Toxics Reduction Plan Summary for TC Industries

(Prepared in Compliance with the Toxics Reduction Act, 2009 & Ontario Regulation 455/09)

December 2012
Ref: 3106-04

Prepared for:

TC Industries
Guelph, Ontario

Prepared by:

Enviro-Stewards
Engineers & Scientists

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BASIC FACILITY INFORMATION		
Substance name(s) & CAS No.(s)	**Substance Name**	**CAS No.**
	Xylene	1330-20-7
	Manganese	7439-96-5
	Copper	7440-50-8
	Nickel	7440-02-0
	Chromium	7440-47-3
	Lead	7439-92-1
	Vanadium	7440-62-2
NPRI ID No.	7630	
O. Reg 127/01 ID No.	-	
Legal name of owner	TC Industries of Canada	
Trade name of owner	-	
Legal name of operator (if different)	-	
Trade name of operator (if different)	-	
Mailing address of owner	249 Speedvale Avenue, Guelph, ON N1H 1C5	
Mailing address of operator (if different)	-	
2-digit NAICS code	33	
4-digit NAICS code	3328	
6-digit NAICS code	332810	
Spatial coordinates (UTM & NAD83)	Latitude: 43.5472 Longitude: -80.2857 Datum: 1983	
Parent Company (if applicable)	-	
Legal name	-	
Mailing address (if different from facility)	-	
Percent owned by parent company	-	
Canada Customs & Revenue Agency No.	-	
Mailing address	-	
TECHNICAL CONTACT		
Name	Richard Goodchild	
Position	Process Systems Manager	
Phone number	(519) 836-7100	
Email	richg@tcindustries.com	
Mailing address (if different)	-	
PERSON WHO COORDINATED THE PLAN		
Name	Lloyd Hipel	
Position	Project Manager	
Phone number	(519) 578-5100	
Email	lhipel@enviro-stewards.com	
Mailing address (if different)	1 Union Street, Elmira, ON N3B 3J9	
PERSON WHO PREPARED THE PLAN		
Name	Lloyd Hipel	
Position	Project Manager	
Phone number	(519) 578-5100	
Email	lhipel@enviro-stewards.com	
Mailing address (if different)	1 Union Street, Elmira, ON N3B 3J9	

HIGHEST RANKING EMPLOYEE	
Name	Jeff Quarrie
Position	VP GM TC Industries of Canada
Phone number	519-836-7100
Email	jeffq@tcindustries.com
Mailing address (if different)	-

PLAN SUMMARY		
Substance name	**Substance Name** Xylene	**CAS No.** 1330-20-7
Statement of Intent & Objectives	TC Industries intends to reduce the use of xylene through spill prevention, onsite reuse, and through staff training and improved operating practices.	
Toxic Substance Accounting Records (methods used to track & quantify, quantifications, input output balance, etc.)	Refer to Attachment A.	
Toxic Substance Reduction Plan (cost estimates, options to reduce, reduction estimates, technical & economic feasibility analyses, etc.)	Refer to Attachment B.	
Implementation Plan of Options		
Total Reductions	Xylene	5,361 kg/yr (40%)
Implementation Category **Implementation Option**	**iv. Spill & Leak Prevention** Use caps on gun holding tubes	
Steps to Implement	• Order caps - Q1 2013 • Install caps on tubes – Q1 2013 • Operator training – Q1 to Q2 2013	
Estimated Reduction	Xylene:	31 kg/year (0.2%) to air
Dates for achieving reduction	• Reductions should be achieved within one year (December 2013)	
Implementation Category **Implementation Option**	**v. On-site reuse or recycling** Spray xylene used to flush black line guns into storage tubes to keep guns soft	
Steps to Implement	• Develop standard operating procedures – Q1 to Q2 2013 • Operator training – Q2 to Q4 2013	
Estimated Reduction	Xylene:	174 kg/year (1%) to air
Dates for achieving reduction	• Reductions should be achieved within one year (December 2013)	
Implementation Category **Implementation Option**	**vii. Training or improved operating practices** Spray training for operators to minimize overspray	
Steps to Implement	• Contact All Colour or Anadale (or other) to see if they offer training – Q1 2013 • Operator training – Q2 2013	
Estimated Reduction	Xylene:	1,544 kg/year (12%) to air
Dates for achieving reduction	• Reductions should be achieved in one year (December 2013)	
Implementation Option	Add minimum required xylene to thin grey paint	
Steps to Implement	• Trial new xylene quantity – Q1 to Q2 2013 • Develop standard operating procedures for xylene addition –Q3 2013 • Operator training – Q4 2013	
Estimated Reduction	Xylene:	395 kg/year (3%) to air
Dates for achieving reduction	• Reductions should be achieved within one year (December 2013)	

Implementation Option	Test spray tips for wear every month & replace to minimize paint consumption	
Steps to Implement	• Measure orifice of used tip with new tip after one month of use – Q1 2013 • Determine optimum frequency of tip replacement based on trials and how often colour is used– Q2 2013 • Develop standard operating procedures for tip replacement based on number of months in use – Q3 2013 • Operator training – Q4 2013	
Estimated Reduction	Xylene:	3,217 kg/year (25%) to air
Dates for achieving reduction	• Reductions should be achieved within one year (December 2013)	

PLAN SUMMARY

Substance name	**Substance Name**	**CAS No.**
	Metal constituents:	
	Manganese	7439-96-5
	Copper	7440-50-8
	Nickel	7440-02-0
	Chromium	7440-47-3
	Lead	7439-92-1
	Vanadium	7440-62-2
Statement of Intent & Objectives	TC Industries intends to reduce the use of metal constituents through on-site reuse, improved purchasing techniques, and through improved operating practices.	
Toxic Substance Accounting Records (methods used to track & quantify, quantifications, input output balance, etc.)	Refer to Attachment A.	
Toxic Substance Reduction Plan (cost estimates, options to reduce, reduction estimates, technical & economic feasibility analyses, etc.)	Refer to Attachment B.	
Implementation Plan of Options		
Total Reductions	Manganese	665 kg/yr (0.3%)
	Copper	74 kg/yr (0.3%)
	Nickel	64 kg/yr (0.3%)
	Chromium	168 kg/yr (0.3%)
	Lead	4 kg/yr (0.3%)
	Vanadium	3 kg/yr (0.3%)
Implementation Category	**v. On-site reuse or recycling**	
Implementation Option	Reuse drop-offs to make other parts	
Steps to Implement	• Already completed in 2012	
Estimated Reduction	Manganese:	12 kg/yr (0.01%) to offsite recycling
	Copper:	1 kg/yr (0.01%) to offsite recycling
	Nickel:	1 kg/yr (0.01%) to offsite recycling
	Chromium:	3 kg/yr (0.01%) to offsite recycling
	Lead:	0.1 kg/yr (0.01%) to offsite recycling
	Vanadium:	0.1 kg/year (0.01%) to offsite recycling
Dates for achieving reduction	• Reductions should be achieved within one year (December 2013)	

Implementation Category	**vi. Improved inventory or purchasing techniques**	
Implementation Option	Purchase custom plate sizes to minimize scrap	
Steps to Implement	• Already completed in 2012	
Estimated Reduction	Manganese:	78 kg/yr (0.03%) to offsite recycling
	Copper:	9 kg/yr (0.03%) to offsite recycling
	Nickel:	7 kg/yr (0.03%) to offsite recycling
	Chromium:	20 kg/yr (0.03%) to offsite recycling
	Lead:	0.4 kg/yr (0.03%) to offsite recycling
	Vanadium:	0.4 kg/year (0.03%) to offsite recycling
Dates for achieving reduction	• Reductions should be achieved within one year (December 2013)	
Implementation Category	**vii. Training or improved operating practices**	
Implementation Option	Track off-spec product and have incident reports to identify root causes	
Steps to Implement	• Began in 2012	
	• Ongoing	
Estimated Reduction	Manganese:	575 kg/yr (0.24%) to offsite recycling
	Copper:	64 kg/yr (0.24%) to offsite recycling
	Nickel:	55 kg/yr (0.24%) to offsite recycling
	Chromium:	145 kg/yr (0.24%) to offsite recycling
	Lead:	3 kg/yr (0.24%) to offsite recycling
	Vanadium:	3 kg/year (0.24%) to offsite recycling
Dates for achieving reduction	• Reductions should be achieved within 3 to 5 years (2015 – 2017)	

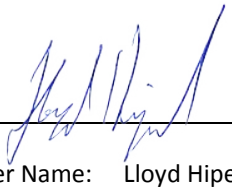
CERTIFICATIONS

Toxics Reduction Planner Certification

As of December 18, 2012,

I, Lloyd Hipel certify that I am familiar with the processes at TC Industries 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 2012 and that the plan complies with that act and Ontario Regulation 455/09 (General) made under that Act.

- *Xylene, manganese, copper, nickel, chromium, lead, vanadium*

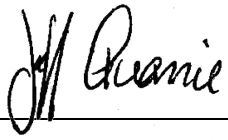
X 

Planner Name: Lloyd Hipel
License No.: TSRP0211

Highest Ranking Employee Certification

As of December 19, 2012 I, Jeff Quarrie*, certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.*

- *Xylene, manganese, copper, nickel, chromium, lead, vanadium*

X 

Highest Ranking Employee Name: Jeff Quarrie