

Facility Name: **Tyson Poultry, Inc. River Vally Ingredients – Cumming Division**
City: Cumming
County: Forsyth
AIRS #: 04-13-117-00005

Application No: TV-790603
Date Application Received: November 29, 2023
Permit No: 2077-117-0005-V-05-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name: Tyson Poultry, Inc. River Valley Ingredients – Cumming Division
2. Parent/Holding Company Name: Tyson Poultry, Inc.
3. Previous and/or Other Name(s):

PKA North Georgia Rendering,
Georgia Proteins, Inc,
American Proteins, Inc. - Cumming Division.

4. Facility Location

4990 Leland Drive
Cumming, Georgia 30041 (Forsyth County)

5. Attainment, Non-attainment Area Location, or Contributing Area

This facility is located in Forsyth County. According to US EPA's Green Book, this county is an "Attainment Area".

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
2077-117-0005-V-04-0	May 22, 2019	3 rd Title V operating permit renewal
2077-117-0005-V-04-1	February 11, 2020	Installing a meat rendering line and replacing a boiler

D. Process Description

1. SIC Codes(s): 2077 - Animal and Marine Fats and Oils

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

The primary final products of this facility are poultry meal, poultry fat, and feather meal.

3. Overall Facility Process Description

Tyson Poultry, Inc. River Valley Ingredients - Cumming Division produces poultry meal, poultry fat, and feather meal. The facility utilizes five raw materials: raw chicken meat; chicken blood; chicken hatchery waste (including dry feed); emulsified chicken fat (also called secondary poultry nutrients, abbreviated as SPN); and raw chicken feathers.

Raw materials mentioned above are generally brought into the facility by tractor trailers. When a load arrives, its excess water is drained from the trailer, and then weighed. The material is then dumped into an appropriate holding facility to await processing. Holding facilities consist of metal bins with integral screw conveyors. Water drained from the raw materials is treated in a wastewater treatment system owned and operated by the facility.

The raw meat, blood, and hatchery waste are processed through meat processing operations to produce poultry meal and poultry fat. Raw feathers are processed through a feather process line to produce the feather meal. The heat for these processes is currently provided by five boilers (FB03, FB04, FB05, FB06 and FB08) and one feather dryer (FB07). A new boiler (FB09) has been permitted to replace Boiler No. FB03 via a permit amendment in the past. All the boilers are required to burn only natural gas with distillate fuel oil (No. 1 and No. 2 fuel oil) as contingency/backup fuel during natural gas curtailment. The feather dryer's fuels include natural gas and distillate fuel oil.

In the feather process line, vapors recovered from the batch cookers, meal dryer, and cage mills are blown through a cyclone to remove solids and then ducted through a condenser. Likewise, in the meat lines, process emissions are vented to condensers. The non-condensable vapors from the condensers are combined with gases captured from the processes and building and ducted to a biofilter which uses wood chips as filter media.

The facility utilizes shell and tube heat exchangers in the form of evaporators to evaporate excess water in various process units. The facility also utilizes shell and tube heat exchangers in the form of water-cooled condensers to condense vapors which are emitted from various cooking and dehydration processes. The cooled water utilized by the condensers is supplied by a cooling system operated by the facility. Excess vapors produced in the facility's evaporators are ducted to condensers. The condensed cooking vapors (condensate) are sent to the facility's wastewater treatment system.

The facility uses several scrubbers to control building ventilation air associated with the various rendering processes, as indicated in Table 3.1. Two (2) scrubbers are used in the feather line and six in meat lines. Another scrubber is used to control emissions from the feather meal dryer. All the scrubbers packed-bed scrubbers. These scrubbers use chlorine dioxide treated water as scrubbant but could also use other scrubbants as long as they have similar or better efficiency in removing odors and VOCs. The air drawn through the scrubbers and biofilter assures that the building is maintained under negative air pressure, which prevents the release of fugitive emissions from the process building.

A regenerative thermal oxidizer (RTO) is being operated as primary control for VOC and odor emissions from the feather drying process. This RTO will burn natural gas with fuel oil as backup during natural gas supply curtailment. The RTO thermally oxidizes/incinerates biomass particles/VOC and odor emissions contained in process exhaust air streams mainly into CO₂, H₂O, and SO₂. The RTO will also convert a certain portion of ammonia (NH₃) in the process exhaust into nitrogen oxides (NO_x). An existing process air scrubber (OD07) is placed in stand-by status on site for contingency backup to the RTO if needed.

The facility wastewater is treated using primary and secondary wastewater treatment systems. The wastewater is first treated in a dissolved air flotation (DAF) tank to remove much of the fat; the fat is then returned to the process. The secondary treatment consists of biological anaerobic and aerobic lagoons. The anaerobic lagoon is covered for odor control. The cover captures off-gases (much of it is methane) produced from the digestion of waste. The captured gas is primarily blended with natural gas and combusted in the facility's boilers or periodically ducted through a flare. After final treatment, the water is used as irrigation water for grasslands.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

Having potential GHG emissions in excess of 100,000 tons per year (tpy), this facility is a major source for greenhouse gas (GHG) emissions under pertinent New Source Review (NSR) rules. Also, because the total boiler heat input capacity at this facility exceeds 250 MMBtu/hour, the facility is considered as one of the "28 source category" with major source threshold of 100 tpy for regulated air pollutants under pertinent NSR rules. Because the facility's potential VOC and NO_x emissions both exceed 100 tpy, this facility is also a major source for both VOC and NO_x.

emissions under pertinent NSR rules. Consequently, any modifications with emission increases to this facility are subject to the determination of applicability to the pertinent NSR provisions.

This facility would have potential SO₂ emissions greater than 100 tpy if the fuel consumption rate is not limited and the sulfur content in combusted fuels exceeds 0.5% by weight. Therefore, the facility has agreed to a facility wide SO₂ limitation of 98 tpy and a sulfur content of 0.5% by weight limit on fuel oil fired at this facility. By accepting various emission and operating limitations to avoid being subject to pertinent NSR rules, the facility has never undergone any NSR permitting for any modifications since its existence.

Since this facility's potential VOC and NO_x emissions both exceed 25 tpy, the facility is subject respectively to the requirements of Georgia State Rule 391-3-1-.02(2)(tt) - "*VOC Emissions from Major Sources*" and 391-3-1-.02(2)(yy) - "*NO_x Emissions from Major Sources.*" Rule (tt) and Rule (yy) require the facility to use Reasonably Available Control Technology (RACT) for production equipment emitting VOC and NO_x emissions.

This facility submitted a VOC RACT Plan on January 10, 2000. The Division agreed that the facility was already utilizing RACT by controlling their VOC emissions with wet scrubbers and biofilters. This RACT determination was incorporated by reference into the initial Title V permit. Partially because of RACT requirements, several operational limitations were established to allow the facility and the Division to verify that the facility's wet scrubbers and biofilter are being operated in accordance with this facility's VOC RACT. Other relevant RACT requirements include monitoring requirements located in Section 5.2 and record keeping and reporting requirements in Section 6.1 of the Permit.

Boiler Nos. FB03, FB04, FB05, and FB06 are subject to the alternative RACT requirements of Georgia State Rule 391-3-1-.02(2)(rrr) - "*NO_x Emissions from Small Fuel-Burning Equipment,*" since only natural gas is combusted in these units during the ozone season as required by Rule (rrr). Rule (rrr) requires the Permittee to perform an annual tune-up on each of these emission units. This rule allows alternative fuel consumption during the ozone season only when natural gas curtailment occurs.

To avoid a NSR review when adding Boiler FB04 in the past, this facility agreed to accept the following limits on Boiler FB04: (1) 0.08 lbs. of NO_x/MMBtu while firing natural gas; (2) 0.10 lbs. of NO_x/MMBtu while firing animal fat or vegetable oil; and (3) 0.11 lbs. of NO_x/MMBtu while firing No. 2 fuel oil. Using Flue Gas Recirculation (FGR), this boiler was able to achieve the potential NO_x emissions increases to less than the previous applicable NSR/Non-Attainment Area (NAA) significant increase threshold of 25 tpy.

To prevent the simultaneous addition of Boiler FB08 and the removal of Boilers FB01 and FB02 (occurred in May 2012) from triggering NAA/NSR requirement for NO_x emissions in the past, this facility has accepted a facility-wide fuel fired BTU input limit of 1.5240388×10^{12} BTU/year (excludes fuel combusted by RTO OD07B).

In 2020, Permit Amendment No. 2077-117-0005-V-04-1 was issued for a facility modification. The modification involved the expansion of the meat process operation. The new meat operation is housed in a new building where raw materials (poultry meat byproducts) will be received,

cooked, pressed, and screened to create chicken meal and poultry fat. The poultry fat will be pumped and stored in fat storage tanks, including a new approximately 20,000-gallon storage tank. The chicken meal will be stored in a new storage silo/bin prior to being conveyed into trucks, in a new loadout bay, or for transporting offsite.

Process vapors from the new meat process operation are sent to a new 20,000 scfm venturi scrubber, followed by a new 20,000 scfm packed-bed scrubber (Scrubber No. 9) which will act as a pre-scrubber for high intensity vapors, prior to a new 100,000 scfm packed-bed scrubber (Scrubber No. 8). Scrubber No. 9 does not directly emit to the atmosphere. In addition to treating vapors from Scrubber No. 9, Scrubber No. 8 pulls approximately 80,000 scfm building air for treatment of odors and VOC's prior to release to the atmosphere. Scrubber No. 8 keeps the new building under a slight vacuum by pulling air into the building through vents, doors, etc. The operational parameters of Scrubber No. 8 are similar to existing Scrubbers Nos. 1 and 2 (both are rated at 100,000 scfm).

As part of the modification, the facility was planning to decommission and shutdown the existing 73 MMBtu/hr. Boiler FB03 manufactured and installed at the facility in the 1970's. The new replacement Boiler FB09 is rated at 81.1 MMBtu/hr. and equipped with a low NO_x burner system with flue gas recirculation to meet the 30 ppm requirement per GA Rule 391-3-1-.02(2)(III). However, the boiler replacement has been experiencing extended delay, and the facility has requested to continuously operate Boiler FB03 until the completion of the replacement.

As stated in the narrative associated with Permit Amendment No. 2077-117-0005-V-04-1, the facility had decided not to burn animal fat and vegetable oil as fuel in boilers and dryers.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes			✓
PM ₁₀	Yes			✓
PM _{2.5}	Yes			✓
SO ₂	Yes		✓	
VOC	Yes	✓		
NO _x	Yes	✓		
CO	Yes			✓
TRS	Yes			✓
H ₂ S	Yes			✓
Individual HAP	Yes			✓
Total HAPs	Yes			✓

3. MACT Standards

This facility is an “area source” for having potential to emit less than 10 tons per year of any single HAP, and less than 25 tons per year of combined HAPs. With each boiler having a heat input capacity greater than 10 MMBtu/hr. each and built before June 4, 2010, Boilers FB03, FB04, FB05, FB06, FB08 and including new boiler FB09 are all potentially subject to 40 CFR Part 63, Subpart JJJJJ – “*National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Area Sources*”, as amended on February 1, 2013. In 2020, the facility requested in Application No. TV-409186 for expanding the existing meat processing operation, replacing Boiler FB03 with Boiler FB09, and making all facility boilers to be operated/reclassified as “gaseous fuel-fired” boilers to avoid being subject to 40 CFR Part 63, Subpart JJJJJ. Therefore, poultry fat and vegetable oil will no longer be permitted as fuels for the boilers. At the same time, distillate fuel oil (No. 1 and No. 2 fuel oil) usage is restricted to periods of natural gas curtailment and up to 48 hours per year per boiler for maintenance, testing and operator training on distillate fuel oil.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	Yes

Program Code	Applicable (y/n)
Program Code M – Part 63 NESHAP	Yes
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

To avoid NSR permitting in the past, this facility required to limit emissions of SO₂ to below the PSD major source threshold of 100 tpy by Conditions 2.2.1 and 2.2.2, which limits the firing of distillate fuel oil, such that SO₂ emissions cannot exceed 98 tons per year. When burning fuel oil, the facility is limited, by Condition 2.2.2, to burning only distillate fuel oils with sulfur contents of 0.5% or less, by weight.

B. Applicable Rules and Regulations

Having combined boiler heat input capacity exceeding 250 MMBTU/hr., and potential emissions exceeding 100 tpy for VOC and NO_x respectively and 100,000 tpy for GHG, this facility is a major source under pertinent NSR rules. By accepting NSR-avoidance emission and/or operating limits, this facility has never undergone a NSR for any modification. The facility has potential SO₂ emission greater than 100 tpy, and therefore, has avoided a NSR for SO₂ by accepting a facility wide SO₂ limitation of 98 tpy and a limit on the sulfur content in fuel oil fired at this facility.

Because its potential emissions of VOC exceed 25 tons per year and it is located in Forsyth County, this facility is subject to the requirements of Georgia Rule 391-3-1-.02(2)(tt) - *"VOC Emissions from Major Sources."* Rule (tt) requires the facility to use RACT for equipment emitting VOCs.

This facility submitted a RACT determination on January 10, 2000, and claimed that the facility was currently utilizing RACT by controlling their VOC emissions with scrubbers and biofilters. The Division concurred with this determination and the RACT determination has been incorporated into the permit. Partially because of the RACT requirements, several operational limitations have been established to allow the facility and the Division to verify that the facility's scrubbers and biofilter controlling VOC emissions are being operated in accordance with the Division-approved RACT. Other RACT related requirements include monitoring requirements located in Part 5.2 and record keeping and reporting requirements in Part 6.0 of the Permit.

The following VOC emission rates were estimated during the VOC RACT determination. These emission rates have not been put into facility's previous and current Title V operating permits as limits. Since these rates were assumed for VOC RACT determination, VOC emissions are expected not to exceed these rates, on an annual average. If alternate control strategies are put into place, the Division would expect the VOC emissions not to exceed these quantities. These emission rates

should be used as emission factors when determining annual VOC emissions from this facility for fee calculations.

<u>Air Scrubbers</u>	<u>VOC Emission Rates</u>	<u>Biofilter</u>	<u>VOC Emission Rate</u>
OD01	7.83 lbs./hour	OD08	14.98 lbs./hour
OD02	7.57 lbs./hour		
OD03	4.20 lbs./hour		
OD05	3.17 lbs./hour		
OD06	3.59 lbs./hour		
OD07	9.81 lbs./hour		

C. Compliance Status

Title V permit renewal application TV-790603 does not indicate the existence of any noncompliance issue.

D. Permit Conditions

Both Conditions 2.2.1 and 2.2.2 were transferred from the current Title V operating permit No. 2077-117-0005-V-04-0 and permit amendment No. 2077-117-0005-V-04-0, except reference to Boiler FB03 has been restored to Condition 2.2.2, since Boiler FB09 has yet to replace Boiler FB03, and the facility requested to restore references to Boiler FB3 back into this permit. Condition 2.2.1 limits SO₂ emissions (from fuel oil firing) to 98 tons during any 12 consecutive calendar month period. Condition 2.2.2 limits the Permittee only to combust distillate fuel oil with less than 0.5 weight percent sulfur. Combined, both conditions allow the facility to remain a minor source under pertinent NSR rules.

Carried over from the current permit, Condition 2.3.1 requires the Permittee to comply with Georgia Rule (tt) - “*VOC Emissions from Major Sources*” through the facility’s approved VOC RACT plan. This includes the operation of wet scrubbers and biofilters listed in Subpart 3.1 of this draft Title V permit to minimize the VOC emissions.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Specific Limitations/Requirements	Air Pollution Control Devices	
ID No.	Description	Applicable Requirements / Standards*	ID No.	Description
MR01	Meat Rendering Process (Meat Line and Feather Line)	391-3-1-.02(2)(tt) 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	OD01 OD02 OD03 OD08 OD09	PT Meat Scrubber (931) PT Meat Scrubber (932) PT Meat Scrubber (933) Rendering Biofilter (942) Vapor Processing/Building Air Scrubber
FR01	Feather Rendering Process	391-3-1-.02(2)(tt) 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	OD05 OD06 OD08	PT Feather Scrubber (945) PT Feather Scrubber (946) Rendering Biofilter (942)
FB03	73.3 MMBtu/hr. Babcock & Wilcox Boiler (B03) Fuel: Natural Gas & Distillate Fuel Oil	391-3-1-.02(2)(d) 391-3-1-.02(2)(rrr) 391-3-1-.02(2)(g)	NA	NA
FB04	91.7 MMBtu/hr. Babcock & Wilcox Boiler (B04) Fuel: Natural Gas & Distillate Fuel Oil	391-3-1-.02(2)(d) 391-3-1-.02(2)(rrr) 391-3-1-.02(2)(g)	NA	NA
FB05	73.3 MMBtu/hr. Babcock & Wilcox Boiler (B05) Fuel: Natural Gas & Distillate Fuel Oil	391-3-1-.02(2)(d) 391-3-1-.02(2)(rrr) 391-3-1-.02(2)(g)	NA	NA
FB06	73.3 MMBtu/hr. Babcock & Wilcox Boiler (B06) Fuel: Natural Gas & Distillate Fuel Oil	391-3-1-.02(2)(d) 391-3-1-.02(2)(rrr) 391-3-1-.02(2)(g)	NA	NA
FB08	96 MMBtu/hr. Babcock and Wilcox Boiler Fuel: Natural Gas & Distillate Fuel Oil	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(lll) 40 CFR 60 Subpart A 40 CFR 60 Subpart Dc	NA	NA
FB09	81 MMBtu/hr. Jahnson Boiler Fuel: Natural Gas & Distillate Fuel Oil	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(lll) 40 CFR 60 Subpart A 40 CFR 60 Subpart Dc	NA	NA
FB07	30 MMBtu/hr. Coen Daz Feather Dryer (941) Firing: Natural Gas & Distillate Fuel Oil	391-3-1-.02(2)(b) 391-3-1-.02(2)(tt) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	OD07B OD07 OD07A	Regenerative Thermal Oxidizer (RTO) PT Feather Dryer Process Air Scrubber (947) Water Spray Tower

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards and corresponding permit conditions are intended as a compliance tool and may not be definitive.

B. Equipment & Rule Applicability

State Rules

Georgia Rule (d) - “Fuel Burning Equipment” regulates PM and visible emissions from all existing boilers in this facility constructed after January 1, 1972. Rule (d) sets PM emissions limits from Boilers FB04, FB05, FB06, FB08 and FB09 based on their heat input rates and limits visible emissions from these boilers to less than 20% opacity limit except 6-minute of no more than 27% per hour. Constructed before January 1, 1972, Boiler FB03 is subject to the relevant PM emission limit based on its heat input rate, but not subject to the opacity limit of Rule (d). Instead, it is subject to the 40% opacity limit of Georgia Rule 391-3-1-.02(2)(b) - “Visible Emissions”.

Georgia Rule (b) - “Visible Emissions” limits visible emissions to 40% opacity and applies to sources that are not subject to another more stringent opacity limit. Meat Rendering Process Line MR01, Feather Processing line FR01, Feather Dryer FB07 and Boiler FB03 are all subject to Rule (b).

Georgia Rule (g) - “Sulfur Dioxide” limits the sulfur content of any combusted fuel to 2.5% in all fuel burning sources below 100 MMBtu/hr. This rule applies to Boilers FB03, FB04, FB05, FB06, FB08, FB09 and Feather Dryer FB07. However, the facility’s boilers are already limited to burning sulfur fuel oils containing 0.5% weight sulfur or less by Condition 2.2.2. Therefore, there is no need for having a condition within the permit to directly address Rule (g). The rule is referred to as subsumed.

Georgia Rule (e) - “Particulate Emissions from Manufacturing Facilities” applies to production processes with PM emissions in this facility and limits the PM emissions from these processes based on pertinent formula: $E = 4.1P^{0.67}$, where E equals the allowable emission rate in pounds per hour and P equals the process input weight rate in tons per hour. Meat Process Line MP01, Feather Process Line FP01, and Feather Dryer FB07 are each subject to this rule.

Located in Forsyth County and constructed/permitted after May 1, 1999, Boilers FB08 and FB09 are subject to Georgia Rule (III) - “NO_x Emissions from Fuel-burning Equipment”. Rule (III) limits the emissions of NO_x from those boilers to 30 ppm at 3% O₂ on dry basis during the Atlanta area ozone season from May 1 through September 30 of each year.

Because this facility emits greater than 25 tpy of NO_x and is located within Forsyth County, it is subject to the requirements of State Rule 391-3-1-.02(2)(yy) - “Emissions of Nitrogen Oxides from Major Sources”. As an alternative to Rule (yy), Boilers FB03, FB04, FB05, and FB06 will comply with the requirements of Rule 391-3-1-.02(2)(rrr). Each of these boilers is required to burn natural gas during the calendar months of May through September of each year and to have an annual tune-up between February 1 and May 1 of each year. Each annual tune-up must be performed using the manufacturer’s recommended settings for reduced NO_x emissions, or using a NO_x analyzer, so that NO_x emissions are minimized per the intent of Rule (yy), in a manner consistent with good combustion practices and safe fuel-burning equipment operation. These requirements help to assure compliance with Georgia State Rule (rrr) as an alternative to requirements of Rule (yy). In the event of natural gas curtailment, the Permittee is excused from natural gas fuel requirement during the ozone season and is authorized by State Rule (rrr) to combust alternative fuels.

Federal Rules

NSR/PSD Rule

Having the potential to emit more than 25 tpy of NO_x, which exceeding the previous NSR/NAA (Non-attainment Area) threshold of 25 tpy for NO_x emissions, the facility had agreed in the past to accept the following NSR avoidance NO_x emission limits to Boiler FB04, thus assuring compliance with the NO_x reductions due to Flue Gas Recirculation (FGR):

- (1) 0.08 lbs. of NO_x per MMBtu while firing natural gas;
- (2) 0.10 lb/MMBtu while firing animal fat or vegetable; and
- (2) 0.11 lbs. per MMBtu while firing distillate fuel oil (No. 1 and No. 2 fuel oil).

Permit Amendment No. 2077-117-0005-V-04-1 limits all the boilers to burn only natural gas with distillate fuel oil as backup. Therefore, the NO_x emission limit for Boiler FB04 burning animal fat or vegetable oil and Condition 3.2.1 containing the limit in Permit No. 2077-117-0005-V-04-0 has been deleted by the permit amendment.

The addition of Boiler FB08 and the removal of Boilers FB01 and FB02 in May 2012 would not trigger NSR/NAA determination for NO_x emissions, because the facility had a facility-wide fuel fired heat/BTU input limit (excluding the RTO) of 1.5240388×10^{12} BTU per year to avoid the old NO_x NSR threshold of 25tpy (*See updated application dated January 9, 2013, for details). The reduction of the NO_x emissions was achieved by using a low NO_x burner and flue gas recirculation (AP-42, Table, 1-4.1) on Boiler FB08. The facility-wide heat/BTU input limit for fuel combustion excluding the RTO is contained in Condition 3.2.5 of Permit No. 2077-117-0005-V-04-0. Permit Amendment No. 2077-117-0005-V-04-1 delated Condition 3.2.5, considering the annul BTU limit in this condition was redundant because of the annual tonnage NO_x emission limit in the current Condition 3.2.6.

Boiler FB08 has an additional limit in the current Condition 3.2.6 which limits the boiler's annual NO_x emissions to 74.71 tons per year. Current Condition 6.2.9 requires this facility to calculate the monthly NO_x emissions from the boiler using the production records required by Condition 5.2.3.

As required by Georgia Rule 391-3-1-.02(2)(III), NO_x emissions from Boilers FB08 and FB09 are limited to no more than 30 ppm corrected to 3% oxygen on a dry basis by Condition 3.4.5. This condition applies during the period from May 1 through September 30 of each year.

40 CFR Part 60, Subpart Dc

40 CFR Part 60, Subpart A - "*General Provisions*" and Subpart Dc - "*Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*" apply to Boilers FB08 and FB09 because both were constructed after 1989 and has a heat input capacity greater than 10 MMBtu/hr. and less than 100 MMBtu/hr. Boilers FB03, FB04, FB05, and FB06 are not subject NSPS Subparts A and Dc since they were constructed prior to 1989. 40 CFR Part 60, Subpart Dc limits Boilers FB08 and FB09 to burning fuel oil with a sulfur content of 0.5%, by weight, or less. It also limits the emission of any gases from the boilers to 20% opacity (6-minute average), except for

one six-minute period per hour of not more than 27% opacity. The applicable NSPS rules require the Permittee to keep fuel records.

The facility does not have any emission unit that is subject to any provisions of 40 CFR Part 64, “*Compliance Assurance Monitoring*” (CAM). The rendering process equipment with Emission Unit ID Nos. MR01 and FR01, are the only emission units that are equipped with air pollution control devices. These controlled processes are subject to VOC RACT; however, none of these processes are subject to a VOC emission limit. Therefore, none of the emission units in the facility are subject to the CAM requirement.

40 CFR Part 63, Subpart JJJJJ

This facility is an “area source” for having potential to emit less than 10 tons per year of any single HAP, and less than 25 tpy of combined HAPs. With each boiler having a heat input capacity greater than 10 MMBtu/hr., Boilers FB03, FB04, FB05, FB06, FB08 and FB09 were potentially all subject to applicable emission and operating requirements subject to 40 CFR Part 63, Subpart JJJJJ – “*National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Area Sources*”, as amended on February 1, 2013. As a result of the facility’s decision to seek avoidance of this rule during the facility expansion/modification described in Application No. TV-409186, poultry fat and vegetable oil are no longer permitted as fuel for all the boilers. In addition, distillate fuel oil usage will be restricted to periods of natural gas curtailment and up to 48 hours per year per boiler for maintenance, testing and operator training on fuel oil. As such, current Condition 3.2.1 containing emission limits for burning poultry fat and vegetable oil was removed by Permit Amendment No. 2077-117-0005-V-04-1. Other conditions containing Subpart JJJJJ requirements, such as current Conditions 3.3.3 through 3.3.6, were also eliminated as well. A new operating standard requiring the facility’s boilers to not fire any fuel other than natural gas and distillate fuel oil is added (Condition 3.3.7) as a 40 CFR Part 63, Subpart JJJJJ avoidance condition by Permit Amendment No. 2077-117-0005-V-04-1.

C. Permit Conditions

Because Permit Amendment No. 2077-117-0005-V-04-1 eliminated Conditions 3.2.1, 3.2.5, and 3.3.3 through 3.3.6, permit conditions in draft Title permit renewal No. 2077-117-0005-V-05-0 have been renumbered accordingly.

Conditions 3.2.2 and 3.2.3 in the current permit No. 2077-117-0005-V-04-0 were carried into this draft permit renewal and renumbered Conditions 3.2.1 and 3.2.2, respectively. Both contain NO_x emission limits for Boiler FB04, allowing the boiler to avoid NSR/PSD in the past.

Condition 3.2.4 in the current permit amendment No. 2077-117-0005-V-04-1 was carried into this draft permit renewal and renumbered Conditions 3.2.3, except reference to Boiler FB03 was restored upon a request from the company. This change allows the facility to continually operate the existing Boiler FB03 until it is replaced by Boiler FB09.

Condition 3.2.6 in the current permit No. 2077-117-0005-V-04-0 was carried into this draft permit renewal and renumbered Conditions 3.2.4. This condition contains a facility-wide annual NO_x emission limit for the existing fuel burning process units/sources including boilers and other fuel

burning process equipment, excluding RTO No. OD07B. This limit allowed the facility to avoid NSR/PSD in a past modification.

Conditions 3.2.7 and 3.2.8 in the current permit No. 2077-117-0005-V-04-0 were carried into this draft permit renewal and renumbered Conditions 3.2.5 and 3.2.6, respectively. Both contain operating requirements for RTO OD07B and its backup Process Air Scrubber OD07.

Condition 3.2.9 in the current permit No. 2077-117-0005-V-04-0 was carried into this draft permit renewal and renumbered Conditions 3.2.7. This condition contains an annual NO_x emission limit for RTO OD07B, allowing the RTO to avoid NSR/PSD in a past permitting.

Condition 3.2.10 in the current permit No. 2077-117-0005-V-04-0 was carried into this draft permit renewal and renumbered Conditions 3.2.8. Spray Tower OD07A could remove a portion of NH₃ in the exhaust air before it enters RTO OD07B. Therefore, the performance of this spray tower could affect the NO_x emissions from the RTO, since the RTO could turn a portion of the NH₃ contained in the incoming exhaust air into NO_x. To prevent excessive NO_x emissions from the RTO caused by low water spraying rate in the spray tower, Condition 3.2.8 establishes a cooling water flow rate requirement for Spray Tower OD07A when RTO OD07B is in use. This limit ensures the proper function of the spray tower regarding the intended emission control and minimizes the NO_x emissions from the RTO.

New Condition 3.2.9 has been added to ensure that Boiler FB09 replaces FB03 as permitted by Permit Amendment No. 2077-117-0005-V-04-1.

Conditions 3.3.1 and 3.3.2 in the current permit were carried into this draft permit without any changes. Condition 3.3.1 contains applicable general requirements for Boilers FB08 and FB09 under NSPS Subpart A. Condition 3.2.2 contains the applicable visible emission standard for the boilers under NSPS Subpart Dc.

After minor revisions, Condition 3.3.7 in the current permit was carried into this and renumbered Condition 3.3.3. The minor revisions involved adding reference to Boiler FB03 and including boiler maintenance and boiler operator training on fuel oil as allowed non-emergency fuel oil burning activities, as specified by 40 CFR Part 63, Subpart JJJJJ.

Condition 3.4.1 in the current permit was revised to restore the applicable standard for Boiler FB03 under Georgia Rule 391-3-1-.02(2)(d)1.(ii).

After minor rewording for clarity, Condition 3.4.2 in the current permit was carried into this permit. This condition establishes the visible emission limit under Georgia Rule (d). Boiler FB03 was constructed before the effective date Georgia Rule (d), its visible emissions are specifically subject to the 40% opacity limit under Georgia Rule (b).

Condition 3.4.4 in the current permit was carried into this draft permit without any changes. It regulates PM emissions from non-fuel burning equipment/process units having PM emissions.

Condition 3.4.5 in the current permit was carried into this draft permit without any changes. It established the NO_x emission limit for affected boilers under Georgia Rule (III) during Atlanta ozone season.

IV. Testing Requirements (with Associated Record Keeping and Reporting)**A. General Testing Requirements**

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

Carried over from the current Title V operating permit No. 2077-117-0005-V-04-0, Condition 4.2.1 requires the Permittee to conduct one performance test every 60 months on RTO OD07B for NO_x emissions following initial performance test protocol. This requirement for repeating performance testing ensures the continuous proper function of RTO OD07B.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

All the conditions in Part 5.0 of this draft Title V permit renewal were transferred from the current Title V operating permit No. 2077-117-0005-V-04-0. Some conditions were slightly re-worded for more clarity and consistency, such as naming of emission units and updating of cross-referenced permit numbers.

To ensure the proper function of relevant emission control devices being used, Condition 5.2.1 requires the Permittee to comply with the specific monitoring requirements for the existing process air scrubbers OD01, OD02, OD03, OD05, OD06, and OD07. Process Air Scrubber OD07 shall also comply only when it is being used for the control of the PM, VOC, and malodor emissions. Condition 5.2.1 also contains record-keeping requirements for fuel usage applicable to Boiler FB08 under NSPS/40 CFR Part 60, Subpart Dc.

To ensure the proper control of the VOC emissions from Biofilter OD08, Condition 5.2.2 requires the Permittee to measure indicated parameters on the biofilter. These parameters include weekly gas temperature at the inlet, moisture content, and weekly pH measurement, which are important for the biofilter to function as desired.

To ensure compliance with the applicable NSR/PSD avoidance NO_x emission limit, Condition 5.2.3 requires the Permittee to monitor the NO_x emission rate, in pounds per million BTU (lb./MMBTU) from Boiler Nos. FB04 and FB08. The measurement of the NO_x emissions shall be conducted monthly. This condition has been slightly revised to replace No. 2 fuel oil with distillate fuel oil which includes both No. 1 and No. 2 fuel oil.

Condition 5.2.4 requires the Permittee to perform an annual tune-up as specified between February 1 and May 1 of each calendar year on Boilers FB03, FB04, FB05, and FB06, as required by Rule (rrr). The annual tune up ensures compliance with the tune-up requirements of Georgia Rule (rrr). Reference to Boiler FB3 has been restored to allow the continuous operation of the boiler until it is replaced by Boiler FB09.

Condition 5.2.5 requires the Permittee to monitor NO_x emissions from Boilers FB08 and FB09 according to the monitoring/annual tune up plan outlined in this condition. The resulting monitoring records shall be used to calculate NO_x emissions and to demonstrate compliance with the NO_x emission limit for Boilers FB08 or FB09 specified in Condition 3.4.5, as applicable. The monitoring requirements in this condition ensure compliance with the NO_x emission limit specified by Georgia Rule (lll)/Condition 3.4.5.

Condition 5.2.6 requires subsequent visible emission performance testing on Boiler FB08 or FB09 to be conducted at a frequency determined by the results of the most recent Method 9 test. This monitoring requirement ensures compliance with visible emission limit under 40 CFR Part 60, Subpart Dc, as specified in Condition 3.3.2 and conforms to monitoring requirements specified in 40 CFR 60.47c(a) for oil fired boilers subject to 40 CFR Part 60, Subpart Dc.

Transferred from the current permit, Condition 5.2.7 allows the Permittee to use Method 22 instead of Method 9 for the visible emission testing required by Condition 5.2.6, provided that the maximum 6-minute opacity in the previous performance test is less than 10%.

Conditions 5.2.8 and 5.2.9 incorporate the standard monitoring requirements for Water Spray Tower OD07A and RTO OD07B, as developed by the Division. Both conditions ensure the proper function of the water spray tower and the RTO and thus the control efficiency of each.

Permit amendment No. 2077-117-0005-V-04-1 eliminated Condition 5.2.8 in the Title V permit No. 2077-117-0005-V-04-0, since all the boilers would be operated as “gaseous fuel-fired” boilers, and exempted from the work practice standards, emission reduction measures and/or management practice requirements under 40 CFR Part 63, Subpart JJJJJ.

After renumbering, Conditions 5.2.10 and 5.2.11 contain alternative performance testing requirements on visible emissions from Boiler FB09 when the boiler burns fuel oil(s), as specified in NSPS Subpart Dc for oil fired boilers.

C. Compliance Assurance Monitoring (CAM)

Not Applicable

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a [quarterly or semiannual] basis.

B. Specific Record Keeping and Reporting Requirements

All the conditions in Part 6.0 of this draft Title V permit renewal were transferred from the current Title V operating permit No. 2077-117-0005-V-04-0. Some conditions were slightly re-worded or updated for more clarity and consistency, such as naming of emission units and numbering of the conditions. The recordkeeping, report, and notification requirements ensure the compliance of the pertinent emission limits and operating requirements contained in the draft permits. References to Boiler FB03 have been restored since this boiler will continue to operate until replaced by Boiler FB09.

Condition 6.2.1 requires the Permittee to verify/record that each shipment of fuel oil received is distillate oil (No. 1 or No. 2 fuel oil) and contains less than 0.5% sulfur. These records are needed to demonstrate that facility wide SO₂ emissions are below the applicable limit to avoid NSR/PSD requirements for SO₂ emissions. These records will also demonstrate compliance with the recordkeeping requirements of 40 CFR Part 60, Subpart Dc for boilers subject to this standard.

Condition 6.2.2 requires the Permittee to submit to the Division, with the semiannual report, records required by Condition 6.2.1 and a statement signed by a responsible official of the Cumming facility, certifying that the fuel oil certificates submitted represent all the fuel oil burned during the reporting period.

Condition 6.2.3 requires the Permittee to record monthly all fuel usage combusted in all the fuel burning unit/Boiler Nos. FB03 through FB09.

Condition 6.2.4 requires the Permittee to record SO₂ emissions during each calendar month via records in Condition 6.2.3 and the equations provided. These records shall be used in the SO₂ emission report required by Condition 6.2.5 and submitted semiannually with the semiannual reports required by Conditions 6.1.3 and 6.1.4. This report shall contain the 12-consecutive month total quantities of SO₂ emitted.

To demonstrate compliance with State Rule 391-3-1-.02(2)(rrr) and (lll), Condition 6.2.6 requires the Permittee to maintain certain operating records for Boilers FB03, FB04, FB05, FB06, FB08 and FB09. This includes the particular fuel burning equipment involved, the amount of fuel oil burned, the date and time of the burn, and the reason for the burn.

Condition 6.2.7 requires the Permittee to record all fuel usage combusted in Boilers FB08 and FB09 in compliance with 40 CFR Part 60, Subpart Dc.

Condition 6.2.8 requires the Permittee to perform any necessary performance test on Boilers FB08 and FB09.

Condition 6.2.9 requires the Permittee to calculate NO_x emissions to demonstrate compliance with the NO_x emission limit in Condition 3.2.4.

To ensure the proper function of RTO OD07B, Condition 6.2.10 requires the Permittee to maintain specified operating records for the RTO and the boiler(s) whose flue/exhaust gas passing through the RTO.

Condition 6.2.11 requires the Permittee to calculate monthly total NO_x emissions from RTO OD07B using the operating records of Condition 6.2.10 and the equation provided. The facility shall notify the Division whenever NO_x emissions exceed 2.08 (one-twelfth of the annual limit set in Condition 3.2.7) tons during any calendar month.

Condition 6.2.12 requires the Permittee to calculate the 12-month rolling total of NO_x emissions from RTO OD07B for each calendar month using the data from Condition 6.2.11. The Permittee shall notify the Division if the 12-month rolling total equals or exceeds the limit set in Condition 3.2.7.

Condition 6.2.13 requires the Permittee to record each occurrence of the contingency operation of Process Air Scrubber OD07.

Permit amendment No. 2077-117-0005-V-04-1 eliminated Conditions 6.2.10, 6.2.11 and 6.2.12 in the current operating permit No. 2077-117-0005-V-04-0, because all the boilers were required to burn exclusively natural gas with distillate oil as backup fuel, and therefore no longer subject to 40 CFR, Part 63, Subpart JJJJJ.

VII. Specific Requirements**A. Operational Flexibility**

None.

B. Alternative Requirements

None.

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit.

D. Temporary Sources

None.

E. Short-Term Activities

None.

F. Compliance Schedule/Progress Reports

None.

G. Emissions Trading

None.

H. Acid Rain Requirements

Not applicable

I. Stratospheric Ozone Protection Requirements

Not applicable

J. Pollution Prevention

Not applicable

K. Specific Conditions

None

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on November 30, 2024, and ended on December 30, 2024. Comments were not received by the Division.