



NPRI and GHG Emissions Report

2022 Reporting Year

**Prepared For:
Oetiker Limited
Alliston, Ontario**

EKG Project: 23-21-024

May 2023

Prepared by:
E. K. Gillin & Associates Inc.
356 Ontario St., Suite 362, Stratford, ON, N5A 7X6, Canada
Bus: 519-662-3819 or 888-771-6754 Fax: 519-662-6595
Email: ekginc@ekginc.com Website: www.ekginc.com

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1.0 INTRODUCTION

E.K. Gillin & Associates Inc. (EKG) was retained by Oetiker Ltd. to prepare the annual National Pollutant Release Inventory (NPRI) and Greenhouse Gas (GHG) Reports under the relevant federal and provincial programs.

EKG collected the relevant information, performed necessary calculations, and, if necessary, prepared the reports for submission through the Single Window Information Manager (SWIM).

This report forms the basis for compliance with the following programs:

- National Pollutant Release Inventory (NPRI) under the Canadian Environmental Protection Act
- Greenhouse Gas Reporting Program (GHGRP) under the Canadian Environmental Protection Act
- O. Reg. 390/18: Greenhouse Gas Emissions: Quantification, Reporting and Verification under Ontario's Environmental Protection Act

Melissa Schmidt was the primary contact and provided the necessary information for the assessment.

2.0 NATIONAL POLLUTANT RELEASE INVENTORY (NPRI)

2.1 NPRI Regulatory Summary

Sections 46-53 of The Canadian Environmental Protection Act, 1999 (CEPA) establish the requirement for facilities to report substances in order to establish and publish a national inventory. This data is used for conducting research, creating an inventory of data, and formulating objectives and codes of practice.

In general, an NPRI report is required for any facility:

- The equivalent of 20,000 hours of labour or more annually (equal to 10 full-time employees).
- and,
- Any substance in NPRI has manufactured, processed, or otherwise used (MPO) quantities that are equal to or greater than the corresponding MPO threshold identified in NPRI.

In addition, the facility must meet any of the other reporting criteria for substances on the NPRI substance list. A list of substances and their reporting requirements are published in the Canada Gazette, which is to be used as a guide for NPRI reporting.

Annual reports are submitted online using the Single Window Information Manager (SWIM) portal.

2.2 NPRI Accounting and Reporting Summary

NPRI accounting for the facility was conducted in accordance with common methods and guidance from the Guide for Reporting to the National Pollutant Release Inventory 2022 and 2024 (NPRI Guidance Document). The facility is required to report on the following substances:

Substance	CAS#	MPO Tonne/YR	Annual Threshold Tonne/Yr	2021 Reporting Status	Rationale for Change 2021 to 2022
Chromium	7440-47-3	1050.8	10	Yes	Insignificant Change
Manganese	7439-96-5	110.9	10	Yes	Insignificant Change
Nickel	7440-02-0	447.9	10	Yes	Insignificant Change

A full summary of the data provided, and calculations used in the formation of the report can be found in Appendix A.

3.0 Greenhouse Gas Emissions Reporting

3.1 Regulatory Summary

The Greenhouse Gas Reporting Program (GHGRP) collects information on greenhouse gas emissions from facilities across Canada. The program is also administered under section 46 of CEPA. This data is used to maintain a Greenhouse Gas Inventory for Canada as part of its obligations under the United Nations Framework Convention on Climate Change (UNFCCC). This agreement requires Canada to keep accurate records of all sources and sinks of GHGs caused by human activity and develop regulatory initiatives to reduce GHG emissions. Facilities are required to report to the federal GHGRP if 10,000 tonnes or more of GHGs in carbon dioxide equivalent units per year. Additionally, facilities engaged in specific industries are required to provide additional data.

Ontario Regulation 390/18: Greenhouse Gas Emissions: Quantification, Reporting and Verification under Ontario's Environmental Protection Act requires some Ontario facilities to report annual greenhouse gas emissions to the Ministry of the Environment, Conservation and Parks (MECP). This initiative is intended to ensure that large industrial emitters are held accountable for their greenhouse gas emissions. Facilities are required to submit a report if they import greater than zero megawatt hours of electricity per year or emit 10,000 tonnes or more of carbon dioxide equivalent per year.

3.2 Summary of GHG Emissions

GHG accounting for the facility was done in accordance with the current federal Technical Guidance on Reporting Greenhouse Gas Emissions (Federal GHG Guideline) and the current provincial Guideline for Quantification, Reporting and Verification of Greenhouse Gas Emissions.

The sources at the Oetiker Ltd., facility included in O. Reg. 390/18 are stationary combustion sources. These Bend All sources do not exceed the reportable threshold and therefore does not need to report GHG emissions for the reporting year 2022.

A full summary of the data provided, and calculations used in the formation of the report can be found in Appendix B.

4.0 ADMINISTRATIVE INFORMATION

The administrative information provided by the site is provided in Appendix C.

Should you have any questions regarding this assessment, please contact your EKGinc representative immediately.

APPENDIX A
NPRI Summary

Part 1A Substances

CAS #	7429-90-5	*	*	110-82-7	111-42-2	67-63-0	*	78-93-3	*	*	1314-20-1	*	71-23-8	Total Used	Percentage of	Recycling (t)
Substance Name	Aluminum(1)	Chromium	Copper	Cyclohexane	Diethanolamine	Isopropyl Alcohol	Manganese	Methyl Ethyl Ketone	Nickel	Phosphorus	Thorium Dioxide	Vanadium	n-Propanol	2022 (t)	Steel Type	
Carbon Steel																
Carbon Steel (Carbon Steel) Comp Group 12	0.01%	0.15%	0.20%				0.50%		0.20%	0.02%			0.01%	1.6	0.39%	0.2
CR6 (Carbon Steel) Comp Group 8							1.20%			0.12%				15.9	3.79%	1.6
G90 (Carbon Steel) Comp Group 10		0.15%	0.25%				0.60%		0.20%	0.03%			0.01%	335.9	80.18%	33.0
HSLA (Carbon Steel) Comp Group 11	0.02%						1.40%			0.03%				0.0	0.00%	0.0
Z275 (Carbon Steel) Comp Group 7	0.02%						1.40%			0.03%				65.5	15.65%	6.4
Stainless Steel																
18SR (Stainless Steel) Comp Group 1	2.00%	18.00%					0.75%		0.50%	0.04%				0.0	0.00%	0.0
304 (Stainless Steel) Comp Group 2		19.50%					2.00%		8.30%	0.05%				355.3	6.59%	37.9
304A (Stainless Steel) Comp Group 3		19.50%					2.00%		8.30%	0.05%				4257.9	79.02%	454.7
304L (Stainless Steel) Comp Group 4		19.50%					2.00%		8.30%	0.05%				741.9	13.77%	79.2
316L (Stainless Steel) Comp Group 5		18.00%					2.00%		8.30%	0.05%				33.5	0.62%	3.6
430 (Stainless Steel) Comp Group 6		18.00%					1.00%		0.75%	0.04%				0.0	0.00%	0.0
Chemicals																
Compound ZF 113					10.00%									0.1		
Crown 6075 Dry Film Lubricant				30.00%		10.00%								0.0		
Dykem Remover & Cleaner						5.00%								0.0		
SCP-70-SCP-709, SCP-719, SCP-740 (FD) Ink						5.00%		95.00%					5.00%	0.3		
Thoriated Tungsten Electrodes											2.00%			0.1		
WS-800 (All Colors) (Water Wash Off)						50.00%								0.0		

2022 Totals	Aluminum(1)	Chromium	Copper	Cyclohexane	Diethanolamine	Isopropyl Alcohol	Manganese	Methyl Ethyl Ketone	Nickel	Phosphorus	Thorium Dioxide	Vanadium	n-Propanol
Total Amount Regulated Substance (t)	0.0	1050.8	0.8	0.0	0.0	0.0	110.9	0.2	447.9	2.8	0.0	0.0	0.0
Total Amount Regulated >1% Conc. (t)	0.0	1050.3	0.0	0.0	0.0	0.0	108.9	0.2	447.2	0.0	0.0	0.0	0.0
Total Recycled (t)	N/A	112.1	N/A	N/A	N/A	N/A	11.6	N/A	47.8	N/A	N/A	N/A	N/A
Total Fugitive to Landfill (t)	N/A	0.0	N/A	N/A	N/A	N/A	0.0	N/A	0.0	N/A	N/A	N/A	N/A
Total Released to Air	N/A	0.0	N/A	N/A	N/A	N/A	0.0	N/A	0.0	N/A	N/A	N/A	N/A
Total Left in Product (t)	N/A	938.1	N/A	N/A	N/A	N/A	97.3	N/A	399.5	N/A	N/A	N/A	N/A
Mass Threshold (t)	10	10	10	10	10	10	10	10	10	10	10	10	10
REPORTABLE (YES/NO)	NO	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO	NO	NO

Part 1B Substances - Alternative Threshold Substances

CAS #	*	*	*	Total Used 2022 (kg)
Substance Name	Cadmium	Arsenic	Lead	
Aluminum Alloys	0.20%			0.0
Masters Metallic Compound			40.00%	0.0
Oxygen Free Electronic (OFE) Copper	0.01%	0.01%	0.01%	0.0

2021 Totals	Cadmium	Arsenic	Lead
Total Amount Regulated Substance (kg)	0.0	0.0	0.0
Concentration Threshold	0.1%	0.1%	0.1%
Total Amount Regulated > Conc. Thresh. (kg)	0.0	0.0	0.0
Total Recycled (5%)* (kg)	0.0	0.0	0.0
Total Fugitive to Landfill (0.01%)* (kg)	0.0	0.0	0.0
Total Released to Air (0.05%)** (kg)	0.0	0.0	0.0
Total Left in Product (kg)	0.0	0.0	0.0
Mass Threshold (kg)	5	50	50
REPORTABLE (YES/NO)	NO	NO	NO

Notes:

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Part 2 Substances: Polycyclic Aromatic Hydrocarbons

Notes:

The facility does not utilize PAHs

Facility did not meet criteria in 2022.

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Part 3 Substances: Dioxins and Furans

Notes:

The facility does not utilize or create Part 3 compounds

Facility did not meet criteria in 2022.

PART 4 Substances: Criterial Air Contaminants

Contaminants	Emission Factor (lbs/m3)	Total Gas Usage (m3)	Emissions/yr (lbs)	Emissions/yr (tonnes)	Threshold (tonnes)	Reportable?
Nitrogen Oxides	0.003531467	1.18E+05	4.16E+02	0.2	20.0	No
Sulphur Dioxide	0.000021189	1.18E+05	2.50E+00	0.0	20.0	No
Carbon Monoxide	0.000194231	1.18E+05	2.29E+01	0.0	20.0	No
VOCs	0.000788	1.18E+05	9.29E+01	0.0	10.0	SEE BELOW
PM10	0.000268391	1.18E+05	3.16E+01	0.0	0.5	No
PM2.5*						No

* Based on USEPA Emission Ratio PM2.5:PM10 = 0.75:1.0

Product	VOC	Total Used 2022 (t)
DME Diamond Compound	100.00%	0.0
Remover Cleaner	36.23%	0.0
SCP-700-709, 719 & 740 (FD) Ink	100.00%	0.3
WS-800 (All Colors) (Water Wash Off)	55.00%	0.2

2022 Totals	VOC (t)
Total Amount Regulated Substance (t)	0.4
Total Recycled (5%)* (t)	N/A
Total Fugitive to Landfill (0.01%)* (t)	N/A
Total Released to Air (0.05%)** (t)	0.4
Total Left in Product (t)	N/A
Mass Threshold (t)	10
REPORTABLE (YES/NO)	NO

Notes:

Facility did not meet criteria for 2022

Part 5 Substances: Speciated VOCs

Facility did not meet criteria based on criteria for Part 4 not being met.

APPENDIX B
GHG Summary

Greenhouse Gases 2022

Site Data		
Stationary Fuel Combustion		
Diesel	0	kl
Natural Gas	117904	m ³
On-Site Transportation		
Diesel	0	kl
Propane	0	kl

Non-Variable Fuels						
	CO ₂ Emission Factor		CH ₄ Emission Factor		N ₂ O Emission Factor	
	Value	Unit	Value	Unit	Value	Unit
Stationary Fuel Combustion						
Diesel	0	kg/kl	0.078	kg/kl	0.02	kg/kl
On-Site Transportation						
Diesel	0	kg/kl	0.073	kg/kl	0.02	kg/kl
Propane	0	kg/kl	0.024	kg/kl	0.087	kg/kl

Variable Fuels						
	Default High Heat Value (for CO ₂ Equation)		CH ₄ Emission Factor		N ₂ O Emission Factor	
	Value	Unit	Value	Unit	Value	Unit
Natural Gas	39.3	MJ/m ³	0.037	g/m ³	0.033	g/m ³

Global Warming Potential (GWP)	
Carbon Dioxide - CO ₂	1
Methane - CH ₄	25
Nitrous Oxide - N ₂ O	298

CO ₂ e									
	Stationary Fuel	Industrial Process	Industrial Product Use	Fugitive			On-Site Transportation	Waste	Wastewater
				Venting	Flaring	Leakage			
Carbon Dioxide - CO ₂ (tonnes)	233	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A
Methane - CH ₄ (tonnes)	0	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A
Nitrous Oxide - N ₂ O (tonnes)	0	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A
YYYY Total - CO ₂ e (tonnes)	234	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A
Reporting Threshold (tonnes)	10000								
Reportable YES/NO	NO								

Facility did not meet criteria.

APPENDIX C
Administrative Information.