TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Carpenter Co.
5100 Frontage Road South
Lakeland, FL 33815

Carpenter Co.

Facility ID No. 1050192

PROJECT

Project No. 1050192-013-AC
Application for Minor Air Construction Permit
Project Name: Addition of Pentane as an Auxiliary Blowing Agent

COUNTY

Polk County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Management
Southwest District Office
Temple Terrace, Florida 33637-7600

February 16, 2011

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Prepared by Nedin Bahtic

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GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

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

I. Project Description:

A. Applicant:

Tracy Lane, Operations Manager
Carpenter Co.
5100 Frontage Road South
Lakeland, FL 33815

B. Professional Engineer:

Michael Ballenger
Trinity Consultants
4767 New Broad Street
Orlando, FL 32814

C. Project Location:

5100 Frontage Road South
Lakeland, FL 33815

D. Project Summary:

For addition of pentane as an auxiliary blowing agent to the foam production process of the Flexible Foam Manufacturing and Fabrication Facility (Emissions Unit 002), as further described in the permit.

E. Application Information:

Application Received on: 12/20/10
Additional Information Requested on: N/A
Additional Information Received on: N/A
Application Complete: 01/13/11

II. Rule Applicability

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes and Chapters 62-204 through 62-297, Florida Administrative Code (F.A.C.), as indicated below.

Subject to:	Y/N	Comments
Rule 62-210.300, F.A.C. - Project Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C.	Y	not exempt from general permitting requirements
Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration	N	facility is a PSD major source based on VOC emissions, but this project does not trigger PSD review since VOC emissions increase for EU 002 is below the significant level of 40 tons/year
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	N	EU 002 is not a source of particulate matter emissions

Subject to:	Y/N	Comments
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	EU 002 is a source of VOCs and could also be a source of odors
Rule 62-296.400, F.A.C. - Stationary Source Emission Standards	N	there is no applicable source category
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Polk County is an attainment area for ozone
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	there is no applicable source category
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	N	there is no applicable source category
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants (NESHAPS – 40 CFR 61)	N	there is no applicable source category
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants for Source Categories a.k.a. MACT (NESHAPS – 40 CFR 63)	Y	EU 002 is subject to 40 CFR 63, Subpart OOOOOO
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	Y	facility is a Title V source since VOC emissions are above 100 tons/year
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	N	compliance testing is not required for EU 002

III. Summary of Emissions

Pollutant	EU No. and brief description	Potential Emissions (tons/year)	Allowable Emissions (tons/year)
PM	003 – Calcium Carbonate Storage Silo	0.84	N/A
	Facility Total	0.84	
PM_{10}	003 – Calcium Carbonate Storage Silo	0.42	N/A
	Facility Total	0.42	
VOC	001 – Expandable Polystyrene Products Mfg.	471	471
	002 – Flexible Foam Mfg.	64	64
	Total	535	535
Total HAPs	001 – Expandable Polystyrene Products Mfg. & 002 – Flexible Foam Mfg.	2.5	2.5
	Total	2.5	2.5
VE	003 – Calcium Carbonate Storage Silo		5% opacity

EU 002 – Flexible Foam Manufacturing and Fabrication Facility:

Pollutant	Baseline Actual Emissions (TPY)	Projected Actual Emissions (TPY)	Projected Actual Minus Baseline Actual Emissions (TPY)	Significant Emissions Rate (TPY)	PSD Required? Y/N
VOC	15.4	54.4	39	40	N

The table above is based on the following:
The following is historical data of VOC emissions and hours of operation for EU 002, as reported in Annual Operating Reports.

Year	Actual VOC Emissions (tons/year)	Hours of Operation
2002	0.91	3030
2003	0.93	3497
2004	16.3	3124
2005	14.5	3137
2006	9.22	2758
2007	3.23	2378
2008	1.64	1772
2009	5.27	1695

Baseline Actual Emissions (BAE) for this project is 15.4 tons/year (the average of 16.3 tons emitted during calendar year 2004 and 14.5 tons during 2005). Projected Actual Emissions (PAE) is a difference between allowable emissions (64 tons/year) and emissions that could have been accommodated during the consecutive 24-month period used to establish BAE (9.6 tons/year; calculated as 25 tons/year minus 15.4 tons/year).

IV. Conclusions

The emission limits proposed by the applicant will meet all of the requirements of Chapters 62-204 through 297, F.A.C.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all the applicable requirements of Chapters 62-204 through 297, F.A.C.

V. Preliminary Determination

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft

permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection Air Resource Management, Southwest District 13051 North Telecom Parkway, Temple Terrace, Florida 33637-7600.

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).