Title V Air Operation Permit Revision
Permit No. 0070004-018-AV

## APPLICANT

The applicant for this project is Griffin Industries, LLC. The applicant's responsible official and mailing address are: Mr. Timmy Garris, District Manager, Griffin Industries, LLC., 1011 Orient Road, Tampa, Florida 33619-3321.

## FACILITY DESCRIPTION

The applicant operates the Hampton Facility, which is located in Bradford County at 11313 SE 52nd Ave, Starke, Florida. The UTM coordinates are Zone 17, 391.94 km East; 3306.05 km N.

This facility is a rendering plant (Standard Industrial Classification No. 2077). The operations include active fossil fuel fired steam generators (boilers), a waste heat evaporator, feather rendering system, two animal/poultry rendering systems, and a Secondary Protein Nutrient Fines Solvent Extraction Process.

Fossil Fuel Steam Generators

Boilers No. 1 (EU006) and No. 2 (EU007) each have a maximum heat input rate of 33.5 million British thermal units per hour (MMBtu/hr). Boiler No. 3 (EU008) has a maximum heat input rate of 32.7 MMBtu/hr. These boilers are authorized to fire natural gas, No. 2 fuel oil, ULSD, No. 6 fuel oil, on-specification used oil, and processed grease The boilers are not subject to 40 CFR 60 Subpart Dc as they were constructed prior to June 9, 1989.

Boiler No. 4 (EU 017) has a maximum heat input rate of 9.9 MMBtu/hr. This boiler is authorized to fire natural gas, No. 2 fuel oil, on-specification used oil and processed grease. Pursuant to 40 CFR 60.40c, the unit is not an affected source of 40 CFR Part 60, Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units since maximum heat input rate of the unit is less than 10 MMBtu/hour.

The natural gas, No.2 fuel oil, ULSD, No. 6 fuel oil, and on-specification used oil are considered "fossil fuel" in accordance with the definition in Rule 62-210.200(141), F.A.C. Therefore, these units are subject to Rule 62-296.406, F.A.C. - Fossil Fuel Steam Generators with Less Than 250 Million Btu per Hour Heat Input, New and Existing Emissions Units.

Rule 62-296.406, F.A.C. requires a Best Available Control Technology (BACT) determination for Sulfur Dioxide and Particulate Matter emissions from the units.

On October 21, 1988, a BACT determination was issued for Boiler No.3. On January 25, 1991, a BACT determination was issued for Boiler Nos. 1 & 2. On May 17, 2010, a BACT determination was issued for Boiler Nos. 1, 2, and 3 based on the addition of natural gas and No. 2 fuel oil in Permit No. 0070004-016-AC. According to the BACT determinations, No.6 fuel oil is limited to a maximum sulfur content of 1.5 % by weight and a maximum sulfur content of 0.05% by weight when firing No.2 fuel oil.

On June14, 2010, a BACT determination was issued for Boiler No.4. According to the BACT determination; when firing natural gas, No.2 fuel oil and on-specification used oil, the particulate matter and sulfur dioxide emissions are to be controlled by limiting the sulfur content of the fuels to no more than 0.05 %, by weight.

According to Rule 62-296.406, F.A.C., the units are subject to visible emissions limitations of 20 percent opacity except for one two-minute period per hour during which opacity shall not exceed 40 percent.

Boilers No. 1 (EU006), No. 2 (EU007) and No. 3 (EU008) generate steam for process heat associated with the rendering and processing activities. Boiler No. 4 (EU017) provides steam solely for the proposed SPN Solvent Extraction Process.

Rendering Operation

The facility also includes waste heat evaporator, feather rendering system, and two animal rendering systems (EU001 and EU002). The waste heat evaporator utilizes heat extracted from the steam generated by the cookers to evaporate excess moisture from various liquid products. The continuous rendering system consists of a number of processes that grind, convey, cook, and remove fluids from red meat/poultry inedibles and poultry feathers. EU 001 & 002 are unregulated units as stated in the Appendix U.

Emissions and odors from the red meat cooker, the poultry cooker, and the feather dryer in the rendering building are controlled by a 10,000 cubic feet per minute (cfm) Venturi scrubber/packed tower system, and two 40,000 cfm building air scrubbers. The scrubber is installed to control the odor and improve the work environment for the facility operators.

Secondary Protein Nutrient (SPN) Fines Solvent Extraction Process

The SPN Fines Extraction Process enables the facility to extract the remaining oil/fat from residual SPN fines (to separate oil/fat and fines solids into separate marketable materials) currently produced by the Hampton facility and other Griffin facilities.

The process consists of a closed loop system to recover and recycle the solvent used in the extraction process to reduce air pollutants emissions and to minimize solvent costs. The solvent will be removed from the oil extracted from the SPN fines using a distillation process and condensers. The vapor stream from the process condensers and final condenser, which include some non-condensable, will be vented to a mineral oil adsorption system for final control and solvent recovery.

The facility is a TV major source for Particulate Matter (PM), Volatile Organic Compounds (VOC), Sulfur Dioxide ($SO_2$) and Nitrogen Oxide ($NO_x$). The addition of the SPN Fines solvent extraction process resulted in the facility being classified as a major source of Hazardous Air Pollutants (HAPs).

Based on the Title V air operation permit revision application received December 30, 2011, the facility has the potential to emit less than 100,000 TPY of $CO_2e$ emissions therefore the facility is not a major

source of Greenhouse Gases based on EPA's 2010 Gas Tailoring Rule which establishes an approach to addressing greenhouse gases from stationary sources under the Clean Air Act.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

**PROJECT DESCRIPTION**

The purpose of this permitting project is to revise the existing Title V permit for the above referenced facility.

**PROCESSING SCHEDULE AND RELATED DOCUMENTS**

Renewed Title V Air Operation Permit issued February 11, 2010
Application for a Title V Air Operation Permit Revision received December 30, 2011
Notice of Intent to Issue Air Permit issued March 27, 2012
Public Notice Published April 26, 2012.

**PRIMARY REGULATORY REQUIREMENTS**

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is not a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility does not operate any units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply:

## PROJECT REVIEW

This permit revision incorporates the terms and conditions of permit No. 0070004-015-AC, which authorized the construction of a SPN fines solvent extraction process and a small steam boiler, Emissions Unit No. 017, to supply steam to the solvent extraction process.

At the time of the Title V Revision application submittal, the Permittee had not completed startup of the SPN fines solvent extraction process or had demonstrated of compliance with the terms and conditions of the air construction permit. As such, this permit revision includes a Compliance Plan as required by Rule 62-213.412(4), F.A.C.

This permit revision also incorporates the terms and conditions of permit No. 0070004-016-AC, which authorized 1) the addition of natural gas and No. 2 fuel oil as permitted fuels for Steam Boiler Nos. 1,2 and 3 (Emissions Unit Nos. 006, 007, and 008, respectively); (2) the revision of the compliance determination method for the facility-wide $SO_2$ emissions cap.

In addition this permit revision includes the installation of a 377 HP caterpillar diesel fired emergency generator Emissions Unit No. 018, for the required fire safety and backup for the SPN Fines process. Based on the Title V air operation permit revision application received December 30, 2011, the unit has been exempt from the requirement to obtain an air construction permit [Rule 62- 210.300(a) 35., F.A.C.].

The following is a brief description of the changes that were made as part of this revision (replacement of TV-6 with new Appendix TV, streamlining of EU sections by moving common conditions to the new appendices, etc.). Numerically listed is a discussion of the reasons for the changes being made as part of this project, followed by the conditions(s) being changed. The changes in the condition are with a ~~strikethrough format~~ for deletions and a <u>double underline format</u> for additions.

### 1. Add 40 CFR 63 Subpart DDDDD – Industrial, Commercial, and Institutional Boilers and Process Heaters

Emission Unit Nos. 006, 007, 008, and 017 are subject to the provisions of 40 CFR 63 Subpart DDDDD – Industrial, Commercial, and Institutional Boilers and Process Heaters.

On September 13, 2004, EPA promulgated national emission standards for hazardous air pollutants (NESHAP) for industrial, commercial, and institutional boilers and process heaters.

June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded the standards.

On March 21, 2011, EPA promulgated 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. This final rule became effective on May 20, 2011.

On May 18, 2011, EPA published a notice delaying the effective dates of the March 21, 2011 final rule until such time as judicial review is no longer pending or until EPA completes its reconsideration of the rules, whichever is earlier.

On December 23, 2011, EPA published the reconsideration proposal (40 CFR 63, subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters). The EPA intends to finalize the reconsideration in the spring of 2012.

On January 9, 2012, the United States Court of Appeals for the District of Columbia Circuit issued a decision vacating and remanding the EPA May 18, 2011 delay notice. As such, the March 21, 2011 promulgated 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters is now effective

**2. Add 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

Emission Unit No.018 is subject to the provisions of 40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

In accordance with the definitions of this subpart, the engine is an existing stationary RICE as it was manufactured before June 12, 2006.

## CONCLUSION

This project revises Title V air operation permit No. 0070004-014-AV, which was issued on February 11, 2010. This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.