Hamilton Works
2011 Annual Toxics Reduction Report
(O. Reg. 455/09)

Issued June 29, 2012

Basic Facility Information

Section 1 – Facility Information	
Owner	US Steel Canada
Facility name	Hamilton Works
Address	386 Wilcox St., P.O. Box 2030
City	Hamilton
Province	Ontario
Postal Code	L8N 3T1
Section 2 – Owner's Mailing Address	
Same as above (Y / N)	Yes
Address	
City	
Province	
Postal code	
Section 3 – Owner's Technical Contact Person	
Same as above (Y / N)	Andrew Sebestyen
Title	Environment Manager
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Hamilton Works is located on 319 hectares of land on the shores of Hamilton Harbour. Hamilton Works is an integrated steel plant and produces approximately 2 million tonnes of steel per year. Process operations at the plant include Cokemaking, Ironmaking, Basic Oxygen Furnace Steelmaking, Continuous Casting, Cold Rolling, Finishing and Galvanizing.

Raw materials (coal and iron ore) are brought to the area by self-unloading ships. Coal is heated in the Coke Ovens, where volatile components of coal are vapourized and the remaining carbon is transformed into coke. The coke is then used as a reductant in the Blast Furnace. The gas generated during coking fuels the coking battery and is used in the Central Boiler Station to generate steam for the operation. The volatile components generated during coking are separated in an adjacent By-Products Plant and are sold.

Coke, iron ore pellets, and dolomite are conveyed to the Blast Furnace, which has a capacity to produce 6,000 tonne/day of molten pig iron. From the Blast Furnace, molten iron is carried to the steelmaking shop in specialized railway cars where it is charged into three Basic Oxygen Furnaces. After mixing the molten iron with scrap steel, fluxes and additives, oxygen is blown into the melt to remove carbon and impurities. The molten steel is treated to adjust its composition to meet the requirements of the final product then transferred to the Continuous Casting process.

The casting complex consists of two casting strands in which the molten steel is solidified into steel slabs. Most slabs cast at Hamilton Works are rolled in the Lake Erie Works Hot Strip Mill although some are shipped to other U. S. Steel facilities or sold.

Coils from Lake Erie Works Hot Strip Mill are returned to Hamilton Works for processing in the 4-Stand Cold Rolling Mill. Some coils are further processed in the Z-Line Galvanizing line.

The plant has extensive environmental control measures. Hamilton Harbour water is used in the production of steel and is cleaned by our water filtration plant and treated before exiting the plant. Air cleaning equipment is used at the Coke Ovens, Blast Furnace and Basic Oxygen Furnaces to minimize emissions.

List of Toxic Substances at the Facility

Substance	Chemical Abstracts Service Number
Arsenic	**
Benzene	71-43-2
Cadmium	**
Chlorine	7782-50-5
Chromium	**
Copper	**
Lead	**
Manganese	**
Mercury	**
Methanol	67-56-1
Toluene	108-88-3
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Benzo(a)anthracene	56-55-3
Benzo(a)phenanthrene	218-01-9
Benzo(a)pyrene	50-32-8
Benzo(b)fluoranthene	205-99-2
Benzo(e)pyrene	192-97-2
Benzo(g,h,i)perylene	191-24-2
Benzo(j)fluoranthene	205-82-3
Benzo(k)fluoranthene	207-08-9
Dibenzo(a,j)acridine	224-41-0
Dibenzo(a,h)anthracene	53-70-3
Dibenzo(a,i)pyrene	189-55-9
7H-Dibenzo(c,g)carbazole	194-59-2
Fluoranthene	206-44-0
Fluorene	86-73-7
Indeno(1,2,3-c,d)pyrene	193-39-5
Naphthalene	91-20-3
Perylene	198-55-0
Phenanthrene	85-01-8
Pyrene	129-00-0
Vanadium	7440-62-2
Xylene	1330-20-7
Zinc	**

** No single CAS number applies to this substance

Summary: Tracking and Quantification

Substance	Usage, tonnes	Creation, tonnes	Destruction, tonnes	Releases to Air, tonnes	Releases to Water, tonnes	Recycling, tonnes	Disposal, tonnes	Contained in Product, tonnes
Arsenic	> 0 to 1	0	0	0	0	0	0	> 0 to 1
Cadmium	> 0 to 1	0	0	0	0	0	0	> 0 to 1
Chromium	> 10 to 100	0	0	0	0	0	0	> 10 to 100
Copper	> 10 to 100	0	0	0	> 0 to 1	0	0	> 10 to 100
Lead	> 1 to 10	0	0	0	0	0	0	> 1 to 10
Manganese	> 10 to 100	0	0	0	0	0	0	> 10 to 100
Mercury	> 0 to 1	0	0	> 0 to 1	0	0	0	> 0 to 1
Vanadium	> 10 to 100	0	0	0	0	0	0	> 10 to 100
Zinc	> 1,000 to 10,000	0	0	0	0	> 100 to 1000	0	> 1,000 to 10,000
Benzene	0	> 1,000 to 10,000	0	> 10 to 100	0	0	0	> 1,000 to 10,000
Chlorine	0	0	0	0	0	0	0	0
Methanol	0	0	0	0	0	0	0	0
Naphthalene	0	> 1,000 to 10,000	0	> 1 to 10	> 0 to 1	0	0	> 1,000 to 10,000
Toluene	0	> 100 to 1000	0	> 1 to 10	0	0	0	> 100 to 1000
Xylene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Sulfuric Acid	> 10 to 100	0	> 10 to 100	0	0	0	0	0
7h-dibenzo(c,g)carbazole	0	> 0 to 1	0	> 0 to 1	0	0	0	> 0 to 1
Acenaphthene	0	> 0 to 1	0	> 0 to 1	0	0	0	> 0 to 1
Acenaphthylene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Benzo(a)anthracene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Benzo(a)phenanthrene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Benzo(a)pyrene	0	> 100 to 1000	0	> 0 to 1	> 0 to 1	0	0	> 100 to 1000
Benzo(b)fluoranthene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Benzo(e)pyrene	0	> 10 to 100	0	> 0 to 1	0	0	0	> 10 to 100
Benzo(g,h,i)perylene	0	> 1 to 10	0	> 0 to 1	0	0	0	> 1 to 10
Benzo(j)fluoranthene	0	> 10 to 100	0	> 0 to 1	0	0	0	> 10 to 100
Benzo(k)fluoranthene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Dibenz(a,j)acridine	0	> 0 to 1	0	> 0 to 1	0	0	0	> 0 to 1
Dibenzo(a,h)anthracene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Dibenzo(a,i)pyrene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Fluoranthene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Fluorene	0	> 1 to 10	0	> 0 to 1	0	0	0	> 1 to 10
Indeno(1,2,3-c,d)pyrene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Perylene	0	> 10 to 100	0	> 0 to 1	0	0	0	> 10 to 100
Phenanthrene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000
Pyrene	0	> 100 to 1000	0	> 0 to 1	0	0	0	> 100 to 1000