

**TO** Air Quality Permit File SOOP # 11-00516  
Gamesa Wind US, LLC / Ebensburg Plant

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**DATE** January 20, 2016

**RE** Review of State Only Operating Permit Renewal Application  
Cambria Township, Cambria County  
APS# 877482; AUTH # 1084849; PF# 668366

### Background

On July 30, 2015, the Department received a State Only Operating Permit (SOOP) renewal application for Gamesa Wind US, LLC /Ebensburg Plant located in Cambria Township, Cambria County. Gamesa is a subsidiary of Gamesa Technology Corporation, Inc. and formerly did business under the name of Fiberblade, LLC. Although the facility has decided to do operations under the subsidiary name, the tax identification number remains the same (20-2162951-1). Gamesa owns and operates the currently "idled" wind turbine component manufacturing and repair facility. Gamesa has complied with the municipal notification requirements contained in 25 Pa. Code §127.413 and the application fee requirements contained in 25 Pa. Code §127.703(b)(3). Gamesa is currently authorized to operate under SOOP 11-00516 issued on March 29, 2011, and expires on March 29, 2016.

On November 15, 2013, the Department received notification that as of February 11, 2013, Source 101-Manufacturing/Moulding comprised of root joint moulding, spar beam moulding, and the fiberblade moulding areas, 8 electric curing ovens, and associated stacks (S01 A-D, S01 E-H, S01 I-L, S01 M-P, S01 S-T, and S01 U-V) ceased operation. Between October 7 and November 4, 2013, Source 101 was removed from the site. Source 101 will not be included in this operating permit renewal.

On March 21, 2014, the Department received notification that as of March 31, 2014, the remaining sources, Source 102 Finishing and associated controls C02A and C02B, Source 104 Emergency Generator, and 105 (14) Misc. Natural Gas Units, will be shutdown. A maintenance plan was included in the notification for each source listed above. Within the maintenance plan, Source 104 and Source 105 would actually remain operational. Source 104, as an emergency generator, self-tests each month; and Source

105, natural gas units, would operate to ensure minimum temperatures are sustained in the plant and prevent freezing of pipes. Therefore, the only source actually deactivated was Source 102 and associated controls. Gamesa's maintenance plan includes the manufacturer's preventative maintenance schedule.

On September 28, 2015, the Department received notification of reactivation of Source 102 and associated controls as Gamesa plans to begin undertaking repairs to wind turbine blades. The repair work would entail the application of resins, fillers, and paints prior to sanding with hand-held power tools. All blade repair operations will be conducted in the same manner as that of the previous blade repair operations and will be in compliance with all existing operating permit conditions. Gamesa did remove C02B and S02B (Nederman Dust Collector System) in 2014 and will only utilize C02A and S02A (Dust Control Unit rated at 2,941 scfm) for Source 102. Previously, the Nederman System and the Dust Control Unit controlled the exhaust from the finishing area with the Nederman System handling 40 percent of the flow. However, both systems were capable of handling 100 percent of the flow and did so during maintenance periods. In the reactivation of Source 102, the Dust Control Unit will control 100 percent of the exhaust. It is the Department's understanding that Gamesa has complied with the deactivation and reactivation requirements per 25 PA Code §§127.11a. and 127.215. On December 7, 2015, the Department approved the Reactivation Plan.

On December 10, 2015, Gamesa notified the Department of the plan to commence operation on January 11, 2016. As of January 13, 2016, the facility is in the preparation stages of starting back up but not repairing blades yet.

#### Previous Authorizations

On February 14, 2013, the Department authorized the temporary operation of the break down, recycling, and spar recovery activities on the turbine blades per 25 Pa Code §127.14(d) listed as plan approval exemption No. 25. The project would not exceed 6 months from the commencement of operation, drop cloths and wet methods would be used to minimize particulate emissions, no internal combustion engines and majority of the work would be completed indoors.

On February 17, 2014, the Department authorized the extension of the break down, recycling, and spar recovery activities on the turbine blade. The facility did not complete the work in the authorization dated February 14, 2013. This RFD was for the remaining 40 spar pieces and approximately 10 blades. Gamesa has completed this project as of March 31, 2014.

#### **Sources, Control Devices and Emissions**

Source 102- Finishing Operations: This source consists of five sanding/inspection stations. Each station is connected to a centralized vacuum system to which the hand-operated sanders are connected. The vacuum system is controlled by a cyclone separator followed by a fabric filter dust collector. The Dust Control Unit is rated at 2,941 scfm and

was authorized in plan approval 11-00516A. Adhesive and gel-coats are also utilized at these stations to fill voids and cavities identified on the blades. In the current operating permit, any irregularities or quality concerns were processed uncontrolled in the finishing area. This included adhesives injected into any voids, gel-coat filling, and any minor repairs. In the permit renewal application, Gamesa has proposed to continue to operate Source 102 in this manner.

Source 104- 600 KW Cummins Diesel Emergency Generator: This source consists of a 600 kilowatt Cummins diesel emergency generator. The generator is capable of supplying electricity to operate the facility during a power interruption. The generator was authorized through Plan Approval 11-00516A on December 19, 2005 and was limited to an annual operation of 500 hours. However, to continue meet the emergency stationary RICE definition in 40 CFR Subpart ZZZZ as stated in the current operating permit, the engine is subject to the hour limitations in §63.6640(f) which are more stringent than the 500 hour limitation in the current operating permit. Therefore, the 500 hours limitation will remain in the proposed operating permit renewal as a maximum hours of operation limitation for all operating scenarios.

Source 105-(14) Misc. Natural Gas Units: This source consists of 14 miscellaneous natural gas units throughout the facility. The units are comprised of space heaters for comfort heating and hot water heaters. No changes have been made from the current operating permit. The following is the list of natural gas units which is listed in the Miscellaneous Section of the proposed operating permit renewal:

- (1) Bryan Boiler 0.850 MMBtu/hr
- (1) Camus Dynaflame Boiler 3.5 MMBtu/hr
- (5) Carrier Space Heaters 0.975 MMBtu/hr each
- (1) Carrier Space Heater 0.800 MMBtu/hr
- (1) Carrier Space Heater 0.776 MMBtu/hr
- (5) Reznor Space Heaters 0.030 MMBtu/hr each

Gamesa is limited to 99 tpy NO<sub>x</sub>, 49 tpy VOC, 9 tpy of a single HAP and 24 tpy aggregate group of HAPs that was established in Plan Approval 11-00516A. Gamesa submitted AIMS reports with actual emissions of 7.61 tpy VOC in 2012 and 2.15 tpy VOC in 2013; no reports were submitted for 2014 or 2015. The current operating permit requires the submittal of an annual facility-wide emissions report (AIMS) by March 1<sup>st</sup> of each year. Gamesa stated that there was no manufacturing of blades in 2014. However, an RFD was requested in February 2014 to complete the recycling project, described above, which would have resulted in some particulate matter emissions. This information is being handed over to Operations District Supervisor, Thomas Norris, to further investigate. The projected emissions are provided in Table 1 for Source 102 and are based on 0.02 gr/dscf PM, 2,941 scfm, and 8,760 hours per year for particulate emissions. VOC/HAP emissions for Source 102 were provided by Gamesa based on 3,000 lbs/yr of repair material and 100% VOC/HAP content. Gamesa submitted Source 104 is based on emission factors obtained by the Cummins Power Data Sheet (600DFGB), AP-42 Tables 3.4-1 for SO<sub>x</sub> and 3.4-3 HAPs, and 500 hours per year. Source 105 is based on AP-42

Table 1.4-1 emission factors and 8,760 hours per year. Gamesa has requested that the emission limits established in the previous operating permit and Plan Approval 11-00516A be kept due to the variable nature of the repair business.

Table 1- Projected Emissions:

Sources:	Tons Per Year					
	NOx	CO	SOx	VOC	PM	HAPS
102- Finishing Operations	0.000	0.000	0.000	1.50	1.650	1.50
104- Emergency Generator	6.110	0.450	0.470	0.130	0.067	0.002
105- Misc. Natural Gas Units	4.700	3.950	0.028	0.260	0.360	0.004
<b>TOTALS:</b>	<b>10.810</b>	<b>4.400</b>	<b>0.498</b>	<b>1.890</b>	<b>2.077</b>	<b>1.506</b>

**Regulatory Analysis:**

Gamesa is subject to the applicable requirements of 25 PA Code, Chapters 121 through 145 as incorporated into the proposed operating permit renewal.

40 CFR Part 60, Subpart IIII- Standards of Performance for Stationary Compression Ignition Internal Combustion Engines was promulgated on July 11, 2006. Per 60.4200(a), this subpart applies stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after July 11, 2005 where the manufactured date is after April 1, 2006 and not a fire pump engine; manufactured after July 1, 2006 as a certified National Fire Protection Association fire pump engine; or has been modified or reconstructed after July 11, 2005. The engine specified in this operating permit was manufactured March 11, 2006; therefore, the Gamesa is not subject to Subpart IIII.

40 CFR Part 63 Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines was last amended on June 15, 2014. Per 63.6590(a)(1)(iii) for stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006. The engine was installed April 20, 2006, which is considered to be an existing stationary RICE. Furthermore, the engine meets the definition of emergency stationary RICE of this subpart. The facility is required to maintain hours of operation, change belts, hoses, and oil every year as well as maintain a non-resettable hour meter. All applicable requirements are incorporated into

this proposed operating permit renewal and have been updated since the last operating permit was issued in 2011.

40 CFR Part 63 Subpart P-PPPP-National Emission Standards for Surface Coating of Plastic Parts and Products was last promulgated on April 24, 2007. This rule applies to affected facilities that are major for HAPs. Per 40 CFR Section 63.4481 coating application with handheld, non-refillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer are not coating operations for the purposes of this subpart. Gamesa is not major for HAP nor do they perform surface coating operations, therefore Gamesa is not subject to Subpart P-PPPP.

40 CFR Part 63 Subpart P-WWWW-National Emission Standards for Reinforced Plastic Composites Production was last promulgated on April 20, 2006. Per 40 CFR Section 63.5780 an affected source to which this subpart applies must be engaged in the reinforced plastic composites production facility that is located at a major source of HAP emissions. Reinforced plastic composites production is limited to operations in which reinforced and/or non-reinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites. The resins and gel coats may also contain materials designed to enhance the chemical, physical, and/or thermal properties of the product. Gamesa is not major for HAP nor do they utilize styrene, therefore Gamesa is not subject to Subpart P-WWWW.

40 CFR Part 63 Subpart P-JJJJJ-National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources was last promulgated on February 1, 2013. This rule applies to affected facilities that are part of an area source of HAPs. Per §63.11195 natural gas-fired boilers are not subject to this subpart and any requirement within the subpart. Therefore, Gamesa is not subject to Subpart P-JJJJJ.

**Recommendation:**

On April 15, 2011, a full compliance evaluation (FCE) was performed by Phil Sapala, Air Quality Specialist. Mr. Sapala did not note any violations at the time of the inspection. The facility was out of operations for most of 2014 and all of 2015; therefore no FCE was performed during these time frames. It is my recommendation that the State Only Operating Permit renewal for Gamesa Wind US, LLC / Ebensburg Plant, SOOP 11-00516, be issued.

On January 9, 2016, the Notice of Intent to Issue was published in the PA Bulletin for a 30-day public comment period. The proposed operating permit will be submitted to Gamesa for their review as well as the Air Quality inspector and District Supervisor for this facility.