Facility Name: **Dart Container of Georgia**
City: Lithonia
County: DeKalb
AIRS #: 04-13-089-00024

Application #: TVR-228293
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Permit No: 3086-089-0224-V-04-0

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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: Dart Container of Georgia

2. Parent/Holding Company Name

   Dart Container of Georgia

3. Previous and/or Other Name(s)

   Dart Container Corporation of Georgia

4. Facility Location

   2120 Lithonia Industrial Boulevard
   Lithonia, Georgia 30058
   DeKalb County

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

   The facility is located in a non-attainment area for ozone.

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 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
3086-089-0224-V-03-0	August 14, 2013	Title V Renewal
Off-permit Change	October 14, 2015	Replacement of existing foam compression densifier with two foam compression densifiers
Off-Permit Change	October 10, 2016	Replacement of Poly Max 1500 compression molder with Poly Max 2500 compression molder.

D. Process Description

1. SIC Codes(s)

3086 – Plastic foam product manufacturing

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 manufactures expandable polystyrene (EPS) containers of different shapes and sizes.

3. Overall Facility Process Description

Dart takes raw expandable polystyrene bead containing pentane as a blowing agent and expands it in pre-expanders to a specified density with steam. This expanded bead is referred to as prepuff. Four boilers that fire either natural gas or no. 2 low sulfur fuel oil are used to produce steam for both the process and building heat. The pre-puff is aged for a few hours and then sent to a cup molding machine where the prepuff is feed into molds, more steam is added, and then the mold cooled to form a EPS foam container. These containers are inspected to make sure they will not leak and then either packaged or sent to the UV printers where art work and graphics are added prior to packaging. Scrap material is sent to the scrap cup densifier. The unit grinds the material internally and then extruded into bricks or logs for disposal. The facility densifies internal scrap material or receive post-consumer scrap to be densified. Dart also has associated warehouse storage and shipping facilities on-site including a truck maintenance shop and a diesel fueling station.

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 a major source under PSD/NSR regulations because the facility’s potential NOx and VOC emissions are both greater than 25 tons per year.

As of January 1, 2004, the Atlanta Ozone NAA was changed from a classification of "serious" to a classification of "severe". This reclassification resulted in a number of changes and additions to the air quality regulations. These changes apply to the Dart facility since it is located in DeKalb County, which is one of the thirteen counties that comprise the Atlanta NAA. The New Source Review (NSR) major source and Rule 391-3-1-.02(2)(yy) Reasonably Available Control Technology (RACT) threshold for NOX have been changed from 50 tons per year to 25 tons per year. The NSR major source threshold for VOC was changed from 50 tons per year to 25 tons per year; the Rule 391-3-1-.02(2)(tt) RACT threshold remains at 25-tpy.

The Dart facility is already a NSR major source for VOC emissions since their emissions exceeded the serious major source threshold of 50 tons per year. Due to a previous modification and emission increases this facility operates under a NSR avoidance limit of 213 tons per year. Dart's VOC source status and NSR avoidance limit will remain unchanged since it was already classified as a major source under NSR and the avoidance limit is for previous modifications.

Dart has a NSR major source avoidance limit for NOx emissions. However, since this facility is subject to the lower NSR major applicability cutoff and the new RACT threshold of 25-tpy they have elected to become a NSR major source for NOx and perform a NOx RACT determination as required by Georgia State Rule (yy) "Emissions of Nitrogen Oxides from Major Sources". A NOx RACT determination was submitted and received on November 29, 2004 for approval by the EPD. The facility's boilers, BLR1, BLR2, BLR3 and BLR4, can be subject to the alternative RACT requirements of Georgia State Rule (rrr) "NOx Emissions from Small Fuel-Burning Equipment," since No. 2 fuel oil will not be burned in these emission units in the months of May through September unless the facility is subject to any periods of natural gas curtailment; only natural gas and pentane will be combusted during the ozone season as required by Georgia State Rule (rrr).

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	Y			X
PM_{10}	Y			X
$PM_{2.5}$	Y			X
SO_2	Y			X
VOC	Y	X		
NO_x	Y	X		
CO	Y			X
TRS	N			
H_2S	N			
Individual HAP	Y			X
Total HAPs	Y			X

3. MACT Standards

The site is not a major source of HAP emissions, therefore no MACT standards apply.

As a minor source of HAP emissions, due to the limit, the facility is subject to 40 CFR 63, Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial Commercial, and Institutional Boilers," for the operation of the boilers.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	N
Program Code 9 - NSPS	Y
Program Code M – Part 63 NESHAP	Y
Program Code V – Title V	Y

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

There is a facility-wide VOC limit of 513 tons per year.

This limit was originally 213 tpy when it was issued in the initial Title V Permit. This limit did not account for warehouse emissions at that time; the emissions were incorrectly considered fugitive. They have been estimated to be 300 tpy and therefore this amount was added to the facility-wide total so that all emissions are represented. The above emissions do not include the 9.2 tpy VOC emission from the scarp cup densifiers. The hot melt densifier was not installed at the facility. With the scarp cup densifier emissions total facility wide VOC emissions will be 522.2 tpy.

The basis of the 513 tpy VOC emissions from the facility is as follows:

Reviewing previous data collected by Compliance, it showed that in 2011, the total pentane loss from the beads (a 2.48% loss from the beads in the pre-expanders and molders) was 335.56 tpy and the actual pentane collected, (taking into account the 97.61% destruction efficiency) was 164.69 tpy. 164.69 is approximately 49% of 335.56, showing that approximately 50% of the pentane emissions were captured and sent to the boilers to be destroyed. The destruction efficiency from the most recent performance test is 97.61%, however, the permit condition specifying the calculation equations requires a 95% destruction be used, and this is the destruction efficiency that was originally used in calculating the limit, so that will be used in these calculations to correct the limit instead of 97.61%.

213 = beads*(0.0248 - (0.0124*.95)) which is the 2.48% loss and then, of that loss amount, the half captured and destroyed,

(In the above equation: 213 tpy VOC emissions is the maximum amount of VOCs from the maximum amount of beads that could have been processed; there is a 2.48% loss of VOC from the pre-expanders and molders – minus the controlled emissions which is the half of those emissions (50% of 0.0248 is 0.0124) that are routed to the boilers and then destroyed at 95% destruction efficiency.)

which gives 16,359.5 tpy of beads allowed to be processed to comply with the limit.

So then the equivalent warehouse emissions from processing these beads would be: 16,360*0.0183 = 300 tpy. Annual testing of the warehouse loss after 30 days of storage has shown the warehouse emissions to be 240 tpy.

Dart's corporate office supplied the percentage of pentane loss from a 30-day storage hold time. The pentane loss is approximately 1.83% over the 30 days. Actual testing of the cups has shown this loss to be around 1.47% over 30 days of product aging. There is a condition in this permit that will require the facility to do site specific testing and this calculation can be revisited if the loss amount varies greatly from this value.

So the new, facility-wide limit will be 213+300 = 513 tpy VOC. Testing has shown potential emissions to be around 453 tpy.

B. Applicable Rules and Regulations

Not applicable.

C. Compliance Status

Not applicable.

D. Permit Conditions

Condition 2.1.1 states the 513 tpy VOC limit for the entire facility, excluding the compression densifier. This condition remains from the initial Title V permit and the renewal Title V permit.

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**	**Corresponding Permit Conditions**	**ID No.**	**Description**
BLR1	600 HP Steam Boiler Natural gas/ Fuel oil (backup), 25.1 MMBTU/hr	391-3-1-.02(2)(d)(2) 391-3-1-02(2)(g) 391-3-1-.02(2)(rrr) 40 CFR 63 Subpart JJJJJJ 40 CFR 63 Subpart A	3.2.1, 3.3.1, 3.4.1, 3.4.3, 3.4.5, 3.4.6, 3.4.10, 3.5.1, 5.2.2, 5.2.4, 5.2.6, 5.2.9, 6.1.7, 6.2.1, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10, 6.2.11, 6.2.12	None	None
BLR2	600 HP Steam Boiler Natural gas/ Fuel oil (backup), 25.1 MMBTU/hr	391-3-1-.02(2)(d)(1) 391-3-1-02(2)(g) 391-3-1-.02(2)(rrr) 40 CFR 63 Subpart JJJJJJ 40 CFR 63 Subpart A	3.2.1, 3.3.1, 3.4.2, 3.4.3, 3.4.4, 3.4.6, 3.4.10, 3.5.1, 5.2.2, 5.2.4, 5.2.6, 5.2.9, 6.1.7, 6.2.1, 6.2.6, 6.2.7, , 6.2.8, 6.2.9, 6.2.10, 6.2.11, 6.2.12	None	None
BLR3	600 HP Steam Boiler Natural gas/ Fuel oil (backup), 25.1 MMBTU/hr	391-3-1-.02(2)(d)(1) 391-3-1-02(2)(g) 391-3-1-.02(2)(rrr) 40 CFR 63 Subpart JJJJJJ 40 CFR 63 Subpart A	3.2.1, 3.3.1, 3.4.2, 3.4.3, 3.4.4, 3.4.6, 3.4.10, 3.5.1, 5.2.2, 5.2.4, 5.2.6, 5.2.9, 6.1.7, 6.2.1, 6.2.6, 6.2.7, , 6.2.8, 6.2.9, 6.2.10, 6.2.11, 6.2.12	None	None
BLR4	600 HP Steam Boiler Natural gas/ Fuel oil (backup), 25.1 MMBTU/hr	391-3-1-.02(2)(d)(2) 391-3-1-02(2)(g) 391-3-1-.02(2)(rrr) 40 CFR 63 Subpart JJJJJJ 40 CFR 63 Subpart A	3.2.1, 3.3.1, 3.4.3, 3.4.5, 3.4.6, 3.4.10, 3.5.1, 5.2.2, 5.2.4, 5.2.6, 5.2.9, 6.1.7, 6.2.1, 6.2.6, 6.2.7, , 6.2.8, 6.2.9, 6.2.10, 6.2.11, 6.2.12	None	None
PRE	16 EPS Pre-expanders	391-3-1-.02(2)(b) 391-3-1-.02(2)(eee) 391-3-1-.02(2)(e)	2.2.1, 3.4.1, 3.4.2, 3.4.7, 3.5.1, 4.2.1, 5.2.1, 5.2.2, 5.2.4, 5.2.5, 5.2.7, 5.2.8, 6.1.7, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6,	BLR1-BLR4	Boilers 1-4
SCD	Two Scrap Cup Densifiers	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.2.2, 3.4.2, 3.4.7	None	None
PC01	Parts Cleaner – Printing Area using wipes/rags	391-3-1-.02(2)(b) 391-3-1-.02(2)(ff)	2.2.1, 3.4.2, 3.4.8, 5.2.3, 6.2.3, 6.2.5, 6.2.6,	None	None
CC01	Parts Cleaner - Production Area	391-3-1-.02(2)(b) 391-3-1-.02(2)(ff)	2.2.1, 3.4.2, 3.4.8, 5.2.3, 6.2.3, 6.2.5, 6.2.6,	None	None
CC02	Print Cleaner – Production Maintenance	391-3-1-.02(2)(b) 391-3-1-.02(2)(ff)	2.2.1, 3.4.2, 3.4.8, 5.2.3, 6.2.3, 6.2.5, 6.2.6	None	None
ST01	20,000 gal No. 2 Fuel Oil Storage Tank (UGST) & fueling equipment	391-3-1-.02(2)(vv)	3.4.9	None	None
ST02	30,000 gal No. 2 Fuel Oil Storage Tank (UGST)	391-3-1-.02(2)(vv)	3.4.9	None	None
WH	Warehouse storage of finished containers (fugitive off gasing)	391-3-1-.02(2)(n)	8.22.1 and 8.22.12	*None*	*None*

Note: The warehouse storing finished foam containers is listed in the emission unit table as VOC emissions from the warehouse has been estimated at around 300 tons per year. The emissions occur inside the warehouse from the stored product and are handled by the facilities ventilation system.

The parts Cleaner CC01, the Print Cleaner CC02, the storage tanks ST01 and ST02 continue to be listed despite being insignificant emission sources based on emission levels since these are subject to VOC RACT requirements of Georgia Rule (ff) and (vv) since the facility is located in an Ozone non-attainment area.

B. Equipment & Rule Applicability

Emission and Operating Caps:

There is a 49 tpy NOx limit for the four boilers at the facility. This limit was originally a NSR major source avoidance limit for NOx emissions. However, since this facility is subject to the lower NSR major applicability cutoff due to non-attainment designation changes and the new RACT threshold of 25-tpy DART elected to become a NSR major source for NOx.

The VOC emissions from the densifier are separate from the facility-wide limit and the increase in emissions from the densifier was evaluated for NSR purposes. The densifier grinds the scrap material in a closed environment, so there are no particulate emissions. The VOC emissions result from the release of the residual pentane in the scrap. Scrap created internally will be generated after the molders and will assume to have 3% pentane content that will be lost in densifying. The facility also receives post-consumer EPS scrap to send to the densifier. The pentane content for this scrap is assumed to be 1.4%. This is a reasonable and conservative assumption based on Dart's own pentane loss calculations; assuming an original 5.5% pentane bead and a 2.48% loss from expansion and molding and a 1.83% loss from warehouse storage give a final content of 1.19%.

The densifier is designed to processes 350 lbs per hour. Assuming worst case, the densifier is completely used for internally created material only (at 3% pentane), the VOC potential emissions increase would be approximately 46 tpy. This is above the 25 tpy threshold as a signification modification that would trigger a NAA-NSR review. To avoid undergoing this review, the facility requested a throughput limit of 70,000 lbs/month for the hot melt densifiers. However, the Permittee installed a compression densifier that has much lower pentane/VOC emissions compared to the hot melt densifier. Therefore, the facility can now process 133,000 lbs/month in the compression densifier without increase in the currently permitted VOC/pentane emissions for the hot melt densifier. The facility may not process more than 133,000 pounds of internal scrap material from the molders and post-consumer scrap per month in the scrap cup compression densifiers (CD). This equates to approximately 12.6 tpy of VOC from the compression densifier for internal EPS scrap cups and post-consumer scarp..

In this permit application DART requested an increase in the amount that can be processed through the compression densifier without an increase in the currently allowed/permitted VOC/pentane emissions. The application also stated that 133,000 lbs/month of EPS scrap can be processed through the densifier while staying below the currently allowed 9.36 tpy permit emission limit for internal EPS scrap cups. The Lithonia facility is currently limited to a total of 70,000 lbs/month total internal and post-consumer EPS scarp to be processed through the densifier based on use of higher emitting hot melt densifier. The currently installed compression densifier grinds and squeezes the EPS foam to compress it releasing much less VOC emission during the densification process since the EPS scrap is not heated during the densification.

Total VOC emissions allowed/permitted from the two densifiers is 11.22 tpy (9.36 tpy from the internal compression densifier and 1.86 tpy from post-consumer compression densifier).

Testing in Fall 2017 showed the compression densifier emission factor to be 1.17% based on testing that showed 2.22% VOC content in fresh cup average and 1.05% VOC content in compressed scrap. The requested limit of 133,000 lbs/month comes from the currently allowed VOC emission limit of 9.36 tpy divided by the compression densifier VOC emission factor of 1.17% . Potential VOC emissions from the compression densifier is 61.5 tpy.

Rules and Regulations Assessment:

40 CFR 63 Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial and Institutional Boilers"
The facility is a minor source for HAP emissions and is not subject to any major source MACT standards. However, as a minor source of HAP emissions, the facility is subject to Area Source GACT standards. The boilers at this facility are subject to this regulation. These boilers will burn natural gas a majority of the time, but the facility does not wish to limit fuel oil consumption to avoid being subject to this regulation. Boilers 1 – 4 are 600 HP boilers which equates to approximately 25.1 MMBtu/hr. For boilers of this size that will burn natural gas and no. 2 fuel oil, there are no emission standards in the regulation that apply. The energy audit requirement is for boilers greater than 10 MMBtu/hr. The other requirement that is applicable is the work practice standard, Item 4. in Table 2 of Subpart JJJJJJ, of conducting an initial tune up and additional tune-ups every 2 years.

Georgia Rule 391-3-1-.02(2)(eee), "VOC Emissions from Expanded Polystyrene Products Manufacturing"

EPS Container Manufacturing Process including the pre-expanders and cup molding processes are subject to this rule which limits emissions of VOC from the cup molding process and warehouse to 0.015 lbs VOC/lb bead utilized. Additionally, volatile organic compound emission reduction equipment (the four boilers) on the pre-expanders must have at least a 90 percent reduction efficiency. The VOC destruction efficiency of boilers has been established to be around 97%. The capture efficiency of the VOC collection system is around 50%.

Georgia Rule 391-3-1-.02(2)(b)1, "Visible Emissions"
Most of the process emission units other than the four boilers listed in the emission unit table in the permit are subject to Georgia Rule 391-3-1-.02(2)(b) because it applies to all sources that are subject to at least one other emission limitation and not subject to any other, more stringent, opacity standard prohibits emissions from any air contaminant source the opacity of which is equal to or greater than forty (40) percent.

Georgia Rule 391-3-1-.02(2)(d), "Fuel-burning Equipment"
Boilers BLR1 through BLR4 are subject to Georgia Rule 391-3-1-.02(2)(d). The Rule limits opacity to 20 percent opacity, except for one six minute period per hour of not more than 27 percent opacity. Boilers BLR1 & BLR4 were constructed after 1972 (in 1986 & 1974, respectfully). The maximum heat input value for each boiler is 25.1 MMBTU/hr. The particulate emissions from these boilers are limited according to 391-3-1-.02(2)(d)2(ii).

Boilers BLR2 & BLR3 were constructed before 1972 (in 1967 & 1970, respectfully). The maximum heat input value for each boiler is 25.1 MMBTU/hr. The particulate emissions from these boilers are limited according to 391-3-1-.02(20(d)1(ii).

Georgia Rule 391-3-1-.02(2)(g), "Sulfur Dioxide"
Boilers BLR1, BLR2, BLR3, and BLR4 are subject this Rule, which limits the rate of emissions of sulfur dioxide by not allowing the boilers to burn fuel containing more than 2.5 percent sulfur, by weight. Natural gas has negligible sulfur content. The backup fuel oil used in the boiler is a ultra low sulfur diesel fuel. Therefore, all fuel fired in the boilers will comply with the 2.5% sulfur content limit per Georgia Rule (g).

Georgia Rule 391-3-1-.02(2)(e), "Particulate Emission from Manufacturing Processes"
EPS Container Manufacturing Process including the pre-expanders and the molding processes are subject to the particulate matter emission rate is limited to production rate as not to exceed the following; $E = 4.1P^{0.67}$ for the printing operations where E = Emission rate in pounds per hour P = Process input rate in tons per hour.

Georgia Rule 391-3-1-.02(2)(vv),"Volatile Organic Liquid Handling and Storage"
The facility has two underground storage tanks (UGST), a 20,000-gallon No. 2 Oil Storage Tank and a 30,000 gallon No. 2 Oil Storage Tank that are subject to this Rule. Georgia Rule 391-3-1-.02(2)(vv) requires submerged fill pipes on tanks that store volatile organic liquids and have a capacity that is greater than 4,000 gallons.

Georgia Rule 391-3-1-.02(2)(ff),"Solvent Metal Cleaning"
The Permittee has three solvent metal cleaning areas subject to this Rule. These areas include; Print Clean-up Emissions (solvents) (FUG2), Parts Cleaner-production Area (CC01), and Print Cleaner-production Maintenance (CC02). Non-VOC solvents are now used in the Parts Cleaner Production area and the Paint Cleaner production maintenance are. Therefore Georgia Rule (ff) does not apply to these two solvent cleaning areas. These two source are still left in the significant emission unit listing in Section 3.1 of the permit for reasons of operational flexibility.

Georgia Rule 391-3-1-.02(2)(rrr)

This facility is a major source for NOx under non-attainment NSR regulations, with emissions exceeding 25-tpy. Because this facility emits greater than 25-tpy of NOx, and is located in DeKalb County, it is subject to the requirements of Rule (yy) "Emissions of Nitrogen Oxides from Major Sources" which requires RACT. As an alternative to Rule (yy), the facility will comply with the requirements of Rule (rrr) "Nitrogen Oxide Emissions from Small Fuel Burning Equipment" which limits the boilers to burning natural gas, LPG, or propane during the calendar months of May through September of each year. The facility will also be permitted to continue to burn the pentane emissions generated from the pre-expansion process. Pentane is a cleaner fuel than natural gas because pentane lacks a nitrogen component, which is present in natural gas; therefore the emission of NOx as a result of the combustion of pentane is less than the emission of NOx from the combustion of natural gas. From a NOx generation point pentane is a preferred fuel compared to natural gas.

C. Permit Conditions

All conditions in this section remain the same from the previous Title V Permit 3086-089-0224-V-03-0.

Condition 3.2.1 states the 49 tpy NOx limit for the four natural gas-fired boilers at the facility.

Condition 3.2.2 states the throughput limits of scrap processed in the scrap cup densifiers to less than 133,000 pounds per month of internal scrap and post-consumer scrap. This is to avoid NAA-NSR review for this project. The amount of the internal scrap amount and the post-consumer scrap amount has been combined in this permit amendment to give more operational flexibility to DART. It also streamlines and simplifies recordkeeping and reporting requirement for these two wastes. Previously the process limit for the scrap cup densifiers of 70,000 lbs was based on use of a hot melt densifier with a higher VOC(pentane) emission factor. The pentane emission factor for the compression scrap cup densifiers is much lower (1.17%) since high temperatures are not involved and since the densified foam still has pentane in it that will not be released to air in the facility warehouse. The low VOC emissions from the compression densifier has enabled processing more scrap cups (133,000 lbs/month) in the compression densifier compared to the amounts (70,000 lbs/month) that could be processed through the hot melt densifier without increase in the VOC emissions (9.36 tpy) from the densifier.

Condition 3.3.1 states that the boilers are the facility are subject to 40 CFR 63 Subpart JJJJJJ and Subpart A, as applicable.

Condition 3.4.1 states that the EPS manufacturing process is subject to Georgia Rule (eee). This condition requires that anytime the pre-expanders are operating, the emissions must be captured and routed to the boilers as control devices. The destruction efficiency of the boilers must be at least 90 percent.

Condition 3.4.2 states the opacity standard as required by Georgia Rule (b) for most of the sources at the facility except the four gas-fired boilers.

Condition 3.4.3 states the opacity standard for the four boilers as required by Georgia Rule (d).

Condition 3.4.4 states the particulate emission standard for boilers BLR1 and BLR4 as required by Georgia Rule (d)1(ii) based on their installation dates.

Condition 3.4.5 states the particulate emission standard for boilers BLR2 and BLR3 as required by Georgia Rule (d)2(ii) based on their installation dates.

Condition 3.4.6 states the sulfur content limit of less than 2.5% by weight sulfur, for fuel burned in the boilers, as stated in Georgia Rule (g).

Condition 3.4.7 states the particulate emissions limit as stated in Georgia Rule (e) for the EPS manufacturing process.

Condition 3.4.8 states the standards for solvent metal cleaning as required by Georgia Rule (ff). This applies to the parts cleaners and print cleaners. This condition is not applicable for non-VOC containing solvents.

Condition 3.4.9 requires storage tanks ST01 and ST02 to have submerged fill pipes as required by Georgia Rule (vv).

Condition No. 3.4.10 in the current permit required the facility to conduct an annual tune-up on all of the boilers subject to Georgia Rule (rrr). The tune-up must take place each year between February 1 and May 1. This condition has been moved to Section 5.2 as Condition 5.2.6 in the renewal permit.

Condition No. 3.4.11 prohibits the facility from firing any fuel other than natural gas, pentane, propane, or LPG during May through September.

This limit was established to help assure compliance with Georgia State Rule (rrr). In the event of natural gas curtailment, the Permittee is excused from this requirement and is authorized by State Rule (rrr) to combust alternative fuels. This condition has been renumbered as Condition 3.4.10 in the renewal permit.

Condition 3.5.1 in the current permit requiring that the facility to not introduce pentane into any one of the boilers if a flame is not present in that boiler is not included in the renewal permit since this condition is redundant as the control system for the pentane collection and distribution system will not send the pentane vapors to a boiler that is not in operation. This task is not done manually. The control system will not send pentane unless it detects a fire eye in the boiler.

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

Condition 4.2.1 requires the facility to test a product sample to determine the residual VOC content in the product after molding and after it has been in warehouse storage for 30 days during the months of July or August each year. These tests are to validate the emission factors the facility uses to calculate emissions from the process. Once the tests show consistent results and that the emissions factors are representative of the site specific process, the testing is no longer necessary. The facility may petition the Division to discontinue the tests.

Warehouse emissions are to be counted in the facility wide totals.

Condition 4.2.2 requires the facility to conduct destruction efficiency tests on the boilers as control devices, every 5 years.

During these tests the facility will document the combustion temperature, and the exhaust duct pressure associated with the destruction efficiency determined during testing. These tests should show at least a 95% destruction efficiency.

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

Condition 5.2.1 states the requirement for monitoring the boilers as control equipment for the pre-expanders. The facility monitors the duct pressure, the VOC concentration in the duct before the boilers, and the vent position to ensure that the emissions are being routed to the boilers for destruction. These are monitored continuously by the Pentane monitoring system.

Condition 5.2.2 states that the facility will conduct an inspection of the boiler system to check for leaks. This will ensure good capture efficiency for the boilers as VOC control equipment.

Condition 5.2.3 requires weekly inspection of the solvent metal cleaning equipment for VOC containing solvent.

Condition 5.2.4 states that the facility will conduct a check of the boiler at startup and shutdown to ensure that VOC emissions are not being routed to the boilers when no flame is present. This is also done automatically by the pentane control system. The valves in the pentane header duct will not open unless the fire eye detects a flame in the boiler. This condition is redundant.

Condition 5.2.5 the facility to check the pentane recovery system control panel once per operating shift to ensure that pentane emissions are not being introduced into any boiler which is not in operation. This is also done automatically by the pentane collection and control system.

Condition No. 5.2.6 specifies the procedures the facility must to properly perform the annual boiler tune-up required by Condition No. 3.4.10.

Condition 5.2.7 states that the EPS process line, Emission Unit PRE, is subject to CAM since there is a VOC limit and a control device (boilers) is used to meet the limit.

Condition 5.2.8 states the requirement of CAM for the boilers as control devices. The monitoring frequency has been increased from once daily to once per operating shift. This is in order to better ensure operation of the boilers as control devices and more quickly identify any issues that may occur. The boiler stack temperature are continuously monitored and logged by the boiler control system.

Condition 5.2.9 in the current permit requiring DART to perform an initial tune-up as stated in 40 CFR 63, Subpart JJJJJJ, no later than March 21, 2014 is not included in the renewal permit since the initial tune-up has already been performed by the compliance deadline.

Condition 5.2.9 states that the facility will perform tune-ups on the boilers every 2 years as required by 40 CFR 63, Subpart JJJJJJ.

Condition 5.2.11 in the current permit required the facility to perform a one-time energy assessment of the boilers. This is required by 40 CFR 63 Subpart JJJJJJ, Table 2, Item 14. This requirement has been satisfied by DART and this condition is not included in the Title V permit renewal.

C. Compliance Assurance Monitoring (CAM)

The emission unit group PRE (16 EPS pre expanders) is subject to CAM for VOC emissions. VOCs from the pre-expanders are controlled by Boilers 1 – 4 and are subject to the emission limits of Georgia Rule 391-3-1-.02(2)(eee). There is also a facility wide VOC emission limit.

Uncontrolled emissions from the pre-expanders were estimated by modifying the equation in the Title V Permit by removing the influence of the capture system and destruction efficiency and the cleanup solvent emissions. This shows approximately 54 tons per year of VOC emissions from each pre-expander. The destruction efficiency of the boilers is assumed to be 95%, as stated in the permit. The post-controlled VOC emissions from each pre-expander are approximately 2.7 tons per year, and therefore a small PSEU.

A small PSEU does not require continuous monitoring, hence the daily temperature checks required for the Boilers 1 – 4. However, this is too long a time period to determine if any exceedances have occurred and been corrected. This has been changed to once per operating shift, leaving an exceedances as 2 readings more than 50 degrees outside the temperature range. The boiler control system monitors the operating parameters continuously and alerts for boiler temperature excursions.

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.

B. Specific Record Keeping and Reporting Requirements

Condition 6.2.1 requires the facility to maintain boiler records of fuel type burned in each boiler and monthly NOx emissions calculated for each boiler.

Condition 6.2.2 requires that the facility keep monthly records of the amount of EPS beads and the pentane content used in the EPS process. The usage records are used to calculate facility-wide VOC emissions (excluding the compression densifier) in Condition 6.2.5. The pentane content will be kept to support the emission factors used in the facility-wide calculations and to show that the pentane content doesn't vary significantly and change the emissions factors.

Condition 6.2.3 requires that the facility keep records of the amount of VOC containing cleanup solvent used at the facility. The VOC emissions from the solvent are counted in the facility-wide VOC emission limit and part of the calculation in Condition 6.2.5.

Condition 6.2.4 requires the facility to keep records of the monthly amount of internal scrap and the post-consumer scrap that is processed in the hot-melt densifier.

The monthly amount of internal scrap and the post-consumer scrap is not to exceed 133,000 pounds. For operational flexibility the amount of the internal scrap and the post-consumer scrap is being combined in the renewed permit.

Condition 6.2.5 requires the facility to calculate the monthly facility-wide VOC emissions, excluding those from the compression densifier. These emissions include the emissions from the EPS process, any solvent usage and the warehouse emissions from stored product. The equation uses emission factors and not test values. The emission factors allow for simpler calculations and recordkeeping and are conservative values to be representative of the facility emissions. The testing validates the emission factors.

Condition 6.2.6 requires the facility calculate the consecutive 12-month total for the facility-wide VOC emissions using the monthly emissions calculated in Condition 6.2.5.

Condition 6.2.7 requires the facility to maintain fuel oil records.

Condition 6.2.8 requires the facility perform boiler tune-ups as required in Condition 5.2.6 as a requirement of Georgia Rule (rrr).

Condition No. 6.2.9 details the documents required to prove compliance with the annual tune-up requirement of 40 CFR 63 Subpart JJJJJJ.

Condition 6.2.10 requires the facility to maintain a copy of the report from the one-time energy assessment.

Condition 6.2.11 requires the facility to keep records of any boiler malfunctions and any corrective actions taken.

Existing Condition 6.2.12 required the facility to submit an Initial Notification for 40 CFR 63 Subpart JJJJJJ by January 20, 2014. This condition has been complied with and is not included in the renewed permit.

Existing Condition 6.2.13 required the facility submit a Notification of Compliance Status for 40 CFR 63 Subpart JJJJJJ no later than 120 days after March 21, 2014. This condition has also been complied with and is not included in the renewal permit.

Condition 6.2.12 requires that the facility prepare a Compliance report for 40 CFR 63 Subpart JJJJJJ by March 1 of each year and submit it upon request, stating that the biennial boiler tune-have been done.

VII. Specific Requirements

A. Operational Flexibility

Not Applicable

B. Alternative Requirements

Not Applicable

C. Insignificant Activities

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

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

Not Applicable

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

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//