TECHNICAL EVALUATION

APPLICANT

Pall Aeropower Corporation
4245 Evans Avenue
Fort Myers, Florida 33901

Pall Aeropower Corporation – Fort Myers Facility
Facility ID No. 0710238

PROJECT

Project No. 0710238-004-AC & 0710238-005-AV
(Revision to Construction Permit No. 0710238-001-AC Issued May 23, 2006
And Title V Operating Permit 0710238-003)
Application for Minor Source Air Construction Permit
Title V Operating Permit Minor Revision

COUNTY

Lee, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
South District Office
2295 Victoria Avenue
Fort Myers, Florida

February 15, 2013

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

Pall Aeropower Corporation an existing facility, which is categorized under Standard Industrial Classification Code No. 3728. The facility is located in Lee County at 4245 Evans Avenue in Fort Myers, Florida. The UTM coordinates of the existing facility are Zone 17, 415.44 km East, and 2942.22 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 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.
- 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

This is a revision to original Construction Permit No. No. 0710238-001-AC Issued May 23, 2006, that eliminates the electric oven in the "Bubble Point Process Line" (Emission Unit No. EU-001), and replaces it with a Phoenix Solar Dryer which uses the heat from the sun, and replaces the 180 cu. ft. oven in the "Resin Impregnation Process"(Emission Unit EU-002), with a Grieve oven Model TBH-500 (133 Cu. Ft. volume) and a Grieve oven Model WRC566-800 (297 Cu. Ft. volume). **It is noted that since there is no change in the filter product production rate or chemicals usage rates, there is no change in the amount of emissions as the result of these equipment changes.**

The facility is a filter element manufacturing facility to serve the aerospace industry. The manufacturing process includes anodizing and metal finishing using aluminum oxide that is formed electrochemically on aluminum surfaces for corrosion control. There is also a passivation process where stainless steel parts are dipped in a 30%

nitric acid solution. Powder coating is performed at the facility and cure ovens are also utilized. Various chemicals are used in the manufacturing process that contains VOCs and HAPs.

The permitted emission units consist of two (2) process lines, which are defined as "Bubble Point Process line" which utilizes a Phoenix Solar Dryer (That replaces original electric oven) and "Resin Impregnation Process" which utilizes an electric Each process line is identified as an emission unit. The "Bubble Point Process Line" is Emission Unit (EU) No. 001 and the "Resin Impregnation Process" is Emission Unit (EU) No. 002. Each process contains a group of process or production units that have at least one (1) definable emission point.

The cumulative potential emissions (PTE) for the "Bubble Point Process Line" line, EU001 are: Product H115 at 7.0 tons/year (plus fugitive emissions up to 0.7 tons/year), Product H123 at 2.0 tons/year (fugitive emissions up to 0.2 tons/year), and Volatile Organic Compounds (VOC) at 151 tons/year (fugitive emissions up to 15 tons/year).

The cumulative potential emissions (PTE) for the "Resin Impregnation Process", EU002 are: Product H115 at 1.0 ton/year (fugitive emissions up to 0.1 ton/year), and Volatile Organic Compounds (VOC) at 39 tons/year (fugitive emissions up to 4 tons/year).

The maximum process throughput rate for the "Bubble Point Process Line" is 160 tons per year and the maximum process throughput rate for the "Resin Impregnation Process" is 40 tons per year.

The maximum allowed combined potential to emit (PTE) of VOCs for the facility is limited to not exceed 200 tons/year. This facility is considered a Major Source of Pollutants Other than HAPs, and is defined as a Title V facility.

HISTORY

May 23, 2006:Air Construction Permit Issued
March 20, 2007: Initial Title V Air Operating Permit Issued
July 29, 2011: Application to Renew Title V Permit Received
February 14, 2013: Application to Revise Construction Permit No. 0710238-001-AC and Title V Operating Permit No. 0710238-003-AV

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

It is determined that this project is not applicable for PSD consideration. (Note: The maximum allowed combined potential to emit (PTE) of VOCs for the facility is limited to 210 tons/year).

3. APPLICATION REVIEW

Discussion of Emissions

3.1 <u>EU-001 (Bubble Point)</u>

H115 - Methanol emissions shall not exceed 7 tons/year.
H123 – Methyl isobutyl ketone (Hexone) emissions shall not exceed 2 tons/year.
VOC emissions (PTE) is 151 tons/year and shall not exceed 160 tons/year.
PM emissions – Minimal

3.2 <u>EU-002 (Resin Impregnation Process)</u>
H115 - Methanol emissions shall not exceed 1.0 tons/year.
VOC - emissions (PTE) is 39 tons/year and shall not exceed 40 tons/year.
PM emissions - Minimal

3.4 Fugitive Emissions:

<u>Bubble Point Process Line (EU-001)</u>
H115 – Methanol Fugitive Emissions are estimated at maximum 0.7 tons/year.
H123 – Methyl isobutyo ketone (Hexone) Fugitive Emissions are estimated at maximum 0.2 tons/year.
VOC - Fugitive Emissions are estimated at maximum 15 tons/year

<u>Resin Impregnation Process (EU-002)</u>
H115 – Methyl Fugitive Emissions are estimated at maximum1.0 ton/year
VOC – Fugitive Emissions are estimated at maximum 4.0 tons/year

Federal NSPS Provisions

None

Federal NESHAP Provisions

Aerospace NESHAP (40 CFR Part 63, Subpart GG) is **NOT** applicable because the facility is considered a Major Source of only VOC emissions which is greater than 100 tons per year. (The HAP emissions are below the threshold of 10 tons of a single HAP or 25 tons of combination of HAPs).

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. Carter B. Endsley, P.E. 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 the Permitting Authority's South District Office at 2295 Victoria Avenue, Suite 364, Fort Myers, Florida 33902.