



MAR 30 2010

Ron Crookham
Dart Container Corporation
1400 E Victor Road
Lodi, CA 95240

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # N-257
Project # N-1093342**

Dear Mr. Crookham:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project is to modify the existing expandable polystyrene processing operation to comply with the applicable requirements of District Rule 4682 - Polystyrene, Polyethylene, and Polypropylene Products Manufacturing (9/20/07).

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Rupri Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: JK/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
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MAR 30 2010

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # N-257
Project # N-1093342**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Dart Container Corporation, located at 1400 E Victor Road, Lodi, California, which has been issued a Title V permit. Dart Container Corporation is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project is to modify the existing expandable polystyrene processing operation to comply with the applicable requirements of District Rule 4682 - Polystyrene, Polyethylene, and Polypropylene Products Manufacturing (9/20/07).

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # N-257-2-4 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
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San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review

Facility Name:	Dart Container Corporation	Date:	March 24, 2010
Mailing Address:	1400 E Victor Road Lodi, CA 95240	Engineer:	Jagmeet Kahlon
Contact Person:	Ron Crookham	Lead Engineer:	Nick Peirce
Telephone:	(209) 333-8088 ext. 5202		
Application #(s):	N-257-2-4		
Project #:	N1093342		
Deemed Complete:	October 15, 2009		

I. PROPOSAL

Dart Container Corporation (Dart) submitted a permit application to modify the expandable polystyrene (EPS) processing operation to comply with the "total product emissions" limit of 2.4% (by weight) of Rule 4682 - Polystyrene, Polyethylene, and Polypropylene Products Manufacturing (9/20/07). The proposed changes to the EPS processing operation include the following items:

- Install a permanent total enclosure (PTE) around the existing raw bead dumping operation and vent the enclosure to the existing vapor recovery system. The enclosure will follow the PTE criteria in Section 6 of EPA Method 204.
- Install a new bead handling system to process ultra-low pentane beads, containing 3.4% (or less) pentane by weight.

The new bead handling system includes a bead dumping operation transferring raw beads into a hopper, enclosed augers transferring beads from the hopper to a holding tank, and from the holding tank to the feeders and weigh bins for Hirsch pre-expanders.

The bead dumping operation will be conducted inside a PTE that will meet PTE criteria in Section 6 of EPA Method 204. The bead transferring augers, product holding tanks, new feeders and weigh bins will all be enclosed and designed to meet PTE criteria given in Section 6 of EPA Method for 100% capture. These units will be vented to the existing vapor recovery system.

- Install two Hirsch top-fed "batch" pre-expanders to pre-puff the ultra-low pentane beads. This installation is necessary since the existing "continuously" fed Rodman pre-expanders are unable to pre-puff the ultra-low pentane beads to the required specifications, and therefore, they have to use Hirsch pre-expanders.

The pentane from each Hirsh pre-expander chamber vent and delumper system (i.e. bottom part to which pre-puff is discharged) will be vented to the existing vapor recovery system.

The facility has proposed to use two bladder bags, made of hypalon (chlorosulfonated polyethylene), to collect the pentane from each Hirsch pre-expander's chamber vent. These bags will be connected to the existing vapor recovery system.

The delumper system will be designed to meet PTE criteria given in Section 6 of EPA Method 204 for 100% capture, and the system will be vented to the existing vapor recovery system.

- Dart wants to retain capability to use regular pentane beads, containing 5.4% (or less) pentane by weight, only for manufacturing products for which vendor product specifications are unable to meet using ultra-low pentane beads.

The existing cascade dryers will be re-designed to meet PTE criteria given in Section 6 of EPA Method 204 for 100% capture, and these units will be vented to an existing vapor recovery system.

- Consolidate EPS beads dumping/conveying, pre-expansion and molding operation permits into one permit for the entire polystyrene container manufacturing operation. This request is based on the fact that their manufacturing operation is a continuous operation and there is no intermittent product storage, and the processes cannot be carried out independently, that is, EPS beads must be conveyed to the pre-expanders to pre-puff, and the pre-puff beads must be conveyed to the molding machines to make cups.

The vapor recovery system (mentioned above) will be vented to the boilers permitted under N-257-4 and N-257-5. Dart expects that the boilers are capable of handling all the airflow from the vapor recovery system. If the boilers' combustion air needs are lower than the airflow required to ensure 100% capture, then the company will submit another ATC application to install a Regenerative Thermal Oxidizer (RTO), or an alternative destruction/control device that is big enough to handle the laden air stream from the vapor recovery system.

This facility is a Major Source of VOC emissions and possesses a Title V permit. They have requested to process the project with Certificate of Conformity (COC), which is EPA's 45-day review of the permits prior to the issuance of final ATC. The proposed project is considered a "Minor Modification" to the Title V permit since the applicant is not proposing to relax the existing source testing, monitoring, recordkeeping and reporting requirements.

II. APPLICABLE RULES

- Rule 2201 New and Modified Stationary Source Review Rule (9/21/06)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 4001 New Source Performance Standards (4/14/99)
- Rule 4101 Visible Emissions (02/17/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4682 Polystyrene, Polyethylene, and Polypropylene Products Manufacturing (9/20/07)

California Health & Safety Code 41700 (Public Nuisance)

California Health & Safety Code 42301.6 (School Notice)

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)

California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

This facility is located at 1400 E Victor Road, Lodi, California. There is no K-12 school within 1,000 feet of this address. Therefore, school noticing requirements per California Health and Safety Code 42301.6 are not triggered.

IV. PROCESS DESCRIPTION

EPS manufacturing process starts with spherical polystyrene beads that have pentane blowing agent encapsulated inside them. The beads are brought into the plant in 1,000-pound gaylord bins or 2,000 pound bulk bags, a tube is inserted by making a small hole in the bead bag to capture the pentane inside the bag, the bag is then emptied into an open-top transfer bin (on the ground) using a dumper system. An auger transfers the beads from the transfer bin to the top of the holding tank, 4 feet above the ground. From the holding bin, the beads are conveyed to the blender where they are evenly mixed and then gravity fed to the feed hoppers for distribution to pre-expanders. In pre-expanders, steam and air is used to vaporize the pentane within the beads to create cells of EPS that expand to a pre-determined density. The expanded beads, (referred as pre-puff) are collected in the collector and cascade dryer system. The pre-puff beads are then transferred pneumatically to shaker screens and passed through a density control check, before being pneumatically delivered to four fabric bags that are hanging from the ceiling of the building. The pre-puff from these bags are then conveyed to ten fabric bags, one for each molding line, to feed the molding machines. Once the pressure within the pre-puff cells stabilizes, the pre-puff is fed to steam chest molders, that is, cup making machines, where steam and cooling (with water) is applied. The molded product is then released using air. The product is inspected, printed with UV ink, and packaged such that it would off-gas the emissions in a warehouse.

V. EQUIPMENT LISTING:

Pre-Project Equipment Description:

N-257-1-1

POLYSTYRENE PELLET DUMPING; FEED HOPPER; FEED CONVEYOR; BLENDING SYSTEM

N-257-2-1

PRE-EXPANSION SYSTEM WITH ASSOCIATED CONVEYING SYSTEM, PENTANE COLLECTION SYSTEM SERVED BY A CYCLONE SEPARATOR.

N-257-3-1

EXPANSION MOLDING SYSTEM

Post-Project Equipment Description:

N-257-2-4

EXPANDABLE POLYSTYRENE (EPS) PROCESSING OPERATION: ENCLOSED BEAD DUMPING OPERATION CONSISTING OF A HOPPER AND DUMPER SYSTEM, ONE HOLDING TANK AND ONE BLENDER, FOUR RODMAN PRE-EXPANDERS WITH CASCADE DRYERS ALL VENTED TO THE VAPOR RECOVERY SYSTEM; ENCLOSED BEAD DUMPING OPERATION CONSISTING OF A HOPPER AND DUMPER SYSTEM, ONE HOLDING TANK, TWO FEEDERS, TWO FEED/WEIGH BINS, TWO HIRSCH PRE-EXPANDERS WITH VENTS AND DELUMPERS, AND TWO BLADDER TANKS ALL VENTED TO THE VAPOR RECOVERY SYSTEM; AND EIGHTY-SEVEN MOLDING MACHINES. THE VAPOR RECOVERY SYSTEM WITH AN IN-LINE CYCLONE SEPARATOR IS VENTED TO THE BOILERS PERMITTED UNDER N-257-4 AND N-257-5.

VI. EMISSION CONTROL TECHNOLOGY EVALUATION:

The vapor recovery system is connected to the boilers operating under permits N-257-4 and N-257-5. These boilers are capable of achieving at least 95% destruction efficiency.

VII. CALCULATIONS:

A. Assumptions:

- All VOCs are pentane.
- 100% capture is proposed for all the emissions points up to and including the pre-expansion process.

- "Manufacturing" emissions are defined as the emissions from bead handling, pre-puffing, and molding processes. Emissions from the finished product storage/aging are not included because the facility maintains a separate permit (N-257-6) for this operation.
- "Total Product" emissions are the same as defined in Section 5.3.1 of Rule 4682.
- Other assumptions will be stated as they are made.

B. Emission Factors (EFs):

1. Pre-Project Emission Factors (EF1):

N-257-1-1: Raw Bead Handling System

N-257-2-1: Pre-expansion System

N-257-3-1: Expansion Molding System

The pentane content in "regular" pentane beads is 5.4% (by weight) or less. Dart states that 1.2% (by weight) pentane is recovered from bead handling and pre-expansion systems and incinerated in the boilers capable of achieving at least 95% destruction efficiency. The average pentane content of the molded cups is 3.2% (by weight). Further, the average pentane content in the shipped product is 1.4% (by weight) after a 30-day storage period. Using this information, Manufacturing and Total Product emissions are as follows:

"Regular" Pentane Bead Processing:

$$\begin{aligned} \text{EF1}_{\text{Manufacturing}} &= (5.4 - 3.2) - (1.2 \times 0.95) \\ &= 1.1\% \end{aligned}$$

$$\begin{aligned} \text{EF1}_{\text{Total Product}} &= (5.4 - 1.4) - (1.2 \times 0.95) \\ &= 2.9\% \end{aligned}$$

2. Post-Project Emission Factors (EF2):

N-257-2-4: EPS Manufacturing Operation

Two types of beads, "regular" pentane beads or "ultra-low pentane", may be utilized at this facility. The emission factor for Manufacturing and the Total Product emissions using regular pentane beads would be same as pre-project emissions determined above. Thus,

"Regular" Pentane Bead Processing:

$$\begin{aligned} \text{EF1}_{\text{Manufacturing}} &= (5.4 - 3.2) - (1.2 \times 0.95) \\ &= 1.1\% \end{aligned}$$

$$\begin{aligned} \text{EF1}_{\text{Total Product}} &= (5.4 - 1.4) - (1.2 \times 0.95) \\ &= 2.9\% \end{aligned}$$

To comply with Rule 4682 Total Product emissions limit, Dart proposes to use ultra-low pentane beads. The pentane content of these beads is 3.4% or less (by weight). A test conducted by the facility indicates that the pre-puff material exits the pre-expanders contains 2.2% (by weight) pentane, in other words, 1.2% (by weight) is recovered from bead handling and pre-expansion systems and incinerated in the boilers capable of achieving at least 95% destruction efficiency. The average pentane content of the molded cups is 1.8% (by weight). Further, the average VOC content in the shipped product is expected to be 0.6% (by weight) after a 30-day storage period. Using this information, Manufacturing and Total Product emissions are as follows:

"Ultra-low" Pentane Bead Processing:

$$\begin{aligned} \text{EF1}_{\text{Manufacturing}} &= (3.4 - 1.8) - (1.2 \times 0.95) \\ &= 0.5\% \end{aligned}$$

$$\begin{aligned} \text{EF1}_{\text{Total Product}} &= (3.4 - 0.6) - (1.2 \times 0.95) \\ &= 1.7\% \end{aligned}$$

C. Calculations:

1. Pre-Project Potential to Emit (PE1):

N-257-1-1: Raw Bead Handling System

N-257-2-1: Pre-expansion System

N-257-3-1: Expansion Molding System

"Regular" Pentane Bead Processing:

The existing permits limits facility's processing rate to 28,774 pounds of EPS per day. Therefore,

$$\text{PE1}_{\text{Manufacturing}} = \left(\frac{1.1 \text{ lb - VOC}}{100 \text{ lb - Product}} \right) \left(28,774 \frac{\text{lb - Product}}{\text{day}} \right) = 316.5 \frac{\text{lb - VOC}}{\text{day}}$$

$$\text{PE1}_{\text{Total Product}} = \left(\frac{2.9 \text{ lb - VOC}}{100 \text{ lb - Product}} \right) \left(28,774 \frac{\text{lb - Product}}{\text{day}} \right) = 834.4 \frac{\text{lb - VOC}}{\text{day}}$$

Using worst-case operating scenario of 365 days a year, the annual emissions would be:

$$\begin{aligned} \text{PE1}_{\text{Manufacturing}} &= 316.5 \text{ lb-VOC/day} \times 365 \text{ days/yr} \\ &= 115,523 \text{ lb-VOC/yr} \end{aligned}$$

$$\begin{aligned} PE1_{\text{Total Product}} &= 834.4 \text{ lb-VOC/yr} \times 365 \text{ days/yr} \\ &= 304,556 \text{ lb-VOC/yr} \end{aligned}$$

Note: Manufacturing emissions are limited to 247 lb-VOC/day. The facility appears to be operating in compliance with the requirements of this limit. This fact is based on review of the CEMS data from August 1, 2009 to August 20, 2009.

$$\begin{aligned} PE1_{\text{Manufacturing}} &= 247 \text{ lb-VOC/day} \times 365 \text{ days/yr} \\ &= 90,155 \text{ lb-VOC/yr} \end{aligned}$$

Summary:

$$PE1_{\text{Manufacturing, Total}} = 247.0 \text{ lb-VOC/day}$$

$$PE1_{\text{Total Product, Total}} = 90,155 \text{ lb-VOC/yr}$$

2. Post Project Potential to Emit (PE2):

N-257-2-4: EPS Manufacturing Operation
"Regular" Pentane Bead Processing:

The maximum "regular" pentane bead processing rate would be 2,877 lb/day (10% of 28,774 lb/day). Thus,

$$PE2_{\text{Manufacturing}} = \left(\frac{1.1 \text{ lb - VOC}}{100 \text{ lb - Product}} \right) \left(2,877 \frac{\text{lb - Product}}{\text{day}} \right) = 31.6 \frac{\text{lb - VOC}}{\text{day}}$$

$$PE2_{\text{Total Product}} = \left(\frac{2.9 \text{ lb - VOC}}{100 \text{ lb - Product}} \right) \left(2,877 \frac{\text{lb - Product}}{\text{day}} \right) = 83.4 \frac{\text{lb - VOC}}{\text{day}}$$

Using worst-case operating scenario of 365 days a year, the annual emissions would be:

$$\begin{aligned} PE2_{\text{Manufacturing}} &= 31.6 \text{ lb-VOC/day} \times 365 \text{ days/yr} \\ &= 11,534 \text{ lb-VOC/yr} \end{aligned}$$

$$\begin{aligned} PE2_{\text{Total Product}} &= 83.4 \text{ lb-VOC/yr} \times 365 \text{ days/yr} \\ &= 30,441 \text{ lb-VOC/yr} \end{aligned}$$

"Ultra-low" Pentane Bead Processing:

Two Hirsch pre-expanders will be used to process ultra-low pentane beads. Dart states that the maximum processing rate to one of these pre-expanders could be 19,423 pounds of product per day. Thus,

$$PE2_{\text{Manufacturing, one pre-expander}} = \left(\frac{0.5 \text{ lb - VOC}}{100 \text{ lb - Product}} \right) \left(19,423 \frac{\text{lb - Product}}{\text{day}} \right) = 97.1 \frac{\text{lb - VOC}}{\text{day}}$$

The "ultra-low" pentane bead processing rate is expected to be 25,897 lb/day (28,774 lb/day - 2,877 lb/day). Therefore,

$$PE2_{\text{Manufacturing}} = \left(\frac{0.5 \text{ lb - VOC}}{100 \text{ lb - Product}} \right) \left(25,897 \frac{\text{lb - Product}}{\text{day}} \right) = 129.5 \frac{\text{lb - VOC}}{\text{day}}$$

$$PE2_{\text{Total Product}} = \left(\frac{1.7 \text{ lb - VOC}}{100 \text{ lb - Product}} \right) \left(25,897 \frac{\text{lb - Product}}{\text{day}} \right) = 440.2 \frac{\text{lb - VOC}}{\text{day}}$$

Using worst-case operating scenario of 365 days a year, the annual emissions would be:

$$PE2_{\text{Manufacturing}} = 129.5 \text{ lb-VOC/day} \times 365 \text{ days/yr} \\ = 47,268 \text{ lb-VOC/yr}$$

$$PE2_{\text{Total Product}} = 440.2 \text{ lb-VOC/yr} \times 365 \text{ days/yr} \\ = 160,673 \text{ lb-VOC/yr}$$

Summary:

$$PE2_{\text{Manufacturing, Total}} = PE2_{\text{Manufacturing, Regular}} + PE2_{\text{Manufacturing, Ultra-low}} \\ = 31.6 \text{ lb-VOC/day} + 129.5 \text{ lb-VOC/day} \\ = 161.1 \text{ lb-VOC/day}$$

$$PE2_{\text{Manufacturing, Total}} = PE2_{\text{Manufacturing, Regular}} + PE2_{\text{Manufacturing, Ultra-low}} \\ = 11,534 \text{ lb-VOC/yr} + 47,268 \text{ lb-VOC/yr} \\ = 58,802 \text{ lb-VOC/yr}$$

$$PE2_{\text{Total Product, Total}} = PE2_{\text{Total Product, Regular}} + PE2_{\text{Total Product, Ultra-low}} \\ = 83.4 \text{ lb-VOC/day} + 440.2 \text{ lb-VOC/day} \\ = 523.6 \text{ lb-VOC/day}$$

$$PE2_{\text{Total Product, Total}} = PE2_{\text{Total Product, Regular}} + PE2_{\text{Total Product, Ultra-low}} \\ = 30,441 \text{ lb-VOC/yr} + 160,673 \text{ lb-VOC/yr} \\ = 191,114 \text{ lb-VOC/yr}$$

3. Quarterly Emissions Changes (QEC)

QEC are determined to complete the emissions profile in District's Permit Administration System (PAS) database. For this project,

$$QEC_{\text{Manufacturing}} = (58,802 - 90,155) \text{ lb-VOC/yr} \div 4 \text{ quarters/yr}$$

$$= - 31,353 \text{ lb-VOC/yr} \div 4 \text{ quarters/yr}$$

$$= - 7,838.25 \text{ lb-VOC/quarter}$$

4. Adjusted increase in Permitted Emissions (AIPE) Calculations:

AIPE is used to determine if Best Available Control Technology (BACT) is required for emission units that are being modified.

The proposed project is exempt from BACT requirements since this project is to comply with District Rule 4682. Therefore, AIPE is not determined.

D. Facility Emissions:

1. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, SSPE1 is the Potential to Emit from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions (AERs) that have occurred at the source, and which have not been used on-site.

SSPE1 (lb/yr)		
Permit #	Description	VOC
N-257-1-1	EPS pellet dumping, conveying and blending operation	91,250 ¹
N-257-2-1	Pre-expansion system and pentane collection system	
N-257-3-1	Molding system	
N-257-4-4	14.65 MMBtu/hr gas-fired boiler	
N-257-5-5	29.3 MMBtu/hr gas-fired boiler	
N-257-6-1	Finished product warehouse	
ERC		0
Total		278,203
Major Source Thresholds		50,000
Major Source?		Yes

¹Permit N-257-0-1 limits facility-wide VOC emissions (excluding warehouse) to 250 lb/day. Using worst-case operating scenario of 365 days a year, annual emissions are 91,250 lb/year.

2. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/yr)		
Permit #	Description	VOC
N-257-2-4	Pre-expansion and molding operations with pentane recovery and control system	58,802
N-257-4-4	14.65 MMBtu/hr gas-fired boiler	539
N-257-5-5	29.3 MMBtu/hr gas-fired boiler	1,079
N-257-6-1	Finished product warehouse	186,953
ERC		0
Total		247,373
Major Source Thresholds		50,000
Major Source?		Yes

3. Stationary Source Increase in Permitted Emissions (SSIPE)

It is a District Practice to define the SSIPE as the difference of SSPE2 and SSPE1. Negative SSIPE values are equated to zero.

Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)
VOC	247,373	278,203	0

4. District Rule 2201 Major Modification

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, §4.1.3); and
- B. If a public notification is triggered (District Rule 2201, §5.4.1).

This facility is a Major Source for VOC emissions. In order to determine whether a Major Modification can be triggered, the Net Emissions Increase (NEI) is calculated and is compared with the Major Modification threshold limit of 50,000 lb/year.

NEI can be calculated as the sum of the difference of post-project potential emissions (PE2) and historical emissions (HE) for the emissions units involved in this project. Negative NEI is equated to zero.

$$NEI = \Sigma(PE2 - HE)$$

Processing Rate:

October 1, 2007 – September 30, 2008: 7,974,000 lb-EPS/year
 October 1, 2008 – September 30, 2009: 6,938,000 lb-EPS/year
 Average: 7,456,000 lb-EPS/year

Based on year 2007 and 2008 source test,

Year	Pentane (% by weight)		
	P1 ¹	P2 ²	P3 ³
2007	4.92	3.80	2.92
2008	5.19	4.04	2.96
Average	5.06	3.92	2.94

$$\begin{aligned} \text{Total VOC Loss} &= (\text{Process Rate lb-EPS/year})[(5.06-2.94)-(5.06-3.92)(0.999^4)]\% \\ &= (7,456,000 \text{ lb-EPS/year})(0.981 \text{ lb-VOC}/100 \text{ lb-EPS}) \\ &= 73,143 \text{ lb-VOC/year} \end{aligned}$$

Summary:

PE2 (lb-VOC/year)	HE (lb-VOC/year)	NEI = PE2 - HE (lb-VOC/year)
58,802	73,143	-14,341
Total:		-14,341

NEI is less than 50,000 lb-VOC/year. Therefore, the proposed project is not a Major Modification.

5. Federal Major Modification

The purpose of Federal Major Modification calculations is to determine the following:

- A. If a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions (District Rule 2201, §4.2.3.5); and
- B. If an Alternate Siting analysis must be performed (District Rule 2201, §4.15.1);
- C. If the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards; and
- D. If a public notification is triggered. (District Rule 2201, §5.4.1) Although the language in §5.4.1 states "Major Modifications", the District is taking a conservative approach by assuming this applies to both District Rule 2201 Major Modifications and Federal Major Modifications.

¹ Pentane content in raw beads (% by wt)

² Pentane content in pre-puff bead, after processed through the pre-expanders (% by wt)

³ Pentane content after molding cups (% by wt)

⁴ Boiler has demonstrated to reduce 99.9% of total hydrocarbons during the source test on March 25, 2008.

According to 40 CFR 51.165 section (a)(2)(ii)(C), significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (PAE, as defined in paragraph (a)(1)(xxviii) of this section) and the baseline actual emissions (BAE, as defined in paragraphs (a)(1)(xxxv)(A) and (B) of this section, as applicable), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (a)(1)(x) of this section).

$$SEI = \Sigma(PAE - BAE) > 50,000 \text{ lb/year}$$

Since the project is not a Major Modification, it cannot be a Federal Major Modification.

VIII. COMPLIANCE:

Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

Section 4.2.3 of Rule 2201 provides an exemption from BACT requirements. This section states the following:

4.2.3 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from Best Available Control Technology for all air pollutants, provided all of the following conditions are met:

4.2.3.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;

4.2.3.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;

4.2.3.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas;

4.2.3.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO_x , or 25 tons per year of VOC, or 15 tons per year of SO_x , or 15 tons per year of PM_{10} , or 50 tons per year of CO; and

4.2.3.5 The project shall not constitute a federal major modification.

The proposed project of modifying the vapor collection system and installing new Hirsch expanders is to comply with emission standards in the Rule 4682, and do not result in increase in the physical or operational design or permitted rating of the unit. There is no increase in permitted emissions for any affected pollutant for which National Ambient Air Quality Standard (NAAQS) exists at this time. Furthermore, the project does not constitute a federal major modification. Therefore, the proposed project is exempt from BACT requirements.

2. Offsets

Section 4.6.8 of Rule 2201 provides an exemption from offsets. This section states the following:

4.6.8 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from offset requirements for all air pollutants provided all of the following conditions are met:

4.6.8.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;

4.6.8.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;

4.6.8.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and

4.6.8.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO_x , or 25 tons per year of VOC, or 15 tons per year of SO_x , or 15 tons per year of PM-10, or 50 tons per year of CO.

The proposed project of modifying the vapor collection system and installing new Hirsch expanders is to comply with emission standards in the Rule 4682, and do not result in increase in the physical or operational design or permitted rating of the unit. There is no increase in permitted emissions for any affected pollutant for which National Ambient Air Quality Standard (NAAQS) exists at this time. Therefore, the proposed project is exempt from offset requirements.

3. Public Notice

District Rule 2201, section 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Major Modifications
- New emission units with a PE>100 lb/day of any one pollutant
- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant

New Major Sources:

This facility is not a new Major Source. Therefore, public noticing is not required under this section.

Major modifications:

Per section VII.D.4 and VII.D.5 of this document, the proposed project is not a Major Modification. Thus, public notice is not required under this section.

New emission units with a PE>100 lb/day of any one pollutant:

This facility will have two new Hirsch expanders. The potential emissions from each expander are less than 100 lb/day. Therefore, public notice is not required under this section.

Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis:

Per sections VII.D.1 and VII.D.2 of this document, facility's total VOC emissions are above the offset threshold level. Thus, public notice is not required under this section.

New stationary sources with SSPE2 exceeding Offset thresholds:

This facility is not a new stationary source. Therefore, this section is not applicable to this project.

Any permitting action with an SSIPE exceeding 20,000 lb/yr for any one pollutant:

Per section VII.D.3 of this document, SSIPE is not greater than 20,000 lb/yr. Thus, public notice is not required under this section.

Summary:

Public notice is not required.

4. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions. The following conditions will be placed on the permit:

- The Manufacturing VOC emissions shall not exceed 161.1 pounds in any one day. [District Rule 2201]

5. Compliance Assurance

Source Testing

Testing of Capture System:

Dart is required to conduct a source test, using a third party contractor, to verify that the following units meet the PTE criteria, listed in Section 6 of EPA Method 204.

- a. Existing bead dumping operation and the cascade dryers for Rodman pre-expanders.
- b. A new bead handling system.
- c. Hirsch pre-expander vents and the delumpers.

This testing is required to be completed within 120 days of initial startup under the permit.

There is no need to require periodic testing since the applicant has proposed to use handheld anemometer, on monthly basis, to measure average facial velocity (fpm) of natural draft openings for each permanent total enclosure. This monitoring will ensure that each enclosure is working properly.

Testing of EPS processed through Hirsch Pre-expanders:

Dart has proposed to determine pentane content in: (1) Raw beads (P1), (2) Pre-puff (P2) beads after the pre-expansion process, and (3) Finished product after molding (P3) to demonstrate compliance with the Manufacturing (161.1 lb-VOC/day) and Total Product emission limits (2.4%).

The proposed "initial test" sampling for "ultra low-pentane" product is formulated into the following condition:

For raw beads (P1): Dart will collect 6 samples from manufacturing lot #1, 6 samples from manufacturing lot #2, and 3 sample from manufacturing lot #3. An average of the test results would establish the value for P1.

For pre-puff (P2): Dart is expected to produce four different density products using Hirsch expanders. For each density product, they will collect 15 samples. An average of the test results would establish the value for P2.

For molded product (P3): Dart is expected to produce four density products using Hirsch expanders. For each density product, they will collect 3 samples. An average of the test results would establish the value for P3.

The proposed **"annual test"** for "ultra-low pentane" product is as follows:

For raw beads (P1): Dart has proposed to collect 3 samples from a bead box.

For pre-puff (P2): Dart has proposed to collect 3 samples for each density product produced using Hirsch expanders.

For molded product (P3): Dart has proposed to collect 3 samples for each density product.

The samples will be taken in the presence of the District Inspector, and sent to a third party lab for pentane content determination. The testing will be conducted using SCAQMD Method 306-91.

If P1, P2, or P3 determined during the annual test exceeds the established pentane content, Dart will follow the "initial test" sampling plan to re-establish the pentane content.

Testing of EPS processed through Rodman Pre-expanders:

The **"initial test"** sampling for "regular pentane" product:

Dart states that over the previous years, P1, P2 and P3 are established for the products processed through the Rodman pre-expanders. Furthermore, their process, or EPS materials have not changed; therefore, there is no need to conduct tests to determine P1, P2 and P3. Dart is allowed to use worst-case differences of P1 and P2 and P2 and P3 after four consecutive annual tests to determine compliance with the permit limits.

The initial test to establish P1, P2 and P3 is not required because they have already established these parameters.

The required **"annual test"** for "regular pentane" product is as follows:

For raw beads (P1): Dart is required to collect 3 samples from a bead box.

For pre-puff (P2): Dart is required to collect 3 samples for each density product produced using Rodman pre-expanders. Rodman pre-expanders are producing two density products.

For molded product (P3): Dart has proposed to collect 3 samples for each density product.

The samples will be taken in the presence of the District Inspector, and sent to a third party lab for pentane content determination. The testing will be conducted using SCAQMD Method 306-91. An average of the test results would establish the value for pentane content.

If P1, P2, or P3 determined during the annual test exceeds the established pentane content, Dart will follow the "initial test" sampling plan for "ultra-low pentane" product to re-establish the pentane content.

Testing Boilers for VOC Control Efficiency:

Boilers are used as an emission control device. District practice is to require annual tests for a combustion type emission control device (such as thermal/catalytic oxidizer). For this reason, Dart is required to conduct a source test, on annual basis, to determine influent and effluent VOC concentrations to verify compliance with the required overall pentane emission reductions (50% or more by weight) and the boiler control efficiency (95% or more).

Monitoring

Monitoring of Capture System:

Dart has proposed to use handheld anemometer to measure average facial velocity (fpm) of natural draft openings for each enclosure system, on a monthly basis. This monitoring will ensure that that each system is working properly.

Monitoring of EPS processed through Hirsch Pre-expanders:

Dart has proposed to monitor P1, P2 and P3 annually using SCAQMD Method 306-91, or alternative methods approved by the District, ARB and the EPA.

Dart uses Continuous Emissions Monitor System (CEMS) to determine the total amount of pentane collected from the various processing steps such as bead handling and pre-expansion system. CEMS is set up to determine compliance with the daily emissions rate and the overall pentane recovery requirements.

Monitoring of EPS processed through Rodman Expanders:

Per PTO N-257-2-1, Dart is allowed to use the worst-case percent by weight pentane concentration differences (P1-P2 and P2-P3) established during each of the previously conducted four tests in lieu of conducting an annual test.

Dart states their process, or EPS materials have not changed; therefore, there is no need to conduct tests to determine P1, P2 and P3.

However, to stay consistent with monitoring of Hirsch expanders; the District would require to monitor P1, P2 and P3 annually using SCAQMD Method 306-91.

Monitoring Boilers for VOC Control Efficiency:

Dart has proposed to monitor and record, each boiler's exhaust gas (stack) temperature, at least every 15-minutes, to demonstrate on-going compliance with the proposed VOC control efficiency of 95%.

Recordkeeping

Dart will be required to keep all records for a period of at least five years. These records shall be made available at the facility during normal business hours.

Reporting

The source test results are required to be submitted within 60 days after conducting each test.

Compliance is expected with this Rule.

Rule 2520 Federally Mandated Operating Permits

Dart possesses a Title V permit, as this facility is a Major Source for VOC emissions. The proposed modification to the manufacturing operation is considered "Minor" because the facility is not proposing to relax any existing source testing, monitoring, recordkeeping or reporting requirement.

The applicant has proposed to receive the permit with COC. Therefore, the 45-day EPA notice will be conducted prior to the issuance of the ATC. The following federally enforceable conditions will be placed on the Authorities to Construct:

- This Authority to Construct serves as a written Certificate of Conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520]
- Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an administrative amendment to its Title V permit, in accordance with District Rule 2520, Section 11.4.2. [District Rule 2520]

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permits (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix III of this document).

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule. Dart is expected to notify the District by filing TV Form -008 upon implementing the ATC. After successful

compliance demonstration, the District Compliance Division is expected to submit a change order to implement these ATC into Permit to Operate.

Compliance is expected with this Rule.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

40 CFR 60 – Subpart DDD (Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry):

40 CFR 60, Subpart DDD applies to facilities involved in the manufacture of polypropylene, polyethylene, polystyrene or poly (ethylene terephthalate) as defined in section 60.561 of this subpart. Dart receives pre-manufactured expandable polystyrene (EPS) beads to manufacture cups. This facility is not involved in the actual manufacturing of the EPS beads at this site. Therefore, this subpart is not applicable this facility, and no further discussion is required.

Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringelmann 1 or equivalent to 20% opacity. The following condition will be placed on the permit:

- No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Compliance is expected with this Rule.

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected. The following condition will be placed on the permit:

- No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

The proposed project will not result an increase in hazardous air pollutants. Therefore, risk management review is not conducted for this project.

Compliance is expected with this Rule.

Rule 4682 Polystyrene, Polyethylene, and Polypropylene Products Manufacturing

Section 2.0 states the provisions of this rule shall apply to any manufacturing, processing, and storage products composed of polystyrene, polyethylene, or polypropylene.

Dart uses pre-manufactured expandable polystyrene beads. Therefore, they are subject to the requirements of this Rule.

Section 5.1 states that its requirements are only effective until September 20, 2010, and shall not apply after that date.

Dart is proposing to modify their existing operation to comply with the requirements of Rule 4682, Section 5.3, which replaces Section 5.1, and is applicable on and after September 20, 2010. Dart does not operate "Controllable VOC Emission Sources" as defined in Section 3.5 of this rule. Therefore, Section 5.1 is not applicable and no further discussion is required.

Section 5.2 states that no person shall place, hold or store any VOC blowing agent in any stationary tank, reservoir or container having a capacity greater than 200 gallons unless one of the emission control systems indicated in Section 5.2.1 or 5.2.2 are utilized.

Dart does not store any VOC blowing agents at this site. Therefore, Section 5.2 is not applicable and no further discussion is required.

Section 5.3 requires that any polystyrene manufacturing operation (as defined by Section 3.10) shall not be conducted unless one of the emission reduction methods indicated in Sections 5.3.1 through 5.3.5 is met.

Section 5.4 states operators subject to the provisions of Section 5.3.1, who exceed the limit based on the monthly calculation, shall be considered to have been in violation for each day of that monthly period.

Dart has chosen to demonstrate compliance with Section 5.3.1, which requires that the total product emissions do not exceed 2.4 lb-VOC/100 pounds of total material processed. The following condition will be included in the permit:

- Effective on and after September 20, 2010, the total product emissions shall not exceed 2.4 pounds of VOC per 100 pounds of bead processed, calculated over a monthly period. Exceeding this limit shall constitute violation for each day of that monthly period. [District Rule 4682]

Section 5.5 requires that the facility emissions occur under Section 5.3.3 shall be calculated using the formula mentioned in this section.

This section is not applicable to this facility since they have not chosen to comply with Section 5.3.3 of the Rule.

Section 5.6 requires that the operators complying with Section 5.3.1, 5.3.4, or 5.3.5 shall submit a compliance plan by March 20, 2009.

Dart has already submitted, and the District has approved their compliance plan. Therefore, compliance is assured with this requirement.

Section 6.1.1, requires the operator to maintain records of operation, including but not limited to the amount of material processed, the equipment used, and the type of the blowing agent used. The following conditions will be placed on the permit:

- The permittee shall maintain records of the following items for the product processed through Rodman pre-expanders: (1) date, (2) amount of EPS processed (lb/day), (3) established P1, P2, and P3, and (4) P1, P2, and P3 during the latest source test. [District Rules 1070, 2520 - 9.4.2, 4682]
- The permittee shall maintain records of the following items for the product processed through Hirsch pre-expanders: (1) date, (2) amount of EPS processed (lb/day), (3) established P1, P2, and P3, and (4) P1, P2, and P3 during the latest source test. [District Rules 1070, 2520 - 9.4.2, 4682]

Section 6.1.2, requires the operator to maintain daily records of key system operating and maintenance procedures which will demonstrate continuous operation and compliance of the emission control device.

Dart uses CEMS to measure the amount of VOCs and the laden airflow rate to the boilers. The following conditions will be placed on the permit:

- The laden air stream from the vapor recovery system shall be measured and recorded at least every 15-minutes using airflow rate detection sensors. The recorded data shall be averaged over a 30-consecutive-minute block to demonstrate

compliance with the established minimum airflow during the initial source test. The averaged readings shall be recorded each day the pre-puff process operates. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rules 2201 and 4682, 40 CFR Part 64]

- Each boiler's stack temperature shall be measured and recorded at least every 15-minute using a thermocouple. The recorded temperature data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established temperature range. The averaged readings shall be recorded each day the boilers operate. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rules 2201 and 4682, 40 CFR Part 64]

Section 6.1.3, requires the operator to maintain records necessary to show compliance with Section 5.1.3 and shall, once every month, calculate the daily average VOC emissions, based on the records for the preceding monthly period, according to the approved emission calculation formula.

The operator is required to maintain sufficient records to determine compliance with average daily VOC emissions. Refer to section 6.1.1 for the proposed permit conditions.

Section 6.1.4, requires the operator to keep all records for a minimum of five years. These records shall be made available at the facility during normal business hours to the APCO, ARB, or EPA. The records shall be submitted to the APCO, ARB, or EPA upon request.

- The operator shall keep all records for a minimum of five years. These records shall be made available at the facility during normal business hours to the APCO, ARB, or EPA. The records shall be submitted to the APCO, ARB, or EPA upon request. [District Rules 2201 and 4682]

Section 6.2, lists the test methods, to measure flow rates, total gaseous organic concentrations, and capture efficiency. The proposed permit will include the necessary test methods.

Section 7.0, states that on and after September 20, 2010, operator shall be in compliance with the applicable provisions of Sections 5.3 through 5.5.

Dart is expected to comply by the above compliance date. Thus, compliance is expected with this section.

40 CFR 64 Compliance Assurance Monitoring (CAM)

40 CFR Part 64 requires Compliance Assurance Monitoring (CAM) for units that meet the following three criteria:

- 1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant;
- 2) The unit uses a control device to achieve compliance with any such emission or standard; and
- 3) The unit has potential pre-control device emissions of the applicable regulated air pollutant greater than the major source thresholds.

Dart's permit contains emission limits for VOC (mainly pentane).

The VOC collected from pentane bead handling and pre-expansion system is being combusted in the boilers to demonstrate compliance with the emissions limits.

Per Section VII.D.2 of this document, Manufacturing VOC emissions after applying the control technologies are 58,802 lb-VOC/yr, which are greater than the Major Source thresholds of 50,000 lb-VOC/yr.

Note, in general, if the unit has continuous emission monitors (CEMS) for the pollutants for which the facility is considered a Major Source, CAM is not applicable and the equipment is exempt from CAM requirements. The CEMS system at the facility is used to determine the amount of pentane collected by the vapor recovery system. This CEMS system is not used to monitor pentane emissions from each boiler's stack; therefore, this facility is subject to CAM requirements.

For units that are subject to CAM, 40 CFR Part 64.3 requires that the operator monitor one or more parameters that indicate the performance of the control device.

Dart has proposed to measure and record laden air stream (cfm) and each boiler's chamber temperature, at least every 15-minutes. These parameters will be compared with the established laden air stream (cfm) and boilers' chamber temperature during the latest source test to detect excursions. The following conditions will be placed on the permit:

- The laden air stream from the vapor recovery system shall be measured and recorded at least every 15-minutes using airflow rate detection sensors. The recorded data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established minimum airflow during the initial source test. The averaged readings shall be recorded each day the pre-puff process operates. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rules 2201 and 4682, 40 CFR Part 64]

- Each boiler's stack temperature shall be measured and recorded at least every 15-minute using a thermocouple. The recorded temperature data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established temperature range. The averaged readings shall be recorded each day the boilers operate. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rules 2201 and 4682, 40 CFR Part 64]
- The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7 for the boilers. [40 CFR Part 64]
- The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9 for the boilers. [40 CFR Part 64]
- If the District or EPA determines per 40 CFR 64.7(d)(2) that a Quality Improvement Plan is required, the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64]

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA) California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds

that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. RECOMMENDATION

Issuance of ATC is recommended after addressing comments from the EPA and the applicant.

X. BILLING INFORMATION

ATC	Fee Schedule	Fee Description	Previous Fee Schedule
N-257-2-4	3020-01 F	541 hp	3020-01B

APPENDICES

- Appendix I: Draft Authority to Construct Permit
- Appendix II: Permits to Operate
- Appendix III: TV Form-009
- Appendix IV: Equipment List

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CONFIDENTIAL

Appendix I
Draft Authority to Construct Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

DRAFT

PERMIT NO: N-257-2-4

LEGAL OWNER OR OPERATOR: DART CONTAINER CORPORATION
MAILING ADDRESS: 1400 EAST VICTOR ROAD
LODI, CA 95240

LOCATION: 1400 EAST VICTOR ROAD
LODI, CA 95240

EQUIPMENT DESCRIPTION:

MODIFICATION OF EXPANDABLE POLYSTYRENE PROCESSING OPERATION INCLUDING: INSTALLATION OF TWO PRE-EXPANDERS, INSTALLATION OF RAW BEAD HANDLING SYSTEM, MODIFICATION TO THE EXISTING BEAD HANDLING SYSTEM, CONSOLIDATION OF PERMITS N-257-1 (BEAD HANDLING SYSTEM) AND N-257-3-1 (EXPANSION MOLDING SYSTEM) SUCH THAT THE POST-PROJECT EQUIPMENT DESCRIPTION WILL BECOME; EXPANDABLE POLYSTYRENE (EPS) PROCESSING OPERATION: ENCLOSED BEAD DUMPING OPERATION CONSISTING OF A HOPPER AND DUMPER SYSTEM, ONE HOLDING TANK AND ONE BLENDER, FOUR RODMAN PRE-EXPANDERS WITH CASCADE DRYERS ALL VENTED TO THE VAPOR RECOVERY SYSTEM; ENCLOSED BEAD DUMPING OPERATION CONSISTING OF A HOPPER AND DUMPER SYSTEM, ONE HOLDING TANK, TWO FEEDERS, TWO FEED/WEIGH BINS, TWO HIRSCH PRE-EXPANDERS WITH VENTS AND DELUMPERS, AND TWO BLADDER TANKS ALL VENTED TO THE VAPOR RECOVERY SYSTEM; AND EIGHTY-SEVEN MOLDING MACHINES. THE VAPOR RECOVERY SYSTEM WITH AN IN-LINE CYCLONE SEPARATOR IS VENTED TO THE BOILERS PERMITTED UNDER N-257-4 AND N-257-5.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-257-2-4 : Mar 25 2010 8:29AM - KAHLOLUJ : Joint Inspection NOT Required

3. A permanent total enclosure (PTE) shall be installed around the existing raw bead dumping operation serving Rodman pre-expanders. This enclosure shall follow PTE criteria in EPA Method 204, and shall be vented to the vapor recovery system at or above the average facial velocity (fpm) established during the initial source testing. [District Rule 4682] Federally Enforceable Through Title V Permit
4. The cascade dryers serving Rodman pre-expanders shall be modified to meet PTE criteria in EPA Method 204. These dryers shall be vented to the vapor recovery system at or above the average facial velocity (fpm) established during the initial source testing. [District Rule 4682] Federally Enforceable Through Title V Permit
5. The permittee shall install, operate, and maintain two Hirsch pre-expanders. [District Rule 4682] Federally Enforceable Through Title V Permit
6. Two bladder bags, one for each Hirsch pre-expander, shall be used to collect pentane from each pre-expander vent. The collected vapors shall be released into the vapor recovery system. [District Rule 4682]
7. Delumpers (i.e. bottom part to which pre-puff is discharged) of Hirsch pre-expanders shall meet PTE criteria in EPA Method 204. These delumpers shall be vented to the vapor recovery system at or above the average facial velocity (fpm) established during the initial source testing. [District Rule 4682] Federally Enforceable Through Title V Permit
8. The permittee shall install, operate, and maintain a new separate raw bead handling system for Hirsch pre-expanders. This bead handling system includes: a bead dumping operation transferring raw beads into a hopper, enclosed augers transferring beads from the hopper to a holding tank and from the holding tank to the feeders and weigh bins for Hirsch pre-expanders. The bead dumping operation shall be conducted inside a PTE that must meet PTE criteria in EPA Method 204. The bead transferring augers, product holding tanks, new feeders and weigh bins shall be enclosed and designed to meet PTE criteria in EPA Method 204. Each unit in the bead handling system shall be vented to the vapor recovery system at or above the average facial velocity (fpm) established during the initial source testing. [District Rule 4682] Federally Enforceable Through Title V Permit
9. The vapor recovery system shall be connected to the boilers (N-257-4 and N-257-5) at all times, except for periods of routine testing or emergency safety. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The vapor recovery system shall be operated in a manner which maximizes collection efficiency at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The polystyrene pellets shall be received and stored in cartons and/or bags lined with vapor transmission inhibiting film. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The operator shall visibly inspect the polystyrene pellet cartons upon receipt and weekly thereafter for damage to the vapor transmission inhibiting film. If damage is discovered, the permittee shall take corrective action immediately by either processing the carton or re-sealing the carton. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. All conveyors shall be enclosed to minimize fugitive VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The chamber temperature of each Rodman pre-expander shall not exceed 215°F. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The pre-puff beads shall be processed in a manner that minimizes fugitive VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
16. There shall be no visible emissions from the bead handling systems, pre-expansion systems, or the molding systems. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The pentane content in the raw EPS beads shall be at or below 5.4% by weight, when the raw bead boxes are received from a vendor. EPS bead manufacturer certification receipt must be kept as a record to demonstrate compliance with this condition. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Manufacturing emissions are defined as the emissions from bead handling, pre-puffing, and molding processes. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The Manufacturing VOC emissions shall not exceed 161.1 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. The amount of raw EPS beads processed through the Rodman and Hirsch pre-expanders shall not exceed 28,774 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The amount of raw EPS beads through any one Hirsch pre-expander shall not exceed 19,423 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Effective on and after September 20, 2010, the total product emissions shall not exceed 2.4 pounds of VOC per 100 pounds of the raw beads processed, calculated over a monthly period. Exceeding this limit shall constitute violation for each day of that monthly period. The total product emissions is same as defined in Section 5.3.1 of Rule 4682 (9/20/2007). [District Rule 4682] Federally Enforceable Through Title V Permit
23. The boilers (N-257-4 and N-257-5) shall be operated to reduce at least 95% of the pentane entering these units. [District Rule 2201] Federally Enforceable Through Title V Permit
24. The overall pentane emissions from the bead handling systems shall be reduced by a minimum of 50% by weight, based on a monthly average basis. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Unless otherwise noted, for the purposes of this permit, P1 is the percent weight of pentane in raw EPS beads (taken directly from newly opened box), P2 is the percent weight of pentane in pre-puff beads, P3 is the percent weight of pentane in the molded product, CE is the VOC control efficiency of the boilers operating under N-257-4 and N-257-5. For daily calculation purposes, P1 value may be taken from EPS bead manufacturer certification receipt, which must be kept as a record. [District Rules 1081, 2201, 2520, 9.3.2, 4682] Federally Enforceable Through Title V Permit
26. P1, P2 and P3 shall be established for the EPS processed through the Hirsch expanders within 120 days of startup under this permit using a third party source test contractor. For determining P1, P2, and P3, the samples shall be taken as follows: P1 - take 6 samples from manufacturer lot #1, take 6 samples from manufacturer lot #2, take 3 samples from manufacturer lot #3; P2 - take 15 samples for each density product; P3 - take 3 samples for each density product. An average of the test results would establish a value for respective parameter. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
27. The minimum stack temperature (°F) for each boiler shall be established during initial source test while demonstrating compliance with the VOC control efficiency and the VOC emission limits of this permit. The established reading shall be listed in the Permit to Operate. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
28. The minimum airflow rate (cfm) for the vapor recovery system shall be established during the initial source test while demonstrating compliance with PTE requirements in EPA Method 204 for the units vented to the vapor recovery system. The established reading shall be listed in the Permit to Operate. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
29. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Source testing shall be conducted within 120 days of initial startup under this permit, or before September 20, 2010, whichever comes first. The initial startup date shall be recorded in a file. [District Rule 2201] Federally Enforceable Through Title V Permit
31. The initial source testing shall be conducted to determine all necessary parameters (e.g. average facial velocity, the direction of air flow, and other required design checks) to ensure compliance with the permit conditions that require an equipment to meet criteria for permanent total enclosure in EPA Method 204. [District Rules 1081, 2201 and 4682] Federally Enforceable Through Title V Permit
32. Initial and annual source testing shall be conducted to verify compliance with the total product emissions limit (2.4 lb-VOC/100 lb-EPS processed), the daily VOC emission limit (161.1 lb/day), the overall pentane emission reductions from the bead handling system (50% or more by weight), and the boilers (N-257-4 and N-257-5) control efficiency (95% or more by weight). [District Rule 2201 and 4682] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

33. P1, P2, and P3 shall be determined annually for each EPS material. The samples shall be taken as follows: P1 - take 3 samples from a bead box; P2 - take 3 samples for each density product; P3 - take 3 samples for each density product. An average of the test results would establish a value for respective parameter. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. P1, P2 and P3 for each EPS material shall be re-established, at least once every five years, or when pentane content in raw beads exceeds the pre-established limit. For determining P1, P2, and P3, the samples shall be taken as follows; P1 - take 6 samples from manufacturer lot #1, take 6 samples from manufacturer lot #2, take 3 samples from manufacturer lot #3; P2 - take 15 samples for each density product; P3 - take 3 samples for each density product. An average of the test results would establish a value for respective parameter. [District Rule 4682] Federally Enforceable Through Title V Permit
35. P1, P2 and P3 shall be determined using SCAQMD Method 306 (Analysis of Pentanes in Expandable Styrene Polymers), or an alternate method as approved by the District, EPA and CARB. [District Rule 4682] Federally Enforceable Through Title V Permit
36. The total product emissions shall be determined by taking the sum of lb-VOC/100 lb raw beads processed each day for a month and then divide it by the number of days in that month. [District Rule 4682] Federally Enforceable Through Title V Permit
37. For processing multiple types of EPS materials in a given day, the daily Manufacturing VOC emissions shall be determined by taking the sum of the numbers obtained for each type of processing material using the following equation: $[(P1 - P3) - (P1 - P2)(CE)](Processing\ Rate\ (lb-EPS/day))$. [District Rule 2201] Federally Enforceable Through Title V Permit
38. For processing a single type of EPS material in a given day, the daily Manufacturing VOC emissions shall be determined using the following equation: $[(P1 - P3)(Processing\ Rate\ (lb/day)) - (CEMS\ data,\ lb-VOC/day)(CE)]$. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Source testing to verify the overall pentane reductions and the minimum control efficiency of the boilers (N-257-4 and N-257-5) shall be conducted within 120 days of initial startup under this permit and annually thereafter. The influent concentration from the vapor recovery system to the boilers and effluent concentration from the boiler stacks shall be measured using EPA Test Method 25 or 25A. These concentrations shall be converted to mass emission rates (lb-VOC/hr, lb-VOC/day) for determining overall pentane reductions, and the control efficiency of the boilers. [District Rule 1081 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. The overall pentane emissions reductions from the bead handling systems (%) shall be computed using the following equation: $(100)\{(Mi - Mo)/Mi\} \{Mi/(E1+E2)\}$, where Mi = mass emission rate at the inlet of boilers (lb-VOC/day), Mo = mass emission rate at boilers stack (lb-VOC/day), $E1$ = (Processing Rate)(P1 - P2) lb-VOC/day for the material processed through the Rodman pre-expanders, $E2$ = (Processing Rate)(P1 - P2) lb-VOC/day for the material processed through the Hirsch pre-expanders. [District Rule 1081 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. The operator shall verify the accuracy of the CEMS during each source test. This system shall be calibrated and operated in accordance with the requirements of 40 CFR Part 51. [District Rules 1081, 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. The permittee shall utilize continuous emissions monitor system (CEMS) to measure and record VOC concentration and volumetric airflow (cfm) of the laden air stream from the vapor recovery system. [District Rule 2201] Federally Enforceable Through Title V Permit
43. The permittee shall use a handheld anemometer to measure average facial velocity (fpm) of natural draft openings for each permanent total enclosure on a monthly basis. These measurements shall be compared with the numbers established in the initial source test to detect a problem. [District Rule 2201] Federally Enforceable Through Title V Permit
44. Temperature of the Rodman pre-expanders shall be observed and recorded daily while any unit operates. The records shall include date of inspection and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

45. Visible emission inspection shall be performed daily. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be correct within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. The permittee shall maintain records of the following items for the product processed through Rodman pre-expanders: (1) date, (2) amount of EPS processed (lb/day), (3) established P1, P2, and P3, and (4) P1, P2, and P3 during the latest source test. [District Rules 1070, 2520 - 9.4.2, 4682] Federally Enforceable Through Title V Permit
47. The permittee shall maintain records of the following items for the product processed through Hirsch pre-expanders: (1) date, (2) amount of EPS processed (lb/day), (3) established P1, P2, and P3, and (4) P1, P2, and P3 during the latest source test. [District Rules 1070, 2520 - 9.4.2, 4682] Federally Enforceable Through Title V Permit
48. The permittee shall maintain records of the daily Manufacturing VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
49. The permittee shall maintain records of the total product emissions (lb-VOC/100 lb of raw beads processed), calculated over a monthly period. [District Rules 4682] Federally Enforceable Through Title V Permit
50. For each source test, the permittee shall maintain records of the date, type of the EPS material, name of the person and company collecting product samples to test P1, P2, P3, and a copy of test results. [District Rule 1070] Federally Enforceable Through Title V Permit
51. The permittee shall keep records of: (1) date, (2) system identification (e.g. bead dumping operation), (3) average facial velocity (fpm) across natural draft openings during the initial source testing, and (4) average facial velocity measurement (fpm) with handheld anemometer. [District Rule 4682] Federally Enforceable Through Title V Permit
52. The operator shall keep all records for a minimum of five years. These records shall be made available at the facility during normal business hours to the APCO, ARB, or EPA. The records shall be submitted to the APCO, ARB, or EPA upon request. [District Rules 1070, 2201, 2520 - 9.4.2, 4682] Federally Enforceable Through Title V Permit
53. The operator shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
54. The laden air stream from the vapor recovery system shall be measured and recorded at least every 15-minute using airflow rate detection sensors. The recorded data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established minimum airflow during the initial source test. The averaged readings shall be recorded each day the pre-puff process operates. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rules 2201 and 4682, 40 CFR Part 64] Federally Enforceable Through Title V Permit
55. Each boiler's stack temperature shall be measured and recorded at least every 15-minute using a thermocouple. The recorded temperature data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established temperature range. The averaged readings shall be recorded each day the boilers operate. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rules 2201 and 4682, 40 CFR Part 64] Federally Enforceable Through Title V Permit
56. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7 for the boilers. [40 CFR Part 64] Federally Enforceable Through Title V Permit
57. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9 for the boilers. [40 CFR Part 64] Federally Enforceable Through Title V Permit
58. If the District or EPA determines per 40 CFR 64.7(d)(2) that a Quality Improvement Plan is required, the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

59. Permits to Operate N-257-1 and N-257-3 shall be cancelled upon implementation of this permit. [District Rule 2201]
Federally Enforceable Through Title V Permit

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Appendix II
Permits to Operate

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-257-1-1

EXPIRATION DATE: 04/30/2009

EQUIPMENT DESCRIPTION:

POLYSTYRENE PELLET DUMPING; FEED HOPPER; FEED CONVEYOR; BLENDING SYSTEM

PERMIT UNIT REQUIREMENTS

1. There shall be no visible emissions from the process. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The pentane (or any other expansion agent) content of the polystyrene pellets shall not exceed 6.25% by weight as received. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The polystyrene pellets shall be received and stored in cartons lined with vapor transmission inhibiting film. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All conveyors shall be enclosed to minimize fugitive losses. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The permittee shall visibly inspect the polystyrene pellet cartons upon receipt and weekly thereafter for damage to the vapor transmission inhibiting film. If damage is discovered, the permittee shall take corrective action immediately by either processing the carton or re-sealing the carton. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. No more than 28,774 pounds of polystyrene pellets shall be processed in any one day. This limit may be revised based on source test results. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The operator shall keep accurate records of the daily amount of pounds of polystyrene pellets processed. [District Rule 2520, 9.3.2 and District Rule 1070] Federally Enforceable Through Title V Permit
8. The permittee shall maintain records of certification of the weight content of pentane (or any other expansion agent). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall maintain all records of required monitoring data for a period of five years and shall be made available for District inspection upon request. [District Rule 2520, 9.4.2 and District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-257-2-1

EXPIRATION DATE: 04/30/2009

EQUIPMENT DESCRIPTION:

PRE-EXPANSION SYSTEM WITH ASSOCIATED CONVEYING SYSTEM, PENTANE COLLECTION SYSTEM SERVED BY A CYCLONE SEPARATOR.

PERMIT UNIT REQUIREMENTS

1. There shall be no visible emissions from the process. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The pentane emissions from the pre-expansion system shall be ducted to the boiler at all times, except for periods of routine testing or emergency safety. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The pre-expansion system temperature shall not exceed 215 degrees Fahrenheit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The pre-expansion beads shall be stored in a manner which minimizes fugitive emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The pentane collection system shall be operated in a manner which maximizes collection efficiency at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The VOC emissions from the polystyrene foam manufacturing process shall not exceed 247 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. No more than 28,774 pounds of polystyrene pellets shall be processed in any one day. This limit may be revised based on source test results. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The pentane (or any other expansion agent) content of the polystyrene pellets shall not exceed 6.25% by weight as received. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The overall pentane emissions from the entire polystyrene pellets handling systems shall be reduced by a minimum of 50% by weight based on a monthly average. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The permittee shall provide, properly install, and maintain in good working order continuous monitoring and recording system to measure pentane concentration and volumetric air flow. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. Annual source testing shall be conducted to verify that the pentane emissions from the entire polystyrene pellet handling system is reduced by a minimum of 50%, by weight. Source testing to verify the capture and control of the polystyrene pellet handling and pre-expander pentane collection system shall be conducted within 120 days of permit issuance and annually thereafter. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The annual source test shall also verify the accuracy of the Continuous Emission Monitoring (CEM) system to determine monthly compliance. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The VOC emissions from the polystyrene foam manufacturing process shall be based on the polystyrene pellet throughput and the percent weight loss of pentane in the pellets at the following process points: P1 - polystyrene pellets (taken directly from newly opened box); P2 - after polystyrene pre-expansion operation and prior to molding and P3 - after molding prior to printing and storage. [District Rule 1081 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. The percent weight of pentane in process points P1, P2 and P3 shall be tested annually to establish the pentane emissions from the polystyrene foam manufacturing process. The percent by weight pentane concentrations determined during the last source test shall be used to determine the daily polystyrene foam manufacturing process emissions. After four consecutive annual tests, the worst-case percent by weight pentane concentration differences (P1-P2 and P2-P3) established during each of the four tests may be used to determine the total daily polystyrene foam manufacturing process emissions in lieu of performing the annual test. Testing shall be performed using test method SCAQMD Method 306-91, or an alternate method with prior approval by the District, EPA and CARB. [District Rule 1081 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Source testing shall also be conducted on the boiler influent concentration (ST1) from the pentane collection system and boiler effluent concentration (ST2). EPA Test Method 25 or 25A shall be used to determine the pentane concentrations in lb-VOC/hr and lb-VOC/day. [District Rule 1081 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Pentane collection system control efficiency shall be determined as the boiler influent concentration (lb-VOC/day) divided by the entire pellet handling system (including pre-expansion) emissions. The control efficiency shall be computed using the following equation: $[(ST1 \text{ (boiler influent concentration) lb-VOC/day}] / [(daily \text{ pellet throughput})(P1 - P2) \text{ lb-VOC/day}]$. [District Rule 1081 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
18. Total polystyrene foam manufacturing process VOC emissions in lb-VOC/day shall be calculated as follows: $[(daily \text{ pellet throughput}) \times (P1 - P3) - (CEM \text{ reading in lb-VOC/day})] + \text{boiler effluent emissions in lb-VOC/day}$. [District Rule 1081 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. All continuous monitoring and recording instruments shall be calibrated and operated in accordance with the requirements of 40 CFR, Part 51. [District Rule 1080 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Visible emission inspection shall be performed daily. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be correct within 24 hours, a visible emissions test using USEPA Method 9 shall be conducted. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
21. The permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Temperature of the pre-expansion system shall be observed and recorded daily during operation of this unit. The records shall include date of inspection and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
23. A record of the daily amount of polystyrene pellets processed shall be maintained on the premises at all times. [District Rule 1070, District Rule 4682, 6.1.1 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
24. All records and continuous emission monitoring reports shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 1070 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-257-3-1

EXPIRATION DATE: 04/30/2009

EQUIPMENT DESCRIPTION:
EXPANSION MOLDING SYSTEM

PERMIT UNIT REQUIREMENTS

1. There shall be no visible emissions from the process. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The temperature of the expansion molding machines shall not exceed 300 degrees Fahrenheit. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The final product shall be packaged and stored in vapor transmission inhibiting material. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The pentane collection system shall be operated in a manner which maximizes collection efficiency at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
5. A pentane recovery system shall be installed if and when required by the Air Pollution Control Officer based on the system's performance at the pre-expansion unit. [District NSR Rule] Federally Enforceable Through Title V Permit
6. No more than 28,774 pounds of polystyrene pellets shall be processed in any one day. This limit may be revised based on source test results. [District NSR Rule] Federally Enforceable Through Title V Permit
7. A record of the daily amount of polystyrene pellets processed shall be maintained on the premises at all times. [District Rule 1070 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 1070 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

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Appendix III
TV Form-009

**San Joaquin Valley
Unified Air Pollution Control District**

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE AMENDMENT
 MINOR PERMIT MODIFICATION

COMPANY NAME: <u>Dart Container of Nor. CA.</u>	FACILITY ID: <u>N-257</u>
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: <u>DART CONTAINER CORP.</u>	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

RCC
Signature of Responsible Official

7-28-09
Date

Row Crookham
Name of Responsible Official (please print)

PLANT MANAGER
Title of Responsible Official (please print)

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Appendix IV
Equipment List

Equipment List

System	Units	Power	Total Power
Bead Handling System	Transfer Bin	3 hp	3 hp
	Blender Bin	5 hp	5 hp
	Feed Auger	2 hp	2 hp
	Holding Tank	2 hp	2 hp
	4 Feeders	¼ hp each	1 hp
Pre-expansion System	4 Rodman Units	5 hp/each	20 hp
	2 Hirsch Units	5 hp each	10 hp
Pre-Puff Distribution System (Main)	4 distribution bags	2 hp each	8 hp
Pre-Puff Distribution System (Line)	10 distribution bags	2 hp each	20 hp
Pentane Recovery System	--	7.5 hp	7.5 hp
Molding System	87 machines	5 hp each	435 hp
	4 vacuum motors	5 hp each	20 hp
New Bead Handling System*	Transfer Bin	3 hp	3 hp
	Feed Auger	2 hp	2 hp
	Holding Tank	2 hp	2 hp
	2 Feeders	¼ hp each	0.5 hp
Total:			541 hp

*assumed to be same as existing handling system