

Toxics Reduction Regulation
Annual Report Ontario Regulation 455/09

Report for 2018

Prepared by:

Janet Payette, P.Eng.

Sr. Environmental Engineer

INVISTA (Canada) Company

Maitland Site

This report is prepared under O.Reg. 455/09 for: **INVISTA (Canada) Company**, Maitland Site.

Street address:

1400 County Road #2 East,
Maitland,
Ontario, K0E 1P0.

Mailing address:

INVISTA (Canada) Company
P.O. Box 611,
Maitland, ON, K0E 1P0

The spatial coordinates of the facility are 44.6606 latitude, -75.6017 longitude.

In 2018 the site had approximately 94 full time equivalent employees.

The site NPRI ID number is 1207; the Site O.Reg 127/01 ID number was 5030.

The 6 digit NAICS codes for this facility is:

- 325190 - Other Basic Organic Chemical Mfg.

Canadian parent company of the facility (100% responsible for this facility):

INVISTA (Canada) Company
455 Front Road
Kingston, Ontario Canada
K7L4Z6

The Site Public Contact:

Paul Brown
455 Front Road
Kingston, Ontario Canada
K7L4Z6
(613) 548-5320

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Substances covered under this report for Maitland Site are:

Substance	CAS #
Hydrochloric Acid	7647-01-0
Hexachlorobenzene	118-74-1
Carbon Monoxide	630-08-0
NOX (as NO2)	11104-93-1
Particulate Matter 2.5	NA-M10
Particulate Matter 10	NA-M09
Total Ammonia	NA-16

Note: Methanol is no longer used at the site. This substance has been removed from this report.

Hydrochloric Acid

Hydrochloric acid is used to aid in treating boiler feedwater; specifically it is used to regenerate ion exchange resin beds where impurities are removed from water prior to the water being used to make steam.

The overall site quantities are (in Tonnes of 100% HCl):

	2018 Quantity/Range Amount (tonnes)	Change from 2017 %
Used	>10 to 100	-17
Created	0	0
Contained in Product	0	0
Released	0	0
Disposed	0	0
Transferred	0	0

The amount of HCl used decreased in 2018 because the site stopped using HCl later in the year. The site has installed new technology for water softening and is no longer using this chemical.

A Toxic Reduction Plan was developed for this substance in 2012. There have been no amendments to the plan. This plan contains an objective to reduce the use of hydrochloric acid at the site by 3.4 tonnes by June 2014. This was to be done through improvements to the system through the calibration of the flow measurement device. Further investigation has determined that the flow meter being used is the most accurate meter available and does not require calibration. This option is no longer valid and reductions will not occur. As mentioned above, the site has installed new technology for water softening and is no longer using HCl.

Hexachlorobenzene

Hexachlorobenzene is included in this report as the Site carries out an activity indicated in the National Pollutant Release Inventory (NPRI) notice which requires reporting any emissions of these substances. The site incinerates a process by-product stream that is classified as hazardous waste.

The overall site quantities are (in Grams):

	2018 Quantity/Range Amount (grams)	Change from 2017 %
Used	0	0
Created	0	0
Contained in Product	0	0
Released	0	0
Disposed	0	0
Transferred	0	0

There was no change in this data for 2018.

A Toxic Reduction Plan was developed for this substance in 2012. There have been no amendments to the plan. This plan contains an objective to continue to measure and monitor process fuel parameters to validate that there is no creation of hexachlorobenzene. There were no options identified within the plan that were technically or economically feasible to implement. There were no additional actions taken in 2018 to achieve the objectives of the plan.

Particulate Matter

Reporting of particulate matter is based on the micron size of the particle. Maitland site meets the threshold for reporting PM_{2.5} and PM₁₀. Particulate from the combustion of fuel is the primary source of particulate emissions at the site.

The overall site quantities are (Tonnes)

	2018 Quantity/Range Amount (tonnes)	Change from 2017 %
PM_{2.5}		
Used	0	0
Created	>1 to 10	-5.02
Released	1.499	-5.02
PM₁₀		
Used	0	0
Created	>1 to 10	-5.01
Released	1.501	-5.01

The amount created and released was approximately the same as 2017 (<10%).

A Toxic Reduction Plan was developed for this substance in 2013. There have been no amendments to the plan. This plan contains an objective to operate the cogeneration facility and boiler units as efficiently as possible which should result in the reduction or more efficient burning of natural gas in the boilers and cogeneration unit which will reduce the creation of particulate. There were no options identified within the plan that were technically or economically feasible to implement. There were no additional actions taken in 2018 to achieve the objectives of the plan.

Carbon Monoxide

Carbon monoxide is created through the combustion of fuel.

The overall site quantities are (in Tonnes):

	2018 Quantity/Range Amount (tonnes)	Change from 2017 %
Used	0	0
Created	>10 to 100	-27.78
Released	24.92	-27.78

The amount created and released decreased in 2018 due to the quantity and type of fuel burned in site equipment.

A Toxic Reduction Plan was developed for this substance in 2013. There have been no amendments to the plan. This plan contains an objective to operate the cogeneration facility and boiler units as efficiently as possible which should result in the reduction or more efficient burning of natural gas in the boilers and cogeneration unit which will reduce the creation of carbon monoxide. There were no options identified within the plan that were technically or economically feasible to implement. There were no additional actions taken in 2018 to achieve the objectives of the plan.

NO_x

NO_x is created through the combustion of fuel.

The overall site quantities are (in Tonnes):

	2018 Quantity/Range Amount (tonnes)	Change from 2017 %
Used	0	0
Created	>10 to 100	-31.6
Released	98.88	-31.6

The amount created and released decreased in 2018 due to changes in the quantity and type of fuel processed in site equipment.

A Toxic Reduction Plan was developed for this substance in 2013. There have been no amendments to the plan. This plan contains an objective to operate the cogeneration facility and boiler units as efficiently as possible which should result in the reduction or more efficient burning of natural gas in the boilers and cogeneration unit which will reduce the creation of NO_x. There were no options identified within the plan that were technically or economically feasible to implement. There were no additional actions taken in 2018 to achieve the objectives of the plan.

Ammonia

Ammonia is used and created in the amines manufacturing process. It is created as a byproduct in the manufacturing process and it is created in the wastewater treatment plant from the breakdown of organic nitrogen.

The overall site quantities are (in Tonnes):

	2018 Quantity/Range Amount (tonnes)	Change from 2017 %
Used	>100 to 1000	22.31
Created	>100 to 1000	18.53
Contained in Product	>10 to 100	103.34
Released	71.04	25.31
Disposed	0.00	0
Transferred	0	0

The creation and released values increased in 2018 due to production. The amount contained in product increased because there were more shipments of ammonia in 2018. In 2018 one of the flowmeters used to calculate ammonia use was determined to not be working properly. The facility intended to change the quantification method for this parameter for the 2019 plan review. Due to changes in the regulation, all quantification methods need to remain the same until the regulation is repealed in 2021. While ammonia use reflects higher for 2018 due to production, there are still inconsistencies with the calculation.

A Toxic Reduction Plan was developed for this substance in 2013. There have been no amendments to the plan. This plan contains an objective to continue to look for options that will reduce the long term use and creation of ammonia. There were no options identified within the plan that were technically or economically feasible to implement. There were no additional actions taken in 2018 to achieve the objectives of the plan.

I certify that I have read this report on the toxic substance reduction accounting 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 the Act.

Signed original located at facility

Mr. Matthew Murton
Maitland Site Manager