

General Dynamic Land Systems Canada – London Facility

Toxic Reduction Public Summary Report

2018 Reporting Year

Facility Information

Company Name	General Dynamics Land Systems – Canada
Facility Name	General Dynamics Land Systems London (GDLS-L)
Facility Physical Address	1991 Oxford Street East, London, Ontario, N5V 2Z7
Facility Mailing Address	Same as Physical Address
Geographical Coordinates of Facility	Zone 17; 485652.69 E, 4762757.48 N Latitude: 43.01930; Longitude: -81.16790
Number of Employees	1350
NPRI ID	10698
6 Digit NAICs Code	336990

Company Business Information

Parent Company	General Dynamics Canadian Holding Inc. 1991 Oxford Street, East, London, Ontario, N5V 2Z7
Percent Ownership	100%

Facility Contact Information

Public Contact	Mark Blesity Manager Security, ER, LR & EHS
Contact Address	1991 Oxford Street East, London, Ontario, N5V 2Z7
Contact Details	Phone: 519-964-5900 ext 6551 Fax: 519-964-5003

Summary Report Details

Reporting Year	2018
Summary Report Date	29 May 2019
TRA Substance - Phase I	Manganese – Does Not Meet Reporting Criteria Toluene – Does Not Meet Reporting Criteria Total Volatile Organics – Does Not Meeting Reporting Criteria
TRA Substance - Phase II	Ethylene Glycol PM ₁₀ PM _{2.5}

TRA Reporting Certification

As of 31 May 2019, I, John E. Ellison, certify that I have read the report on the toxic substance reduction plan(s) for the toxic substances identified above and am familiar with their contents and to my knowledge the information contained in the report(s) is factually accurate and complies with the Toxics Reduction Act, 2009 and Ontario Regulation O.Reg. 455/09 (General) made under that Act.

The Toxic Substance Summary Report (original submission) is signed off by:

Highest Ranking Employee: John E. Ellison
Vice President & General Manager

John Ellison – signature on original June 3, 2019

Signature Date

General Dynamic Land Systems Canada – London Facility

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2018 Reporting Year

TRA Substance: **Ethylene Glycol**
 CAS # 107-21-1

TRA Reporting Phase	II			
TRA Plan Submission Date	16 December 2013			
TRA Public Summary Reporting Date	29 May 2019			
Status of Substance	MPO > 10 tonnes			
Justification of Status	Part 1A NPRI Substance			
Plant Objectives and Targets	For the purpose of the Toxics Reduction Act, GDLS – C – London Facility will not be implementing any options to reduce the use of ethylene glycol in its operations as it is a major component of and a requirement for their final product.			
Accounting and Comparison				
<i>Pathways</i>	2018 Tonnes	2017 Tonnes	Change Tonnes	Change %
U – Enters the Process	>10-100	>10-100	-4.420	-30.41
C – Created	0	0	0	0
P – In Product that leaves the Process	>10-100	>10-100	-5.974	-44.13
R – Released	0.0000	0.0002	-0.0002	-100
D – Disposed - Recycled	2.553	0.999	1.554	155.56
T - Transferred	0	0	0	0
Justification of Changes	<ul style="list-style-type: none"> - decrease in production use - increase in waste antifreeze for recycling 			
Progress on Implementation		2018		
Summary of activities taken to implement reduction strategies		None		
Summary of additional activities that impacted the substance accounting and reductions achieved		None		
Summary of differences between the actions of the plan and any additional activities undertaken		None		
Details of any amendments to the TRA Plan		None		

General Dynamic Land Systems Canada – London Facility

Toxic Reduction Public Summary Report

2018 Reporting Year

TRA Substance: **Particulate Matter <= 10 Microns (PM₁₀)**
CAS # NA-M09

TRA Reporting Phase	II			
TRA Plan Submission Date	16 December 2013			
TRA Public Summary Reporting Date	29 May 2019			
Status of Substance	Release Threshold >0.5 tonnes			
Justification of Status	Part 4 NPRI Substance			
Plant Objectives and Targets	For the purpose of the Toxics Reduction Act, GDLS-C – London 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.			
Accounting and Comparison				
<i>Pathways</i>	2018 Tonnes	2017 Tonnes	Change Tonnes	Change %
U – Enters the Process	0	0	0	0
C – Created	> 1 - 10	> 1-10	0.123	11.28
P – In Product that leaves the Process	0	0	0	0
R – Released	1.213	1.090	0.123	11.28
D – Disposed	Not Applicable			
T - Transferred	Not Applicable			
Justification of Changes	Increase in production – painting. Increased combustion of natural gas and diesel fuel.			
Progress on Implementation				
	2018			
Summary of activities taken to implement reduction strategies	None			
Summary of additional activities that impacted the substance accounting and reductions achieved	None			
Summary of differences between the actions of the plan and any additional activities undertaken	None			
Details of any amendments to the TRA Plan	None			

General Dynamic Land Systems Canada – London Facility

Toxic Reduction Public Summary Report

2018 Reporting Year

TRA Substance: **Particulate Matter <= 2.5 Microns (PM_{2.5})**
CAS # NA-M10

TRA Reporting Phase	II			
TRA Plan Submission Date	16 December 2013			
TRA Public Summary Reporting Date	29 May 2019			
Status of Substance	Release Threshold >0.3 tonnes			
Justification of Status	Part 4NPRI Substance			
Plant Objectives and Targets	For the purpose of the Toxics Reduction Act, GDLS-C – London 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.			
Accounting and Comparison				
<i>Pathways</i>	2018 Tonnes	2017 Tonnes	Change Tonnes	Change %
U – Enters the Process	0	0	0	0%
C – Created	> 1 - 10	> 1 - 10	0.123	11.45
P – In Product that leaves the Process	0	0	0	0
R – Released	1.197	1.074	0.123	11.45
D – Disposed	Not Applicable			
T - Transferred	Not Applicable			
Justification of Changes	Increase in production – painting. Increased combustion of natural gas and diesel fuel.			
Progress on Implementation	2018			
Summary of activities taken to implement reduction strategies	None			
Summary of additional activities that impacted the substance accounting and reductions achieved	None			
Summary of differences between the actions of the plan and any additional activities undertaken	None			
Details of any amendments to the TRA Plan	None			

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2018 Reporting Year

TRA Substance: **Manganese Compounds (including Permanganates)**
CAS # 7439-96-5

TRA Reporting Phase	I			
TRA Plan Submission Date	31 December 2012			
TRA Public Summary Reporting Date	29 May 2019			
Status of Substance	Does not meet NPRI reporting criteria for 2018 Reporting Year			
Justification of Status	Manganese does not meet the reporting requirement for the 2018 Reporting Year. A TRA Exit Record has been submitted for Manganese for the 2018 operational year.			
Plant Objectives and Targets	<p>While GDLS-C –London Facility does not intend to reduce the use of Manganese, the plan was developed with the following objectives:</p> <ul style="list-style-type: none"> - We will continue to operate in full compliance with all applicable environmental regulation; and - We will continue to manage releases of Manganese through current and future pollution prevention and best management practices. 			
Pathways	2018 Tonnes	2017 Tonnes	Change Tonnes	Change %
U – Enters the Process	DNMC	>10 - 100	-	-
C – Created	DNMC	0	-	-
P – In Product that leaves the Process	DNMC	>10 - 100	-	-
R – Released	DNMC	0.0027	-	-
D – Disposed - Recycled	6.301	6.300	0.001	0.02
T - Transferred	DNMC	0	-	-
Justification of Changes	Not Applicable			
Progress on Implementation	2018			
Summary of activities taken to implement reduction strategies	Not Applicable			
Summary of additional activities that impacted the substance accounting and reductions achieved	Not Applicable			
Summary of differences between the actions of the plan and any additional activities undertaken	Not Applicable			
Details of any amendments to the TRA Plan	Not Applicable			

DNMC – Does Not Meet Criteria