Facility Name: **LG Hausys America, Inc.**
City: Adairsville
County: Gordon
AIRS #: 04-13-129-00075

Application #: TV-47599
Date Application Received: August 11, 2017
Permit No: 3088-129-0075-V-05-0

Program	Review Engineers	Review Managers
SSPP	Susan Jenkins	Heather Brown
ISMU	Ray Shen	Dan McCain
SSCP	N/A	N/A
Toxics	Kenneth Phillips	Michael Odom
Permitting Program Manager		Eric Cornwell

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:LG Hausys America Inc.

2. Parent/Holding Company Name

   LG Hausys America Inc.

3. Previous and/or Other Name(s)

   LG Chem Industrial Materials Inc. (October 12, 2004 through June 17, 2009)

4. Facility Location

   310 LG Drive, SE, Adairsville, Georgia [Gordon County]

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

   The facility is located in a county designed as attainment or unclassifiable for all applicable National Ambient Air Quality Standards. The facility is located in a county deemed to be contributing to Atlanta's ozone nonattainment per Georgia Rule 391-3-1-.03(8)(e).

B. Site Determination

Table 1 summarizes the site determination for this facility

Table 1: Site Determination	
Applicable Regulation	**Site Determination**
New Source Review/PSD	Process lines L001, L002, L003, and L004 are stand-alone manufacturing lines located on contiguous property. Process lines L002 and L004 are located under the same roof and these process lines are located in a building separate from process lines L001 and L003. Process lines L001 and L003 are each located in separate buildings. Process lines L001, L002, and L004 operate under the same SIC Code, namely 3088. Process line L003 operates under a different SIC Code, namely 2295. Process lines L001, L002, L003, and L004 are under common control. Process line L003 is a separate source from process lines L001, L002, L004 for purposes of New Source Review/PSD because LG operates L003 under a different two-digit SIC Code and the line is not classified as a support facility for process lines L001, L002, and L004.

Table 1: Site Determination	
Applicable Regulation	**Site Determination**
NESHAP Applicability Title V Applicability	Process lines L001, L002, L003, and L004 are under common control and are located on contiguous property. These four process lines constitute one site for purposes of NESHAP applicability. LG operates under a facility-wide individual/total hazardous air pollutant (HAP) emissions limits to remain an SM for HAPs.

C. Existing Permits

Table 2 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 2: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
3088-129-0075-E-04-0	12/23/2015	Permit to construct and operate process line L004 and a permit to operate process lines L001, L002, and L003. Facility is reclassified as “E” rather than “S”. Facility remains a synthetic minor (SM) for HAP emissions.
No Permit Required (App# 23804)	5/9/2016	Process Line L004: LG sent notification to EPD that the volume flow exhaust rate for the process line L004 regenerative thermal oxidizer (RTO) is larger than stated in the application to construct and operate this line. No increase in emissions is expected.
3088-129-0075-E-04-1	10/27/2016	Process Line L003: Operation of two dry ESPs. One on the exhaust of the calendering operation and one on the exhaust of a portion of the expander operation.
3088-129-0075-E-04-2	9/8/2017	Process Line L003: Deletion of reference to baghouses BF37, BF38, and BF39 from the permit because these units exhaust indoors.

D. Process Description

1. SIC Codes(s)

3088

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 facility consists of four process lines: Line L001 produces acrylic slab counter-tops (Hi-MACS), Lines L002 and L004 produce engineered stone counter-tops (VIATERA), and Line L003 known as the "Autoskin" line manufactures synthetic leather for the automotive industry.

3. Overall Facility Process Description

Process Lines L001, L002, and L004

The operations on each of these process lines consist of chemical storage, pneumatic conveying, mixing, blending, molding, curing, cutting, sanding and/or polishing, packaging and shipping.

Process Line L003
Solid and liquid raw materials are fed to mixers which operate in series. The mixers combine the raw materials and produce a dough-like intermediate product. The dough is then calendered onto fiber backing cloth to produce the semi-finished roll of synthetic leather product. The semi-finished product roll is then fed into expander ovens which operate in series. In the ovens, the ADA blow agent decomposes to carbon monoxide and nitrogen, thereby expanding the product. The product is then fed to roll coaters, each with a corresponding steam-fueled drying oven. After drying, the finished product roll is wound and packaged for shipment.

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 not one of the 28 named source categories under 40 CFR 52.21(b) and therefore the major source threshold is 250 tons per year of a regulated NSR pollutant. The PSD/NSR site consisting of process lines L001, L002 and L004 remains a PSD minor source through the operation of baghouses for control of particulate matter (PM, PM_{10}, $PM_{2.5}$). This same PSD/NSR site remains a PSD minor source for volatile organic compounds (VOCs) through the operation of several permanent total enclosures exhausting through RTOs. The PSD/NSR site consisting of process line L003 operates baghouses, a permanent total enclosure and an RTO to remain a PSD minor source for PM, PM_{10}, $PM_{2.5}$, and VOCs.

LG has the potential to emit emissions of nitrogen oxides (NOx), carbon monoxide (CO), and sulfur dioxide (SO_2) in amounts less than 25 tpy, each.

Table 3A and 3B summarizes the PSD/NSR potential to emit from the facility for PM, PM_{10}, $PM_{2.5}$, and VOCs.

Table 3A: PSD Applicability Emissions Profile

Site	Process Line #	Controlled PM, PM_{10}, $PM_{2.5}$ PTE (tpy)	Note(s)
#1	L001	64.0	Operation of baghouses and bin vent filters are necessary for compliance with Georgia Rules 391-3-1-.02(2)(e) and (b).
#1	L002	15.0	Operation of baghouses necessary for compliance with Georgia Rules 391-3-1-.02(2)(e) and (b).
#1	L004	32.0	Operation of baghouses necessary for compliance with Georgia Rules 391-3-1-.02(2)(e) and (b).
#1	**Total**	**111**	
#2	**L003**	**2.7**	**Must operate the RTO and permanent total enclosure to remain a PSD minor source.**

Table 3B: PSD Applicability Emissions Profile				
Site	**Process Line #**	**Uncontrolled VOC PTE (tpy)**	**Controlled VOC PTE[1] (tpy)**	**Note(s)**
#1	L001	223.00	16.60	Facility-wide potential VOC emissions are controlled to less than 250 tons per year by complying with the facility-wide synthetic minor HAP limit.
#1	L002	122.60	12.26	
#1	L004	245.60	24.56	
#1	**Total**	**591.24**	**53.42**	
#2	**L003**	**477.62**	**47.76**	

2. Title V Major Source Status by Pollutant\

Table 4 summarizes the Title V major source status for process lines L001, L002, L003, and L004, on a combined basis.

Table 4: 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	✓	✓ (~114 tpy)		
PM_{10}	✓	✓ (~114 tpy)		
$PM_{2.5}$	✓	✓ (~114 tpy)		
SO_2	✓			✓
VOC	✓	✓ (~101 tpy)		
NO_x	✓			✓
CO	✓			✓
TRS				
H_2S				
Individual HAP Entire Facility[2]	✓		✓	
Total HAPs Entire Facility	✓		✓	

3. MACT Standards

The facility operates two boilers that are natural gas fired only and therefore not subject to the requirements of 40 CFR 63 Subpart JJJJJJ. LG is subject to 40 CFR 63 Subpart ZZZZ for an emergency generator.

[1] PTE computed using minimum VOC destruction efficiency established for each control device per LG's permit.
[2] Individual HAPs emitted by entire facility include methyl methacrylate (MMA), styrene, and dimethylformamide.

The facility is classified as a synthetic minor (SM) for individual and total HAP emissions as they have taken facility-wide emissions limits for individual and total HAPs. Table 5 summarizes potential uncontrolled and controlled individual HAP emissions from the facility irrespective of this permit limit.

Table 5: Estimates of Individual HAP Emissions from LG Hausys			
Process Line	**HAP**	**Uncontrolled PTE (tpy)**	**Estimated Controlled PTE[3] (tpy)**
L001	MMA	223.00	16.6
L002+L004	Styrene	368.20	37.82
L003	Dimethylformamide	70.00	7.00
	MIBK	5.3	0.53
	Toluene	4.3	0.43

4. Program Applicability (AIRS Program Codes)

LG is subject to 40 CFR 60 Subparts A, Dc, and IIII. In addition, LG is subject to 40 CFR 63 Subpart ZZZZ for an emergency generator.

Table 6: 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 M – Part 63 NESHAP	Yes
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

LG operates under a facility-wide emissions limit for individual and total HAP emissions at 10 tons per year and 25 tons per year, respectively. These emissions limits are carried over to LG's initial Title V Permit.

LG operates under the requirements, noted in Table 7, that aid in maintaining actual individual and total HAP emissions less than 10/25 tons per year.

[3] PTE computed using minimum HAP destruction efficiencies established by permit.

Table 7: Process Operating Requirements To Aid in SM Status for HAPs		
Line #	**Emissions Units**	**Requirement**
L001	Compound mixers, casting operation, and cleaning and additive rooms. Hoppers, chemical storage tanks, mixers, compound mixers, cleaning and additive rooms, and belt coating and casting ovens.	Operate within an enclosure that satisfies the requirement of Method 204 for Permanent Total Enclosures. Exhaust through the applicable RTO.
L002	Resin and catalyst storage tanks, service tanks, weighing stations, mixers, and forming operation.	Exhaust through the applicable RTO.
L003	Roll coaters Roll coaters and associated drying ovens.	Operate within an enclosure that satisfies the requirement of Method 204 for Permanent Total Enclosures. Exhaust through the applicable RTO.
L004	Resin and catalyst storage tanks, service tanks, weighing stations, mixers, and forming operation.	Exhaust through the applicable RTO.

B. Applicable Rules and Regulations

Not applicable.

C. Compliance Status

The facility appears to be operating in compliance.

D. Permit Conditions

Table 8 summarizes the permit condition for Section 2 of LG's initial Title V Permit.

Table 8: Summary of Section 2 Permit Condition(s)		
New Permit Condition No.	**Existing Permit Condition No.**	**Discussion**
2.1.1	2.1	**No change –** Existing SM limit for HAPs is carried over to this initial Title V Permit.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Table 9 summarizes the equipment list at LG.

Table 9: Summary of Section 3 Permit Conditions					
Emission Units		**Specific Limitations/Requirements**		**Air Pollution Control Devices**	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
Process Line L001 – HiMACS®					
AS101	$Al(OH)_3$ Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF101	Bin Vent Filter
AS102	$Al(OH)_3$ Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF102	Bin Vent Filter
PS101	PMMA Silos	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF103	Bin Vent Filter
PH102	PMMA Scale Hopper	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF104 BF105	Bin Vent Filter Bin Vent Filter
AH102	$Al(OH)_3$ Scale Hopper	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF106	Bin Vent Filter
AH103	$Al(OH)_3$ Scale Hopper	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF107	Bin Vent Filter
CW001	Chip Weighing	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7 , 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF004	Baghouse
PH101 AH101	<u>Hoppers</u> PMMA Bag Dump Hopper $Al(OH)_3$ Hopper	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF201	Baghouse
SH201 SH202 SM301 SM302	<u>Hoppers</u> PMMA/MMA Scale Hopper PMMA/MMA Scale Hopper Syrup Scale Hopper Syrup Scale Hopper	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.4, 3.2.5, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	OX001	Regenerative Thermal Oxidizer (RTO)
TK104 TK105 DT001	<u>Tanks</u> MMA Storage Tank MMA Storage Tank DOP Tank	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.4, 3.2.5, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	OX001	RTO
SM101 SM102 SM201 SM202 CO001 CH001 CH002 MIX001 CU001	<u>Mixers</u> 1st Syrup Mixers 1st Syrup Mixers 2nd Syrup Mixers 2nd Syrup Mixers Color Mixer Chip Mixer Chip Mixer Mix Room Cushion Mixer	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.4, 3.2.5, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	OX001	RTO

Table 9: Summary of Section 3 Permit Conditions					
Emission Units		**Specific Limitations/Requirements**		**Air Pollution Control Devices**	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
	Compound Mixers				
CM001 CM002 DM001 CM003	Compound Mixers #1 Compound Mixers #2 Demister and Vacuum Pumps Associated with Compound Mixers Compounding Additive Tank	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF005 PTE1 OX001	Baghouse Permanent Total Enclosure RTO
AC001 CL001 PS001	Chemical Recycling Room Chemical Cleaning Room Peroxide Additive Storage Room	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.3, 3.2.4, 3.2.5, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	PTE2 OX001	Permanent Total Enclosure RTO
BC001 OV001	Belt Coating/Casting Oven	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	2.1.1, 3.2.3, 3.2.6, 3.2.7, 3.4.3, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	PTE3 OX002	Permanent Total Enclosure RTO
	Finishing				
CM001 PL001 PL002	Cutting and Milling Planer #l Planer #2	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF001 BF002 BF006	Baghouse Baghouse Baghouse
Process Line L002 Viatera I®					
PREP2A	Preparation A Grit Hoppers Silica Powder Silos Grit Conveying System Filler Weighing Units	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF301 BF304 BF303 BF305	Baghouse Baghouse Baghouse Baghouse
PREP2B	Preparation B UPA Resin Storage Tanks Daily Resin Service Tanks Resin Weighing Tanks Catalyst Weighing Units	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.8, 3.2.9, 3.4.4, 3.4.5,4.2.1, 4.2.2, 4.2.3, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	RC001 Or OX003	Zeolite Rotor Concentrated Oxidizer (RCO) RTO
PREP2C	Pigment Preparation Room	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF302	Baghouse
MIX2	Mixers	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.2.8, 3.2.9, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 4.2.1, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF301 BF303 BF305 RC001 Or OX003	Baghouse Baghouse Baghouse RCO RTO
FORM2A	Forming Mixture Treatment Units Homogenizing Ring Conveyance/Distributors Mixture Distributor	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.8, 3.2.9, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 4.2.1, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF303 BF304 BF305 RC001 Or OX003	Baghouse Baghouse Baghouse RCO RTO

Table 9: Summary of Section 3 Permit Conditions					
Emission Units		**Specific Limitations/Requirements**		**Air Pollution Control Devices**	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
FORM2B	Forming Press (Molding) Kiln (Slab Curing)	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	2.1.1, 3.4.3, 3.4.4, 3.4.5, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	N/A	N/A
FINISH2	Finishing Edge Cutting Calibration Polishing Inspection and Packaging	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.4.4, 3.4.5, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	N/A	N/A
Process Line L003 – Autoskin					
MIX3	Mixers	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 60 Subpart A 40 CFR 60 Subpart VVV	2.1.1, 3.2.2, 3.3.3, 3.3.4, 3.3.5, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, ,6.2.7, 6.2.8, 6.2.9, 6.2.10	BF31 BF32 BF33 BF34 BF35 BF36 BF40	Banbury Mixer Dust Collector Conveyance Dust Collector Conveyance Dust Collector Conveyance Dust Collector $CaCO_3$ Silo Dust Collector PVC Resin Silo Dust Collector Spare Dust Collector
CA01	Calendering	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 60 Subpart A 40 CFR 60 Subpart VVV	2.1.1, 3.3.3, 3.3.4, 3.3.5, 3.4.4, 3.4.5, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.7, 6.2.8, 6.2.9, 6.2.10	N/A	N/A
ED01	Expander Operation Expander Ovens	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	2.1.1, 3.4.3,3.4.4, 3.4.5, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	N/A	N/A
COAT1	Coating Operation Roll Coaters Dryer Ovens	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart VVV	2.1.1, 3.2.3, 3.2.10, 3.2.11, 3.3.3, 3.3.4, 3.3.5, 3.4.3, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.7, 6.2.8, 6.2.9, 6.2.10	PTE3 RTO1	Permanent Total Enclosure RTO
Process Line L004 – Viatera II®					
PREP4A	Preparation A Grit Hoppers Silica Powder Silos Grit Conveying System Filler Weighing Units	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF41	Baghouse

Table 9: Summary of Section 3 Permit Conditions					
Emission Units		**Specific Limitations/Requirements**		**Air Pollution Control Devices**	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
PREP4B	Preparation B UPA Resin Storage Tanks Daily Resin Service Tanks Resin Weighing Tanks Catalyst Weighing Units	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.12, 3.2.13, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	RTO2	RTO
PREP4C	Pigment Preparation Room	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF42	Baghouse
MIX4	Mixers	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.2, 3.2.12, 3.2.13, 3.4.4, 3.4.5, 3.5.1, 3.5.2, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	BF41 RTO2	Baghouse RTO
FORM4A	Forming Mixture Treatment Units Homogenizing Ring Conveyance/Distributors Mixture Distributor	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.2.12, 3.2.13, 3.4.4, 3.4.5, 4.2.2, 4.2.3, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	RTO2	RTO
FORM4B	Forming Press (Molding) Kiln (Slab Curing)	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	2.1.1, 3.4.3, 3.4.4, 3.4.5, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	N/A	N/A
FINISH4	Finishing Cooling Edge Cutting Calibration Polishing Inspection and Packaging	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	2.1.1, 3.4.4, 3.4.5, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.10	N/A	N/A
Boilers					
BL001	14.3 Natural Gas fired boiler	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 63 Subpart Dc	2.1.1, 3.2.1, 3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.4.3, 5.2.5, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.10	N/A	N/A
BL02	12.277 Natural Gas fired boiler	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 63 Subpart Dc	2.1.1, 3.2.1, 3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.4.3, 5.2.5, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.10	N/A	N/A

B. Equipment & Rule Applicability

Federal Rules

40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units: Boilers BL001 and BL02 are subject to this NSPS based on maximum heat input and date of construction. The boilers are permitted to burn natural gas or distillate fuel oil. The existing NSPS Dc requirement specifying the maximum fuel oil sulfur content weight percent is carried over to the initial Title V Permit. No other limitations or standards apply.

40 CFR 60 Subpart VVV – Standards of Performance for Polymeric Coating of Supporting Substrates Facilities: The *affected facility* to which the provisions of this NSPS apply is each *coating operation* and any *onsite coating mix preparation equipment* used to prepare coatings for the polymeric coating of supporting substrates for which construction, modification, or reconstruction begins after April 30, 1987. Table 10 summarizes the definitions that are important in documenting applicability to this NSPS.

Table 10: NSPS VVV Definitions of Interest

Term	Definition
Coating Operation	Any coating applicator(s), flashoff area(s), and drying oven(s) located between a substrate unwind station and a rewind station that coats a continuous web to produce a substrate with a polymeric coating. Should the coating process not employ a rewind station, the end of the coating operation is after the last drying oven in the process.
Coating Applicator	Any apparatus used to apply a coating to a continuous substrate.
Onsite Coating Mix Preparation Equipment	Those pieces of coating mix preparation equipment located at the same plant as the coating operation they serve.
Polymeric Coating of Supporting Substrates	A web coating process that applies elastomers, polymers, or prepolymers to a supporting web other than paper, plastic film, metallic foil, or metal coil.
Web Coating	The coating of products, such as fabric, paper, plastic film, metallic foil, metal coil, cord, and yarn, that are flexibility enough to be unrolled from a large roll; and coated as a continuous substrate by methods including, but not limited to, knife coating, roll coating, dip coating, impregnation, rotogravure, and extrusion.

Table 11 summarizes the conclusions of the Division's analysis.

Table 11: NSPS VVV Applicability Analysis

Process Equipment	Note(s)
Line L003 *onsite coating mix preparation equipment* plus *calendering operation* Coating Operation #1	This process component of process line L003 meets the applicability criteria. No emission standard applies as long as actual and projected VOC usage is less than 95 megagrams (104.72 tpy).

Table 11: NSPS VVV Applicability Analysis	
Process Equipment	**Note(s)**
Line L003 roll coaters and associated drying ovens Coating Operation #2 (separate from Coating Operation #1)	These process components are not listed as applicable to this NSPS per LG's existing air permit. The Division has determined that the COAT1 operation and subsequent dryers meet the applicability criteria for this NSPS.[4] No emission standard applies as long as actual and projected VOC usage is less than 95 megagrams (104.72 tpy).

LG's initial Title V permit language associated with this NSPS is updated as summarized in Table 12.

Table 12: Section 3.3 Permit Language Update for NSPS VVV	
Process Equipment	**New Permit Conditions in Section 3.3**
Coating Operation #1	-Added NSPS VVV definition for *VOC used*. -Added NSPS VVV mass limit for *VOC used.*
Coating Operation #2	-Added process component as applicable to this NSPS. -Added NSPS VVV definition for *VOC used*. -Added NSPS VVV mass limit for *VOC used.*

State Rules

Georgia Rule 391-3-1-.02(2)(e)-Particulate Emissions from Manufacturing Operations: Each PM emission point other than fuel-burning equipment is subject to this regulation. The applicant should easily comply with this state rule because the applicable emission units will be controlled for PM emissions and thereby emit minor amounts. Table 13 summarizes the existing operational requirements for purposes of providing a reasonable assurance of compliance with this state rule.

Note regarding the use of *Smog Hogs* on process line L003. The end point on the calendaring operation exhausts to the atmosphere through a ventilation hood. LG routes the ventilation hood to a dry electrostatic precipitator (in this case *Smog Hogs*). The expander operation contains a ventilation hood which LG routes to additional *Smog Hog* units. Based on PM, PM_{10}, and $PM_{2.5}$ emission estimates (most likely in the form of aerosols in the steam mist), the use of the *Smog Hogs* is not required for compliance with Georgia Rules 391-3-1-.02(2)(b) and (e) or with the Georgia Air Toxics Guideline. Therefore, the existing permit conditions pertaining to the operation and monitoring of the *Smog Hogs* are not carried over to the initial Title V permit.

Table 13: Process Operating Requirements For Compliance with Georgia Rules (e) and (b)		
Line #	**Emissions Units**	**Requirement**
L001	Silos, scale hoppers, weighing stations, hoppers and bag dump stations, and mixing stations	Operate the applicable bin vent filter or baghouse at all times of process operation.
L002	Grit hoppers, silos, conveying systems, weighing stations, pigment preparation	Operate the applicable baghouse at all times of process operation.

[4] U.S. EPA Applicability Determination Index, Control Number 0400037, 8/19/2004, Part 60, VVV, Polymeric Coating of Supporting Substrates.

Table 13: Process Operating Requirements For Compliance with Georgia Rules (e) and (b)		
Line #	**Emissions Units**	**Requirement**
L003	Mixers	Operate the applicable baghouses at all times of operation of the mixers.
L004	Grit hoppers, silos, conveying systems, weighing stations, pigment preparation	Operate the applicable baghouse at all times of process operation.

Georgia Rule 391-3-1-.02(2)(b)-Visible Emissions: Each non-fuel burning equipment emission point subject to Georgia Rule 391-3-1-.02(2)(e) is subject to this state rule which limits the opacity to less than or equal to forty (40) percent. Table 13 summarizes the existing operational requirements for purposes of providing a reasonable assurance of compliance with this state rule.

Georgia Rule 391-3-1-.02(2)(lll): NOx Emissions from Fuel-Burning Equipment: Boilers BL001 and BL02 are subject to this rule based on maximum heat input, date of construction, and county location. This state rule limits the NOx emissions to 30 ppm on a volume and dry basis at 3% oxygen from May 1 through September 30 of each year.

Georgia Rule 391-3-1-.02(2)(x) – Fabric and Vinyl Coating: Process line L003 is potentially subject to this state rule, however, the potential VOC emissions from this process line are less than 100 tons per year. The potential VOC emissions from this process line are less than 100 tons per year as long as LG maintains the integrity of the permanent total enclosure housing the roll coaters, operates this enclosure in compliance with Method 204, and routes the enclosure exhaust to an RTO.

C. Permit Conditions:

Table 14 summarizes the Section 3 permit conditions.

Table 14: Summary of Section 3 Permit Condition(s)			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
Boilers	3.2.1	2.3	**No change** – Establishes the fuel types that can be combusted in the boilers in order to avoid the emission standards of 40 CFR 63 Subpart JJJJJJ.
Applicable Process Equipment	3.2.2	4.3 4.12 4.16 4.23	**No change** – Establishes the requirement to operate and maintain dust collection devices (e.g., baghouses, bin vent filters) on the specified process operations.
L001	3.2.3	4.9 4.10 4.11 4.22	**Updated Condition** – Permanent Total Enclosure Requirement -No change for process line L001. -Clarified the applicable process point on process line L003 that must be operated within a permanent total enclosure.

Table 14: Summary of Section 3 Permit Condition(s)			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
L001	3.2.4	4.5 4.6	**Updated Condition -** RTO with ID No. OX001 -Establishes the minimum destruction efficiency of MMA rather than "HAPS" because MMA is the only HAP emitted from this line. -Removed reference to minimum destruction efficiency of VOCs and made that a separate condition. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
L001	3.2.5	4.5 4.6	**Updated Condition -** RTO with ID No. OX001 -Establishes the minimum destruction efficiency of VOC. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
L001	3.2.6	4.7 4.8	**Updated Condition -** RTO with ID No. OX002 -Establishes the minimum destruction efficiency of MMA rather than "HAPS" because MMA is the only HAP emitted from this line. -Removed reference to minimum destruction efficiency of VOCs and made that a separate condition. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
L001	3.2.7	4.7 4.8	**Updated Condition -** RTO with ID No. OX002 -Establishes the minimum destruction efficiency of VOC. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
L002	3.2.8	4.13 4.15	**Updated Condition -** RTO with ID No. OX003 or RCO with ID No. RC001 -Establishes the minimum destruction efficiency of styrene rather than "HAPS" because styrene is the only HAP emitted from this line. -Removed reference to minimum destruction efficiency of VOCs and made that a separate condition. -Establishes the requirement to exhaust all applicable process emission points to this RTO or RCO.
L002	3.2.9	4.13 4.15	**Updated Condition -** RTO with ID No. OX003 or RCO with ID No. RC001 Establishes the minimum destruction efficiency of VOC. -Establishes the requirement to exhaust all applicable process emission points to this RTO.

Table 14: Summary of Section 3 Permit Condition(s)			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
L003	3.2.10	4.18 4.19	**Updated Condition -** RTO with ID No. RTO1 -Establishes the minimum destruction efficiency of *total HAPs.* -Removed reference to minimum destruction efficiency of VOCs and made that a separate condition. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
L003	3.2.11	4.18 4.19	**Updated Condition -** RTO with ID No. RTO1 -Establishes the minimum destruction efficiency of VOC. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
L004	3.2.12	4.24 4.25	**Updated Condition -** RTO with ID No. RTO2 -Establishes the minimum destruction efficiency of styrene rather than "HAPS" because styrene is the only HAP emitted from this line. -Removed reference to minimum destruction efficiency of VOCs and made that a separate condition. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
L004	3.2.13	4.24 4.25	**Updated Condition -** RTO with ID No. RTO2 -Establishes the minimum destruction efficiency of VOC. -Establishes the requirement to exhaust all applicable process emission points to this RTO.
Boilers	3.3.1 3.3.2	2.2	**No Change** – NSPS Dc Requirement for the Boilers -40 CFR 60 Subparts A and Dc applicability statements for the boilers remain.
L003	3.3.3	2.10	**Updated Condition** – Process Line L003 -40 CFR 60 Subparts A and VVV applicability statements are expanded to include all applicable equipment.
L003	3.3.4	N/A	**New condition –** NSPS VVV definition for "VOC used" is added.
L003	3.3.5	N/A	**New condition –** NSPS VVV limit on mass of "VOC used" is added. Additional requirements apply if and when LG exceeds this limit.
Boilers	3.4.1.a	2.6	**No change** – Boilers -Georgia Rule 391-3-1-.02(2)(d), PM standard
Boilers	3.4.1.b	2.7	**No change** – Boilers -Georgia Rule 391-3-1-.02(2)(d), opacity
Boilers	3.4.2	2.4 2.5	**No change** – Boilers -Georgia Rule 391-3-1-.02(2)(lll) requirement
Fuel burning sources	3.4.3	N/A	**New Condition** – Boilers and Ovens -Georgia Rule 391-3-1-.02(2)(g), fuel sulfur content limit

Table 14: Summary of Section 3 Permit Condition(s)			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
Facility wide	3.4.4	2.9	**No change** – Opacity of emissions per Georgia Rule 391-3-1-.02(2)(b)
Applicable Process Equipment	3.4.5	2.8	**No change** –Georgia Rule 391-3-1-.02(2)(e)
Applicable Process Equipment	3.5.1	4.1	**No change -** Routine maintenance on all air pollution control equipment.
Applicable Equipment	3.5.2	4.2	**No change –** Maintain an inventory of filter bags or bin filter replacements.
IC Engines	N/A	2.11	**Deleted Condition** - IC engine permit requirements are included in Appendix B of the initial Title V Permit.
Fugitive Emissions	N/A	3.1 3.2	**Deleted Condition** – No specific emission unit in Section 3 is subject to this state rule. This state rule is still specified in Section 8 of the initial Title V Permit.
L003	N/A	4.20	**Deleted Condition –** Pertains to process line L003 *Smog Hog*.
L003	N/A	4.21	**Deleted Condition –** Pertains to process line L003 *Smog Hog*.

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

FEDERAL REGULATIONS

40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units: No testing requirements are imposed by NSPS Dc.

40 CFR 60 Subpart VVV – New Source Performance Standard for Polymeric Coating of Supporting Substrates Facilities: No testing requirements are imposed by NSPS VVV.

STATE RULES

Georgia Rule 391-3-1-.02(2)(lll): NOx Emissions from Fuel-Burning Equipment: Boilers BL001 and BL02 are subject to this rule based on maximum heat input, age, and county location. No testing requirements are imposed by the Division's *Procedures for Testing and Monitoring Sources of Air Pollutants* based on this state rule.

40 CFR 63 Area Source Classification: LG operates thermal oxidation systems as well as several permanent total enclosure rooms to maintain area source classification under Part 63. LG has fulfilled the existing testing requirements which are summarized in Table 15. LG's existing permit requires re-testing of the destruction removal efficiencies at least once every five years. The Title V Permit establishes the next testing deadline as February 4, 2021 based on feedback from LG and SSCP.

Table 15 – Most Recent Division Approved Test Results.

Line	Control Device	Pollutant	Note(s)
L001	OX001	VOC as C	From Mixing, Cleaning, and Additives Rooms, tested June 2016: -Average VOC destruction removal efficiency of 94% -Average Combustion Zone Temperature = 1566^0F
L001	OX001	MMA[5]	From Mixing, Cleaning, and Additives Rooms, tested 10/27/2016 -Average MMA destruction removal efficiency of 98.9% -Average Combustion Zone Temperature = 1565^0F
L001	OX002	VOC as C	From Casting room and ovens, tested June 2016: -Average VOC destruction removal efficiency of 93.8% -Average Combustion Zone Temperature = 1566^0F
L001	OX002	MMA	From Casting room and ovens, tested June 2016: -Average MMA destruction removal efficiency of 99.2% -Average Combustion Zone Temperature = 1566^0F
L001	Permanent Total Enclosures for: -Casting Room -Mixing Room -Cleaning Room -Additives Room -Chemical Recycling Room	N/A	Verified that each of these rooms can be classified as a *permanent total enclosure* in June 2016.

[5] Methyl Methacrylate

Table 15 – Most Recent Division Approved Test Results.			
Line	**Control Device**	**Pollutant**	**Note(s)**
L002	OX003	VOC	Tested February 2015: -Average VOC destruction removal efficiency of 96.8%. Average styrene destruction removal efficiency is set equal to VOC destruction removal efficiency. -Average Combustion Zone Temperature = 1524^{0}F
L002	RCO	VOC	The RCO has not been tested to verify compliance with existing Permit Condition Nos. 4.13 and 4.15.
L003	Permanent Total Enclosure for: -Expander Oven enclosure -Coating Room	N/A	Verified that each of these rooms can be classified as a *permanent total enclosure* in January 2016.
L003	RTO1	VOCs	From coating room and ovens, tested in January 2016 -Average VOC destruction removal efficiency of 95.0%. Average total HAP destruction removal efficiency is set equal to VOC destruction removal efficiency. -Average Combustion Zone Temperature = 1614^{0}F
L004	RTO2	VOC as C	Tested September 2016: -Average VOC destruction removal efficiency of 99.7%. Average styrene destruction removal efficiency is set equal to VOC destruction removal efficiency. -Average Combustion Zone Temperature =1519^{0}F

Permit Conditions:

Table 16 specifies the Permit Conditions in Section 4 of LG's initial Title V Permit.

Table 16: Permit Conditions in Section 4			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
Facility wide	4.1.1	6.1	**Updated Condition:** Standard Georgia Title V template language.
Facility wide	4.1.2	6.1	**Updated Condition:** Standard Georgia Title V template language.
Facility wide	4.1.3	N/A	**New Condition:** Standard Georgia Title V template language.

Table 16: Permit Conditions in Section 4			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
Facility wide	4.1.4	N/A	**New Condition:** Standard Georgia Title V template language.
L002	4.2.1	4.14	**New Condition:** Standard Georgia Title V template language.
L001 L002 L003 L004	4.2.2	6.2	**Updated Condition** – Specifies the frequency of conducting performance testing with a first deadline of February 4, 2021.
L001 L002 L003 L004	4.2.3	6.2	**Updated Condition** – -Clarified the testing requirement per line per pollutant. No other changes are incorporated.

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

FEDERAL REGULATIONS

40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units: No monitoring requirements are imposed by NSPS Dc other than tracking fuel usage. This is covered in Section VI of the narrative and permit.

40 CFR 60 Subpart VVV – New Source Performance Standard for Polymeric Coating of Supporting Substrates Facilities: No monitoring requirements are imposed by NSPS VVV other than tracking "VOC used". This is covered in Section VI of the narrative and permit.

STATE RULES

Georgia Rule 391-3-1-.02(2)(lll): NOx Emissions from Fuel-Burning Equipment: The existing monitoring requirements for boilers BL001 and BL02 are carried over to LG's Title V permit and are taken from Section 2.119 of the Division's *Procedures for Testing and Monitoring Sources of Air Pollutants* based on this state rule.

40 CFR 63 Area Source Classification: LG operates thermal oxidation systems as well as several permanent total enclosure rooms to maintain area source classification under Part 63. The existing monitoring and recordkeeping requirements are carried over to LG's Title V Permit. The monitoring requirements are summarized in Table 17.

Table 17: Monitoring Requirements for 40 CFR 63 Area Source Classification and Avoidance of 40 CFR 52.21 for VOC Emissions

Line #	Control Device	Monitoring
L001	OX001	Continuously monitor and record combustion zone temperature. Data shall be reduced to 3-hour rolling averages.
L001	OX002	Continuously monitor and record combustion zone temperature. Data shall be reduced to 3-hour rolling averages.
L001	Permanent Total Enclosures	Continuously monitor whether the applicable process ventilation fan is pulling flow to this RTO. Record whether the fan is "on" or "off" at least once every four hours. This is a new monitoring requirement approved by the facility which they already implement.
L001	Permanent Total Enclosures	Continuously monitor whether the fan immediately upstream of the applicable RTO is running. Frequency of recording "yes" or "no" is at least once every four hours.
L002	OX003	Continuously monitor and record combustion zone temperature. Data shall be reduced to 3-hour rolling averages.
L002	RC001	Continuously monitor and record combustion zone temperature. Data shall be reduced to 3-hour rolling averages. Continuously monitor and record the temperature at the inlet to the desorption/reactivation zone. Continuously monitor and record the inverter speed in revolutions per minute for the desorption/reactivation fan. Continuously monitor and record the rotational speed in revolutions per minute.
L003	RTO1	Continuously monitor and record combustion zone temperature. Data shall be reduced to 3-hour rolling averages.
L003	Permanent Total Enclosure	Applicable to coating operation. Continuously monitor and record the inlet static pressure in the duct plenum downstream of the coating operation. This is a new monitoring requirement approved by the facility. This monitoring operation exists for process line L003.
L004	RTO2	Continuously monitor and record combustion zone temperature. Data shall be reduced to 3-hour rolling averages.

PM, PM_{10}, $PM_{2.5}$ Emissions: LG operates a number of dust collectors to maintain minor source classification for particulate emissions (PM, PM_{10}, $PM_{2.5}$). The existing monitoring and recordkeeping requirements are carried over to LG's Title V Permit. The monitoring requirements are summarized in Table 18.

Table 18: Monitoring Requirements for Dust Collection Devices for Avoidance of 40 CFR 52.21		
Line	**Control Devices**	**Monitoring Requirements**
L001	BF201 BF001 BF002 BF004 BF005 BF006 BF101 BF102 BF103 BF104 BF105 BF106 BF107	Continuously monitoring pressure drop across each dust collector (either a baghouse or a bin vent filter). Record the pressure drop value at least once every twelve hours of operation for each dust collector. Daily VE check during operation of the process line. Implement a Preventive Maintenance Program (excluding bin vent filters).
L002	BF301 BF302 BF304 BF305	Continuously monitoring pressure drop across each dust collector. Record the pressure drop value at least once every twelve hours of operation for each dust collector. Daily VE check during operation of the process line. Implement a Preventive Maintenance Program.
L003	BF31 BF32 BF33 BF34 BF35 BF36 BF40	Continuously monitoring pressure drop across each dust collector. Record the pressure drop value at least once every twelve hours of operation for each dust collector. Daily VE check during operation of the process line. Implement a Preventive Maintenance Program.
L004	BF41 BF42	Continuously monitoring pressure drop across each dust collector. Record the pressure drop value at least once every twelve hours of operation for each dust collector. Daily VE check during operation of the process line. Implement a Preventive Maintenance Program.

C. Compliance Assurance Monitoring (CAM)

LG is not required to submit a CAM plan as part of this initial Title V permitting exercise because the applicable *pollutant specific emissions units (PSEUs)* are not classified as *large PSEUs*, per 40 CFR 64.5.

Permit Conditions:
Table 19 summarizes the Section 5 permit conditions.

Table 19: Section 5 Permit Conditions			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
L001 L002 L003 L004	5.1.1	5.1	**Updated Condition** -Standard Georgia Title V template language
L001	5.2.1.a	5.8.a	**Updated Condition** -RTO with ID No. OX001, combustion zone temperature -Updated permit language
L001	5.2.1.b	5.8.b	**Updated Condition** –RTO with ID No. OX002, combustion zone temperature -Updated permit language
L002	5.2.1.c	5.8.c	**Updated Condition** -RTO with ID No. OX003, combustion zone temperature -Updated permit language
L002	5.2.1.d	5.8.d	**Updated Condition** –RCO with ID No. RC001, combustion zone temperature -Updated permit language
L002	5.2.1.e	5.8.e	**Updated Condition** –RCO with ID No. RC001, temperature at the inlet to the desorption/reactivation zone -Updated permit language
L002	5.2.1.f	5.8.f	**Updated Condition** –RCO with ID No. RC001, inverter speed for the desorption/reactivation fan -Updated permit language
L002	5.2.1.g	5.8.g	**Updated Condition** –RCO with ID No. RC001, rotational speed -Updated permit language.
L003	5.2.1.h	5.8.h	**Updated Condition** –RTO with ID No. RTO1, combustion zone temperature -Updated permit language
L003	5.2.1.i	N/A	**New Condition** -Continuously monitor and record the inlet static pressure to RTO with ID No. RTO1 to verify operation of the permanent total enclosure.

Table 19: Section 5 Permit Conditions			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
L004	5.2.1.j	5.8.i	**Updated Condition** –RTO with ID No. RTO2, combustion zone temperature -Updated permit language
L001	5.2.2.a 5.2.2.b 5.2.2.c 5.2.2.d 5.2.2.e 5.2.2.f	5.2.a.i	**No change** –Baghouse pressure drop monitoring for process line L001
L002	5.2.2.g 5.2.2.h	5.2.a.ii	**No change** –Baghouse pressure drop monitoring for process line L002
L002	5.2.2.i 5.2.2.j 5.2.2.k	N/A	**New Condition** –Additional baghouses on atmospheric exhaust points for process line L002 are added and the Title V permit requires pressure drop monitoring be installed and implemented for each of these baghouses.
L003	5.2.2.l 5.2.2.m 5.2.2.n 5.2.2.o 5.2.2.p 5.2.2.q 5.2.2.r	5.2.a.iii	**No change** –Baghouse pressure drop monitoring for process line L003
L004	5.2.2.s 5.2.2.t	5.2.a.iv	**No change** –Baghouse pressure drop monitoring for process line L004
L001	5.2.2.u 5.2.2.v 5.2.2.w 5.2.2.x 5.2.2.y 5.2.2.z 5.2.2.aa	5.2.b.i	**No change** –Bin vent filter pressure drop monitoring
L001	5.2.2.bb	N/A	**New Condition** -Record the fan operating status which pulls flow into RTO with ID No. OX001.
L001	5.2.2.cc	N/A	**New Condition** -Record the fan operating status which pulls flow into RTO with ID No. OX002.

Table 19: Section 5 Permit Conditions			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
L001 L002 L003 L004	5.2.3	5.3	**Updated Condition** –Visible emission checks for baghouses. -Using standard language for Georgia Title V Permits.
L001 L002 L003 L004	5.2.4	5.4	**Updated Condition** -PMP for baghouses. -Using standard language for Georgia Title V Permits.
Boilers	5.2.5	5.5	**No change** –Monitoring for verifying compliance with Georgia Rule 391-3-1-.02(2)(lll).

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.

Table 20 summarizes the Section 6.1 permit conditions.

Table 20: Section 6.1 Permit Conditions			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
Facility wide	6.1.1	1.4	**Updated Condition** -Standard Georgia Title V template language.
Facility wide	6.1.2	N/A	**New Condition** -Standard Georgia Title V template language.
Facility wide	6.1.3	N/A	**New Condition** -Standard Georgia Title V template language.
Facility wide	6.1.4	7.1.7	**Updated Condition** -Standard Georgia Title V template language. -Reporting requirements revised from quarterly to semiannual per LG's request.
Facility wide	6.1.5	N/A	**New Condition** -Standard Georgia Title V template language.

Table 20: Section 6.1 Permit Conditions			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
Facility wide	6.1.6	N/A	**New Condition** -Standard Georgia Title V template language.
Facility wide	6.1.7.a.i	N/A	**New Condition** -Standard Georgia Title V template language. -No excess emission is defined per state rule or federal regulation.
Facility wide	6.1.7.b.i	7.6 7.17	**Updated Condition** –Standard Georgia Title V template language as it pertains to facility-wide SM limit for HAPs.
L003	6.1.7.b.ii	7.16.c 7.16.d	**Updated Condition** –Standard Georgia Title V template language as it pertains to VOC emissions from Coating Operation #1 per NSPS VVV.
L003	6.1.7.b.iii	N/A	**New Condition** –Standard Georgia Title V template language as it pertains to VOC emissions from Coating Operation #2 per NSPS VVV.
L001	6.1.7.c.i	7.18.a	**Updated Condition** -Standard Georgia Title V template language. -Referenced the most recent Division approved temperature for RTO with ID No. OX001, 1566^0F. -Averaging period remains as a 3-hour rolling average. -Definition of excursion is revised for Title V purposes.
L001	6.1.7.c.ii	7.18.b	**Updated Condition** -Standard Georgia Title V template language. -Referenced the most recent Division approved temperature for RTO with ID No. OX002, 1566^0F. -Averaging period remains as a 3-hour rolling average. -Definition of excursion is revised for Title V purposes.
L002	6.1.7.c.iii	7.18.d	**Updated Condition** -Standard Georgia Title V template language. -Referenced the most recent Division approved temperature for RTO with ID No. OX003, 1524^0F. -Averaging period remains as a 3-hour rolling average. -Definition of excursion is revised for Title V purposes.

Table 20: Section 6.1 Permit Conditions			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
L002	6.1.7.c.iv	7.18.e	**Updated Condition** -Standard Georgia Title V template language. -Averaging period remains a 3-hour rolling average. -There is no test data for the RCO controlling emissions on Line L002.
L003	6.1.7.c.v	7.18.f	**Updated Condition** -Standard Georgia Title V template language. -Referenced the most recent Division approved temperature for RTO with ID No. RTO1, 1614^0F (879^0C). -Averaging period remains as a 3-hour rolling average.
L004	6.1.7.c.vi	7.18.g	**Updated Condition** -Standard Georgia Title V template language. -Referenced the most recent Division approved temperature for RTO with ID No. RTO2, 1519^0F. -Averaging period remains as a 3-hour rolling average.
L001	6.1.7.c.vii	N/A	**New Condition** –Regarding permanent total enclosure of the line L001 compound mixing room. -SSCP has defined an excursion for operating the compound mixing room during periods when the room exhaust is not being ventilated to RTO with ID No. OX001.
L001	6.1.7.c.viii	N/A	**New Condition** –Regarding permanent total enclosure of the line L001 cleaning and additive room. -SSCP has defined an excursion for operating the cleaning and additive room during periods when the room exhaust is not being ventilated to RTO with ID No. OX001.
L001	6.1.7.c.ix	N/A	**New Condition** –Regarding permanent total enclosure of the line L001 belt coating/casting operation room. -SSCP has defined an excursion for operating the belt coating/casting room during periods when the room exhaust is not being ventilated to RTO with ID No. OX001.
L003	6.1.7.c.x	N/A	**New Condition** –Regarding permanent total enclosure of the line L003 belt coating/casting operation. -monitor the inlet static pressure in the duct plenum immediately before the RTO with ID No. RTO1.

Table 20: Section 6.1 Permit Conditions			
Applicable Equipment	**New Permit Condition No.**	**Existing Permit Condition No.**	**Discussion**
Applicable Equipment	6.1.7.c.xi	N/A	**New Condition** -Defines an excursion for the baghouses based on visible emissions.
Applicable Equipment	6.1.7.c.xii	N/A	**New Condition** –Defines an excursion for the baghouses based on pressure drop.
L001	6.1.7.c.xiii	N/A	**New Condition** –Defines an excursion for the bin vent filters based on pressure drop.
N/A	N/A	7.18.c	**Deleted Condition** –Redundant with Title V Permit template.

B. Specific Record Keeping and Reporting Requirements

FEDERAL REGULATIONS

40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units: The existing recordkeeping requirements, per 40 CFR 60.48c(g)(2) are carried over to LG's Title V permit. As part of this recordkeeping requirement, LG shall record and maintain records of the amount of each fuel combusted in boilers with ID Nos. BL001 and BL02 on a monthly basis.

40 CFR 60 Subpart VVV – New Source Performance Standard for Polymeric Coating of Supporting Substrates Facilities: The existing recordkeeping requirements, per NSPS VVV, are modified as incorporated in LG's initial Title V Permit. A VOC usage limit of 95 megagrams (Mg)/yr is included in the updated permit. Thus the need to carry over existing permit condition number 7.16.c and 7.16.d is eliminated.

STATE RULES

Georgia Rule 391-3-1-.02(2)(lll): NOx Emissions from Fuel-Burning Equipment: No recordkeeping or reporting requirements apply in addition to those specified in Permit Condition No. 5.2.6.

40 CFR 63 Area Source Classification: The existing recordkeeping and reporting requirements associated with verifying LG's Part 63 area source classification are carried over to LG's Title V permit. As part of these requirements, LG must maintain a written emission calculation protocol for determining actual emissions of individual and total HAPs emitted from the entire facility on a monthly basis. LG shall use the written calculation protocol (including emission factors) submitted to the Division in May of 2017. The existing version of the protocol and any subsequent modification to the protocol shall be kept in a permanent form suitable and available for inspection.

Avoidance of 40 CFR 52.21 for VOC Emissions: Potential VOC emissions (after controls) are less than 250 tons per year from each Title I site. The existing recordkeeping and reporting requirements associated with the computation of actual VOC emissions from the facility are not carried over to the initial Title V Permit. Minimizing the number and frequency of excursions as defined in Permit Condition Nos. 6.1.7.c.i-x will provide a reasonable assurance that the facility is operating as a PSD minor source for VOC emissions.

Permit Conditions:
Table 21 summarizes the Section 6.2 permit conditions.

Table 21: Section 6.2 Permit Conditions

Applicable Equipment	New Permit Condition No.	Existing Permit Condition No.	Discussion
Facility wide	6.2.1 6.2.2 6.2.3 6.2.4	7.3 7.4 7.5 7.6	**Updated Conditions** –SM Status for HAPs -Referenced approved calculation protocol as the basis going forward. -Maintain monthly records of the parameters used to calculate actual HAP emissions. -Calculate and maintain monthly and consecutive 12-month individual and total HAP emissions from the facility.
Boilers	6.2.5 6.2.6	7.12 7.13	**No change** –NSPS Dc recordkeeping requirements.
L003	6.2.7 6.2.8 6.2.9	7.14 7.15	**Updated Conditions** – NSPS VVV -Using applicable language from the regulation.
Facility wide	6.2.10	7.17	**Updated Condition** – Additional Reporting Requirement -No need to report VOC emissions as they are not required to be computed for any regulatory reason. -Carried over reporting of facility-wide individual and total HAPs. -Existing reporting requirements in 7.17.d., e., f., and g. are no longer necessary as these are available upon request.
L003	N/A	7.16	**Deleted** –LG has satisfied the requirements of Permit Condition Nos. 7.16.a and 7.1.6.b. -Existing requirements of Permit Condition Nos. 7.1.6.c and 7.1.6.d are now specified in new Permit Condition Nos. 6.1.7.b.

VII. Specific Requirements

A. Operational Flexibility

Not Applicable

B. Alternative Requirements

Not Applicable

C. Insignificant Activities

Refer https://geos.epd.georgia.gov/ga/geos/public/govent/shared/pages/main/login.aspx

D. Temporary Sources

Not Applicable

E. Short-Term Activities

Not Applicable

F. Compliance Schedule/Progress Reports

Not Applicable

G. Emissions Trading

Not Applicable

H. Acid Rain Requirements

Not Applicable

I. Stratospheric Ozone Protection Requirements

LG operates air conditioner/refrigeration equipment that used CFC's, HFC's or other stratospheric ozone-depleting substances listed in 40 CFR Part 82, Subpart A, Appendices A and B.

J. Pollution Prevention

Not Applicable

K. Specific Conditions

Not Applicable

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