Facility Name: **Kimberly-Clarke Corporation**
City: LaGrange
County: Troup
AIRS #: 04-13-285-00048
Application #: TV-22862
Date Application Received: September 23, 2014
Permit No: 2297-285-0048-V-04-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 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. This 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 primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Kimberly-Clark Corporation** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This 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:

Kimberly-Clark Corporation

2. Parent/Holding Company Name

Kimberly-Clark Corporation

3. Previous and/or Other Name(s)

Not applicable

4. Facility Location

1300 Orchard Hill Road
LaGrange, Georgia 30240

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

Kimberly-Clark Corporation is located in Troup County, which is designated by the Environmental Protection Agency (EPA) to be "attainment" or "unclassifiable" for all criteria pollutants.

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
2297-285-0048-V-03-0	March 22, 2010	Second Title V renewal permit
Off Permit Change	April 20, 2010	The installation of mezzanine, thermal calandar rolls, and a new extruder to the existing VFL line

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
Off Permit Change	April 18, 2014	The replacement of two (2) existing fume removal fans with four (4) new removal fans
Off Permit Change	September 30, 2014	Installation of two (2) new plasma treaters

D. Process Description

1. SIC Codes(s)

2297 – Non-woven Fabrics

2. Description of Product(s)

Kimberly-Clark produces a non-woven web material which is wound unto rolls for sale or further processed to produce hospital gowns, sheets, pillowcases, and disposable diapers.

3. Overall Facility Process Description

Purchased polymer pellets are melted in an extruder and pumped into a spinning system where the polymer is cooled and stretched into filaments through the use of process air systems. The cooled fiber filaments are collected and air-formed into a nonwoven web on a moving forming wire. The resulting material web is then bonded in an on-line hot oil filled calandar roll resulting in the manufacture of a nonwoven fabric. Some fabric grades are web-treated prior to being wound into rolls for sale. The material can also be sent for further processing and converted into finished products such as hospital gowns, sheets, pillowcases, and disposable diapers. The following process lines manufacture the nonwoven fabrics: SMS1, SMS2, SMS3, and VFL.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

The facility is potentially a "major" source under PSD/NSR regulations, but took limits to remain as a "minor" source and avoid a PSD review. They accepted a facility-wide limit of less than 250 tons of VOC during any consecutive 12-month period.

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	N/A			
H_2S	N/A			
Individual HAP	Yes			✓
Total HAPs	Yes			✓
Total GHGs	Yes			✓

3. MACT Standards

The facility is not subject to any MACT standard.

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	No
Program Code M – Part 63 NESHAP	No
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

Kimberly-Clark Corporation, LaGrange Mill accepted a facility-wide VOC limit of less than 250 tons during any consecutive 12-month period. This limit was established for the avoidance of PSD.

B. Applicable Rules and Regulations

None. A limit to avoid the applicable regulation 40 CFR 52.21 (PSD) is in place.

C. Compliance Status

The facility has not indicated any non-compliance

D. Operational Flexibility

None applicable.

E. Permit Conditions

Condition 2.1.1 contains the facility-wide VOC limit of less than 250 ton during any consecutive 12-month period for the facility.

III. Regulated Equipment Requirements

A. Brief Process Description

The facility manufactures non-woven web material.

B. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
GB01	Gas Boiler No. 1	GA Rule 391-3-1-.02(2)(d) GA Rule 391-3-1-.02(2)(g)	None	None
B003	Burnout Oven No. 3	None (Electric)	SC3	Spray Chamber Scrubbing System
SMS1	SMS1 Process	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	None	None
SMS2	SMS2 Process	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	None	None
SMS3	SMS3 Process	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	None	None
VFL1	VFL Process	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	None	None
WT01	Web Treaters (3)	None	None	None

C. Equipment & Rule Applicability

Gas-Fired Boilers No. 1 and No. 2 (ID Nos. GB01 and GB02)

Gas boiler No. 1 with identification number GB01 was manufactured in 1983 and installed in 1984. It has a maximum heat input capacity of 12 million British thermal units per hour (MMBtu/hr) and fires natural gas and propane gas as backup.

Gas boiler No. 2 with identification number GB02 was manufactured in 2007 and installed in 2007. It has a maximum heat input capacity of 6 MMBtu/hr and fires natural gas and propane gas as backup. As of 2007, Boiler No. 2 is the primary boiler for the facility. Boiler No. 2 is exempt by Georgia Rule 391-3-1-.03(6)(b)1 because its heat input capacity is less than 10 MMBtu/hr.

Boiler No. 1 is subject to the particulate matter limit outlined in Georgia Rule 391-3-1-.02(2)(d) "Fuel Burning Equipment". It is subject to paragraph 391-3-1-.02(2)(d)2(ii) because it was constructed after January 1, 1972. Georgia Rule 391-3-1-.02(2)(d)2.(ii) limits the emission of fly ash and/or other particulate matter from any fuel burning equipment based on the following:

For equipment equal to or greater than 10 million BTU heat input per hour, or equal to or less than 250 million BTU heat input per hour:

$P = 0.5(\frac{10}{R})^{0.5}$ Pounds per million BTU heat input;

Where:

P= the allowable weight of fly ash and/or other particulate matter in pounds per million BTU heat input
R= the heat input of fuel-burning equipment in million BTU per hour.

Boiler No. 1 is subject to Georgia Rule (g) "Sulfur dioxide". This rule limits fuel burning sources below 100 MMBtu/hr to sulfur content by weight of less than or equal to 2.5 percent. Compliance with Rule (g) is likely because processed natural gas and propane gas contain sulfur much less than the Rule (g) limit.

40 CFR 60, Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units."

Due to its size, the only NSPS that could be applicable to Boiler No. 1 is 40 CFR Part 60, Subpart Dc for "Small Industrial-Commercial-Institutional Steam Generating Units." Boiler No. 1 would be subject to Subpart Dc if it was constructed, modified, or reconstructed after June 9, 1989. Therefore, Boiler No. 1 is not subject to Subpart Dc since it was constructed in 1983.

40 CFR 63, subpart JJJJJJ – "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources."

Boiler Nos. 1 and 2 are located at a minor source of HAP emissions; each is therefore potentially subject to the NESHAP for Industrial, Commercial and Institutional Boilers Area Sources (40 CFR 63, Subpart JJJJJJ). As indicated, each boiler (1 and 2) fires primarily natural gas and propane gas. Per 40 CFR 63.11195(e), gas-fired boilers are not subject to 40 CFR 63, Subpart JJJJJJ.

The following process descriptions were provided by the facility:

The existing operation at Kimberly-Clark consists of four spunbound and meltblown processes (SMS 1 Process – ID No. SMS1, SMS 2 Process – ID No. SMS2, SMS 3 Process – ID No. SMS3, and VFL Process – ID No. VFL1).

SMS1, SMS2, and SMS3: Polymer pellets are melted in an extruder and pumped to a spinning system where the polymer is cooled and stretched into continuous filaments. The filaments are collected and air formed into a non-woven web on a forming wire. The resulting material web is then bound in an on-line hot oil filled calander roll. From there it is treated in an on-line web treater and rolled up for shipping.

VFL1: Polymer pellets are melted in an extruder and pumped to a spinning system where the polymer is cooled and stretched into continuous filaments. The filaments are laminated between two layers of spunbond, which is unwound into the process. The resulting web is relaxed, slit and wound up for shipping.

The equipment listed above is subject to the following rules and regulations:

Georgia Rule 391-3-1-.02(2)(b) "Visible Emissions"
Georgia Rule 391-3-1-.02(2)(e) "Particulate Matter Emissions from Manufacturing Processes"

Georgia Rule 391-3-1-.02(2)(g) "Sulfur Dioxide"

Web Treaters (3) (Source Code: WT01)

The VOC emissions from the Web Treaters (3) (ID No. WT01) were limited in the previous permit to 100 tons per any 12 consecutive month period to avoid Georgia Rule 391-3-1-.02(2)(x). However, this rule only applies to knife, roll, or rotogravure coaters of fabric, none of which appear to be in existence at the facility. The rule was not intended for spray coaters or dip and squeeze type coaters (the facility has 2 spray boom treaters and 1 dip and squeeze treater). Therefore, the limit is not needed. The Web Treaters are part of processes SMS1, SMS2, and SMS3. The Web Treaters (ID No. WT01) consist of three (3) web treaters formerly described separately on the equipment list as SMS I Spray Boom Treater (SBT1), SMS III Spray Boom Treater (SBT3) ,and Dip and Squeeze Treater (ID No. DST1).

VOC emissions from the Web Treaters must be calculated and included in the facility-wide total to determine compliance with the facility-wide VOC limit of less than 250 ton/yr. See discussion under Section VI of this narrative.

SMS 1 Process (ID No. SMS1), SMS 2 Process (ID No. SMS2), SMS 3 Process (ID No. SMS3), and VFL Process (ID No. VFL1)

SMS1, SMS2, and SMS3 emit particulate matter and appear to be subject to Georgia Rule 391-3-1-.02(2)(e). Therefore, the Rule (e) limit has been applied to these units. However, because the potential to emit for these processes are less than the allowable PM limit, no monitoring is necessary. PTE PM from SMS1 is 1.61 lb/hr. PTE PM from SMS2 is 1.61 lb/hr. PTE PM from SMS3 is 1.95 lb/hr. The Allowable PM emission rate for SMS1, SMS2, and SMS3 based on the Rule (e) limit is 5.5 lb/hr each. Georgia Rule 391-3-1-.02(2)(b) applies as listed in the facility's application and the applicable 40% opacity limit is therefore, being established in this renewal permit for SMS2, SMS2, and SMS3.

VOC emissions from SMS1, SMS2, SMS3 and VFL1 must be calculated and included in the facility-wide total to determine compliance with the facility-wide limit of 250 tons per any 12 consecutive month period. See discussion under Section VI of this narrative

Burnout Oven No. 3 (ID No. B003)

Burnout Oven No. 3 (B003) is electric and its only emissions are VOCs produced during the heating of the polymer residue on the parts. The oven is used as a cleaning device for process equipment. The spray chamber scrubber system is used to control VOC. The facility is required to monitor the spray flow rate for the spray chamber scrubber system.

VOC emissions from Burnout Oven No. 3 are required to be calculated and included in the facility-wide total for determining compliance with the facility-wide VOC limit of 250 tons per any 12 consecutive month period. See Section VI for additional details on recordkeeping and reporting requirements for this unit.

Emission and Operating Caps:

None applicable.

D. Compliance Status

The facility has not indicated any non-compliance.

E. Operational Flexibility

None applicable.

F. Permit Conditions

Existing Condition 3.4.1 limits particulate matter emissions from Boiler No. 1 to less than that allowed by Georgia Rule (d).

Existing Condition 3.4.2 limits visible emissions from Boiler No. 1 to less than 20 percent opacity per Georgia Rule (d).

Existing Condition 3.4.3 limits fuel sulfur content of fossil fuel fired in Boiler No. 1 to not more than 2.5 percent, by weight.

Existing Condition 3.4.4 limits visible emissions from emission units subject to Georgia Rule (b) in the Emission Units table to opacity less than 40 percent.

Existing Condition 3.4.5 limits particulate matter emissions from emission units subject to Georgia Rule (b) in the Emission Units table to less than that allowed by Georgia Rule (e).

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

Existing Condition 5.2.1 requires the Permittee to install, calibrate, maintain, and operate monitoring devices for the measurement of the scrubbant spray flow rate from the spray chamber scrubbing system (ID No. SC3) on Burnout Oven No. 3 at least once per day. This reduces VOC emissions from Burnout Oven No. 3.

C. Compliance Assurance Monitoring (CAM)

CAM is not applicable to the pollutant specific emission unit (PSEU) which is the Burnout Oven No. 3 because the PSEU is not subject to an emission limitation in the Title V permit.

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 semiannual basis.

Template Conditions 6.1.3 and 6.1.4 were updated in September 2011 to allow ~60 days to submit periodic reports. Alternative reporting deadlines are allowed per 40 CFR 70.6, 40 CFR 60.19(f) and 40 CFR 63.10(a).

B. Specific Record Keeping and Reporting Requirements

Existing Condition 6.1.7b.i defines as an exceedance any VOC emissions from the facility that equals or exceeds the PSD major source threshold of 250 tons during any period of 12 consecutive months.

Existing Condition 6.1.7c.i defines as an excursion any two consecutive determinations for which the scrubbant spray flow rate from the spray chamber scrubbing system is outside the range of 0.3-0.6 gallons per minute.

Existing Condition 6.2.1 requires the Permittee to maintain monthly usage records of all materials containing volatile organic compounds, including the weight of each material used, the VOC content of each material used, and the weight of each material disposed of as waste.

Existing Condition 6.2.2 requires the Permittee to calculate the monthly VOC emissions from the web treaters, the meltblown/spunbound laminating processes, and Burnout Oven No. 3 using the records required by Condition 6.2.1.

Existing Condition 6.2.3 requires the Permittee to calculate monthly the 12-month VOC emission from the facility using the VOC emission data from Condition 6.2.2. The Permittee is required to notify the Division when the VOC emissions from the facility exceed 20.83 tons during any month.

Existing Condition 6.2.4 requires the Permittee to submit a quarterly report of a summary of the monthly and 12-month rolling total VOC emissions from the entire facility within 30 days following each calendar quarter.

VII. Specific Requirements

A. Operational Flexibility: None applicable.

B. Alternative Requirements: None applicable.

C. Insignificant Activities

Refer to http://airpermit.dnr.state.ga.us/GATV/default.asp for the Online Title V Application.

Refer to the following forms in the Title V permit application:

- Form D.1 (Insignificant Activities Checklist)
- Form D.2 (Generic Emissions Groups)
- Form D.3 (Generic Fuel Burning Equipment)
- Form D.6 (Insignificant Activities Based on Emission Levels of the Title V permit application)

D. Temporary Sources: None.

E. Short-Term Activities: None.

F. Compliance Schedule/Progress Reports: None

G. Emissions Trading: None.

H. Acid Rain Requirements: None.

I. Stratospheric Ozone Protection Requirements

The standard permit condition pursuant to 40 CFR 82 Subpart F has been included in the Title V permit. The facility operates equipment that is subject to Title VI of the 1990 Clean Air Act Amendments.

J. Pollution Prevention: None.

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.