

## Toxic Reduction Plan Summary

### Substance

Substance Name and CAS #	Manganese, CAS# 7439-96-5
Substances for which other plans have been prepared	Toluene
Beneficial Uses at Facility	Significant Component of Plate Steel; Required for Equipment Integrity
Previously Implemented Reduction Activities	N/A

### Facility Information

Company Name	General Dynamics Land Systems - Canada
Facility Name	General Dynamics Land Systems London
Facility Physical Address	1991 Oxford Street East London, Ontario N5V 2Z7
Facility Mailing Address	Same as Physical Address
Spatial Coordinates of Facility	43.01930, -81.16790
Number of Employees	1800
NPRI ID	0000010698
Ontario MOE ID Number	N/A
2 Digit NAICS Code	33
4 Digit NAICS Code	3369
6 Digit NAICS Code	336990

### Parent Company Information

Parent Company Name	General Dynamics Land Systems
Address	38500 Mound Road Sterling Heights, MI 48310
Percent Ownership	100%
Business Number	865069421

### Facility Contact

Public Contact	Sasha Finley
Address	1991 Oxford Street East London, Ontario N5V 2Z7
email	<a href="mailto:finleys@gdls.com">finleys@gdls.com</a>
Phone	(519) 964-5476
Fax	(519) 964-5003

## **Statement of Intent**

General Dynamics Land Systems - Canada is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate, or reduce the use, creation and discharge of manganese in full compliance with all Federal and Provincial Regulations.

## **Plan Objectives**

While General Dynamics Land Systems – Canada does not intend to reduce the use of manganese, the plan was developed with the following objectives:

- We will continue to operate in full compliance with all applicable environmental regulations; and
- We will continue to manage releases of nickel through current and future pollution prevention and best management practices.

## **Description of Substance**

Manganese is used in two ways at the GDLS facility:

1. Manganese is a significant component of plate steel
2. Manganese is required for equipment integrity

## **Toxic Substance Reduction Option(s) To Be Implemented**

For the purposes of the Toxics Reduction Act, GDLS will not be implementing any options to reduce the use of manganese in its operations because it is a component of their product.

## **Plan Summary Statement**

This plan summary accurately reflects the content of the toxic substance reduction plan for manganese, prepared by General Dynamics Land Systems – Canada, dated December 17, 2012.

### **Certification By Highest Ranking Employee**

As of December 17, 2012, I, Danny Deep, 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.

Substance: Manganese

Original signed

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Danny Deep  
Vice President  
General Dynamics Land Systems - Canada

### **Certification By Licensed Planner**

As of December 17, 2012, I, Mark Roehler certify that I am familiar with the processes at General Dynamics Land Systems - Canada 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 December 17, 2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act

Substance: Manganese

Original signed

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Mark Roehler  
Principal, Toxic Substance Reduction Planner  
License Number: TSRP0128  
LEHDER Environmental Services Limited

## Toxic Reduction Plan Summary

### Substance

Substance Name and CAS #	Ethylene Glycol, CAS# 107-21-1
Substances for which other plans have been prepared	Particulate Matter (and its size fractions PM <sub>2.5</sub> and PM <sub>10</sub> ), Manganese, Toluene
Beneficial Uses at Facility	Major Component of Antifreeze for Defense Vehicles; Small Component of Sealant and Caulking Products
Reasons for Use	Component of Antifreeze
Reasons for Use – Summary Statement (mandatory)	Ancillary/other use
Reasons for Creation	This substance is not created at the facility
Reasons for Creation – Summary Statement (mandatory)	N/A
Previously Implemented Reduction Activities	N/A

### Facility Information

Company Name	General Dynamics Land Systems - Canada
Facility Name	General Dynamics Land Systems London
Facility Physical Address	1991 Oxford Street East London, Ontario N5V 2Z7
Facility Mailing Address	Same as Physical Address
Spatial Coordinates of Facility	43.01930, -81.16790
Number of Employees	1800
NPRI ID	0000010698
Ontario MOE ID Number	N/A
2 Digit NAICS Code	33
4 Digit NAICS Code	3369
6 Digit NAICS Code	336990

### Parent Company Information

Parent Company Name	General Dynamics Land Systems
Address	38500 Mound Road Sterling Heights, MI 48310
Percent Ownership	100%
Business Number	865069421

### Facility Contact

Public Contact	Sasha Finley
Address	1991 Oxford Street East London, Ontario N5V 2Z7
email	<a href="mailto:finleys@gdls.com">finleys@gdls.com</a>
Phone	(519) 964-5476
Fax	(519) 964-5003

## **Statement of Intent**

General Dynamics Land Systems - Canada is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate, or reduce the use, creation and discharge of ethylene glycol in full compliance with all Federal and Provincial Regulations.

## **Plan Objectives**

The objective of this plan is to reduce the use of ethylene glycol by implementing the technically and economically feasible reduction options.

## **Description of Substance**

Ethylene glycol is used at the GDLS facility as a solvent required for a functioning paint system.

## **Toxic Substance Reduction Option(s) To Be Implemented**

For the purposes of the Toxics Reduction Act, GDLS will not be implementing any options to reduce the use of ethylene glycol in its operations because it is a major component of and a requirement for their final product.

## **Plan Summary Statement**

This plan summary accurately reflects the content of the toxic substance reduction plan for ethylene glycol, prepared by General Dynamics Land Systems – Canada, dated December 16, 2013.

### **Certification By Highest Ranking Employee**

As of December 16, 2013, I, Danny Deep, 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.

Substance: Ethylene Glycol

#### **Original Signed**

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Danny Deep  
Vice  
President  
General Dynamics Land Systems -  
Canada Terry Thrasher: Delegation of  
Authority (Senior Director Business  
Development)

### **Certification By Licensed Planner**

As of December 16, 2013, I, Mark Roehler certify that I am familiar with the processes at General Dynamics Land Systems - Canada 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 December 16, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Substance: Ethylene Glycol

#### **Original Signed**

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Mark Roehler  
Principal, Toxic Substance Reduction  
Planner License Number: TSRP0128  
LEHDER Environmental Services Limited

## Toxic Reduction Plan Summary

### Substance

Substance Name and CAS #	PM2.5, CAS# N/A - M10 PM10, CAS# N/A - M09
Substances for which other plans have been prepared	Ethylene Glycol, Manganese, Toluene
Beneficial Uses at Facility	Particulate Matter (and its size fractions PM <sub>10</sub> /PM <sub>2.5</sub> ) has no beneficial use on site
Reasons for Use	This substance is not used at the facility
Reasons for Use – Summary Statement (mandatory)	N/A
Reasons for Creation	As a by-product
Reasons for Creation – Summary Statement (mandatory)	The substance is a by-product of key reactions within the manufacturing processes at the site
Previously Implemented Reduction Activities	GDLS has previously installed dust collectors to minimize emissions

### Facility Information

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Phone	(519) 964-5476
Fax	(519) 964-5003

## **Statement of Intent**

General Dynamics Land Systems - Canada is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate, or reduce the use, creation and discharge of Particulate Matter (and its size fractions PM<sub>2.5</sub> and PM<sub>10</sub>) in full compliance with all Federal and Provincial Regulations.

## **Plan Objectives**

The objective of this plan is to reduce the use of Particulate Matter (and its size fractions PM<sub>2.5</sub> and PM<sub>10</sub>) by implementing the technically and economically feasible reduction options.

## **Description of Substance**

Particulate Matter (and its size fractions PM<sub>2.5</sub> and PM<sub>10</sub>) is created in the manufacture of defense vehicles.

## **Toxic Substance Reduction Option(s) To Be Implemented**

For the purposes of the Toxics Reduction Act, the facility will not be implementing any options to reduce the creation of particulate matter in its operations because it is a by-product of key reactions within the current manufacturing processes at the site. In the past, the facility has implemented multiple programs to prevent and limit discharges. There were no further feasible (technical and economic) reduction options identified.

## **Plan Summary Statement**

This plan summary accurately reflects the content of the toxic substance reduction plan for Particulate Matter (and its size fractions PM<sub>2.5</sub> and PM<sub>10</sub>), prepared by General Dynamics Land Systems – Canada, dated December 16, 2013.



### **Certification By Highest Ranking Employee**

As of December 16, 2013, I, Danny Deep, 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.

Substance: Particulate Matter (and its size fractions PM<sub>2.5</sub> and PM<sub>10</sub>)

#### **Original Signed**

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Danny Deep  
Vice President  
General Dynamics Land Systems - Canada  
Terry Thrasher: Delegation of Authority  
(Senior Director Business Development)

### **Certification By Licensed Planner**

As of December 16, 2013, I, Mark Roehler certify that I am familiar with the processes at General Dynamics Land Systems - Canada 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 December 17, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Substance: Particulate Matter (and its size fractions PM<sub>2.5</sub> and PM<sub>10</sub>)

#### **Original Signed**

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Mark Roehler  
Principal, Toxic Substance Reduction Planner  
License Number: TSRP0128  
LEHDER Environmental Services Limited