TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Publix Super Markets, Inc.
3300 Publix Corporate Parkway
Lakeland, Florida 33811

Publix Lakeland Danish Bakery

Facility ID No. 1050177

PROJECT

Project No. 1050177-007-AC
Application for Minor Air Construction Permit
Project Name: Add New Sugar Silo (EU No. 010)

COUNTY

Polk County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Management
Southwest District Office
Temple Terrace, Florida 33637-0926

October 31, 2013

Prepared by Danny Stubbs

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. Facility Description:

This facility includes six permitted raw material storage silos (Silo Nos. 1, 2, 3, 4, 5 and 6) used to store Rye, Winona, Cake, Pastry and other types of flours and granulated sugar. These silos are loaded pneumatically from trucks and monitored during loading by a computer based recording system that captures system loading pressures and material loading time. Each silo is equipped with an independent baghouse to control particulate matter emissions.

This facility also includes two large natural gas fired pastry ovens (Winkler-Chubco (W-B) Oven No. 3 and Food Handling Systems (FHS) Oven No. 6.) each with a design heat input rate of 2.5 MMBtu/hour.

II. Project Description:

A. Applicant:

Mr. Jeff Stephens, Vice President, Manufacturing
Publix Super Markets, Inc.
3300 Publix Corporate Parkway
Lakeland, Florida 33811

B. Professional Engineer:

Mr. Michael W. Hewett, P.E.
Publix Super Markets, Inc.
3300 Publix Corporate Parkway
Lakeland, Florida 33811

C. Project Location:

The facility is located at 3620 New Tampa Highway in Lakeland, Florida.

D. Project Summary:

This project will add a new sugar silo which will be used to feed an indoor sugar grinding process. The new silo will be equipped with a dust collector to control particulate matter emissions during the loading of granular sugar. This project will also make the following changes to existing emissions units:

- The 2,500 hours per year loading restrictions on Silo No. 6 (EU No. 006) will be removed. The potential emissions shown in the "Summary of Emissions " table below make it clear that a restriction on the hours of operation is not necessary.
- The loading restriction that limit the facility to load a maximum of three (3) silos at any one time and only one of Silo Nos. 1 through 5 at any one time will be removed. These restrictions are operation and maintenance issues that the facility must be responsible for managing. Control equipment circumvention language and the General VE Standard contained in the permit and in the appendices will cover problems that may occur as a result of poor operation and maintenance practices.
- The silo loading procedures associated with the computer based pressure recording system will be removed. This is also an operation and maintenance issue that the facility must be responsible for managing. Control equipment circumvention language and the General VE Standard contained in the permit and in the appendices will cover events that may occur as a result of poor operation and maintenance practices.
- The visible emissions limits and testing requirements for EU Nos. 001 through 006 will be removed. EU Nos. 001 through 005 used visible emissions to demonstrate compliance with the particulate matter emissions limit of 0.23 lbs per hour (used for the PM RACT Exemption). However, the PM RACT Rule (Rule 62-296.700(2)(c), F.A.C.) specifies an annual particulate matter emissions limit of less than 1 ton per year and not an hourly limit. Emissions calculations (instead of annual VE testing) should be an acceptable method for demonstrating compliance in this case. Also, conservative emissions calculations (shown below in the Summary of Emissions, Note 1) are significantly below the allowable necessary for the PM RACT exemption. Silo No. 006 is not subject to any federal, state or local unit specific visible emissions standard, only the facility-wide General Visible Emissions Standard contained in Rule 62-296.320(4)(b), F.A.C. Based on DARM Guidance Memo (DARM-PER-33) with the subject "Guidance on the Use of the General Visible Emissions Standard, Rule 62-296.320(4)(b), F.A.C., in Permits" a the General VE limit should only be included in the facility-wide limitations and should not be included in the specific conditions for an emissions unit. This was the basis for removing the visible emissions limits and testing requirements from EU No. 006.
- Annual silo loading limits and monthly recordkeeping requirements for Silo Nos. 1 through 5 (EU ID Nos. 001 through 005) will be added. This was added to allow demonstration of compliance with the annual particulate matter emissions limit of 0.99 tons per year (used for the PM RACT Exemption).

E. Application Information:

Application Received on:	September 17, 2013
Additional Information Received on:	October 16, 2013
Application Complete on:	September 17, 2013

III. Applicable State and Federal Regulations

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. – Permits Required	Y	subject to general permitting requirements
Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration	N	facility is not a PSD major source
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	Y	facility could be a source of unconfined particulate matter
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	facility is a source of VOCs, could also be a source of odor.
Rule 62-296.401-418, 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 not an air quality maintenance area for ozone
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	EU No. 010 is a new source, therefore not subject to the PM RACT rule. *{Note: EU Nos. 001, through 005 are subject to PM RACT. EU No. 006 is also considered a new source and is not subject to the PM RACT }*
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)	N	there is no applicable source category
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	N	facility is a synthetic non-Title V source
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	N	compliance testing is not required for the new emissions unit (EU No. 010)

IV. Summary of Emissions

Pollutant	EU No. and brief description	Potential Emissions (tpy)	Allowable Emissions (tpy)
PM	001 - Flour Silo No. 1 (Winona)	0.99	0.99[1]
	002 - Flour Silo No. 2 (Rye)	0.99	0.99[1]
	003 - Flour Silo No. 3 (Winona)	0.99	0.99[1]
	004 - Sugar Silo No. 4 (Granulated Sugar)	0.99	0.99[1]
	005 - Flour Silo No. 5 (Cake)	0.99	0.99[1]
	006 - Flour Silo No. 6 (Pastry)	0.138[2]	
	010 - Flour Silo No. 10 (Granulated Sugar)	0.046[2]	
	Total	**5.134**	
VOC	008 - Winkler-Chubco (W-B) Oven No. 3	25	25
	009 - Food Handling Systems (FHS) Oven No. 6	74	74
	Total	**99**	**99[3]**

Notes:

1. *For EU Nos. 001 through 005, PM allowable emissions of less than one ton per year are specified to exempt each emissions units from the PM RACT requirements of 62-296.700, F.A.C. (See 62-296.700(2)(c), F.A.C.). The PM allowable emissions for EU Nos. 001 through 005 are limited in the permit by limiting annual throughput of each emissions unit. Each emissions unit has a dust factor of 0.01(i.e., 1% emissions, uncontrolled) and a dust collector PM control efficiency of 99.985%. See additional information letter from applicant dated October 16, 2013. The table below shows the permitted throughput limits and corresponding PM emissions calculations based on the dust factor and dust collector efficiencies.*

EU No.	*Permit Throughput Limits (TPY)*	*PM Emissions Calculations (TPY)*
001	*123,400*	*0.185*
002	*131,000*	*0.197*
003	*127,100*	*0.191*
004	*101,800*	*0.153*
005	*104,700*	*0.157*

2. *Potential emissions were calculated based on the following:*
   a. *EU Nos. 006 and 010 have potential annual throughputs of 92,185 and 30,660 TPY of material, respectively.*
   b. *EU Nos. 006 and 010 each have dust factors of 0.01and a dust collector PM control efficiencies of 99.985%.*

   See additional information letter from applicant dated October 16, 2013.

3. *In addition to the two primary ovens used to produce yeast containing product (VOC emissions sources), minor amounts of yeast containing products may be baked other ovens; however, the total VOC emissions from all ovens shall not exceed 99 tons per year.*

V. 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.

VI. 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).