National Pollutant Release Inventory (NPRI) and Partners





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SWIM ➤ 2017 ➤ Toyota Boshoku Canada Inc. ➤ TB - Elmira ➤ Report Preview

Report Preview

Report Details

Report Year

2017

Report Type:

NPRI,ON MOE TRA

Report Status:

Ready to Submit

Modified Date/Time:

01/06/2018 2:49 PM

Company and Facility Details

Company Name:

Toyota Boshoku Canada Inc.

Business Number:

850793365

Mailing Address:

Address Line 1: 45 Southfield Drive

City, Province/Territory, Postal Code: Elmira Ontario N3B 3L6

Country: Canada

Facility Name:

TB - Elmira

NAICS Code:

332999

NPRI ID:

11074

Physical Address:

Address Line 1: 45 Southfield Drive Drive

City, Province/Territory, Postal Code: Elmira Ontario N3B3L6

Country: Canada Latitude: 43.58249 Longitude: -80.5557 UTM Zone: 17 UTM Easting: 535870 UTM Northing: 4825600

Contacts Details

Contact Type

Technical Contact

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Contact Type Highest Ranking Employee Name: Ulrich Borths Position: Plant Manager Telephone: 5198804104 Fax: 5196690019 Email: ulrich.borths@tbamerica.com Mailing Address: Address Line 1: 45 Southfield Drive City, Province/Territory, Postal Code: Elmira Ontario N3B3L6 Country: Canada Contact Type Person who prepared the report Name: Lloyd Hipel Position: Project Manager Telephone: 5195785100 Email: Ihipel@enviro-stewards.com Mailing Address: Delivery Mode: GeneralDelivery Address Line 1: 1 Union Street City, Province/Territory, Postal Code: Elmira Ontario N3B 3J9 Country: Canada

General Information Number of employees:

Number of employees:	540
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:	No
Operating Schedule - Days of the Week:	Mon, Tue, Wed, Thu, Fri
Usual Number of Operating Hours per day:	19
Usual Daily Start Time (24h) (hh:mm):	07:00

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
110-82-7	Cyclohexane	12.7050	N/A	N/A	N/A	tonnes
78-93-3	Methyl ethyl ketone	2.1670	N/A	N/A	N/A	tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	0.6470	N/A	N/A	N/A	tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	0.3160	N/A	N/A	N/A	tonnes
NA - M16	Volatile Organic Compounds (VOCs)	26.6680	12.2100	N/A	N/A	tonnes

CAS RN	Substance Name	NPRI	ON MOE TRA	ON MOE Reg 127/01	this substance to the ON MOE TRA
110-82-7	Cyclohexane	Yes	Yes		No
78-93-3	Methyl ethyl ketone	Yes	Yes		No
NA - M09	PM10 - Particulate Matter <= 10 Microns	Yes	Yes		Yes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Yes	Yes		No
NA - M16	Volatile Organic Compounds (VOCs)	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
110-82-7	Cyclohexane	Yes	No	No
78-93-3	Methyl ethyl ketone	Yes	No	No
NA - M16	Volatile Organic Compounds (VOCs)		No	Yes

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
110-82-7	Cyclohexane	No	No	No
78-93-3	Methyl ethyl ketone	No	No	No
NA - M16	Volatile Organic Compounds (VOCs)			

General Information about the Substance - Nature of Activities

CAS RN	Substance Name	Manufacture the Substance	Process the Substance	Otherwise Use of the Substance
110-82-7	Cyclohexane		As a reactant	
78-93-3	Methyl ethyl ketone			As a physical or chemical processing aid
NA - M16	Volatile Organic Compounds (VOCs)			

Substances added to/removed from the report

CAS RN Substance Name		Added/Removed	Comment	
NA - M09	PM10 - Particulate Matter <= 10 Microns	Added	Increase in production.	

TRA Quantifications

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
110-82-7	Cyclohexane	Use	12.705 tonnes	Yes
110-82-7	Cyclohexane	Creation	0 tonnes	No
110-82-7	Cyclohexane	Contained in Product	0 tonnes	No
78-93-3	Methyl ethyl ketone	Use	2.167 tonnes	Yes
78-93-3	Methyl ethyl ketone	Creation	0 tonnes	No
78-93-3	Methyl ethyl ketone	Contained in Product	0 tonnes	No
NA - M09	PM10 - Particulate Matter <= 10 Microns	Use	0 tonnes	No
NA - M09	PM10 - Particulate Matter <= 10 Microns	Creation	0.647 tonnes	Yes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Contained in Product		
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Use	0 tonnes	No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Creation	0.316 tonnes	Yes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Contained in Product		
NA - M16	Volatile Organic Compounds (VOCs)	Use	26.668 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Creation		No
NA - M16	Volatile Organic Compounds (VOCs)	Contained in Product		

TRA Quantifications - VOC Breakdown List

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity
141-78-6	Ethyl acetate	Use	6.594 tonnes
NA - 31	Heptane (all isomers)	Use	2.843 tonnes
64742-95-6	Light aromatic solvent naphtha	Use	0.686 tonnes
78-93-3	Methyl ethyl ketone	Use	2.087 tonnes
78-93-3	Methyl ethyl ketone	Creation	0 tonnes

TRA Quantifications - Total Speciated VOCs

Use, Creation, Contained in Product	Quantity
Use	12.210 tonnes
Creation	0 tonnes

TRA Quantifications - Others

CAS RN	Substance Name	Change in Method of Quantification	Reasons for Change	Description of how the change impact tracking and quantification of the substance	Description of how an incident(s) affected quantifications	Significant Process Change
110-82-7	Cyclohexane					No
78-93-3	Methyl ethyl ketone					No
NA - M09	PM10 - Particulate Matter <= 10 Microns					No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns					No
NA - M16	Volatile Organic Compounds (VOCs)					No

On-site Releases - Releases to air

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
110-82-7	Cyclohexane	Stack or Point Releases	O - Engineering Estimates		12.705 tonnes
78-93-3	Methyl ethyl ketone	Stack or Point Releases	O - Engineering Estimates		2.167 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Stack or Point Releases	O - Engineering Estimates		0.647 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Stack or Point Releases	O - Engineering Estimates		0.316 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Stack or Point Releases	O - Engineering Estimates		26.668 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Other Sources - Speciated VOCs	NA - Not Applicable		26.668 tonnes

On-site Releases - Releases to air - Total

CAS RN	Substance Name	Total - Releases to Air
110-82-7	Cyclohexane	12.705 tonnes
78-93-3	Methyl ethyl ketone	2.167 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	0.647 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	0.316 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	26.668 tonnes

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

Category	CAS RN	Substance Name	Quantity
Other Sources - Speciated VOCs	141-78-6	Ethyl acetate	6.594 tonnes
Other Sources - Speciated VOCs	NA - 31	Heptane (all isomers)	2.843 tonnes
Other Sources - Speciated VOCs	64742-95-6	Light aromatic solvent naphtha	0.686 tonnes
Other Sources - Speciated VOCs	78-93-3	Methyl ethyl ketone	2.087 tonnes

On-site Releases - Total

CAS RN	Substance Name	Total releases
110-82-7	Cyclohexane	12.705 tonnes
78-93-3	Methyl ethyl ketone	2.167 tonnes

On-site Releases - Quarterly Breakdown of Annual Releases

CAS RN	Substance Name	Quarter 1	Quarter 2	Quarter 3	Quarter 4
110-82-7	Cyclohexane	25	25	25	25
78-93-3	Methyl ethyl ketone	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 - M09	PM10 - Particulate Matter <= 10 Microns	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34
	PM2.5 -												

CAS F	RN Substance Name	e Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
NA - N	M10 Particulate Matter <= 2.5 Microns	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34
NA - N	Volatile Organic Compound (VOCs)	s 8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34

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

CAS RN	Substance Name	Reasons for Changes in Quantities from Previous Year	Comments
110-82-7	Cyclohexane	Changes in production levels	
78-93-3	Methyl ethyl ketone	Changes in production levels	
NA - M09	PM10 - Particulate Matter <= 10 Microns	Not applicable (first year reporting this substance)	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Changes in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Changes in production levels	

Disposals - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Disposed	Reasons for Changes in Quantities from Previous Year	Comments
110-82-7	Cyclohexane		Changes in production levels	
78-93-3	Methyl ethyl ketone		Other (specify in On-site Releases comment field)	Not disposed of.

Recycling - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Recycled	Reasons for Changes in Quantities Recycled from Previous Year	Comments
110-82-7	Cyclohexane		Other (specify in recycling comments field)	Not recycled offsite.
78-93-3	Methyl ethyl ketone		Other (specify in recycling comments field)	Not recycled offsite.

Comparison Report - Enters, Creation, Contained in Product

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
110-82-7	Cyclohexane	No	Enters the facility (Use)	12.705 tonnes	11.731 tonnes	2016	0.974	8.30
110-82-7	Cyclohexane	No	Creation	0 tonnes	0 tonnes	2016	0	
110-82-7	Cyclohexane	No	Contained in Product	0 tonnes	0 tonnes	2016	0	
141-78-6	Ethyl acetate	Yes	Enters the facility (Use)	6.594 tonnes	6.043 tonnes	2016	0.551	9.12
NA - 31	Heptane (all isomers)	Yes	Enters the facility (Use)	2.843 tonnes	2.594 tonnes	2016	0.249	9.60
64742-95- 6	Light aromatic solvent naphtha	Yes	Enters the facility (Use)	0.686 tonnes	1.101 tonnes	2016	-0.415	-37.69
78-93-3	Methyl ethyl ketone	No	Enters the facility (Use)	2.167 tonnes	1.987 tonnes	2016	0.180	9.06
78-93-3	Methyl ethyl ketone	No	Creation	0 tonnes	0 tonnes	2016	0	
78-93-3	Methyl ethyl ketone	No	Contained in Product	0 tonnes	0 tonnes	2016	0	
78-93-3	Methyl ethyl ketone	Yes	Enters the facility (Use)	2.087 tonnes	1.923 tonnes	2016	0.164	8.53
78-93-3	Methyl ethyl ketone	Yes	Creation	0 tonnes	0 tonnes	2016	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Creation	0.316 tonnes	0.347 tonnes	2016	-0.031	-8.93

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
110-82-7	Cyclohexane	No reasons - quantities approximately the same Increase in production levels	
78-93-3	Methyl ethyl ketone	No reasons - quantities approximately the same Increase in production levels	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No reasons - quantities approximately the same	
NA - M16	Volatile Organic Compounds (VOCs)	No reasons - quantities approximately the same Decrease in production levels	

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
110-82-7	Cyclohexane	No	Total Releases to Air	12.705 tonnes	11.731 tonnes	2016	0.974	8.30
110-82-7	Cyclohexane	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
110-82-7	Cyclohexane	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
110-82-7	Cyclohexane	No	Total Releases to All Media	0 tonnes	0 tonnes	2016	0	
141-78-6	Ethyl acetate	Yes	Total Releases to Air	6.594 tonnes	6.043 tonnes	2016	0.551	9.12
NA - 31	Heptane (all isomers)	Yes	Total Releases to Air	2.843 tonnes	2.594 tonnes	2016	0.249	9.60
64742-95- 6	Light aromatic solvent naphtha	Yes	Total Releases to Air	0.686 tonnes	1.101 tonnes	2016	-0.415	-37.69
78-93-3	Methyl ethyl ketone	No	Total Releases to Air	2.167 tonnes	1.987 tonnes	2016	0.180	9.06
78-93-3	Methyl ethyl ketone	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
78-93-3	Methyl ethyl ketone	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
78-93-3	Methyl ethyl ketone	No	Total Releases to All Media	0 tonnes	0 tonnes	2016	0	
78-93-3	Methyl ethyl ketone	Yes	Total Releases to Air	2.087 tonnes	1.923 tonnes	2016	0.164	8.53
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Air	0.316 tonnes	0.347 tonnes	2016	-0.031	-8.93
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to All Media	0 tonnes	0 tonnes	2016	0	

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
110-82-7	Cyclohexane	No reasons - quantities approximately the same Increase in production levels	
78-93-3	Methyl ethyl ketone	No reasons - quantities approximately the same Increase in production levels	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No reasons - quantities approximately the same	
NA - M16	Volatile Organic Compounds (VOCs)	No reasons - quantities approximately the same Decrease in production levels	

Pollution Prevention

Does the facility have a documented pollution prevention plan?

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

No			

No

Progress on TRA Plan - Objectives

CAS RN	Substance Name	Objectives
110-82-7	Cyclohexane	Toyota Boshoku Elmira intends to reduce the use of cyclohexane through material substitution, on-site reuse, improved inventory techniques, and training and improved operating practices.
141-78-6	Ethyl acetate	Toyota Boshoku intends to reduced its use of ethyl acetate through process modification, leak prevention, on-site reuse, improved inventory techniques, and improved operating practices.
NA - 31	Heptane (all isomers)	Toyota Boshoku Elmira intends to reduce the use of heptane through material substitution, product design, on-site recycling, improved inventory techniques, and training or improved operating practices.
64742-95- 6	Light aromatic solvent naphtha	Toyota Boshoku Elmira intends to reduce the use of light aromatic solvent naphtha through material substitution, product design, improved inventory techniques, and training or improved operating practices.
78-93-3	Methyl ethyl ketone	Toyota Boshoku Elmira intends to reduce the use of MEK through spill and leak prevention, on-site recycling, and improved inventory techniques.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Toyota Boshoku Elmira intends to reduce the use of PM2.5 through product design, equipment modification, and training and improved operating practices.

Progress on TRA Plan - Use Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
110-82-7	Cyclohexane	8668 kg	No timeline target	

CAS RN	Substance Name	Quantity	Years	Description of Target
141-78-6	Ethyl acetate	No quantity target	No timeline target	
NA - 31	Heptane (all isomers)	302 kg	2	
64742-95-6	Light aromatic solvent naphtha	551 kg	2	
78-93-3	Methyl ethyl ketone	No quantity target	No timeline target	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No quantity target	No timeline target	

Progress on TRA Plan - Creation Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
110-82-7	Cyclohexane	No quantity target	No timeline target	
141-78-6	Ethyl acetate	No quantity target	No timeline target	
NA - 31	Heptane (all isomers)	No quantity target	No timeline target	
64742-95-6	Light aromatic solvent naphtha	No quantity target	No timeline target	
78-93-3	Methyl ethyl ketone	No quantity target	No timeline target	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	Reviews taking place on how to implement this change	TBCA is evaluating our flushing frequency requirements.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
110-82-7	Cyclohexane	Substituted materials	Trials on production equipment were completed; difficulties observed	Water-based adhesive trials are continuing; goal is to implement in FY2019	Research / trials are continuing; challenges include changing our process to accommodate the water-based adhesive; need higher heat	TBCA is following its plan and is on track to achieve its target
110-82-7	Cyclohexane	Other	Reviews taking place on how to implement this change	TBCA is looking into how to implement this change	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	Optimization of the robot's spray pattern were completed resulting in a 3% reduction in glue consumption	TBCA optimized the spray pattern resulting in a 3% reduction in glue consumption	The described steps match the actual steps	TBCA followed its plan and has completed this task
110-82-7	Cyclohexane	Other	Reviews taking place on how to implement this change	TBCA is reviewing the current spray patterns and developing ways to reduce this.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
110-82-7	Cyclohexane	Training related to toxics substance reduction	Reviews taking place on how to implement this change	TBCA is evaluating our spray pattern test requirements.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The equipment was reviewed and it was determined that with the appropriate changes, solvent could be introduced closer to the gun to reduce waste. We will be working with a fluid flow company to determine how to achieve this.	The equipment was reviewed and it was determined that with the appropriate changes, solvent could be introduced closer to the gun to reduce waste. We are working with our supplier to help us achieve this goal.	TBCA is following its plan and is on track to achieve its target	TBCA is making headway with this initiative, and we will achieve our target
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	The procedure was reviewed and there is a plan to change the procedure to ensure the collection pail is empty before shutdowns	The procedure was reviewed and there is a plan to change the procedure to ensure the collection pail is empty before shutdowns	The procedure was reviewed and there is a plan to change the procedure to ensure the collection pail is empty before shutdowns. We are on track to complete this item within the prescribed timeline.	The procedure was reviewed and there is a plan to change the procedure to ensure the collection pail is empty before shutdowns. We are on track to complete this item within the prescribed timeline.
141-78-6	Ethyl acetate	Instituted recirculation within a process	Reviews taking place on how to implement this change	TBCA is looking into how to implement this change. There is potential to change our process to allow on-site reuse.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer operations	The process was reviewed and the countermeasure implemented. This item is complete.	The process was reviewed and the countermeasure implemented. This item is complete.	The process was reviewed and the countermeasure implemented. This item is complete.	The process was reviewed and the countermeasure implemented. This item is complete.

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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	Incremental improvements have been made to improve robot overspray	Incremental improvements have been made to improve robot overspray	There have been some improvements in glue spraying capability that have resulted in reduced overspray. Work is ongoing.	There have been some improvements in glue spraying capability that have resulted in reduced overspray. Work is ongoing.
NA - 31	Heptane (all isomers)	Instituted improved purchasing procedures	Reviews taking place on how to implement this change	TBCA is evaluating our flushing frequency requirements.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
NA - 31	Heptane (all isomers)	Substituted materials	Purchasing review is taking place to find alternative	Purchasing is looking for an alternative product that meets our needs.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
NA - 31	Heptane (all isomers)	Other	Reviews taking place on how to implement this change	TBCA is looking into how to implement this change	match the actual steps Research / trials are	TBCA is following its plan and is on track to achieve its target
NA - 31	Heptane (all isomers)	Modified design or composition	Trials on production equipment were completed; difficulties observed	Water-based adhesive trials are continuing; goal is to implement in FY2019	continuing; challenges include changing our process to accommodate the water-based adhesive; need higher heat	TBCA is following its plan and is on track to achieve its target
NA - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	Optimization of the robot's spray pattern were completed resulting in a 3% reduction in glue consumption	TBCA optimized the spray pattern resulting in a 3% reduction in glue consumption	The described steps match the actual steps	TBCA followed its plan and has completed this task
NA - 31	Heptane (all isomers)	Other	None at this point	This activity will start later in 2018	This activity will start later in 2018	This activity will start later in 2018
NA - 31	Heptane (all isomers)	Training related to toxics substance reduction	Reviews taking place on how to implement this change	TBCA is evaluating our spray pattern test requirements.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
64742-95- 6	Light aromatic solvent naphtha	Other	Reviews taking place on how to implement this change	TBCA is evaluating our flushing frequency requirements.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
64742-95- 6	Light aromatic solvent naphtha	Substituted materials	Purchasing review is taking place to find alternative	Purchasing is looking for an alternative product that meets our needs.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
64742-95- 6	Light aromatic solvent naphtha	Modified design or composition	Purchasing review is taking place to find alternative	Purchasing is looking for an alternative product that meets our needs.	The described steps match the actual steps	TBCA is following its plan and is on track to achieve its target
64742-95- 6	Light aromatic solvent naphtha	Training related to toxics substance reduction	None at this point	This activity will start later in 2018	This activity will start later in 2018	This activity will start later in 2018
78-93-3	Methyl ethyl ketone	Other	A review of the operating procedure governing the empty pails of glue was undertaken.	A review of how we handle empty glue pails was undertaken and it was determined that this countermeasure is not necessary because common practice is to drain the near-empty container in to the next full one.	The actual steps match the plan.	A review of the operating procedure regarding empty glue pails was undertaken and it was determined that this countermeasure is not necessary because common practice is to drain the near-empty container in to the next full one. This ensures minimal waste and MEK emissions.
78-93-3	Methyl ethyl ketone	Other	A lid was added to the clean- out collection bucket to reduce the evaporation rate.	A lid was added to the clean-out collection bucket to reduce the evaporation rate of the cleaning chemical, thus ensure reduced emissions to air.	The actual steps match the plan.	A lid was added to the clean-out collection bucket to reduce the evaporation rate of the cleaning chemical, thus ensure reduced emissions to air.
78-93-3	Methyl ethyl ketone	Other	A review of the operating procedure governing the use of MEK was undertaken.	A review of the operating procedure governing the use of MEK was undertaken.	The actual steps match the plan.	A review of cleaning chemicals and bench marking was completed in 2015 and it was confirmed that the minimum amount of MEK was actually being used.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	A review of exhaust requirements has started .	A review of exhaust requirements was started, but process was discontinued.	A review of exhaust requirements was started, but process was discontinued.	Measure was started, but process was discontinued and the measure is therefore no longer applicable.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	After a review of all welded attachment points and subsequent improvements, TBCA was able to reduce the combined weld length by 15%	A drawing review and comparison to actual condition yielded a reduction in weld length	The actual steps matched the plan.	Through continuous improvement, TBCA was able to reduce combined weld length on our products by 15% thus reducing emissions to air by the same amount.

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	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 - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	Operating procedures were reviewed and it was determined that the system will be automated to include an automatic shut off.	Operating procedures were reviewed and it was determined that the system will be automated to include an automatic shut off.	Operating procedures were reviewed as per the plan, during which time it was determined that the system will be automated to include an automatic shut off so that the exhaust fan only runs when needed.	Operating procedures were reviewed and it was determined that the system will be automated to include an automatic shut off so that the exhaust fan only runs when needed.

Comparison of the

CAS RN	Substance Name	Activity	Will the timelines in the current version of the plan will be met	Comments:
110-82-7	Cyclohexane	Instituted improved purchasing procedures	Yes	
110-82-7	Cyclohexane	Substituted materials	Yes	
110-82-7	Cyclohexane	Other	Yes	
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	Yes	The plan's timeline has been met.
110-82-7	Cyclohexane	Other	Yes	
110-82-7	Cyclohexane	Training related to toxics substance reduction	Yes	
141-78-6	Ethyl acetate	Modified equipment, layout or piping	Yes	
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	Yes	
141-78-6	Ethyl acetate	Instituted recirculation within a process	Yes	
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer operations	Yes	
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	Yes	
NA - 31	Heptane (all isomers)	Instituted improved purchasing procedures	Yes	
NA - 31	Heptane (all isomers)	Substituted materials	Yes	
NA - 31	Heptane (all isomers)	Other	Yes	
NA - 31	Heptane (all isomers)	Modified design or composition	Yes	
NA - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	Yes	The plan's timeline has been met.
NA - 31	Heptane (all isomers)	Other	Yes	
NA - 31	Heptane (all isomers)	Training related to toxics substance reduction	Yes	
64742-95- 6	Light aromatic solvent naphtha	Other	Yes	
64742-95- 6	Light aromatic solvent naphtha	Substituted materials	Yes	
64742-95- 6	Light aromatic solvent naphtha	Modified design or composition	Yes	
64742-95- 6	Light aromatic solvent naphtha	Training related to toxics substance reduction	Yes	
78-93-3	Methyl ethyl ketone	Other	Yes	This project is complete.
78-93-3	Methyl ethyl ketone	Other	Yes	This project is complete.
78-93-3	Methyl ethyl ketone	Other	Yes	This project is complete.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	No	Measure was started, but process was discontinued and the measure is therefore no longer applicable.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	Yes	This project is complete.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	Yes	Our weld exhaust system is now fully automated; this project is complete.

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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified equipment, layout or piping	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount

Progress on TRA Plan - Reductions due to Options Implemented - Improved inventory management or purchasing techniques of the San Participation of the Continue of the Continue

CAS RN	Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
110-82-7	Cyclohexane	Instituted improved purchasing procedures	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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
141-78-6	Ethyl acetate	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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 - 31	Heptane (all isomers)	Instituted improved purchasing procedures	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
78-93-3	Methyl ethyl ketone	Other	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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 - Materials or feedstock substitution

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
NA - 31	Heptane (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
NA - 31	Heptane (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
NA - 31	Heptane (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
NA - 31	Heptane (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
NA - 31	Heptane (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
NA - 31	Heptane (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
NA - 31	Heptane (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
NA - 31	Heptane (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
NA - 31	Heptane (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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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

CAS RN				
64742-95-	Light aromatic	Substituted	The amount of reduction in the substance recycled off-site at the facility during the reporting period that	No Amount
6	solvent naphtha	materials	resulted due to the steps described:	110 7 III I Garie

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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
10-82-7	Cyclohexane	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
.10-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
10-82-7	Cyclohexane	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
10-82-7	Cyclohexane	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
10-82-7	Cyclohexane	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
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Instituted recirculation within a process	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	Other	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone Other The amount of reduction in release to land of the substance at the facility during period that resulted due to steps described:		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	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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
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Progress on TRA Plan - Reductions due to Options Implemented - Spill or leak prevention

CAS RN Substance Activity		Activity	Reductions due to Options Implemented	Quantity
141-78-6	Ethyl acetate		The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
141-78-6	Ethyl acetate	Improved procedures for loading, unloading and transfer 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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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
78-93-3	Methyl ethyl ketone	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 - Good operator practice or training

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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:	0.35 tonnes
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
110-82-7	Cyclohexane	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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
141-78-6	Ethyl acetate	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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:	0.08 tonnes
NA - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Improved maintenance scheduling, record keeping or procedures	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 - 31	Heptane (all isomers)	Other	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	Other	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
NA - 31	Heptane (all isomers)	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
64742-95- 6	Light aromatic	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic	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
64742-95- 6	Light aromatic	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
64742-95-	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic solvent naphtha	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
64742-95- 6	Light aromatic	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
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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:	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described:	No Amount
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount

Progress on TRA Plan - Additional Actions

CAS RN	Substance Name	Were there any additional actions outside the plan taken during the reporting period to reduce the use and/or creation of the substance?	Provide a public summary of the description of the additional action taken
110-82-7	Cyclohexane	No	
141-78-6	Ethyl acetate	No	
NA - 31	Heptane (all isomers)	No	
64742-95- 6	Light aromatic solvent naphtha	No	
78-93-3	Methyl ethyl ketone	No	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	

Progress on TRA Plan - Reductions due to additional actions taken

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
110-82-7	Cyclohexane	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
110-82-7	Cyclohexane	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
110-82-7	Cyclohexane	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
110-82-7	Cyclohexane	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.	
110-82-7	Cyclohexane	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.	
110-82-7	Cyclohexane	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
110-82-7	Cyclohexane	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.	
110-82-7	Cyclohexane	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.	
110-82-7	Cyclohexane	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
141-78-6	Ethyl acetate	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
141-78-6	Ethyl acetate	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
141-78-6	Ethyl 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.	
141-78-6	Ethyl 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.	
141-78-6	Ethyl 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.	
141-78-6	Ethyl 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.	
141-78-6	Ethyl 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.	
141-78-6	Ethyl 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.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
141-78-6	Ethyl 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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
NA - 31	Heptane (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.	
64742-95- 6	Light aromatic solvent naphtha	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
64742-95- 6	Light aromatic solvent	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
64742-95- 6	Light aromatic solvent	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
64742-95- 6	Light aromatic solvent	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.	
64742-95- 6	Light aromatic solvent	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.	
64742-95- 6	Light aromatic solvent	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
64742-95- 6	Light aromatic solvent	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.	
64742-95- 6	Light aromatic solvent	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.	
64742-95- 6	Light aromatic solvent	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.	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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 - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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 - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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 - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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 - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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 - M10	PM2.5 - Particulate Matter <= 2.5 Microns	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 - M10	PM2.5 - Particulate Matter	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	were made to the toxic substance reduction plan during the reporting period	any amendments that were made to the toxic substance reduction plan during the reporting period
110-82-7	Cyclohexane	No		
141-78-6	Ethyl acetate	No		
NA - 31	Heptane (all isomers)	No		
64742-95- 6	Light aromatic solvent naphtha	No		
78-93-3	Methyl ethyl ketone	No		
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No		

Empty

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