Summary

Chemical Name and CAS#:	Manganese	NA-09
	Zinc	NA-14
NPRI ID Number:	635	
O.Reg. 127/05 ID Number:	10100	
Company Name:	Hanson Brick Ltd.	
Company Address:	5155 Dundas St.	
	Burlington ON, L7R 3Y2	
Number of employees:	200	
Two Digit NAICS Code:	32	
Four Digit NAICS Code:	3279	
Six Digit NAICS Code:	32 7990	

Public Contact:

Name:	Shane Egan
Address:	5155 Dundas St.
	Burlington ON
	L7R2Y2
Phone Number:	905 335 7204
Fax Number:	905.335.3401
E-mail:	shane egan@hanson.com

UTM Spatial Coordinates (NAD83):

Latitude:	43.414317°
Longitude:	-79.805937°
Datum:	
UTM:	17
	E596677
	N4807518

Statement of Intent: Hanson Brick continues its commitment to protection of the environment. We will sustain our efforts to reduce the release of manganese and zinc and meet all current environmental standards for these chemicals. These chemicals are used in nine processes within the facility.

There are 11 listed substances that require a Toxic Substance Reduction Plan at Hanson Brick Ltd. They are listed below in groups that are results of common pathway through the manufacturing operations Each substance will be accounted for in its group. This plan addresses Group 2. All information in the report referring to manganese is also referring to zinc. The compounds are accounted for separately.

Group 1

Calcium fluoride (7789-75-5)
Hydrochloric acid (7647-01-0)
Hydrogen fluoride (7664-39-3)
Sulphur dioxide (7446-09-5)

Group 2

Manganese (and its compounds) (NA - 09)
Zinc (and its compounds) (NA - 14)

Group 3

PM - Total Particulate Matter (NA - M08)
PM10 - Particulate Matter <= 10 Microns (NA - M09)
PM2.5 - Particulate Matter <= 2.5 Microns (NA - M10)

Group 4

Nitrogen oxides (expressed as NO2) (11104-93-1)
Carbon monoxide (630-08-0)

Reason for Use:

Target: Hanson Brick will reduce the use of plan compounds on a unit production basis and end releases to land

Objective: Hanson Brick Burlington will reduce the release to land of Manganese and Zinc by implementation of up to13 options identified in this plan. This will reduce the release the release to land by 100%.

Certification: Highest Ranking Employee

As of December 20, 2013, I, Shane Egan, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

Manganese	NA-09
Zinc	NA-14

Shane Egan
V.P. Operations
Hanson Brick Ltd.

9 July - 14
Date

Certification: Planner

As of December 20, 2013, I, John Hewitt certify that I am familiar with the processes at Hanson Brick Ltd. that use or create the toxic substance referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the Toxics Reduction Act, 2009 that are set out in the plan dated [December 31, 2013] and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Manganese	NA-09
Zinc	NA-14

John Hewitt TSRP 1037
Projects & Environmental Manager
Hanson Brick Limited

July 10 2014
Date

Options to Be Implemented

OPTION	CATEGORY	REDUCTION	IMPLEMENTATION
Reduce MN content of B2 products where addition is to disguise the body when chipping occurs.	Product Reformulation	Use reduced 21.184 tonne, waste reduced 0.4341 tonne	Dec-14
Stop developing products with manganese addition to the body	Product Reformulation	Zero growth	Dec-14
Investigate soda ash addition as a means to change appearance of fired body to make chips on face of fired brick less prominent.	Product Reformulation	Unknown	Dec-14
Modify the B 2 even feeder with a cross shaft so it can empty easily and manage larger surges	Equipment or Process Modifications	Use decrease of 4.2042 tonne and disposal to land by 2.1073 tonne	Dec-14
B2—on any day that trucks are hauling shale, place green waste directly into the trucks	On site reuse or recycling	Items5 through 9 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-15
B1—if the green waste from B2 is all consumed recycle any unusable green waste from B1 as above into B2.	On site reuse or recycling	Items 5 through 9 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-15
B1—on-site recycling of various colored green waste back into the raw shale feed of the same color.	On site reuse or recycling	Items 5 through 9 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-15

OPTION	CATEGORY	REDUCTION	IMPLEMENTATION
B1 & B2—any materials that cannot be handled by the above three tactics are to be loaded onto the trucks returning to Center Quarry	On site reuse or recycling	Items 5 through 9 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-15
Any high limestone B1 green waste that is deemed not suitable for direct recycle to B1 can be blended into the high limestone shale	On site reuse or recycling	Items 5 through 9 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-15
There needs to be Tracking Mechanism that shows everybody involved what is coming and going	Training or Improved Operating Practices	Items 10 through 13 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-14
A weigh scale that measures the green brick waste leaving B1 will let everyone know what has left the plant	Training or Improved Operating Practices	Items 10 through 13 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-14
Daily reinforcement of the control of waste generation and waste recycling while safely making a quality product first	Training or Improved Operating Practices	Items 10 through 13 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-14
Make clear that there is a step by step means to manage the waste even when weather does not co-operate	Training or Improved Operating Practices	Items 10 through 13 reduce release to land by 32.4288 tonne Mn and Zn by 1.0468 tonne	Dec-14