



2021

ANNUAL EMISSIONS REPORTING

FACILITY REPORT

*An Assessment for the Reporting of the National Pollutant Release
Inventory (NPRI) and other Emissions Reporting Programs*

Prepared for:

Devtek Aerospace Inc.
1665 Highland Road West
Kitchener, ON N2N 3K5

Project No.: 22ELC005

ENVIROLUM CONSULTING INC.

KITCHENER, ON
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1.0 Introduction

EnviroLUM Consulting Inc. (*EnviroLUM*) was retained by Devtek Aerospace Inc. to assess the 2021 National Pollutant Release Inventory (*NPRI*), Environment Canada's Greenhouse Gas Emissions (*Federal GHG*), and Ontario Greenhouse Gas Emissions reporting program requirements for their facility located at 1665 Highland Road West in Kitchener, Ontario. Reporting under the Ontario Toxic Substance Reduction Act is no longer required since this regulation was repealed on December 31, 2021.

The facility manufactures landing gear and structural parts for the aerospace industry. Processes include precision machining and assembly. The assessment of substances manufactured, processed, or otherwise used (*MPO*) is based on purchasing data of raw material provided by Devtek Aerospace Inc. for the 2021 calendar year. Overall metals (aluminum, carbon steel, and titanium) purchased has decreased from 645,238 kg in 2020 to 554,170 kg in 2021.

The total amount of scrap metal recycled has increased from 52,941 kg in 2020 to 3,515,339 kg in 2021.

A summary of the assessment for this facility for each applicable reporting program for the year 2021 is provided in this report.

2.0 National Pollutant Release Inventory

The NPRI is a federal initiative directed by Environment Canada under the Canadian Environmental Protection Act, 1999 (*CEPA*) that is triggered when specific facility and processing criteria are met. If the reporting criteria for this initiative are met, then reporting for releases to air, water, and land; waste transfers; waste disposals; and transfers for recycling is required.

A report on the air emissions of the substance(s) manufactured, processed, or otherwise used that triggered the reporting threshold must be submitted before June 1, 2022. Details of the NPRI assessment of the materials purchased at the facility are provided in Appendix A.

All volatile organic compounds are assumed to be released to air at 100%. The total VOCs calculated from the 2021 chemical inventory shows that quantity used/purchased triggers the reporting threshold. Therefore, total VOCs must be reported for the 2021 year. No speciated VOCs listed under Part 5 meet the reporting threshold of 1000 kg and therefore is not required to report. No metal contaminants meet the reporting threshold. Detailed emission calculations are provided in Appendix E.

A summary of air emissions for the reportable substance(s) is shown in Table 1.

Table 1: Summary of NPRI Release to Air

Substance	CAS	2021 Total Air Emissions (tonnes)	Substance Group
VOCs	NA – M16	18.037	Part 4

3.0 Environment Canada's GHG Reporting

Environment and Climate Change Canada (ECCC) requires reporting of GHG emissions by major emitters. The ECCC has revised the requirement by lowering the reporting threshold from 50,000 tonnes to 10,000 tonnes of carbon dioxide equivalent (CO_2e) beginning with the 2017 calendar year. Facilities that release more than 10,000 tonnes of CO_2e per year must report their emissions by June 1, 2022.

A screening level assessment of GHG emissions for this program indicating the facility does not meet reporting criteria is included in Appendix B of this report. As per the *Technical Guidance on Reporting GHG Emissions 2017*, only direct emissions are evaluated for this program (i.e., indirect emissions from electricity generation are not evaluated and therefore this assessment should not be considered a completed GHG inventory in accordance with ISO 14064 or the World Resource Institute's GHG Protocol).

4.0 Ontario GHG Reporting

Effective August 1, 2018, this requirement is regulated under the Environmental Protection Act as the Greenhouse Gas Emissions: Quantification, Reporting, and Verification Regulation 390/18. The regulation requires facilities to report by June 1 annually for all regulated sources that emit 10,000 tonnes of carbon dioxide equivalent (CO_2e) or more per year.

A screening level assessment of GHG emissions for this program indicating the facility does not meet reporting criteria is included in Appendix C of this report.

5.0 Conclusions

This report summarizes the assessment of the NPRI, Federal GHG, and provincial GHG reporting program requirements for the 2021 operating year.

The data as it was submitted to the Ontario Ministry of Environment and Environment Canada can be viewed online through the SWIM system at any time (<https://ec.ss.ec.gc.ca/>). A copy of the Confirmation of Submission is included in Appendix F. As well, a hardcopy of the data can also be printed through the SWIM online system.

APPENDIX A

NPRI Assessment Summary

NPRI - SUMMARY 2021**Part 1A: Core Substances**

Nothing to report

Part 1B: Other Substances

Nothing to report

Part 2: Polycyclic Aromatic Hydrocarbons

Nothing to report

Part 3: Hexachlorobenzene and Dioxins / Furans

Nothing to report

Part 4: Criteria Air Contaminants

Substance	CAS	2021 Total Emissions (tonnes)	2020 Total Emissions (tonnes)	% Change in Total Emissions	Comments
VOCs	NA-M16	18.037	24.315	-25.8%	no significant change.

Part 5: Speciated Volatile Organic Compounds

Nothing to report

Part 1A (2020/2021)

Substance	CAS	Total Usage	Threshold (kg)	Report?
N,N-Dimethylformamide	68-12-2	0.00	10,000	No
Vinyl chloride	75-01-4	0.00	10,000	No
Acetonitrile	75-05-8	0.00	10,000	No
Dichloromethane	75-09-2	0.00	10,000	No
Trichloroethylene	79-01-6	0.00	10,000	No
Acrylamide	79-06-1	0.00	10,000	No
Acrylic acid (and its salts)	79-10-7	0.00	10,000	No
Chloroacetic acid (and its salts)	79-11-8	0.00	10,000	No
Boron trifluoride	7637-07-2	0.00	10,000	No
Potassium bromate	7758-01-2	0.00	10,000	No
Hydrogen sulphide	7783-06-4	0.00	10,000	No
Ethylbenzene	100-41-4	0.00	10,000	No
Styrene	100-42-5	0.00	10,000	No
Benzyl chloride	100-44-7	0.00	10,000	No
Chlorine dioxide	10049-04-4	0.00	10,000	No
p,p'-Methylenebis(2-chloroaniline)	101-14-4	0.00	10,000	No
Methylenebis(phenylisocyanate)	101-68-8	112.32	10,000	No
p,p'-Methylenedianiline	101-77-9	0.00	10,000	No
Bis(2-ethylhexyl) adipate	103-23-1	0.00	10,000	No
p-Dichlorobenzene	106-46-7	0.00	10,000	No
p-Phenylenediamine (and its salts)	106-50-3	0.00	10,000	No
1,2-Butylene oxide	106-88-7	53.46	10,000	No
Epichlorohydrin	106-89-8	0.00	10,000	No
1,3-Butadiene	106-99-0	0.00	10,000	No
Acrolein	107-02-8	0.00	10,000	No
1,2-Dichloroethane	107-06-2	0.00	10,000	No
Allyl alcohol	107-18-6	0.00	10,000	No
Ethylene glycol	107-21-1	0.00	10,000	No
Vinyl acetate	108-05-4	0.00	10,000	No
Methyl isobutyl ketone	108-10-1	0.00	10,000	No
Maleic anhydride	108-31-6	0.00	10,000	No
Toluene	108-88-3	0.00	10,000	No
Chlorobenzene	108-90-7	0.00	10,000	No
Cyclohexanol	108-93-0	0.00	10,000	No
Phenol (and its salts)	108-95-2	0.00	10,000	No
2-Methoxyethanol	109-86-4	0.00	10,000	No
2-Methoxyethyl acetate	110-49-6	0.00	10,000	No
n-Hexane	110-54-3	0.00	10,000	No
2-Ethoxyethanol	110-80-5	0.00	10,000	No
Cyclohexane	110-82-7	0.00	10,000	No
Pyridine (and its salts)	110-86-1	0.00	10,000	No
2-Ethoxyethyl acetate	111-15-9	0.00	10,000	No
Diethanolamine (and its salts)	111-42-2	0.00	10,000	No
2-Butoxyethanol	111-76-2	0.00	10,000	No
2-(2-Methoxyethoxy)ethanol	111-77-3	0.00	10,000	No
Propylene	115-07-1	0.00	10,000	No
Decabromodiphenyl oxide	1163-19-5	0.00	10,000	No
Bis(2-ethylhexyl) phthalate	117-81-7	0.00	10,000	No
Di-n-octyl phthalate	117-84-0	0.00	10,000	No
Catechol	120-80-9	0.00	10,000	No
1,2,4-Trichlorobenzene	120-82-1	0.00	10,000	No
2,4-Dichlorophenol (and its salts)	120-83-2	0.00	10,000	No
2,4-Dinitrotoluene	121-14-2	0.00	10,000	No
Triethylamine	121-44-8	0.00	10,000	No
N,N-Dimethylaniline (and its salts)	121-69-7	0.00	10,000	No

Substance	CAS	Total Usage	Threshold (kg)	Report?
Diphenylamine	122-39-4	0.00	10,000	No
Hydroquinone (and its salts)	123-31-9	0.00	10,000	No
Propionaldehyde	123-38-6	0.00	10,000	No
Butyraldehyde	123-72-8	0.00	10,000	No
1,4-Dioxane	123-91-1	0.00	10,000	No
Dimethylamine	124-40-3	0.00	10,000	No
Tetrachloroethylene	127-18-4	0.00	10,000	No
2,6-Di-t-butyl-4-methylphenol	128-37-0	0.00	10,000	No
Dimethyl phthalate	131-11-3	0.00	10,000	No
Molybdenum trioxide	1313-27-5	0.00	10,000	No
Thorium dioxide	1314-20-1	0.00	10,000	No
Cresol (all isomers and their salts)	1319-77-3	0.00	10,000	No
Xylene (all isomers)	1330-20-7	0.00	10,000	No
Asbestos (friable form)	1332-21-4	0.00	10,000	No
Aluminum oxide (fibrous form)	1344-28-1	0.00	10,000	No
Iron pentacarbonyl	13463-40-6	0.00	10,000	No
Nitilotriacetic acid (and its salts)	139-13-9	0.00	10,000	No
Ethyl acrylate	140-88-5	0.00	10,000	No
Butyl acrylate	141-32-2	0.00	10,000	No
2-Mercaptobenzothiazole	149-30-4	0.00	10,000	No
Methyl tert-butyl ether	1634-04-4	0.00	10,000	No
2,2, 4-Trimethylhexamethylene diisocyanate	16938-22-0	0.00	10,000	No
HCFC-141b	1717-00-6	0.00	10,000	No
HCFC-123 (and all isomers)	34077-87-7	0.00	10,000	No
Halon 1211	353-59-3	0.00	10,000	No
Isophorone diisocyanate	4098-71-9	0.00	10,000	No
HCFC-122 (and all isomers)	41834-16-6	0.00	10,000	No
Carbonyl sulphide	463-58-1	0.00	10,000	No
Formaldehyde	50-00-0	0.00	10,000	No
1,1- Methylenebis (4-isocyanatocyclohexane)	5124-30-1	0.00	10,000	No
4,6-Dinitro-o-cresol (and its salts)	534-52-1	0.00	10,000	No
Lithium carbonate	554-13-2	0.00	10,000	No
Nitroglycerin	55-63-0	0.00	10,000	No
Carbon tetrachloride	56-23-5	0.00	10,000	No
C.I. Basic Green 4	569-64-2	0.00	10,000	No
3,3'-Dichlorobenzidine dihydrochloride	612-83-9	0.00	10,000	No
Aniline (and its salts)	62-53-3	0.00	10,000	No
Thiourea	62-56-6	0.00	10,000	No
1,1,1,2-Tetrachloroethane	630-20-6	0.00	10,000	No
HCFC 124 (and all isomers)	63938-10-3	0.00	10,000	No
Formic acid	64-18-6	0.00	10,000	No
Diethyl sulphate	64-67-5	0.00	10,000	No
Methanol	67-56-1	0.00	10,000	No
Isopropyl alcohol	67-63-0	0.00	10,000	No
Chloroform	67-66-3	0.00	10,000	No
Hexachlorophene	70-30-4	0.00	10,000	No
n-Butyl alcohol	71-36-3	0.00	10,000	No
Benzene	71-43-2	0.00	10,000	No
Aluminum (fume or dust)	7429-90-5	9118.93	10,000	No
Vanadium (except when in an alloy) and its compounds		0.00	10,000	No
Bromomethane	74-83-9	0.00	10,000	No
Ethylene	74-85-1	0.00	10,000	No
Chloromethane	74-87-3	0.00	10,000	No
Methyl iodide	74-88-4	0.00	10,000	No
Hydrogen cyanide	74-90-8	0.00	10,000	No

Substance	CAS	Total Usage	Threshold (kg)	Report?
Chloroethane	75-00-3	0.00	10,000	No
Acetaldehyde	75-07-0	0.00	10,000	No
Carbon disulphide	75-15-0	0.00	10,000	No
Ethylene oxide	75-21-8	0.00	10,000	No
Phosgene	75-44-5	0.00	10,000	No
HCFC-22	75-45-6	0.00	10,000	No
Titanium tetrachloride	7550-45-0	0.00	10,000	No
Propylene oxide	75-56-9	0.00	10,000	No
Halon 1301	75-63-8	0.00	10,000	No
tert-Butyl alcohol	75-65-0	0.00	10,000	No
HCFC-142b	75-68-3	0.00	10,000	No
CFC-11	75-69-4	0.00	10,000	No
CFC-12	75-71-8	0.00	10,000	No
CFC-13	75-72-9	0.00	10,000	No
CFC-114	76-14-2	0.00	10,000	No
CFC-115	76-15-3	0.00	10,000	No
Sodium nitrite	7632-00-0	0.00	10,000	No
Hydrochloric acid	7647-01-0	0.00	10,000	No
Hydrogen fluoride	7664-39-3	0.00	10,000	No
Sulphuric acid	7664-93-9	0.00	10,000	No
Sodium fluoride	7681-49-4	0.00	10,000	No
Nitric acid	7697-37-2	0.00	10,000	No
Phosphorus (yellow or white)	7723-14-0	0.00	10,000	No
Bromine	7726-95-6	0.00	10,000	No
Hexachlorocyclopentadiene	77-47-4	0.00	10,000	No
Dicyclopentadiene	77-73-6	0.00	10,000	No
Dimethyl sulphate	77-78-1	0.00	10,000	No
Fluorine	7782-41-4	0.00	10,000	No
Chlorine	7782-50-5	0.00	10,000	No
Calcium fluoride	7789-75-5	0.00	10,000	No
Tetraethyl lead	78-00-2	0.00	10,000	No
i-Butyl alcohol	78-83-1	0.00	10,000	No
Isobutyraldehyde	78-84-2	0.00	10,000	No
1,2-Dichloropropane	78-87-5	0.00	10,000	No
sec-Butyl alcohol	78-92-2	0.00	10,000	No
Methyl ethyl ketone	78-93-3	0.00	10,000	No
1,1,2-Trichloroethane	79-00-5	0.00	10,000	No
Peracetic acid (and its salts)	79-21-0	0.00	10,000	No
1,1,2,2-Tetrachloroethane	79-34-5	0.00	10,000	No
2-Nitropropane	79-46-9	0.00	10,000	No
Cumene hydroperoxide	80-15-9	0.00	10,000	No
Methyl methacrylate	80-62-6	0.00	10,000	No
Diethyl phthalate	84-66-2	0.00	10,000	No
Dibutyl phthalate	84-74-2	0.00	10,000	No
Phthalic anhydride	85-44-9	0.00	10,000	No
Butyl benzyl phthalate	85-68-7	0.00	10,000	No
N-Nitrosodiphenylamine	86-30-6	0.00	10,000	No
N-Methyl-2-pyrrolidone	872-50-4	0.00	10,000	No
Polymeric diphenylmethane diisocyanate	9016-87-9	249.60	10,000	No
Michler's ketone (and its salts)	90-94-8	0.00	10,000	No
Naphthalene	91-20-3	0.00	10,000	No
N-Methylolacrylamide	924-42-5	0.00	10,000	No
Biphenyl	92-52-4	0.00	10,000	No
Benzoyl peroxide	94-36-0	0.00	10,000	No
o-Dichlorobenzene	95-50-1	0.00	10,000	No
1,2,4-Trimethylbenzene	95-63-6	0.00	10,000	No
Methyl acrylate	96-33-3	0.00	10,000	No

Substance	CAS	Total Usage	Threshold (kg)	Report?
Ethylene thiourea	96-45-7	0.00	10,000	No
Cumene	98-82-8	0.00	10,000	No
Acetophenone	98-86-2	0.00	10,000	No
Benzoyl chloride	98-88-4	0.00	10,000	No
Antimony (and its compounds)	NA - 01	0.00	10,000	No
Chromium (and its compounds)	NA - 04	0.00	10,000	No
Copper (and its compounds)	NA - 06	245.13	10,000	No
Cyanides (ionic)	NA - 07	0.00	10,000	No
Manganese (and its compounds)	NA - 09	0.00	10,000	No
Nickel (and its compounds)	NA - 11	0.00	10,000	No
Silver (and its compounds)	NA - 13	0.00	10,000	No
Zinc (and its compounds)	NA - 14	519.68	10,000	No
Ammonia (total)	NA - 16	0.00	10,000	No
Nitrate ion (in solution at a pH of 6.0 or greater)	NA - 17	0.00	10,000	No
Octylphenol and its ethoxylates	NA - 21	0	10,000	No
Phosphorus (total)	NA - 22	0	10,000	No
Naphthenic acid fraction compounds (and their salts)	NA - 47	0	10,000	No
Total reduced sulphur	NA - M14	0.00	10,000	No

Part 1B

Substance	CAS	Total Usage	Threshold (kg)	Report?
Acrylonitrile	107-13-1	0.00	1 000	No
Bisphenol A	80-05-07	0.00	100	No
Hydrazine (and its salts)	302-01-2	0.00	1 000	No
Isoprene	78-79-5	0.00	100	No
Nonylphenol and its ethoxylates	n/a	280.05	1 000	No
Toluene-2,4-diisocyanate	584-84-9	0.00	100	No
Toluene-2,6-diisocyanate	1991-08-07	0.00	100	No
Toluenediisocyanate (mixed isomers)	26471-62-5	0.00	100	No
2-Propanone, reaction products with diphenylamine	68412-48-6	0.00	50	No
1,4-Benzenediamine, N,N'-mixed phenyl and tolyl deriva	68953-84-4	0.00	50	No
Thallium (and its compounds)	-	0.00	100	No
Arsenic (and its compounds)	NA - 02	0.00	50	No
Cadmium (and its compounds)	NA - 03	0.00	5	No
Cobalt (and its compounds)	NA - 05	0.00	50	No
Lead (and its compounds) except tetraethyl lead	NA - 08	0.00	50	No
Mercury (and its compounds)	NA - 10	0.00	5	No
Selenium (and its compounds)	NA - 12	0.00	100	No
Hexavalent chromium	NA - 19	0.00	50	No
Azo disperse dyes	NA - 46	0.00	10	No
Chlorinated alkanes, long-chain, C _n H _x Cl, 18<n<20		0.00	1,000	No
Chlorinated alkanes, medium-chain, C _n H _x Cl, 14<n<17		0.00	1,000	No

Part 2: PAHs

Substance	CAS #	Release Threshold (kg/yr)	Annual Emission Rate (Air) (kg/yr)	Estimation Method	Reportable? (Yes/No)
No Reportable Part 2 Substances (i.e. company not engaged in identified activities)*					

Part 3: Dioxins/Furans

Substance	CAS #	Annual Emission Rate (g TEQ/yr)	Estimation Method
No Reportable Part 3 Substances (i.e. company not engaged in identified activities)*			

*identified activities - as listed in "Guide for Reporting to the National Pollutant Release Inventory"

Part 4: Criteria Air Contaminants

Part 4 Summary

CAS	Substance	Total Emissions (kg)	Threshold (kg)	Report?
630-08-0	Carbon Monoxide	158	20,000	No
11104-93-1	Nitrogen Oxides	188	20,000	No
7446-09-5	Sulphur Dioxide	1.13	20,000	No
N/A - M10	PM-2.5	3.56	300	No
N/A - M09	PM-10	3.56	500	No
N/A - M08	Total PM-100	403	20,000	No
N/A - M16	VOCs	18,037	10,000	Yes

Natural Gas Combustion

Natural Gas Used: m³

CAS	Substance	Emission Factor (lb/10 ⁶ scf)	Emission Factor (kg/10 ⁶ m ³)	Emissions from Nat Gas (kg)
630-08-0	Carbon Monoxide	84	1,344	157.6
11104-93-1	Nitrogen Oxides	100	1,600	187.6
N/A - M10	PM-2.5	1.9	30	3.6
N/A - M09	PM-10	1.9	30	3.6
7446-09-5	Sulphur Dioxide	0.6	10	1.1
N/A - M08	Total PM-100	1.9	30	3.6
N/A - M16	VOCs	5.5	88	10.3

Part 5: Speciated VOCs (2020/2021)

Report for speciated VOCs if Part 4 VOC Quantity is > 10 tonne threshold.

Part 4 VOC Quantity 18.04 therefore must speciate.

CAS #	Substance	Release Threshold (kg/yr)	Annual Emission Rate (kg/yr)	Estimation Method	Reportable? (Yes/No)
74-86-2	Acetylene	1,000	0.000	NA	No
124-04-9	Adipic acid	1,000	0.000	NA	No
62-53-3	Aniline	1,000	0.000	NA	No
71-43-2	Benzene	1,000	0.000	NA	No
106-99-0	1,3-Butadiene	1,000	0.000	NA	No
111-76-2	2-Butoxyethanol	1,000	0.000	NA	No
123-86-4	n-Butyl acetate	1,000	0.000	MB	No
108-90-7	Chlorobenzene	1,000	0.000	NA	No
106-46-7	p-Dichlorobenzene	1,000	0.000	NA	No
107-06-2	1,2-Dichloroethane	1,000	0.000	NA	No
115-10-6	Dimethylether	1,000	0.000	MB	No
141-78-6	Ethyl acetate	1,000	0.000	NA	No
64-17-5	Ethyl alcohol	1,000	0.000	MB	No
74-85-1	Ethylene	1,000	0.000	NA	No
50-00-0	Formaldehyde	1,000	0.000	NA	No
98-00-0	Furfuryl alcohol	1,000	0.000	NA	No
110-54-3	n-Hexane	1,000	0.000	MB	No
67-63-0	Isopropyl alcohol	1,000	0.000	MB	No
5989-27-5	D-Limonene	1,000	0.000	NA	No
67-56-1	Methanol	1,000	0.000	NA	No
78-93-3	Methyl ethyl ketone	1,000	0.000	MB	No
7379-12-6	2-Methyl-3-hexanone	1,000	0.000	NA	No
108-10-1	Methyl isobutyl ketone	1,000	0.000	MB	No
123-35-3	Myrcene	1,000	0.000	NA	No
555-10-2	beta-Phellandrene	1,000	0.000	NA	No
103-71-9	Phenyl isocyanate	1,000	0.000	NA	No
80-56-8	alpha-Pinene	1,000	0.000	NA	No
127-91-3	beta-Pinene	1,000	0.000	NA	No
74-98-6	Propane	1,000	0.000	MB	No
115-07-1	Propylene	1,000	0.000	NA	No
100-42-5	Styrene	1,000	0.000	NA	No
109-99-9	Tetrahydrofuran	1,000	0.000	NA	No
108-88-3	Toluene	1,000	0.000	MB	No
95-63-6	1,2,4-Trimethylbenzene	1,000	0.000	MB	No
420-56-4	Trimethylfluorosilane	1,000	0.000	NA	No
108-05-4	Vinyl acetate	1,000	0.000	NA	No
NA - 23	Anthraquinone (all isomers)	1,000	0.000	NA	No
NA - 24	Butane (all isomers)	1,000	0.000	NA	No
25167-67-3	Butene (all isomers)	1,000	0.000	NA	No
NA - 25	Cycloheptane (all isomers)	1,000	0.000	NA	No
NA - 26	Cyclohexene (all isomers)	1,000	0.000	NA	No
NA - 27	Cyclooctane (all isomers)	1,000	0.000	NA	No
NA - 28	Decane (all isomers)	1,000	0.000	NA	No
NA - 29	Dihydronaphthalene (all isomers)	1,000	0.000	NA	No
NA - 30	Dodecane (all isomers)	1,000	0.000	NA	No
NA - 31	Heptane (all isomers)	1,000	0.000	MB	No
NA - 32	Hexane (all isomers) excluding n-hexane	1,000	0.000	MB	No
25264-93-1	Hexene (all isomers)	1,000	0.000	NA	No
27133-93-3	Methylindan (all isomers)	1,000	0.000	NA	No
NA - 33	Nonane (all isomers)	1,000	0.000	MB	No
NA - 34	Octane (all isomers)	1,000	0.000	NA	No

NA - 35	Pentane (all isomers)	1,000	0.000	MB	No
NA - 36	Pentene (all isomers)	1,000	0.000	NA	No
68956-56-9	Terpenes (all isomers)	1,000	0.000	NA	No
25551-13-7	Trimethylbenzene (all isomers) excluding	1,000	0.000	NA	No
1330-20-7	Xylene (all isomers)	1,000	0.000	MB	No
8001-58-9	Creosote	1,000	0.000	NA	No
112-34-5	Diethylene glycol butyl ether	1,000	0.000	NA	No
112-15-2	Diethylene glycol ethyl ether acetate	1,000	0.000	NA	No
112-07-2	Ethylene glycol butyl ether acetate	1,000	0.000	NA	No
112-25-4	Ethylene glycol hexyl ether	1,000	0.000	NA	No
64741-65-7	Heavy alkylate naptha	1,000	0.000	MB	No
64742-94-5	Heavy aromatic solvent naphtha	1,000	0.000	NA	No
64742-48-9	Hydrotreated heavy naptha	1,000	0.000	MB	No
64742-47-8	Hydrotreated light distillate	1,000	0.000	MB	No
64742-95-6	Light aromatic solvent naphtha	1,000	0.000	NA	No
64475-85-0	Mineral spirits	1,000	0.000	NA	No
8030-30-6	Naphtha	1,000	0.000	NA	No
5131-66-8	Propylene glycol butyl ether	1,000	0.000	NA	No
108-65-6	Propylene glycol methyl ether acetate	1,000	0.000	NA	No
64742-89-8	Solvent naptha light aliphatic	1,000	0.000	MB	No
64742-88-7	Solvent naptha medium aliphatic	1,000	0.000	MB	No
8052-41-3	Stoddard solvent	1,000	0.000	NA	No
8032-32-4	VM & P naptha	1,000	0.000	MB	No
8042-47-5	White mineral oil	1,000	0.000	MB	No

MB - Mass Balance NA - Not Applicable

APPENDIX B

EC's GHG Screening Assessment Summary

EC s. 46 Greenhouse Gas Emissions Reporting
Emissions Reporting
Reporting Threshold (10,000 tonnes of CO2 equivalent)

Devtek Aerospace Inc. - Kitchener
Year: 2021

Note: A person submitting a report in respect of a facility that meets the emission criteria shall use quantification methods for estimating emissions that are consistent with the guidelines approved for use by the United Nations Framework Convention on Climate Change (UNFCCC) for the preparation of National Greenhouse Gas Inventories.

Substance	Source Categories				Global Warming Potentials (GWP)	CO2 Equivalents (tonnes/yr)
	Stationary Combustion Emissions (tonnes/yr)	Industrial Process Emissions (tonnes/yr)	Wastewater Emissions (tonnes/yr)	On-Site Transportation Emissions (tonnes/yr)		
Carbon Dioxide (CO ₂)	220.3022	n/a - see below	n/a - see below	0.0000	1	220
Nitrous Oxide (N ₂ O)	0.0039	n/a - see below	n/a - see below	0.0000	298	1
Methane (CH ₄)	0.0043	n/a - see below	n/a - see below	0.0000	25	0.11
Emission Method	Emission Factor	n/a	n/a	n/a	CO2 Eq:	222
Threshold:						10,000
Reportable?						No
Source:	Stationary Fuel Combustion					
Method:	Standard Quantification Method ON.40/ON.20					
Basis:	Guideline for Quantification, Reporting and Verification of GHG Emissions, Ontario MOECC, July 2017					
Natural Gas Use:	117,255	m ³ in reporting year	Data Source:	Purchasing		

APPENDIX C

Ontario's GHG Screening Assessment Summary

ONTARIO REGULATION 390/18 (replaces 143/16)	Devtek Aerospace Inc. - Kitchener
Quantification, Reporting and Verification of Greenhouse Gas Emissions	Year: 2021
Reporting Threshold (10,000 tonnes of CO2 equivalent)	

GHG Source:	General stationary combustion (ON.20)
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Annual greenhouse gas emissions in tonnes

Substance List from Table 1 of O. Reg. 452/09	Emissions From Fossil Fuels (tonnes/yr)	Emissions from Biomass (Wood) Fuels (tonnes/yr)					Global Warming Potentials (GWP)	CO2 Equivalents (tonnes/yr)
Carbon Dioxide (CO ₂)	220.3022	0.0000	--	--	--	--	1	220.3
Methane (CH ₄)	0.0043	0.0000	--	--	--	--	21	0.09
Nitrous Oxide (N ₂ O)	0.0039	0.0000	--	--	--	--	310	1.2
Emission Method	Emission Factors	Emission Factors					CO2 Eq:	222

Threshold:	10,000
Reportable?	No

Annual Fuel Consumption

Natural Gas Use:	117,255	m ³ in reporting year	Data Source:	Purchasing Department
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APPENDIX D

Facility and Material Usage Details

Devtek Aerospace Inc. - Héroux-Devtek Landing Gear Division	
NPRI and Other Reporting Programs	2021

SITE DETAILS			
Company	Devtek Aerospace Inc.	Parent Company	n/a
Site Name	Devtek Aerospace Inc.	% Ownership	n/a
Address	1665 Highland Road West Kitchener, ON N2N 3K5 Canada	Address	
Coordinates, Easting	535577	D&B D-U-N-S No.	n/a
Coordinates, Northing	4807619	Federal Business No.	n/a
Zone	17	NPRI ID	7643
NAICS Code (2 digits)	31-33 - Manufacturing	MOE ID	n/a
NAICS Code (4 digits)	3366		
NAICS Code (6 digits)	336410 - Aerospace Product and Parts Manufacturing		

CONTACT INFORMATION			
Technical Contact	Miro Jarnjevic	Certifying Official Contact	Steve Milijasevic
Position	Operations Cell Leader	Position	General Manager
Address	1665 Highland Road West Kitchener, ON N2N 3K5 Canada	Address	1665 Highland Road West Kitchener, ON N2N 3K5 Canada
Phone	519-576-8910 x2709	Phone	519-576-8910 x2751
Fax	519-576-5119	Fax	519-576-5119
Email	mjarnjevic@herouxdevtek.com	Email	steve.milijasevic@herouxdevtek.com
Facility Public Contact	Robert Cadieux	Company Coordinator	Miro Jarnjevic
Position	Environment, Director	Position	Operations Cell Leader
Address	1111, Saint-Charles Street West Suite 600, West Tower Longueuil, Québec J4K 5G4	Address	1665 Highland Road West Kitchener, ON N2N 3K5 Canada
Phone	450-679-5450 x 4828	Phone	519-576-8910 x2709
Fax		Fax	519-576-5119
Email	Robert.cadieux@herouxdevtek.com	Email	mjarnjevic@herouxdevtek.com

TYPICAL FACILITY OPERATION IN REPORTING YEAR	
Days of Operation	<input checked="" type="checkbox"/> Monday <input checked="" type="checkbox"/> Tuesday <input checked="" type="checkbox"/> Wednesday <input checked="" type="checkbox"/> Thursday <input checked="" type="checkbox"/> Friday <input checked="" type="checkbox"/> Saturday <input checked="" type="checkbox"/> Sunday
Hours of Operation	<input checked="" type="checkbox"/> 24 hr <input type="checkbox"/> 16 hr <input type="checkbox"/> 8 hr <input type="checkbox"/> Other If Other: _____ Start Time: n/a
Shutdowns > 1 week (incl. start/end date)	no shutdown

Emission Inventory Data Inputs

Heroux Devtek Kitchener

Site Information

Number of Employees:	107	
Total Annual Hours - Laser Cutting:		
Operating Days Per Year:	249	
Periods of Extended Shut down (Greater than 1 week) :	From	To
	none	

Pollution Prevention Plan (P2 Plan)

Does the Facility have a P2 Plan? (Yes or NO)

Fuels

Natural Gas	Equipment	Capacity	Fuel Use	Units
			117255	m ³

Propane (excluding fuel used for vehicles (i.e. Forklifts)	Equipment	Capacity	Fuel Use	Units
	Forklifts		n/a	kg
			0	

RAW MATERIAL/PRODUCT INPUTS AND OUTPUTS

Production Area Inputs	Raw Material	Used	Unit	Specific Gravity	Total (kg)	Comments
Metals	Aluminum Alloys	9,805	kg	-	9,805.3	Linked to Metal by Part worksheet
	Carbon and Alloy Steels	530,762	kg	-	530,761.6	Linked to Metal by Part worksheet
	Titanium	13,603	kg	-	13,603.2	Linked to Metal by Part worksheet
Production Materials	Cimstar Qual star LF	9,152.00	L	1.02	9,335.0	
	CIMClean 40	152.00	L	1.03	157.2	
	CIMTECH 320Z - 200L drum	0.00	L	1.08	0.0	
	Ecocut GD1	0.00	L	0.9	0.0	no hazardous substances
	EnSolV-5408	10,816.00	L	1.0	10,816.0	
	Entron Aero (Solvent)	4,160.00	L	1.3	5,345.6	
	EQO - MAX 759	5,865.00	L	0.91	5,337.2	
	Honing Oil (Man-852-55)	832.00	L	0.91	757.1	
	Hydraulic 32	7,422.00	L	0.87	6,420.0	
	Instapak component A - 250kgs	208.00	L	1.20	249.6	
	Instapak component B - 213.63kgs	208.00	L	1.10	228.8	
	Way-Lube 302	9,620.00	L	0.88	8,465.6	
	Castrol Sytilo 9913	208.00	L	1.0	208.0	
	HOCUT 795B	9,840.00	L	0.97	9,544.8	new for 2020
	MTC 53 (Hocut cleaner)	1,639.00	L	1.04	1,706.2	new for 2020; cleaner for machines; no haz. Ingredients listed.
	PROTECTION OIL MIL-PRF-32033	615.00	L	0.89	547.4	new for 2020
	VELOCITE OIL no.3 SPINDLE OIL	285.00	L	0.8	228.6	new for 2020; machine spindle
	LUBEWAY WAYLUBE 32	220.00	L	0.868	191.0	new for 2020; no haz. Ingredient listed on SDS
	PC Waylube 220	120.00	L		0.0	New for 2021; no hazardous substance
	Hydraulic 46	615.00	L	0.862	0.0	New for 2021; no hazardous substance
	10 SpindleOil	820.00	L	0.862		New for 2021; no hazardous substance
Hydraulic 68	205.00	L	0.862	0.0	New for 2021; no hazardous substance	
INDUSTRIAL GEAR OIL 150	56.70	L		0.0	New for 2021; no hazardous substance	
Welding	E6013	0.00	kg		0.0	confirmed zero usage in 2020
	E7018	0.00	kg		0.0	confirmed zero usage in 2020
	E70S	0.00	kg		0.0	confirmed zero usage in 2020

Production Area Outputs	Type of Metal	Total Recycled	Unit	Total (kg)	Recycling Contractor	Comments
Scrap Metals	Aluminum	14,940	lb	6,777	Gerdau	
	Carbon and Alloy Steels	6,141,222	lb	2,785,609	Gerdau	
	Titanium	13,461	lb	6,106	Gerdau	
	Nickels	1,580,380	lb	716,848	Gerdau	

MANUFACTURING EQUIPMENT OPERATING RATES

Source ID	Source Description	Flow Rate	Operating Hours (hrs/day)	Operating Hours (day/week)	Data Source
	Deburring Process	3.4	15	6	

Operating Data

Month	Production Days	Monthly %	Quarterly %
January	21	8.43%	25%
February	19	7.63%	
March	23	9.24%	
April	21	8.43%	

May	20	8.03%	25%
June	22	8.84%	
July	21	8.43%	25%
August	21	8.43%	
September	21	8.43%	
October	20	8.03%	24%
November	22	8.84%	
December	18	7.23%	
Total	249	100%	

Year 2021	VOC?:	-		-		1A		-		-		1A		-	
		Y		Y		Y		Y		Y		Y		Y	
		Total	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%
Material Used	Usage	Glycerol 56-81-5		Monoisopropanolamine 78-96-6		Methylene (bisphenyl) isocyanate 101-68-8		Neutralised dicyclohexylamine 101-83-7		Triethanolamine 102-71-6		1,2-butylene oxide 106-88-7		n-propyl bromide 106-94-5	
Aluminum	9,805.30		-		-		-		-		-		-		-
Carbon and Alloy Steel	530,761.61		-		-		-		-		-		-		-
Cimstar Qual star LF	9,335.04		-		-		-		-	3.0	280.05		-		-
CIMClean 40	157.17		-		-		-		-		-		-		-
Ecocut GD1	0.00		-		-		-		-		-		-		-
Entron Aero (Solvent)	5,345.60		-		-		-		-		-	1.0	53.46	95.0	5,078.32
EQO - MAX 759	5,337.15		-		-		-		-		-		-		-
Honing Oil (Man-852-55)	757.12		-		-		-		-		-		-		-
Hydraulic 32	6,420.03		-		-		-		-		-		-		-
Instapak component A - 250kgs	249.60		-		-	45.0	112.32		-		-		-		-
Instapak component B - 213.63kgs	228.80		-		-		-		-		-		-		-
Titanium	13,603.22		-		-		-		-		-		-		-
Way-Lube 302	8,465.60		-		-		-		-		-		-		-
Castrol Sytlo 9913	208.00		-		-		-		-	3.0	6.24		-		-
HOCUT 795B	9,544.80	3.0	286.34	3.0	286.34		-	7.5	715.86	3.0	286.34		-		-
MTC 53 (Hocut cleaner)	1,706.20		-		-		-		-		-		-		-
PROTECTION OIL MIL-PRF-32033	547.35		-		-		-		-		-		-		-
VELOCITE OIL no.3 SPINDLE OIL	228.57		-		-		-		-		-		-		-
LUBEWAY WAYLUBE 32	190.96		-		-		-		-		-		-		-
PC Waylube 220	0.00		-		-		-		-		-		-		-
Hydraulic 46	0.00		-		-		-		-		-		-		-
10 SpindleOil	0.00		-		-		-		-		-		-		-
Hydraulic 68	0.00		-		-		-		-		-		-		-
INDUSTRIAL GEAR OIL 150	0.00		-		-		-		-		-		-		-
E6013	0.00		-		-		-		-		-		-		-
E7018	0.00		-		-		-		-		-		-		-
E70S	0.00		-		-		-		-		-		-		-
TOTALS	613,708		-		-		-		-		-		-		-
Total MPO (kg)			286.34		286.34		112.32		715.86		572.64		53.46		15353.52
Total VOCs (kg)	18,027		286		286		112		716		573		53		15354
			VOC		VOC		VOC		VOC		VOC		VOC		VOC

Year 2021

	-		-		-		-		1A		-		1A		-	
	Y		N		N		N		N		N		N		N	
	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)
Material Used	Monoethanolamine 141-43-5		Dioxolane 646-06-0		Hexahydro-1,3,5-tris(2-hydroxyethyl) 4719-04-4		Sodium metasilicate 6834-92-0		Aluminum (fume or dust) 7429-90-5		Magnesium 7439-95-4		Manganese NA - 09		Molybdenum 7439-98-7	
Aluminum	-	-	-	-	-	-	-	-	93.0	9,118.93	2.8	274.55	0.5	-	-	-
Carbon and Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	0.5	-
Cimstar Qual star LF	5.0	466.75	-	-	3.0	280.05	-	-	-	-	-	-	-	-	-	-
CIMClean 40	5.0	7.86	-	-	7.5	11.79	2.0	3.14	-	-	-	-	-	-	-	-
Ecocut GD1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Entron Aero (Solvent)	-	-	2.0	106.91	-	-	-	-	-	-	-	-	-	-	-	-
EQO - MAX 759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Honing Oil (Man-852-55)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Instapak component A - 250kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Instapak component B - 213.63kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Way-Lube 302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Castrol Sytilo 9913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HOCUT 795B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MTC 53 (Hocut cleaner)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROTECTION OIL MIL-PRF-32033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VELOCITE OIL no.3 SPINDLE OIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LUBEWAY WAYLUBE 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PC Waylube 220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 SpindleOil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INDUSTRIAL GEAR OIL 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E6013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E7018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E70S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS																
Total MPO (kg)		474.61		106.91		291.84		3.14		9118.93		274.55		0.00		0.00
Total VOCs (kg)		475		n/a		n/a		n/a		n/a		n/a		n/a		n/a
VOC				-		-		-		-		-		-		-

Year 2021

Material Used	1A		-		1A		1A		1A		-		1B		1A	
	N		N		N		N		N		N		N		N	
	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)
	Nickel		Silicon		Chromium		Copper		Zinc		Parrafin wax		Nonylphenol ethoxylate		Polyurethane prepolymer	
	NA - 11		7440-21-3		NA - 04		NA - 06		NA - 14		8002-74-2		9016-45-9		9016-87-9	
Aluminum	0.0	-	0.2	-	0.2	-	2.5	245.13	5.3	519.68	20.0	0	-	-	-	-
Carbon and Alloy Steel	0.995	-	0.5	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Cimstar Qual star LF	-	-	-	-	-	-	-	-	-	-	-	-	3.0	280.05	-	-
CIMClean 40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecocut GD1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Entron Aero (Solvent)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EQO - MAX 759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Honing Oil (Man-852-55)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Instapak component A - 250kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	249.60
Instapak component B - 213.63kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Way-Lube 302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Castrol Sytilo 9913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HOCUT 795B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MTC 53 (Hocut cleaner)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROTECTION OIL MIL-PRF-32033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VELOCITE OIL no.3 SPINDLE OIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LUBEWAY WAYLUBE 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PC Waylube 220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 SpindleOil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INDUSTRIAL GEAR OIL 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E6013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E7018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E70S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS																
Total MPO (kg)		0.00		0.00		0.00		245.13		519.68		0.00		280.05		249.60
Total VOCs (kg)		n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a
		-		-		-		-		-		-		-		-

Year 2021

	-		-		-		-		-		5		-	
	N		N		N		N		N		Y		N	
	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)
Material Used	Neutralised boric acid		Titanium dioxide		2-ethylhexyl palmitate		Inhibitor based on calcium sulfonate		Mineral Oil		Petroleum distillates		Petroleum Distillate	
	10043-35-3		13463-67-7		29806-73-3		57855-77-3		64741-88-4		64742-01-4		64742-47-8	
Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon and Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cimstar Qual star LF	-	-	-	-	-	-	-	-	-	-	-	-	20.0	1,867.01
CIMClean 40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecocut GD1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Entron Aero (Solvent)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EQO - MAX 759	-	-	50.0	2,668.58	-	-	-	-	-	-	-	-	-	-
Honing Oil (Man-852-55)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 32	-	-	-	-	-	-	92.5	5,938.53	-	-	-	-	-	-
Instapak component A - 250kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Instapak component B - 213.63kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium	-	99.0	13,467.19	-	-	-	-	-	-	-	-	-	-	-
Way-Lube 302	-	-	-	-	-	-	-	-	30.6	2,586.24	-	-	-	-
Castrol Sytilo 9913	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HOCUT 795B	3.0	286.34	-	-	-	-	-	-	-	-	-	-	-	-
MTC 53 (Hocut cleaner)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROTECTION OIL MIL-PRF-32033	-	-	-	-	-	3.0	16.42	-	-	-	-	-	60.0	328.41
VELOCITE OIL no.3 SPINDLE OIL	-	-	-	-	-	-	-	-	-	-	75.0	171.43	-	-
LUBEWAY WAYLUBE 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PC Waylube 220	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 46	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 SpindleOil	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydraulic 68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INDUSTRIAL GEAR OIL 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E6013	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E7018	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E70S	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS														
Total MPO (kg)		286.34	13467.19	2668.58	16.42	5938.53	2586.24	171.43	2195.42					
Total VOCs (kg)		n/a	n/a	n/a	n/a	n/a	n/a	171	n/a					
		-	-	-	-	-	-	VOC	-					

Year 2021

	-		-		-		-		-		-		-				
	N		N		N		N		N		N		N				
	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)	%	mass (kg)			
Material Used	Distillates (petroleum), hydrotreated light 64742-53-6		Solvent refined paraffinic oil 64742-54-7		Hydrotreated light paraffinic distillates, 64742-55-8		Petroleum oil paraffinie 64742-58-1		Paraffin oils 64742-71-8		Severely Treated Petroleum Distillate 64742-62-7		Pentene, 2,4,4-trimethyl-sulfurized 68515-88-8		Mineral Oil 72623-83-7		
Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Carbon and Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cimstar Qual star LF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CIMClean 40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ecocut GD1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Entron Aero (Solvent)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
EQO - MAX 759	-	-	7.5	400.29	-	-	-	-	15.0	800.57	-	-	1.0	53.37	-	-	
Honing Oil (Man-852-55)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hydraulic 32	-	-	-	-	-	-	-	-	-	7.5	481.50	-	-	-	-	-	
Instapak component A - 250kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Instapak component B - 213.63kgs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Titanium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Way-Lube 302	-	-	-	-	-	-	80.0	6,772.48	80.0	6,772.48	30.6	2,586.24	-	-	30.6	2,586.24	
Castrol Sytlo 9913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HOCUT 795B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MTC 53 (Hocut cleaner)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PROTECTION OIL MIL-PRF-32033	25.0	136.84	-	-	-	-	-	-	40.0	218.94	-	-	-	-	-	-	
VELOCITE OIL no.3 SPINDLE OIL	-	-	-	-	25.0	57.14	-	-	-	-	-	-	-	-	-	-	
LUBEWAY WAYLUBE 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PC Waylube 220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hydraulic 46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10 SpindleOil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hydraulic 68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
INDUSTRIAL GEAR OIL 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
E6013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
E7018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
E70S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTALS																	
Total MPO (kg)		136.84		400.29		57.14		6772.48		7791.99		3067.74		53.37		2586.24	
Total VOCs (kg)		n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a	
		-		-		-		-		-		-		-		-	

Year 2021	-		-		-	
	N		N		N	
	%	mass (kg)	%	mass (kg)	%	mass (kg)
Material Used	Sodium alkylaryl sulfonate 78330-12-8		Synthetic sodium sulfonate 93820-59-8		1H-Benzotriazole-1-Methanamine n,n-bis(2) 94270-86-7	
Aluminum	-	-	-	-	-	-
Carbon and Alloy Steel	-	-	-	-	-	-
Cimstar Qual star LF	3.0	280.05	3.0	280.05	-	-
CIMClean 40	-	-	-	-	-	-
Ecocut GD1	-	-	-	-	-	-
Entron Aero (Solvent)	-	-	-	-	-	-
EQO - MAX 759	-	-	-	-	0.5	-
Honing Oil (Man-852-55)	-	-	-	-	-	-
Hydraulic 32	-	-	-	-	-	-
Instapak component A - 250kgs	-	-	-	-	-	-
Instapak component B - 213.63kgs	-	-	-	-	-	-
Titanium	-	-	-	-	-	-
Way-Lube 302	-	-	-	-	-	-
Castrol Sytilo 9913	-	-	-	-	-	-
HOCUT 795B	-	-	-	-	-	-
MTC 53 (Hocut cleaner)	-	-	-	-	-	-
PROTECTION OIL MIL-PRF-32033	-	-	-	-	-	-
VELOCITE OIL no.3 SPINDLE OIL	-	-	-	-	-	-
LUBEWAY WAYLUBE 32	-	-	-	-	-	-
PC Waylube 220	-	-	-	-	-	-
Hydraulic 46	-	-	-	-	-	-
10 SpindleOil	-	-	-	-	-	-
Hydraulic 68	-	-	-	-	-	-
INDUSTRIAL GEAR OIL 150	-	-	-	-	-	-
E6013	-	-	-	-	-	-
E7018	-	-	-	-	-	-
E70S	-	-	-	-	-	-
TOTALS						
Total MPO (kg)		280.05		280.05		0.00
Total VOCs (kg)		n/a		n/a		n/a
		-		-		-

APPENDIX E

Emission Calculations

Consumable Welding Emissions

Description: Consumable welding is the process by which 2 different metal parts are joined by heating the parts at contact and forming a new connection with a consumable electrode. The facility conducts maintenance welding.

Process Operating Conditions

Welding type: GMAW
Electrode type: GMAW - E70S
Electrode Usage: 0.0 kg/yr
Name of Electrode: E70S

Emission Estimation Methodology

- Total annual electrode usage data provided by Devtek Aerospace
- The closest wire/rod chemistry was selected from US EPA AP-42, "Electric Arc Welding", Chapter 12.19, 1995. Emissions for individual components on the MSDS with no emission factors were determined by multiplying the US EPA emission factor for total fume emissions by the maximum percent composition of the individual component.
- Particulate Matter emissions were determined based on the US EPA emission factor for total fume emissions for the specific wire/rod selected.

Contaminant	CAS #	Emission Factor (g/kg of Electrode Consumed)	Avg. Wt. Percent	Annual Emission Rate (kg/yr)	Emission Estimation Technique	Data Quality
USEPA						
Chromium	7440-47-3	0.001	-	0.00E+00	EF	AA
Cobalt	7440-48-4	0.001	-	0.00E+00	EF	AA
Manganese	7439-96-5	0.318	-	0.00E+00	EF	AA
Nickel	7440-02-0	0.001	-	0.00E+00	EF	AA
Particulate Matter	NA - M10	5.2	-	0.00E+00	EF	AA
MSDS						
Carbon	7440-44-0	5.2	0.11%	0.00E+00	EF	AA
Copper	7440-50-8	5.2	0.5%	0.00E+00	EF	AA
Iron	7439-89-6	5.2	94.0%	0.00E+00	EF	AA
Phosphorus	7723-14-0	5.2	0.025%	0.00E+00	EF	AA
Sulphur	7704-34-9	5.2	0.035%	0.00E+00	EF	AA
Molybdenum	7439-98-7	5.2	0.50%	0.00E+00	EF	AA
Silicon	7440-21-3	5.2	0.78%	0.00E+00	EF	AA
Titanium	7440-32-6	5.2	0.1%	0.00E+00	EF	AA
Aluminum	7429-90-5	5.2	0.1%	0.00E+00	EF	AA
Zirconium	7440-67-7	5.2	0.07%	0.00E+00	EF	AA

EF: Emission Factor

AA: Above Average Data Quality

Sample Calculations

$$\begin{aligned}
 \text{Chromium Emission Rate} &= \text{Feedrate} \times \text{Emission Factor} \times \text{Percent Emitted} \\
 &= 5 \text{ kg/yr} \times 0.001 \text{ g/kg} \div 1000 \text{ g/kg} \times 100 \% \\
 &= 0.000000 \text{ kg/yr}
 \end{aligned}$$

$$\begin{aligned}
 \text{Iron Emission Rate} &= \text{Feedrate} \times \text{Emission Factor} \times \text{Avg. Wt. Percent} \times \text{Percent Emitted} \\
 &= 5 \text{ kg/yr} \times 5.2 \text{ g/kg} \times 94\% \div 1000 \text{ g/kg} \times 100 \% \\
 &= 0.000 \text{ kg/yr}
 \end{aligned}$$

References

- 1) US EPA AP-42 Metallurgical Industry, Electric Arc Welding, Chapter 12.19, January 1995.

<<http://www.epa.gov/ttn/chief/ap42/ch12/final/c12s19.pdf>>.

Consumable Welding Emissions

Description: Consumable welding is the process by which 2 different metal parts are joined by heating the parts at contact and forming a new connection with a consumable electrode. The facility performs maintenance welding.

Process Operating Conditions

Welding type: SMAW
Electrode type: SMAW - E6013
Electrode Usage: 0.0 kg/yr
Name of Electrode: E6013

Emission Estimation Methodology

- Total annual electrode usage data provided by Devtek Aerspace Inc.
- The closest wire/rod chemistry was selected from US EPA AP-42, "Electric Arc Welding", Chapter 12.19, 1995. Emissions for individual components on the MSDS with no emission factors were determined by multiplying the US EPA emission factor for total fume emissions by the maximum percent composition of the individual component.
- Particulate Matter emissions were determined based on the US EPA emission factor for total fume emissions for the specific wire/rod selected.

Contaminant	CAS #	Emission Factor (g/kg of Electrode Consumed)	Avg. Wt. Percent	Annual Emission Rate (kg/yr)	Emission Estimation Technique	Data Quality
USEPA						
Manganese	7439-96-5	0.945	-	0.00E+00	EF	AA
Particulate Matter	NA - M10	19.7	-	0.00E+00	EF	AA
MSDS						
Aluminum silicate	12141-46-7	19.7	1%	0.00E+00	EF	AA
Calcium carbonate	1317-65-3	19.7	1%	0.00E+00	EF	AA
Potassium silicate	1312-76-1	19.7	1%	0.00E+00	EF	AA
Potassium titanate	12030-97-6	19.7	1%	0.00E+00	EF	AA
Sodium silicate	1344-09-8	19.7	1%	0.00E+00	EF	AA
Zirconium silicate	1214-23-4	19.7	1%	0.00E+00	EF	AA
Magnesium carbonate	546-93-0	19.7	2%	0.00E+00	EF	AA
Aluminum oxide	1344-28-1	19.7	5%	0.00E+00	EF	AA
Cellulose	65996-61-4	19.7	5%	0.00E+00	EF	AA
Mica	12001-26-2	19.7	5%	0.00E+00	EF	AA
Titanium dioxide	13463-67-7	19.7	10%	0.00E+00	EF	AA
Iron	7439-89-6	19.7	80%	0.00E+00	EF	AA

EF: Emission Factor

AA: Above Average Data Quality

Sample Calculations

$$\begin{aligned}
 \text{Manganese Emission Rate} &= \text{Feedrate} \times \text{Emission Factor} \\
 &= 2 \text{ kg/yr} \times 0.945 \text{ g/kg} \div 1000 \text{ g/kg} \\
 &= 0.00000 \text{ kg/yr}
 \end{aligned}$$

$$\begin{aligned}
 \text{Iron Emission Rate} &= \text{Feedrate} \times \text{Emission Factor} \times \text{Avg. Wt. Percent} \\
 &= 2 \text{ kg/yr} \times 18.7 \text{ g/kg} \times 80\% \div 1000 \text{ g/kg} \\
 &= 0.0000 \text{ kg/yr}
 \end{aligned}$$

Consumable Welding Emissions

Description: Consumable welding is the process by which 2 different metal parts are joined by heating the parts at contact and forming a new connection with a consumable electrode. The facility performs maintenance welding.

Process Operating Conditions

Welding type: SMAW
Electrode type: SMAW - E7018
Electrode Usage: 0.0 kg/yr
Name of Electrode: E7018

Emission Estimation Methodology

- Total annual electrode usage data provided by Devtek Aerospace Inc.
- The closest wire/rod chemistry was selected from US EPA AP-42, "Electric Arc Welding", Chapter 12.19, 1995. Emissions for individual components on the MSDS with no emission factors were determined by multiplying the US EPA emission factor for total fume emissions by the maximum percent composition of the individual component.
- Particulate Matter emissions were determined based on the US EPA emission factor for total fume emissions for the specific wire/rod selected.

Contaminant	CAS #	Emission Factor (g/kg of Electrode Consumed)	Avg. Wt. Percent	Annual Emission Rate (kg/yr)	Emission Estimation Technique	Data Quality
USEPA						
Manganese	7439-96-5	1.03	-	0.00E+00	EF	A
Particulate Matter	NA - M10	18.4	-	0.00E+00	EF	A
MSDS						
Iron oxide	1309-37-1	18.4	0.5%	0.00E+00	EF	A
Zinc oxide	1314-13-2	18.4	0.5%	0.00E+00	EF	A
Molybdenum	7439-98-7	18.4	1%	0.00E+00	EF	A
Phosphorus	7723-14-0	18.4	1%	0.00E+00	EF	A
Sulfur	7704-34-9	18.4	1%	0.00E+00	EF	A
Vanadium	7440-62-2	18.4	1%	0.00E+00	EF	A
Silicon	7440-21-3	18.4	2%	0.00E+00	EF	A
Cellulose	65996-61-4	18.4	5%	0.00E+00	EF	A
Aluminum oxide	1344-28-1	18.4	5%	0.00E+00	EF	A
Sodium silicate	1344-09-8	18.4	5%	0.00E+00	EF	A
Calcium fluoride	7789-75-5	18.4	10%	0.00E+00	EF	A
Kaolin	1332-58-7	18.4	10%	0.00E+00	EF	A
Titanium dioxide	13463-67-7	18.4	8%	0.00E+00	EF	A
Calcium carbonate	1317-65-3	18.4	15%	0.00E+00	EF	A
Iron	7439-89-6	18.4	27%	0.00E+00	EF	A

EF: Emission Factor

A: Average Data Quality

Sample Calculations

$$\begin{aligned}
 \text{Manganese Emission Rate} &= \text{Feedrate} \times \text{Emission Factor} \\
 &= 3 \text{ kg/yr} \times 1.03 \text{ g/kg} \div 1000 \text{ g/kg} \\
 &= 0.00000 \text{ kg/yr}
 \end{aligned}$$

$$\begin{aligned}
 \text{Iron Emission Rate} &= \text{Feedrate} \times \text{Emission Factor} \times \text{Avg. Wt. Percent} \\
 &= 3 \text{ kg/yr} \times 18.4 \text{ g/kg} \times 27\% \div 1000 \text{ g/kg} \\
 &= 0.0000 \text{ kg/yr}
 \end{aligned}$$

References

- 1) US EPA AP-42 Metallurgical Industry, Electric Arc Welding, Chapter 12.19, January 1995.

Deburring Emissions

Description: The facility uses grinding wheels and discs and grinding rolls to remove excess burrs from the steel, aluminum, and titanium. The deburring process is serviced by a dust collector. The grit size of the wheels/discs and rolls varies from 40 to 240 grit.

Process Operating Conditions

Actual operating times: 5.5 hrs/day, 6 days/week, 49 weeks/yr

Total operating hours: 1617 hrs/yr

Exhaust flow rate: 3.4 m³/s

Emission Estimation Methodology

The MOE's baghouse emission factor (20 mg/m³) was used in conjunction with the exhaust flow rate to determine emissions of particulate matter. As the grit size of the grinding media increases, the resulting particulate emissions decrease in size. Using a grit size of 240, particulate emissions will be in the range of 45 to 57 microns.

Contaminant	CAS #	Annual Emission Rate (kg/yr)	Emission Estimation Technique	Data Quality
Total Particulate Matter	NA - M08	396	EF	A

EF: Emission Factor

A: Average Data Quality

Sample Calculations

$$\begin{aligned} \text{PM Emission Rate} &= \text{Emission Factor} \times \text{Exhaust Flow Rate} \times \text{Operating time/yr} \\ &= 20 \text{ mg/m}^3 \times 3.4 \text{ m}^3/\text{s} \div 1000000 \text{ mg/kg} \times 3600 \text{ s/hr} \times 16 \text{ hrs/day} \times 6 \\ &\quad \text{days/week} \times 49 \text{ weeks/yr} \\ &= 396 \text{ kg/yr} \end{aligned}$$

APPENDIX F

Confirmation of Submission



National Pollutant Release Inventory Report Preview

Report Details

Report Year

2021

Programs

NPRI

Report Types

NPRI Inventory

Report Status

Submitted

Submitted Date

5/31/2022 9:33:44 AM

Update Comment

Facility Information

Company Information

* Company Legal Name

Heroux Devtek Landing Gear Division

Business Number

887045482

* Mailing Address

1665 Highland Road West, Kitchener, Ontario, N2N 3K5, Canada

Facility Information

* Facility Name

West Heights Manufacturing/Devtek Aerospace Inc

* Physical Address

1665 Highland Road West, Kitchener, Ontario, N2N 3K5, Canada

* Latitude (decimal degrees)

43.4205

* Longitude (decimal degrees)

-80.5606

* Is this a portable facility?

No

* NAICS Code

336410

* Number of full-time employee equivalents

107

Identifiers, Environmental Regulations, and Permits Numbers

Type/Name of Identifier or Permit	Identifier or Permit #
National Pollutant Release Inventory Identifier	7643
Ontario Hazardous Waste Generation	ON0185800
Environmental Compliance Approvals	8753-8FDRE3

General Comments for Facility

Contacts

* Technical Contact

Miro Jarnjevic

* Certifying Official (or authorized delegate)

Steve Milijasevic

Company Coordinator

Miro Jarnjevic

* Public Contact

Robert Cadieux

Contractor Contact

Connie Lum

* Contractor Company

Envirolum Consulting Inc.

Contact(s) Coordinates

Contact Name	Phone	Ext.	Position	Email
Miro Jarnjevic	519-576-8910	2709	Operations Leader	mjarnjevic@herouxdevte
Steve Milijasevic	519-576-8910	2751	General Manager	steve.milijasevic@heroux
Robert Cadieux	450-679-5450	4828	Environment, Director	robert.cadieux@heroux
Connie Lum	519-635-2286		Principal Environmental	connie@envirolum.com

General Reporting Questions

Part 1A - NPRI Core Substances

* Do you want to report any Part 1A substances?

No

Part 1B - NPRI substances with an alternative threshold (ex. metals)

* Do you want to report any Part 1B substances?

No

* Is the facility subject to the Chromium Electroplating, Chromium Anodizing and Reverse Etching Regulations (SOR/2009-162)?

No

Part 2 - PAHs (Polycyclic Aromatic Hydrocarbons)

* Do you want to report any Part 2 substances?

No

* Did wood preservation using creosote occur at the facility, and were PAHs released, disposed of, or transferred as a result of wood preservation using creosote?

No

Part 3 - Dioxins, Furans and Hexachlorobenzene

*** Do any of the following activities take place at the facility, regardless of the number of employees at the facility?**

- Non-hazardous solid waste incineration (≥ 26 tonnes/year) including, but not limited to, incineration with conical burners and beehive burners
- Biomedical or hospital waste incineration (≥ 26 tonnes/year)
- Hazardous waste incineration
- Sewage sludge incineration
- Wood preservation using pentachlorophenol
- None of the above

*** Do employees at the facility work a total of 20 000 hours or more AND do any of the following activities take place at the facility?**

- Base metal smelting (including copper, lead, nickel, and zinc)
- Smelting of secondary aluminum
- Smelting of secondary lead
- Production of iron ore pellets using an induration furnace or manufacturing of sinter using the iron sintering process
- Operation of electric arc furnaces in steel manufacturing
- Operation of electric arc furnaces in steel foundries
- Production of magnesium
- Manufacturing of Portland cement

- Production of chlorinated organic solvents or chlorinated monomers
- Combustion of fossil fuel in a boiler unit with a nameplate capacity of 25 MW of electricity of greater, for the purpose of producing steam for the production of electricity.
- Combustion of hog fuel originating from logs that were transported or stored in salt water in the pulp and paper sector
- Combustion of fuel in kraft liquor boilers in forest products
- Titanium dioxide pigment production using chloride process
- None of the above

Part 4 - Criteria Air Contaminants (CAC)

* Do you want to report any Part 4 substances?

Yes



Part 5 - Speciated Volatile Organic Compounds (VOCs)

* Do you want to report any Part 5 substances?

No



Special Report Activities (P2 Report and EGU Report)

Pollution Prevention Report Activities

* Does the facility have a P2 Plan?

No



* Did the facility complete any pollution prevention activities in the current NPRI reporting year?

No



Electricity Generating Unit

* Did the facility operate one or more electricity generating units that had a capacity of 25 MW or more and that distributed or sold to the grid 33% or more of its potential electrical output in the calendar year?

No



Part 4 Substances - Facility Operating Schedule and Shutdown

Operating Schedule - Days of week

Select All Days

Select the usual operating day(s) of the facility

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Operating Schedule - Hours

* Usual Number of Operating Hours per day in decimal number (hh.mm)

24.00

* Usual Daily Start Time (hh:mm)

07:00 AM

Shutdown Periods

* Was the facility shut down for more than one week during the year?

No

Start Date	End Date	Will the shutdown period occur at or around the same time in future years	Was the shutdown period a partial or complete shutdown	Comments	Actions
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Stack or Point Releases

Substance name

Volatile Organic Compounds (VOCs)

Cas number

NA - M16

Part

4

Unit

tonnes

Threshold

10 tonnes air release / N/A concentration

Releases

Enter breakdown values for

Stack or Point Releases

Select your Basis of Estimate from the drop-down list

C - Mass Balance

Enter the released Quantity (Tonnes)

18.037000

Stacks (50 m or greater)

Stack Name/Prov ID and Type	Stack Information	Lat/Long	Released Quantity (Tonnes)	Actions
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Total - Released quantities (tonnes) Assigned to Stacks

Total - Released quantities (tonnes) not Assigned to Stacks

18.037

Substances

CAS	Substance Name	Applicable Programs	Part
NA - M16	Volatile Organic Compounds (VOCs)	NPRI	4

General Information about the Substances

Volatile Organic Compounds (VOCs) (NA - M16)

NPRI - Are the criteria specified in the Canada Gazette notice met for this substance?

Yes, the NPRI reporting criteria have been met

On-site Releases

Volatile Organic Compounds (VOCs) (NA - M16)

On-site Releases

Type	Category	Basis of Estimate	Detail Code	Quantity (tonnes)
Releases to air	Stack or Point Releases	C - Mass Balance		18.037

Breakdown of annual releases

January %: 8.43
 February %: 7.63
 March %: 9.24
 April %: 8.43
 May %: 8.03
 June %: 8.84
 July %: 8.43
 August %: 8.43
 September %: 8.43
 October %: 8.03
 November %: 8.84
 December %: 7.24

Reasons for Changes in Quantities Released from Previous Year

Decrease in production levels

Disposals

Recycling

Reasons for adding or removing substance(s)

Substances added to the report

Substances removed from the report

Pollution Prevention – No Plan and No Activities

Pollution prevention activities

*** Please select all applicable reasons from the list below or return to the General Reporting Questions page and change your answer.**

- Substance, process or technology alternatives are unknown or unavailable
- Activities were implemented in a previous year; additional activities are either unnecessary or unfeasible at this time
- Insufficient capital to implement activities
- Insufficient understanding of how to implement pollution prevention activities
- Concern that product quality may decline as a result of activities

- Limited by regulatory or permit obligations
- Other (please specify)

Please provide any additional comments

Feedback

Specify your level of satisfaction

- Completely satisfied. The reporting system works well and saves me time.
- Very satisfied. Did not encounter any technical issues, but there is room for improvement.
- Satisfied. Few technical issues and they were easily resolved.
- Neutral
- Dissatisfied. Technical issues with the reporting system made it difficult to report.
- Very dissatisfied. Technical issues with the reporting system made it very difficult to report.

Help us improve the system by describing the technical issues encountered and their frequency. Suggest improvements to the system.

Please provide any comments you may have on the layout and functionality for the new 2021 Pollution Prevention requirements.

Report Submission and Electronic Certification

Electronic Statement of Certification

* Specify the language of correspondence

English



Comments (optional)

I hereby certify that I have exercised due diligence to ensure that the submitted information is true and complete. The amounts and values for the facility(ies) identified below are accurate, based on reasonable estimates using available data. The data for the facility(ies) that I represent are hereby submitted to the programs identified below using the Single Window Reporting Application.

I also acknowledge that the data will be made public

Company name

Heroux Devtek Landing Gear Division

Certifying Official

Steve Milijasevic

Report Submitted by

Connie Lum

* I, the Certifying Official or authorized delegate, agree with the statements above and acknowledge that by pressing the "Submit Report(s)" button, I am electronically certifying and submitting the facility report(s) for the identified company to its affiliated programs.



Report(s) included with submission

Report Year	Facility Name	Province	City	Applicable Program(s)
2021	West Heights Manufacturing/Devtek Aerospace Inc	Ontario	Kitchener	NPRI