APPENDIX A

TRA PLAN SUMMARY – CHROMIUM

BASIC FACILITY INFORMATION

Name & CAS # of Substance	Chromium	7440-47-3
Substance for which other Plans have been prepared	Manganese Nickel Zinc	7439-96-5 7440-02-0 7440-66-6
Facility Identification and Site Address		
Company Name	Hanson Pressure Pipe	
Facility Name	Stoufville Pressure Facility	
Facility Address	5387 Bethesda Rd. Stoufville, Ontario L4A 7X3	
Spatial Coordination of Facility	(UTM Easting, UTM Northing) (638003, 4871070)	
Number of Employees	57	
NPRI ID	11763	
Parent Company (PC) Information		
PC Name & Address **Percent Ownership for each PC**	NA	
Business Number for PC	NA	
Primary North American Industrial Classification System Code (NAICS)		
2 Digit NAICS Code	31-33 – Manufacturing	
4 Digit NAICS Code	3273 - Cement and Concrete Product Manufacturing	
6 Digit NAICS Code	327330 - Concrete Pipe, Brick and Block Manufacturing	

Company Contact Information		
Facility Public Contact	Mr. Rick Bayard	Same as Facility address
	(905) 640-5151 ex.525	
	rick.bayard@hanson.com	
Facility Technical Contact:	Mr. Rick Bayard	Same as Facility address
	(905) 640-5151 ex.525	
	rick.bayard@hanson.com	
Person who Prepared the Plan: (if different from the Coordinator)	Erik Martinez, P.Eng	Conestoga-Rovers & Associates Ltd.
	emartinez@craworld.com	651 Colby Drive
	Phone: (519) 884-0510	Waterloo, ON
	Fax: (519) 884-0525	N2V 1C2
Highest Ranking Employee	Mr. Rick Bayard	Same as Facility address
	(905) 640-5151 ex.525	
	rick.bayard@hanson.com	
Planner Information:		
Planner Responsible for Making Recommendations	Erik Martinez, P.Eng	Conestoga-Rovers & Associates Ltd.
	Planner License No: TSRP0005	651 Colby Drive
	emartinez@craworld.com	Waterloo, ON
	Phone: (519)884-0510 ext. 2342	N2V 1C2
Planner Responsible for Certification	Erik Martinez, P.Eng	Conestoga-Rovers & Associates Ltd.
	Planner License No: TSRP0005	651 Colby Drive
	emartinez@craworld.com	Waterloo, ON
	Phone: (519)884-0510 ext. 2342	N2V 1C2

TOXIC REDUCTION POLICY STATEMENT OF INTENT

Hanson Pipe and Products Canada Inc. (Hanson) is currently using chromium in six processes. Hanson is required to order specific steel products to meet their client specifications. Hanson does not intend to reduce the use of chromium. Hanson does not create chromium, therefore this plan will not address reducing its creation.

REDUCTION OBJECTIVES

Hanson prides itself on technological innovation in order to produce high quality products in an environmentally responsible manner. Hanson will strive to reduce the

use of chromium at the Facility. Further, this plan will determine the technical and economic feasibility of each option to determine which, if any, are viable for implementation at this time.

DESCRIPTION OF FACILITY

The Facility utilizes sandstone, Portland cement, and steel to produce reinforced concrete pipe and related products for the construction industry. Metals are welded together to complete fabrication of the re-bar cages. The completed re-bar cages are then filled with concrete and formed as necessary prior to shipping the final product to the customer.

The North American Industry Classification System (NAICS) Code that applies to this Facility is 327330 – Concrete Pipe, Brick and Block Manufacturing.

In 2011, the facility operated from 7:00 a.m. to 4:00 p.m., 5 days a week.

TOXIC SUBSTANCE REDUCTION OPTIONS

After looking into the seven categories of toxic substance reduction options, no options were identified. Explanations are provided in the table below to detail why an option could not be identified in each category.

Toxic Substance Reduction Category	*Option: Identification and Description*
1) Materials or feedstock substitution	**No option identified:** Hanson is required to order specific steel products to meet their client specifications. Hanson does not have the ability to change the material or its composition.
2) Product design or reformulation	**No option identified:** The products are assembled according to customer specifications. The part dimensions and specifications are specified by the clients and Hanson does not have ability to redesign the finished products.
3) Equipment or Process Modification	**No option identified:** The current equipment used and the processes at the facility produce final products that meet the specifications of the clients. No changes to equipment or modifications would provide a potential reduction in the amount of toxic substances used.

Toxic Substance Reduction Category	*Option: Identification and Description*
4) Spill and Leak prevention	**No option identified:** The types of materials used at Hanson are steel and welding rods, which do not pose an issue for spills or leaks.
5) On-site reuse or recycling	**No option identified:** Hanson reuses excess steel pieces that have been cut for other products. All scrap material that cannot be used are then recycled off-site. Due to the constraints in ordering steel material, there are no options available to Hanson to limit their scrap material that is sent off-site for recycling.
6) Improve inventory management or purchasing techniques	**No option identified:** Due to the nature of steel and the finished concrete products, improved inventory management or purchasing techniques would not reduce the use of the toxic substances.
7) Training or improved operating practices	**No option identified:** All employees at Hanson are trained to operate the equipment used in the manufacture of their products. Improved training or operating practices would not reduce the use of the toxic substances.

PLAN SUMMARY STATEMENT

This plan summary accurately reflects the content of the toxic substance reduction plan for chromium.

CERTIFICATION BY HIGHEST RANKING EMPLOYEE

Attached.

CERTIFICATION BY LICENSED PLANNER

Attached.

APPENDIX B

TRA PLAN SUMMARY – MANGANESE

BASIC FACILITY INFORMATION

Name & CAS # of Substance	Manganese	7439-96-5
Substance for which other Plans have been prepared	Chromium Nickel Zinc	7440-47-3 7440-02-0 7440-66-6
Facility Identification and Site Address		
Company Name	Hanson Pressure Pipe	
Facility Name	Stoufville Pressure Facility	
Facility Address	5387 Bethesda Rd. Stoufville, Ontario L4A 7X3	
Spatial Coordination of Facility	(UTM Easting, UTM Northing) (638003, 4871070)	
Number of Employees	57	
NPRI ID	11763	
Parent Company (PC) Information		
PC Name & Address **Percent Ownership for each PC**	NA	
Business Number for PC	NA	
Primary North American Industrial Classification System Code (NAICS)		
2 Digit NAICS Code	31-33 – Manufacturing	
4 Digit NAICS Code	3273 - Cement and Concrete Product Manufacturing	
6 Digit NAICS Code	327330 - Concrete Pipe, Brick and Block Manufacturing	
Company Contact Information		
Facility Public Contact	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address

Facility Technical Contact:	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address
Person who Prepared the Plan: (if different from the Coordinator)	Erik Martinez, P.Eng emartinez@craworld.com Phone: (519) 884-0510 Fax: (519) 884-0525	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2
Highest Ranking Employee	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address
Planner Information:		
Planner Responsible for Making Recommendations	Erik Martinez, P.Eng Planner License No: TSRP0005 emartinez@craworld.com Phone: (519)884-0510 ext. 2342	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2
Planner Responsible for Certification	Erik Martinez, P.Eng Planner License No: TSRP0005 emartinez@craworld.com Phone: (519)884-0510 ext. 2342	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2

TOXIC REDUCTION POLICY STATEMENT OF INTENT

Hanson Pipe and Products Canada Inc. (Hanson) is currently using manganese in six processes. Hanson is required to order specific steel products to meet their client specifications. Hanson does not intend to reduce the use of manganese. Hanson does not create manganese, therefore this plan will not address reducing its creation.

REDUCTION OBJECTIVES

Hanson prides itself on technological innovation in order to produce high quality products in an environmentally responsible manner. Hanson will strive to reduce the use of manganese at the Facility. Further, this plan will determine the technical and economic feasibility of each option to determine which, if any, are viable for implementation at this time.

DESCRIPTION OF FACILITY

The Facility utilizes sandstone, Portland cement, and steel to produce reinforced concrete pipe and related products for the construction industry. Metals are welded together to complete fabrication of the re-bar cages. The completed re-bar cages are then filled with concrete and formed as necessary prior to shipping the final product to the customer.

The North American Industry Classification System (NAICS) Code that applies to this Facility is 327330 – Concrete Pipe, Brick and Block Manufacturing.

In 2011, the facility operated from 7:00 a.m. to 4:00 p.m., 5 days a week.

TOXIC SUBSTANCE REDUCTION OPTIONS

After looking into the seven categories of toxic substance reduction options, no options were identified. Explanations are provided in the table below to detail why an option could not be identified in each category.

Toxic Substance Reduction Category	*Option: Identification and Description*
1) Materials or feedstock substitution	**No option identified:** Hanson is required to order specific steel products to meet their client specifications. Hanson does not have the ability to change the material or its composition.
2) Product design or reformulation	**No option identified:** The products are assembled according to customer specifications. The part dimensions and specifications are specified by the clients and Hanson does not have ability to redesign the finished products.
3) Equipment or Process Modification	**No option identified:** The current equipment used and the processes at the facility produce final products that meet the specifications of the clients. No changes to equipment or modifications would provide a potential reduction in the amount of toxic substances used.
4) Spill and Leak prevention	**No option identified:** The types of materials used at Hanson are steel and welding rods, which do not pose an issue for spills or leaks.

Toxic Substance Reduction Category	*Option: Identification and Description*
5) On-site reuse or recycling	**No option identified:** Hanson reuses excess steel pieces that have been cut for other products. All scrap material that cannot be used are then recycled off-site. Due to the constraints in ordering steel material, there are no options available to Hanson to limit their scrap material that is sent off-site for recycling.
6) Improve inventory management or purchasing techniques	**No option identified:** Due to the nature of steel and the finished concrete products, improved inventory management or purchasing techniques would not reduce the use of the toxic substances.
7) Training or improved operating practices	**No option identified:** All employees at Hanson are trained to operate the equipment used in the manufacture of their products. Improved training or operating practices would not reduce the use of the toxic substances.

PLAN SUMMARY STATEMENT

This plan summary accurately reflects the content of the toxic substance reduction plan for manganese.

CERTIFICATION BY HIGHEST RANKING EMPLOYEE

Attached.

CERTIFICATION BY LICENSED PLANNER

Attached.

APPENDIX C

TRA PLAN SUMMARY – NICKEL

BASIC FACILITY INFORMATION

Name & CAS # of Substance	Nickel	7440-02-0
Substance for which other Plans have been prepared	Chromium Manganese Zinc	7440-47-3 7439-96-5 7440-66-6
Facility Identification and Site Address		
Company Name	Hanson Pressure Pipe	
Facility Name	Stoufville Pressure Facility	
Facility Address	5387 Bethesda Rd. Stoufville, Ontario L4A 7X3	
Spatial Coordination of Facility	(UTM Easting, UTM Northing) (638003, 4871070)	
Number of Employees	57	
NPRI ID	11763	
Parent Company (PC) Information		
PC Name & Address **Percent Ownership for each PC**	NA	
Business Number for PC	NA	
Primary North American Industrial Classification System Code (NAICS)		
2 Digit NAICS Code	31-33 – Manufacturing	
4 Digit NAICS Code	3273 - Cement and Concrete Product Manufacturing	
6 Digit NAICS Code	327330 - Concrete Pipe, Brick and Block Manufacturing	
Company Contact Information		
Facility Public Contact	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address

Facility Technical Contact:	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address
Person who Prepared the Plan: (if different from the Coordinator)	Erik Martinez, P.Eng emartinez@craworld.com Phone: (519) 884-0510 Fax: (519) 884-0525	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2
Highest Ranking Employee	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address
Planner Information:		
Planner Responsible for Making Recommendations	Erik Martinez, P.Eng Planner License No: TSRP0005 emartinez@craworld.com Phone: (519)884-0510 ext. 2342	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2
Planner Responsible for Certification	Erik Martinez, P.Eng Planner License No: TSRP0005 emartinez@craworld.com Phone: (519)884-0510 ext. 2342	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2

TOXIC REDUCTION POLICY STATEMENT OF INTENT

Hanson Pipe and Products Canada Inc. (Hanson) is currently using nickel in six processes. Hanson is required to order specific steel products to meet their client specifications. Hanson does not intend to reduce the use of nickel. Hanson does not create nickel, therefore this plan will not address reducing its creation.

REDUCTION OBJECTIVES

Hanson prides itself on technological innovation in order to produce high quality products in an environmentally responsible manner. Hanson will strive to reduce the use of nickel at the Facility. Further, this plan will determine the technical and economic feasibility of each option to determine which, if any, are viable for implementation at this time.

DESCRIPTION OF FACILITY

The Facility utilizes sandstone, Portland cement, and steel to produce reinforced concrete pipe and related products for the construction industry. Metals are welded together to complete fabrication of the re-bar cages. The completed re-bar cages are then filled with concrete and formed as necessary prior to shipping the final product to the customer.

The North American Industry Classification System (NAICS) Code that applies to this Facility is 327330 – Concrete Pipe, Brick and Block Manufacturing.

In 2011, the facility operated from 7:00 a.m. to 4:00 p.m., 5 days a week.

TOXIC SUBSTANCE REDUCTION OPTIONS

After looking into the seven categories of toxic substance reduction options, no options were identified. Explanations are provided in the table below to detail why an option could not be identified in each category.

Toxic Substance Reduction Category	*Option: Identification and Description*
1) Materials or feedstock substitution	**No option identified:** Hanson is required to order specific steel products to meet their client specifications. Hanson does not have the ability to change the material or its composition.
2) Product design or reformulation	**No option identified:** The products are assembled according to customer specifications. The part dimensions and specifications are specified by the clients and Hanson does not have ability to redesign the finished products.
3) Equipment or Process Modification	**No option identified:** The current equipment used and the processes at the facility produce final products that meet the specifications of the clients. No changes to equipment or modifications would provide a potential reduction in the amount of toxic substances used.
4) Spill and Leak prevention	**No option identified:** The types of materials used at Hanson are steel and welding rods, which do not pose an issue for spills or leaks.

Toxic Substance Reduction Category	*Option: Identification and Description*
5) On-site reuse or recycling	**No option identified:** Hanson reuses excess steel pieces that have been cut for other products. All scrap material that cannot be used are then recycled off-site. Due to the constraints in ordering steel material, there are no options available to Hanson to limit their scrap material that is sent off-site for recycling.
6) Improve inventory management or purchasing techniques	**No option identified:** Due to the nature of steel and the finished concrete products, improved inventory management or purchasing techniques would not reduce the use of the toxic substances.
7) Training or improved operating practices	**No option identified:** All employees at Hanson are trained to operate the equipment used in the manufacture of their products. Improved training or operating practices would not reduce the use of the toxic substances.

PLAN SUMMARY STATEMENT

This plan summary accurately reflects the content of the toxic substance reduction plan for nickel.

CERTIFICATION BY HIGHEST RANKING EMPLOYEE

Attached.

CERTIFICATION BY LICENSED PLANNER

Attached.

APPENDIX D

TRA PLAN SUMMARY – ZINC

BASIC FACILITY INFORMATION

Name & CAS # of Substance	Zinc	7440-66-6
Substance for which other Plans have been prepared	Chromium Manganese Nickel	7440-47-3 7439-96-5 7440-02-0
Facility Identification and Site Address		
Company Name	Hanson Pressure Pipe	
Facility Name	Stoufville Pressure Facility	
Facility Address	5387 Bethesda Rd. Stoufville, Ontario L4A 7X3	
Spatial Coordination of Facility	(UTM Easting, UTM Northing) (638003, 4871070)	
Number of Employees	57	
NPRI ID	11763	
Parent Company (PC) Information		
PC Name & Address **Percent Ownership for each PC**	NA	
Business Number for PC	NA	
Primary North American Industrial Classification System Code (NAICS)		
2 Digit NAICS Code	31-33 – Manufacturing	
4 Digit NAICS Code	3273 - Cement and Concrete Product Manufacturing	
6 Digit NAICS Code	327330 - Concrete Pipe, Brick and Block Manufacturing	
Company Contact Information		
Facility Public Contact	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address

Facility Technical Contact:	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address
Person who Prepared the Plan: (if different from the Coordinator)	Erik Martinez, P.Eng emartinez@craworld.com Phone: (519) 884-0510 Fax: (519) 884-0525	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2
Highest Ranking Employee	Mr. Rick Bayard (905) 640-5151 ex.525 rick.bayard@hanson.com	Same as Facility address
Planner Information:		
Planner Responsible for Making Recommendations	Erik Martinez, P.Eng Planner License No: TSRP0005 emartinez@craworld.com Phone: (519)884-0510 ext. 2342	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2
Planner Responsible for Certification	Erik Martinez, P.Eng Planner License No: TSRP0005 emartinez@craworld.com Phone: (519)884-0510 ext. 2342	Conestoga-Rovers & Associates Ltd. 651 Colby Drive Waterloo, ON N2V 1C2

TOXIC REDUCTION POLICY STATEMENT OF INTENT

Hanson Pipe and Products Canada Inc. (Hanson) is currently using zinc in six processes. Hanson is required to order specific steel products to meet their client specifications. Hanson does not intend to reduce the use of zinc. Hanson does not create zinc, therefore this plan will not address reducing its creation.

REDUCTION OBJECTIVES

Hanson prides itself on technological innovation in order to produce high quality products in an environmentally responsible manner. Hanson will strive to reduce the use of zinc at the Facility. Further, this plan will determine the technical and economic feasibility of each option to determine which, if any, are viable for implementation at this time.

DESCRIPTION OF FACILITY

The Facility utilizes sandstone, Portland cement, and steel to produce reinforced concrete pipe and related products for the construction industry. Metals are welded together to complete fabrication of the re-bar cages. The completed re-bar cages are then filled with concrete and formed as necessary prior to shipping the final product to the customer.

The North American Industry Classification System (NAICS) Code that applies to this Facility is 327330 – Concrete Pipe, Brick and Block Manufacturing.

In 2011, the facility operated from 7:00 a.m. to 4:00 p.m., 5 days a week.

TOXIC SUBSTANCE REDUCTION OPTIONS

After looking into the seven categories of toxic substance reduction options, no options were identified. Explanations are provided in the table below to detail why an option could not be identified in each category.

Toxic Substance Reduction Category	*Option: Identification and Description*
1) Materials or feedstock substitution	**No option identified:** Hanson is required to order specific steel products to meet their client specifications. Hanson does not have the ability to change the material or its composition.
2) Product design or reformulation	**No option identified:** The products are assembled according to customer specifications. The part dimensions and specifications are specified by the clients and Hanson does not have ability to redesign the finished products.
3) Equipment or Process Modification	**No option identified:** The current equipment used and the processes at the facility produce final products that meet the specifications of the clients. No changes to equipment or modifications would provide a potential reduction in the amount of toxic substances used.
4) Spill and Leak prevention	**No option identified:** The types of materials used at Hanson are steel and welding rods, which do not pose an issue for spills or leaks.

Toxic Substance Reduction Category	*Option: Identification and Description*
5) On-site reuse or recycling	**No option identified:** Hanson reuses excess steel pieces that have been cut for other products. All scrap material that cannot be used are then recycled off-site. Due to the constraints in ordering steel material, there are no options available to Hanson to limit their scrap material that is sent off-site for recycling.
6) Improve inventory management or purchasing techniques	**No option identified:** Due to the nature of steel and the finished concrete products, improved inventory management or purchasing techniques would not reduce the use of the toxic substances.
7) Training or improved operating practices	**No option identified:** All employees at Hanson are trained to operate the equipment used in the manufacture of their products. Improved training or operating practices would not reduce the use of the toxic substances.

PLAN SUMMARY STATEMENT

This plan summary accurately reflects the content of the toxic substance reduction plan for zinc.

CERTIFICATION BY HIGHEST RANKING EMPLOYEE

Attached.

CERTIFICATION BY LICENSED PLANNER

Attached.

8.0 PLAN CERTIFICATIONS

CERTIFICATION BY HIGHEST RANKING EMPLOYEE

As of December 20, 2012, I, Rick Bayard, 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.

Chromium
Manganese
Nickel
Zinc

Rick Bayard
Hanson Pipe & Precast Ltd.

Dec 20/12.
Date

CERTIFICATION BY LICENSED PLANNER

As of December 20, 2012, I, Erik Martinez, certify that I am familiar with the processes at Hanson 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 October 10, 2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Chromium
Manganese
Nickel
Zinc

Erik Martinez, P. Eng.
Planner License # TSRP0005
Conestoga-Rovers & Associates Ltd.

Dec 20, 2012
Date