Summary Letter as required under Toxics Reduction Act and Ontario Regulation 455/09

Integrated Grain Processors Co-operative Incorporated - IGPC Ethanol

NPRI ID: 11696
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Aylmer, ON N5H 2R9 Canada
Number of employees: 83

Contact Information

Kevin Norton
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Geographical Coordinates

Latitude: 42.7827
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Datum: 1983

Standard Industrial Classifications

- **NAICS 2 Code:** 31-33 - Manufacturing
- **NAICS 4 Code:** 3251 - Basic Chemical Mfg.
- **NAICS 6 Code:** 325190 - Other Basic Organic Chemical Mfg.

Other Environmental Programs

- G10478 – GHGRP

Substance Information (tonnes)

Substance Name	CAS Number	Amount Entering Process	Amount Created	Amount Released to Air	Amount Disposed	Amount Recycled	Amount Contained in Product
Methanol	67-56-1	1 to 10	1 to 10	7.42	0	0	1 to 10
Sulphuric Acid	7664-93-9	1,000 to 10,000	0	0	0	0	0
Toluene	108-88-3	100 to 1,000	0	0.89	0	0	100 to 1,000
Benzene	71-43-2	10 to 100	0	0.08	0	0	10 to 100
Ethyl Alcohol	64-17-5	0	100,000 to 1,000,000	72.43	0	0	100,000 to 1,000,000
Ammonia	NA - 16	0	0	0	0	0	0
Nitrogen Oxides	11104-93-1	0	100 to 1000	134.83	0	0	0
Carbon Monoxide	630-08-0	0	100 to 1000	196.54	0	0	0
Particulate Matter ($PM_{2.5}$)	NA – M10	0	10 to 100	39.43	0	0	0
Particulate Matter (PM_{10})	NA – M09	0	10 to 100	41.79	0	0	0

For comparison purposes, the following table provides a summary of the 2017 and 2018 TRA Accounting values.

Comparison of 2017 to 2018 Reportable TRA Substances (tonnes)

Substance Name	Year	Amount Entering Process	Amount Created	Amount Released to Air	Amount Off-Site Disposal	Amount Contained in Product
Methanol 67-56-1	2017	1 to 10	1 to 10	5.37	0	1 to 10
	2018	1 to 10	1 to 10	7.42	0	1 to 10
	Change in % and Tonnes	Increase of 14% or 0.24 tonnes	Increase of 38% or 2.05 tonnes	Increase of 38% or 2.05 tonnes	N/A	Increase of 14% or 0.24 tonnes
	Rationale	Increased chemical usage due to plant expansion and production increase	Plant expansion and production increase	Plant expansion and production increase	N/A	Increased chemical usage
	Installation of the Ethanol Vapour Recovery System was proposed to result in a decrease of 98% or 4.3 tonnes of methanol emissions to air by end of calendar year 2014. In 2013, an increase of 0.048 tonnes or 1.3% of emission to air was recorded. In 2014, a decrease of 0.23 tonnes or 4.73% of emission to air was recorded. Due to increased 2015 production, the methanol air releases increased by 0.6 tonnes. Also due to increased production, methanol air releases increased by 3.11% in 2016. In 2017, a decrease of 0.03 tonnes or 0.54% of emissions to air was recorded. Due to the facility expansion and resultant increased production in 2018, the methanol air releases increased by 2.0 tonnes or 38%. The implementation of the system did not result in the anticipated reductions.					
Sulphuric Acid 7664-93-9	2017	1,000 to 10,000	0	0	0	0
	2018	1,000 to 10,000	0	0	0	0
	Change in % and Tonnes	Increase of 19% or 340.97 tonnes	N/A	N/A	N/A	N/A
	Rationale	Increased chemical usage due to plant expansion and production increase	N/A	N/A	N/A	N/A
	No plans to reduce Sulphuric Acid use.					
Toluene 108-88-3	2017	100 to 1,000	0	0.06	0	100 to 1,000
	2018	100 to 1,000	0	0.89	0	100 to 1,000
	Change in % and Tonnes	Increase of 22% or 83.45 tonnes	N/A	Increase of 1383% or 0.83 tonnes	N/A	Increase of 22% or 82.62 tonnes
	Rationale	Increased chemical usage due to plant expansion and production increase	N/A	Plant expansion, updated truck loadout flare last containing information and an increase in annual hours of operation.	N/A	Plant expansion and increased production
	It is the objective of IGPC Ethanol Inc. to minimize the use of toluene containing denaturants within product specification limits.					

Substance Name	Year	Amount Entering Process	Amount Created	Amount Released to Air	Amount Off-Site Disposal	Amount Contained in Product
Benzene 71-43-2	2017	10 to 100	0	0.01	0	10 to 100
	2018	10 to 100	0	0.08	0	10 to 100
	Change in % and Tonnes	Increase of 22% or 6.26 tonnes	N/A	Increase of 512% or 0.06 tonnes	N/A	Increase of 22% or 6.20 tonnes
	Rationale	Increased chemical usage due to plant expansion and production increase	N/A	Plant expansion, updated truck loadout flare last containing information and an increase in annual hours of operation.	N/A	Plant expansion and increased Production
	It is the objective of IGPC Ethanol Inc. to minimize the use of benzene containing denaturants within product specification limits and.					
Ethyl Alcohol 64-17-5	2017	0	100,000 to 1,000,000	47.20	0	100,000 to 1,000,000
	2018	0	100,000 to 1,000,000	72.43	0	100,000 to 1,000,000
	Change in % and Tonnes	N/A	Increase of 22% or 31,214 tonnes	Increase of 53% or 25 tonnes	N/A	Increase of 22% or 31,189 tonnes
	Rationale	N/A	Plant expansion and increase in production	Plant expansion, updated truck loadout flare last containing information and an increase in annual hours of operation.	N/A	Plant expansion and increase in production
	No plans to reduce Ethyl Alcohol use.					
Ammonia NA - 16	2017	0	0	0	0	0
	2018	0	0	0	0	0
	Change in % and Tonnes	N/A	N/A	N/A	N/A	N/A
	Rationale	Eliminated use of ammonia	N/A	N/A	Eliminated use of ammonia	N/A
	Installation of hose weights and improvement of loading process were to result in decrease of 1% or 0.003 tonnes in 2013. In 2013, IGPC attempted to implement toxic reduction plans and concurrently performed trial using enzymes, which eliminated use of ammonia during the trial period. The enzyme trial resulted in a 20% decrease in use of ammonia and 30% decrease in off-site transfers in 2013. In 2014, IGPC eliminated the use of ammonia. With the implementation of the aforementioned actions, IGPC surpasses the reduction plan targets. In 2015, 2016, 2017 and 2018, ammonia continues to be absent at the facility.					
Nitrogen Oxides 11104-93-1	2017	0	100 to 1,000	102.24	0	0
	2018	0	100 to 1,000	134.83	0	0
	Change in % and Tonnes	N/A	Increase of 32% or 32.59 tonnes	Increase of 32% or 32.59 tonnes	N/A	N/A
	Rationale	N/A	Plant expansion increase in production and natural gas usage.	Plant expansion increase in production and natural gas usage.	N/A	N/A
	No plans to reduce the creation of Nitrogen Oxides.					

Substance Name	Year	Amount Entering Process	Amount Created	Amount Released to Air	Amount Off-Site Disposal	Amount Contained in Product
Carbon Monoxide 630-08-0	2017	0	10 to 100	85.88	0	0
	2018	0	100 to 1,000	196.54	0	0
	Change in % and Tonnes	N/A	Increase of 129% or 110.67 tonnes	Increase of 129% or 110.67 tonnes	N/A	N/A
	Rationale	N/A	Plant expansion, increase in production and natural gas usage.	Plant expansion, increase in production and natural gas usage.	N/A	N/A
	No plans to reduce the creation of carbon monoxide.					
Particulate Matter ($PM_{2.5}$) NA-M10	2017	0	12.16	12.16	0	0
	2018	0	39.43	39.43	0	0
	Change in % and Tonnes	N/A	Increase of 224% or 27.27 tonnes	Increase of 224% or 27.27 tonnes	N/A	N/A
	Rationale	N/A	Plant expansion and increase in production	Plant expansion and increase in production	N/A	N/A
	No plans to reduce the creation of $PM_{2.5}$.					
Particulate Matter (PM_{10}) NA-M09	2017	0	13.43	13.43	0	0
	2018	0	41.79	41.79	0	0
	Change in % and Tonnes	N/A	Increase of 211% or 28.35 tonnes	Increase of 211% or 28.35 tonnes	N/A	N/A
	Rationale	N/A	Plant expansion and increase in production	Plant expansion and increase in production	N/A	N/A
	No plans to reduce the creation of PM_{10}.					

Certification

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

Signed, in Aylmer, ON, on May 31, 2019

*Signed version available at facility upon request

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Kevin Norton, CEO-COO
IGPC Ethanol Inc.