



Toxic Reduction Plan Particulate Matter – PM2.5

Martinrea International Inc. 99 Golf Course Line Ridgetown, Ontario N0P2C0

Martinrea Ridgetown

651 Colby Drive Waterloo Ontario N2V 1C2 047955 | Report No 7 | September 21 2015

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1. Introduction

1.1 Basic Facility Information

Name & CAS # of Substance	Particulate Matter ≤ 2.5µm	NA		
Substances for which other Plans have been prepared	Lead 7439-92-1 PM10 NA			
Facility Identification and Site Addr	ess			
Company Name	Martinrea International Inc.			
Facility Name	Martinrea Ridgetown			
Facility Address	Physical Address:	Mailing Address: (if different)		
	99 Golf Course Line Ridgetown, Ontario N0P 2C0			
Spatial Coordination of Facility	4697616 N 427573 E; Zone 17			
Number of Employees	260			
NPRI ID	4891			
Ontario MOE ID Number	N/A			
Parent Company (PC) Information				
PC Name & Address Percent Ownership for each PC	Martinrea International Inc. 30 Aviva Park Drive Vaughan, ON L4L 9C7 100 percent			
Business Number for PC				
Primary North American Industrial Classification System Code (NAICS)				
2 Digit NAICS Code	33 Manufacturing			
4 Digit NAICS Code	3363-Motor Vehicle Parts Manufacturing			
6 Digit NAICS Code	336370 – Motor Vehicle Metal Stamping			

Company Contact Information					
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Planner Responsible for Certification	(Same as planner responsible for making recommendations)				

1.2 Statement of Intent

Martinrea does not intend to reduce the creation of particulate matter \leq 2.5 µm (PM2.5). Martinrea does not use PM2.5; therefore this plan does not address the reduction of its use.

1.3 **Objectives**

Martinrea uses high technological innovation with the aim of manufacturing high quality automotive linkage and suspension components in an environmentally responsible manner. In the future, Martinrea will strive to reduce the creation of PM2.5 at the Facility.

This Plan will also assess the technical and economic feasibility of each option of reducing the creation of PM2.5 at the Facility, to determine which options, if any, are viable for implementation at this time.

1.4 Facility Description

Martinrea Inc. is a leader in the global automotive sector. Martinrea (Facility) located in Ridgetown, Ontario, manufactures automobile parts and related components.

2. Identification and Description

2.1 Stages & Processes

The sequence of the processes implemented at the Martinrea Ridgetown Facility, as presented in Figure 1 - Facility-wide process flow diagram including all stages and processes, is described as follows:

- Receiving Process: Raw materials, such as steel coils and sheets, are received at the Facility
- Stamping Process: all steel coils and sheets received at the Facility go to Stamping
- Welding Process: from Stamping, the material is distributed through
 - Spot Welding Process: 60 percent of the material is spot welded
 - MIG¹ Welding Process: 10 percent of the material is MIG welded before being shipped off-site.
- **Shipping Process**: The remaining 30 percent of the material received from Stamping is shipped directly off-site.

Additional activities inherent to the processes flow at the Facility occur as:

• Natural gas (NG) and propane Combustion Process through the Facility

The raw material receiving, cooling process, stamping and welding are processes which do not involve the creation of PM2.5; the Welding Process and Combustion Process create PM2.5 at the Facility. These processes are described in the next sections of the Plan. A Process Flow Diagram is presented as Figure 1.

¹ MIG = metal inert gas

2.2 Process Flow Diagram



Figure 1 Facility-Wide Process Flow Diagram

3. Tracking and Quantification of Facility Processes

The following acronyms were defined in regards of the substances throughout the processes flows at the Facility:

- U Use of toxic substance
- C Creation of toxic substance
- P Toxic substance contained in Product
- TR Off-Site transfer of toxic substance for Treatment or Recycling
- A On-Site release of toxic substance to Air

This results in the following example of an acronym denomination for the amount of PM released to atmosphere during the welding process: WP-A.

The processes and activities developed at the Facility are briefly described below. A rationale about their inclusion or exclusion from the PM2.5 toxic reduction analysis is also presented.

Raw Material Receiving Process

The first stage of the manufacturing operation at Martinrea is the Receiving Process. The Receiving Process consists of the raw material receiving, including the unloading and storage, followed by the

Staging Process. During the Receiving Process, the raw materials, based on customer specifications, are received and unloaded at the Facility. Materials processed at the Facility consist of:

- Various grades of carbon steel
- Welding wire/electrodes
- Nuts, bolts and studs

The raw material does not contain any PM2.5; consequently, no PM2.5 toxic reduction analysis will be applied to the raw material Receiving Process in this Plan.

Stamping Process

Martinrea has several heavy presses where the steel coils are fed and the parts are stamped. The Stamping Process consists of the following steps:

- Uncoiling Process the steel coils are received from the press shop and straightened.
- Blanking Process the uncoiled steel enters the blanking process, where the sheets are cut
 mechanically to the appropriate size as required by each press line.
- The blanked metal sheets are fed through the press and stamped. The first five stamped parts are scrapped to ensure quality and performance.
- Scrap collection- scrap is collected for off-site recycling.
- Lubricants sludge lubricants are used during the Stamping Process. The accumulated sludge is sent off-site for disposal.
- The stamped parts are either welded and shipped or sent directly to shipping.

No PM2.5 substance is produced at any time during the Stamping Process. Consequently, no PM2.5 toxic reduction analysis will be applied to the Stamping Process in this Plan.

Welding Process

MIG Welding Process

Approximately 10 percent of the metal parts from the Stamping Process are delivered to the MIG Welding Process. During the MIG welding Process, the metal sheets are joined together by applying electric current through the metal electrode, which is a consumable part. The Facility has several welding stations equipped with welding hoods which exhaust the dust collector units. Prior to being sent to Shipping or further processing, the parts are checked during the QA/QC process. Those parts which do not meet the specifications are scrapped in bins. From there, the parts are directed to Shipping or sent off-Site for recycling.

Spot Welding Process

Following the Stamping Process, approximately 60 percent of the metal parts are delivered to the Spot Welding Process. During the Spot Welding Process, the sheet metal is joined together by applying electrical current and pressure to certain spots. The Spot Welding process is considered a non-consumable welding activity. The Facility has several welding stations equipped with welding hoods that exhaust emissions from the facility. Before being sent to Shipping or further processing,

the parts are QA/QC checked. Those parts that do not meet the QA/QC specifications are scrapped in bins. Following welding, the scrapped metal parts go directly to Shipping or are sent off-site for recycling.

Creation of PM2.5 occurs during the welding process. Consequently, the PM2.5 toxic reduction analysis will be applied to the Welding Process and presented in this Plan as PM2.5 releases to air from welding.

Shipping Process

The Shipping Stage consists of the Package and Shipping Process. After the Manufacturing Stage, the finished products are transferred to the inspection and packaging area, were the parts are inspected by facility personnel, then packaged and stored on-site before being shipped to the customers.

There is no PM2.5 created during the Shipping Process. Consequently, no PM2.5 toxic reduction analysis will be applied to the Shipping Process in this Plan.

Cooling Tower Process

The Cooling Tower Process at the Facility is used as heat exchanger to dissipate the heat loads resulting from the heat generating processes at the Facility. Martinrea uses a cooling tower with circulating water flow through induced draft.

No PM2.5 substance is produced at any time during the Cooling Tower Process. Consequently, no PM2.5 toxic reduction analysis will be applied to the Cooling Tower Process in this Plan.

Natural Gas and Propane Combustion Process

Various combustion activities occur at the Facility resulting in the creation of PM2.5. Consequently, the PM2.5 toxic reduction analysis will be applied to the natural gas (NG) and propane Combustion Process.

3.1 Welding Process – Amount of PM2.5 Releases to Air WP-A1

Figure 2 below presents the Welding Process flow diagram.

Figure 2 Welding Process Flow Diagram

	LEGEND
-	SOLID ARROW DENOTES PRESENCE OF TOXIC SUBSTANCE
А	ON-SITE RELEASE OF TOXIC SUBSTANCE TO AIR
Р	TOXIC SUBSTANCE CONTAINED IN PRODUCT
U	USE OF TOXIC SUBSTANCE
TR	OFF-SITE TRANSFER OF TOXIC SUBSTANCE
DQL	DATA QUALITY LEVEL: H - HIGH AA - ABOVE AVERAGE A - AVERAGE



A) Tracking and Quantification Method

Quantification Method: Emission Factor and Mass Balance

PM2.5 releases from the welding were based on the Facility's annual usage of weld rods, and the fume estimation factors were obtained from the USEPA AP-42 emission factors for shielded metal arc welding (SMAW), Section 12.19, Table 12.19-1.

B) Best Available Method Rationale

The Facility has detailed records of weld type and annual usage, which allows for accurate estimate of PM2.5 emissions, based on the USEPA AP-42 emission factors mentioned above.

C) Data Quality Level

Based on the records of weld type and use, and the implementation of emissions factors, the data quality is considered as average.

D) Quantification of PM2.5

PM2.5 emissions rate = mass of electrode * USEPA Emission Factor * PM2.5/PM10 Factor. Details of quantification by type of weld and use are provided in Table 1.

The PM2.5 emission releases are estimated as created emissions C1= [WP-A1] to be 2,515.12 kg/year = 2.52 tonnes/year.

3.2 Natural Gas and Propane Combustion Process – Amount of PM2.5 Releases to Air CP-A2

Figure 3 below presents the NG and propane Combustion Process flow diagram.

Figure 3 Natural Gas and Propane Combustion Process Flow Diagram



A) Tracking and Quantification Method

Quantification Method: Emission Factor.

PM2.5 releases from NG and propane combustion are calculated based on the NG and propane consumption quantity and USEPA AP-42 emissions factors.

B) Best Available Method Rationale

Using the Facility's record of NG and propane use and the US EPA "AP-42" emission factors for Natural Gas and Propane Ch. 1.5, accurate estimates of PM2.5 emissions were calculated.

C) Data Quality Level

Based on the Facility's records of NG and propane usage, and the implementation of the respective emissions factors, the data quality is considered average.

D) Quantification of PM2.5

PM2.5 emissions rate = usage rates * USEPA Emission Factor * PM2.5/PM10 Factor. Details of quantification by combustion type are provided in Table 3.

The PM2.5 emission releases are estimated as created emissions C2= [CP-A2] to be 8.5 kg/year = 0.0085 tonnes/year.

3.3 Summary Amount of PM2.5 Releases to Air at the Facility

Details of quantification of all PM2.5 emissions at the Facility are provided in Table 4.

The PM2.5 emission releases are estimated as [WP-A1] + [CP-A2] to be 2,524 kg/year = 2.52 tonnes/year.

4. Facility-Wide PM2.5 Accounting Information

4.1 PM2.5 Use

There were zero uses of PM2.5 in 2014.

4.2 PM2.5 Creation

The total Facility wide creation of PM2.5 in 2014 was as follows:

Facility Wide Creation = C1 + C2 = 2.52 tonnes + 0.0085 tonnes = 2.52 tonnes

4.3 PM2.5 Transformation

There were zero transformations of PM2.5 in 2014.

4.4 PM2.5 Destruction

There were zero destructions of PM2.5 in 2014.

4.5 PM2.5 Contained in Product

There was zero PM2.5 contained in product in 2014.

4.6 PM2.5 Releases to Air

The total Facility wide amount of PM2.5 released to air in 2014 is equal to the amount created on-site.

Facility Wide Releases to Air = [WP-A1] + [CP-A2] = 2.52 tonnes

4.7 PM2.5 Releases to Land

There were zero on-site or off-site releases to land of PM2.5 in 2014.

4.8 PM2.5 Releases to Water

There were zero on-site or off-site releases to water of PM2.5 in 2014.

4.9 PM2.5 Disposals (On-Site)

There were zero on-site disposals of PM2.5 in 2014.

4.10 PM2.5 Disposals (Off-Site)

There were zero off-site disposals of PM2.5 in 2014.

4.11 PM2.5 Off-Site Transfers (Treatment or Recycling)

There were zero off-site transfers for treatment or recycling of PM2.5 in 2014.

5. Direct and Indirect Cost Analysis

Below is a summary of all direct and indirect costs associated specifically with the use, release, transfer, disposal, and amounts contained of PM2.5 in Product.

Material		Unit	Unit Cost (\$/unit)	Total (\$)
Annual NPRI/TRA Reporting	1	Report	\$5,000	\$5,000
TRA Plan Preparation	1	Plan	\$ 5,900	\$5,900
Martinrea Labour – TRA/NPRI	40	hours	\$40/hour	\$1,600
			TOTAL	\$12,500

In total the direct and indirect costs associated with the use, release, transfer, disposal and amount of PM2.5 contained in product in 2014 were \$12,500.

6. Toxic Substance Use and Creation Reduction Options

6.1 Material or Feedstock Substitution Options

6.1.1 Identification of Options

No options for reduction in this category could be identified. No PM2.5 is contained in the material or feedstock used for manufacturing at the Facility. Further to the above, Martinrea's clients are major automotive companies. The raw materials to be used by Martinrea are specified by the customer, and there are limited sources where the material can be purchased from. The material used and the composition of the material are not in Martinrea's control.

6.1.2 Estimated Reductions

Refer to Section 6.1.1.

6.1.3 Technical Feasibility

Refer to Section 6.1.1.

6.1.4 Economic Feasibility

Refer to Section 6.1.1.

6.2 **Product Redesign or Reformulation**

6.2.1 Identification of Options

As specified in Section 6.1.1, no PM2.5 is contained in the material or feedstock used for manufacturing at the Facility and consequently, no PM2.5 is contained in the scrap generated at the Facility. No options for the product redesign or reformulation are available for PM2.5.

6.2.2 Estimated Reductions

Refer to Section 6.2.1.

6.2.3 Technical Feasibility

Refer to Section 6.2.1.

6.2.4 Economic Feasibility

Refer to Section 6.2.1.

6.3 Equipment or Process Modifications

6.3.1 Identification of Options

No options for reduction in this category could be identified. Martinrea conducts regular preventative maintenance on all equipment to ensure it is operating efficiently. The process is highly specialized and due to the unique chemistry of the process, modifications are not possible.

6.3.2 Estimated Reductions

Refer to Section 6.3.1.

6.3.3 Technical Feasibility

Refer to Section 6.3.1.

6.3.4 Economic Feasibility

Refer to Section 6.3.1.

6.4 Spill and Leak Prevention

6.4.1 Identification of Options

No options for reduction in this category could be identified. There are no spills or leaks of PM2.5 that could occur at Martinrea. Spill and leak prevention is not a concern and an option cannot be identified in this category that would result in a reduction of PM2.5.

6.4.2 Estimated Reductions

Refer to Section 6.4.1.

6.4.3 Technical Feasibility

Refer to Section 6.4.1.

6.4.4 Economic Feasibility

Refer to Section 6.4.1.

6.5 On-Site Reuse and Recycling

6.5.1 Identification of Options

PM2.5 is only emitted as an air emissions once created, and as such, cannot be reused or recycled, therefore, no options for reduction in this category could be identified.

6.5.2 Estimated Reductions

Refer to Section 6.5.1.

6.5.3 Technical Feasibility

Refer to Section 6.5.1.

6.5.4 Economic Feasibility

Refer to Section 6.5.1

6.6 Improved Inventory Management/Purchasing Techniques

6.6.1 Identification of Options

The air emissions of PM2.5 have no relation to inventory management or purchasing techniques, therefore no options for reduction in this category could be identified.

6.6.2 Estimated Reductions

Refer to Section 6.6.1.

6.6.3 Technical Feasibility

Refer to Section 6.6.1.

6.6.4 Economic Feasibility

Refer to Section 6.6.1.

6.7 Training or Improved Operating Practices

6.7.1 Identification of Options

No options of reduction for this category could be identified. Employees are trained on each piece of machinery, and the requirements for every part that the Facility produces. Work instruction and quality control documents are posted at every work station.

Quality checks are completed by operators and by Quality Auditors several times per shift to ensure that all parts are conforming to customer specification. All parts also go through a central/final inspection where parts are verified and another final inspection is completed before the Package and Shipping Process.

Employees are trained on any changes or updates to the production of parts and the quality system document is used to document the training and entered on each employee's file.

Martinrea conducts continuous improvement meetings and production meetings to ensure issues are dealt with and communicated as soon as possible to ensure the quality of parts are in conformance with the customer demands.

6.7.2 Estimated Reductions

Refer to Section 6.7.1.

6.7.3 Technical Feasibility

Refer to Section 6.7.1

6.7.4 Economic Feasibility

Refer to Section 6.7.1.

7. Plan Certifications

7.1 Certification by Highest Ranking Employee

As of September 21, 2015, I, Don Gillier, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

[PM2.5]

Don Gillier General Manager Date

As of September 21, 2015, I, Erik Martinez certify that I am familiar with the processes at Martinrea that use or create the toxic substance referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the Toxics Reduction Act, 2009 that are set out in the plan dated August 20, 2015 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

[PM2.5]

Erik Martinez Toxic Substance Reduction Planner License No. TSRP0005 Date

Table 1

PM2.5 Emission Release Estimates For Welding Martinrea Ridgetown Ridgetown, Ontario

Particulate (PM2.5)	Туре	Annual Usage (kg/yr)	Total Fume Emission Factor (g/kg)	Estimated Emission Quantity (2) (kg/yr)	Estimated Emission Quantity (t/year)
Lincoln	L-50	138,324	24.10 (1)	2500.21	2.50E+00
Weld Tip	CLFA25	1701.00	5.0	6.38	6.38E-03
Weld Tip	CLFA25S	136.50	5.0	0.51	5.12E-04
Weld Tip	CLFA26S	7.56	5.0	0.03	2.84E-05
Weld Tip	CLFB25S	132.57	5.0	0.50	4.97E-04
Weld Tip	CLFB26	43.88	5.0	0.16	1.65E-04
Weld Tip	MPB25	1054.60	5.0	3.95	3.95E-03
Weld Tip	62ZF-730-5	67.51	5.0	0.25	2.53E-04
Weld Tip	CLFC-26	83.50	5.0	0.31	3.13E-04
Weld Tip	FAB-260	623.61	5.0	2.34	2.34E-03
Weld Tip	MPE25Z	44.81	5.0	0.17	1.68E-04
Weld Tip	MPE26Z	76.09	5.0	0.29	2.85E-04
Weld Tip	WC1A25B	5.85	5.0	0.02	2.19E-05
			TOTAL	2,515.12	2.52

Note:

(1) Based on USEPA AP-42 emission factors for shielded metal arc welding (SMAW), provided in Section 12.19, Tables 12.19-1.

(2) Emission Factors based on PM10 emissions. PM10 emitted quantity multiplied by 75% to represent PM2.5 subset of PM10.



GHD | Report for Martinrea Ridgetown - Toxic Reduction Plan | 047955 (7)

Appendix A Recommendations

Draft for Review



September 21, 2015

Reference No. 047955

Mr. Ian Wood Martinrea 99 Golf Course Line Ridgetown, Ontario N0P 2C0

Dear Mr. Wood:

Re: Toxics Reduction Plan – PM2.5 – Planner Recommendations

1. Introduction

The Toxics Reduction Act and Ontario Regulation (O. Reg.) 455/09 require that each toxic substance reduction plan be reviewed and certified by a Licensed Toxic Substance Reduction Planner (Planner). Section 18 of O. Reg. 455/09 requires the Planner to provide recommendations, with supporting rationale, for the purposes of improving all aspects of the plan including the potential for reducing the use and creation of the toxic substance at the facility and the business rationale for implementing the plan.

The Planner is required to provide recommendations for any of the following relevant issues, or a written explanation of why a recommendation is not necessary:

- 1. Whether improvements could be made in the expertise relied on in preparing the plan.
- 2. Whether improvements could be made in:
 - i. The data and methods used for accounting purposes
 - ii. The process flow diagrams
 - iii. Reasons why the input and output balances are not approximately equal
 - iv. A description of how, when, where and why the substance is used or created
- 3. Whether there are technically and economically feasible options for reducing the use and creation of the substance at the facility that have not been identified in the plan that would result in reductions that are equal to or greater than those already identified in the plan.



- 4. Whether improvements could be made in:
 - i. The estimates of anticipated reduction of use or creation, releases to environment and contained in product of the substance
 - ii. In determination of the technical feasibility of options
 - iii. In determination of the economic feasibility of options
- 5. Whether improvements could be made to the estimates of the direct and indirect costs.
- 6. Whether the steps and timetable set out in the implementation plan are likely to be achieved.

2. Expertise Relied On In Preparing the Plan

This Toxic Substance Reduction Plan (Plan) was developed by a planning team that included lan Wood from Martinrea and Erik Martinez, a Licensed Toxics Reduction Planner.

Ian Wood is knowledgeable in all aspects of the production processes at Martinrea and was able to provide the information required to develop the Plan. All relevant data was collected from the appropriate departments. Erik Martinez has worked with various facilities for over five years, providing engineering consulting services on environmental projects. He is familiar with the Martinrea's Ridgetown Facility (Facility) processes.

The level of expertise relied on during the preparation of the Plan was sufficient that the involvement of any additional parties with relevant technical experience would not have improved the plan or increased the potential to reduce the creation of PM2.5.

3. Accounting

Data and Methods Used

The total amount of raw material used at the Facility in 2014 was calculated based on purchasing records. Depending on the amount of raw material entering the Facility, the welds using during the welding process, the cooling tower recirculation water and the usage rates for combustion of NG and propane were also provided by Martinrea. The amount of PM2.5 that is created during the applicable processes at the Facility was calculated based on the welds, the cooling tower recirculation water, and the usage rates for combustion of NG and propane and the corresponding emission factors for these activities.

The amount of material that is sent for recycling is tracked as a total mass of metal sent off-Site. However, this amount is not of relevance in the current case, as there is no PM2.5 used or contained in the product at the Facility.

PM2.5 is released to air from the following processes at the Facility:

• <u>Welding Process</u> with consumable electrodes. The PM2.5 releases to air from the Welding Process were estimated based on the annual usage of welds and total fumes emission factors, using the USEPA AP-42 emission factors for shielded metal arc welding (SMAW), Section 12.19,

Tables 12.19-1. The data quality of this estimate is considered acceptable. The Facility has detailed records of weld type and annual usage, which allows for accurate estimate of PM2.5 emissions.

<u>Natural Gas and Propane Combustion Process.</u> Various combustion activities occur at the Facility during the processes flow. The combustion activities rely on the use of NG and propane, which create PM2.5 releases to air. The Facility has detailed records of NG, respectively propane usage rates, which allow for accurate estimate of PM2.5 emissions, based on usage rates * USEPA Emission Factor. Emission factors are as follows: the US EPA "AP-42" emission factors for NG and Emission Factor for propane Ch. 1.5. PM2.5. The data quality of this estimate is considered acceptable.

All quantities calculated for accounting purposes are based on engineering calculations or mass balance. Based on the data available and the type of processes involved at Martinrea, these are the most accurate and appropriate methods for accounting purposes.

Process Flow Diagrams

Martinrea maintains process flow charts for all stages of production. The process flow diagram provided for the purposes of this Plan is considered to be comprehensive and accurate. This level of detail provides a comprehensive understanding of the flow of material through the process. The Plan satisfies this condition of the Regulation and a recommendation is not necessary. The accounting quantities of PM2.5 have been calculated for each applicable process at the Facility.

Quantification Methods

The mass balances for PM2.5 were calculated using an Emission Factor and Mass Balance approach.

Description of How, When, Where, and Why The Substance Is Used or Created

The Plan satisfies this condition of the Regulation and a recommendation is not necessary.

4. Toxic Substance Reduction Options

Martinrea engaged in a detailed review of each reduction category, and ultimately was not able to identify an option that would reduce the creation of PM2.5, due to the nature of the business and the manufacturing operation.

5. Direct and Indirect Costs

All direct and indirect costs associated with the creation of PM2.5 were obtained from the purchasing and accounting departments. The Facility completed a thorough review of potential costs, including annual NPRI/TRA reporting, TRA Plan Preparation, and Martinrea Labour associated with TRA/NPRI.

The Plan satisfies this condition of the Regulation and I have no recommendations to improve the Plan regarding this requirement.

6. Implementation Plan

As previously stated, Martinrea will not be implementing any reduction options at this time as a detailed review of each reduction category yielded no option that would reduce PM2.5 at this time.

Should you have any questions on the above, please do not hesitate to contact us.

Yours truly,

GHD Limited

Erik Martinez, P. Eng.

Certified Toxics Reduction Planner – License #TSRP0005

JC/sn/25

Encl.

Appendix B Plan Summary

Appendix BTRA Plan Summary – PM2.5

Basic Facility Information

Name & CAS # of Substance	Particulate Matter ≤ 2.5µm	NA		
Substances for which other	Lead	7439-92-1		
Plans have been prepared	PM10	NA		
Facility Identification and Site	Address			
Company Name	Martinrea International Inc.			
Facility Name	Martinrea Ridgetown			
	Physical Address:	Mailing Address: (if different)		
Facility Address	99 Golf Course Line Ridgetown, Ontario N0P 2C0			
Spatial Coordination of Facility	4697616 N 427573 E; Zone 17			
Number of Employees	260			
NPRI ID	4891			
Ontario MOE ID Number	N/A			
Parent Company (PC) Informat	ion			
PC Name & Address Percent Ownership for each	Martinrea International Inc. 30 Aviva Park Drive Vaughan, ON L4L 9C7			
	100%			
Business Number for PC				
Primary North American Industrial Classification System Code (NAICS)				
2 Digit NAICS Code	33 Manufacturing			
4 Digit NAICS Code	3363-Motor Vehicle Parts Manufacturing			
6 Digit NAICS Code	336370 – Motor Vehicle Metal Stamping			

Company Contact Information	Company Contact Information				
	Ian Wood Industrial Engineering				
Facility Public Contact	ian.wood@martinrea.com	Same address as facility			
	Phone: 519 674- 0711 x223	,			
	Fax: 519 -674 -0500				
	Ian Wood Industrial Engineering				
Facility Technical Contact	ian.wood@martinrea.com	Same as facility address			
	Phone: 519 674- 0711 x223				
	Fax: 519 -674 -0500				
Company Coordinator Contact	Same as Facility Technical Contact				
	Erik Martinez, P.Eng.				
	Environmental Consultant	GHD Limited			
Person who Prepared the Plan: (if different from the	Planner License No. TSRP0005	651 Colby Drive			
Coordinator)	Erik.Martinez@GHD.com	N2V 1C2			
	Phone: 519- 884-0510 ext. 2342				
	Don Gillier General Manager				
Highest Ranking	don.gillier@martinrea.com	Same as facility address			
	Phone: 519- 674-0711 X258				
	Fax: 519- 674-0500				
Planner Information:					
	Erik Martinez, P.Eng.				
	Environmental Consultant	GHD Limited			
Planner Responsible for Making Recommendations	Planner License No. TSRP0005	651 Colby Drive Waterloo, ON			
	Erik.Martinez@GHD.com	N2V 1C2			
	Phone: 519- 884-0510 ext. 2342				
Planner Responsible for Certification	(same as planner responsible for making recommendations)				

Toxic Reduction Policy Statement of Intent

Martinrea (Facility) does not use PM2.5. Martinrea is currently producing PM2.5 as part of the Welding Process, Cooling Tower Process and Natural Gas and propane Combustion Process. The Facility does not currently intend to reduce the creation of this toxic substance at the Facility.

Reduction Objectives

Martinrea prides itself on technological innovation in order to produce high quality products in an environmentally responsible manner. Martinrea's manufacturing operation has already been optimized to minimize the use of raw materials. In the future, Martinrea will strive to reduce the creation of PM2.5 at the Facility, should an option become available.

Description of Facility

Martinrea International Inc. is a leader in the global automotive sector. Martinrea, the Facility, is located in Ridgetown, Ontario and manufactures automotive parts and related components.

All steel coils and sheets received at the facility go directly to Stamping. From Stamping approximately 30 percent is shipped directly off-Site while 60 percent is Spot Welded and 10 percent is MIG Welded before being shipped off-Site. Aluminized and aluminum materials, nuts, bolts, and studs retain article status and do not release reportable substances when processed or used.

Toxic Substance Reduction Options

After looking into the seven categories of toxic substance reduction options, no options were identified. Explanations are provided in the table below to detail why an option could not be identified in each category.

Toxic Substance Reduction Category	Option: Identification and Description
1) Materials or feedstock substitution	No option identified: Martinrea's clients are major automotive companies. The raw materials to be used by Martinrea are specified by the customer, and there are limited sources where the material can be purchased from. The material used and the composition of the material are not in Martinrea's control.
2) Product design or reformulation	No option identified: The product design is completely specified by the customer and is not within Martinrea's control. While the Facility equipment is owned by Martinrea, they cannot change the size of the part produced. The amount of scrap generated at the Manufacturing Stage is monitored and ways to reduce the amount generated are encouraged.
3) Equipment or Process Modification	No option identified: Martinrea conducts regular preventative maintenance on all equipment to ensure it is operating efficiently. The process is highly specialized and due to the unique chemistry of the process modifications are not possible.

Toxic Substance Reduction Category	Option: Identification and Description
4) Spill and Leak prevention	No option identified: All of Martinrea's raw materials are solids. Spill and leak prevention is not a concern and an option cannot be identified in this category that would result in a reduction in the production of PM2.5.
5) On-site reuse or recycling	No option identified: All metal scrap generated at the Facility is recycled. Martinrea is paid for all scrap metal, and therefore the recovery of scrap metal has already been optimized. Martinrea re-works off-spec parts into the processes where possible. Any parts that are unable to be re-worked are recycled.
6) Improve inventory management or purchasing techniques	No option identified: Martinrea's inventory is controlled by customer demand. The Facility has limited inventory at any given time, which addresses any issues of stock rotation (additionally, metal does not have an expiry date).
7) Training or improved operating practices	No option identified: Employees are trained on each piece of machinery, and the requirements for every part that the Facility produces. Work instruction and quality control documents are posted at every work station. Quality checks are completed by operators and by Quality Auditors several times per shift to ensure that all parts are conforming to customer specification. All parts also go through a central/final inspection where parts are verified and another final inspection is completed before the Package and Shipping Process. Employees are trained on any changes or updates to the production of parts and the quality system document is used to document the training and entered on each employee's file. TRW conducts continuous improvement meetings and production meetings to ensure issues are dealt with and communicated as soon as possible to ensure the quality of parts are in conformance with the customer demands.

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for the creation of PM2.5.

Certification by Highest Ranking Employee

Attached.

Certification by Licensed Planner

Attached.

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