

State Registration Number  
D8065

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-D8065-2020

**Dart Container of Michigan LLC**

State Registration Number (SRN): D8065

Located at

432 Hogsback Road, Mason, Ingham County, Michigan 48854

Permit Number: MI-ROP-D8065-2020

Staff Report Date: August 17, 2020

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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**RENEWABLE OPERATING PERMIT**

D8065

**AUGUST 17, 2020 - STAFF REPORT**

MI-ROP-D8065-2020

**Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan’s Administrative Rules for Air Pollution Control promulgated under Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source’s applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

**General Information**

Stationary Source Mailing Address:	Dart Container of Michigan LLC 432 Hogsback Road Mason, Michigan 48854
Source Registration Number (SRN):	D8065
North American Industry Classification System (NAICS) Code:	326140
Number of Stationary Source Sections:	3
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201900001
Responsible Official – Section 1:	Mr. Byron Chen, Interim Plant Manager Mason Cup Plant 517-244-2483
Responsible Official – Section 2:	Ken Turner, Plant Manager Machinery and Tooling Manufacturing 517-244-2452
Responsible Official – Section 3:	John Alfano, Facilities Engineering Director Facility Equipment and Non-Manufacturing 517-244-3131
AQD Contact:	Samantha Davis, Environmental Quality Analyst 517-282-1373
Date Application Received:	December 28, 2018
Date Application Was Administratively Complete:	January 8, 2019
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	August 17, 2020
Deadline for Public Comment:	September 16, 2020

## Source Description

Dart Container of Michigan (Dart) is located northwest of Mason, Michigan, just west of the US-127 in Ingham County. The Dart campus straddles Howell Road adjacent to Hogsback Road. Commercial developments are located to the south and southeast. Immediately west is a residential subdivision. Agriculture and recreational land ranges to the north and northeast. Farther to the south is more agricultural land.

Dart manufactures polystyrene containers (cups) from expandable polystyrene (EPS) beads. Pentane emissions released from the polystyrene beads during manufacturing are controlled by exhausting the pentane into three natural gas fired boilers. The boilers are also used to generate steam for the cup molding processes and for comfort heating. Two of the three boilers can burn no. 2 fuel oil as backup.

Also, Permit to Install (PTI) No. 205-18A was issued on July 19, 2019 for a new recycling process. This process includes EU-RECGRIND and EU-RECDENSIFY. EU-RECGRIND is a recycle grinder and EU-RECDENSIFY is a densifier used in the recycle center to recycle both pre and post-consumer polystyrene foam.

Besides manufacturing foam containers at this location, Dart also operates facilities that support this and its other container manufacturing locations. A parts coating line is used to coat parts which are used in the manufacture of molds or molding machines for this and other Dart plants. Molds used to shape the foam containers are periodically plated or re-plated with chrome. PTI No. 121-18 was issued August 13, 2018 for a new hard chrome plating process that was installed. This process includes two plating tanks (tanks 4A and 4B), each with a 2,000-amp rectifier, and associated cleaning and rinse tanks (tanks 2,3,5 and 6). Tanks 4A and 4B are controlled by two 3-stage composite mesh pad scrubbers with a 4<sup>th</sup> stage HEPA filter. Tank 2 is controlled by wet packed bed fume scrubber. Also included in the process is a chrome stripping tank and thermal evaporative system. The chrome stripping tank (tank 7) and associated rinse tanks (tanks 8 and 9) are used for stripping of molds in preparation for re-plating and is controlled by a wet packed bed fume scrubber. The thermal evaporative system is natural gas fired (650,000 Btu/hr), with a built-in mist eliminator.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year 2019.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year (TPY)
Carbon Monoxide (CO)	7.79
Lead (Pb)	5e-5
Nitrogen Oxides (NO <sub>x</sub> )	11.91
Particulate Matter (PM)	0.667
Sulfur Dioxide (SO <sub>2</sub> )	0.28
Volatile Organic Compounds (VOCs)	218.11

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2018 by Dart:

Individual Hazardous Air Pollutants (HAPs) **	Pounds per Year
Chromium VI	0.02
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>0.02 (reported)</b>

\*\*As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

## **Regulatory Analysis**

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is in Ingham County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of volatile organic compounds exceeds 100 tons per year.

The stationary source is a minor source of HAP emissions because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

EU-CUPSTORAGE at the stationary source was subject to review under the Prevention of Significant Deterioration regulations of The Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality because at the time of New Source Review permitting the potential to emit of volatile organic compounds was greater than 250 tons per year.

EU-FIREPUMPGEN at the stationary source is subject to the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subpart JJJJ.

EU-BOILER5 and EU-BOILER7 at the stationary source are subject to the Maximum Achievable Control Technology Standards for Industrial, Commercial, and Institutional Boilers for area sources promulgated in 40 CFR Part 63, Subparts A and JJJJJ. EU-BOILER8 is not subject to this subpart because it burns only natural gas.

EU-BOILER5, EU-BOILER7 and EU-BOILER8 at the stationary source are not subject to 40 CFR 60 Subpart D, D(a), D(b), D(c) - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units because they are less than 100MMBTU/hr. and they were constructed before June 9, 1989.

EU-FIREPUMP3, EU-FIREPUMPGEN, EU-CORPGEN, EU-CUPLIGHTS, EU-B6GEN, EU-B7GEN, EU-B5GEN, EU-B2BGEN, and EU-B9GEN at the stationary source are subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines promulgated in 40 CFR, Part 60, Subparts A and IIII.

EU-FIREPUMP3, EU-FIREPUMPGEN, EU-CORPGEN, EU-CUPLIGHTS, EU-B6GEN, EU-B7GEN, EU-B5GEN, EU-B2BGEN, and EU-B9GEN at the stationary source are subject to the Maximum Achievable Control Technology Standards for Stationary Reciprocating Internal Combustion Engines (RICE) for area sources promulgated in 40 CFR, Part 63, Subparts A and ZZZZ.

EU-B5CHRMPLATR at the stationary source is subject to the Maximum Achievable Control Technology Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks promulgated in 40 CFR, Part 63, Subparts A and N.

The AQD's Rules 287 and 290 were revised on December 20, 2016. FGRULE287(2)(c) and FGRULE290 are flexible group tables created for emission units subject to these rules. Emission units installed before December 20, 2016, can comply with the requirements of Rule 287 and Rule 290 in effect at the time of installation or modification as identified in the tables. However, emission units installed or modified on or after December 20, 2016, must comply with the requirements of the current rules as outlined in the tables.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

The emission limitation(s) or standard(s) for Total Chromium at the stationary source with the underlying applicable requirement(s) of 40 CFR 63, Subpart N—National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks from EU-B5CHRMPLATR is exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because 0.006 mg/dscm meets the CAM exemption for NSPS or MACT proposed after November 15, 1990.

The following Emission Units/Flexible Groups are subject to CAM:

Emission Unit/Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	Emission Unit/Flexible Group for CAM	PAM? *
EU-CUP	219.95 tpy of pentane	R 336.1205 R 336.1702(a)	Boilers	Boiler exhaust gas Temperature (greater than 300°F)	EU-CUP	No

\*Presumptively Acceptable Monitoring (PAM)

EU-CUP at the stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule pursuant to 40 CFR Part 64, because the unit has potential pre-control emissions of VOC greater than the major source thresholds. Boilers are used as the control device and combust captured pentane. Monitoring for the control devices are thermocouples used to determine that temperatures greater than 300° F are maintained during process operation. The 300° F is adequate to achieve a 95 percent, or greater, destruction efficiency of the pentane as required by new source review. The flow rate and concentration of pentane to the boilers are also continuously monitored to verify proper operation of the pentane capture system. The monitored pentane values are used to calculate the pounds per hour of pentane entering the boiler and to calculate the pentane capture efficiency. The pentane capture and monitoring system was approved through new source review and requires a minimum capture efficiency of 30 percent.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

**Source-Wide Permit to Install (PTI)**

Rule 214a requires the issuance of a Source-Wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-D8065-2014a are identified in Appendix 6 of the ROP.

PTI Number			
270-85	270-85A	933-87	150-89
337-89	808-89	808-89A	209-90

PTI Number			
931-90	440-96	728-96	349-06
349-06A	177-13		

**Streamlined/Subsumed Requirements**

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

**Non-applicable Requirements**

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

**Processes in Application Not Identified in Draft ROP**

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EU-TGPWERWASH	Natural Gas fired power washer, 816,000 btu/hr; 12: stack through roof.	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EU-JIGGRIND	Moore (NASA) Jig Grinder (#625); Jig Grind Room, emissions captured via dust collector and emitted to atmosphere.	R 336.1212(4)(e)	R 336.1285(2)(l)(vi)(C)
EU-B5CHRMBOIL	New 285,000 BTU/hr natural gas fired high efficiency condensing boiler as the heat source for the evaporative recovery of chrome plating solution & clean distillate water.	R 336.1212(4)(c)	R 336.1282(2)(b)(ii)
EU-TEFLONANNEAL	Grieve model AB850 (SN 106962A0812) electric heated (12kW; 40,945 Btu) oven for Teflon blank annealing, with a 600 cfm internal blower system. Used for annealing uncoated machined Teflon parts, at 475°F for 6 hrs/batch; no emissions.	R 336.1212(4)(i)	R 336.1291(2)(a)
EU-MICROGRNPV	Micro-cellular Foam (MicroGreen) Pressure Vessel.	R 336.1212(4)(d)	R 335.1285(2)(j)
Various	Natural gas fired equipment (space heaters, humidifiers, process heaters).	R 336.1212(4)(c)	R 336.1285(2)(i)

**Draft ROP Terms/Conditions Not Agreed to by Applicant**

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

### **Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

### **Action taken by EGLE, AQD**

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Brad Myott, Lansing District Office Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

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**RENEWABLE OPERATING PERMIT**

ROP Number  
MI-ROP-D8065-20XX

**OCTOBER 12, 2020 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated August 17, 2020, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

Responsible Official Section 1:	Marc Landry, Cup Plant Manager 517-244-2483
Responsible Official Section 2:	Ken Turner, Plant Manager – Machinery & Tooling Manufacturing 517-244-2997
Responsible Official Section 3:	John Alfano, Director – Facilities Engineer 517-244-3131
AQD Contact:	Samantha Davis, Environmental Quality Analyst 517-282-1373

**Summary of Pertinent Comments**

No pertinent comments were received during the 30-day public comment period.

**Changes to the August 17, 2020 Draft ROP**

No changes were made to the draft ROP.