

INGOT METAL COMPANY LIMITED

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TOXICS REDUCTION ACT TOXIC SUBSTANCE REDUCTION PLAN SUMMARIES 2012

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DECEMBER 20, 2012

LONDON

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1. PLAN SUMMARY – COPPER (AND ITS COMPOUNDS)

Name and CASRN of Substance	Copper (and its compounds)	Not Applicable
Substances for which other plans have been prepared	Hexachlorobenzene	118-74-1
	PCCD/F	Not Applicable
	2,3,7,8 -TCCD	1746-01-6
	1,2,3,7,8 - PeCDD	40321-76-4
	1,2,3,4,7,8 - HxCDD	39227-28-6
	1,2,3,6,7,8 - HxCDD	57653-85-7
	1,2,3,7,8,9 - HxCDD	19408-74-3
	1,2,3,4,6,7,8 - HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8 - TCDF	51207-31-9
	2,3,4,7,8 - PeCDF	57117-31-4
	1,2,3,7,8 - PeCDF	57117-41-6
	1,2,3,4,7,8 - HxCDF	70648-26-9
	1,2,3,7,8,9 - HxCDF	72918-21-9
	1,2,3,6,7,8 - HxCDF	57117-44-9
	2,3,4,6,7,8 - HxCDF	60851-34-5
	1,2,3,4,6,7,8 - HpCDF	67562-39-4
	1,2,3,4,7,8,9 - HpCDF	55673-89-7
	OCDF	39001-02-0
	Manganese (and its compounds)	Not Applicable
Nickel (and its compounds)	Not Applicable	
Zinc (and its compounds)	Not Applicable	

1.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

1.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company Limited has been a manufacturer of brass and bronze ingots for over sixty years. Our aim is to provide foundries with the highest quality ingot available, at competitive prices. Copper and its compounds are currently purchased and used at the plant in the processing of copper base alloys. As this is an integral component of these alloys we are unable to reduce the use of Copper but will ensure sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

1.3 Reduction Objectives

Ingot Metal Company Limited is unable to reduce the use of Copper (and its compounds) as it is an integral component of the alloys produced by the facility. However, we will ensure the sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

1.4 Description of Substance

Copper (and its compounds) are found in raw materials as well as scrap metal purchased by the facility. Ingot metal company produces brasses, bronzes, and other alloys in which Copper (and its compounds) is a major component.

1.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of Copper (and its compounds).

1.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for Copper (and its compounds), prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

1.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

2. PLAN SUMMARY – MANGANESE (AND ITS COMPOUNDS)

Name and CASRN of Substance	Manganese (and its compounds)	Not Applicable
Substances for which other plans have been prepared	Hexachlorobenzene	118-74-1
	PCCD/F	Not Applicable
	2,3,7,8 -TCCD	1746-01-6
	1,2,3,7,8 - PeCDD	40321-76-4
	1,2,3,4,7,8 - HxCDD	39227-28-6
	1,2,3,6,7,8 - HxCDD	57653-85-7
	1,2,3,7,8,9 - HxCDD	19408-74-3
	1,2,3,4,6,7,8 - HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8 - TCDF	51207-31-9
	2,3,4,7,8 - PeCDF	57117-31-4
	1,2,3,7,8 - PeCDF	57117-41-6
	1,2,3,4,7,8 - HxCDF	70648-26-9
	1,2,3,7,8,9 - HxCDF	72918-21-9
	1,2,3,6,7,8 - HxCDF	57117-44-9
	2,3,4,6,7,8 - HxCDF	60851-34-5
	1,2,3,4,6,7,8 - HpCDF	67562-39-4
	1,2,3,4,7,8,9 - HpCDF	55673-89-7
	OCDF	39001-02-0
	Copper (and its compounds)	Not Applicable
Nickel (and its compounds)	Not Applicable	
Zinc (and its compounds)	Not Applicable	

2.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

2.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company Limited has been a manufacturer of brass and bronze ingots for over sixty years. Our aim is to provide foundries with the highest quality ingot available, at competitive prices. Manganese (and its compounds) are currently purchased and used at the plant in the processing of copper based alloys. As this is an integral component of these alloys we are unable to reduce the use of Manganese but will ensure sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

2.3 Reduction Objectives

Ingot Metal Company Limited is unable to reduce the use of Manganese (and its compounds) as it is an integral component of some of the alloys produced by the facility. However, we will ensure the sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

2.4 Description of Substance

Manganese (and its compounds) are found in raw materials as well as scrap metal purchased by the facility. Ingot metal company also produces alloys such as Manganese Bronzes in which the substance is a major component.

2.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of Manganese (and its compounds).

2.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for Manganese (and its compounds), prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

2.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

3. PLAN SUMMARY – NICKEL (AND ITS COMPOUNDS)

Name and CASRN of Substance	Nickel (and its compounds)	Not Applicable
Substances for which other plans have been prepared	Hexachlorobenzene	118-74-1
	PCCD/F	Not Applicable
	2,3,7,8 -TCCD	1746-01-6
	1,2,3,7,8 - PeCDD	40321-76-4
	1,2,3,4,7,8 - HxCDD	39227-28-6
	1,2,3,6,7,8 - HxCDD	57653-85-7
	1,2,3,7,8,9 - HxCDD	19408-74-3
	1,2,3,4,6,7,8 - HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8 - TCDF	51207-31-9
	2,3,4,7,8 - PeCDF	57117-31-4
	1,2,3,7,8 - PeCDF	57117-41-6
	1,2,3,4,7,8 - HxCDF	70648-26-9
	1,2,3,7,8,9 - HxCDF	72918-21-9
	1,2,3,6,7,8 - HxCDF	57117-44-9
	2,3,4,6,7,8 - HxCDF	60851-34-5
	1,2,3,4,6,7,8 - HpCDF	67562-39-4
	1,2,3,4,7,8,9 - HpCDF	55673-89-7
	OCDF	39001-02-0
	Copper (and its compounds)	Not Applicable
Manganese (and its compounds)	Not Applicable	
Zinc (and its compounds)	Not Applicable	

3.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

3.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company Limited has been a manufacturer of brass and bronze ingots for over sixty years. Our aim is to provide foundries with the highest quality ingot available, at competitive prices. Nickel (and its compounds) are currently purchased and used at the plant in the processing of copper based alloys. As this is an integral component of these alloys we are unable to reduce the use of Nickel but will ensure sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

3.3 Reduction Objectives

Ingot Metal Company Limited is unable to reduce the use of Nickel (and its compounds) as it is an integral component of some of the alloys produced by the facility. However, we will ensure the sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

3.4 Description of Substance

Nickel (and its compounds) are found in raw materials as well as scrap metal purchased by the facility. Ingot metal company also produces alloys such as Nickel Silvers in which the substance is a major component.

3.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of Nickel (and its compounds).

3.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for Nickel (and its compounds), prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

3.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

4. PLAN SUMMARY – ZINC (AND ITS COMPOUNDS)

Name and CASRN of Substance	Manganese (and its compounds)	Not Applicable
Substances for which other plans have been prepared	Hexachlorobenzene	118-74-1
	PCCD/F	Not Applicable
	2,3,7,8 -TCCD	1746-01-6
	1,2,3,7,8 - PeCDD	40321-76-4
	1,2,3,4,7,8 - HxCDD	39227-28-6
	1,2,3,6,7,8 - HxCDD	57653-85-7
	1,2,3,7,8,9 - HxCDD	19408-74-3
	1,2,3,4,6,7,8 - HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8 - TCDF	51207-31-9
	2,3,4,7,8 - PeCDF	57117-31-4
	1,2,3,7,8 - PeCDF	57117-41-6
	1,2,3,4,7,8 - HxCDF	70648-26-9
	1,2,3,7,8,9 - HxCDF	72918-21-9
	1,2,3,6,7,8 - HxCDF	57117-44-9
	2,3,4,6,7,8 - HxCDF	60851-34-5
	1,2,3,4,6,7,8 - HpCDF	67562-39-4
	1,2,3,4,7,8,9 - HpCDF	55673-89-7
	OCDF	39001-02-0
	Copper (and its compounds)	Not Applicable
Nickel (and its compounds)	Not Applicable	
Manganese (and its compounds)	Not Applicable	

4.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

4.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company Limited has been a manufacturer of brass and bronze ingots for over sixty years. Our aim is to provide foundries with the highest quality ingot available, at competitive prices. Zinc (and its compounds) are currently purchased and used at the plant in the processing of copper based alloys. As this is an integral component of these alloys we are unable to reduce the use of Zinc but will ensure sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

4.3 Reduction Objectives

Ingot Metal Company Limited is unable to reduce the use of Zinc (and its compounds) as it is an integral component of some of the alloys produced by the facility. However, we will ensure the sound management and use of this substance that minimizes significant adverse impacts on human health and the environment.

4.4 Description of Substance

Zinc (and its compounds) is found in the raw materials and scrap metal purchased by the facility. Ingot metal company also produces alloys such as brasses and bronzes in which the substance is a major component.

4.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of Zinc (and its compounds).

4.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for Zinc (and its compounds), prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

4.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

5. PLAN SUMMARY – HEXACHLOROBENZENE

Name and CASRN of Substance	Hexachlorobenzene	118-74-1
Substances for which other plans have been prepared	PCCD/F	Not Applicable
	2,3,7,8 -TCCD	1746-01-6
	1,2,3,7,8 - PeCDD	40321-76-4
	1,2,3,4,7,8 - HxCDD	39227-28-6
	1,2,3,6,7,8 - HxCDD	57653-85-7
	1,2,3,7,8,9 - HxCDD	19408-74-3
	1,2,3,4,6,7,8 - HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8 - TCDF	51207-31-9
	2,3,4,7,8 - PeCDF	57117-31-4
	1,2,3,7,8 - PeCDF	57117-41-6
	1,2,3,4,7,8 - HxCDF	70648-26-9
	1,2,3,7,8,9 - HxCDF	72918-21-9
	1,2,3,6,7,8 - HxCDF	57117-44-9
	2,3,4,6,7,8 - HxCDF	60851-34-5
	1,2,3,4,6,7,8 - HpCDF	67562-39-4
	1,2,3,4,7,8,9 - HpCDF	55673-89-7
	OCDF	39001-02-0
	Nickel (and its compounds)	Not Applicable
	Copper (and its compounds)	Not Applicable
Manganese (and its compounds)	Not Applicable	
Zinc (and its compounds)	Not Applicable	

5.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

5.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of Hexachlorobenzene in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

5.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce Hexachlorobenzene to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

5.4 Description of Substance

Hexachlorobenzene is believed to be created when melting scrap metal due to the presence of chlorinated substances contaminating the scrap. There is insufficient documentation in the published literature to indicate that this is always the case. Furthermore, the Ingot Metal Company facility does not routinely accept or process scrap contaminated by plastics or other chlorinated compounds.

5.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the creation and release of Hexachlorobenzene.

5.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for Hexachlorobenzene, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

5.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

6. PLAN SUMMARY – Polychlorinated Dibenzo-P-Dioxins & Polychlorinated Dibenzofurans (PCDD/F)

Name and CASRN of Substance	PCDD & PCDF	Not Applicable
Substances for which other plans have been prepared	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
Nickel (and its compounds)	Not Applicable	
Zinc (and its compounds)	Not Applicable	

6.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

6.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of PCDD/F in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

6.3 Reduction Objectives

Ingot Metal Company Limited's goal is to reduce the creation and release of PCDD/F where technically and economically feasible. Based on currently available information and technologies, there are no technically and economically feasible reduction options currently available for this substance. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

6.4 Description of Substance

PCDD/Fs are formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

6.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of PCDD/F.

6.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for PCDD/F, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

6.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

7. PLAN SUMMARY – 2,3,7,8 -TCDD

Name and CASRN of Substance	2,3,7,8-TCDD	1746-01-6
Substances for which other plans have been prepared	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
Zinc (and its compounds)	Not Applicable	
PCDD & PCDF (g TEQ)	Not Applicable	

7.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

7.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 2,3,7,8 -TCDD in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

7.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce 2,3,7,8 -TCCD to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

7.4 Description of Substance

2,3,7,8 -TCCD is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

7.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 2,3,7,8 -TCCD.

7.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 2,3,7,8 -TCCD, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

7.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

8. PLAN SUMMARY – 1,2,3,7,8 - PeCDD

Name and CASRN of Substance	1,2,3,7,8-PeCD	40321-76-4
Substances for which other plans have been prepared	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
PCDD & PCDF (g TEQ)	Not Applicable	
2,3,7,8-TCDD	1746-01-6	

8.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

8.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,7,8 - PeCDD in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

8.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce 1,2,3,7,8 - PeCDD to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

8.4 Description of Substance

1,2,3,7,8 - PeCDD is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

8.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,7,8 - PeCDD.

8.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,7,8 - PeCDD, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

8.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

9. PLAN SUMMARY – 1,2,3,4,7,8 - HxCDD

Name and CASRN of Substance	1,2,3,4,7,8-HxCDD	39227-28-6
Substances for which other plans have been prepared	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
2,3,7,8-TCDD	1746-01-6	
1,2,3,7,8-PeCD	40321-76-4	

9.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

9.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,4,7,8 - HxCDD in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

9.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce 1,2,3,4,7,8 - HxCDD to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

9.4 Description of Substance

1,2,3,4,7,8 - HxCDD is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

9.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,4,7,8 - HxCDD.

9.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,4,7,8 - HxCDD, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

9.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

10. PLAN SUMMARY – 1,2,3,6,7,8 - HxCDD

Name and CASRN of Substance	1,2,3,6,7,8-HxCDD	57653-85-7
Substances for which other plans have been prepared	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
1,2,3,7,8-PeCD	40321-76-4	
1,2,3,4,7,8-HxCDD	39227-28-6	

10.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

10.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,6,7,8 - HxCDD in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

10.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

1,2,3,6,7,8 - HxCDD to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

10.4 Description of Substance

1,2,3,6,7,8 - HxCDD is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

10.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,6,7,8 - HxCDD.

10.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,6,7,8 - HxCDD, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

10.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

11. PLAN SUMMARY – 1,2,3,7,8,9 - HxCDD

Name and CASRN of Substance	1,2,3,7,8,9-HxCDD	19408-74-3
Substances for which other plans have been prepared	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
1,2,3,4,7,8-HxCDD	39227-28-6	
1,2,3,6,7,8-HxCDD	57653-85-7	

11.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

11.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,7,8,9 - HxCDD in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

11.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

1,2,3,7,8,9 - HxCDD to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

11.4 Description of Substance

1,2,3,7,8,9 - HxCDD is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

11.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,7,8,9 - HxCDD.

11.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,7,8,9 - HxCDD, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

11.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

12. PLAN SUMMARY – 1,2,3,4,6,7,8 - HpCDD

Name and CASRN of Substance	1,2,3,4,6,7,8-HpCDD	35822-46-9
Substances for which other plans have been prepared	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
1,2,3,6,7,8-HxCDD	57653-85-7	
1,2,3,7,8,9-HxCDD	19408-74-3	

12.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

12.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,4,6,7,8 - HpCDD in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

12.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce 1,2,3,4,6,7,8 - HpCDD to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

12.4 Description of Substance

1,2,3,4,6,7,8 - HpCDD is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

12.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,4,6,7,8 - HpCDD.

12.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,4,6,7,8 - HpCDD, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

12.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

13. PLAN SUMMARY – OCDD

Name and CASRN of Substance	OCDD	3268-87-9
Substances for which other plans have been prepared	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
1,2,3,7,8,9-HxCDD	19408-74-3	
1,2,3,4,6,7,8-HpCDD	35822-46-9	

13.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

13.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of OCDD in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

13.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce OCDD

to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

13.4 Description of Substance

OCDD is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

13.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of OCDD.

13.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for OCDD, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

13.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

14. PLAN SUMMARY – 2,3,7,8 - TCDF

Name and CASRN of Substance	2,3,7,8-TCDF	51207-31-9
Substances for which other plans have been prepared	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCDD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9

14.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

14.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 2,3,7,8 - TCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

14.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

2,3,7,8 - TCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

14.4 Description of Substance

2,3,7,8 - TCDF is a polychlorinated dibenzofuran (PCDF). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

14.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 2,3,7,8 - TCDF.

14.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 2,3,7,8 - TCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

14.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

15. PLAN SUMMARY – 2,3,4,7,8 - PeCDF

Name and CASRN of Substance	2,3,4,7,8-PeCDF	57117-31-4
Substances for which other plans have been prepared	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
OCDD	3268-87-9	
2,3,7,8-TCDF	51207-31-9	

15.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

15.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 2,3,4,7,8 - PeCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

15.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

2,3,4,7,8 - PeCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

15.4 Description of Substance

2,3,4,7,8 - PeCDF is a polychlorinated dibenzofuran (PCDF). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

15.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 2,3,4,7,8 - PeCDF.

15.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 2,3,4,7,8 - PeCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

15.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

16. PLAN SUMMARY – 1,2,3,7,8 - PeCDF

Name and CASRN of Substance	1,2,3,7,8-PeCDF	57117-41-6
Substances for which other plans have been prepared	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
2,3,4,7,8-PeCDF	57117-31-4	

16.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

16.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,7,8 - PeCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

16.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

1,2,3,7,8 - PeCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

16.4 Description of Substance

1,2,3,7,8 - PeCDF is a polychlorinated dibenzofuran (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

16.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,7,8 - PeCDF.

16.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,7,8 - PeCDF, prepared on behalf of Ingot Metal Company, and dated DECEMBER 20, 2012.

16.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

17. PLAN SUMMARY – 1,2,3,4,7,8 - HxCDF

Name and CASRN of Substance	1,2,3,4,7,8-HxCDF	70648-26-9
Substances for which other plans have been prepared	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
2,3,4,7,8-PeCDF	57117-31-4	
1,2,3,7,8-PeCDF	57117-41-6	

17.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

17.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,4,7,8 - HxCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

17.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

1,2,3,4,7,8 - HxCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

17.4 Description of Substance

1,2,3,4,7,8 - HxCDF is a polychlorinated dibenzofuran (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

17.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,4,7,8 - HxCDF.

17.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,4,7,8 - HxCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

17.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

18. PLAN SUMMARY – 1,2,3,7,8,9 - HxCDF

Name and CASRN of Substance	1,2,3,7,8,9-HxCDF	72918-21-9
Substances for which other plans have been prepared	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
1,2,3,7,8-PeCDF	57117-41-6	
1,2,3,4,7,8-HxCDF	70648-26-9	

18.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

18.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,7,8,9 - HxCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

18.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

1,2,3,7,8,9 - HxCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

18.4 Description of Substance

1,2,3,7,8,9 - HxCDF is a polychlorinated dibenzofuran (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

18.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,7,8,9 - HxCDF.

18.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,7,8,9 - HxCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

18.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

19. PLAN SUMMARY – 1,2,3,6,7,8 - HxCDF

Name and CASRN of Substance	1,2,3,6,7,8-HxCDF	57117-44-9
Substances for which other plans have been prepared	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
1,2,3,4,7,8-HxCDF	70648-26-9	
1,2,3,7,8,9-HxCDF	72918-21-9	

19.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

19.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,6,7,8 - HxCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

19.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce

1,2,3,6,7,8 - HxCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

19.4 Description of Substance

1,2,3,6,7,8 - HxCDF is a polychlorinated dibenzofuran (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

19.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,6,7,8 - HxCDF.

19.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,6,7,8 - HxCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

19.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

20. PLAN SUMMARY – 2,3,4,6,7,8 - HxCDF

Name and CASRN of Substance	2,3,4,6,7,8-HxCDF	60851-34-5
Substances for which other plans have been prepared	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
1,2,3,7,8,9-HxCDF	72918-21-9	
1,2,3,6,7,8-HxCDF	57117-44-9	

20.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

20.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 2,3,4,6,7,8 - HxCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

20.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce 2,3,4,6,7,8 - HxCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

20.4 Description of Substance

2,3,4,6,7,8 - HxCDF is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

20.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 2,3,4,6,7,8 - HxCDF.

20.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 2,3,4,6,7,8 - HxCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

20.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

21. PLAN SUMMARY – 1,2,3,4,6,7,8 - HpCDF

Name and CASRN of Substance	1,2,3,4,6,7,8-HpCDF	67562-39-4
Substances for which other plans have been prepared	1,2,3,4,7,8,9-HpCDF	55673-89-7
	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
1,2,3,6,7,8-HxCDF	57117-44-9	
2,3,4,6,7,8-HxCDF	60851-34-5	

21.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

21.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,4,6,7,8 - HpCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

21.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce



1,2,3,4,6,7,8 - HpCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

21.4 Description of Substance

1,2,3,4,6,7,8 - HpCDF is a polychlorinated dibenzo-p-dioxin (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

21.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,4,6,7,8 - HpCDF.

21.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,4,6,7,8 - HpCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

21.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

22. PLAN SUMMARY – 1,2,3,4,7,8,9 - HpCDF

Name and CASRN of Substance	1,2,3,4,7,8,9-HpCDF	55673-89-7
Substances for which other plans have been prepared	OCDF	39001-02-0
	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
2,3,4,6,7,8-HxCDF	60851-34-5	
1,2,3,4,6,7,8-HpCDF	67562-39-4	

22.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

22.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of 1,2,3,4,7,8,9 - HpCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

22.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce



1,2,3,4,7,8,9 - HpCDF to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

22.4 Description of Substance

1,2,3,4,7,8,9 - HpCDF is a polychlorinated dibenzofuran (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

22.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of 1,2,3,4,7,8,9 - HpCDF.

22.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for 1,2,3,4,7,8,9 - HpCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

22.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

23. PLAN SUMMARY – OCDF

Name and CASRN of Substance	OCDF	39001-02-0
Substances for which other plans have been prepared	Hexachlorobenzene	118-74-1
	Copper (and its compounds)	Not Applicable
	Manganese (and its compounds)	Not Applicable
	Nickel (and its compounds)	Not Applicable
	Zinc (and its compounds)	Not Applicable
	PCDD & PCDF (g TEQ)	Not Applicable
	2,3,7,8-TCDD	1746-01-6
	1,2,3,7,8-PeCD	40321-76-4
	1,2,3,4,7,8-HxCDD	39227-28-6
	1,2,3,6,7,8-HxCDD	57653-85-7
	1,2,3,7,8,9-HxCDD	19408-74-3
	1,2,3,4,6,7,8-HpCDD	35822-46-9
	OCDD	3268-87-9
	2,3,7,8-TCDF	51207-31-9
	2,3,4,7,8-PeCDF	57117-31-4
	1,2,3,7,8-PeCDF	57117-41-6
	1,2,3,4,7,8-HxCDF	70648-26-9
	1,2,3,7,8,9-HxCDF	72918-21-9
	1,2,3,6,7,8-HxCDF	57117-44-9
	2,3,4,6,7,8-HxCDF	60851-34-5
	1,2,3,4,6,7,8-HpCDF	67562-39-4
	1,2,3,4,7,8,9-HpCDF	55673-89-7

23.1 Basic Facility Information

Basic facility information has been included in Section 24 of this document.

23.2 Toxic Reduction Policy Statement of Intent

Ingot Metal Company is committed to playing a leadership role in protecting the environment. Whenever feasible, we will eliminate or reduce the use, creation and discharge of OCDF in full compliance with all federal and provincial regulations. Our employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at Ingot Metal Company; we will continue to evaluate all options available to achieve this.

23.3 Reduction Objectives

All employees at Ingot Metal Company will be involved in the reduction of toxic substance use, creation and releases. Where technically and economically feasible, our goal is to reduce OCDF



to the greatest extent possible. Ingot Metal Company has looked into all the options and currently found none to be feasible at this time. The facility will continue to monitor technological advancements to ensure that reduction options that are both technological and financially viable are implemented at our facility.

23.4 Description of Substance

OCDF is a polychlorinated dibenzofuran (PCDD/F). The substance is formed via *de novo* synthesis by the combustion of non-chlorinated organic matter such as polystyrene, coal and particulate carbon in the presence of chlorine donors (specifically metals such as copper or iron). Many of these substances are contained in trace concentrations in the scrap or are process raw materials such as injected carbon. Formations take place at temperatures between 250°C and 500°C in the presence of oxygen. High temperatures and contributing factors such as oxygen concentrations, gas exiting temperatures and scrap metal content have been factors for creating dioxins.

23.5 Toxic Substance Reduction Option to be Implemented

There are currently no options identified for implementation to reduce the use and release of OCDF.

23.6 Plan Summary Statement

This plan accurately reflects the content of the toxic substance reduction plan for OCDF, prepared on behalf of Ingot Metal Company, and dated December 20, 2012.

23.7 Copy of Plan Certification

A copy of the plan certification is presented in Section 25 of this document.

24. BASIC FACILITY INFORMATION

Facility Identification and Site Address		
Company Name	Ingot Metal Company Limited	
Facility Name	Ingot Metal Company Limited	
Facility Address	Physical Address:	Mailing Address
	111 Fenmar Drive Weston, Ontario M9L 1M3	111 Fenmar Drive Weston, Ontario M9L 1M3
Spatial Coordinates (UTM)	616788.6	4846150
Datum	WGS84	
Number of Employees	25	
NPRI ID	00455	
ON MOE ID	6337	
Parent Company Information		
Parent Company Name & Address	Ingot Metal Company Limited 111 Fenmar Drive Weston, ONTARIO M9L 1M3	
Percent Ownership	100%	
Primary North American Industrial Classification System Code (NAICS)		
2 Digit NAICS Code	31-33 Manufacturing	
4 Digit NAICS Code	3314 – Non-Ferrous (exc. Al) Production & Processing	
6 Digit NAICS Code	331410 – Non-Ferrous (except Al) Smelting & Refining	
Company Contact Information		
Facility Public Contact	Ivan Betcherman Vice President	Contact Address
	ivan@ingot.ca	Ingot Metal Company Limited 111 Fenmar Drive Weston, Ontario M9L 1M3
	Phone: (416) 749-1372	
	Fax: (416) 749-1371	

25. COPY OF PLAN CERTIFICATION

Certification by the Highest Ranking Employee

As of December 21, 2012, I, Ivan Betcherman, certify that I have read the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the plans are factually accurate and comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substances:

Manganese (and its compounds)	2,3,4,7,8-PeCDF	2,3,4,6,7,8-HxCDF
PCDD & PCDF	1,2,3,7,8-PeCDF	1,2,3,4,6,7,8-HpCDF
2,3,7,8-TCDD	1,2,3,4,7,8-HxCDF	1,2,3,4,7,8,9-HpCDF
1,2,3,7,8-PeCD	1,2,3,7,8,9-HxCDF	OCDF
1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDF	Hexachlorobenzene
1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD
OCDD	2,3,7,8-TCDF	Copper (and its compounds)
Nickel (and its compounds)	Zinc (and its compounds)	



 Ivan Betcherman
 Vice President, Ingot Metal Company Limited

Certification by Licensed Planner

As of December 21, 2012, I, Tim Logan certify that I am familiar with the processes at Ingot Metal Company Limited, Weston's facility 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 plans dated December 20, 2012 and that the plans comply with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substances:

Manganese (and its compounds)	2,3,4,7,8-PeCDF	2,3,4,6,7,8-HxCDF
PCDD & PCDF	1,2,3,7,8-PeCDF	1,2,3,4,6,7,8-HpCDF
2,3,7,8-TCDD	1,2,3,4,7,8-HxCDF	1,2,3,4,7,8,9-HpCDF
1,2,3,7,8-PeCD	1,2,3,7,8,9-HxCDF	OCDF
1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDF	Hexachlorobenzene
1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD
OCDD	2,3,7,8-TCDF	Copper (and its compounds)
Nickel (and its compounds)	Zinc (and its compounds)	


 _____, December 21, 2012
 Tim Logan (License No. TSRP0003)
 President, O2E Inc. Environmental Consultants

