National Pollutant Release Inventory (NPRI) and



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SWIM ➤ 2015 ➤ Morbern Inc. ➤ Morbern Inc. (Update 1) ➤ Report Preview

Report Preview

Report Details

Report Year

2015

Report Type:

NPRI,ON MOE TRA

Report Status:

Update 1 - Submitted

Modified Date/Time:

11/08/2016 8:29 AM

Report Update Comments:

update value of one chemical emission

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, Province/Territory, Postal Code: Cornwall Ontario K6H 5V3

Country: Canada

Facility Name:

Morbern Inc.

NAICS Code:

313320

NPRI ID:

741

ON Reg 127/01 ID:

6243

Physical Address:

Address Line 1: 80 Boundary Road South

City, Province/Territory, Postal Code: Cornwall Ontario K6H5v3

Country: Canada Latitude: 45.03300 Longitude: -74.66840 UTM Zone: 18 UTM Easting: 526120 UTM Northing: 4986669

Contacts Details

Contact Type

Technical Contact, Certifying Official, Person who prepared the report

Name:

Brian Elliott

Position:

EHS Manager

Telephone:

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Contact Type

Highest Ranking Employee

Name:

Jacques St-Denis

Position:

President

Telephone:

6133601707

Email: jstdenis@morbern.com Mailing Address: Delivery Mode: PostOfficeBox PO Box: 1207 Address Line 1: Road South City, Province/Territory, Postal Code: cornwall Ontario k6h 6m1 Country: Canada Contact Type Person who coordinated the preparation of the Toxics Reduction Plan Name: Colin Welburn Position: Partner Telephone: 6138526003 Email: colin@welburnconsulting.ca Mailing Address: Address Line 1: 143 Sunnyside Avenue City, Province/Territory, Postal Code: Ottawa Ontario K1S 0R2 Country: Canada

General Information

Number of employees:	260
Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:	None of the above
Activities Relevant to Reporting Dioxins, Furans and Hexacholorobenzene:	None of the above
Activities Relevant to Reporting of Polycyclic Aromatic Hydrocarbons (PAHs):	Wood preservation using creosote: No
Is this the first time the facility is reporting to the NPRI (under current or past ownership):	No
Is the facility controlled by another Canadian company or companies:	No
Did the facility report under other environmental regulations or permits:	No
Is the facility required to report one or more NPRI Part 4 substances (Criteria Air Contaminants):	Yes
Was the facility shut down for more than one week during the year:	Yes
Operating Schedule - Days of the Week:	Mon, Tue, Wed, Thu, Fri
Usual Number of Operating Hours per day:	24
Usual Daily Start Time (24h) (hh:mm):	07:00
General Comments for Facility:	Shutdown two weeks in summer one week Christmas

Shutdown Periods:

From 2015-07-11 To 2015-07-27

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
NA - 01	Antimony (and its compounds)	N/A	N/A	2.4000	N/A	tonnes
67-63-0	Isopropyl alcohol	0.9000	N/A	1.9000	N/A	tonnes
78-93-3	Methyl ethyl ketone	328.0000	N/A	47.0000	N/A	tonnes
108-10-1	Methyl isobutyl ketone	3.7000	N/A	0.4000	N/A	tonnes
108-10-1	Methyl isobutyl ketone	3.7000	N/A	0.4000	N/A	tonnes
872-50-4	N-Methyl-2-pyrrolidone	N/A	N/A	1.4000	N/A	tonnes
127-18-4	Tetrachloroethylene	0.1000	N/A	1.2000	N/A	tonnes
108-88-3	Toluene	12.2000	N/A	1.8000	N/A	tonnes
NA - M16	Volatile Organic Compounds (VOCs)	514.0000	3.6000	N/A	N/A	tonnes
1330-20-7	Xylene (all isomers)	7.8000	N/A	0.9000	N/A	tonnes
NA - 14	Zinc (and its compounds)	N/A	N/A	1.0000	N/A	tonnes

Applicable Programs

CAS RN	Substance Name	NPRI	ON MOE TRA	ON MOE Reg 127/01	First report for this substance to the ON MOE 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
127-18-4	Tetrachloroethylene	Yes	Yes		No
108-88-3	Toluene	Yes	Yes		No
NA - M16	Volatile Organic Compounds (VOCs)	Yes	Yes		No
1330-20-7	Xylene (all isomers)	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	Yes	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	No	No	No
127-18-4	Tetrachloroethylene	Yes	No	No
108-88-3	Toluene	Yes	No	No
NA - M16	Volatile Organic Compounds (VOCs)		No	Yes
1330-20-7	Xylene (all isomers)	Yes	No	No
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
127-18-4	Tetrachloroethylene	Yes	No	No
108-88-3	Toluene	Yes	No	No
NA - M16	Volatile Organic Compounds (VOCs)			
1330-20-7	Xylene (all isomers)	Yes	No	No
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
127-18-4	Tetrachloroethylene	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)			
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CAS RN	Substance Name	Manufacture the Substance	Process the Substance	Otherwise Use of the Substance
1330-20	7 Xylene (all isomers)	For on-site use/processing	As a formulation component	As a manufacturing aid
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	Quantity	Use ranges for public reporting
NA - 01	Antimony (and its compounds)	Use	78.50 tonnes	No
NA - 01	Antimony (and its compounds)	Creation	0 tonnes	No
NA - 01	Antimony (and its compounds)	Contained	76.2 tonnes	No
67-63-0	Isopropyl alcohol	Use	19.08 tonnes	No
67-63-0	Isopropyl alcohol	Creation	0 tonnes	No
67-63-0	Isopropyl alcohol	Contained	3.8 tonnes	No
78-93-3	Methyl ethyl ketone	Use	470.21 tonnes	No
78-93-3	Methyl ethyl ketone	Creation	0 tonnes	No
78-93-3	Methyl ethyl ketone	Contained	94.1 tonnes	No
108-10-1	Methyl isobutyl ketone	Use	5.06 tonnes	No
108-10-1	Methyl isobutyl ketone	Creation	0 tonnes	No
108-10-1	Methyl isobutyl ketone	Contained	1 tonnes	No
872-50-4	N-Methyl-2-pyrrolidone	Use	14.41 tonnes	No
872-50-4	N-Methyl-2-pyrrolidone	Creation	0 tonnes	No
872-50-4	N-Methyl-2-pyrrolidone	Contained	2.9 tonnes	No
127-18-4	Tetrachloroethylene	Use	1.32 tonnes	No
127-18-4	Tetrachloroethylene	Creation	0 tonnes	No
127-18-4	Tetrachloroethylene	Contained	0 tonnes	No
108-88-3	Toluene	Use	17.51 tonnes	No
108-88-3	Toluene	Creation	0 tonnes	No
108-88-3	Toluene	Contained	3.5 tonnes	No
NA - M16	Volatile Organic Compounds (VOCs)	Use	503.9 tonnes	No
NA - M16	Volatile Organic Compounds (VOCs)	Creation	0 tonnes	No
NA - M16	Volatile Organic Compounds (VOCs)	Contained		
1330-20-7	Xylene (all isomers)	Use	10.80 tonnes	No
1330-20-7	Xylene (all isomers)	Creation	0 tonnes	No
1330-20-7	Xylene (all isomers)	Contained	2.2 tonnes	No
NA - 14	Zinc (and its compounds)	Use	31.69 tonnes	No
NA - 14	Zinc (and its compounds)	Creation	0 tonnes	No
NA - 14	Zinc (and its compounds)	Contained	30.7 tonnes	No

TRA Quantifications - VOC Breakdown List

CAS RN	Substance Name	Use, Creation, Contained	Quantity
112-07-2	Ethylene glycol butyl ether acetate	Use	6.7 tonnes
64742-48-9	Hydrotreated heavy naphtha	Use	8 tonnes
67-63-0	Isopropyl alcohol	Use	13.4 tonnes
78-93-3	Methyl ethyl ketone	Use	329.1 tonnes
108-10-1	Methyl isobutyl ketone	Use	3.6 tonnes
109-99-9	Tetrahydrofuran	Use	123 tonnes
108-88-3	Toluene	Use	12.3 tonnes
108-88-3	Toluene	Creation	0 tonnes
1330-20-7	Xylene (all isomers)	Use	7.8 tonnes

TRA Quantifications - Total Speciated VOCs

Use, Creation, Contained	Quantity
Use	503.9 tonnes
Creation	0 tonnes

TRA Quantifications - Others

CAS RN		Change in Method of Quantification	Reasons for Change	Description of how the change impact tracking and quantification of the substance	Incidents out of the normal course of events	Significant Process Change
NA - 01	Antimony (and its compounds)					No
67-63-0	Isopropyl alcohol					No

CAS RN	Substance Name	Change in Method of Quantification	Reasons for Change	Description of how the change impact tracking and quantification of the substance	Incidents out of the normal course of events	Significant Process Change
78-93-3	Methyl ethyl ketone					No
108-10-1	Methyl isobutyl ketone					No
872-50-4	N-Methyl-2- pyrrolidone					No
127-18-4	Tetrachloroethylene					No
108-88-3	Toluene					No
NA - M16	Volatile Organic Compounds (VOCs)					No
1330-20-7	Xylene (all isomers)					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
78-93-3	Methyl ethyl ketone	Stack or Point Releases	C - Mass Balance		296 tonnes
78-93-3	Methyl ethyl ketone	Fugitive Releases	C - Mass Balance		32 tonnes
108-10-1	Methyl isobutyl ketone	Stack or Point Releases	M2 - Predictive Emission Monitoring		3.3 tonnes
108-10-1	Methyl isobutyl ketone	Fugitive Releases	M2 - Predictive Emission Monitoring		0.4 tonnes
127-18-4	Tetrachloroethylene	Fugitive Releases	C - Mass Balance		0.1 tonnes
108-88-3	Toluene	Stack or Point Releases	C - Mass Balance		11 tonnes
108-88-3	Toluene	Fugitive Releases	C - Mass Balance		1.2 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Stack or Point Releases	C - Mass Balance		455 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Fugitive Releases	C - Mass Balance		59 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Other Sources - Speciated VOCs	NA - Not Applicable		514 tonnes
1330-20-7	Xylene (all isomers)	Stack or Point Releases	C - Mass Balance		7 tonnes
1330-20-7	Xylene (all isomers)	Fugitive Releases	C - Mass Balance		0.8 tonnes

On-site Releases - Releases to air - Total

CAS RN	Substance Name	Total - Releases to Air
78-93-3	Methyl ethyl ketone	328 tonnes
108-10-1	Methyl isobutyl ketone	3.7 tonnes
127-18-4	Tetrachloroethylene	0.1 tonnes
108-88-3	Toluene	12.2 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	514 tonnes
1330-20-7	Xylene (all isomers)	7.8 tonnes

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

Category	CAS RN	Substance Name	Quantity
Other Sources - Speciated VOCs	78-93-3	Methyl ethyl ketone	3.6 tonnes

Total Quantity Released (All Media)

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
67-63-0	Isopropyl alcohol	Total Quantity Released	C - Mass Balance		0.9 tonnes

On-site Releases - Total

CAS RN	Substance Name	Total releases
78-93-3	Methyl ethyl ketone	328 tonnes
108-10-1	Methyl isobutyl ketone	3.7 tonnes
127-18-4	Tetrachloroethylene	0.1 tonnes
108-88-3	Toluene	12.2 tonnes
1330-20-7	Xylene (all isomers)	7.8 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	25	25	25	25
78-93-3	Methyl ethyl ketone	25	25	25	25
108-10-1	Methyl isobutyl ketone	25	25	25	25

CAS RN	Substance Name	Quarter 1	Quarter 2	Quarter 3	Quarter 4
127-18-4	Tetrachloroethylene	25	25	25	25
108-88-3	Toluene	25	25	25	25
1330-20-7	Xylene (all isomers)	25	25	25	25

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)	8.3	8.3	8.3	8.3	8.4	8.4	8.3	8.4	8.4	8.3	8.3	8.3

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

CAS RN	Substance Name	Reasons for Changes in Quantities Disposed from Previous Year	Comments (Disposals)
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	
127-18-4	Tetrachloroethylene	No significant change (i.e. < 10%) or no change	
1330-20-7	Xylene (all isomers)	No significant change (i.e. < 10%) or no change	
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	
NA - M16	Volatile Organic Compounds (VOCs)	No significant change (i.e. < 10%) or no change	

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		2.4 tonnes
67-63-0	Isopropyl alcohol	Incineration / Thermal	C - Mass Balance		1.9 tonnes
78-93-3	Methyl ethyl ketone	Incineration / Thermal	C - Mass Balance		47 tonnes
108-10-1	Methyl isobutyl ketone	Incineration / Thermal	C - Mass Balance		0.4 tonnes
872-50-4	N-Methyl-2-pyrrolidone	Incineration / Thermal	C - Mass Balance		1.4 tonnes
127-18-4	Tetrachloroethylene	Incineration / Thermal	C - Mass Balance		1.2 tonnes
108-88-3	Toluene	Incineration / Thermal	C - Mass Balance		1.8 tonnes
1330-20-7	Xylene (all isomers)	Incineration / Thermal	C - Mass Balance		0.9 tonnes
NA - 14	Zinc (and its compounds)	Incineration / Thermal	C - Mass Balance		1 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)	2.4 tonnes
67-63-0	Isopropyl alcohol	1.9 tonnes
78-93-3	Methyl ethyl ketone	47 tonnes
108-10-1	Methyl isobutyl ketone	0.4 tonnes
872-50-4	N-Methyl-2-pyrrolidone	1.4 tonnes
127-18-4	Tetrachloroethylene	1.2 tonnes
108-88-3	Toluene	1.8 tonnes
1330-20-7	Xylene (all isomers)	0.9 tonnes
NA - 14	Zinc (and its compounds)	1 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	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	0.4 tonnes
108-88-3	Toluene	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	1.8 tonnes
127-18-4	Tetrachloroethylene	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	1.2 tonnes
1330-20-7	Xylene (all isomers)	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	0.9 tonnes
67-63-0	Isopropyl alcohol	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	1.9 tonnes
78-93-3	Methyl ethyl ketone	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	47 tonnes
872-50-4	N-Methyl-2-pyrrolidone	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	1.4 tonnes
NA - 01	Antimony (and its compounds)	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	2.4 tonnes
NA - 14	Zinc (and its compounds)	Incineration / Thermal	RPR Environmental	164-174 south service road, Stoney Creek, ON, canada	1 tonnes

Disposals - Total Quantity Disposed (All Media)

CAS RN	Substance Name	Total Quantity Disposed (All Media)
NA - 01	Antimony (and its compounds)	2.4 tonnes
67-63-0	Isopropyl alcohol	1.9 tonnes
78-93-3	Methyl ethyl ketone	47 tonnes
108-10-1	Methyl isobutyl ketone	0.4 tonnes
872-50-4	N-Methyl-2-pyrrolidone	1.4 tonnes
127-18-4	Tetrachloroethylene	1.2 tonnes
108-88-3	Toluene	1.8 tonnes
1330-20-7	Xylene (all isomers)	0.9 tonnes
NA - 14	Zinc (and its compounds)	1 tonnes

Disposals - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Disposed	Reasons for Changes in Quantities Disposed from Previous Year	Comments (Disposals)
108-10-1	Methyl isobutyl ketone	Production residues Off-specification products Contaminated materials Machine or finishing residues	No significant change (i.e. < 10%) or no change	
108-88-3	Toluene	Production residues Unusable parts or discards Machine or finishing residues	No significant change (i.e. < 10%) or no change	
127-18-4	Tetrachloroethylene	Production residues Unusable parts or discards Machine or finishing residues	No significant change (i.e. < 10%) or no change	
1330-20-7	Xylene (all isomers)	Production residues Contaminated materials Machine or finishing residues	No significant change (i.e. < 10%) or no change	
67-63-0	Isopropyl alcohol	Production residues Off-specification products Contaminated materials Unusable parts or discards Machine or finishing residues	No significant change (i.e. < 10%) or no change	
78-93-3	Methyl ethyl ketone	Production residues Off-specification products Contaminated materials Machine or finishing residues	No significant change (i.e. < 10%) or no change	
872-50-4	N-Methyl-2-pyrrolidone	Production residues Off-specification products Contaminated materials Machine or finishing residues	No significant change (i.e. < 10%) or no change	
NA - 01	Antimony (and its compounds)	Production residues Off-specification products Contaminated materials Machine or finishing residues	No significant change (i.e. < 10%) or no change	
NA - 14	Zinc (and its compounds)	Production residues Off-specification products Machine or finishing residues	No significant change (i.e. < 10%) or no change	

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	
127-18-4	Tetrachloroethylene		No significant change (i.e. < 10%) or no change	
1330-20-7	Xylene (all isomers)		No significant change (i.e. < 10%) or no change	
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	Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 01	Antimony (and its compounds)	No	Enters the facility (Use)	78.50 tonnes	55.2 tonnes	2014	23.30	42.21

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	Creation	0 tonnes	0 tonnes	2014	0	
NA - 01	Antimony (and its compounds)	No	Contained	76.2 tonnes	53.5 tonnes	2014	22.7	42.43
112-07-2	Ethylene glycol butyl ether acetate	Yes	Enters the facility (Use)	6.7 tonnes	6.96 tonnes 2014		-0.26	-3.74
64742-48- 9	Hydrotreated heavy naphtha	Yes	Enters the facility (Use)	8 tonnes	69.12 tonnes	2014	-61.12	-88.43
67-63-0	Isopropyl alcohol	No	Enters the facility (Use)	19.08 tonnes	19.08 tonnes	2014	0.00	0
67-63-0	Isopropyl alcohol	No	Creation	0 tonnes	0 tonnes	2014	0	
67-63-0	Isopropyl alcohol	No	Contained	3.8 tonnes	3.8 tonnes	2014	0.0	0
67-63-0	Isopropyl alcohol	Yes	Enters the facility (Use)	13.4 tonnes	19.08 tonnes	2014	-5.68	-29.77
78-93-3	Methyl ethyl ketone	No	Enters the facility (Use)	470.21 tonnes	470.53 tonnes	2014	-0.32	-0.07
78-93-3	Methyl ethyl ketone	No	Creation	0 tonnes	0 tonnes	2014	0	
78-93-3	Methyl ethyl ketone	No	Contained	94.1 tonnes	143.9 tonnes	2014	-49.8	-34.61
78-93-3	Methyl ethyl ketone	Yes	Enters the facility (Use)	329.1 tonnes	470.53 tonnes	2014	-141.43	-30.06
108-10-1	Methyl isobutyl ketone	No	Enters the facility (Use)	5.06 tonnes	5.06 tonnes	2014	0.00	0
108-10-1	Methyl isobutyl ketone	No	Creation	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Contained	1 tonnes	1 tonnes	2014	0	0
108-10-1	Methyl isobutyl ketone	Yes	Enters the facility (Use)	3.6 tonnes	5.06 tonnes	2014	-1.46	-28.85
872-50-4	N-Methyl-2-pyrrolidone	No	Enters the facility (Use)	14.41 tonnes	10.54 tonnes	2014	3.87	36.72
872-50-4	N-Methyl-2-pyrrolidone	No	Creation	0 tonnes	0 tonnes	2014	0	
872-50-4	N-Methyl-2-pyrrolidone	No	Contained	2.9 tonnes	2.1 tonnes	2014	0.8	38.10
127-18-4	Tetrachloroethylene	No	Enters the facility (Use)	1.32 tonnes	1.29 tonnes	2014	0.03	2.33
127-18-4	Tetrachloroethylene	No	Creation	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Contained	0 tonnes	0 tonnes	2014	0	
109-99-9	Tetrahydrofuran	Yes	Enters the facility (Use)	123 tonnes	151.99 tonnes	2014	-28.99	-19.07
108-88-3	Toluene	No	Enters the facility (Use)	17.51 tonnes	17.51 tonnes	2014	0.00	0
108-88-3	Toluene	No	Creation	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Contained	3.5 tonnes	3.5 tonnes	2014	0.0	0
108-88-3	Toluene	Yes	Enters the facility (Use)	12.3 tonnes	17.51 tonnes	2014	-5.21	-29.75
108-88-3	Toluene	Yes	Creation	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Enters the facility (Use)	10.80 tonnes	10.80 tonnes	2014	0.00	0
1330-20-7	Xylene (all isomers)	No	Creation	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Contained	2.2 tonnes	2.2 tonnes	2014	0.0	0
1330-20-7	Xylene (all isomers)	Yes	Enters the facility (Use)	7.8 tonnes	5.62 tonnes	2014	2.18	38.79
NA - 14	Zinc (and its compounds)	No	Enters the facility (Use)	31.69 tonnes	25.63 tonnes	2014	6.06	23.64
NA - 14	Zinc (and its compounds)	No	Creation	0 tonnes	0 tonnes	2014	0	
NA - 14	Zinc (and its compounds)	No	Contained	30.7 tonnes	24.9 tonnes	2014	5.8	23.29

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

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CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 01	Antimony (and its compounds)	Other	formulation change
67-63-0	Isopropyl alcohol	No reasons - quantities approximately the same	
78-93-3	Methyl ethyl ketone	Change in quantification methodology	
108-10-1	Methyl isobutyl ketone	No reasons - quantities approximately the same	
872-50-4	N-Methyl-2-pyrrolidone	No reasons - quantities approximately the same	
127-18-4	Tetrachloroethylene	No reasons - quantities approximately the same	
108-88-3	Toluene	No reasons - quantities approximately the same	
NA - M16	Volatile Organic Compounds (VOCs)	No reasons - quantities approximately the same	
1330-20-7	Xylene (all isomers)	No reasons - quantities approximately the same	

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 14	Zinc (and its compounds)	Increase 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	0 tonnes	13.3 tonnes	2014	-13.3	-100
67-63-0	Isopropyl alcohol	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
67-63-0	Isopropyl alcohol	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
67-63-0	Isopropyl alcohol	No	Total Releases to All Media	0.9 tonnes	0 tonnes	2014	0.9	100
78-93-3	Methyl ethyl ketone	No	Total Releases to Air	328 tonnes	329.3 tonnes	2014	-1.3	-0.39
78-93-3	Methyl ethyl ketone	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
78-93-3	Methyl ethyl ketone	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
78-93-3	Methyl ethyl ketone	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Total Releases to Air	3.7 tonnes	3.7 tonnes	2014	0.0	0
108-10-1	Methyl isobutyl ketone	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Total Releases to Air	0.1 tonnes	0.1 tonnes	2014	0.0	0
127-18-4	Tetrachloroethylene	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Releases to Air	12.2 tonnes	12.2 tonnes	2014	0.0	0
108-88-3	Toluene	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to Air	7.8 tonnes	7.8 tonnes	2014	0.0	0
1330-20-7	Xylene (all isomers)	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
67-63-0	Isopropyl alcohol	No reasons - quantities approximately the same	
78-93-3	Methyl ethyl ketone	No reasons - quantities approximately the same	
108-10-1	Methyl isobutyl ketone	No reasons - quantities approximately the same	
127-18-4	Tetrachloroethylene	No reasons - quantities approximately the same	
108-88-3	Toluene	No reasons - quantities approximately the same	
NA - M16	Volatile Organic Compounds (VOCs)	No reasons - quantities approximately the same	
1330-20-7	Xylene (all isomers)	No reasons - quantities approximately the same	

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	2014	0	
NA - 01	Antimony (and its compounds)	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
NA - 01	Antimony (and its compounds)	No	Total Off-site transfer for treatment Prior to Final Disposal	2.4 tonnes	1.7 tonnes	2014	0.7	41.18

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 Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
NA - 01	Antimony (and its compounds)	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
67-63-0	Isopropyl alcohol	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
67-63-0	Isopropyl alcohol	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
67-63-0	Isopropyl alcohol	No	Total Off-site transfer for treatment Prior to Final Disposal	1.9 tonnes	1.9 tonnes	2014	0.0	0
67-63-0	Isopropyl alcohol	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
67-63-0	Isopropyl alcohol	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
78-93-3	Methyl ethyl ketone	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
78-93-3	Methyl ethyl ketone	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
78-93-3	Methyl ethyl ketone	No	Total Off-site transfer for treatment Prior to Final Disposal	47 tonnes	47.1 tonnes	2014	-0.1	-0.21
78-93-3	Methyl ethyl ketone	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
78-93-3	Methyl ethyl ketone	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Total Off-site transfer for treatment Prior to Final Disposal	0.4 tonnes	0.40 tonnes	2014	0.00	0
108-10-1	Methyl isobutyl ketone	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
108-10-1	Methyl isobutyl ketone	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Off-site transfer for treatment Prior to Final Disposal	1.4 tonnes	1.1 tonnes	2014	0.3	27.27
872-50-4	N-Methyl-2- pyrrolidone	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
872-50-4	N-Methyl-2- pyrrolidone	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Total Off-site transfer for treatment Prior to Final Disposal	1.2 tonnes	1.2 tonnes	2014	0.0	0
127-18-4	Tetrachloroethylene	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
127-18-4	Tetrachloroethylene	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Off-site transfer for treatment Prior to Final Disposal	1.8 tonnes	1.8 tonnes	2014	0.0	0
108-88-3	Toluene	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Off-site Disposals	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Off-site transfer for treatment Prior to Final Disposal	0.9 tonnes	0.9 tonnes	2014	0.0	0
1330-20-7	Xylene (all isomers)	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	
NA - 14	Zinc (and its compounds)	No	Total On-site Disposals	0 tonnes	0 tonnes	2014	0	
NA - 14	Zinc (and its compounds)	No	Total Off-site Disposals	0 tonnes	0.8 tonnes	2014	-0.8	-100
NA - 14	Zinc (and its compounds)	No	Total Off-site transfer for treatment Prior to Final Disposal	1 tonnes	0 tonnes	2014	1	100
NA - 14	Zinc (and its compounds)	No	Total On-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	0	

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	l Reporting Period of Last Reported Quantity	Change	% Change
NA - 14	Zinc (and its compounds)	No	Total Off-site Disposal of Tailings and Waste Rock	0 tonnes	0 tonnes	2014	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)	Increase in production levels	
67-63-0	Isopropyl alcohol	No reasons - quantities approximately the same	
78-93-3	Methyl ethyl ketone	No reasons - quantities approximately the same	
108-10-1	Methyl isobutyl ketone	No reasons - quantities approximately the same	
872-50-4	N-Methyl-2-pyrrolidone	No reasons - quantities approximately the same	
127-18-4	Tetrachloroethylene	No reasons - quantities approximately the same	
108-88-3	Toluene	No reasons - quantities approximately the same	
1330-20-7	Xylene (all isomers)	No reasons - quantities approximately the same	
NA - 14	Zinc (and its compounds)	No reasons - quantities approximately the same	

Pollution Prevention

Does the facility have a documented pollution prevention plan?	Yes
a) Please check all that apply	Plan was prepared or implemented on a voluntary basis.
b) Did the facility update their plan in the current reporting year?	No
c) Does the plan address substances, energy conservation, or water conservation?	Substances
Did the facility complete any pollution prevention activities in the current NPRI reporting year	No

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
112-07-2	Ethylene glycol butyl ether acetate	In accordance with s. 4(1)1 of the Toxics Reduction Act and Morbern Inc.'s commitment to pollution prevention, Morbern intends to reduce or minimize the use, creation and releases of the listed substance wherever technically and economically viable.
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	30%
127-18-4	Tetrachloroethylene	to eliminate the usage of tetrachloroethylene by 2015
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 - Targets

(and its compounds) glycol butyl ether acetate ted heavy naphtha alcohol	68042 kg No quantity target 0.08 tonnes	4 No timeline target 3	17010.7kg in 2013, 17010.7kg in 2014, 17010.7kg in 2015, 17010.7kg in 2016
ted heavy naphtha	, , ,		
	0.08 tonnes	3	
alcohol			
	6.6 tonnes	5	
nyl ketone	354 tonnes	5	
butyl ketone	0.35 tonnes	5	
2-pyrrolidone	No quantity target	No timeline target	
oethylene	33 tonnes	2	50% reduction in 2013 and 50% reductionin 2014 by substitution
ofuran	102 tonnes	5	
	6172 kg	5	
		5	
	ofuran	ofuran 102 tonnes	102 tonnes 5 6172 kg 5

CAS RN	Substance Name	Quantity	Years	Description of Target
NA - 14	Zinc (and its compounds)	0.02 tonnes	3	

Progress on TRA Plan - Description

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
112-07-2	Ethylene glycol butyl ether acetate	No quantity target	No timeline target	
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	
127-18-4	Tetrachloroethylene	No quantity target	No timeline target	this product is not created at this facility
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 base substitution	water base substitution	water base substitution	water base 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 base substitution	water base substitution	water base substitution	water base substitution
67-63-0	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 base substitution	water base substitution	water base substitution	water base substitution
78-93-3	3 Methyl ethyl ketone Training related to toxics substance reduction		whimus training	whimus training	whimus training	whimus training
108-10-1	Methyl isobutyl ketone	Improved application techniques	transfer to water base solvents	transfer to water base solvents	transfer to water base solvents	transfer to water base solvents
108-10-1	Methyl isobutyl Schedule to minimize equipment and feedstock changeovers		optimization of schedule	optimization of schedule	optimization of schedule	optimization of schedule
127-18-4	Tetrachloroethylene	Substituted materials	water base substitution	water base substitution	water base substitution	water base substitution
109-99-9	Tetrahydrofuran	Improved application techniques	training / procedures	training / procedures	training / procedures	training / procedures
109-99-9	Tetrahydrofuran	Substituted materials	water base substitution	water base substitution	water base substitution	water base 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	waterbase top coat substitution	waterbase top coat substitution	waterbase top coat substitution	waterbase top coat substitution
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	waterbase top coat substitution	waterbase top coat substitution	waterbase top coat substitution	waterbase top coat substitution
108-88-3	Toluene	Training related to toxics substance reduction	work procedures / training	work procedures / training	work procedures / training	work procedures / training

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
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 base substitution	water base substitution	water base substitution	water base 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

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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun
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 Amoun

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
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
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
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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 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
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

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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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
127-18-4	Tetrachloroethylene	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

CAS RN Substance Name Activity Reductions due to Options Implemented Quantity

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

CAS RN	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
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-	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-	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-	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-	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-	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-	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-	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-	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-	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

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 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	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
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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
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
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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
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		
112-07-2	Ethylene glycol butyl ether acetate	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		
127-18-4	Tetrachloroethylene	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.	
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.	
112-07-2	Ethylene glycol butyl ether acetate	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
112-07-2	Ethylene glycol butyl ether acetate	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
112-07-2	Ethylene glycol butyl ether acetate	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
112-07-2	Ethylene glycol butyl ether acetate	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.	
112-07-2	Ethylene glycol butyl ether acetate	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.	
12-07-2	Ethylene glycol butyl ether acetate	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
112-07-2	Ethylene glycol butyl ether acetate	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.	
112-07-2	Ethylene glycol butyl ether acetate	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.	
112-07-2	Ethylene glycol butyl ether acetate	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.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
108-10-1	Methyl isobutyl 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.	
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.	
127-18-4	Tetrachloroethylene	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
127-18-4	Tetrachloroethylene	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
		The amount of reduction in the substance contained in meduct at the facility during the reporting period that	
ack		Validate Sav	e/Contin
127-18-4	Tetrachloroethylene	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.	
127-18-4	Tetrachloroethylene	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.	
127 10 /	Tetrachloroethylene	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted	

127-18-4	Tetrachloroethylene	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.	
127-18-4	Tetrachloroethylene	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.	
127-18-4	Tetrachloroethylene	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
127-18-4	Tetrachloroethylene	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.	
127-18-4	Tetrachloroethylene	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.	
127-18-4	Tetrachloroethylene	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.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
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.	
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		
112-07-2	Ethylene glycol butyl ether acetate	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		
127-18-4	Tetrachloroethylene	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		

Report Submission and Electronic Certification

NPRI - Electronic Statement of Certification

Specify the language of correspondence
English
Comments (optional)

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)

Brian Elliott

Report Submitted by

Brian Elliott

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 MOE TRA - Electronic Certification Statement

Annual Report Certification Statement

As of 11/08/2016, I, Jacques St-Denis, 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

Substance Name							
Antimony (and its compounds)							
Ethylene glycol butyl ether acetate							
Hydrotreated heavy naphtha							
Isopropyl alcohol							
Methyl ethyl ketone							
Methyl isobutyl ketone							
N-Methyl-2-pyrrolidone							
Tetrachloroethylene							
Tetrahydrofuran							
Toluene							
Xylene (all isomers)							
Zinc (and its compounds)							
Company Name							
Morbern Inc.							
Highest Ranking Employee							
Jacques St-Denis							
Brian Elliott							
Website address							

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
2015	11/08/2016	Morbern Inc.	Ontario	Cornwall	NPRI,ON MOE TRA

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



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