Florida Department of Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

PERMITTEE

Griffin Industries of Florida
11313 Southeast 52nd Avenue
Starke, Florida 32091

Authorized Representative:

Timmy Garris, District Manager

Air Permit No. 0070004-025-AC
Expiration Date: January 29, 2017

Hampton Facility

PROJECT

This is the final air construction permit establishes Hazardous Air Pollutant (HAP) synthetic minor emissions limits, establishes a Prevention of Significant Deterioration (PSD) Volatile Organic Compound (VOC) synthetic minor emissions limit, an updated emissions calculation methodology for actual and potential emissions from the existing inedible animal by-products protein conversion process lines and separate Feather Protein Conversion Process Line (a new emissions unit, EU 020), the description of No. 6 fuel oil be changed to "residual oil" for the three of the four onsite boilers (EU 006, EU 007 and EU 008), the description of No. 2 fuel oil be changed to "distillate oil" for the four boilers (EU 006, EU 007, EU 008 and EU 017), and the description of processed greases be changed to "processed fats" for the four boilers (EU 006, EU 007, EU 008 and EU 017), at the facility.

The proposed work will be conducted at the Hampton Facility, which is an animal/poultry byproducts rendering, used cooking oil and grease trap processing, and Secondary Protein Nutrient (SPN) fines process plant (Standard Industrial Classification No. 2077). The facility is located in Bradford County at 11313 Southeast 52nd Avenue in Starke, Florida. The UTM coordinates are Zone 17, 391.94 km East, and 3306.05 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Facility-Wide Conditions); Section 4 (Emissions Unit Specific Conditions); and Section 5 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 5 of this permit. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Jacksonville, Florida

Richard S. Rachal III, P.G.
Permitting Program Administrator

FILING AND ACKNOWLEDGEMENT & CERTIFICATE OF SERVICE

Filed on this date pursuant to § 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged. The undersigned hereby certifies that the Final Air Permit package (including the Final Determination and Final Permit), and all copies were sent before the close of business on January 29, 2016, to the listed persons.

Timmy Garris, District Manager, Griffin Industries (tgarris@griffinind.com)
Brad James, P.E., Managing Consultant, Trinity Consultants (bjames@trinityconsultants.com)

Clerk — January 29, 2016
Date

FACILITY DESCRIPTION

The facility operates an animal/poultry byproducts rendering, used cooking oil and grease trap processing, and Secondary Protein Nutrient (SPN) fines process plant (Standard Industrial Classification No. 2077). The operations include four (4) active fossil fuel fired steam generators (boilers), a waste heat evaporator, feather rendering system, a blood processing system, two (2) animal/poultry byproducts rendering systems, and a SPN Fines Solvent Extraction Process, a cooking oil and grease processing system, an emergency diesel generator, and an onsite biological wastewater treatment and land application system.

Fossil Fuel Steam Generators

Boilers No. 1 (EU 006), No. 2 (EU 007) and No. 3 (EU 008) generate steam for process heat associated with the rendering and processing activities. EU 006 and EU 007 each have a maximum heat input rate of 33.5 million British thermal units per hour (MMBtu/hr) and EU 008 has a maximum heat input rate of 32.7 MMBtu/hr. These boilers are authorized to fire natural gas, No. 2 fuel oil, ultra-low sulfur diesel (ULSD), No. 6 fuel oil, on-specification used oil, and processed grease.

Boiler No. 4 (EU 017) provides steam solely for the Secondary Protein Nutrient (SPN) Solvent Extraction Process. EU 017 has a maximum heat input rate of 9.9 MMBtu/hr and is authorized to fire natural gas, No. 2 fuel oil, ULSD, on-specification used oil and processed grease.

Rendering Operation

The facility also includes a waste heat evaporator, Feather Protein Conversion Process Line, and two (2) Inedible Animal By-products Protein Conversion Processes, Lines #1 and #3 (EU 014 and EU 019, respectively). 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, blood, and poultry feathers.

Emissions and odors from the red meat byproducts cooker, the poultry byproducts 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 is 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 vapors, is vented to a mineral oil adsorption system for final control and solvent recovery.

Emergency Generator

The 377 HP caterpillar diesel fired emergency generator (EU 018) Model No. 3306 was manufactured in 1995 and installed in 2010. The unit was installed for the required fire safety and backup for the SPN Fines Solvent Extraction Process.

The existing facility consists of the following emissions units.

Facility ID No. 0070004

ID No.	Emission Unit Description
006	Boiler No. 1
007	Boiler No. 2
008	Boiler No. 3
014	Inedible Animal By-products Protein Conversion Process Line #1 (identified by Griffin Industries internally as EU 001)
016	SPN Fines Solvent Extraction Process
017	Boiler No. 4
018	Emergency Generator
019	Inedible Animal By-products Protein Conversion Process Line #3

PROPOSED PROJECT

HAP Synthetic Minor (Area) Source Classification

The project establishes a synthetic minor limit of individual HAP emissions (n-hexane) to 9.9 tons/rolling 12-month period and total HAP emissions to 24.9 tons/rolling 12-month period from the Hampton facility.

VOC Prevention of Significant Deterioration (PSD) Synthetic Minor Source Classification

The project establishes a PSD synthetic minor VOC emissions limit of 249 tons/rolling 12-month period from the Hampton facility.

Inedible Animal By-products Protein Conversion Processes Emissions Calculation Methodology

The project revises the method of determining actual and potential emissions from the Animal Rendering Cooker #1, the Animal Rendering Cooker #3, and the Feather/Blood Line for PM, PM_{10}, $PM_{2.5}$ and VOC emissions. No physical changes or changes in the method of operation will be made to the processes, only the emissions calculation methodology will be changed to that utilized by the facility for similar operations at other facilities located in the U.S. The project also revises the nomenclature for these emissions units to Inedible Animal By-products Protein Conversion Process Line#1, Inedible Animal By-products Protein Conversion Process Line#3, and Feather Protein Conversion Process Line, respectively.

Boiler Permitted Fuel Description Changes

The project changes the description of No. 6 fuel oil to “residual oil” for Boiler Nos. 1, 2, and 3 (EU 006, EU 007, EU 008), the description of No. 2 fuel oil to “distillate oil” for all four boilers, Boiler Nos. 1, 2, 3 and 4 (EU 006, EU 007, EU 008, EU 017), and the description of processed greases to “processed fats” for all four boilers (EU 006, EU 007, EU 008, EU 017), at the Hampton facility.

This project will affect the following emissions units.

Facility ID No. 0070004

ID No.	Emission Unit Description
006	Boiler No. 1
007	Boiler No. 2
008	Boiler No. 3
014	Inedible Animal By-products Protein Conversion Process Line #1 (identified by Griffin Industries internally as EU 001)
016	SPN Fines Solvent Extraction Process
017	Boiler No. 4
019	Inedible Animal By-products Protein Conversion Process Line #3

This project will add the following emissions unit.

ID No.	Emission Unit Description
020	Feather Protein Conversion Process Line

FACILITY REGULATORY CLASSIFICATION

- The facility **will not be** a major source of hazardous air pollutants (HAP). The facility **will become** a synthetic area source of HAP.
- The facility **does not** operate 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 **will become** a synthetic minor Prevention of Significant Deterioration (PSD) Stationary Source for the pollutant VOC.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Northeast District Office, Permitting Program, of the Florida Department of Environmental Protection (Department). The Northeast District Office's mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District Office, Permitting Program. The Permitting Authority's telephone number is (904) 256-1700.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office, Compliance Assurance at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. The Compliance Authority's telephone number is (904) 256-1700.

3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.

   [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.

   [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires.

   [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Source Obligation:

   a. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12)(b),(c), F.A.C.]

9. Application for Title V Permit: A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority.

   [Rules 62-4.030, 62-4.050, and Chapter 62-213, F.A.C.]

1. Volatile Organic Compounds (VOC) Emissions Cap: The total maximum allowable facility-wide VOC emissions from all operations at the Hampton Facility shall not exceed 249.0 tons per any consecutive 12-month rolling period. This limitation is requested by the applicant.

   Compliance with the VOC emissions cap shall be demonstrated from actual facility wide VOC emissions determined monthly and on a 12-month rolling basis using the following equation:

   $E = \sum_{i=1}^{12} m_i = \{(q)_{i,p}\,(5.5\text{ lb/MMscf}) + (uo)_{i,p}\,(1.0\text{ lb/Mgal}) + (ro)_{i,p}\,(0.28\text{ lb/Mgal}) + (do)_{i,p}\,(0.20\text{ lb/Mgal}) + (a)_i\,(0.00251\text{ lb/hp-hr}) + (Gd)_i + (bf)_{i,k} + N\}(1\text{ ton}/2{,}000\text{ lb}) \leq 249.0$ tons/12-month rolling period, VOC

   Where:

   E = 12-month rolling VOC facility-wide emissions (tons/rolling 12-month period).

   i = Specific operating month, where 12 corresponds to the previous operating month and 1 corresponds to the operating month 12 months prior to previous operating month.

   m_i = Emissions of VOC during the operating month (tons/month).

   p = Operating boiler, where 1 corresponds to EU006, 2 corresponds to EU007, 3 corresponds to EU008, and 4 corresponds to EU017

   qi = Natural gas combustion for the operating boiler, p during the month, i [million standard cubic feet (MMscf)/month].

   uo = On-spec used oil combusted in boiler p, during the month, i [1,000-gallons per month (Mgal/month)].

   ro = Residual oil combusted in boiler p, during the month, i [1,000-gallons per month (Mgal/month)].

   do = No. 2 fuel oil and ULSD combusted in boiler p, during the month, i [1,000-gallons per month (Mgal/month)].

   a = Hours of operation for the emergency generator, EU 018 during the month, i [hr/month].

   G = Specific monthly solvent loss for the SPN fines solvent extraction process (gal/month)[1].

   d = Density for solvent being used (highest density of solvent, as reported by the supplier, received during the month) for the SPN fines solvent extraction process (lb/gal).

   k = Inedible animal by-products recycling operation, where 1 corresponds to EU 014, 2 corresponds to EU 019, and 3 corresponds to EU 020.

   b = Finished meal production rate for the inedible animal by-products recycling operation, k during the month, i [tons/month].

   f = VOC emission factor for inedible animal by-products recycling operation, k (lb/ton).

   N = Emissions of VOC during the operating month (pounds/month) from other regulated, insignificant, and unregulated emissions units/activities/sources at the Hampton Facility not specifically identified in this equation.

   [1] Solvent loss to be determined as stated in Subsection D., **Condition D.4.**

   [Application No. 0070004-025-AC; PSD Major Source Review Avoidance; Rule 62-212.400(12), F.A.C., Rule 62-4.070(3), F.A.C; Rule 62-210.200(PTE), F.A.C.]

2. Individual Hazardous Air Pollutant Emissions Cap: The total maximum allowable facility-wide individual HAP emissions[1] from all operations at the Hampton Facility shall not exceed 9.9 tons per any consecutive 12-month rolling period. This limitation is requested by the applicant.

   Compliance with the individual HAP emissions cap shall be demonstrated from actual facility wide HAP emissions determined monthly and on a 12-month rolling basis using the following equation:

   $E = \sum_{i=1}^{12} m_i = \{(q)_{i,p}\,(1.8\ \text{lb/MMscf}) + (Ghd)_i + N\}(1\ \text{ton}/2{,}000\ \text{lb}) \leq 9.9$ tons/12-month rolling period, HAP

   Where:

   E = 12-month rolling n-hexane facility-wide emissions (tons/rolling 12-month period).

   i = Specific operating month, where 12 corresponds to the previous operating month and 1 corresponds to the operating month 12 months prior to previous operating month.

   m_i = Emissions of n-hexane during the operating month (tons/month).

   p = Operating boiler, where 1 corresponds to EU006, 2 corresponds to EU007, 3 corresponds to EU008, and 4 corresponds to EU017

   qi = Natural gas combustion for the operating boiler, p during the month, i [million standard cubic feet (MMscf)/month].

   G = Specific monthly solvent loss for the SPN fines solvent extraction process (gal/month)[2].

   h = Specific monthly f Factor for the solvent being used for the SPN fines solvent extraction process (%)[3].

   d = Density for solvent being used (highest density of solvent, as reported by the supplier, received during the month) for the SPN fines solvent extraction process (lb/gal).

   N = Emissions of n-hexane during the operating month (pounds/month) from other regulated, insignificant, and unregulated emissions units/activities/sources at the Hampton Facility not specifically identified in this equation.

   [1] The Hampton facility's main source of HAP emissions is from solvent usage in the SPN Fines Solvent Extraction Process (EU 016) that contains n-hexane**.**

   [2] Solvent loss to be determined as stated in Subsection D., **Condition D.4.**

   [3] f Factor to be determined as stated in Subsection D., **Condition D.5**.

   [Application No. 0070004-025-AC; Rule 62-4.070(3), F.A.C; Rule 62-210.200(PTE), F.A.C.]

3. Total Hazardous Air Pollutants Emissions Cap: The total maximum allowable facility-wide total HAP emissions from all operations at the Hampton Facility shall not exceed 24.9 tons per any consecutive 12-month rolling period[1]. This limitation is requested by the applicant.

   Compliance with the total HAP emissions cap shall be demonstrated by complying with the individual HAP emissions cap stated in **Condition FW.2.** for the pollutant n-hexane[2].

   [1] Requested by facility to avoid classification as a major source of HAPs. Potential HAP emissions other that n-hexane are stated by the facility to be in an insignificant quantity, i.e. less than 2,500 pounds per year.

   [2] The individual HAP stated by the facility to be emitted in the maximum quantity at the Hampton Facility.

   [Application No. 0070004-025-AC; Rule 62-4.070(3), F.A.C; Rule 62-210.200(PTE), F.A.C.]

4. Facility Wide VOC, individual HAP Emissions Caps- Recordkeeping: The Permittee shall maintain a record of the facility-wide VOC and individual HAP emissions as specified in **Conditions FW.1. and FW.2.** on monthly basis and a 12 month rolling basis.

   All supporting information, documentation, and records used to compute emissions shall be maintained onsite at the facility in a permanent form suitable for Department inspection for at least five years from the date the data is recorded. This includes, but it not limited to performance test results, emission unit hours of operation, fuels combusted, quantity of fuels combusted, methods, calculations, and formulas. These records and materials shall be made available to the Department or federal air pollution agency upon request.

   [Rule 62-4.070(3), F.A.C., Rule 62-4.160(14)(b), F.A.C., Rule 62-210.370(1), F.A.C.]

5. Facility Wide VOC, individual HAP, and total HAP Emissions Caps- Reporting: The Permittee shall report the 12 month rolling facility-wide VOC, individual HAP, and total HAP emissions from the Hampton facility to the Compliance Authority on an annual basis. These reports shall be submitted with the Compliance Ratio/Compliance Certification report required by Construction Permit No. 0070004-022-AC and the current Title V Operation Permit.

   [Rule 62-4.070(3), F.A.C.]

6. Compliance Ratio Reporting: Pursuant to 8.a. of Consent Oder OGC No. 15-0606, within 30 days following the last day of each month, beginning the first month after the effective date of the Consent Order (OGC No. 15-0606), and lasting for 18 months, the Permittee shall submit to the Compliance Authority reports that include the 12 month rolling average Compliance Ratios for the SPN Fines Solvent Extraction Process in the same format as the initial Compliance Ratio Report submitted to the Compliance Authority on June 3, 2015 (dated May 30, 2015), and 12 month rolling average HAPs [(Ton/Yr.)(Single HAP and Total HAP)] emitted at the Hampton facility. The first submittal as required by the Consent Order (OGC No. 15-0606), shall include the compliance ratio determination and HAP rolling average which encompasses the period from August 2014 through July 2015 and each subsequent 12 month rolling average compliance ratio and HAP value thereafter, with the final report to be submitted covering the time period of February 2016 to January 2017.

   [Rule 62-4.070(3), F.A.C.; Consent Order (OGC No. 15-0606)]

7. Comprehensive Compliance Plan: Pursuant to 8.b. of Consent Oder OGC No. 15-0606, if the Permittee exceeds the compliance ratio for HAP emissions during the 18 month reporting period stated in **Condition FW.6.,** the Permittee shall submit a comprehensive compliance plan (Plan) to the Compliance Authority within 60 days of submittal of the Compliance Ratio Report that contains the exceedance. The Plan shall detail any process improvements taken since the exceedance in order to address the issue and any remaining steps necessary to achieve and maintain compliance for HAP emissions. The Plan may involve physical modifications to the facility, modifications to the process, reductions in the amount of solvent entering the facility, or any operational changes. The Plan shall be signed and sealed by a Professional Engineer (Engineer) registered in the State of Florida and also the facility Responsible Official. The Plan shall include a time schedule by which compliance shall be achieved. The Permittee must receive written notification of review and acceptance of the Plan from the Department (Notification) prior to implementation of the Plan, excluding those process improvements already implemented in order to address the issue as quickly as possible. If the Plan is deemed incomplete by the Department, or if the Department Requests Further Information (RFI), the Permittee shall provide this information in a written response within 30 days of the date of the RFI. Any revisions to the currently permitted Facility or collection system, including treatment and/or modification of the Facility necessary to return the Facility to compliance, are subject to Department approval which shall include a permit determination. The Plan shall be implemented within 30 days of the date of Notification or the timeframe included within the accepted Plan. The

Permittee shall complete all steps required by the accepted Plan within the time frames in the accepted Plan.

[Rule 62-4.070(3), F.A.C.; Consent Order (OGC No. 15-0606)]

8. Annual Operating Report. The Permittee shall submit an annual report, as specified in Appendix C – Common Conditions of this permit, which summarizes the actual operating rates and emissions from this facility. The Annual Operating Report for Air Pollutant Emitting Facility (DEP form number 62-210.900(5)) shall be completed each year and shall be submitted to the Compliance Authority by April 1 of the following year.

   [Rule 62-210.370(3), F.A.C.]

Subsection A. Emissions Units 006, 007, 008, 017

This section of the permit addresses the following emissions units.

E.U. ID No.	Emission Unit Description
006	No.1 Boiler is a 33.5 MMBtu/hr capacity boiler that generates steam for process heat associated with the rendering and processing activities. *Fuels:* This unit is authorized to fire natural gas, Distillate oil with a maximum sulfur content of 0.05% by weight; on-specification used oil with a maximum sulfur content of 0.5% by weight, Residual oil with a maximum sulfur content of 1.5% by weight; Ultra Low Sulfur Diesel (ULSD) and processed fats. *Stack Parameters*: Exhaust gas exits at approximately 375 ˚F with a volumetric flow rate of 9,735 acfm through a single stack that is approximately 2 feet in diameter and 31 feet above ground level.
007	No.2 Boiler is a 33.5 MMBtu/hr capacity boiler that generates steam for process heat associated with the rendering and processing activities. *Fuels:* This unit is authorized to fire natural gas, Distillate oil with a maximum sulfur content of 0.05% by weight; on-specification used oil with a maximum sulfur content of 0.5% by weight, Residual oil with a maximum sulfur content of 1.5% by weight; Ultra Low Sulfur Diesel (ULSD) and processed fats. *Stack Parameters*: Exhaust gas exits at approximately 350 ˚F with a volumetric flow rate of 9,735 acfm through a single stack that is approximately 2 feet in diameter and 25 feet above ground level.
008	No. 3 Boiler is a 32.7 MMBtu/hr capacity boiler that generates steam for process heat associated with the rendering and processing activities. *Fuels:* This unit is authorized to fire natural gas, Distillate oil with a maximum sulfur content of 0.05% by weight; on-specification used oil with a maximum sulfur content of 0.5% by weight, Residual oil with a maximum sulfur content of 1.5% by weight; Ultra Low Sulfur Diesel (ULSD) and processed fats. *Stack Parameters*: Exhaust gas exits at approximately 355 ˚F with a volumetric flow rate of 11,943 acfm through a single stack that is approximately 2.6 feet in diameter and 38 feet above ground level.
017	*Description*: No. 4 Boiler is a 9.9 MMBtu/hour capacity boiler that solely provides energy for SPN solvent extraction process. *Fuels:* This unit is authorized to fire natural gas, Distillate oil with a maximum sulfur content of 0.05% by weight; on-specification used oil with a maximum sulfur content of 0.05% by weight, Ultra Low Sulfur Diesel (ULSD), and processed fats. *Stack Parameters:* Exhaust gas exists at approximately 375 °F with a volumetric flow rate of 1,909 scfm through a single stack that is approximately 2 feet in diameter and 15 feet above ground level.

{Permitting notes: These emissions units are regulated under: 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; Best Available Control Technology (BACT) Determination dated September 27, 2013 is applicable to Emissions Unit 017, BACT Determinations dated October 21, 1988, January 25, 1991, and April 20, 2010 are applicable to Emissions Units 006, 007, and 008. These emission units are subject to 40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. Emissions Unit Nos. 006, 007, and 008 are classified as existing industrial boilers, and Emissions Unit No. 017 is classified as a new industrial boiler under this Subpart. Hyperlink to 40 CFR 63 Subpart DDDDD}

The following permit conditions are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight.

"Residual oil" shall replace "No. 6 fuel oil" authorized for combustion in EU 006, EU 007 and EU 008.

"Distillate oil" shall replace "No. 2 fuel oil" authorized for combustion in EU 006, EU 007, EU 008, and EU 017.

"Processed fats" shall replace "processed grease" authorized for combustion in EU 006, EU 007, EU 008, and EU 017.

Permit Being Modified: Permit No. 0070004-006-AC

Affected Emissions Units: EU 006, EU 007, EU 008

Specific Condition 4: This condition is revised as follows.

4. Fuel Limits shall comply with limits listed below:

LOCATION	MATERIAL	LIMITS
Emissions Unit 006	~~Processed Grease/WCO~~ Processed fats, ~~No. 6 Fuel Oil~~ Residual oil On-Specification Used Oil	2.5% sulfur 2.5% sulfur **NOTE (1)** 2.5% sulfur **NOTE (1)**
Emissions Unit 007	~~Processed Grease/WCO~~ Processed fats, ~~No. 6 Fuel Oil~~ Residual oil On-Specification Used Oil	2.5% sulfur 2.5% sulfur **NOTE (1)** 2.5% sulfur **NOTE (1)**
Emissions Unit 006	~~Processed Grease/WCO~~ Processed fats, ~~No. 6 Fuel Oil~~ Residual oil On-Specification Used Oil	2.5% sulfur 1.5% sulfur **NOTE (1)** 1.5% sulfur **NOTE (1)**

NOTE (1) Sulfur limits based on BACT Dated 10/21/88.

Permitting Note: For the purposes of this permit, residual oil shall mean crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, see 40 CFR 63.14(b)).

[Rule 62-210.200(PTE) and Application No. 0070004-025-AC]

Permit Being Modified: Permit No. 0070004-016-AC

Affected Emissions Units: EU 006, EU 007, EU 008

Permit Condition Revision 2: This condition is revised as follows.

2. Specific condition A.3., Section III of Permit No. 0070004-014-AV will be revised from:

A.3. Method of Operation (Permitted Fuel): These emissions units are permitted to use No.6 fuel oil, on-specification waste oil or processed grease.
[Rule 62-213.410, F.A.C. and permit No. 0070004-006-AC]

To:

A.3. Method of Operation (Permitted Fuel): These emissions units are permitted to use natural gas, ~~No.6 fuel oil~~, Residual Oil, ~~No.2 fuel oil~~, Distillate Oil, on-specification used oil and ~~processed grease~~ Processed Fats.

Permitting Note: For the purposes of this permit, Residual oil shall mean crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, see 40 CFR 63.14(b)).

Permitting Note: For the purposes of this permit, Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see 40 CFR 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see 40 CFR 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see 40 CFR 60.14).

[Rule 62-213.410, F.A.C. and ~~Application received March 18, 2010~~ Application No. 0070004-016-AC; Application No. 0070004-025-AC]

Permit Being Modified: Permit No. 0070004-022-AC

Affected Emissions Units: EU 017

Subsection B., Condition 4: This condition is revised as follows.

4. Permitted Fuels: The unit is allowed to fire natural gas, ~~No. 2 fuel oil~~ Distillate Oil with a maximum sulfur content of 0.05% by weight; on-specification used oil with a maximum sulfur content of 0.05% by weight, Ultra Low Sulfur Diesel (ULSD), and ~~processed grease~~ Processed Fats.

   {Note: Natural gas, ~~No. 2 fuel oil~~ Distillate, ULSD, and on-specification used oil are considered fossil fuel, while ~~processed grease~~ processed fats is not.}

   Permitting Note: For the purposes of this permit, Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see 40 CFR 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see 40 CFR 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see 40 CFR 60.14).

   [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C. Application No. 0070004-025-AC]

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
014 (identified by Griffin Industries internally as EU 001)	**Inedible Animal By-products Protein Conversion Process Line #1:** The continuous rendering system consists of a number of processes that grind, convey, cook, and remove fluids from poultry inedibles. Raw materials are loaded into a Dupps 260J Cooker. Emissions and odors from the poultry byproducts cooker are controlled by a 10,000 cubic feet per minute (cfm) Venturi scrubber/packed tower system and two 40,000 cfm building air scrubbers.
019	**Inedible Animal By-products Protein Conversion Process Line #3:** The continuous rendering system consists of a number of processes that grind, convey, cook, and remove fluids from red meat inedibles. Raw materials are loaded into a Dupps 200U cooker**.** Emissions and odors from the red meat byproducts cooker are controlled by a 10,000 cubic feet per minute (cfm) Venturi scrubber/packed tower system and two 40,000 cfm building air scrubbers.
020	**Feather Protein Conversion Process Line:** The continuous rendering system consists of a number of processes that grind, convey, cook, and remove fluids from blood, and poultry feathers. Emissions and odors from 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.

PREVIOUS APPLICABLE REQUIREMENTS

B.1. Other Permits: The conditions of this permit supplement all previously issued air construction permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

PERFORMANCE RESTRICTIONS

Essential Potential to Emit (PTE) Parameters

B.2. Production Rate of Emissions Unit (EU 014). This Emissions Unit has a maximum design production capacity of 6,284 pounds per hour of finished meal.

Permitting Note: Based on the facility provided design capacity to evaporate 19,175 lb/hr water (average 65% moisture content, raw material input rate 29,500 lb/hr) and finished meal yield of 21.3% protein solids (meal).

[Rules 62-4.070(3), 62-210.200(PTE), F.A.C., Application No. 0070004-025-AC]

B.3. Production Rate of Emissions Unit (EU 019). This Emissions Unit has a maximum design production capacity of 4,856 pounds per hour of finished meal.

Permitting Note: Based on the facility provided design capacity to evaporate 14,800 lb/hr water (average 65% moisture content, raw material input rate 22,800 lb/hr) and finished meal yield of 21.3% protein solids (meal).

[Rules 62-4.070(3), 62-210.200(PTE), F.A.C., Application No. 0070004-025-AC]

B.4. Production Rate of Emissions Unit (EU 020). This Emissions Unit has a maximum design production rate of 3,600 pounds per hour of finished feather meal or 1,800 pounds per hour of finished blood meal or a combination of finished feather/blood meal.

Permitting Note: Based on the facility provided design capacity of 12,000 lb/hr feather raw material input rate (average 70% water content) with an average finished meal yield of 30% protein solids from feathers, and 20,000 lb/hr blood raw material input rate (average 91% water content) with an average finished meal yield of 9% protein solids from blood.

[Rules 62-4.070(3), 62-210.200(PTE), F.A.C., Application No. 0070004-025-AC]

B.5. Restricted Operation of each Emissions Unit (EU 014- EU 019, EU 021). The hours of operation of each emissions unit are not limited (8,760 hours per year).

[Rules 62-4.070(3), 62-210.200(PTE), F.A.C.; Construction Permit No. 0070004-024-AC]

TESTING REQUIREMENTS

B.6. VOC Performance Test: The combined VOC emissions from Emissions Unit 014 and Emissions Unit 019, and the VOC emissions from Emissions Unit 020 shall be determined at the scrubber system exhaust stack using the test method specified in **Condition B.9.** The test data shall be used to provide reasonable assurance that the VOC emission factors[1] used in the project construction permit application for these emissions units are an accurate representation in determining future actual and potential VOC emissions for these emissions units and to ensure PSD is not triggered for this pollutant. The initial tests shall be conducted no later than 180 days after receipt of the final construction permit.

{Permitting note: The test results on an hourly basis shall be compared to the combined hourly potential emissions[2, 3, 4]. If the test results are greater, the Permittee shall reassess the potential emissions of VOC for these emissions units using the test results.}

[1] Emission Factors used in construction permit application: 0.386 lb VOC/ton meal for EU 014 and EU 019, and 0.344 lb VOC/ton meal for EU 020.

[2] EU 014 and EU 019 Combined Hourly Potential Emissions = 2.15 lb/hr at stated emission unit production capacity and 1.94 lb/hr at testing capacity. [(6284 + 4856) lb/hr finished meal x 1 Ton/2000 lbs x 0.386 lb VOC/ton meal x 90% production capacity]

[3] EU 020 Hourly Potential Emissions Feather Meal = 0.62 lb/hr at stated emission unit finished feather meal production capacity and 0.56 lb/hr at testing capacity. [3600 lb/hr finished meal x 1 Ton/2000 lbs x 0.344 lb VOC/ton meal x 90% production capacity]

[4] EU 020 Hourly Potential Emissions Blood Meal = 0.31 lb/hr at stated emission unit finished blood meal capacity and 0.28 lb/hr at testing capacity. [1800 lb/hr finished meal x 1 Ton/2000 lbs x 0.344 lb VOC/ton meal x 90% production capacity]

[Rule 62-4.070(3), F.A.C.; Rule 62-212.400(12)(b),(c), F.A.C.]

B.7. Subsequent VOC Performance Tests: By the terms of this permit, subsequent VOC performance testing is not required for Emissions Unit 014, Emissions Units 019 and 020.

[Rule 62-4.070(3), F.A.C.]

B.8. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. During each required performance stack test, the permittee shall operate Emissions Units Nos. 014, 019, and 020 at the unit's testing capacity (at least 90 percent of the maximum operation rate specified by the permit). Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(3), (3)(b) F.A.C.; Rule 62-297.310(9), F.A.C.]

B.9. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
25, 25A or 25B	Method for Determining Volatile Organic Compounds

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.

[Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

B.10. Test Reports: The Permittee shall prepare and submit written test reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. The required test reports shall be filed with the Compliance Authority, as soon as practical, but no later than 45 days after the last sampling run of each test is completed. Test reports may be submitted electronically. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed.

[Rule 62-297.310(10), F.A.C.]

B.11. EU 014 and EU 019– Actual VOC Emissions. For the purpose of determining actual VOC emissions from these emissions units, the Permittee shall use the following equation on at least a monthly basis:

Actual VOC Emissions (tons/mo) = Finished Meal Production Rate (ton_{meal} /hr)[1] x Site Emission Factor (lb_{VOC}/ton_{meal}) x Hours of operation per month (hr/mo) x $1ton_{VOC}/2000\ lb_{VOC}$

Where:

Site Emission Factor = either 0.386 lb VOC/ton of finished meal[2] or an emission factor as determined by the performance testing required in **Specific Condition B.6.**

[1] From EU 014 and EU 019 combined

[2] Emission Factor used in construction permit application

[Application No. 0070004-025-AC]

B.12. EU 020 – Actual VOC Emissions. For the purpose of determining actual VOC emissions from this emissions unit, the Permittee shall use the following equation on at least a monthly basis:

Actual VOC Emissions (tons/mo) = Finished Meal Production Rate (ton_{meal} /hr) x Site Emission Factor (lb_{VOC}/ton_{meal}) x Hours of operation per month (hr/mo) x $1ton_{VOC}/2000\ lb_{VOC}$

Where:

Site Emission Factor = either 0.344 lb VOC/ton of finished meal[1] or an emission factor as determined by the performance testing required in **Specific Condition B.6.**

[1] Emission Factor used in construction permit application

[Application No. 0070004-025-AC]

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
016	**Secondary Protein Nutrient Fines Solvent Extraction Process:** A collection of continuous process equipment and activities that produce meal products by extracting the remaining fat/oil from residual SPN fines through direct contact with the organic solvent, hexane isomer blend. The process equipment includes raw material preparation operations, solvent extractors, a single, continuous flow, tray desolventizer, meal dryers, meal coolers, meal conveyor systems, oil distillation units, solvent evaporators and condensers, solvent recovery system, vessels storing solvent-laden materials, residual meal storage/processing and storage vessels.

{Permitting note: The SPN fines solvent extraction process is subject to Case by Case Maximum Achievable Control Technology (MACT) Determination pursuant to Section 112(g) of Clean Air Act.

The following permit conditions are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight.

Permit Being Modified: Permit No. 0070004-022-AC

Affected Emissions Units: EU 016

Specific Condition 3: This condition is revised as follows.

3. Maximum Throughput Rate: The maximum feeding rate of the SPN fines into the extractor ~~is~~ shall not exceed 100 tons/day, averaged monthly ~~averaged~~ and also 14,340 tons per rolling 12-month period.

   The SPN fines are concentrated semi-solid matrix of solids and oil/fat that result from dewatering of wastewater emulsions that are collected from the rendering facilities or Griffin's customers.

   [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; Rule 62-212.400(12), F.A.C]

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
016	**Secondary Protein Nutrient Fines Solvent Extraction Process:** A collection of continuous process equipment and activities that produce meal products by extracting the remaining fat/oil from residual SPN fines through direct contact with the organic solvent hexane isomer blend. The process equipment includes raw material preparation operations, solvent extractors, a single, continuous flow, tray desolventizer, meal dryers, meal coolers, meal conveyor systems, oil distillation units, solvent evaporators and condensers, solvent recovery system, vessels storing solvent-laden materials, residual meal storage/processing and storage vessels.

{Permitting note: The SPN fines solvent extraction process is subject to Case by Case Maximum Achievable Control Technology (MACT) Determination pursuant to Section 112(g) of Clean Air Act.

PREVIOUS APPLICABLE REQUIREMENTS

D.1. Other Permits: The conditions of this permit supplement all previously issued air construction permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

PERFORMANCE RESTRICTIONS

D.2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly.

[Rule 62-210.650, F.A.C.]

VOC AND HAP SYNTHETIC MINOR LIMITATIONS COMPLIANCE REQUIREMENTS

D.3. N-Hexane Solvent. The Permittee shall use a combination of normal HAP solvent (consisting of 64% n-hexane and 36% hexane isomers) and lower HAP solvents (consisting of an average of less than 5% n-hexane content with the remaining content comprised of iso-hexane or hexane isomers) in the SPN Fines Solvent Extraction Process for the purposes of compliance with the HAP Emissions Caps stated in **Conditions FW.1.** and **FW.2.**

[Application No. 0070004-025-AC; Rule 62-4.070(3), F.A.C.]

D.4. VOC and HAP Emissions – Monthly Solvent Loss Calculation Methodology: For the purposes of determining the VOC and HAP emissions from the SPN Fines Solvent Extraction Process for compliance with the VOC and HAP Emissions Caps stated in **Conditions FW.1.** and **FW.2.**, the permittee shall calculate the total solvent loss in gallons using the following equation:

Solvent Loss (gal/month) = $Solvent_E + Solvent_R - Solvent_B$

Where:

$Solvent_E$ = Gallons of solvent in the inventory at the end of the operating month as determined in Specific Condition 17.(3) of Construction Permit No. 0070004-022-AC.

$Solvent_R$ = Gallons of solvent received during the operating month as determined in Specific Condition 17.(4) of Construction Permit No. 0070004-022-AC.

$Solvent_B$ = Gallons of solvent in the inventory at the beginning of the operating month as determined in Specific Condition 17.(3) of Construction Permit No. 0070004-022-AC.

Solvent inventory shall be determined from the solvent storage tank, the solvent work tank, and other process vessels in the SPN Fines solvent extraction process. The Permittee shall record the solvent loss by the end of each calendar month following an operating month.

Solvent loss shall not include losses that occur during non-operating and malfunction periods as described in Specific Condition Nos. 12 and 17 of Construction Permit No. 0070004-022-AC.

[Rule 62-4.070(3) F.A.C.; Application No. 0070004-025-AC]

D.5. <u>HAP Emissions – Monthly f Factor Methodology:</u> For the purposes of determining the HAP emissions from the SPN Fines Solvent Extraction Process for compliance with the HAP Emissions Caps stated in **Conditions FW.2. and FW.3.**, the permittee shall calculate the specific month f Factor (monthly weighted average HAP content of the Extraction Solvent) using the following equation:

$$\text{Monthly Weighted Average HAP Content of Extraction Solvent} = \frac{\sum_{i=1}^{n} \text{Received}_i \times \text{Content}_i}{\text{Total Received}}$$

Where:

$Received_i$ = Gallons of extraction solvent received in delivery ``i."

$Content_i$ = The volume fraction of HAP in extraction solvent delivery ``i."

Total Received = Total gallons of extraction solvent received since the end of the previous operating month.

n = Number of extraction solvent deliveries since the end of the previous operating month.

The Permittee shall determine the weighted average volume fraction of HAP in the extraction solvent each operating month. The weighted average volume fraction of HAP for an operating month includes all solvent received since the end of the last operating month, regardless of the operating status at the time of the delivery. The Permittee shall record the record the result by the end of each calendar month following an operating month

[Rule 62-4.070(3) F.A.C.; Application No. 0070004-025-AC]

RECORDKEEPING REQUIREMENTS

D.6. The following records shall be kept for the SPN Fines Solvent Extraction Process (EU 016):

a. Solvent inventory records as required by Specific Condition No. 32 of Construction Permit No. 0070004-022-AC.

b. Weighted average volume fraction of HAP in the extraction solvent as required by Specific Condition No. 33 of Construction Permit No. 0070004-022-AC.

c. Total weight of SPN Fines fed to the extractor as required by Specific Condition No. 24 of Construction Permit No. 0070004-022-AC.

d. Monthly solvent loss in gallons as required by **Condition D.4.**

e. Density, as reported by the supplier, of each extraction solvent delivery received during the month**.**

f. Material safety data sheet or a manufacturer's certificate of analysis of each delivery of extraction solvent received during the month.

[Rule 62-4.070(3), F.A.C.]