



**U. S. Steel Canada**  
A Subsidiary of United States Steel

## **Lake Erie Works**

# **Toxic Substance Reduction Summary Plans – Butane, n-Hexane and Propane (BHP)** (O. Reg. 455/09)

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Butane	**
	n-Hexane	110-54-3
	Propane	74-98-6

<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 - Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

<b>Company Contact Information</b>	
<b>Facility Public Contact</b>	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for butane, n-hexane and propane, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation and usage of butane, n-hexane and propane providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation and usage of butane, n-hexane and propane to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Butane, n-hexane and propane (BHP) are both incidentally used as undesired components of natural gas, and created through pyrolysis of coal in the absence of oxygen in the coke ovens which, in addition to coke, produces a range of other compounds from hydrogen and methane through heavy organic compounds.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because butane, n-hexane and propane (BHP) are created incidentally in the production of coke from coal as a result of the chemical structure of coal. Since the production of coke is crucial to our cokemaking operations and since coke cannot be replaced by other materials, it is not possible to eliminate the creation of BHP. The usage is incidental and practically all industry heavily depends on fossil fuels.



**U. S. Steel Canada**  
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## **Lake Erie Works**

# **Toxic Substance Reduction Summary Plans – Ethylene, Propylene and Butene (O. Reg. 455/09)**

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Ethylene	74-85-1
	Propylene	115-07-1
	Butene	25167-67-3

<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 - Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

<b>Company Contact Information</b>	
<b>Facility Public Contact</b>	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002



## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for ethylene, propylene and butene, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation of ethylene, propylene and butene providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation of ethylene, propylene and butene to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Ethylene, propylene and butene (EPB) are introduced into the process incidentally, formed through pyrolysis of coal in the absence of oxygen in the coke ovens which, in addition to coke, produces a range of other compounds from hydrogen and methane through heavy organic compounds.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because ethylene, propylene and butene (EPB) are created incidentally in the production of coke from coal as a result of the chemical structure of coal. Since the production of coke is crucial to our cokemaking operations and since coke cannot be replaced by other materials, it is not possible to eliminate the creation of EPB.



**U. S. Steel Canada**  
A Subsidiary of United States Steel

**Lake Erie Works**  
**Toxic Substance Reduction Summary Plans – Calcium**  
**Fluoride**  
(O. Reg. 455/09)

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Calcium Fluoride	7789-75-5
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
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<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

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<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 – Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

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	Fax: (905) 308-7002



## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for calcium fluoride, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the usage and creation of calcium fluoride providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the usage and creation of calcium fluoride to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Calcium fluoride containing products are deliberately introduced into the plant's processes to be utilized as fluxes. They lower the melting point of raw materials in order to improve the removal of impurities. Incidental creation occurs when slag from aforementioned processes is recycled.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because utilization of calcium fluoride is the most feasible option.



**U. S. Steel Canada**  
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**Lake Erie Works**  
**Toxic Substance Reduction Summary Plans – Carbon**  
**Monoxide**  
(O. Reg. 455/09)

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Carbon Monoxide	630-08-0
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 – Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

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	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for carbon monoxide, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation of carbon monoxide providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation of carbon monoxide to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Carbon monoxide is introduced into the plant's processes both incidentally through combustion of fuel gases and as a desired substance through deliberate creation inside of the blast furnace. Practically all carbon monoxide is recycled as a fuel, with a minor fraction being flared or emitted to the atmosphere.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

Carbon monoxide is a key component of the iron making process where it reduces the iron oxide in the ore to molten iron. Consequently carbon monoxide creation cannot be eliminated. No option exists for reduction of this substance that is technically and economically feasible.



**U. S. Steel Canada**  
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**Lake Erie Works**  
**Toxic Substance Reduction Summary Plans –**  
**Hydrochloric Acid**  
(O. Reg. 455/09)

Issued December 27, 2013



## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Hydrochloric Acid	7647-01-0
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 - Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

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	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for hydrochloric acid, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the usage of hydrochloric acid providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the usage of hydrochloric acid to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Pickling is a process in which hydrochloric acid is utilized to “clean” the steel coils, in other words to remove iron oxide from their surfaces resulting from hot rolling.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because no other non-toxic substance is capable of performing the same task.



**U. S. Steel Canada**  
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## **Lake Erie Works**

### **Toxic Substance Reduction Summary Plans – Hydrogen Sulphide and Total Reduced Sulphur (O. Reg. 455/09)**

Issued December 27, 2013

## BASIC FACILITY INFORMATION

Name & CAS # of Substance	Hydrogen Sulphide	7783-06-4
	Total Reduced Sulphur	**

Facility Identification and Site Address		
Company Name	U. S. Steel Canada Inc.	
Facility Name	Lake Erie Works	
Facility Address	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
Facility Latitude	42° 48' 00"	
Facility Longitude	80° 06' 00"	
Number of Employees	1374	
NPRI ID	3855	
Ontario MOE ID Number	5110	

Parent Company (PC) Information	
PC Name & Address	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
Percent Ownership for each PC	100 per cent
Business Number for PC	171240948

Primary North American Industrial Classification System Code (NAICS)	
2 Digit NAICS Code	31-33 - Manufacturing
4 Digit NAICS Code	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
6 Digit NAICS Code	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

Company Contact Information	
Facility Public Contact	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for hydrogen sulphide and total reduced sulphur, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation of hydrogen sulphide and total reduced sulphur providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation of hydrogen sulphide and total reduced sulphur to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Hydrogen sulphide and total reduced sulphur creation occurs incidentally during coke and iron making slag quenching operations.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because all creation is incidental and the best available technology is being utilized. Since the production of coke and molten iron is crucial to our operations and since noted materials cannot be replaced, it is not possible to eliminate their creation.





**U. S. Steel Canada**  
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**Lake Erie Works**  
**Toxic Substance Reduction Summary Plans - Nickel**  
(O. Reg. 455/09)

Issued December 27, 2012

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Nickel	N/A
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 – Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

<b>Company Contact Information</b>	
<b>Facility Public Contact</b>	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for nickel, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the usage of nickel providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the usage of nickel to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Nickel is introduced into the plant's processes both incidentally, as an impurity, primarily through the utilization of iron ore pellets and as a desired substance through the consumption of scrap and alloys.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because nickel is a trace component of coal and iron ore or is used to achieve required steel properties.



**U. S. Steel Canada**  
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## **Lake Erie Works**

# **Toxic Substance Reduction Summary Plans – Nitrogen Oxides (as NO<sub>2</sub>) (O. Reg. 455/09)**

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Nitrogen Oxides (as NO2)	11104-93-1
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 - Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

<b>Company Contact Information</b>	
<b>Facility Public Contact</b>	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002



## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for nitrogen oxides, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation of nitrogen oxides providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation of nitrogen oxides to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Nitrogen oxides are introduced into the process incidentally primarily formed through combustion of fuel gases with some trivial creation transpiring during miscellaneous plant's operations.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

In addition to being a significant constituent of air, required for both fuel combustion and molten metal formation, nitrogen is a trace component of coal and iron ore. Coal and iron ore are crucial to our operations and cannot be replaced by other materials free of impurities. Consequently it is impossible to eliminate sources of nitrogen. No option exists for reduction of this substance that is technically and economically feasible.



**U. S. Steel Canada**  
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## **Lake Erie Works**

# **Toxic Substance Reduction Summary Plans – Total Particulate Matter, PM10 and PM2.5 (O. Reg. 455/09)**

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	<b>Total Particulate Matter</b>	N/A
	PM10	N/A
	PM2.5	N/A

<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	<b>Physical Address:</b> 2330 RR#3, Nanticoke, Ontario N0A 1L0	<b>Mailing Address:</b> Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 - Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

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	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for total particulate matter, PM10 and PM2.5, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation of total particulate matter, PM10 and PM2.5 providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation of total particulate matter, PM10 and PM2.5 to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Generation of particulate matter is attributed to various operations that occur regularly throughout the plant. The two most significant sources are paved/unpaved roads and material handling activities. The noted toxic substances are also created by industrial processes such as coke making, iron making and steel making as well as fuel combustion.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

Total particulate matter, PM10 and PM2.5 are all created incidentally during normal operations. No option exists for reduction of this substance that is technically and economically feasible.



**U. S. Steel Canada**  
A Subsidiary of United States Steel

**Lake Erie Works**  
**Toxic Substance Reduction Summary Plans -**  
**Selenium**  
(O. Reg. 455/09)

Issued December 27, 2013



## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Selenium	N/A
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 - Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

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	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for selenium, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the usage of selenium providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the usage of selenium to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Selenium is introduced into the plant’s processes incidentally, as an impurity, primarily through the utilization of iron ore pellets and coal however minor quantities are also contributed by alloys.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because selenium is a trace component of coal, iron ore pellets and alloys. Since the abovementioned raw materials are crucial to our operations and cannot be replaced by other materials free of impurities, it is virtually impossible to eliminate the “usage” of selenium.



**U. S. Steel Canada**  
A Subsidiary of United States Steel

## **Lake Erie Works**

# **Toxic Substance Reduction Summary Plans – Sulphur Dioxide**

(O. Reg. 455/09)

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Sulphur Dioxide	7446-09-5
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 - Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

<b>Company Contact Information</b>	
<b>Facility Public Contact</b>	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for sulphur dioxide, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation of sulphur dioxide providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation of sulphur dioxide to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Sulphur dioxide is introduced into the process incidentally, primarily formed through combustion of fuels. Trivial quantities are also created during iron making operations (blast furnace casting).

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

Sulphur required for the creation of sulphur dioxide is incidentally released from coal and iron ore in the production of coke and molten iron, respectively. Since the production of coke and molten iron are crucial to our operations and since the noted materials cannot be replaced by other materials, it is not possible to eliminate the creation of sulphur dioxide. No option exists for reduction of this substance that is technically and economically feasible.





**U. S. Steel Canada**

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**Lake Erie Works**  
**Toxic Substance Reduction Summary Plans -**  
**Vanadium**  
(O. Reg. 455/09)

Issued December 27, 2013

## BASIC FACILITY INFORMATION

<b>Name &amp; CAS # of Substance</b>	Vanadium	7440-62-2
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<b>Facility Identification and Site Address</b>		
<b>Company Name</b>	U. S. Steel Canada Inc.	
<b>Facility Name</b>	Lake Erie Works	
<b>Facility Address</b>	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
<b>Facility Latitude</b>	42° 48' 00"	
<b>Facility Longitude</b>	80° 06' 00"	
<b>Number of Employees</b>	1374	
<b>NPRI ID</b>	3855	
<b>Ontario MOE ID Number</b>	5110	

<b>Parent Company (PC) Information</b>	
<b>PC Name &amp; Address</b>	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
<b>Percent Ownership for each PC</b>	100 per cent
<b>Business Number for PC</b>	171240948

<b>Primary North American Industrial Classification System Code (NAICS)</b>	
<b>2 Digit NAICS Code</b>	31-33 – Manufacturing
<b>4 Digit NAICS Code</b>	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
<b>6 Digit NAICS Code</b>	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

<b>Company Contact Information</b>	
<b>Facility Public Contact</b>	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002

## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for vanadium, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the usage of vanadium providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the usage of vanadium to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

Vanadium is introduced into the plant's processes both incidentally, as an impurity, primarily through the utilization of coal and iron ore pellets and as a desired substance at the steelmaking process as a constituent of scrap and alloys.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because vanadium is a trace component of coal and iron ore or is used to achieve required steel properties. As far as the incidental usage is concerned both coal and iron ore are crucial to our operations and cannot be replaced by other materials free of impurities.



**U. S. Steel Canada**  
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## **Lake Erie Works**

# **Toxic Substance Reduction Summary Plans – Volatile Organic Compounds (VOC)** (O. Reg. 455/09)

Issued December 27, 2013

## BASIC FACILITY INFORMATION

Name & CAS # of Substance	Volatile Organic Compounds	**
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Facility Identification and Site Address		
Company Name	U. S. Steel Canada Inc.	
Facility Name	Lake Erie Works	
Facility Address	Physical Address: 2330 RR#3, Nanticoke, Ontario N0A 1L0	Mailing Address: Same as physical address
Facility Latitude	42° 48' 00"	
Facility Longitude	80° 06' 00"	
Number of Employees	1374	
NPRI ID	3855	
Ontario MOE ID Number	5110	

Parent Company (PC) Information	
PC Name & Address	United States Steel Corporation 600 Grant Street, Pittsburgh, PA 15219
Percent Ownership for each PC	100 per cent
Business Number for PC	171240948

Primary North American Industrial Classification System Code (NAICS)	
2 Digit NAICS Code	31-33 - Manufacturing
4 Digit NAICS Code	3311 - Iron & Steel Mills & Ferro-Alloy Manufacturing
6 Digit NAICS Code	331110 - Iron & Steel Mills & Ferro-Alloy Manufacturing

Company Contact Information	
Facility Public Contact	Trevor D Harris
	<a href="mailto:tdharris@uss.com">tdharris@uss.com</a>
	Phone: (905) 577-4447
	Fax: (905) 308-7002



## **PLAN SUMMARY STATEMENT**

The plan summary accurately reflects the content of the toxic substance reduction plan for volatile organic compounds, prepared by U. S. Steel Canada - Lake Erie Works, dated December 2, 2013.

## **STATEMENT OF INTENT**

U. S. Steel Canada – Lake Erie Works is committed to reducing or, where possible, eliminating the creation and usage of volatile organic compounds providing that circumstances permit it, while complying with all Federal and Provincial Regulations.

## **REDUCTION OBJECTIVES**

Our objective is to reduce the creation and usage of volatile organic compounds to the extent that circumstances permit.

## **DESCRIPTION OF SUBSTANCE**

For the most part volatile organic compounds are introduced into the process incidentally, formed through pyrolysis of coal in the absence of oxygen in the coke ovens. In addition, some VOCs are inadvertently used as undesired components of fossil fuel.

## **TOXIC SUBSTANCE REDUCTION OPTION TO BE IMPLEMENTED**

No such options exist because volatile organic compounds are created incidentally in the production of coke from coal as a result of the chemical structure of coal. Since the production of coke is crucial to our cokemaking operations and since coke cannot be replaced by other materials, it is not possible to eliminate the creation of volatile organic compounds. The usage is incidental.



**U. S. Steel Canada**  
A Subsidiary of United States Steel

**Lake Erie Works**  
**Toxic Substance Reduction Plans - Certifications**  
(O. Reg. 455/09)

Issued December 24, 2013

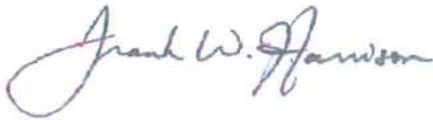
## TOXIC SUBSTANCES

Table 1

Name & CAS # of Substance		
	Butane	N/A
	Butene	25167-67-3
	Calcium Fluoride	7789-75-5
	Carbon Monoxide	630-08-0
	Ethylene	74-85-1
	Hydrochloric Acid	7647-01-0
	Hydrogen Sulphide	7783-06-4
	n-Hexane	110-54-3
	Nickel	N/A
	Nitrogen Oxides (as NO <sub>2</sub> )	11104-93-1
	Particulate Matter	N/A
	PM10	N/A
	PM2.5	N/A
	Propane	74-98-6
	Propylene	115-07-1
	Selenium	N/A
	Sulphur Dioxide	7446-09-5
	Total Reduced Sulphur	N/A
	Vanadium	7440-62-2
	Volatile Organic Compounds	N/A

### **CERTIFICATION BY HIGHEST RANKING EMPLOYEE**

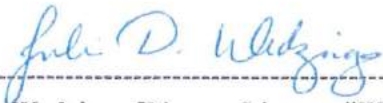
As of 24 December 2013 I certify that I have read the toxic substance reduction plans for all substances listed in Table 1 and am familiar with their contents, and to my knowledge that plans are factually accurate and comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under this Act.



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Frank W. Harrison, Director – Environmental & Corporate Affairs  
U. S. Steel Canada Inc

### **CERTIFICATION BY LICENSED PLANNER**

As of 24 December 2013 I, Julie Wedzinga certify that I am familiar with the processes at U. S. Steel Canada – Lake Erie Works that use or create toxic substances listed in Table 1, 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 [date – refer above] and that the plans comply with that Act and Ontario Regulation 455/09 (General) made under this Act.



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Julie Wedzinga [Planner License #TSRP0050]  
Environmental Engineer / Toxic Substance Reduction Planner  
U. S. Steel Canada – Hamilton Works