Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V DRAFT PERMIT NO. V-05-025
Griffin Industries, Inc.
Russellville Plant
Russellville, Kentucky 42276
APRIL 25, 2005
BEN MARKIN, REVIEWER

SOURCE I.D. #:	021-141-00026
SOURCE A.I. #:	2753
ACTIVITY #:	APE20040002

SOURCE DESCRIPTION:

An operating permit application was received from Griffin Industries, Inc. on December 14, 1997 and was called complete on February 12, 1998. Griffin Industries operates a rendering facility and finishing product at the Russellville facility in Logan County, Kentucky. In the rendering facility (E.U. 003) animal by-product materials are processed into tallow, grease, and high protein meat and bone meal. In addition, the facility operates two (2) residual oil-fired indirect heat exchangers (E.U. 001 & E.U 002) with heat input of 50 mmBtu/hr each, and a cooling tower. The emissions of ammonia from cooling tower (E.U. 004) operations are contingent upon the amount of water cooled per unit time, which is in turn contingent upon the amount of finished product processed.

COMMENTS:

Based on the information provided, the Division concluded that 401 KAR 59:015 applies to the indirect heat exchangers that were constructed after 1972, 401 KAR 59:010 and 401 KAR 53:010 apply to the rendering processes and the finished products, while 401 KAR 63:021 and 401 KAR 63:010 apply to the cooling tower.

E.U 001 & 002, Indirect Heat Exchangers:
Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.329 lb/mmBtu actual heat input, each. Pursuant to 401 KAR 59:015, Section 4(2), visible emissions from any stack shall not equal or exceed twenty (20) percent opacity based on a six-minute average, except that a maximum of 40% opacity, based on a six-minute average, shall be permissible for not more than 6 consecutive minutes in any consecutive 60 minutes during cleaning the fire-box or blowing soot. Pursuant to KAR 59:015, Section 5(1)(c), sulfur dioxide emissions shall not exceed 1.16 lb/mmBtu actual heat input, each.

The permittee shall monitor the heating and sulfur content of residual oil of each shipment received. The permittee may use fuel supplier certification to meet this requirement. The permittee shall maintain the records of the fuel analysis; the amount of fuel combusted on a monthly basis; the monthly sulfur dioxide emissions and summarize them on a 12-month rolling average.

The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a daily basis and maintain a log of the observations. If visible emissions from each stack are seen (not including condensed water vapor within the plume), then the opacity shall be determined by EPA Reference Method 9 and an inspection shall be initiated of control equipment for

any and all necessary repairs.

The permittee shall submit a schedule within six months from the issuance of this permit to conduct at least one performance test for particulate matter and sulfur dioxide within one year following the issuance of this permit.

E. U. 003: Rendering processes and finish product

Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions into the open air shall not exceed [$3.59(P)^{0.62}$] lbs/hour based on a three-hour-average where P is the processing rate in tons/hour. For compliance with the PM emission limit, an emission factor of 1.43 lbs PM/ton of raw material processed through the unit shall be used, based on the 1992 Air Pollution Engineering Manual, p. 523 (assuming maximum raw material processing rate through the unit), until new information is gathered from the stack tests that shall be performed within one year from issuance of the proposed permit. Emission factors derived from stack testing are to replace the emission factor currently listed in the emissions inventory database, and shall be used to calculate future emissions.

Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 20% opacity based on a six-minute-average. The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from each stack are seen (not including condensed water vapor within the plume), then the opacity shall be determined by EPA Reference Method 9 and an inspection shall be initiated of control equipment for any and all necessary repairs.

In order to be in compliance with 401 KAR 53:010, the mixture of 1 volume of ambient air mixed with 7 volumes of odorless air at any given time, must have no detectable odor.

The permittee shall report exceedances of Hydrogen Sulfide over 100 pounds in any 24 hour period to the Division's Regional Office listed on the front cover. (AFO Consent Agreement in Federal Register Vol. 70 No. 19, Dated January 31, 2005)

Type of control and efficiency
The rendering process is equipped with venturi scrubber/packed tower scrubber as well as a room air scrubber.

E. U 004: Cooling Tower

Pursuant to KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the installation and utilization of hoods, fans, and fabric filters to enclose and vent the emissions generated from the processing of dust generating materials, or use of water sprays or other measures to suppress the dust emissions during handling. Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive emissions beyond the property line is prohibited.

The permittee shall monitor the amount of ammonia injected and processed on a monthly basis. Compliance with the requirements of 401 KAR 63:021 is demonstrated if the rates of ammonia usage per hour and year established in the Title V application are not exceeded.

Emissions were calculated based on AP 42. The results of the analysis are summarized in the air quality analysis and indicate that the standards will not be exceeded. Since this review has disclosed

that all requirements will be met, the preliminary determination is that an operating permit may be issued as conditioned, but contingent to the satisfactory resolution of any adverse public comments which might be received. Additional information used in making this review was obtained from existing limitations on file records.

APPLICABLE REGULATIONS:

401 KAR 53:010, Ambient Air Quality
401 KAR 59:010, New Process Operations.
401 KAR 59:015, New Indirect Heat Exchangers applicable to an emission unit with a capacity less than 250 mmBtu per hour and commenced on or after April 9, 1972.
401 KAR 63:010, Fugitive Emissions
401 KAR 63:021, Existing sources emitting toxic air pollutants.

NON-APPLICABLE REGULATIONS DUE TO APPLICABILITY DATE OR SIZE OF THE UNIT:

401 KAR 60:005, New Source Performance Standards incorporating by reference 40 CFR 60 Subpart Dc, Standards of performance for small industrial-commercial-institutional steam generating units, applicable to an emission unit with a design maximum heat input capacity of 100 mmBtu/hour or less and greater than or equal to 10 mmBtu/hour and constructed after June 9, 1989. Based on the clarification letter dated February 25, 1998, from U.S. EPA to the director of Division for Air Quality, Kentucky, both boilers permitted under permits S-94-031 and S-00-137, are exempted from 40 CFR 60, Subpart Dc applicability. See Attachment E.

EMISSION AND OPERATING CAPS DESCRIPTION:

Source wide #6 fuel oil shall not exceed 5,732,490 gallons per year, and 225 tons per year for sulfur dioxide emissions to preclude the applicability of Prevention of Significant Deterioration (PSD) of Air Quality, 401 KAR 51:017.

OPERATIONAL FLEXIBILITY:

None

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

S:\SHARE\titlev\stat_bas.djg