



**Imperial Oil
Products and Chemicals Division**
P.O. Box 3004
Sarnia ON N7T 7M5

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Sarnia Chemical Plant – Reduction Plan Summary (OR 455/09)

Provincial regulations set out requirements for business owners to inform Ontarians about the use and creation of reportable substances in their communities. Under the Toxics Reduction Act (TRA), companies are required to develop reduction plans for this group of reportable substances.

The Sarnia chemical plant produces a wide range of petrochemicals using refinery and external feedstocks. These products are then used to manufacture a number of widely used consumer products, such as plastics, in North America and around the world. Imperial Oil has comprehensive programs in place at all its facilities to reduce waste, to prevent spills and leaks, to reduce fugitive emissions, and to train personnel on the environmental responsibilities of their role.

The following summary of the reduction plans has been prepared in accordance with Section 8 of the TRA and the requirements of Section 24 of Ontario Regulation 455/09, as amended from time to time.

Plan Summary Preview

Company Details

Company Legal Name:

Imperial Oil

Company Address:

237 4th Avenue Southwest, Calgary (Alberta)

Report Details

Facility:

Sarnia Chemical Plant

Facility Address:

602 Christina Street South, Sarnia (Ontario)

Update Comments:

Activities

Select the Facility Contacts

Contacts

Public Contact:*

Jon Harding

Highest Ranking Employee:

Paul Sabatini

Person responsible for Toxic Substance Reduction Plan preparation:

Scott Armstrong

Organization Validation

Company and Parent Company Information

Company Details

Company Legal Name:*

Imperial Oil

Company Trade Name:*

Imperial Oil

Business Number:*

Mailing Address

Delivery Mode:

PO Box or Rural Route Number:

Address Line 1:

City:

Province/Territory:

Postal Code:

Physical Address

Address Line 1:

City:

Province/Territory:

Postal Code:

Additional Information:

Land Survey Description:

National Topographical Description:

Parent Companies

Facility Validation

Facility Information

Facility:*

NAICS Id.*

NPRI Id.*

ON Reg 127/01 Id:

Mailing Address

Delivery Mode:

PO Box or Rural Route Number:	<input type="text" value="3004"/>
Address Line 1:	<input type="text" value="602 Christina Street South"/>
City:	<input type="text" value="Sarnia"/>
Province/Territory:	<input type="text" value="Ontario"/>
Postal Code:	<input type="text" value="N7T7M5"/>

Physical Address

Address Line 1:	<input type="text" value="602 Christina Street South"/>
City:	<input type="text" value="Sarnia"/>
Province/Territory:	<input type="text" value="Ontario"/>
Postal Code:	<input type="text" value="N7T7M5"/>
UTM Zone:	<input type="text" value="17"/>
UTM Easting:	<input type="text" value="385773.59"/>
UTM Northing:	<input type="text" value="4756731.82"/>
Latitude:	<input type="text" value="42.95440"/>
Longitude:	<input type="text" value="-82.41530"/>
Additional Information:	<input type="text"/>
Land Survey Description:	<input type="text"/>
National Topographical Description:	<input type="text"/>

Contact Validation

Contacts

Public Contact:

First Name:*	<input type="text" value="Jon"/>
Last Name:*	<input type="text" value="Harding"/>
Position:*	<input type="text" value="Public Contact"/>

Telephone:* 5193394015

Ext:

Fax: 5193394491

Email:* jon.s.harding@esso.ca

Mailing Address

Delivery Mode: Post Office Box

PO Box or Rural Route Number: 3004

Address Line 1: 602 Christina Street South

City: Sarnia

Province/Territory: Ontario

Postal Code: N7T7M5

Highest Ranking Employee:

First Name:* Paul

Last Name:* Sabatini

Position:* Sarnia Chemcial Plant Manager

Telephone:* 5193392000

Ext:

Fax:

Email:* paul.a.sabatini@esso.ca

Mailing Address

Delivery Mode: Post Office Box

PO Box or Rural Route Number: 3004

Address Line 1: 602 Christina Street South

City: Sarnia

Province/Territory:

Postal Code:

Person responsible for the Toxic Substance Reduction Plan preparation:

First Name:*

Last Name:*

Position:*

Telephone:*

Ext:

Fax:

Email:*

Mailing Address

Delivery Mode:

PO Box or Rural Route Number:

Address Line 1:

City:

Province/Territory:

Postal Code:

Employees

Employees

Number of Full-time Employees:*

Substances

108-88-3, Toluene

108-88-3, Toluene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Toluene is currently used at the facility and enters the Chemical Plant in various feedstocks.
Sarnia Chemical Plant is in the business of producing toluene from feedstock to be used in other commercial and industrial applications.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Toluene is created at the facility in the conversion units through cracking processes.
Sarnia Chemical Plant is in the business of producing toluene from feedstock to be used in other commercial and industrial applications.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of toluene at this time.
Various projects at Sarnia Chemical Plant are expected to reduce the fugitive emissions of toluene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

Quantity

Unit

No quantity target or

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target or	<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

For sale/distribution

Summarize why the toxic substance is used at the facility:**

Sarnia Chemical Plant is in the business of producing toluene from feedstock to be used in other commercial and industrial applications.

Reasons for Creation

Why is the toxic substance created at the facility?:*

As a by-product

Summarize why the toxic substance is created at the facility:**

Toluene is created at the facility in the conversion units through cracking processes.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Sarnia Chemical Plant is in the business of producing toluene from feedstock to be used in other commercial and industrial applications. No reduction options were identified to reduce the use or creation of toluene at Imperial Oil's Sarnia Chemical Plant.

Various projects at Sarnia Chemical Plant are expected to reduce fugitive emissions of toluene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

1330-20-7, Xylene (all isomers)

1330-20-7, Xylene (all isomers)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Xylene (all isomers) is currently used at the facility and enters the Chemical Plant in various feedstocks.

Sarnia Chemical Plant is in the business of producing xylene (all isomers) from feedstock to be used in other commercial and industrial applications.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Xylene (all isomers) is created at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant is in the business of producing xylene (all isomers) from feedstock to be used in other commercial and industrial applications.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of xylene (all isomers) at this time.

Various projects at Sarnia Chemical Plant are expected to reduce the fugitive emissions of xylene (all isomers) in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Xylene (all isomers) is created at the facility in the conversion units through cracking and reaction processes.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Sarnia Chemical Plant is in the business of producing xylene (all isomers) from feedstock to be used in other commercial and industrial applications. No reduction options were identified to reduce the use or creation of xylene (all isomers) at Imperial Oil's Sarnia Chemical Plant.

Various projects at Sarnia Chemical Plant are expected to reduce fugitive emissions of xylene (all isomers) in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

50-00-0, Formaldehyde

50-00-0, Formaldehyde

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Formaldehyde was not detected in measurable concentrations in any of the chemical plant inputs or products.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Formaldehyde is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of formaldehyde at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	
		<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.
Explanation of the reasons why no option will be implemented:**

As formaldehyde was not detected in any of the chemical plant feedstock, nor is it created onsite, no options were identified that would be expected to reduce the use or creation of formaldehyde at the facility.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

67-56-1, Methanol

67-56-1, Methanol

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Methanol enters the facility as an antifreeze additive and is destroyed in hydrocarbon processing. Methanol is used by the facility as an antifreeze in the process as it is compatible with hydrocarbon processing and offers superior freeze protection over other antifreeze.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Methanol is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of methanol at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<input type="text"/>
			<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

71-43-2, Benzene

71-43-2, Benzene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Benzene is currently used at the facility and enters the Chemical Plant in various feedstocks.
 Sarnia Chemical Plant is in the business of producing benzene from feedstock to be used in other commercial and industrial applications.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Benzene is created at the facility in the conversion units through cracking processes.
 Sarnia Chemical Plant is in the business of producing benzene from feedstock to be used in other commercial and industrial applications.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of benzene at this time.
 Various projects at Sarnia Chemical Plant are expected to reduce the fugitive emissions of benzene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Sarnia Chemical Plant is in the business of producing benzene from feedstock to be used in other commercial and industrial applications. No reduction options were identified to reduce the use or creation of benzene at Imperial Oil's Sarnia Chemical Plant.

Various projects at Sarnia Chemical Plant are expected to reduce fugitive emissions of benzene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

194-59-2, 7H-Dibenzo(c,g)carbazole

194-59-2, 7H-Dibenzo(c,g)carbazole

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

7H-Dibenzo(c,g)carbazole is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of 7H-Dibenzo(c,g)carbazole at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?.*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in byproduct streams, 7H-Dibenzo(c,g)carbazole is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of 7H-Dibenzo(c,g)carbazole at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of 7H-Dibenzo(c,g)carbazole at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	
		<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

83-32-9, Acenaphthene

83-32-9, Acenaphthene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Acenaphthene is currently used at the facility and enters the Chemical Plant in unit feedstock.
 Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of acenaphthene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Acenaphthene is created at the facility in the conversion units through cracking processes.
 Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of acenaphthene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of acenaphthene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit

No quantity target or

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

208-96-8, Acenaphthylene

208-96-8, Acenaphthylene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Acenaphthylene is created at the facility in the conversion units through cracking processes.
Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of acenaphthylene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of acenaphthylene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 150px; height: 25px;"></div> <div style="border: 1px solid black; width: 150px; height: 25px;"></div> </div>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 100px; height: 25px; margin-right: 5px;"></div> years </div>
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 150px; height: 25px;"></div> <div style="border: 1px solid black; width: 150px; height: 25px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

120-12-7, Anthracene

120-12-7, Anthracene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Anthracene is created at the facility in the conversion units through cracking processes.
Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Anthracene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Anthracene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

As a by-product

Summarize why the toxic substance is used at the facility:**

Anthracene is currently used at the facility and enters the Chemical Plant in unit feedstock.

Reasons for Creation

Why is the toxic substance created at the facility?:*

As a by-product

Summarize why the toxic substance is created at the facility:**

Anthracene is created at the facility in the conversion units through cracking processes.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of anthracene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of anthracene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

1332-21-4, Asbestos (friable form only)

1332-21-4, Asbestos (friable form only)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Asbestos (friable form only) currently exists at the facility as a result of historical use. No new asbestos (friable form only) enters the chemical plant.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Asbestos (friable form only) is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

No new asbestos (friable form only) enters the chemical plant and asbestos (friable form only) is not created. As a result, no technically and economically feasible options to reduce use and/or creation of asbestos (friable form only) were identified at the Sarnia Chemical Plant.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 20px;"></div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 20px;"></div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

This substance is not used at the facility

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

This substance is not created at the facility

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Asbestos (friable form only) currently exists at the facility as a result of historical use. No new asbestos (friable form only) enters the chemical plant. In additions, asbestos (friable form only) is not created at the facility. As such, Imperial Oil has not identified any options to reduce the use or creation of asbestos (friable form only) at the Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

56-55-3, Benzo(a)anthracene

56-55-3, Benzo(a)anthracene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Benzo(a)anthracene is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)anthracene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Benzo(a)anthracene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)anthracene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)anthracene at this time

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Based on detection in product streams, Benzo(a)anthracene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of benzo(a)anthracene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of benzo(a)anthracene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

218-01-9, Benzo(a)phenanthrene

218-01-9, Benzo(a)phenanthrene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Benzo(a)phenanthrene is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)phenanthrene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Benzo(a)phenanthrene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)phenanthrene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)phenanthrene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of benzo(a)phenanthrene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of benzo(a)phenanthrene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

50-32-8, Benzo(a)pyrene

50-32-8, Benzo(a)pyrene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?.*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility.**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility.**

Benzo(a)pyrene is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)pyrene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?.*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility.**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility.**

Based on detection in product streams, Benzo(a)pyrene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)pyrene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(a)pyrene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

Quantity

Unit

No quantity target or

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
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No quantity target or

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of benzo(a)pyrene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of benzo(a)pyrene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

205-99-2, Benzo(b)fluoranthene

205-99-2, Benzo(b)fluoranthene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Benzo(b)fluoranthene is not used at the facility.
 Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(b)fluoranthene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Benzo(b)fluoranthene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.
 Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(b)fluoranthene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(b)fluoranthene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or	
	<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of benzo(b)fluoranthene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of benzo(b)fluoranthene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

192-97-2, Benzo(e)pyrene

192-97-2, Benzo(e)pyrene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Benzo(e)pyrene is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(e)pyrene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Benzo(e)pyrene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(e)pyrene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(e)pyrene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<input type="text"/>
			<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/> No timeline target	or <input type="text"/>	years
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Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of benzo(e)pyrene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of benzo(e)pyrene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

191-24-2, Benzo(g,h,i)perylene

191-24-2, Benzo(g,h,i)perylene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Benzo(g,h,i)perylene has not been detected in measurable concentrations in any of the chemical plant inputs or outputs and is not created.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Benzo(g,h,i)perylene has not been detected in measurable concentrations in any of the chemical plant inputs or outputs and is not created.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Benzo(g,h,i)perylene was not detected at measurable concentrations in any of the chemical plant inputs or outputs and is not created. As such, no technically and economically feasible options to reduce use and/or creation were identified.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<input style="width: 100px; height: 20px;" type="text"/> <input style="width: 100px; height: 20px;" type="text"/>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<input style="width: 100px; height: 20px;" type="text"/> years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit

No quantity target or

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

205-82-3, Benzo(j)fluoranthene

205-82-3, Benzo(j)fluoranthene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of

the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Benzo(j)fluoranthene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.
Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(j)fluoranthene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Benzo(j)fluoranthene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

92-52-4, Biphenyl

92-52-4, Biphenyl

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Biphenyl is currently used at the facility and enters the Chemical Plant in unit feedstock.
Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use of Biphenyl at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Biphenyl is not created at the facility. Biphenyl is destroyed at the facility in the conversion unit through cracking processes.
Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use of Biphenyl at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creations of biphenyl at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	
		<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<input type="text"/>	years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	
		<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<input type="text"/>	years
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Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

As a by-product

Summarize why the toxic substance is used at the facility:**

Biphenyl is currently used at the facility and enters the Chemical Plant in unit feedstock.

Reasons for Creation

Why is the toxic substance created at the facility?:*

This substance is not created at the facility

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use and/or creation of biphenyl at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of biphenyl currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

106-99-0, 1,3-Butadiene

106-99-0, 1,3-Butadiene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

1,3-Butadiene is currently used at the facility and enters the Chemical Plant in various feedstocks. Sarnia Chemical Plant is in the business of producing 1,3-Butadiene from feedstock to be used in other commercial and industrial applications.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

1,3-Butadiene is created at the facility in the conversion units through cracking processes. Sarnia Chemical Plant is in the business of producing 1,3-Butadiene from feedstock to be used in other commercial and industrial applications.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of 1,3-Butadiene at this time.

Various projects at Sarnia Chemical Plant are expected to reduce the fugitive emissions of 1,3-Butadiene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 20px;"></div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 20px;"></div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

For on-site use/processing

Summarize why the toxic substance is used at the facility:**

Sarnia Chemical Plant is in the business of producing 1,3-Butadiene from feedstock to be used in other commercial and industrial applications.

Reasons for Creation

Why is the toxic substance created at the facility?:*

As a by-product

Summarize why the toxic substance is created at the facility:**

1,3-Butadiene is created at the facility in the conversion units through cracking processes.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Sarnia Chemical Plant is in the business of producing 1,3-Butadiene from feedstock to be used in other commercial and industrial applications. No reduction options were identified to reduce the use or creation of 1,3-Butadiene at Imperial Oil's Sarnia Chemical Plant. As such, Imperial Oil does not intend to implement any options to reduce the use or creation of 1,3-Butadiene at the Sarnia Chemical Plant.

Various projects at Sarnia Chemical Plant are expected to reduce the fugitive emissions of 1,3-Butadiene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

NA - 03, Cadmium (and its compounds)

NA - 03, Cadmium (and its compounds)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Cadmium (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of cadmium (and its compounds) at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 20px;"></div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 20px;"></div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

This substance is not used at the facility

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

New Plan

189-55-9, Dibenzo(a,i)pyrene

189-55-9, Dibenzo(a,i)pyrene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Dibenzo(a,i)pyrene is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Dibenzo(a,i)pyrene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Dibenzo(a,i)pyrene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Dibenzo(a,i)pyrene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Dibenzo(a,i)pyrene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Based on detection in product streams, Dibenzo(a,i)pyrene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of dibenzo(a,i)pyrene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of dibenzo(a,i)pyrene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

224-42-0, Dibenzo(a,j)acridine

224-42-0, Dibenzo(a,j)acridine

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Dibenzo(a,j)acridine is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Dibenzo(a,j)acridine at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Dibenzo(a,j)acridine is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Dibenzo(a,j)acridine at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Dibenzo(a,j)acridine at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or <input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or <input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of dibenzo(a,j)acridine at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of dibenzo(a,j)acridine currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

100-41-4, Ethylbenzene

100-41-4, Ethylbenzene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Ethylbenzene is currently used at the facility and enters the Chemical Plant in various feedstocks.

Sarnia Chemical Plant is in the business of producing ethylbenzene from feedstock to be used in other commercial and industrial applications.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Ethylbenzene is created at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant is in the business of producing ethylbenzene from feedstock to be used in other commercial and industrial applications.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of ethylbenzene at this time.

Various projects at Sarnia Chemical Plant are expected to reduce the fugitive emissions of ethylbenzene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

While Imperial Oil does not intend to reduce the use or creation of ethylbenzene at Sarnia Chemical Plant, we are continuing to evaluate ethylbenzene reduction options.

Various projects at Sarnia Chemical Plant are expected to reduce the fugitive emissions of ethylbenzene in the coming years. These projects include but are not limited to tank upgrades and improvements to the fugitive emission monitoring program.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

206-44-0, Fluoranthene

206-44-0, Fluoranthene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Fluoranthene is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Fluoranthene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Fluoranthene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Fluoranthene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Fluoranthene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

Quantity

Unit

No quantity target or

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target or	<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

This substance is not used at the facility

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

As a by-product

Summarize why the toxic substance is created at the facility:**

Based on detection in product streams, Fluoranthene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of fluoranthene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of fluoranthene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

86-73-7, Fluorene

86-73-7, Fluorene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Fluorene is currently used at the facility and enters the Chemical Plant in feedstock.
Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Fluorene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Fluorene is created at the facility in the conversion units through cracking processes.
Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Fluorene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Fluorene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of fluorene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of fluorene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

193-39-5, Indeno(1,2,3-c,d)pyrene

193-39-5, Indeno(1,2,3-c,d)pyrene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Indeno(1,2,3-c,d)pyrene is not used at the facility.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Indeno(1,2,3-c,d)pyrene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, Indeno(1,2,3-c,d)pyrene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Indeno(1,2,3-c,d)pyrene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Indeno(1,2,3-c,d)pyrene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<input type="text"/>
			<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of indeno(1,2,3-c,d)pyrene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of indeno(1,2,3-c,d)pyrene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

NA - 08, Lead (and its compounds)

NA - 08, Lead (and its compounds)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Lead (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Lead (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of lead (and its compounds) at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		
		or	

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or		years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity		Unit

No quantity target or

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

This substance is not used at the facility

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

This substance is not created at the facility

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

As lead (and its compounds) was not detected in any of the chemical plant feedstock, nor is it created onsite, no options were identified that would be expected to reduce the use or creation of lead (and its compounds) at the facility.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

NA - 10, Mercury (and its compounds)

NA - 10, Mercury (and its compounds)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility.**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility.**

Mercury (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of mercury (and its compounds) at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<div style="border: 1px solid black; width: 100px; height: 20px;"></div>	years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<div style="border: 1px solid black; width: 100px; height: 20px;"></div>	years
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Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

91-20-3, Naphthalene

91-20-3, Naphthalene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Naphthalene is currently used at the facility and enters the Chemical Plant in various feedstocks. Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of naphthalene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Napthalene is created at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of napthalene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of napthalene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or		years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or		years
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Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

As a by-product

Summarize why the toxic substance is used at the facility:**

Napthalene is currently used at the facility and enters the Chemical Plant in various feedstocks.

Reasons for Creation

Why is the toxic substance created at the facility?:*

As a by-product

Summarize why the toxic substance is created at the facility:**

Napthalene is created at the GCIS through the cracking process.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use of naphthalene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of naphthalene currently used at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance

reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

NA - 11, Nickel (and its compounds)

NA - 11, Nickel (and its compounds)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Nickel (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Nickel (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of nickel (and its compounds) at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

Yes

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

As nickel (and its compounds) was not detected in any of the chemical plant feedstock, nor is it created onsite, no options were identified that would be expected to reduce the use or creation of nickel (and its compounds) at the facility.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

85-01-8, Phenanthrene

85-01-8, Phenanthrene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Phenanthrene is currently used at the facility and enters the Chemical Plant in unit feedstock.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Phenanthrene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Phenanthrene is created at the facility in the conversion units through cracking processes.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Phenanthrene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of Phenanthrene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or	

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically or economically feasible options were identified that would be expected to reduce the use or creation of phenanthrene at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the amount of phenanthrene currently used or created at Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

108-95-2, Phenol (and its salts)

108-95-2, Phenol (and its salts)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Phenol (and its salts) is currently used at the chemical plant in purchased additive. The additive selection is optimized for the facility's operating envelope and product market demand.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Phenol (and its salts) is also produced at the facility gas cracking unit (GCIS) as a byproduct of the complex chemical reactions. No feasible options to reduce the production of phenol (and its salts) were identified.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of phenol (and its salts) at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<input type="text"/>
			<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

No technically and economically feasible options were identified that would be expected to reduce the use and creation of phenol (and its salts) at the facility. Therefore, Imperial Oil does not intend to implement any options to reduce the use or creation of phenol (and its salts) at the Sarnia Chemical Plant.

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

TSRP0071

What version of the plan is this summary based on?:*

New Plan

129-00-0, Pyrene

129-00-0, Pyrene

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Pyrene is not used at the facility.
 Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of pyrene at this time.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Based on detection in product streams, pyrene is estimated to be created in small concentrations at the facility in the conversion units through cracking processes.
 Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of pyrene at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of pyrene at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 20px;"></div>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<div style="border: 1px solid black; width: 100%; height: 20px; display: inline-block;"></div> years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

NA - 12, Selenium (and its compounds)

NA - 12, Selenium (and its compounds)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Selenium (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of selenium (and its compounds) at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	
		<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<input type="text"/>	years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	
		<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*



No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

7664-93-9, Sulphuric acid

7664-93-9, Sulphuric acid

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce creation of sulphuric acid at this time.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant is targeting to reduce the use of sulphuric acid additive by approximately 1 tonne. These measures are expected to result in a reduction in the amount of sulphuric acid destroyed/transformed.

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce creation of sulphuric acid at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity	or	Unit
<input type="checkbox"/>	No quantity target		1 <input style="width: 150px;" type="text"/>
			<input style="width: 150px;" type="text" value="tonnes"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Full field implementation by Q3 2013

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity	or	Unit
<input checked="" type="checkbox"/>	No quantity target		<input style="width: 150px;" type="text"/>
			<input style="width: 150px;" type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

As a physical or chemical processing aid

Summarize why the toxic substance is used at the facility:**

Sulphuric Acid is currently used at the facility and enters the chemical plant as an additive. Sulphuric Acid is added to the facility's clean water impounding basin to lower the pH during the summer months.

Reasons for Creation

Why is the toxic substance created at the facility?:*

As a by-product

Summarize why the toxic substance is created at the facility:**

Sulphuric Acid is created in small quantity during the combustion of fuel gas in fired heaters.

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

No

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Other

Which activities will be undertaken to implement these reduction options?

Which activities will be undertaken to implement these reduction options?:*

Other

Describe the option:*

Implement an alternate technology for clean water impounding basin pH control.

Estimates

Estimate of the amount by which the use of the toxic substance at the facility will be reduced as a result of implementing the option:

N/A tonnes %

Estimate of the amount by which the creation of the toxic substance at the facility will be reduced as a result of implementing the option:

N/A tonnes %

Estimate of the amount by which the toxic substance contained in the product leaving the facility will be reduced as a result of implementing the option:

N/A tonnes %

Estimate of the amount by which the total releases to air of the toxic substance at the facility will be reduced as a result of implementing the option:

N/A tonnes %

Estimate of the amount by which the total releases to water of the toxic substance at the facility will be reduced as a result of implementing the option:

N/A tonnes %

Estimate of the amount by which the total releases to land of the toxic substance at the facility will be reduced as a result of implementing the option:

N/A tonnes %

Estimate of the amount by which the disposals on-site (including tailing and waste rock) of the toxic substance at the facility will be reduced as a result on implementing this option:

N/A tonnes %

Estimate of the amount by which the disposals off-site of the toxic substance at the facility will be reduced as a result on implementing this option:

N/A tonnes %

Estimate of the amount by which total recycling off-site of the toxic substance at the facility will be reduced as a result on implementing this option:

N/A tonnes %

Timelines

Anticipated timelines for achieving the estimated reduction of the use of the toxic substance:

N/A years

Anticipated timelines for achieving the estimated reduction of the creation of the toxic substance:

N/A years

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

7440-62-2, Vanadium (and its compounds)

7440-62-2, Vanadium (and its compounds)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Vanadium (and its compounds) has not been detected in measurable concentrations in any of the chemical plant inputs or outputs and is not created.

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Vanadium (and its compounds) has not been detected in measurable concentrations in any of the chemical plant inputs or outputs and is not created.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Vanadium (and its compounds) was not detected at measurable concentrations in any of the chemical plant inputs or outputs and is not created. As such, no technically and economically feasible options to reduce use and/or creation were identified.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<input type="text"/>
			<input type="text"/>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/>	No timeline target	or	<input type="text"/>	years
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Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

Quantity

Unit



No quantity target

or

What is the targeted timeframe for this reduction?*



No timeline target

or

years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

NA - 14, Zinc (and its compounds)

NA - 14, Zinc (and its compounds)

Substances Section Data

Statement of Intent

Use

Is there a statement that the owner or operator of the facility intends to reduce the use of the toxic substance at the facility?:*

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the use of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the use of the toxic substance at the facility:**

Creation

Is there a statement that the owner or operator of the facility intends to reduce the creation of the toxic substance at the facility?:*

No

If 'yes', exact statement of the intent that is included in the facility's TRA Plan to reduce the creation of the toxic substance at the facility:**

If 'no', reason in the facility's TRA Plan for no intent to reduce the creation of the toxic substance at the facility:**

Zinc (and its compounds) was not detected in measurable concentrations in any of the chemical plant inputs or products and is not created at the facility.

Objectives, Targets and Description

Objectives

Objectives in plan:*

Sarnia Chemical Plant has not identified any technically and economically feasible options to reduce use and/or creation of zinc (and its compounds) at this time.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

		Quantity	Unit
<input checked="" type="checkbox"/>	No quantity target	or	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Reasons for Use

Why is the toxic substance used at the facility?:*

Summarize why the toxic substance is used at the facility:**

Reasons for Creation

Why is the toxic substance created at the facility?:*

Summarize why the toxic substance is created at the facility:**

Toxic Reduction Options for Implementation

Description of the toxic reduction option(s) to be implemented:

Is there a statement that no option will be implemented?:*

If you answered "No" to this question, please add the option(s) under the appropriate Toxic Substance Reduction Categories (e.g. Materials or feedstock substitution, Product design or reformulation, etc.). If you answered "Yes" please provide an explanation below why your facility is not implementing an option.

Explanation of the reasons why no option will be implemented:**

Materials or feedstock substitution

Product design or reformulation

Equipment or process modifications

Spill or leak prevention

On-site reuse, recycling or recovery

Improved inventory management or purchasing techniques

Good operator practice or training

Rationale for why the listed options were chosen for implementation:

General description of any actions undertaken by the owner and operator of the facility to reduce the use and creation of the toxic substance at the facility that are outside of the plan:

License Number of the toxic substance reduction planner who made recommendations in the toxic substance reduction plan for this substance (format TSRPXXXX):*

License Number of the toxic substance reduction planner who has certified the toxic substance reduction plan for this substance (format TSRPXXXX):*

What version of the plan is this summary based on?:*

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 106-99-0, 1,3-Butadiene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18/12
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 106-99-0, 1,3-Butadiene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRPO071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 194-59-2, 7H-Dibenzo(c,g)carbazole

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 194-59-2, 7H-Dibenzo(c,g)carbazole

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRPO071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 71-43-2 Acenaphthene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18/2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 71-43-2 Acenaphthene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 208-96-8, Acenaphthylene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18/2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 208-96-8, Acenaphthylene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 120-12-7, Anthracene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18/2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 120-12-7, Anthracene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 1332-21-4, Asbestos (friable form only)

Paul Sabatini Date Dec 18/2012
Paul Sabatini
Sarnia Chemical Plant Manager

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 1332-21-4, Asbestos (friable form only)

Scott Manser TSR0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 71-43-2 Benzene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 71-43-2 Benzene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 56-55-3, Benzo(a)anthracene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 56-55-3, Benzo(a)anthracene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

15RP0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 218-01-9, Benzo(a)phenanthrene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec. 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 218-01-9, Benzo(a)phenanthrene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSR0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

• 192-97-2, Benzo(a)pyrene
Paul Sabatini Dec 18/12
Paul Sabatini Date
Sarnia Chemical Plant Manager

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

192-97-2, Benzo(a)pyrene
Scott Manser TSRP 0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 205-99-2 / 205-82-3, Benzo(b,j)fluoranthene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 205-99-2 / 205-82-3, Benzo(b,j)fluoranthene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 192-97-2, Benzo(e)pyrene

Paul Sabatini

Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012

Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 192-97-2, Benzo(e)pyrene

Scott Manser

Scott Manser
Toxic Substance Reduction Planner

TSRP 0071

License Number

12/11/2012

Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 191-24-2 Benzo(g,h,i)perylene

Paul Sabatini Dec 18, 2012
Date
Paul Sabatini
Sarnia Chemical Plant Manager

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 191-24-2 Benzo(g,h,i)perylene

Scott Manser TSRP0071 12/11/2012
Date License Number Date
Scott Manser
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- CAS # 92-52-4, Biphenyl

Paul Sabatini Date Dec 18, 2012
Paul Sabatini
Sarnia Chemical Plant Manager

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- CAS # 92-52-4, Biphenyl

Scott Manser TSRP0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- NA - 03 Cadmium (and its compounds)

Paul Sabatini Dec 18, 2012
Paul Sabatini Date
Chemical Plant Manager, Sarnia Chemical Plant

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia chemical plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- NA - 03 Cadmium (and its compounds)

Scott Manser TSRP0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 189-55-9, Dibenzo(a,i)pyrene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 189-55-9, Dibenzo(a,i)pyrene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 224-42-0, Dibenzo(a,j)acridine

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 224-42-0, Dibenzo(a,j)acridine

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 100-41-4, Ethylbenzene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 100-41-4, Ethylbenzene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

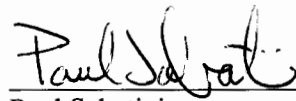
12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 206-44-0, Fluoranthene



Paul Sabatini
Sarnia Chemical Plant Manager

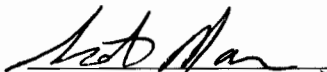
Dec 18, 2012

Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 206-44-0, Fluoranthene



Scott Manser
Toxic Substance Reduction Planner

TSRP0071

License Number

12/11/2012

Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- CAS # 86-73-7, Fluorene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- CAS # 86-73-7, Fluorene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 50-00-0 Formaldehyde

Paul Sabatini
Paul Sabatini
Chemical Plant Manager, Sarnia Chemical Plant

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia chemical plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 50-00-0 Formaldehyde

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 193-39-5, Indeno(1,2,3-c,d)pyrene

Paul Sabatini

Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012

Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 193-39-5, Indeno(1,2,3-c,d)pyrene

Scott Manser

Scott Manser
Toxic Substance Reduction Planner

TSRPO071

License Number

12/11/2012

Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date

reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- NA - 08 Lead (and its compounds)

Paul Sabatini

Paul Sabatini
Chemical Plant Manager, Sarnia Chemical Plant

Dec 18/12
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name

at Imperial Oil's Sarnia chemical plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- NA - 08 Lead (and its compounds)

Scott Manser

Scott Manser
Toxic Substance Reduction Planner

TSR0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- NA - 10, Mercury (and its compounds)

Paul Sabatini Dec 18/12
Paul Sabatini Date
Chemical Plant Manager, Sarnia Chemical Plant

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia chemical plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- NA - 10, Mercury (and its compounds)

Scott Manser TSRP 0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 67-56-1 Methanol

Paul Sabatini Date Dec 18/12
Paul Sabatini
Sarnia Chemical Plant Manager

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 67-56-1 Methanol

Scott Manser TSRP 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

• CAS # 91-20-3, Naphthalene
Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

• CAS # 91-20-3, Naphthalene
Scott Manser TSRP 0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- NA – 11, Nickel (and its compounds)

Paul Sabatini Dec 18, 2012
Paul Sabatini Date
Chemical Plant Manager, Sarnia Chemical Plant

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia chemical plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- NA – 11, Nickel (and its compounds)

Scott Manser TSRP0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- CAS # 85-01-8, Phenanthrene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- CAS # 85-01-8, Phenanthrene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date

reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 108-95-2, Phenol (and its salts)

Paul Sabatini

Paul Sabatini

Date

Dec 18, 2012

Chemical Plant Manager, Sarnia Chemical Plant

Toxic Substance Reduction Planner

As of 12/11/2012, I, SCOTT MANSER certify that I am familiar with the processes
Date Planner Name

at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 108-95-2, Phenol (and its salts)

Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 129-00-0, Pyrene

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

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at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 129-00-0, Pyrene

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- NA – 12, Selenium (and its compounds)

Paul Sabatini

Paul Sabatini
Chemical Plant Manager, Sarnia Chemical Plant

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia chemical plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- NA – 12, Selenium (and its compounds)

Scott Manser

Scott Manser
Toxic Substance Reduction Planner

ISRPO071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- **CAS # 7664-93-9, Sulphuric Acid**

Paul Sabatini Dec 18, 2012
Paul Sabatini Date
Chemical Plant Manager, Sarnia Chemical Plant

Toxic Substance Reduction Planner

As of 12/11/2012, I, SCOTT MANSER certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- **CAS # 7664-93-9, Sulphuric Acid**

Scott Manser TSRP0071 12/11/2012
Toxic Substance Reduction Planner License Number Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 108-88-3, Toluene

Paul Sabatini

Paul Sabatini
Sarnia Chemical Plant Manager

Dec. 18/12
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 108-88-3, Toluene

Scott Manser

Scott Manser
Toxic Substance Reduction Planner

TSRP0071
License Number

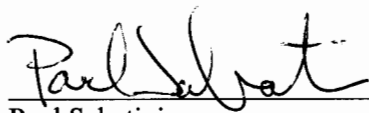
12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my
knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario
Regulation 455/09 (General) made under that Act.

- 7440-62-2 Vanadium (and its compounds)



Paul Sabatini
Sarnia Chemical Plant Manager

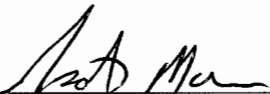
Date

Dec 18, 2012

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I
agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics
Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan
complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 7440-62-2 Vanadium (and its compounds)



Scott Manser
Toxic Substance Reduction Planner

TSRP0071

License Number

12/11/2012

Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date

reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- 1330-20-7, Xylene (all isomers)

Paul Sabatini
Paul Sabatini
Sarnia Chemical Plant Manager

Dec 18, 2012
Date

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia Chemical Plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- 1330-20-7, Xylene (all isomers)

Scott Manser
Scott Manser
Toxic Substance Reduction Planner

TSRP 0071
License Number

12/11/2012
Date

9. TOXIC REDUCTION PLAN CERTIFICATION

Highest Ranking Employee

As of 12/18/2012, I, Paul Sabatini, certify that I have read the toxic substance
Date
reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- NA - 14 Zinc (and its compounds)

Paul Sabatini Dec 18, 2012
Paul Sabatini Date
Chemical Plant Manager, Sarnia Chemical Plant

Toxic Substance Reduction Planner

As of 12/11/2012, I, Scott Manser certify that I am familiar with the processes
Date Planner Name
at Imperial Oil's Sarnia chemical plant that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated 12/11/2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- NA - 14 Zinc (and its compounds)

Scott Manser TSR0071 12/11/2012
Scott Manser License Number Date
Toxic Substance Reduction Planner