flexible Foam

Manufacturing and Fabrication Facility.
[Permit Application received 12/20/10; Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

9. Annual Operating Report: On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority.
[Rule 62-210.370(3), F.A.C.]

10. Application for Title V Air Operation Permit: This permit authorizes construction or modification of the permitted emissions unit(s) and initial operation to determine compliance with Department rules. A Title V air operation permit is required for continued operation of the permitted emissions unit(s). The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after the first time pentane is used as a blowing agent in EU 002. To apply for a Title V air operation permit, the applicant shall submit the following:

    a. the appropriate permit application form *(see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: http://www.dep.state.fl.us/air/)*; and

    b. copies of the most recent two months of records/logs specified in Specific Condition No. A.8.

    The application shall be submitted to the Permitting Authority.
    [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

A. EU 002 - Flexible Foam Manufacturing and Fabrication Facility

This section of the permit addresses the following emissions unit.

ID No.	Emissions Unit Description
002	The flexible foam manufacturing and fabrication facility fabricates polyurethane foam, polyester fiber battings, and occasional textile materials into semi-finished comfort cushioning products for furniture, bedding, home furnishings, and recreational product manufacturers. Additionally, polyurethane foam is fabricated into protective cushioning for the packaging industry. The primary means of fabrication is cutting the foam to customer specified sizes and shapes and when necessary assembling the pieces of foam by gluing them together. The gluing/adhesive application is typically accomplished by using 3 gluing/adhesive stations consisting of no more than 3 in-drum, pneumatically powered drum pumps feeding no more than a total of 15 compressed-air atomized, hand-held spray guns. Emissions from the glue/adhesive spray guns are discharged fugitively to the ambient air through natural building ventilation and dock door openings. This emissions unit, which does not produce "molded foam", is subject to the requirements of Title 40, Code of Federal Regulations (CFR), Part 63, Subpart OOOOOO – National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources. Carpenter Co. can utilize a blowing agent to produce different grades of foam. With this project, pentane will be added as an auxiliary blowing agent. The use of pentane will improve the production of certain grades of foam that are difficult to produce with consistent quality with the current use of CO_2 as the only blowing agent. No physical modifications to the foam production line are necessary to accommodate the use of an auxiliary blowing agent other than the addition of storage and handling equipment. The maximum expected short term pentane usage will be approximately 600 pounds per hour, not to exceed 39 tons per year. Pentane usage will be accurately metered, controlled, and monitored. All used pentane will be assumed to be released into the atmosphere as fugitive VOC emissions.

PERFORMANCE RESTRICTIONS

A.1. Federal Regulatory Requirements: This emissions unit is subject to 40 CFR 63, Subpart OOOOOO – National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources, which is adopted by reference in Rule 62-204.800. This Subpart is shown in its entirety in Appendix F, which is a part of this permit (Appendix E includes the applicable provisions of 40 CFR 63 Subpart A – General Provisions).
[Rule 62-204.800(11), F.A.C.]

A.2. Permitted Capacity: This emissions unit only produces slabstock flexible polyurethane foam, rebond foam, and flexible polyurethane foam. The flexible polyurethane foam process may contain a loop slitter and the emissions unit does not produce "molded foam".
[Rule 62-210.200 (PTE), F.A.C.; Construction Permit 1050192-012-AC]

A.3. Operational Limitation: This emissions unit shall not use materials containing methylene chloride as stipulated in 40 CFR 63.11416 and 40 CFR 63.11417 of Title 40, Code of Federal

Regulations (CFR), Part 63, Subpart OOOOOO – National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources. [Rule 62-204.800(11), F.A.C.]

A.4. Hours of Operation: The hours of operation are not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

A.5. VOC Emissions Limit: Emissions from this unit shall comply with the following:

Pollutant	**Emission Limit** (tons per any consecutive 12-month period)
VOC Emissions Excluding Emissions from Usage of Pentane as an Auxiliary Blowing Agent	25
VOC Emissions Exclusively from Usage of Pentane as an Auxiliary Blowing Agent	39
Total VOC Emissions	64

[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

{*Permitting Note: The limits were requested in air construction permit application received on 12/20/10*}

A.6. HAP Emissions Limit: Combined total HAP emissions from Emission Units 001 and 002 shall not exceed 2.5 tons per any consecutive 12 month period.
[62-210.200(PTE), F.A.C.; Construction Permit 1050192-008-AC]

NOTIFICATION REQUIREMENTS

A.7. Notification of Operation Commencement: The permittee shall notify the Compliance Authority in writing of the date pentane is first used as an auxiliary blowing agent, no later than fifteen (15) days after that date.
[Rule 62-4.070, F.A.C.]

RECORDS AND REPORTS

A.8. Daily and Monthly Logs: In to order to verify compliance with Specific Conditions Nos. A.5. and A.6., the permittee shall maintain appropriate daily records of materials used and monthly calculate and record the actual VOC and HAP emissions in accordance with the following:

For VOC Emissions Excluding Emissions from Usage of Pentane as an Auxiliary Blowing Agent

$V = \Sigma (P_i \times W_i)$

where: V = VOC emissions in pounds;
i = each unique material used;
P = % VOC content (this value may be reduced by the % of VOC retained in the product);
W = weight of material used in pounds.

For VOC Emissions Exclusively from Usage of Pentane as an Auxiliary Blowing Agent

V = Q x D

where: V = VOC emissions in pounds;
Q = Quantity of pentane used in gallons;
D = Density of pentane in pounds per gallon.

For HAP Emissions

Material Usage Rate x Individual HAP Concentration x Emission Factor = Individual HAP Emissions;
Sum of Individual HAP emissions = Total HAP Emissions

These records shall be kept at the facilities for a minimum of 5 years and made available to the Department upon request. Daily records shall be completed by the end of the following 14th business day and monthly records shall be completed by the end of the following month. Where appropriate, the monthly values recorded in "lbs." shall be converted to "tons" in order to demonstrate compliance. The permittee shall also maintain documentation, such as all MSD sheets, purchasing records, etc., for all polystyrene beads, glue/adhesives, and pentane used, which includes sufficient information to determine VOC, individual HAP, and total HAP emissions.
[Rule 62-4.070(3), F.A.C.; Construction Permit 1050192-008-AC]

A.9. Subpart OOOOOO Records: The permittee shall comply with the recordkeeping requirements of 40 CFR 63.11416(f), 40 CFR 63.11417(b)(3), and 40 CFR 63.11417(d) of Title 40, Code of Federal Regulations (CFR), Part 63, Subpart OOOOOO – National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources.
[Rule 62-204.800(11), F.A.C.; Construction Permit 1050192-012-AC]