PLAN SUMMARY
CORVEX Manufacturing
12 Independence Place
Guelph, Ontario, Canada
N1K 1H8

Facility Information			
Name & CAS # of Substance	Manganese	7439-96-5	
Substances for which other plans have been prepared Facility Identification and Site	Nickel Address	7440-02-0	
Company Name	Lina	mar	
Facility Name	Corvex Mai	,	
Facility Address	12 Independence ON N1		
	Northing 4820281.309 Easting 556559.962		
Spatial Coordinates of Facility	460		
Number of Employees	160 approx.		
NPRI ID	7259		
Ontario MOE ID Number			
Parent Company (PC) Inforn	nation		
PC Name & Address	Linamar Corporation, 287 Speedvale Ave. West, Guelph, ON N1H 1C5		
Percent Ownership of PC	100%		
Business Number for PC	103333662		
Primary North American Industrial Classificati			
		~~~2	
2 Digit NAICS Code 4 Digit NAICS Code	33 3363		
6 Digit NAICS Code	336390		
Company Contact Informa		W30	
Company Contact Informa	Mr. John Graham		
Facility Public Contact	General Manager		
	519-763-7786		
Parent Company Contact Info	rmation		
Parent Company Contact		plicable	

### PLAN SUMMARY STATEMENT

This plan summary reflects the content of the toxic substance reduction plan for CORVEX MANUFACTURING for MANGANESE, prepared by Jeff King (EHS Specialist for Corvex Manufacturing) and Melissa Gould (Toxic Reduction Planner, Planner License #TSRP0259).

#### STATEMENT OF INTENT

CORVEX MANUFACTURING is committed to playing a leadership role in protecting the environment. Whenever feasible, CORVEX MANUFACTURING will eliminate and reduce the use of MANGANESE in full compliance with all Federal and Provincial Regulations.

## REDUCTION OBJECTIVES

CORVEX MANUFACTURING prides itself on technical innovation in order to produce high quality automotive components in an environmentally responsible manner.

This plan documents the options available to CORVEX MANUFACTURING to optimize the use of MANGANESE at the facility.

The following option(s) has been identified for implementation to reduce the use MANGANESE:

- Use scrap parts for machine set-up purposes it is estimated that this will reduce scrap by
   5-7% and the target implementation is due by end of 2013
- Order less raw material it is estimated that this will reduced the amount used by 15% and the target implementation is due by end of 2013
- Training for Personnel Training can teach employees how to effectively make sure they are building parts to the correct size. Improvements to the procedure can assist CORVEX MANUFACTURING in identifying errors earlier to reduce the amount of rejected parts we send to recycling. This effort will therefore reduce the amount of MANGANESE used. It is estimated that this will reduce total MANGANESE usage across applicable product lines. Implementation and education on this practice is on-going.
- This facility does not create MANGANESE, therefore the plan does not address reducing its creation.

		Amount	Amount	Air Release	Amount	Amount	Amount Contained in
		Used	Created	Estimate	Disposed	Transferred	Product
Сотроинд	CAS No.	(tonnes/yr)	(tounes/yr)	(tonnes/yr)	(tounes/yr)	(tonnes/yr)	(tonues/yr)
Managanaa	7439-						
Manganese	96-5	167.73	NA	NA	NA	36.166	131.559

## **DESCRIPTION OF SUBSTANCE**

MANGANESE is a toxic substance which enters the facility at the receiving stage, where it is contained within the casting (metal component). CORVEX MANUFACTURING machines the metal components to customer specifications. The final product is sent to various customers. CORVEX MANUFACTURING does not create, destroy or change the manganese composition during the machining process. All waste manganese is sent off-site for recycling.

## REDUCTION OPTIONS TO BE IMPLEMENTED

CORVEX MANUFACTURING's commitment to continuous improvement has resulted in a lean and efficient manufacturing facility.

The facility's continuous improvement measures, coupled with the acknowledgment that the customer provides the specifications for the raw materials processed at the site mean that there are no additional options for the facility to implement.

## CERTIFICATION BY HIGHEST RANKING EMPLOYEE

As of December 28, 2012, I, John Graham, 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 made under the Act.

Toxic Sulastance: Manganese

John Graham General Manager

Corvex Manufacturing

### CERTIFICATION BY LICENSED PLANNER

As of December 28, 2012, I, Melissa Gould, certify that I am familiar with the processes at Corvex 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 December 28, 2012 and the plan complies with that Act and Ontario Regulation 455/09 made under the act.

Toxic Substance: Manganese

Melissa Gould

Planner License #TSRP0259 Expiry Date: 9/30/2017

melissa.gould@linamar.com

Facility Information				
Name & CAS # of Substance	Nickel	7440-02-0		
Substances for which other plans have been prepared	Manganese	7439-96-5		
Facility Identification and Site				
Company Name	<u> </u>	amar		
Facility Name		inufacturing		
Facility Address	12 Independend ON N	ce Place, Guelpl 1K 1H8		
Spatial Coordinates of Facility	_	Northing 4820281.309 Easting 556559.962		
Number of Employees	160 a	160 approx.		
NPRI ID		7259		
Ontario MOE ID Number		and the same		
Parent Company (PC) Inform	mation			
PC Name & Address	Speedvale Ave	Linamar Corporation, 287 Speedvale Ave. West, Guelph, ON N1H 1C5		
Percent Ownership of PC	10	100%		
Business Number for PC	1033	103333662		
Primary North American Industrial Classificat	ion System Code (NAI	ICS)		
2 Digit NAICS Code	<del></del> <u>'</u>	33		
4 Digit NAICS Code	3:	3363		
6 Digit NAICS Code	330	336390		
Company Contact Inform	ation			
	Mr. John Graham			
Facility Public Contact	General Manager			
	519-763-7786			
Parent Company Contact Info	ormation			
Parent Company Contact		oplicable		
		× <del></del>		

#### PLAN SUMMARY STATEMENT

This plan summary reflects the content of the toxic substance reduction plan for CORVEX MANUFACTURING for NICKEL, prepared by Jeff King (EHS Specialist for Corvex Manufacturing) and Melissa Gould (Toxic Reduction Planner, Planner License #TSRP0259).

### STATEMENT OF INTENT

CORVEX MANUFACTURING is committed to playing a leadership role in protecting the environment. Whenever feasible, CORVEX MANUFACTURING will eliminate and reduce the use of NICKEL in full compliance with all Federal and Provincial Regulations.

## REDUCTION OBJECTIVES

CORVEX MANUFACTURING prides itself on technical innovation in order to produce high quality automotive components in an environmentally responsible manner.

This plan documents the options available to CORVEX MANUFACTURING to optimize the use of NICKEL at the facility.

The following option(s) has been identified for implementation to reduce the use NICKEL:

- Use scrap parts for machine set-up purposes it is estimated that this will reduce scrap by recycled by 5-7% and the target implementation is due by end of 2013
- Order less raw material it is estimated that this will reduced the amount used by 15% and the target implementation is due by end of 2013
- Training for Personnel Training can teach employees how to effectively make sure they are building parts to the correct size. Improvements to the procedure can assist CORVEX MANUFACTURING in identifying errors earlier to reduce the amount of rejected parts we send to recycling. This effort will therefore reduce the amount of NICKEL used. It is estimated that this will reduce total NICKEL usage across applicable product lines. Implementation and education on this practice is on-going.
- This facility does not create NICKEL; therefore the plan does not address reducing its creation.

			Amount Used	Amount Created	Air Release Estimate	Amount Disvosed	Amount Transferred	Amount Contained in Product
	Сотронив	CAS No.	(toimes/yr)	(tomes/yr)	(tonnes/yr)	(tounes/yr)	(tounes/yr)	(tonnes/yr)
Níckel		7440- 02-0	175.79	NA	NA	NA	36.976	139,84

## **DESCRIPTION OF SUBSTANCE**

NICKEL is a toxic substance which enters the facility at the receiving stage, where it is contained within the casting (metal component). CORVEX MANUFACTURING machines the metal components to customer specifications. The final product is sent to various customers. CORVEX MANUFACTURING does not create, destroy or change the NICKEL composition during the machining process. All waste NICKEL is sent off-site for recycling.

## REDUCTION OPTIONS TO BE IMPLEMENTED

CORVEX MANUFACTURING's commitment to continuous improvement has resulted in a lean and efficient manufacturing facility.

The facility's continuous improvement measures, coupled with the acknowledgment that the customer provides the specifications for the raw materials processed at the site mean that there are no additional options for the facility to implement.

## CERTIFICATION BY HIGHEST RANKING EMPLOYEE

As of December 28, 2012, I, John Graham, 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 made under the Act.

Toxic Substance: Nickel

John Graham General Manager

Corvex Manufacturing

# CERTIFICATION BY LICENSED PLANNER

As of December 28, 2012, I, Melissa Gould, certify that I am familiar with the processes at Corvex 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 December 28, 2012 and the plan complies with that Act and Ontario Regulation 455/09 made under the act.

Toxic Substance: Nickel

Melissa Gould

Planner License #TSRP0259 Expiry Date: 9/30/2017

melissa.gould@linamar.com