Report Preview

Report Details

Report Year	2018
Report Type:	NPRI,ON MECP TRA
Report Status:	Submitted
Modified Date/Time:	31/05/2019 4:50 PM

Company and Facility Details

Company Name:	Viasystems Toronto, Inc.
Business Number:	122456379
Mailing Address:	Delivery Mode: GeneralDelivery Address Line 1: 8150 Sheppard Avenue East City, Province/Territory, Postal Code: Toronto Ontario M1B 5K2 Country: Canada
Facility Name:	Sheppard Facility
NAICS Code:	334410
NPRI ID:	11606
Portable:	No
Physical Address:	Address Line 1: 8150 Sheppard Avenue East City, Province/Territory, Postal Code: Toronto Ontario M1B 5K2 Country: Canada Latitude: 43.8031 Longitude: -79.1952 UTM Zone: 17 UTM Easting: 645022 UTM Northing: 4851615

Parent Companies

Company Name:	Sheppard Facility
Civic Address:	Address Line 1: City, Province/Territory, Postal Code: None Country: None Latitude: 43.8031 Longitude: -79.1952

Permits

Number or Permit Number:	8991-6N5LSA
Government Department, Agency, or Program Name:	Ministry of the Environment, Cert. of Air Approval
Number or Permit Number:	ON0761503

Government Department, Agency, or Program Name:	Ministry of the Environment, Regulation 347
Number or Permit Number:	539945
Government Department, Agency, or Program Name:	CEPA EIHW Export Notice Number (2016 - 2017)
Number or Permit Number:	701067
Government Department, Agency, or Program Name:	CEPA EIHW Export Notice Number (2017 - 2018)

Contacts Details

Contact Type	Technical Contact, Certifying Official, Company Coordinator, Person who prepared the report, Person who coordinated the preparation of the Toxics Reduction Plan, Public Contact
Name:	Mark Scruton
Position:	Dir. of EHSS of AMII
Telephone:	4162082127
Fax:	4162082154
Email:	Mark.Scruton@ttm.com
Contact Type	Highest Ranking Employee
Name:	Jon Pereira
Position:	VP Operations of AMII
Telephone:	4162082100
Extension	2206
Email:	Jon.Pereira@ttm.com
Mailing Address:	Delivery Mode: GeneralDelivery Address Line 1: 8150 Sheppard Avenue East City, Province/Territory, Postal Code: Toronto Ontario M1B 5K2 Country: Canada

General Information

Number of employees:	594
Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:	None of the above
Activities Relevant to Reporting Dioxins, Furans and Hexacholorobenzene:	None of the above
Activities Relevant to Reporting of Polycyclic Aromatic Hydrocarbons (PAHs):	Wood preservation using creosote: No
Is this the first time the facility is reporting to the NPRI (under current or past ownership):	No
Is the facility controlled by another Canadian company or companies:	No
Did the facility report under other environmental regulations or permits:	Yes
Is the facility required to report one or more NPRI Part 4 substances (Criteria Air Contaminants):	No
General Comments for Facility:	PWB manufacturing

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
NA - 16	Ammonia (total)	15.7200	N/A	0.6080	21.7300	tonnes
NA - 06	Copper (and its compounds)	0.0360	N/A	2.2740	131.4090	tonnes
50-00-0	Formaldehyde	0.0300	N/A	0.0510	N/A	tonnes
7647-01-0	Hydrochloric acid	0.1220	N/A	1.7457	57.2600	tonnes
NA - 08	Lead (and its compounds)	0.1080	N/A	11.9270	455.7600	kg
7697-37-2	Nitric acid	1.4440	N/A	13.5300	N/A	tonnes
7664-93-9	Sulphuric acid	0.0180	N/A	17.1800	N/A	tonnes

Applicable Programs

CAS RN	Substance Name	NPRI	ON MECP TRA	ON MECP Reg 127/01	First report for this substance to the ON MECP TRA
NA - 16	Ammonia (total)	Yes	Yes		No
NA - 06	Copper (and its compounds)	Yes	Yes		No
50-00-0	Formaldehyde	Yes	Yes		No
7647-01-0	Hydrochloric acid	Yes	Yes		No
NA - 08	Lead (and its compounds)	Yes	Yes		No
7697-37-2	Nitric acid	Yes	Yes		No
7664-93-9	Sulphuric acid	Yes	Yes		No

General Information about the Substance - Releases and Transfers of the Substance

CAS RN	Substance Name	Was the substance released on-site	The substance will be reported as the sum of releases to all media (total of 1 tonne or less)	1 tonne or more of a Part 5 Substance (Speciated VOC) was released to air
NA - 16	Ammonia (total)	Yes	No	No
NA - 06	Copper (and its compounds)	Yes	Yes	No
50-00-0	Formaldehyde	Yes	Yes	No
7647-01-0	Hydrochloric acid	Yes	Yes	No
NA - 08	Lead (and its compounds)	Yes	No	No
7697-37-2	Nitric acid	Yes	No	No
7664-93-9	Sulphuric acid	Yes	Yes	No

General Information about the Substance - Disposals and Off-site Transfers for Recycling

CAS RN	Substance Name	Was the substance disposed of (on-site or off-site), or transferred for treatment prior to final disposal	Is the facility required to report on disposals of tailings and waste rock for the selected reporting period	Was the substance transferred off-site for recycling
NA - 16	Ammonia (total)	Yes	No	Yes
NA - 06	Copper (and its compounds)	Yes	No	Yes
50-00-0	Formaldehyde	Yes	No	No
7647-01-0	Hydrochloric acid	Yes	No	Yes
NA - 08	Lead (and its compounds)	Yes	No	Yes
7697-37-2	Nitric acid	Yes	No	No
7664-93-9	Sulphuric acid	Yes	No	No

General Information about the Substance - Nature of Activities

CAS RN	Substance Name	Manufacture the Substance	Process the Substance	Otherwise Use of the Substance
NA - 16	Ammonia (total)		As a reactant	As a physical or chemical processing aid
NA - 06	Copper (and its compounds)		As a reactant As an article component	
50-00-0	Formaldehyde		As a reactant	As a physical or chemical processing aid
7647-01-0	Hydrochloric acid		As a reactant	As a physical or chemical processing aid
NA - 08	Lead (and its compounds)		As a reactant As an article component	
7697-37-2	Nitric acid		As a reactant	As a physical or chemical processing aid

CAS RN	Substance Name	Manufacture the Substance	Process the Substance	Otherwise Use of the Substance
7664-93-9	Sulphuric acid		As a reactant	As a physical or chemical processing aid

TRA Quantifications

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
NA - 16	Ammonia (total)	Use	37.87 tonnes	Yes
NA - 16	Ammonia (total)	Creation	0 tonnes	Yes
NA - 16	Ammonia (total)	Contained in Product	0 tonnes	Yes
NA - 06	Copper (and its compounds)	Use	148.207 tonnes	Yes
NA - 06	Copper (and its compounds)	Creation	0 tonnes	Yes
NA - 06	Copper (and its compounds)	Contained in Product	14.49 tonnes	Yes
50-00-0	Formaldehyde	Use	20.536 tonnes	Yes
50-00-0	Formaldehyde	Creation	0 tonnes	Yes
50-00-0	Formaldehyde	Contained in Product	0 tonnes	Yes
7647-01-0	Hydrochloric acid	Use	66.61 tonnes	Yes
7647-01-0	Hydrochloric acid	Creation	0 tonnes	Yes
7647-01-0	Hydrochloric acid	Contained in Product	0 tonnes	Yes
NA - 08	Lead (and its compounds)	Use	539.932 kg	Yes
NA - 08	Lead (and its compounds)	Creation	0 kg	Yes
NA - 08	Lead (and its compounds)	Contained in Product	48.070 kg	Yes
7697-37-2	Nitric acid	Use	27.30 tonnes	Yes
7697-37-2	Nitric acid	Creation	0 tonnes	Yes
7697-37-2	Nitric acid	Contained in Product	0 tonnes	Yes
7664-93-9	Sulphuric acid	Use	102.79 tonnes	Yes
7664-93-9	Sulphuric acid	Creation	0 tonnes	Yes
7664-93-9	Sulphuric acid	Contained in Product	0 tonnes	Yes

TRA Quantifications - Others

CAS RN	Substance Name	Change in Method of Quantification	Reasons for Change	Description of how the change impact tracking and quantification of the substance	Description of how an incident(s) affected quantifications	Significant Process Change	Reason for the significant process change
NA - 16	Ammonia (total)					No	
NA - 06	Copper (and its compounds)					No	
50-00-0	Formaldehyde					No	
7647-01-0	Hydrochloric acid					No	
NA - 08	Lead (and its compounds)					No	
7697-37-2	Nitric acid					No	
7664-93-9	Sulphuric acid					No	

On-site Releases - Releases to air

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
NA - 16	Ammonia (total)	Stack or Point Releases	O - Engineering Estimates		15.72 tonnes
NA - 08	Lead (and its compounds)	Stack or Point Releases	O - Engineering Estimates		0.108 kg
7697-37-2	Nitric acid	Stack or Point Releases	O - Engineering Estimates		1.444 tonnes

On-site Releases - Releases to air - Total

CAS RN	Substance Name	Total - Releases to Air
NA - 16	Ammonia (total)	15.72 tonnes
NA - 08	Lead (and its compounds)	0.108 kg
7697-37-2	Nitric acid	1.444 tonnes

Total Quantity Released (All Media)

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
NA - 06	Copper (and its compounds)	Total Quantity Released	O - Engineering Estimates		0.036 tonnes

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
50-00-0	Formaldehyde	Total Quantity Released	O - Engineering Estimates		0.030 tonnes
7647-01-0	Hydrochloric acid	Total Quantity Released	O - Engineering Estimates		0.122 tonnes
7664-93-9	Sulphuric acid	Total Quantity Released	O - Engineering Estimates		0.018 tonnes

On-site Releases - Total

CAS RN	Substance Name	Total releases
NA - 16	Ammonia (total)	15.72 tonnes
NA - 08	Lead (and its compounds)	0.108 kg
7697-37-2	Nitric acid	1.444 tonnes

On-site Releases - Quarterly Breakdown of Annual Releases

CAS RN	Substance Name	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NA - 16	Ammonia (total)	25	25	25	25
NA - 06	Copper (and its compounds)	25	25	25	25
50-00-0	Formaldehyde	25	25	25	25
7647-01-0	Hydrochloric acid	25	25	25	25
NA - 08	Lead (and its compounds)	25	25	25	25
7697-37-2	Nitric acid	25	25	25	25
7664-93-9	Sulphuric acid	25	25	25	25

On-site Releases - Reasons for Changes in Quantities Released from Previous Year

CAS RN	Substance Name	Reasons for Changes in Quantities from Previous Year	Comments
50-00-0	Formaldehyde	No significant change (i.e. <10% or no change)	
7647-01-0	Hydrochloric acid	Other (specify in comment field)	Per third party Engineering, modified ECA engineering estimate calculation.
7664-93-9	Sulphuric acid	Other (specify in comment field)	per third party Engineering, modified ECA engineering estimate calculation.
7697-37-2	Nitric acid	No significant change (i.e. <10% or no change)	
NA - 06	Copper (and its compounds)	Other (specify in comment field)	Modified ECA Engineering Estimate
NA - 08	Lead (and its compounds)	Other (specify in comment field)	per third party Engineering, modified ECA engineering estimate calculation.
NA - 16	Ammonia (total)	Other (specify in comment field)	per third party Engineering. modified ECA engineering estimate calculation

Disposals - Off-site Transfers (excluding Tailings and Waste Rock)

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
NA - 16	Ammonia (total)	Chemical Treatment	O - Engineering Estimates		0.491 tonnes
NA - 16	Ammonia (total)	Municipal Sewage Treatment Plant	O - Engineering Estimates		0.117 tonnes
NA - 06	Copper (and its compounds)	Chemical Treatment	O - Engineering Estimates		2.1720 tonnes
NA - 06	Copper (and its compounds)	Municipal Sewage Treatment Plant	O - Engineering Estimates		0.102 tonnes
50-00-0	Formaldehyde	Municipal Sewage Treatment Plant	O - Engineering Estimates		0.051 tonnes
7647-01-0	Hydrochloric acid	Chemical Treatment	O - Engineering Estimates		1.7457 tonnes
NA - 08	Lead (and its compounds)	Chemical Treatment	O - Engineering Estimates		11.380 kg
NA - 08	Lead (and its compounds)	Municipal Sewage Treatment Plant	O - Engineering Estimates		0.547 kg
7697-37-2	Nitric acid	Chemical Treatment	O - Engineering Estimates		13.53 tonnes
7664-93-9	Sulphuric acid	Chemical Treatment	O - Engineering Estimates		17.18 tonnes

Disposals - Off-site Transfers (excluding Tailings and Waste Rock) - Total

CAS RN	Substance Name	Total - Treatment Prior to Final Disposal
NA - 16	Ammonia (total)	0.608 tonnes
NA - 06	Copper (and its compounds)	2.2740 tonnes
50-00-0	Formaldehyde	0.051 tonnes
7647-01-0	Hydrochloric acid	1.7457 tonnes
NA - 08	Lead (and its compounds)	11.927 kg
7697-37-2	Nitric acid	13.53 tonnes
7664-93-9	Sulphuric acid	17.18 tonnes

Disposals - Off-site Transfers (excluding Tailings and Waste Rock) - By Facilities

CAS RN	Substance Name	Category	Off-site Name	Off-site Address	Quantity
50-00-0	Formaldehyde	Municipal Sewage Treatment Plant	Highland Creek Water Treatment Plant	1160 Highland Creek W., Toronto, ON, Canada	0.051 tonnes
7647-01-0	Hydrochloric acid	Chemical Treatment	Detox Environmental Ltd.	322 Bennett, Bowmanville, ON, Canada	1.7457 tonnes
7647-01-0	Hydrochloric acid	Chemical Treatment	Sure Horizon Environmental	40 Advance Blvd., Berampton, ON, L6T 4J4, Canada	
7664-93-9	Sulphuric acid	Chemical Treatment	Detox Environmental Ltd.	322 Bennett, Bowmanville, ON, Canada	17.18 tonnes
7664-93-9	Sulphuric acid	Chemical Treatment	Sure Horizon Environmental	40 Advance Blvd., Berampton, ON, L6T 4J4, Canada	0 tonnes
7697-37-2	Nitric acid	Chemical Treatment	Detox Environmental Ltd.	322 Bennett, Bowmanville, ON, Canada	0 tonnes
7697-37-2	Nitric acid	Chemical Treatment	Sure Horizon Environmental	40 Advance Blvd., Berampton, ON, L6T 4J4, Canada	13.53 tonnes
NA - 06	Copper (and its compounds)	Chemical Treatment	Detox Environmental Ltd.	322 Bennett, Bowmanville, ON, Canada	1.6113 tonnes
NA - 06	Copper (and its compounds)	Chemical Treatment	Sure Horizon Environmental	40 Advance Blvd., Berampton, ON, L6T 4J4, Canada	0.5607 tonnes
NA - 06	Copper (and its compounds)	Chemical Treatment	Highland Creek Water Treatment Plant	1160 Highland Creek W., Toronto, ON, Canada	
NA - 06	Copper (and its compounds)	Municipal Sewage Treatment Plant	Highland Creek Water Treatment Plant	1160 Highland Creek W., Toronto, ON, Canada	0.102 tonnes
NA - 08	Lead (and its compounds)	Chemical Treatment	Detox Environmental Ltd.	322 Bennett, Bowmanville, ON, Canada	11.380 kg
NA - 08	Lead (and its compounds)	Chemical Treatment	Highland Creek Water Treatment Plant	1160 Highland Creek W., Toronto, ON, Canada	
NA - 08	Lead (and its compounds)	Municipal Sewage Treatment Plant	Highland Creek Water Treatment Plant	1160 Highland Creek W., Toronto, ON, Canada	0.547 kg
NA - 16	Ammonia (total)	Chemical Treatment	Detox Environmental Ltd.	322 Bennett, Bowmanville, ON, Canada	0.491 tonnes
NA - 16	Ammonia (total)	Chemical Treatment	Sure Horizon Environmental	40 Advance Blvd., Berampton, ON, L6T 4J4, Canada	0 tonnes
NA - 16	Ammonia (total)	Chemical Treatment	Highland Creek Water Treatment Plant	1160 Highland Creek W., Toronto, ON, Canada	
NA - 16	Ammonia (total)	Municipal Sewage Treatment Plant	Highland Creek Water Treatment Plant	1160 Highland Creek W., Toronto, ON, Canada	0.117 tonnes

Disposals - Total Quantity Disposed (All Media)

CAS RN	Substance Name	Total Quantity Disposed (All Media)
NA - 16	Ammonia (total)	0.608 tonnes
NA - 06	Copper (and its compounds)	2.2740 tonnes
50-00-0	Formaldehyde	0.051 tonnes
7647-01-0	Hydrochloric acid	1.7457 tonnes
NA - 08	Lead (and its compounds)	11.927 kg
7697-37-2	Nitric acid	13.53 tonnes
7664-93-9	Sulphuric acid	17.18 tonnes

Disposals - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Disposed	Reasons for Changes in Quantities from Previous Year	Comments
50-00-0	Formaldehyde	Contaminated materials	No significant change (i.e. <10% or no change)	
7647-01-0	Hydrochloric acid	Contaminated materials	Changes in composition of materials released/disposed of/transferred	Changed Tin stripper from PC 1111 to PCI 4600 starting February 2018, which contain 3% HCl as per SDS. Considering all the HCl contained on Tin Stripper was disposed.
7664-93-9	Sulphuric acid	Contaminated materials	Other (specify in comment field)	No abnormal disposal occurred in 2018 compared to 2016 and 2017, and treated 1 ton more in-house in 2018.
7697-37-2	Nitric acid	Contaminated materials	Changes in composition of materials released/disposed of/transferred	Decrease in 2018 shipment is due to change in Sn stripper formulation.
NA - 06	Copper (and its compounds)	Production residues Contaminated materials Pollution abatement residues	Other (specify in comment field)	All Cu in filter cake and copper dust were recycled
		Contaminated		

CAS RN	Substance Name	Reasons Why Substance Was Disposed	Reasons for Changes in Quantities from Previous Year	Comments
NA - 08	Lead (and its compounds)	materials Pollution abatement residues	Other (specify in comment field)	More work in HASL due to sub-contract work.
NA - 16	Ammonia (total)	Contaminated materials	Changes in composition of materials released/disposed of/transferred	Change to a Sn stripper which is free from Ammonia salts.

Recycling - Off-site Transfers for Recycling

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
NA - 16	Ammonia (total)	Recovery of Inorganic Materials (not metals)	O - Engineering Estimates		21.73 tonnes
NA - 06	Copper (and its compounds)	Recovery of Metals and Metal Compounds	O - Engineering Estimates		131.409 tonnes
7647-01-0	Hydrochloric acid	Recovery of Inorganic Materials (not metals)	O - Engineering Estimates		57.26 tonnes
NA - 08	Lead (and its compounds)	Recovery of Metals and Metal Compounds	O - Engineering Estimates		455.760 kg

Recycling - Off-site Transfers for Recycling - Total

CAS RN	Substance Name	Total - Off-site Transfers for Recycling
NA - 16	Ammonia (total)	21.73 tonnes
NA - 06	Copper (and its compounds)	131.409 tonnes
7647-01-0	Hydrochloric acid	57.26 tonnes
NA - 08	Lead (and its compounds)	455.760 kg

Recycling - Off-site Transfers for Recycling - By Facility

CAS RN	Substance Name	Category	Off-site Name	Off-site Address	Quantity
7647-01-0	Hydrochloric acid	Recovery of Inorganic Materials (not metals)	Micronutrients	1550 Research Way, Indianapolis, IN, United States	57.26 tonnes
NA - 06	Copper (and its compounds)	Recovery of Metals and Metal Compounds	Reldan Metals, LLC	550 Old Bordentown Road, , Fairless Hills, PA, USA	54.627 tonnes
NA - 06	Copper (and its compounds)	Recovery of Metals and Metal Compounds	Micronutrients	1550 Research Way, Indianapolis, IN, United States	63.245 tonnes
NA - 06	Copper (and its compounds)	Recovery of Metals and Metal Compounds	Combined Metal Industries Inc.	505 B Garyray Dr., Weston, ON, Canada	4.884 tonnes
NA - 06	Copper (and its compounds)	Recovery of Metals and Metal Compounds	Detox Environmental Ltd.	322 Bennett, Bowmanville, ON, Canada	8.653 tonnes
NA - 08	Lead (and its compounds)	Recovery of Metals and Metal Compounds	Combined Metal Industries Inc.	505 B Garyray Dr., Weston, ON, Canada	455.760 kg
NA - 16	Ammonia (total)	Recovery of Inorganic Materials (not metals)	Micronutrients	1550 Research Way, Indianapolis, IN, United States	21.73 tonnes

Recycling - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Recycled	Reasons for Changes in Quantities Recycled from Previous Year	Comments
50-00-0	Formaldehyde		Other (specify in comment field)	Formaldehyde not recycled
7647-01-0	Hydrochloric acid	Contaminated materials	Decrease in production levels	10% less laminate released to the floor per issuance report. Improvement in HCl N control of DES (drop from 1-1.1 N to 0.8N) P2 improvement.
7664-93-9	Sulphuric acid		Other (specify in comment field)	H2SO4 not being recycled
7697-37-2	Nitric acid		Other (specify in comment field)	Nitric Acid is not recycled
NA - 06	Copper (and its compounds)	Production Residues Contaminated materials Unusable parts or discards Pollution abatement residues Machine or finishing residues	Other (specify in comment field)	All Filter Cake, scrap materials, as well as Drill and Router dust were sent out for recycling.
NA - 08	Lead (and its compounds)	Off-specification products Contaminated materials Unusable parts or discards	Increase in production levels Other (specify in comment field)	More HASL work due to sub-contract.
NA - 16	Ammonia (total)	Contaminated materials	Decrease in production levels	Less recycled, since less ammonia purchased.

Comparison Report - Enters, Creation, Contained in Product

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 16	Ammonia (total)	No	Enters the facility (Use)	37.87 tonnes	42.95 tonnes	2017	-5.08	-11.83
NA - 16	Ammonia (total)	No	Creation	0 tonnes	0 tonnes	2017	0	
NA - 16	Ammonia (total)	No	Contained in Product	0 tonnes	0 tonnes	2017	0	
NA - 06	Copper (and its compounds)	No	Enters the facility (Use)	148.207 tonnes	164.757 tonnes	2017	-16.550	-10.05
NA - 06	Copper (and its compounds)	No	Creation	0 tonnes	0 tonnes	2017	0	
NA - 06	Copper (and its compounds)	No	Contained in Product	14.49 tonnes	25.06 tonnes	2017	-10.57	-42.18
50-00-0	Formaldehyde	No	Enters the facility (Use)	20.536 tonnes	19.489 tonnes	2017	1.047	5.37
50-00-0	Formaldehyde	No	Creation	0 tonnes	0 tonnes	2017	0	
50-00-0	Formaldehyde	No	Contained in Product	0 tonnes	0 tonnes	2017	0	
7647-01-0	Hydrochloric acid	No	Enters the facility (Use)	66.61 tonnes	90.73 tonnes	2017	-24.12	-26.58
7647-01-0	Hydrochloric acid	No	Creation	0 tonnes	0 tonnes	2017	0	
7647-01-0	Hydrochloric acid	No	Contained in Product	0 tonnes	0 tonnes	2017	0	
NA - 08	Lead (and its compounds)	No	Enters the facility (Use)	539.932 kg	334.842 kg	2017	205.090	61.25
NA - 08	Lead (and its compounds)	No	Creation	0 kg	0 kg	2017	0	
NA - 08	Lead (and its compounds)	No	Contained in Product	48.070 kg	30.694 kg	2017	17.376	56.61
7697-37-2	Nitric acid	No	Enters the facility (Use)	27.30 tonnes	34.27 tonnes	2017	-6.97	-20.34
7697-37-2	Nitric acid	No	Creation	0 tonnes	0 tonnes	2017	0	
7697-37-2	Nitric acid	No	Contained in Product	0 tonnes	0 tonnes	2017	0	
7664-93-9	Sulphuric acid	No	Enters the facility (Use)	102.79 tonnes	112.22 tonnes	2017	-9.43	-8.40
7664-93-9	Sulphuric acid	No	Creation	0 tonnes	0 tonnes	2017	0	
7664-93-9	Sulphuric acid	No	Contained in Product	0 tonnes	0 tonnes	2017	0	

Comparison Report - Enters, Creation, Contained in Product : Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 16	Ammonia (total)	Decrease in production levels Implementation of toxics reduction option(s) Other	Used SES replenisher for pH and Chloride control, did not use NH4OH in 2018
NA - 06	Copper (and its compounds)	Other	In 2018, more mass lam received, and 10% to 15% less laminate and foils purchased in 2018
50-00-0	Formaldehyde	No reasons - quantities approximately the same	
7647-01-0	Hydrochloric acid	Other	Replaced the DI System with the RO System on May 2018, unlike the DI, the RO does not need any HCl.
NA - 08	Lead (and its compounds)	Increase in production levels Other	More work in HASL due to sub-contract.
7697-37-2	Nitric acid	Other	switched Sn strippers which did not work well in 2017 and increased the reuse of Ni tank stripper.
7664-93-9	Sulphuric acid	No reasons - quantities approximately the same Other	PAL 2 D&R issue in 2017 and 2016, while 2018 was a normal year, no large D&R.

Comparison Report - On-site Releases

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 16	Ammonia (total)	No	Total Releases to Air	15.72 tonnes	16.17 tonnes	2017	-0.45	-2.78
NA - 16	Ammonia (total)	No	Total Releases to Water	0 tonnes	0 tonnes	2017	0	
NA - 16	Ammonia (total)	No	Total Releases to Land	0 tonnes	0 tonnes	2017	0	

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 16	Ammonia (total)	No	Total Releases to All Media	0 tonnes				
NA - 06	Copper (and its compounds)	No	Total Releases to Air	0 tonnes				
NA - 06	Copper (and its compounds)	No	Total Releases to Water	0 tonnes				
NA - 06	Copper (and its compounds)	No	Total Releases to Land	0 tonnes				
NA - 06	Copper (and its compounds)	No	Total Releases to All Media	0.036 tonnes	0 tonnes	2017	0.036	100
50-00-0	Formaldehyde	No	Total Releases to Air	0 tonnes				
50-00-0	Formaldehyde	No	Total Releases to Water	0 tonnes				
50-00-0	Formaldehyde	No	Total Releases to Land	0 tonnes				
50-00-0	Formaldehyde	No	Total Releases to All Media	0.030 tonnes	0.03 tonnes	2017	0.000	0.0
7647-01-0	Hydrochloric acid	No	Total Releases to Air	0 tonnes				
7647-01-0	Hydrochloric acid	No	Total Releases to Water	0 tonnes				
7647-01-0	Hydrochloric acid	No	Total Releases to Land	0 tonnes				
7647-01-0	Hydrochloric acid	No	Total Releases to All Media	0.122 tonnes	0.90 tonnes	2017	-0.778	-86.44
NA - 08	Lead (and its compounds)	No	Total Releases to Air	0.108 kg	0.020 kg	2017	0.088	440.0
NA - 08	Lead (and its compounds)	No	Total Releases to Water	0 kg	0 kg	2017	0	
NA - 08	Lead (and its compounds)	No	Total Releases to Land	0 kg	0 kg	2017	0	
NA - 08	Lead (and its compounds)	No	Total Releases to All Media	0 kg				
7697-37-2	Nitric acid	No	Total Releases to Air	1.444 tonnes	1.394 tonnes	2017	0.050	3.59
7697-37-2	Nitric acid	No	Total Releases to Water	0 tonnes	0 tonnes	2017	0	
7697-37-2	Nitric acid	No	Total Releases to Land	0 tonnes	0 tonnes	2017	0	
7697-37-2	Nitric acid	No	Total Releases to All Media	0 tonnes				
7664-93-9	Sulphuric acid	No	Total Releases to Air	0 tonnes				
7664-93-9	Sulphuric acid	No	Total Releases to Water	0 tonnes				
7664-93-9	Sulphuric acid	No	Total Releases to Land	0 tonnes				
7664-93-9	Sulphuric acid	No	Total Releases to All Media	0.018 tonnes	0.0002 tonnes	2017	0.0178	8900

Comparison Report - On-site Releases - Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 16	Ammonia (total)	Other	per third mparty Engineering, modified ECA engineering estimate calculation.
NA - 06	Copper (and its compounds)	Other	Modified ECA Engineering estimates
50-00-0	Formaldehyde	No reasons - quantities approximately the same	
7647-01-0	Hydrochloric acid	Other	per third party Engineering modified ECA engineering calculation.
NA - 08	Lead (and its compounds)	Increase in production levels Other	per third party Engineering, modified ECA engineering estimate calculation
7697-37-2	Nitric acid	Other	per third party Engineering, Modified ECA engineering estimate calculation.
7664-93-9	Sulphuric acid	Other	per third party Engineering modified ECA engineering estimate calculation.

Comparison Report - Disposals On-site, Off-site and Tailings and Waste Rock

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 16	Ammonia (total)	No	Total On-site Disposals	0 tonnes	0 tonnes	2017	0	
NA - 16	Ammonia (total)	No	Total Off-site Disposals	0 tonnes	0 tonnes	2017	0	
NA - 16	Ammonia (total)	No	Total Off-site transfer for treatment Prior to Final Disposal	0.608 tonnes	0.965 tonnes	2017	-0.357	-36.99
NA - 16	Ammonia (total)	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
NA - 16	Ammonia (total)	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
NA - 06	Copper (and its compounds)	No	Total On-site Disposals	0 tonnes	0 tonnes	2017	0	
NA - 06	Copper (and its compounds)	No	Total Off-site Disposals	0 tonnes	0 tonnes	2017	0	
NA - 06	Copper (and its compounds)	No	Total Off-site transfer for treatment Prior to Final Disposal	2.2740 tonnes	9.68 tonnes	2017	-7.4060	-76.51
NA - 06	Copper (and its compounds)	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
NA - 06	Copper (and its compounds)	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
50-00-0	Formaldehyde	No	Total On-site Disposals	0 tonnes	0 tonnes	2017	0	
50-00-0	Formaldehyde	No	Total Off-site Disposals	0 tonnes	0 tonnes	2017	0	
50-00-0	Formaldehyde	No	Total Off-site transfer for treatment Prior to Final Disposal	0.051 tonnes	0.051 tonnes	2017	0.000	0
50-00-0	Formaldehyde	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
50-00-0	Formaldehyde	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
7647-01-0	Hydrochloric acid	No	Total On-site Disposals	0 tonnes	0 tonnes	2017	0	
7647-01-0	Hydrochloric acid	No	Total Off-site Disposals	0 tonnes	0 tonnes	2017	0	
7647-01-0	Hydrochloric acid	No	Total Off-site transfer for treatment Prior to Final Disposal	1.7457 tonnes	0.0049 tonnes	2017	1.7408	35526.53
7647-01-0	Hydrochloric acid	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
7647-01-0	Hydrochloric acid	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
NA - 08	Lead (and its compounds)	No	Total On-site Disposals	0 kg	0 kg	2017	0	
NA - 08	Lead (and its compounds)	No	Total Off-site Disposals	0 kg	0 kg	2017	0	
NA - 08	Lead (and its compounds)	No	Total Off-site transfer for treatment Prior to Final Disposal	11.927 kg	5.814 kg	2017	6.113	105.14
NA - 08	Lead (and its compounds)	No	Total On-site Disposal of Tailings and Waste Rock	0 kg	0 kg	2017	0	
NA - 08	Lead (and its compounds)	No	Total Off-site Disposal of Tailings and Waste Rock	0 kg	0 kg	2017	0	
7697-37-2	Nitric acid	No	Total On-site Disposals	0 tonnes	0 tonnes	2017	0	
7697-37-2	Nitric acid	No	Total Off-site Disposals	0 tonnes	0 tonnes	2017	0	
7697-37-2	Nitric acid	No	Total Off-site transfer for treatment Prior to Final Disposal	13.53 tonnes	19.64 tonnes	2017	-6.11	-31.11
7697-37-2	Nitric acid	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
7697-37-2	Nitric acid	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
7664-93-9	Sulphuric acid	No	Total On-site Disposals	0 tonnes	0 tonnes	2017	0	
7664-93-9	Sulphuric acid	No	Total Off-site Disposals	0 tonnes	0 tonnes	2017	0	
7664-93-9	Sulphuric acid	No	Total Off-site transfer for treatment Prior to Final Disposal	17.18 tonnes	25.40 tonnes	2017	-8.22	-32.36
7664-93-9	Sulphuric acid	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	
7664-93-9	Sulphuric acid	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2017	0	

Comparison Report - Disposals On-site, Off-site and Tailings and Waste Rock - Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 16	Ammonia (total)	Other	Changed to Ammonia Salt free Sn Stripper

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 06	Copper (and its compounds)	Other	All Cu in filter cake and drill/rout dusts were recycled.
50-00-0	Formaldehyde	No reasons - quantities approximately the same	
7647-01-0	Hydrochloric acid	Other	Changed Tin Stripper on February 2018, which contain 3% HCl and Sg of 1.21 as per SDS.
NA - 08	Lead (and its compounds)	Increase in production levels Other	More work in HASL coming from sub- contract
7697-37-2	Nitric acid	Other	More Ntric shipped out in 2017 due to poor stipper formulation.
7664-93-9	Sulphuric acid	Other	No abnormal dump on 2018 compaired to 2017. Additional copper sulphate was shipped out in 2017 compaired to 2018 due to change of supplier (PAL dump) and treated 1 ton more in 2018.

Comparison Report - Transfers off-site for Recycling

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 16	Ammonia (total)	No	Total off-site Transfers for Recycling	21.73 tonnes	25.82 tonnes	2017	-4.09	-15.84
NA - 06	Copper (and its compounds)	No	Total off-site Transfers for Recycling	131.409 tonnes	130.02 tonnes	2017	1.389	1.07
7647-01-0	Hydrochloric acid	No	Total off-site Transfers for Recycling	57.26 tonnes	63.74 tonnes	2017	-6.48	-10.17
NA - 08	Lead (and its compounds)	No	Total off-site Transfers for Recycling	455.760 kg	298.314 kg	2017	157.446	52.78

Comparison Report - Transfers off-site for Recycling - Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 16	Ammonia (total)	Decrease in production levels Other	less SES replenisher purchased.
NA - 06	Copper (and its compounds)	Other	All of Cu in filter cake and drill/rout dust were recycled.
7647-01-0	Hydrochloric acid	Other	10% less Laminates released to the floor per issuance report. Improvement in HCl N control of DES (drop form 1 - 1.1 N to 0.8 N t
NA - 08	Lead (and its compounds)	Increase in production levels Other	more work in HASL from sub- contract.

Pollution Prevention

Does the facility have a documented pollution prevention plan?	Yes
a) Please check all that apply	Plan was prepared or implemented for another government jurisdiction (i.e. other Federal government department, province, municipality). Specify name in comments field below.
b) Did the facility update their plan in the current reporting year?	No
c) Does the plan address substances, energy conservation, or water conservation?	Substances (provide the name of the primary Substances in the comments field below)
Please summarize your pollution prevention plan. If you selected "Substances", please specify the substances that were addressed in your plan (this information will be publicly available).	We have an MOE TRA Plan and a City of Toronto P2 Plan. The MOE TRA plan includes Copper, Ammonia, Formaldehyde, Lead, Nitric Acid, Sulfuric Acid and Hydrochloric Acid. The City Plan also includes Nickel.
Did the facility complete any pollution prevention activities in the current NPRI reporting year	Yes

Pollution Prevention Activities

Category	Activity	Name and description of the other activity
Equipment or Process Modification	Modified equipment, layout or piping Improved application techniques	Replaced DI system with RO system saving HCl. We improved normality control of HCl reactor, which reduced the normality variance.
Good Operating Practice or Training	Other (specify in comments field)	Implemented ISO 14001 certification.
Inventory Management or Purchasing Techniques		
Materials or Feedstock		

Category	Activity	Name and description of the other activity
Substitution		
On-site Reuse, Recycling or Recovery	Instituted recirculation within a process	Improved the reuse of Nitric Acid stripping of Nickel tank.
Other Pollution Prevention Activities	Other pollution prevention activities (specify in comments field)	Diverted Copper from land fill to third party smelter.
Product Design or Reformulation		
Spill and Leak Prevention		Potential spill or leak are being monitored through LPA program.

Progress on TRA Plan - Objectives

CAS RN	Substance Name	Objectives
NA - 16	Ammonia (total)	Viasystems intends to reduce NH3 but additional research and testing is required prior to stating any commitment
NA - 06	Copper (and its compounds)	DDi has successfully implemented the toxic reduction option.
50-00-0	Formaldehyde	DDi intends to conduct further research to identify new reduction options
7647-01-0	Hydrochloric acid	DDi intends to reduce HCL but additional research and testing is required prior to the commitment.
NA - 08	Lead (and its compounds)	DDi intends to reduce the use of Lead in the HASL process.
7697-37-2	Nitric acid	Viasystems intends to reduce HNO3 but additional research and testing is required prior to any commitment
7664-93-9	Sulphuric acid	DDi intends to reduce H2SO4 but additional research and testing is required prior to the commitment

Progress on TRA Plan - Use Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
NA - 16	Ammonia (total)	No quantity target	No timeline target	
NA - 06	Copper (and its compounds)	No quantity target	No timeline target	
50-00-0	Formaldehyde	No quantity target	No timeline target	
7647-01-0	Hydrochloric acid	No quantity target	No timeline target	
NA - 08	Lead (and its compounds)	90.83 kg	2	Q4 2014
7697-37-2	Nitric acid	No quantity target	No timeline target	
7664-93-9	Sulphuric acid	No quantity target	No timeline target	

Progress on TRA Plan - Creation Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
NA - 16	Ammonia (total)	No quantity target	No timeline target	
NA - 06	Copper (and its compounds)	No quantity target	No timeline target	
50-00-0	Formaldehyde	No quantity target	No timeline target	
7647-01-0	Hydrochloric acid	No quantity target	No timeline target	
NA - 08	Lead (and its compounds)	No quantity target	No timeline target	
7697-37-2	Nitric acid	No quantity target	No timeline target	
7664-93-9	Sulphuric acid	No quantity target	No timeline target	

Progress on TRA Plan - Toxic Reduction Options Implemented

CAS RN	Substance Name	Activity	Steps that were taken in the reporting period to implement the toxic reduction option	Public summary of the description of the steps	Comparison of the steps that were described in the plan for implementation with the actual steps taken during the reporting period	Public summary of the comparison of the steps
NA - 16	Ammonia (total)	Other	NA	NA	No change	No change
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	Plans to remove the HASL is being considered. Not much work being produced in this machine except from outside contract.	Plans to remove the HASL is being considered.	Plan not implemented to date. Directing customers to other final finishes.	Plan not implemented to date. Directing customers to other final finishes.
7697-37-2	Nitric acid	Changed to aqueous cleaners	Upgraded Tin Stripper and increased the reuse of in house Nickel tank stripper solution.	Upgraded Tin Stripper and increased the reuse of in house Nickel tank stripper solution.	Changed to new formulation.	Changed to new formulation.
7697-37-2	Nitric acid	Initiated testing of outdated material	NA	NA	NA	NA
7697-37-2	Nitric acid	Instituted recirculation within a process	Increased concentration of Nickel stripper, reused multiple times.	Increased concentration of Nickel stripper, reused multiple times.	Changed formulation.	Changed formulation.
7697-37-2	Nitric acid	Other	NA	NA	NA	NA

CAS RN	Substance Name	Activity	Will the timelines in the current version of the plan will be met	Comments:
NA - 16	Ammonia (total)	Other	Yes	
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	Yes	
7697-37-2	Nitric acid	Changed to aqueous cleaners	Yes	
7697-37-2	Nitric acid	Initiated testing of outdated material	Yes	
7697-37-2	Nitric acid	Instituted recirculation within a process	No	
7697-37-2	Nitric acid	Other	Yes	

Progress on TRA Plan - Reductions due to Options Implemented - Equipment or process modifications

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 08	Lead (and its compounds)	Modified equipment, layout or piping	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	6.96 tonnes
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	6.95 tonnes
7697-37-2	Nitric acid	Changed to aqueous cleaners	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the steps described:	No Amount

Progress on TRA Plan - Reductions due to Options Implemented - Improved inventory management or purchasing techniques

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Initiated testing of outdated material	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the steps described:	No Amount

Progress on TRA Plan - Reductions due to Options Implemented - On-site reuse, recycling or recovery

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Instituted recirculation within a process	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the steps described:	No Amount

Progress on TRA Plan - Reductions due to Options Implemented - Good operator practice or training

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - 16	Ammonia (total)	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 16	Ammonia (total)	Other	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
7697-37-2	Nitric acid	Other	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the steps described:	No Amount

Progress on TRA Plan - Additional Actions

CAS RN	Substance Name	Were there any additional actions outside the plan taken during the reporting period to reduce the use and/or creation of the substance?	Describe any additional actions that were taken during the reporting period to achieve the plan's objectives	Provide a public summary of the description of the additional action taken
NA - 16	Ammonia (total)	Yes	Stopped using Ammonium Hydroxide for pH control.	Stopped using Ammonium Hydroxide for pH control.

CAS RN	Substance Name	Were there any additional actions outside the plan taken during the reporting period to reduce the use and/or creation of the substance?	Describe any additional actions that were taken during the reporting period to achieve the plan's objectives	Provide a public summary of the description of the additional action taken
NA - 06	Copper (and its compounds)	Yes	Diverted Filter Cake and drill/rout dust from disposal to recycling.	Diverted Filter Cake and drill/rout dust from disposal to recycling.
50-00-0	Formaldehyde	No		
7647-01-0	Hydrochloric acid	Yes	Replaced DI water system with an RO water system	Replaced the DI water system, which uses HCl to regenerate the resin with a RO system which does not consume HCl.
NA - 08	Lead (and its compounds)	Yes	Directed the filter cake and rout dust to recycling	Directed the filter cake and rout dust to recycling.
7697-37-2	Nitric acid	No		
7664-93-9	Sulphuric acid	No		

Progress on TRA Plan - Reductions due to additional actions taken

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
NA - 16	Ammonia (total)	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the additional actions.	2.40 tonnes
NA - 16	Ammonia (total)	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 16	Ammonia (total)	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 16	Ammonia (total)	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 16	Ammonia (total)	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 16	Ammonia (total)	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to additional actions.	No Amount
NA - 16	Ammonia (total)	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 16	Ammonia (total)	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 16	Ammonia (total)	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 06	Copper (and its compounds)	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	7.40 tonnes
NA - 06	Copper (and its compounds)	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the additional actions.	No Amount
50-00-0	Formaldehyde	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the additional actions.	
50-00-0	Formaldehyde	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the additional actions.	
50-00-0	Formaldehyde	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the additional actions.	
50-00-0	Formaldehyde	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the additional actions.	
50-00-0	Formaldehyde	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the additional actions.	
50-00-0	Formaldehyde	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to additional actions.	
50-00-0	Formaldehyde	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
50-00-0	Formaldehyde	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
50-00-0	Formaldehyde	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the additional actions.	
7647-01-0	Hydrochloric acid	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the additional actions.	13.7 tonnes
7647-01-0	Hydrochloric acid	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
7647-01-0	Hydrochloric acid	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the additional actions.	No Amount
7647-01-0	Hydrochloric acid	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
7647-01-0	Hydrochloric acid	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
7647-01-0	Hydrochloric acid	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to additional actions.	No Amount
7647-01-0	Hydrochloric acid	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	No Amount
7647-01-0	Hydrochloric acid	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	No Amount
7647-01-0	Hydrochloric acid	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	No Amount
NA - 08	Lead (and its compounds)	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	0.215 kg
NA - 08	Lead (and its compounds)	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the additional actions.	No Amount
7697-37-2	Nitric acid	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7697-37-2	Nitric acid	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7697-37-2	Nitric acid	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the additional actions.	
7697-37-2	Nitric acid	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7697-37-2	Nitric acid	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7697-37-2	Nitric acid	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to additional actions.	
7697-37-2	Nitric acid	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
7697-37-2	Nitric acid	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
7697-37-2	Nitric acid	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in the substance **contained in product** at the facility during the reporting period that resulted due to the additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in **release to air** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in **release to water** of the substance at the facility during the reporting period that resulted due to the additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in **release to land** of the substance at the facility during the reporting period that resulted due to additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in the substance **disposed on-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
7664-93-9	Sulphuric acid	The amount of reduction in the substance **disposed off-site** (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
7664-93-9	Sulphuric acid	The amount of reduction in the substance **recycled off-site** at the facility during the reporting period that resulted due to the additional actions.	

Progress on TRA Plan - Amendments

CAS RN	Substance Name	Were any amendments made to the toxic substance reduction plan during the reporting period	Description any amendments that were made to the toxic substance reduction plan during the reporting period	Provide a public summary of the description of any amendments that were made to the toxic substance reduction plan during the reporting period
NA - 16	Ammonia (total)	No		
NA - 06	Copper (and its compounds)	No		
50-00-0	Formaldehyde	No		
7647-01-0	Hydrochloric acid	No		
NA - 08	Lead (and its compounds)	No		
7697-37-2	Nitric acid	No		
7664-93-9	Sulphuric acid	No		

Report Submission and Electronic Certification

NPRI - 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.

Note: Only the person identified as the Certifying Official or the authorized delegate should submit the report(s) identified below.

Company Name

Viasystems Toronto, Inc.

Certifying Official (or authorized delegate)

Mark Scruton

Report Submitted by

Jon Pereira

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.

ON MECP TRA - Electronic Certification Statement

Annual Report Certification Statement

As of 31/05/2019, I, Jon Pereira, certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

TRA Substance List*

CAS RN	Substance Name
NA - 16	Ammonia (total)
NA - 06	Copper (and its compounds)
50-00-0	Formaldehyde
7647-01-0	Hydrochloric acid
NA - 08	Lead (and its compounds)
7697-37-2	Nitric acid
7664-93-9	Sulphuric acid

*Due to reporting system limitations, for the 2018 annual report the TRA Substance List may included new Volatile Organic Compounds (VOCs) and/or Dioxins and Furans congeners reported to NPRI only.

Company Name

Viasystems Toronto, Inc.

Highest Ranking Employee

Jon Pereira

Report Submitted by

Jon Pereira

Website address

www.ttmtech.com

I, the highest ranking employee, agree with the certification statement(s) above and acknowledge that by checking the box I am electronically signing the statement(s). I also acknowledge that by pressing the 'Submit Report(s)' button I am submitting the facility record(s)/report(s) for the identified facility to the Director under the Toxics Reduction Act, 2009. I also acknowledge that the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 provide the authority to the Director under the Act to make certain information as specified in subsection 27(5) of Ontario Regulation 455/09 available to the public.

Submitted Report

Period	Submission Date	Facility Name	Province	City	Programs
2018	31/05/2019	Sheppard Facility	Ontario	Toronto	NPRI,ON MECP TRA

Note: If there is a change in the contact information for the facility, a change in the owner or operator of the facility, if operations at the facility are terminated, or if information submitted for any previous year was mistaken or inaccurate, please update this information through SWIM or by contacting the National Pollutant Release Inventory directly.

Version: 3.15.0