

General Dynamic Land Systems Canada – London Facility

Toxic Reduction Public Summary Report

2017 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	Sasha Finley Area Manager – Environment, Health and Safety
Contact Address	1991 Oxford Street East, London, Ontario, N5V 2Z7
Contact Details	Phone: 519-964-5476 Fax: 519-964-5003

Summary Report Details

Reporting Year	2017
Summary Report Date	31 May 2018
TRA Substance - Phase I	Manganese – Does Not Meet Reporting Criteria – Voluntary Reporting 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 2018, I, Danny Deep, 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: Danny Deep
Vice President

Danny Deep - Signature on Original

June 1, 2018

Signature

Date

General Dynamic Land Systems Canada – London Facility

Toxic Reduction Public Summary Report

2017 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	31 May 2018			
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>	2017 Tonnes	2016 Tonnes	Change Tonnes	Change %
U – Enters the Process	>10-100	>10 - 100	1.542	11.87
C – Created	0	0	0	0
P – In Product that leaves the Process	>10-100	>10 - 100	2.552	23.23
R – Released	0.0002	0.0002	0	0
D – Disposed - Recycled	0.999	2.009	-1.010	- 50.27
T - Transferred	0	0	0	0
Justification of Changes	<ul style="list-style-type: none"> - increase in production use - decrease in waste antifreeze for recycling 			
Progress on Implementation		2017		
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

2017 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	31 May 2018			
Status of Substance	Does not meet NPRI reporting criteria for 2017 Reporting Year			
Justification of Status	Manganese does not meet the reporting requirement for the 2017 Reporting Year, however due to the correlation of the Manganese MPO and the steel used in production GDLS-C – London Facility has chosen to voluntarily continue to report for Manganese. Projected production volumes have the potential to result in Manganese meeting the reporting threshold criteria for 2018.			
Plant Objectives and Targets	While GDLS-C –London Facility does not intend to reduce the use of Manganese, the plan was developed with the following objectives: <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. 			
<i>Pathways</i>	2017 Tonnes	2016 Tonnes	Change Tonnes	Change %
U – Enters the Process	>10 - 100	>10 - 100	-1.281	-6.07
C – Created	0	0	0	0
P – In Product that leaves the Process	>10 - 100	>10 - 100	-0.938	-6.48
R – Released	0.0027	0.003	-0.0003	-10.0
D – Disposed - Recycled	6.300	6.640	-0.340	- 5.12
T - Transferred	0	0	0	0
Justification of Changes	No significant change <10%			
Progress on Implementation	2017			
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			

General Dynamic Land Systems Canada – London Facility

Toxic Reduction Public Summary Report

2017 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	31 May 2018			
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>	2017 Tonnes	2016 Tonnes	Change Tonnes	Change %
U – Enters the Process	0	0	0	0
C – Created	> 1 - 10	> 1-10	0.123	12.72
P – In Product that leaves the Process	0	0	0	0
R – Released	1.090	0.967	0.123	12.72
D – Disposed	N/A			
T - Transferred	N/A			
Justification of Changes	Increase in production			
Progress on Implementation				
	2017			
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

2017 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	31 May 2018			
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>	2017 Tonnes	2016 Tonnes	Change Tonnes	Change %
U – Enters the Process	0	0	0	0%
C – Created	> 1 - 10	> 1 - 10	0.1238	13.03
P – In Product that leaves the Process	0	0	0	0
R – Released	1.074	0.9502	0.1238	13.03
D – Disposed	N/A			
T - Transferred	N/A			
Justification of Changes	Increase in production			
Progress on Implementation			2017	
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	