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National Pollutant Release Inventory (NPRI) and Partners

Submission Management

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Report Details

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Report Year 2020 Report Type: NPRI, ON MECP TRA Report Status: Submitted Modified Date/Time: 2021-07-16 3:49 PM Company and Facility Details Company Name: Morbern Inc. Business Number: 103760948 Mailing Address: Delivery Mode: PostOfficeBox PO Box: 1207 Address Line 1: 80 Boundary Road South City: Cornwall Province/Territory: Ontario Postal Code: K6H 5V3 Country: Canada Facility Name: Morbern Inc. NAICS Code: 313320 NPRI ID: 741 ON Reg 127/01 ID: 6243 Portable: No Physical Address: Address Line 1: 80 Boundary Road South City: Cornwall Province/Territory: Ontario Postal Code: K6H 5v3 Country: Canada Latitude: 45.033 Longitude: -74.6684

Contacts Details

Contact Type	Certifying Official, Highest Ranking Employee
Name:	Eric Lamontagne
Position:	President
Telephone:	6139372474
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Contact Type

Contractor Contact, Person who prepared the report, Person who coordinated the preparation of the Toxics Reduction Plan

Name: Colin Welburn Position: Partner Telephone: 6138526003 Email: colin@welburnconsulting.ca Independent contractor/consultant company Welburn Consulting name: Contact Type Technical Contact, Public Contact, Company Coordinator Name: Steve Prashad Position: EHS Manager Telephone: 6139328811 Email: sprashad@morbern.com

General Information

Number of employees:

Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:

Activities Relevant to Reporting Dioxins, Furans and Hexacholorobenzene:

Activities Relevant to Reporting of Polycyclic Aromatic Hydrocarbons (PAHs):

Does this facility release less than the reporting threshold for each Part 4 substance AND have one or more light or medium crude oil batteries with a total oil throughput for the battery components of the facility of \geq 1,900 m3 per year?

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

Is this the first time the facility is reporting to the NPRI (under current or past ownership):

Is the facility controlled by another Canadian company or companies:

Did the facility report under other environmental regulations or permits?

Does this facility solely consist of compression equipment in the oil and gas extraction sector?

Is the facility required to report one or more NPRI Part 4 substances (Criteria Air Contaminants):

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

Operating Schedule - Days of the Week:

Usual Number of Operating Hours per day:

Usual Daily Start Time (24h) (hh:mm):

Shutdown Periods:

From 2020-03-30 To 2020-04-11

Will the shutdown period occur at or around the same time in future years?

Was the shutdown period a partial or complete shutdown?

Yes

No

Yes

Mon, Tue, Wed, Thu, Fri, Sat, Sun

24

07:00

No

Complete

348

None of the above

None of the above

Wood preservation using creosote: No

No

|--|

Comments:

COVID-19 pandemic measures

No

Yes

Complete

From 2020-05-10 To 2020-05-16

Will the shutdown period occur at or around the same time in future years?

Was the shutdown period a partial or complete shutdown?

Comments:

From 2020-05-31 To 2020-06-06

Will the shutdown period occur at or around the same time in future years?

Was the shutdown period a partial or complete shutdown?

Comments:

From 2020-07-10 To 2020-07-25

Will the shutdown period occur at or around the same time in future years?

Was the shutdown period a partial or complete shutdown?

Comments:

COVID-19
10
Complete
OVID-19

Complete

Summer maintenance shutdown

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
NA - 01	Antimony (and its compounds)	N/A	N/A	2.400000	N/A	tonnes
67-63-0	Isopropyl alcohol	9.980000	N/A	1.420000	N/A	tonnes
78-93-3	Methyl ethyl ketone	172.630000	N/A	24.660000	N/A	tonnes
108-10-1	Methyl isobutyl ketone	1.140000	N/A	0.130000	N/A	tonnes
872-50-4	N-Methyl-2-pyrrolidone	1.020000	N/A	9.150000	N/A	tonnes
108-88-3	Toluene	7.440000	N/A	1.060000	N/A	tonnes
NA - M16	Volatile Organic Compounds (VOCs)	256.200000	253.330000	N/A	N/A	tonnes
NA - 14	Zinc (and its compounds)	N/A	N/A	0.600000	N/A	tonnes

Applicable Programs

CAS RN	Substance Name	NPRI	ON MECP TRA	First report for this substance to the ON MECP TRA
NA - 01	Antimony (and its compounds)	Yes	Yes	No
67-63-0	Isopropyl alcohol	Yes	Yes	No
78-93-3	Methyl ethyl ketone	Yes	Yes	No
108-10-1	Methyl isobutyl ketone	Yes	Yes	No
872-50-4	N-Methyl-2-pyrrolidone	Yes	Yes	No
108-88-3	Toluene	Yes	Yes	No
NA - M16	Volatile Organic Compounds (VOCs)	Yes	Yes	No
NA - 14	Zinc (and its compounds)	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 - 01	Antimony (and its compounds)	No	No	No
67-63-0	Isopropyl alcohol	Yes	No	No
78-93-3	Methyl ethyl ketone	Yes	No	No
108-10-1	Methyl isobutyl ketone	Yes	No	No
872-50-4	N-Methyl-2- pyrrolidone	Yes	No	No
108-88-3	Toluene	Yes	No	No
NA - M16	Volatile Organic Compounds (VOCs)		No	Yes

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 - 14	Zinc (and its compounds)	No	No	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 - 01	Antimony (and its compounds)	Yes	No	No
67-63-0	Isopropyl alcohol	Yes	No	No
78-93-3	Methyl ethyl ketone	Yes	No	No
108-10-1	Methyl isobutyl ketone	Yes	No	No
872-50-4	N-Methyl-2- pyrrolidone	Yes	No	No
108-88-3	Toluene	Yes	No	No
NA - M16	Volatile Organic Compounds (VOCs)			
NA - 14	Zinc (and its compounds)	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 - 01	Antimony (and its compounds)	For on-site use/processing	As a formulation component	As a manufacturing aid
67-63-0	Isopropyl alcohol	For on-site use/processing	As a formulation component	As a manufacturing aid
78-93-3	Methyl ethyl ketone	For on-site use/processing	As a formulation component	As a manufacturing aid
108-10-1	Methyl isobutyl ketone	For on-site use/processing	As a formulation component	As a manufacturing aid
872-50-4	N-Methyl-2-pyrrolidone	For on-site use/processing	As a formulation component	As a manufacturing aid
108-88-3	Toluene	For on-site use/processing	As a formulation component	As a manufacturing aid
NA - M16	Volatile Organic Compounds (VOCs)			
NA - 14	Zinc (and its compounds)	For on-site use/processing	As a formulation component	As a manufacturing aid

TRA Quantifications

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
NA - 01	Antimony (and its compounds)	Use	80 tonnes	Yes
NA - 01	Antimony (and its compounds)	Creation	0 tonnes	No
NA - 01	Antimony (and its compounds)	Contained in Product	77.60 tonnes	Yes
67-63-0	Isopropyl alcohol	Use	14.24 tonnes	Yes
67-63-0	Isopropyl alcohol	Creation	0 tonnes	No
67-63-0	Isopropyl alcohol	Contained in Product	2.85 tonnes	Yes
78-93-3	Methyl ethyl ketone	Use	246.62 tonnes	Yes
78-93-3	Methyl ethyl ketone	Creation	0 tonnes	No
78-93-3	Methyl ethyl ketone	Contained in Product	49.32 tonnes	Yes
108-10-1	Methyl isobutyl ketone	Use	1.59 tonnes	Yes
108-10-1	Methyl isobutyl ketone	Creation	0 tonnes	No
108-10-1	Methyl isobutyl ketone	Contained in Product	0.32 tonnes	Yes
872-50-4	N-Methyl-2-pyrrolidone	Use	12.71 tonnes	Yes
872-50-4	N-Methyl-2-pyrrolidone	Creation	0 tonnes	No
872-50-4	N-Methyl-2-pyrrolidone	Contained in Product	2.54 tonnes	Yes
108-88-3	Toluene	Use	10.63 tonnes	Yes
108-88-3	Toluene	Creation	0 tonnes	No
108-88-3	Toluene	Contained in Product	2.13 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Use	441.08 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Creation	0 tonnes	No
NA - M16	Volatile Organic Compounds (VOCs)	Contained in Product		
NA - 14	Zinc (and its compounds)	Use	20.01 tonnes	Yes
NA - 14	Zinc (and its compounds)	Creation	0 tonnes	No

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
NA - 14	Zinc (and its compounds)	Contained in Product	19.41 tonnes	No

TRA Quantifications - VOC Breakdown List

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity
64742-48-9	Hydrotreated heavy naphtha	Use	68.82 tonnes
67-63-0	Isopropyl alcohol	Use	14.25 tonnes
78-93-3	Methyl ethyl ketone	Use	246.62 tonnes
108-10-1	Methyl isobutyl ketone	Use	1.59 tonnes
109-99-9	Tetrahydrofuran	Use	73.74 tonnes
108-88-3	Toluene	Use	10.63 tonnes
1330-20-7	Xylene (all isomers)	Use	3.02 tonnes
1330-20-7	Xylene (all isomers)	Creation	0 tonnes

TRA Quantifications - Total Speciated VOCs

Use, Creation, Contained in Product	Quantity
Use	418.67 tonnes
Creation	0 tonnes

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 - 01	Antimony (and its compounds)					No	
67-63-0	Isopropyl alcohol					No	
78-93-3	Methyl ethyl ketone					No	
108-10-1	Methyl isobutyl ketone					No	
872-50-4	N-Methyl-2- pyrrolidone					No	
108-88-3	Toluene					No	
NA - M16	Volatile Organic Compounds (VOCs)					No	
NA - 14	Zinc (and its compounds)					No	

On-site Releases - Releases to air

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
67-63-0	Isopropyl alcohol	Stack or Point Releases	C - Mass Balance		8.98 tonnes
67-63-0	Isopropyl alcohol	Fugitive Releases	C - Mass Balance		1.00 tonnes
78-93-3	Methyl ethyl ketone	Stack or Point Releases	C - Mass Balance		155.37 tonnes
78-93-3	Methyl ethyl ketone	Fugitive Releases	C - Mass Balance		17.26 tonnes
108-10-1	Methyl isobutyl ketone	Stack or Point Releases	C - Mass Balance		1.03 tonnes
108-10-1	Methyl isobutyl ketone	Fugitive Releases	C - Mass Balance		0.11 tonnes
872-50-4	N-Methyl-2-pyrrolidone	Stack or Point Releases	C - Mass Balance		0 tonnes
872-50-4	N-Methyl-2-pyrrolidone	Fugitive Releases	C - Mass Balance		1.02 tonnes
108-88-3	Toluene	Stack or Point Releases	C - Mass Balance		6.70 tonnes
108-88-3	Toluene	Fugitive Releases	C - Mass Balance		0.74 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Stack or Point Releases	C - Mass Balance		223.5 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Storage or Handling Releases	C - Mass Balance		0 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Fugitive Releases	C - Mass Balance		32.7 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Other Sources - Speciated VOCs	NA - Not Applicable		253.33 tonnes

On-site Releases - Releases to air - Total

CAS RN	Substance Name	Total - Releases to Air
67-63-0	Isopropyl alcohol	9.98 tonnes

CAS RN	Substance Name	Total - Releases to Air
78-93-3	Methyl ethyl ketone	172.63 tonnes
108-10-1	Methyl isobutyl ketone	1.14 tonnes
872-50-4	N-Methyl-2-pyrrolidone	1.02 tonnes
108-88-3	Toluene	7.44 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	256.2 tonnes

On-site Releases - Releases to air - VOC Breakdown List

Category	CAS RN	Substance Name	Quantity
Other Sources - Speciated VOCs	64742-48-9	Hydrotreated heavy naphtha	6.88 tonnes
Other Sources - Speciated VOCs	67-63-0	Isopropyl alcohol	9.97 tonnes
Other Sources - Speciated VOCs	78-93-3	Methyl ethyl ketone	172.64 tonnes
Other Sources - Speciated VOCs	108-10-1	Methyl isobutyl ketone	1.14 tonnes
Other Sources - Speciated VOCs	109-99-9	Tetrahydrofuran	53.09 tonnes
Other Sources - Speciated VOCs	108-88-3	Toluene	7.44 tonnes
Other Sources - Speciated VOCs	1330-20-7	Xylene (all isomers)	2.17 tonnes

On-site Releases - Total

CAS RN	Substance Name	Total releases
67-63-0	Isopropyl alcohol	9.98 tonnes
78-93-3	Methyl ethyl ketone	172.63 tonnes
108-10-1	Methyl isobutyl ketone	1.14 tonnes
872-50-4	N-Methyl-2-pyrrolidone	1.02 tonnes
108-88-3	Toluene	7.44 tonnes

On-site Releases - Quarterly Breakdown of Annual Releases

CAS RN	Substance Name	Quarter 1	Quarter 2	Quarter 3	Quarter 4
67-63-0	Isopropyl alcohol	28	20	24	28
78-93-3	Methyl ethyl ketone	28	20	24	28
108-10-1	Methyl isobutyl ketone	28	20	24	28
872-50-4	N-Methyl-2-pyrrolidone	28	20	24	28
108-88-3	Toluene	28	20	24	28

On-site Releases - Monthly Breakdown of Annual Releases

CAS RN	Substance Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
NA - M16	Volatile Organic Compounds (VOCs)	9.4	9.1	9.1	6.0	7.5	7.2	4.7	9.7	9.4	9.7	9.4	8.8

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
108-10-1	Methyl isobutyl ketone	Decrease in production levels	
108-88-3	Toluene	Decrease in production levels	
67-63-0	Isopropyl alcohol	Decrease in production levels	
78-93-3	Methyl ethyl ketone	Decrease in production levels	
872-50-4	N-Methyl-2-pyrrolidone	Decrease in production levels	
NA - 01	Antimony (and its compounds)	Decrease in production levels	
NA - 14	Zinc (and its compounds)	Decrease in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Decrease in production levels	

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

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
NA - 01	Antimony (and its compounds)	Incineration / Thermal	C - Mass Balance		2.40 tonnes
67-63-0	Isopropyl alcohol	Incineration / Thermal	C - Mass Balance		1.42 tonnes
78-93-3	Methyl ethyl ketone	Incineration / Thermal	C - Mass Balance		24.66 tonnes

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
108-10-1	Methyl isobutyl ketone	Incineration / Thermal	C - Mass Balance		0.13 tonnes
872-50-4	N-Methyl-2-pyrrolidone	Incineration / Thermal	C - Mass Balance		9.15 tonnes
108-88-3	Toluene	Incineration / Thermal	C - Mass Balance		1.06 tonnes
NA - 14	Zinc (and its compounds)	Incineration / Thermal	C - Mass Balance		0.60 tonnes

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

CAS RN	Substance Name	Total - Treatment Prior to Final Disposal
NA - 01	Antimony (and its compounds)	2.40 tonnes
67-63-0	Isopropyl alcohol	1.42 tonnes
78-93-3	Methyl ethyl ketone	24.66 tonnes
108-10-1	Methyl isobutyl ketone	0.13 tonnes
872-50-4	N-Methyl-2-pyrrolidone	9.15 tonnes
108-88-3	Toluene	1.06 tonnes
NA - 14	Zinc (and its compounds)	0.60 tonnes

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

CAS RN	Substance Name	Category	Off-site Name	Off-site Address	Quantity
108-10-1	Methyl isobutyl ketone	Incineration / Thermal	Revolution Environmental Solutions	52 Imperial St. , Hamilton, ON, Canada	0.13 tonnes
108-88-3	Toluene	Incineration / Thermal	Revolution Environmental Solutions	52 Imperial St. , Hamilton, ON, Canada	1.06 tonnes
67-63-0	Isopropyl alcohol	Incineration / Thermal	Revolution Environmental Solutions	52 Imperial St. , Hamilton, ON, Canada	1.42 tonnes
78-93-3	Methyl ethyl ketone	Incineration / Thermal	Revolution Environmental Solutions	52 Imperial St. , Hamilton, ON, Canada	24.66 tonnes
872-50-4	N-Methyl-2-pyrrolidone	Incineration / Thermal	Revolution Environmental Solutions	52 Imperial St. , Hamilton, ON, Canada	9.15 tonnes
NA - 01	Antimony (and its compounds)	Incineration / Thermal	Revolution Environmental Solutions	52 Imperial St. , Hamilton, ON, Canada	2.40 tonnes
NA - 14	Zinc (and its compounds)	Incineration / Thermal	Revolution Environmental Solutions	52 Imperial St. , Hamilton, ON, Canada	0.60 tonnes

Disposals - Total Quantity Disposed (All Media)

CAS RN	Substance Name	Total Quantity Disposed (All Media)
NA - 01	Antimony (and its compounds)	2.40 tonnes
67-63-0	Isopropyl alcohol	1.42 tonnes
78-93-3	Methyl ethyl ketone	24.66 tonnes
108-10-1	Methyl isobutyl ketone	0.13 tonnes
872-50-4	N-Methyl-2-pyrrolidone	9.15 tonnes
108-88-3	Toluene	1.06 tonnes
NA - 14	Zinc (and its compounds)	0.60 tonnes

Disposals - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Disposed	Reasons for Changes in Quantities from Previous Year	Comments
108-10-1	Methyl isobutyl ketone	Production residues Contaminated materials Machine or finishing residues	Decrease in production levels	
108-88-3	Toluene	Production residues Machine or finishing residues	Decrease in production levels	
67-63-0	Isopropyl alcohol	Production residues	Decrease in production levels	
78-93-3	Methyl ethyl ketone	Contaminated materials Unusable parts or discards Machine or finishing residues	Decrease in production levels	
872-50-4	N-Methyl-2-pyrrolidone	Production residues Unusable parts or discards Machine or finishing residues	Decrease in production levels	
NA - 01	Antimony (and its compounds)	Unusable parts or discards	Decrease in production levels	
NA - 14	Zinc (and its compounds)	Production residues Unusable parts or discards Machine or finishing residues	Decrease in production levels	

Recycling - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Recycled	Reasons for Changes in Quantities Recycled from Previous Year	Comments
108-10-1	Methyl isobutyl ketone		No significant change (i.e. <10% or no change)	
108-88-3	Toluene		No significant change (i.e. <10% or no change)	

CAS RN	Substance Name	Reasons Why Substance Was Recycled	Reasons for Changes in Quantities Recycled from Previous Year	Comments
67-63-0	Isopropyl alcohol		No significant change (i.e. <10% or no change)	
78-93-3	Methyl ethyl ketone		No significant change (i.e. <10% or no change)	
872-50-4	N-Methyl-2-pyrrolidone		No significant change (i.e. <10% or no change)	
NA - 01	Antimony (and its compounds)		No significant change (i.e. <10% or no change)	
NA - 14	Zinc (and its compounds)		No significant change (i.e. <10% or no change)	

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 - 01	Antimony (and its compounds)	No	Enters the facility (Use)	80 tonnes	158.40 tonnes	2019	-78.40	-49.49
NA - 01	Antimony (and its compounds)	No	Creation	0 tonnes	0 tonnes	2019	0	
NA - 01	Antimony (and its compounds)	No	Contained in Product	77.60 tonnes	153.65 tonnes	2019	-76.05	-49.50
64742-48- 9	Hydrotreated heavy naphtha	Yes	Enters the facility (Use)	68.82 tonnes	85.94 tonnes	2019	-17.12	-19.92
67-63-0	Isopropyl alcohol	No	Enters the facility (Use)	14.24 tonnes	22.74 tonnes	2019	-8.50	-37.38
67-63-0	Isopropyl alcohol	No	Creation	0 tonnes	0 tonnes	2019	0	
67-63-0	Isopropyl alcohol	No	Contained in Product	2.85 tonnes	4.55 tonnes	2019	-1.70	-37.36
67-63-0	Isopropyl alcohol	Yes	Enters the facility (Use)	14.25 tonnes	22.74 tonnes	2019	-8.49	-37.34
78-93-3	Methyl ethyl ketone	No	Enters the facility (Use)	246.62 tonnes	329.58 tonnes	2019	-82.96	-25.17
78-93-3	Methyl ethyl ketone	No	Creation	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Contained in Product	49.32 tonnes	65.92 tonnes	2019	-16.60	-25.18
78-93-3	Methyl ethyl ketone	Yes	Enters the facility (Use)	246.62 tonnes	329.58 tonnes	2019	-82.96	-25.17
108-10-1	Methyl isobutyl ketone	No	Enters the facility (Use)	1.59 tonnes	2.29 tonnes	2019	-0.70	-30.57
108-10-1	Methyl isobutyl ketone	No	Creation	0 tonnes	0 tonnes	2019	0	
108-10-1	Methyl isobutyl ketone	No	Contained in Product	0.32 tonnes	0.46 tonnes	2019	-0.14	-30.43
108-10-1	Methyl isobutyl ketone	Yes	Enters the facility (Use)	1.59 tonnes	2.29 tonnes	2019	-0.70	-30.57
872-50-4	N-Methyl-2-pyrrolidone	No	Enters the facility (Use)	12.71 tonnes	22.95 tonnes	2019	-10.24	-44.62
872-50-4	N-Methyl-2-pyrrolidone	No	Creation	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2-pyrrolidone	No	Contained in Product	2.54 tonnes	4.59 tonnes	2019	-2.05	-44.66
109-99-9	Tetrahydrofuran	Yes	Enters the facility (Use)	73.74 tonnes	132.67 tonnes	2019	-58.93	-44.42
108-88-3	Toluene	No	Enters the facility (Use)	10.63 tonnes	16.81 tonnes	2019	-6.18	-36.76
108-88-3	Toluene	No	Creation	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Contained in Product	2.13 tonnes	3.36 tonnes	2019	-1.23	-36.61
108-88-3	Toluene	Yes	Enters the facility (Use)	10.63 tonnes	16.8 tonnes	2019	-6.17	-36.73
1330-20-7	Xylene (all isomers)	Yes	Enters the facility (Use)	3.02 tonnes	4.62 tonnes	2019	-1.60	-34.63
1330-20-7	Xylene (all isomers)	Yes	Creation	0 tonnes	0 tonnes	2019	0	
NA - 14	Zinc (and its compounds)	No	Enters the facility (Use)	20.01 tonnes	36.95 tonnes	2019	-16.94	-45.85
NA - 14	Zinc (and its compounds)	No	Creation	0 tonnes	0 tonnes	2019	0	
NA - 14	Zinc (and its compounds)	No	Contained in Product	19.41 tonnes	35.84 tonnes	2019	-16.43	-45.84

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 01	Antimony (and its compounds)	Decrease in production levels	
67-63-0	Isopropyl alcohol	Decrease in production levels	
78-93-3	Methyl ethyl ketone	Decrease in production levels	

CAS RN	Substance Name	Reason(s) for Change	Other Reason
108-10-1	Methyl isobutyl ketone	Decrease in production levels	
872-50-4	N-Methyl-2-pyrrolidone	Decrease in production levels	
108-88-3	Toluene	Decrease in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Decrease in production levels	
NA - 14	Zinc (and its compounds)	Decrease in production levels	

Comparison Report - On-site Releases

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
67-63-0	Isopropyl alcohol	No	Total Releases to Air	9.98 tonnes	15.92 tonnes	2019	-5.94	-37.31
67-63-0	Isopropyl alcohol	No	Total Releases to Water	0 tonnes	0 tonnes	2019	0	
67-63-0	Isopropyl alcohol	No	Total Releases to Land	0 tonnes	0 tonnes	2019	0	
67-63-0	Isopropyl alcohol	No	Total Releases to All Media	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Total Releases to Air	172.63 tonnes	230.71 tonnes	2019	-58.08	-25.17
78-93-3	Methyl ethyl ketone	No	Total Releases to Water	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Total Releases to Land	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Total Releases to All Media	0 tonnes	0 tonnes	2019	0	
108-10-1	Methyl isobutyl ketone	No	Total Releases to Air	1.14 tonnes	1.64 tonnes	2019	-0.50	-30.49
108-10-1	Methyl isobutyl ketone	No	Total Releases to Water	0 tonnes	0 tonnes	2019	0	
108-10-1	Methyl isobutyl ketone	No	Total Releases to Land	0 tonnes	0 tonnes	2019	0	
108-10-1	Methyl isobutyl ketone	No	Total Releases to All Media	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Releases to Air	1.02 tonnes	1.84 tonnes	2019	-0.82	-44.57
872-50-4	N-Methyl-2- pyrrolidone	No	Total Releases to Water	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Releases to Land	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Releases to All Media	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Total Releases to Air	7.44 tonnes	11.77 tonnes	2019	-4.33	-36.79
108-88-3	Toluene	No	Total Releases to Water	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Total Releases to Land	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Total Releases to All Media	0 tonnes	0 tonnes	2019	0	
1330-20-7	Xylene (all isomers)	Yes	Total Releases to Air	2.17 tonnes	3.33 tonnes	2019	-1.16	-34.83

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
67-63-0	Isopropyl alcohol	Decrease in production levels	
78-93-3	Methyl ethyl ketone	Decrease in production levels	
108-10-1	Methyl isobutyl ketone	Decrease in production levels	
872-50-4	N-Methyl-2-pyrrolidone	Decrease in production levels	
108-88-3	Toluene	Decrease in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Decrease in production levels	

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
NA - 01	Antimony (and its compounds)	No	Total On-site Disposals	0 tonnes	0 tonnes	2019	0	

CAS RN	Substance Name Is Breakdown Category		Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change	
NA - 01	01 Antimony (and its compounds) No Total Off-site Disposals		0 tonnes	0 tonnes	2019	0		
NA - 01	Antimony (and its compounds)	No	Total Off-site transfer for treatment Prior to Final Disposal	2.40 tonnes	4.75 tonnes	2019	-2.35	-49.47
NA - 01	Antimony (and its compounds)	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
NA - 01	Antimony (and its compounds)	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
67-63-0	Isopropyl alcohol	No	Total On-site Disposals	0 tonnes	0 tonnes	2019	0	
67-63-0	Isopropyl alcohol	No	Total Off-site Disposals	0 tonnes	0 tonnes	2019	0	
67-63-0	Isopropyl alcohol	No	Total Off-site transfer for treatment Prior to Final Disposal	1.42 tonnes	2.27 tonnes	2019	-0.85	-37.44
67-63-0	Isopropyl alcohol	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
67-63-0	Isopropyl alcohol	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Total On-site Disposals	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Total Off-site Disposals	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Total Off-site transfer for treatment Prior to Final Disposal	24.66 tonnes	32.96 tonnes	2019	-8.30	-25.18
78-93-3	Methyl ethyl ketone	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
78-93-3	Methyl ethyl ketone	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
108-10-1	Methyl isobutyl ketone	No	Total On-site Disposals	0 tonnes	0 tonnes	2019	0	
108-10-1 Methyl isobutyl No Total Off-site Disposals		Total Off-site Disposals	0 tonnes	0 tonnes	2019	0		
108-10-1	Methyl isobutyl ketone	No	Total Off-site transfer for treatment Prior to Final Disposal	0.13 tonnes	0.18 tonnes	2019	-0.05	-27.78
108-10-1	Methyl isobutyl ketone	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
108-10-1	Methyl isobutyl ketone	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total On-site Disposals	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Off-site Disposals	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Off-site transfer for treatment Prior to Final Disposal	9.15 tonnes	16.52 tonnes	2019	-7.37	-44.61
872-50-4	N-Methyl-2- pyrrolidone	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Total On-site Disposals	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Total Off-site Disposals	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Total Off-site transfer for treatment Prior to Final Disposal	1.06 tonnes	1.68 tonnes	2019	-0.62	-36.90
108-88-3	Toluene	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
108-88-3	Toluene	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
NA - 14	Zinc (and its compounds)	No	Total On-site Disposals	0 tonnes	0 tonnes	2019	0	
NA - 14	Zinc (and its compounds)	No	Total Off-site Disposals	0 tonnes	0 tonnes	2019	0	
NA - 14	Zinc (and its compounds)	No	Total Off-site transfer for treatment Prior to Final Disposal	0.60 tonnes	1.11 tonnes	2019	-0.51	-45.95
NA - 14	Zinc (and its compounds)	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	0	
NA - 14	Zinc (and its compounds)	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2019	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 - 01	Antimony (and its compounds)	Decrease in production levels	
67-63-0	Isopropyl alcohol	Decrease in production levels	
78-93-3	Methyl ethyl ketone	Decrease in production levels	
108-10-1	Methyl isobutyl ketone	Decrease in production levels	

CAS RN	Substance Name	Reason(s) for Change	Other Reason
872-50-4	N-Methyl-2-pyrrolidone	Decrease in production levels	
108-88-3	Toluene	Decrease in production levels	
NA - 14	Zinc (and its compounds)	Decrease in production levels	

Pollution Prevention

Does the facility have a documented pollution prevention plan?

a) Please check all that apply

b) Did the facility update their plan in the current reporting year?

c) Does the plan address substances, energy conservation, or water conservation?

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).

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

If no, please select all applicable reasons from the list below:

Plan was prepared or implemented on a voluntary basis.

No

Yes

Substances (provide the name of the primary Substances in the comments field below)

Our efforts fall in line with Ontario's Toxics Reduction program, which is driven by th Toxics Reduction Act, 2009 and Ontario Regulation 455/09

No

Activities were implemented in a previous year; additional activities are either unnecessary or unfeasible at this time

Progress on TRA Plan - Objectives

CAS RN	Substance Name	Objectives
NA - 01	Antimony (and its compounds)	to reduce the usage of substance by 50% by year 2017
64742-48- 9	Hydrotreated heavy naphtha	Morbern Inc. in compliance with the Toxic Reduction Act (2009) and O.Reg. 455/09, does intend to reduce the use of Naphtha.
67-63-0	Isopropyl alcohol	Morbern Inc. in compliance with the Toxic Reduction Act (2009) and O.Reg. 455/09, does intend to reduce the use of IPA.
78-93-3	Methyl ethyl ketone	Morbern Inc. in compliance with the Toxic Reduction Act (2009) and O.Reg. 455/09, does intend to reduce the use of MEK.
108-10-1	Methyl isobutyl ketone	Morbern Inc. in compliance with the Toxic Reduction Act (2009) and O.Reg. 455/09, does intend to reduce the use of MIBK.
872-50-4	N-Methyl-2- pyrrolidone	While Morbern Inc. is implementing options for reducing the use of NMP, it does not have a target for reducing the use of this substance, since it is a component of water-based inks. Morbern is increasing the use of water-based inks to reduce the use and creation of other, more toxic substances at the facility.
109-99-9	Tetrahydrofuran	Morbern Inc. in compliance with the Toxic Reduction Act (2009) and O.Reg. 455/09, does intend to reduce the use of THF.
108-88-3	Toluene	morbern will reduce the toluene uasge by using more waterbase finishes
1330-20-7	Xylene (all isomers)	Morbern Inc. in compliance with the Toxic Reduction Act (2009) and O.Reg. 455/09, does intend to reduce the use of Xylene.
NA - 14	Zinc (and its compounds)	Morbern Inc. in compliance with the Toxic Reduction Act (2009) and O.Reg. 455/09, does intend to reduce the use of Zinc.

Progress on TRA Plan - Use Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
NA - 01	Antimony (and its compounds)	68042 kg	4	17010.7kg in 2013, 17010.7kg in 2014, 17010.7kg in 2015, 17010.7kg in 2016
64742-48-9	Hydrotreated heavy naphtha	0.08 tonnes	3	
67-63-0	Isopropyl alcohol	6.6 tonnes	5	
78-93-3	Methyl ethyl ketone	354 tonnes	5	
108-10-1	Methyl isobutyl ketone	0.35 tonnes	5	
872-50-4	N-Methyl-2-pyrrolidone	No quantity target	No timeline target	
109-99-9	Tetrahydrofuran	102 tonnes	5	
108-88-3	Toluene	6172 kg	5	
1330-20-7	Xylene (all isomers)	1.7 tonnes	5	
NA - 14	Zinc (and its compounds)	0.02 tonnes	3	

Progress on TRA Plan - Creation Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
				1

CAS RN	Substance Name	Quantity	Years	Description of Target
NA - 01	Antimony (and its compounds)	No quantity target	No timeline target	not created at this facility
64742-48-9	Hydrotreated heavy naphtha	No quantity target	No timeline target	
67-63-0	Isopropyl alcohol	No quantity target	No timeline target	
78-93-3	Methyl ethyl ketone	No quantity target	No timeline target	
108-10-1	Methyl isobutyl ketone	No quantity target	No timeline target	
872-50-4	N-Methyl-2-pyrrolidone	No quantity target	No timeline target	
109-99-9	Tetrahydrofuran	No quantity target	No timeline target	
108-88-3	Toluene	No quantity target	No timeline target	not created at the facility
1330-20-7	Xylene (all isomers)	No quantity target	No timeline target	
NA - 14	Zinc (and its compounds)	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 - 01	Antimony (and its compounds)	Substituted materials	Water-based substitution	Water-based substitution	Water-based substitution	Water-based substitution
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	Schedule optimization	Schedule optimization	Schedule optimization	Schedule optimization
67-63-0	Isopropyl alcohol	Improved application techniques	Training / procedures	Training / procedures	Training / procedures	Training / procedures
67-63-0	Isopropyl alcohol	Substituted materials	Water-based substitution	Water-based substitution	Water-based substitution	Water-based substitution
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	Schedule optimization	Schedule optimization	Schedule optimization	Schedule optimization
78-93-3	Methyl ethyl ketone	Improved application techniques	Training / procedures	Training / procedures	Training / procedures	Training / procedures
78-93-3	Methyl ethyl ketone	Substituted materials	Water-based substitution	Water-based substitution	Water-based substitution	Water-based substitution
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	WHMIS training	WHMIS training	WHMIS training	WHMIS training
108-10-1	Methyl isobutyl ketone	Improved application techniques	Ongoing transition to water- based solvents	Ongoing transition to water-based solvents	Ongoing transition to water-based solvents	Ongoing transition to water-based solvents
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	Optimization of schedule	Optimization of schedule	Optimization of schedule	Optimization of schedule
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	None	None	Not applicable. No steps identified in plan	Not applicable. No steps identified in plan
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	Working with supplier to identify and test alternatives to NMP	Working with supplier to identify and test alternatives to NMP	Not applicable. No steps identified in plan	Not applicable. No steps identified in plan
872-50-4	N-Methyl-2- pyrrolidone	Other	Lean production planning ongoing	Lean production planning ongoing	Not applicable. No steps identified in plan	Not applicable. No steps identified in plan
109-99-9	Tetrahydrofuran	Improved application techniques	Training / procedures	Training / procedures	Training / procedures	Training / procedures
109-99-9	Tetrahydrofuran	Substituted materials	Water-based substitution	Water-based substitution	Water-based substitution	Water-based substitution
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	Schedule optimization	Schedule optimization	Schedule optimization	Schedule optimization
108-88-3	Toluene	Improved rinse equipment operations	Trial to optimize	Trial to optimize	Trial to optimize	Trial to optimize
108-88-3	Toluene	Substituted materials	Trial to optimize	Trial to optimize	Trial to optimize	Trial to optimize
108-88-3	Toluene	Other	Work procedures / training	Work procedures / training	Work procedures / training	Work procedures / training
108-88-3	Toluene	Modified design or composition	Water-based topcoat substitution	Water-based topcoat substitution	Water-based topcoat substitution	Water-based topcoat substitution

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
108-88-3	Toluene	Training related to toxics substance reduction	Work procedures / training	Work procedures / training	Work procedures / training	Work procedures / training
1330-20-7	Xylene (all isomers)	Improved application techniques	Training / procedures	Training / procedures	Training / procedures	Training / procedures
1330-20-7	Xylene (all isomers)	Substituted materials	Water-based substitution	Water-based substitution	Water-based substitution	Water-based substitution
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	Schedule optimization	Schedule optimization	Schedule optimization	Schedule optimization
NA - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	Schedule optimization	Schedule optimization	Schedule optimization	Schedule optimization

CAS RN	Substance Name	Activity	Will the timelines in the current version of the plan will be met	Comments:
NA - 01	Antimony (and its compounds)	Substituted materials	No	
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	No	
67-63-0	Isopropyl alcohol	Improved application techniques	No	
67-63-0	Isopropyl alcohol	Substituted materials	No	
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	No	
78-93-3	Methyl ethyl ketone	Improved application techniques	No	
78-93-3	Methyl ethyl ketone	Substituted materials	No	
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	No	
108-10-1	Methyl isobutyl ketone	Improved application techniques	No	
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	No	
872-50-4	N-Methyl-2-pyrrolidone	Improved application techniques	No	
872-50-4	N-Methyl-2-pyrrolidone	Substituted materials	No	
872-50-4	N-Methyl-2-pyrrolidone	Other	No	
109-99-9	Tetrahydrofuran	Improved application techniques	No	
109-99-9	Tetrahydrofuran	Substituted materials	No	
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	No	
108-88-3	Toluene	Improved rinse equipment operations	No	
108-88-3	Toluene	Substituted materials	No	
108-88-3	Toluene	Other	No	
108-88-3	Toluene	Modified design or composition	No	
108-88-3	Toluene	Training related to toxics substance reduction	No	
1330-20-7	20-7 Xylene (all isomers) Improved application techniques		No	
1330-20-7	Xylene (all isomers)	Substituted materials	No	
1330-20-7	-7 Xylene (all isomers) Changed production schedule to minimize equipment and feedstock changeovers		No	
NA - 14	Zinc (and its compounds) Changed production schedule to minimize equipment and feedstock changeovers		No	

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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
67-63-0	Isopropyl alcohol	Improved application techniques	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
67-63-0	Isopropyl alcohol	Improved application techniques	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
67-63-0	Isopropyl alcohol	Improved application techniques	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
67-63-0	Isopropyl alcohol	Improved application techniques	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
67-63-0	Isopropyl alcohol	Improved application techniques	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
67-63-0	Isopropyl alcohol	Improved application techniques	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
67-63-0	Isopropyl alcohol	Improved application techniques	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
67-63-0	Isopropyl alcohol	Improved application techniques	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
67-63-0	Isopropyl alcohol	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
78-93-3	Methyl ethyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
108-10-1	Methyl isobutyl ketone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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

CAS RN	Substance Name	Activity	tivity Reductions due to Options Implemented Q	
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
872-50-4	N-Methyl-2- pyrrolidone	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
109-99-9	Tetrahydrofuran	Improved application techniques	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
108-88-3	Toluene	Improved rinse equipment operations	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
1330-20-7	Xylene (all isomers)	Improved application techniques	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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
1330-20-7	Xylene (all isomers)	Improved application techniques	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 - Materials or feedstock substitution

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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 - 01	Antimony (and its compounds)	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
67-63-0	Isopropyl alcohol	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
78-93-3	Methyl ethyl ketone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
872-50-4	N-Methyl-2- pyrrolidone	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
109-99-9	Tetrahydrofuran	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
108-88-3	Toluene	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
1330-20-7	Xylene (all isomers)	Substituted materials	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
108-88-3	Toluene	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
108-88-3	Toluene	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
108-88-3	Toluene	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
108-88-3	Toluene	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
108-88-3	Toluene	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
108-88-3	Toluene	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
108-88-3	Toluene	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
108-88-3	Toluene	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
108-88-3	Toluene	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 - Reductions due to Options Implemented - Product design or reformulation

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
108-88-3	Toluene	Modified design or composition	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
64742-48- 9	Hydrotreated heavy naphtha	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
67-63-0	Isopropyl alcohol	Changed production schedule to minimize equipment and feedstock changeovers	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
78-93-3	Methyl ethyl ketone	Training related to toxics substance reduction	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
108-10-1	Methyl isobutyl ketone	Changed production schedule to minimize equipment and feedstock changeovers	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
872-50-4	N-Methyl-2- pyrrolidone	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
872-50-4	N-Methyl-2- pyrrolidone	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
872-50-4	N-Methyl-2- pyrrolidone	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
872-50-4	N-Methyl-2- pyrrolidone	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
872-50-4	N-Methyl-2- pyrrolidone	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
872-50-4	N-Methyl-2- pyrrolidone	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
872-50-4	N-Methyl-2- pyrrolidone	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
872-50-4	N-Methyl-2- pyrrolidone	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
872-50-4	N-Methyl-2- pyrrolidone	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
109-99-9	Tetrahydrofuran	Changed production schedule to minimize equipment and feedstock changeovers	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
108-88-3	Toluene	Training related to toxics substance reduction	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
1330-20-7	Xylene (all isomers)	Changed production schedule to minimize equipment and feedstock changeovers	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
NA - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 14	Zinc (and its compounds)	Changed production schedule to minimize equipment and feedstock changeovers	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 - 01	Antimony (and its compounds)	No		
64742-48- 9	Hydrotreated heavy naphtha	No		
67-63-0	Isopropyl alcohol	No		
78-93-3	Methyl ethyl ketone	No		
108-10-1	Methyl isobutyl ketone	No		
872-50-4	N-Methyl-2- pyrrolidone	No		
109-99-9	Tetrahydrofuran	No		
108-88-3	Toluene	No		
1330-20-7	Xylene (all isomers)	No		
NA - 14	Zinc (and its compounds)	No		

Progress on TRA Plan - Reductions due to additional actions taken

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
NA - 01	Antimony (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.	
NA - 01	Antimony (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.	
NA - 01	Antimony (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.	
NA - 01	Antimony (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.	
NA - 01	Antimony (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.	
NA - 01	Antimony (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.	
NA - 01	Antimony (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.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
NA - 01	Antimony (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.	
NA - 01	Antimony (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.	
64742-48- 9	Hydrotreated heavy naphtha	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
64742-48- 9	Hydrotreated heavy naphtha	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
64742-48- 9	Hydrotreated heavy naphtha	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
64742-48- 9	Hydrotreated heavy naphtha	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.	
64742-48- 9	Hydrotreated heavy naphtha	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.	
64742-48- 9	Hydrotreated heavy naphtha	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
64742-48- 9	Hydrotreated heavy naphtha	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.	
64742-48- 9	Hydrotreated heavy naphtha	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.	
64742-48- 9	Hydrotreated heavy naphtha	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
67-63-0	Isopropyl alcohol	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
67-63-0	Isopropyl alcohol	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
67-63-0	Isopropyl alcohol	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
67-63-0	Isopropyl alcohol	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.	
67-63-0	Isopropyl alcohol	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.	
67-63-0	Isopropyl alcohol	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
67-63-0	Isopropyl alcohol	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.	
67-63-0	Isopropyl alcohol	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.	
67-63-0	Isopropyl alcohol	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
78-93-3	Methyl ethyl ketone	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
78-93-3	Methyl ethyl ketone	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
78-93-3	Methyl ethyl ketone	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
78-93-3	Methyl ethyl ketone	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.	
78-93-3	Methyl ethyl ketone	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.	
78-93-3	Methyl ethyl ketone	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
78-93-3	Methyl ethyl ketone	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.	
78-93-3	Methyl ethyl ketone	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.	
78-93-3	Methyl ethyl ketone	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
108-10-1	Methyl isobutyl ketone	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
108-10-1	Methyl isobutyl ketone	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
108-10-1	Methyl isobutyl ketone	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
108-10-1	Methyl isobutyl ketone	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.	
108-10-1	Methyl isobutyl ketone	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.	
108-10-1	Methyl isobutyl ketone	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
108-10-1	Methyl isobutyl ketone	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.	
108-10-1	Methyl isobutyl ketone	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.	
108-10-1	Methyl isobutyl	The amount of reduction in the substance recycled off-site 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
872-50-4	N-Methyl-2- pyrrolidone	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
872-50-4	N-Methyl-2- pyrrolidone	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
872-50-4	N-Methyl-2- pyrrolidone	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
872-50-4	N-Methyl-2- pyrrolidone	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.	
872-50-4	N-Methyl-2- pyrrolidone	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.	
872-50-4	N-Methyl-2- pyrrolidone	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
872-50-4	N-Methyl-2- pyrrolidone	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.	
872-50-4	N-Methyl-2- pyrrolidone	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.	
872-50-4	N-Methyl-2- pyrrolidone	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
109-99-9	Tetrahydrofuran	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
109-99-9	Tetrahydrofuran	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
109-99-9	Tetrahydrofuran	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
109-99-9	Tetrahydrofuran	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.	
109-99-9	Tetrahydrofuran	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.	
109-99-9	Tetrahydrofuran	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
109-99-9	Tetrahydrofuran	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.	
109-99-9	Tetrahydrofuran	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.	
109-99-9	Tetrahydrofuran	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
108-88-3	Toluene	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
108-88-3	Toluene	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
108-88-3	Toluene	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
108-88-3	Toluene	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.	
108-88-3	Toluene	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.	
108-88-3	Toluene	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
108-88-3	Toluene	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.	
108-88-3	Toluene	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.	
108-88-3	Toluene	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
NA - 14	Zinc (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.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
NA - 14	Zinc (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.	
NA - 14	Zinc (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.	
NA - 14	Zinc (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.	
NA - 14	Zinc (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.	
NA - 14	Zinc (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.	
NA - 14	Zinc (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.	
NA - 14	Zinc (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.	
NA - 14	Zinc (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.	

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 - 01	Antimony (and its compounds)	No		
64742-48- 9	Hydrotreated heavy naphtha	No		
67-63-0	Isopropyl alcohol	No		
78-93-3	Methyl ethyl ketone	No		
108-10-1	Methyl isobutyl ketone	No		
872-50-4	N-Methyl-2- pyrrolidone	No		
109-99-9	Tetrahydrofuran	No		
108-88-3	Toluene	No		
1330-20-7	Xylene (all isomers)	No		
NA - 14	Zinc (and its compounds)	No		

Feedback

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	
Morbern Inc.	
Certifying Official (or authorized delegate)	
Eric Lamontagne	
Report Submitted by	
Eric Lamontagne	

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 2021-07-16, I, Eric Lamontagne, 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 - 01	Antimony (and its compounds)			
64742-48-9	Hydrotreated heavy naphtha			
67-63-0	Isopropyl alcohol			
78-93-3	Methyl ethyl ketone			
108-10-1	Methyl isobutyl ketone			
872-50-4	N-Methyl-2-pyrrolidone			
109-99-9	Tetrahydrofuran			
108-88-3	Toluene			
1330-20-7	Xylene (all isomers)			
NA - 14	Zinc (and its compounds)			
Company Name				
Morbern Inc.				

lighest Ranking Employee	
Eric Lamontagne	
Report Submitted by	
Eric Lamontagne	

Website address

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https://morbern.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
2020	2021-07-16	Morbern Inc.	Ontario	Cornwall	NPRI,ON MECP

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: 3.18.5		
Terms and Conditions Transparency							
About us News		Contact us		Stay cor	Stay connected		
HEALTH healthycanadians.gc.ca	TRAVEL travel.gc.ca	SERVICE CANADA servicecanada.gc.ca	JOBS jobbank.gc.ca	ECONOMY actionplan.gc.ca	Canada.gc.ca		