

## MEMORANDUM

**DATE:** December 13, 2012

**TO:** Richard D. Garrity, Ph.D.

**FROM:** Stephen Hathaway, P.E.                      **THRU:** Diana M. Lee, P.E.

**SUBJECT:** **Air Construction Permit – Griffin Industries, LLC**  
**FINAL Permit No. 0570163-004-AC**

Attached is FINAL Permit No. 0570163-004-AC which authorizes Griffin Industries, LLC to replace Cooker #1 in the existing rendering process with a larger cooker. The new cooker will be a Dupps Company Supercooker rated at a maximum of 43,440 pounds per hour of raw material input, based on a raw material moisture content of 34%. Additionally, the water-cooled shell and tube condenser for Cooker #1 will be replaced with a larger condenser rated at 16.1 MMBtu/hr to handle the increased steam and condensable malodorous compound loading, and will be tied into the existing three-stage scrubbing system. Griffin Industries operates a continuous rendering facility located at 1001 Orient Road in Tampa.

The DRAFT Permit package, including the Technical Evaluation and Preliminary Determination, Intent to Issue, and Notice of Intent to Issue Permit No. 0570163-004-AC was mailed to the applicant on November 16, 2012. Comments were submitted by the applicant on November 19, 2012, which included minor wording changes to the process description to be more in line with current rendering industry terminology. The Notice of Intent to Issue Permit was published in The Tampa Tribune on November 23, 2012. The comments were incorporated into the FINAL AC permit.

This project is subject to Rule 62-296.320, General Pollutant Emission Limiting Standards, since it is a source of PM, VOC, visible emissions, and a potential source of odors.

Based on our review, we recommend the issuance of the FINAL AC permit.

FINAL DETERMINATION

FOR

Griffin Industries, LLC

Hillsborough County

Air Construction Permit

Application Number

0570163-004-AC

Environmental Protection Commission of

Hillsborough County

Tampa, FL

December 13, 2012

The Environmental Protection Commission of Hillsborough County mailed the DRAFT Permit package on November 16, 2012, which included the Technical Evaluation and Preliminary Determination, Intent to Issue, and Notice of Intent to Issue Permit No. 0570163-004-AC to Griffin Industries, LLC located at 1001 Orient Road, Tampa, FL 33619. Comments regarding the DRAFT AC Permit were submitted by the applicant on November 19, 2012, which included minor wording changes to the process description to be more in line with current rendering industry terminology. The permit authorizes Griffin Industries to replace one of the Dupps Company 1500 Equacookers with a Dupps Company 200U Supercookor.

The Notice of Intent to Issue Permit was published on November 23, 2012 in The Tampa Tribune.

No further comments were received from the facility or the public since the Intent was published.

The final action of the Environmental Protection Commission of Hillsborough County is to issue the FINAL AC permit.

ENVIRONMENTAL PROTECTION COMMISSION OF  
HILLSBOROUGH COUNTY, as Delegated by  
  
STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
  
NOTICE OF PERMIT

Tim Garris  
District Manager  
Griffin Industries, LLC  
1001 Orient Road  
Tampa, FL 33619

Dear Mr. Garris:

Re: Hillsborough County - AP

Enclosed is Permit Number 0570163-004-AC to replace one of the existing cookers with a new cooker at the rendering facility located at 1001 Orient Road, Tampa, FL 33619. The maximum process rate of the cooker will increase from 34,000 to 43,440 lbs/hr of raw material input. In addition, a new shell and tube condenser rated at 16.1 MMBtu/hr will be installed to accommodate the increased cooker capacity. Emissions will be controlled by the existing 3-stage scrubber system.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the EPC in the Legal Department at 3629 Queen Palm Dr., Tampa, Florida 33619; 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 of Appeal must be filed within 30 days from the date this Notice is filed with the clerk of the EPC.

Executed in Tampa, Florida.

Sincerely,

Richard D. Garrity, Ph.D.  
Executive Director

RDG/SRH/srh

cc: Florida Department of Environmental Protection (e-mail)  
John Crowley, P.E. – Griffin Industries, LLC

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on \_\_\_\_\_ to the listed persons.

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated clerk, receipt of which is hereby acknowledged.

\_\_\_\_\_  
Clerk

\_\_\_\_\_  
Date

PERMITTEE:  
Griffin Industries, LLC  
1001 Orient Road  
Tampa, FL 33619

PERMIT/CERTIFICATION:  
DRAFT Permit No.: 0570163-004-AC  
County: Hillsborough  
Expiration Date: June 1, 2014  
Project: Replace Cooker #1

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 62-204, 62-210, 62-212, 62-296, 62-297, and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the EPC and made a part hereof and specifically described as follows:

For the modification of the rendering operation. Griffin Industries will replace Cooker #1 in the existing rendering process with a larger cooker. The new cooker will be a Dupps Company Supercookor rated at a maximum of 43,440 pounds per hour of raw material input, based on a raw material moisture content of 34%. Additionally, the water-cooled shell and tube condenser for Cooker #1 will be replaced with a larger condenser rated at 16.1 MMBtu/hr to handle the increased steam and condensable malodorous compound loading, and will be tied into the existing three-stage scrubbing system.

Griffin Industries currently processes animal remains, scrap meat, and the interface from used restaurant food grease using two (2) high pressure steam heated cookers that are used to separate fat from meat or animal remains by slow heating and processing of meat, fat, bone, and offal. Currently, each cooker has a maximum input rate of 34,000 pounds per hour to produce tallow, yellow grease, and bone meal, based on a raw material moisture content of 34%. The Dupps Company 1500 Equacooker (Cooker #1) will be replaced with a Dupps Company 200U Supercookor, increasing the capacity of Cooker #1 from 34,000 pounds per hour to 43,440 pounds per hour of raw material input. Correspondingly, the existing shell and tube condenser for Cooker #1 will be replaced with a larger condenser which is designed to handle a higher condensable vapor loading rate. The new cooker will be of similar design as the existing cooker.

Each cooker has a water-cooled shell and tube condenser to collapse the steam and control condensable odor emissions generated from the cooking operation. The two water-cooled shell and tube condensers operating in parallel are followed by three scrubbers in series; a 10,000 acfm Venturi Scrubber and High Intensity Packed Bed Scrubber to control non-condensable odor emissions from the cookers, and a 50,000 acfm Room Air Scrubber to control the pre-treated process vapors and fugitive vapors from the processing building. The Room Air Scrubber treats

approximately 40,000 acfm of in-plant air and 10,000 acfm of pretreated process vapors from the Venturi and High Intensity Packed Bed scrubbers. The in-plant air emissions consist of emissions from the feed screws, grinders, control wheels, drainers, centrifuges, screw presses, and other miscellaneous process equipment. Sodium hypochlorite is injected as a scrubbing agent in the scrubbers for odor control. In addition, sodium hydroxide and muriatic acid are used for pH control in the scrubbers.

In addition, there is a tertiary odor control system, which uses atomizing spray nozzles that distribute a mist of odor masking compound around the opening at the truck unloading/receiving pit area for the purpose of masking odors in the immediate raw material unloading area. In order to mitigate potential odors, all raw materials are processed within 24 hours of receipt.

Two steam boilers, one rated at 62.76 MMBtu/hr and another rated at 31.38 MMBtu/hr, supply high pressure process steam for use in the two cookers. Both boilers are fired primarily on natural gas with backup of virgin No. 2 fuel oil with less than 0.05% sulfur content by weight. The facility also maintains the ability to combust processed fats due to its similar heat content to fuel oil. Both of the boilers are exempt from permitting based on Rule 62-210.300(3)(a), F.A.C. and the EPC permit determination letter dated March 6, 2000.

Additionally, there is a Restaurant Food Grease (RFG) processing operation that involves using steam to heat and concentrate the grease by removing water in a series of work tanks. According to Griffin Industries, these work tanks will be replaced with an evaporator (concentrator). The RFG operation generates approximately 800 acfm and is tied into the existing scrubber system. This activity is considered to be an insignificant emissions source with respect to the overall rendering process.

The final products from this facility consist of bone meal (crax) and processed fats, which includes tallow, yellow grease, brown grease, and poultry fat. These products are sold for use in animal feed applications, chemical manufacturing, and combustion applications. Below is a list of the process and pollution control equipment that will be in place upon completion of this air construction permit:

<u>Equipment</u>	<u>Manufacturer</u>	<u>Model No.</u>
Cooker #1	The Dupps Company	200U Supercookor
Cooker #2	The Dupps Company	1500 Equacooker
Shell and tube condenser #1	Texas Metal Fabrication Company	T-42
Shell and tube condenser #2	The Dupps Company	12 SS
Venturi Scrubber	10,000 ACFM SCP Control, Inc.	8'' x 20''
Packed Bed Scrubber	10,000 ACFM GPI Corporation	#4468 60'' x 258''
Room Air Scrubber	50,000 ACFM American Fan Co.	BI-490

This project is subject to Rule 62-296.320, General Pollutant Emission Limiting Standards, since it is a source of PM, VOC, visible emissions, and a potential source of odors.

Location: 1001 Orient Road, Tampa, Hillsborough County, FL 33619

Emission Unit No.:

003	Rendering Operation
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References Permit Nos.: 0570163-003-AO and AC29-106753

PERMITTEE:  
Griffin Industries, LLC

Permit/Certification No.: 0570163-004-AC  
Project: Replace Cooker #1

SPECIFIC CONDITIONS:

1. A part of this permit is the attached General Conditions. [Rule 62-4.160, F.A.C.]
2. All applicable rules of the Environmental Protection Commission of Hillsborough County including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction. [Rule 62-4.070(7), F.A.C.]
3. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapters 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C., or any other requirements under federal, state, or local law. [Rule 62-210.300, F.A.C.]
4. The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320, F.A.C.]
5. The input rates for each Cooker shall not exceed the following maximum raw material processing rates (lbs/hr) while processing fat, bones, offal, and restaurant grease interface.

		<u>lbs/hr</u>
A)	Cooker #1	43,440
B)	Cooker #2	34,000

[Rule 62-210.200(PTE), 62-4.070(1), F.A.C., and Construction Permit No. AC29-106753]

6. In order to ensure compliance with Specific Condition No. 4, the following shall apply to this rendering operation: [Rule 62-4.070(3), F.A.C. and Permit No. 0570163-003-AO]
  - A) The odor control systems, which include the water-cooled shell and tube condensers and scrubbers, must be properly maintained, and in operation whenever the rendering process is in operation. The odor control system shall be started and fully operational prior to feeding raw materials into the process.
  - B) Raw materials shall be restricted to animal by-products and grease.
  - C) Raw materials shall be processed as soon as reasonably practicable upon delivery to the facility. If raw materials are not processed within 24 hours after delivery to the facility due to an operational breakdown or plant upset, the permittee shall notify the EPC regarding the operational breakdown or plant upset and the estimated time frame for completing processing of raw materials.
  - D) The water in the line returning from either of the two condensers following the cookers shall not exceed 140° F.

PERMITTEE:  
Griffin Industries, LLC

Permit/Certification No.: 0570163-004-AC  
Project: Replace Cooker #1

SPECIFIC CONDITIONS:

7. The following Operation and Maintenance Plan for the odor control systems shall be strictly adhered to: [Rule 62-4.070(1), F.A.C. and Permit No. 0570163-003-AO]

A) The following performance parameters of the sources and the odor control/monitoring system shall be maintained within the specified operating ranges below:

- 1) High Intensity Packed Bed Scrubber pressure drop: 2-8 inches H<sub>2</sub>O
- 2) Room Air Scrubber pressure drop: 1-5 inches H<sub>2</sub>O
- 3) Scrubbing liquid flow rate to the High Intensity Packed Bed Scrubber spray nozzles: minimum of 100 gpm
- 4) Scrubbing liquid flow rate to the Room Air Scrubber nozzles: normal, 450 gpm
- 5) Total liquid flow rate (make up and recirculating) to Venturi Scrubber: Minimum of 40 gpm
- 6) pH of scrubbing liquid to the High Intensity Packed Bed and Room Air Scrubbers: not to exceed 9
- 7) Oxidation-Reduction Potential (ORP) of scrubber liquid to the High Intensity Packed Bed and Room Air Scrubber as measured at the line leading to/supplying spray nozzles: minimum 500 mV (10 ppm)\*
- 8) Cooker Temperature Range: not to exceed 300° F\*

\* The ORP may be operated at a higher mV value, as necessary, in order to minimize objectionable odors. The cooker temperature upper limit may be exceeded up to 320 °F for no longer than 15 minutes in any single hour. Operating under either or both of these conditions does not exempt the permittee from complying with Specific Condition No. 4 of this permit.

B) The following observations, checks, and operations apply to this source and shall be conducted and recorded on the schedule specified:

Daily (While Operating)

- 1) Check the pressure drop across the High Intensity Packed Bed and Room Air Scrubbers (hourly).
- 2) Check the scrubbing liquid flow rate to the Venturi, High Intensity Packed Bed and Room Air Scrubbers (hourly).
- 3) Check the pH of the High Intensity Packed Bed and Room Air Scrubbers scrubbing liquid reservoir (hourly).
- 4) Check the amp meter for the fan serving the Room Air Scrubber.
- 5) Continuously monitor and record the ORP of the scrubbing liquid in the High Intensity Packed Bed and Room Air Scrubbers.
- 6) Continuously monitor and record process temperature of each cooker.

PERMITTEE:  
Griffin Industries, LLC

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Project: Replace Cooker #1

SPECIFIC CONDITIONS:

- 7) Good housekeeping practices shall be adhered to.

Every Other Month:

- 1) Cleaning procedure for High Intensity Packed Bed Scrubber:
- a) Check the packed tower for grease build-up.
  - b) Caustic wash the tower with 20-gallons for 2 hours.
  - c) Caustic wash the Venturi scrubber with 15-gallons for 2 hours.
  - d) Drain both systems - fill with fresh water rinse for 1 hour.
  - e) Drain both systems - fill with fresh water add 25 gallons 20% muriatic acid and wash for 3 hours.
  - f) Drain both systems - fill with fresh water.
  - g) Check ORP and pH probes. Make sure they are clean and verify calibration.
  - h) Turn on fan. Make sure pressure drop is reading as permit requires.
  - i) Set valves to make sure the circulating pumps read what the permit requires for both systems.
  - j) Before leaving system, make sure ORP and pH probes are reading what the permit requires.

- 2) Cleaning Procedure for Room Air Scrubber:

- a) Check packed tower for grease build-up.
- b) Caustic wash tower with 55-gallons for 2 hours.
- c) Drain system fill with fresh water - rinse 1 hour.
- d) Drain system fill with fresh water. Add 55 gallon 20% muriatic acid wash for 3 hours.
- e) Drain system - fill with fresh water.
- f) Check ORP and pH probes. Make sure they are clean and verify calibration.
- g) Turn on fan. Make sure pressure drop is reading as permit requires.
- h) Set valves to make sure the bleed is 10 gpm to outside scrubber.
- i) Before leaving system, make sure ORP and pH probes are reading what the permit requires.

- C) The following maintenance and operation shall apply to this source and shall be conducted on the schedule specified.

Weekly

- 1) Check all the fan bearings and lubricate if needed.

PERMITTEE:  
Griffin Industries, LLC

Permit/Certification No.: 0570163-004-AC  
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SPECIFIC CONDITIONS:

Monthly

- 1) Check all drive belts and chains for wear and tension.
- 2) Check the High Intensity Packed Bed and Room Air Scrubbers spray nozzles to ensure that there is a proper spray pattern. Repair if necessary.
- 3) Check all hoses and clamps.
- 4) Calibrate all indicating equipment.
- 5) Inspect housing for corrosion.

Quarterly

- 1) Inspect paint on odor control systems.

Annually

- 1) Check all bolts.
- 2) Check welds.
- 3) Calibrate ORP and pH controllers.

D) Records:

Records of inspections, maintenance, and performance parameters required by the specific condition of this permit shall be retained for a minimum of two years and shall be made available to the Environmental Protection Commission of Hillsborough County upon request. [Rule 62-4.070(3), F.A.C.]

8. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in Rule 62-296.320, F.A.C. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alterations, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions shall include, but not be limited to, the following:

- A) Maintenance of parking areas and yards.
- B) Removal of particulate matter from paved areas, buildings and work areas under control of the owner/operator.

PERMITTEE:  
Griffin Industries, LLC

Permit/Certification No.: 0570163-004-AC  
Project: Replace Cooker #1

SPECIFIC CONDITIONS:

9. Excess emissions resulting from start-up, shutdown or malfunction of any emissions unit shall be permitted provided that best operational practices to minimize emissions are adhered to; and, the duration of excess emissions shall be minimized but in no case exceed two hours in any 24-hour period. [Rule 62-210.700(1), F.A.C.]

10. If the permittee is not able to comply with any of the provisions of this permit, in particular, maintenance of the operating parameters of the primary and/or secondary odor control systems, then the permittee shall report the problem to the Environmental Protection Commission of Hillsborough County by telephone or in writing no later than the next business day. [Rule 62-4.070(1), F.A.C. and Permit No. 0570163-003-AO]

11. The use of property, facilities, equipment, processes, products, or compounds, or the commission of paint overspraying or any other act, that causes or materially contributes to a public nuisance is prohibited, pursuant to the Hillsborough County Environmental Protection Act, Section 16, Chapter 84-446, Laws of Florida, as Amended.

12. The permittee shall provide timely notification to the Environmental Protection Commission of Hillsborough County prior to implementing any changes that may result in a modification to this permit pursuant to Rule 62-210.200, F.A.C. The changes do not include normal maintenance, but may include, and are not limited to, the following, and may also require prior authorization before implementation: [Rules 62-4.070(1) and 62-210.300, F.A.C.]

- A) Alteration or replacement of any equipment or major component of such equipment.
- B) Installation or addition of any equipment which is a source of air pollution.

13. If the permittee wishes to transfer this permit to another owner, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted, in duplicate, to the Environmental Protection Commission of Hillsborough County within 30 days after the sale or legal transfer of the permitted facility. [Rule 62-4.120, F.A.C.]

14. A minimum of two copies of an application for an air operation permit shall be submitted to the Environmental Protection Commission of Hillsborough County within 90 days of initial operation of the Supercookor, or at least 90 days prior to the expiration date of this permit, whichever occurs first. The application shall also include a copy of the previous three (3) months of records required by this permit. [Rules 62-4.050(2) and 62-210, F.A.C.]

PERMITTEE:  
Griffin Industries, LLC

Permit/Certification No.: 0570163-004-AC  
Project: Replace Cooker #1

SPECIFIC CONDITIONS:

ENVIRONMENTAL PROTECTION COMMISSION  
OF HILLSBOROUGH COUNTY

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Richard D. Garrity, Ph.D.  
Executive Director