TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Jupiter Composites, Inc.
3301 Bill Metzger Lane
Pensacola, Florida 32514

Jupiter Composites Facility
Facility ID No. 0330291

PROJECT

Project No. 0330291-002-AC
Application for Title V Source Air Construction Permit
Project Name: Reinforced Plastics Composites
Wind Turbine Generator Housings & Components

COUNTY

Escambia, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
Northwest District Office
160 W. Government Street, Suite 308
Pensacola, Florida 32502-5740

April 4, 1013

1. 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.

Facility Description and Location

Jupiter Composites, Inc. proposes to construct a manufacturing facility to fabricate wind turbine generator housings made of reinforced plastic composites, which is categorized under Standard Industrial Classification Code No. 3999 Manufacturing Industries, Not Elsewhere Classified. The facility is located in Escambia County at 3301 Bill Metzger Lane in Pensacola, Florida. The UTM coordinates of the existing facility are Zone 16, 481.5 km East, and 3376.9 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

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

Project Description

Pre-cut fiberglass and metal parts will be added to the molds and the molds will be prepared for vacuum infusion. Styrene resin is drawn into the mold cavity by vacuum. A vacuum pump will be installed to draw the resin from the mixing room to the molds. PM, HAP and non-HAP VOCs emission from these areas of operations will be discharged outside the building from Stack No. 1and Stack No. 2. Each stack will be equipped with a fabric filter to remove PM.

A section of the building will be converted into the fiberglass manufacturing process. A 20’ by 45’ gelcoat room will be fabricated and equipped with both inlet and out exhaust blowers.

All resin and gelcoat will be mixed and handled in a 10’ by 15’ mixing room that will be fabricated and equipped with exhaust blowers. Both the resin and the gelcoat operations will draw product from this room to either the vacuum molds or gelcoat spray system.

An existing vacuum collection loop will be modified and used to collect dust generated in the trimming process of the molds. This system will discharge through a new baghouse.

Processing Schedule

January 17, 2013 Application received.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

As provided in the application, the following table summarizes potential emissions and PSD applicability for the project.

Table A. Potential Emissions (Tons/Year) and PSD Applicability

Pollutant	Pre-Project Potential Emissions	Project Potential Emissions (TPY)		Subject To PSD?
	Existing AG facility	Estimated (*Based on 250 units/yr)*	Limit	
PM/PM_{10}		0.66		No
VOC		11.29	< 25	No
HAP (total)	<25	11.29	< 25	
Styrene HAP)	<10	10.42		
MMA (HAP)	<10	0.87		

Although this is an existing facility it is not considered a major stationary source with respect to PSD because existing potential emissions do not exceed the 250 tons per year threshold for this type of facility and because the facility is not a listed major stationary source in the "List of 28" so the 100 tons per year threshold does not apply. The potential emissions increase alone from the proposed project itself does not equal or exceed the PSD major stationary source thresholds for this type of facility. Based on these facts it is determined that the project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Application Fee

This facility has two emissions units: AC/1E ($1,000.00 fee) for a source of emissions more than 5 but less than 25 tons per year, and AC/1F ($250.00) for a source of emissions less than 5 tons per year.

State Requirements

Rule 62-213, F.A.C. (Operation Permits for Major Sources of Air Pollution)

Federal NSPS Provisions

Not Applicable

Federal NESHAP Provisions

This facility, including the use of molds and the application of resin/gelcoat, is subject to the MACT standards of 40 CFR 63 subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.

Other Draft Permit Requirements

VOC and HAP are emitted uncontrolled. A dust collector is used to control PM from the sanding and grinding activities. An initial visible emissions test with a limit of 20% is required to demonstrate compliance with the General Visible Emissions Standard. The facility is limited to emissions of no more than 25 TPY of VOC and/or HAP because of the $1,000 processing fee paid for the AC permit application. Monthly record keeping for VOC, Styrene and Methyl Methacrylate, is used to verify that the 12-month rolling total emissions remain within the permit allowable limits.

4. 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. Angelia Jackson is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at 850.595.0598 or angelia.jackson@dep.state.fl.us.