



***Toxic Reduction Plan Summaries
2012***

Toxic Substance Reduction Plan - Public Report 2012

Description of the Toxic Substances Found at Kuntz Electroplating Inc

There are five (5) toxic substances that require the development of a toxic substance reduction plan based on the criteria set out in the Toxic Reduction Act, 2009 and Ontario Regulation 455/09.

These substances are:

- Hexavalent Chromium (and its compound) CAS #: NA-19
- Hydrochloric Acid CAS #: 7647-01-0
- Nickel (and its Compounds) CAS #: NA - 11
- Sulphuric Acid CAS #: 7664-93-9
- Copper (and its Compounds) CAS #: NA-06

Facility Information:

Facility Name	Kuntz Electroplating Inc 851 Wilson Avenue Kitchener, ON N2C 1J1
NPRI ID:	000003111
Ontario Reg. 127/01 ID:	6761
Number of Employees	388
UTM Coordinates (NAD83)	17 T 545146m E, 4806822m N
NAICS 2 Code:	31-33 Manufacturing
NAICS 4 Code:	3328 – Coating, Engraving and Heat Treating Activities
Public Contact	Robin Leach Manager of Environmental Services 519-893-7680
Highest Ranking Employee	John Hohmeier President and CEO 519-893-7680

Copper (and its Compounds) – CAS # NA-06

Aqueous solution is made up from water, copper sulfate and sulfuric acid. Direct current is applied and flows from the anode to the cathode, depositing elemental copper on the cathode.

The name of other toxic substances used or created at the facility for which plans are required to be prepared: nickel and its compounds, hexavalent chromium and its compounds, hydrochloric acid, and sulphuric acid.

Objective:	We intend to reduce the use of copper at our facility by >1 to 10 tonnes (2%) by modifying tanks; drain pans/tank covers to reduce splashing and material lost through drag out. We plan to continue to monitor for new/alternate technologies that are technically and economically feasible that will further reduce the usage of copper at our facility.
Target:	We plan to reduce the use by >1 to 10 tonnes (2%) in the next 12 months.

Facility Wide Accounting Information

Facility Level Quantifications of Copper	
Form of Involvement	Amount of Substance (tonnes)
Enters the Facility (Use)	>10 to 100
Created at the Facility	0.00
Contained In Product	79.68
Transformed/Destroyed (optional)	0.00
Released (air) from the Facility	0.00
Released (water) from the Facility	0.07
Released (land) from the Facility	0.00
Transferred (for recycling) from the Facility	11.09
Disposed of (off-site) by the Facility	0.05

Changes in Methods/Combination of Methods/Incidents out of the Normal Course of Events:

- There has been no change in the method or combination of methods used to track and quantify the substance during the previous calendar year; nor has there been a significant process change.
- There has been no incident of the normal course of events during the previous calendar year.
- There have been no amendments to the plan during the reporting year.

Comparison of Results

Comparison of Results to Previous Reporting Period expressed in Quantity and %						
Description	Quantity (tonnes)	Last Reported Quantity (tonnes)	Reporting Period of Last Reported Quantity	Change (tonnes)	% Change	Reason for Change
Enters the Facility (Use)	>10 to 100	>10 to 100	2010	3.29	3.76	Increase in Production Level
Creation	0.00	0.00	NA	0.00	0.00	NA
Contained In Product	0.00	0.00	NA	0.00	0.00	NA
Releases to Air	0.00	0.00	NA	0.00	0.00	NA
Releases to Water	0.00	0.00	NA	0.00	0.00	NA
Releases to Land	0.00	0.00	NA	0.00	0.00	NA
Total On Site Disposals	0.00	0.00	NA	0.00	0.00	NA
Total Off Site Disposals	0.042	0.0230	2010	0.0190	82.61	Business/Economic Reasons
Total Off Site Transfer for Tx Prior to Final Disposal	0.004	1.31	2010	-1.306	-99.69	Business/Economic Reasons
Total Off Site Transfer for Recycling	11.085	15.01	2010	-3.925	-26.15	Process Efficiencies

Timeline for Implementation of Options and Assessment and Effectiveness of Implementation

Description and Timetable for Implementation of Options		Assessment & Effectiveness of Options
Steps	Estimated Timelines	
Modify tank covers and drain pans	6-12 months	t.b.c.
List Additional Options Not Included in Plan here:	NA	NA

Estimate of Reductions

Estimate of Reduction of Copper as by Implementation of Options		
Type	Estimated Reductions in (tonnes) (percent)	Anticipated Date(s) for Achieving Reductions
Use	>1 to 10 tonnes (2%)	6-12 months
Creation	0.00 tonnes (0 %)	Not applicable
Release to Air	0.00 tonnes (0 %)	Not applicable
Release to Water	0.00 tonnes (0%)	Not applicable
Release to land	0.00 tonnes (0%)	Not applicable
Disposal Off Site	0.00 tonnes (0%)	Not applicable
Transfer Off Site for Recycling	0.00 tonnes (0%)	Not applicable
Contained in Product	0.00 tonnes (0%)	Not applicable

Summary of Amendments Made to the Plant during the Reporting Year:

There have been no changes made the TSRP for Copper during the reporting year.

Sulphuric Acid (H₂SO₄) - CAS #: 7664-93-9

Aqueous solution is made up from water and sulphuric acid. Solution is used as a surface activator prior to plating.

The name of other toxic substances used or created at the facility for which plans are required to be prepared: nickel and its compounds, copper and its compounds, hexavalent chromium and its compounds, nitric acid, and hydrochloric acid.

Objective:	We intend to reduce the use of H ₂ SO ₄ at our facility by >1 to 10 tonnes (1.25%) by modifying our racking system, and drain pans/tank covers to reduce splashing and material lost through drag out in the plating process. We plan to continue to monitor for new/alternate technologies that are technically and economically feasible that will further reduce the usage of sulphuric acid at our facility.
Target:	We plan to reduce the use by >1 to 10 tonnes (1.25%) in the next 12 months.

Facility Wide Accounting Information

Facility Level Quantifications	
Form of Involvement	Amount of Substance (tonnes)
Enters the Facility (Use)	>100 to 1000
Created at the Facility	0.00
Contained In Product	0.00
Transformed/Destroyed (optional)	0.00
Released (air) from the Facility	0.00
Released (water) from the Facility	0.00
Released (land) from the Facility	0.00
Transferred (for recycling) from the Facility	0.00
Disposed of (off-site) by the Facility	0.00
Remained in Storage at the Facility	0.00

Changes in Methods/Combination of Methods/Incidents out of the Normal Course of Events:

- There has been no change in the method or combination of methods used to track and quantify the substance during the previous calendar year; nor has there been a significant process change.
- There has been no incident of the normal course of events during the previous calendar year.
- There have been no amendments to the plan during the reporting year.

Comparison of Results

Comparison of Results to Previous Reporting Period expressed in Quantity and %						
Description	Quantity (tonnes)	Last Reported Quantity (tonnes)	Reporting Period of Last Reported Quantity	Change (tonnes)	% Change	Reason for Change
Enters the Facility (Use)	>100 to 1000	>100 to 1000	2010	27.26	7.08	No Significant Change
Creation	0.00	0.00	0.00	0.00	0.00	NA
Contained In Product	0.00	0.00	0.00	0.00	0.00	NA
Releases to Air	0.00	0.00	0.00	0.00	0.00	NA
Releases to Water	0.00	0.00	0.00	0.00	0.00	NA
Releases to Land	0.00	0.00	0.00	0.00	0.00	NA
Total On Site Disposals	0.00	0.00	0.00	0.00	0.00	NA
Total Off Site Disposals	0.00	0.00	0.00	0.00	0.00	NA
Total Off Site Transfer for Tx Prior to Final Disposal	0.00	0.00	0.00	0.00	0.00	NA
Total Off Site Transfer for Recycling	0.00	0.00	0.00	0.00	0.00	NA

Timeline for Implementation of Options and Assessment and Effectiveness of Implementation

Description and Timetable for Implementation of Options		Assessment & Effectiveness of Options
Steps	Estimated Timelines	
Send racks out for repair(s) Modify racks at same time so that parts drain towards overflow when removed from the plating tank	6-12 months	t.b.c.
Order anode rail covers (HS-A) and drain pan (HA) Install anode rail covers and drain pan	6-12 months 6-12 months	t.b.c.
List Additional Options Not Included in Plan here:	NA	NA

Estimate of Reductions

Estimate of Reduction as by Implementation of Options		
Type	Estimated Reductions in Tonnes (percent)	Anticipated Date(s) for Achieving Reductions
Use	>10 to 100 tonnes (1.25 %)	6-12 months
Creation	0.00 tonnes (0%)	Not applicable
Release to Air	0.00 tonnes (0%)	Not applicable
Release to Water	0.00 tonnes (0%)	Not applicable
Release to land	0.00 tonnes (0%)	Not applicable
Disposal Off Site	0.00 tonnes (0%)	Not applicable
Transfer Off Site for Recycling	0.00 tonnes (0%)	Not applicable
Contained in Product	0.00 tonnes (0%)	Not applicable

Summary of Amendments Made to the Plant during the Reporting Year:

There have been no changes made the TSRP for H₂SO₄ during the reporting year.

Hydrochloric Acid (HCl) - CAS #: 7647-01-0

Aqueous solution is made up from water and hydrochloric acid. Solution is used as an acid dip prior to plating to neutralize and solubilize alkaline film on parts.

The name of other toxic substances used or created at the facility for which plans are required to be prepared: nickel and its compounds, copper and its compounds, hexavalent chromium and its compounds, nitric acid, and sulphuric acid.

Objective:	<p>We intend to reduce the use of hydrochloric acid at our facility by >10 to 100 tonnes (5%) by substituting an alternate material in the water treatment final surge pH adjustment process.</p> <p>We plan to continue to monitor for new/alternate technologies that are technically and economically feasible that will further reduce the usage of hydrochloric acid at our facility.</p>
Target:	We plan to reduce the use by >10 to 100 tonnes (5%) in the next 12 months.

Facility Wide Accounting Information

Facility Level Quantifications	
Form of Involvement	Amount of Substance (tonnes)
Enters the Facility (Use)	>100 to 1000
Created at the Facility	0.00
Contained In Product	0.00
Transformed/Destroyed (optional)	0.00
Released (air) from the Facility	0.00
Released (water) from the Facility	0.00
Released (land) from the Facility	0.00
Transferred (for recycling) from the Facility	0.00
Disposed of (off-site) by the Facility	0.00
Remained in Storage at the Facility	0.00

Changes in Methods/Combination of Methods/Incidents out of the Normal Course of Events:

- There has been no change in the method or combination of methods used to track and quantify the substance during the previous calendar year; nor has there been a significant process change.
- There has been no incident of the normal course of events during the previous calendar year.
- There have been no amendments to the plan during the reporting year.

Comparison of Results

Comparison of Results to Previous Reporting Period expressed in Quantity and %						
Description	Quantity (tonnes)	Last Reported Quantity (tonnes)	Reporting Period of Last Reported Quantity	Change (tonnes)	% Change	Reason for Change
Enters the Facility (Use)	>100 to 1000	>100 to 1000	2010	10.07	2.57	No Significant Change
Creation	0.00	0.00	0.00	0.00	0.00	NA
Contained In Product	0.00	0.00	0.00	0.00	0.00	NA
Releases to Air	0.00	0.00	0.00	0.00	0.00	NA
Releases to Water	0.00	0.00	0.00	0.00	0.00	NA
Releases to Land	0.00	0.00	0.00	0.00	0.00	NA
Total On Site Disposals	0.00	0.00	0.00	0.00	0.00	NA
Total Off Site Disposals	0.00	0.00	0.00	0.00	0.00	NA
Total Off Site Transfer for Tx Prior to Final Disposal	0.00	0.00	0.00	0.00	0.00	NA
Total Off Site Transfer for Recycling	0.00	0.00	0.00	0.00	0.00	NA

Timeline for Implementation of Options and Assessment and Effectiveness of Implementation

Description and Timetable for Implementation of Options		Assessment & Effectiveness of Options
Steps	Estimated Timelines	
Switch the main water treatment final surge line over from HCl to H ₂ SO ₄ .	6-12 months	t.b.c.
List Additional Options Not Included in Plan here:	NA	NA

Estimate of Reductions

Estimate of Reduction as by Implementation of Options		
Type	Estimated Reductions in (kg) (percent)	Anticipated Date(s) for Achieving Reductions
Use	>10 to 100 tonnes (5%)	6-12 months
Creation	0.00 tonnes (0%)	Not applicable
Release to Air	0.00 tonnes (0%)	Not applicable
Release to Water	0.00 tonnes (0%)	Not applicable
Release to land	0.00 tonnes (0%)	Not applicable
Disposal Off Site	0.00 tonnes (0%)	Not applicable
Transfer Off Site for Recycling	0.00 tonnes (0%)	Not applicable
Contained in Product	0.00 tonnes (0%)	Not applicable

Summary of Amendments Made to the Plant during the Reporting Year:

There have been no changes made the TSRP for HCl during the reporting year.

Nickel (and its Compounds) - CAS #: NA - 11

Aqueous solution is made up from water, nickel chloride, nickel sulfate and boric acid. Direct current is applied and flows from the anode to the cathode, depositing elemental nickel on the cathode.

The name of other toxic substances used or created at the facility for which plans are required to be prepared: hexavalent chromium and its compounds, copper and its compounds, hydrochloric acid, nitric acid, and sulphuric acid.

Objective:	<p>We intend to reduce the use of nickel at our facility by >1 to 10 tonnes (2.5%) by modifying our racking system, and drain pans/tank covers to reduce splashing and material lost through drag out. In addition we have installed pH adjusters to help stabilize the process and reduce the amount of nickel solution lost during maintenance activities on the nickel filters.</p> <p>We plan to continue to monitor for new/alternate technologies that are technically and economically feasible that will further reduce the usage of nickel at our facility.</p>
Target:	We plan to reduce the use by >1 to 10 tonnes (2.5%) in the next 12 months.

Facility Wide Accounting Information

Facility Level Quantifications of Hex-Cr	
Form of Involvement	Amount of Substance (tonnes)
Enters the Facility (Use)	>100 to 1000
Created at the Facility	0.00
Contained In Product	432.71
Transformed/Destroyed (optional)	0.00
Released (air) from the Facility	0.00
Released (water) from the Facility	0.00
Released (land) from the Facility	0.00
Transferred (for recycling) from the Facility	120.10
Disposed of (off-site) by the Facility	0.52
Remained in Storage at the Facility	10.85

Changes in Methods/Combination of Methods/Incidents out of the Normal Course of Events:

- There has been no change in the method or combination of methods used to track and quantify the substance during the previous calendar year; nor has there been a significant process change.
- There has been no incident of the normal course of events during the previous calendar year.
- There have been no amendments to the plan during the reporting year.

Comparison of Results

Comparison of Results to Previous Reporting Period expressed in Quantity and %						
Description	Quantity (tonnes)	Last Reported Quantity (tonnes)	Reporting Period of Last Reported Quantity	Change (tonnes)	% Change	Reason for Change
Enters the Facility (Use)	>100 to 1000	>100 to 1000	2010	-7.99	-1.42	No Significant Change
Creation	0.00	0.00	0.00	0.00	0.00	NA
Contained In Product	0.00	0.00	0.00	0.00	0.00	NA
Releases to Air	0.00	0.00	0.00	0.00	0.00	NA
Releases to Water	0.00	0.00	0.00	0.00	0.00	NA
Releases to Land	0.00	0.00	0.00	0.00	0.00	NA
Total On Site Disposals	0.00	0.00	0.00	0.00	0.00	NA
Total Off Site Disposals	0.208	0.2230	2010	-0.0150	-6.73	More material sent out for recycling
Total Off Site Transfer for Tx Prior to Final Disposal	0.021	7.620	2010	-7.599	-99.72	See above
Total Off Site Transfer for Recycling	120.094	112.70	2010	7.394	6.56	Less material sent out for disposal

Timeline for Implementation of Options and Assessment and Effectiveness of Implementation

Description and Timetable for Implementation of Options		Assessment & Effectiveness of Options
Steps	Estimated Timelines	
Send racks out for repair(s) Modify racks at same time so that parts drain towards overflow when removed from the plating tank	6-12 months	t.b.c.
Modify tank covers and drain pans	6-12 months	t.b.c.
List Additional Options Not Included in Plan here:	NA	NA

Estimate of Reductions

Estimate of Reduction as by Implementation of Options		
Type	Estimated Reductions in (kg) (percent)	Anticipated Date(s) for Achieving Reductions
Use	>10 to 100 tonnes (2.5%)	6-12 months
Creation	0.00 tonnes (0 %)	Not applicable
Release to Air	0.00 tonnes (0 %)	Not applicable
Release to Water	0.00 tonnes (0%)	Not applicable
Release to land	0.00 tonnes (0%)	Not applicable
Disposal Off Site	0.00 tonnes (0%)	Not applicable
Transfer Off Site for Recycling	0.00 tonnes (0%)	Not applicable
Contained in Product	0.00 tonnes (0%)	Not applicable

Summary of Amendments Made to the Plant during the Reporting Year:

There have been no changes made the TSRP for Nickel during the reporting year.

Hexavalent Chromium and its compounds – CAS #: NA-19

Aqueous solution is made up from water, chromic acid, sulfuric acid. Direct current is applied and flows from the anode to the cathode, depositing elemental chrome on the cathode.

The name of other toxic substances used or created at the facility for which plans are required to be prepared: nickel and its compounds, copper and its compounds, hydrochloric acid, and sulphuric acid.

Objective:	<p>We intend to reduce the use of Hex-Cr at our facility by 1,000 to 10,000 kg (10%) by the installation of a chrome purification system, and by modifying our racking system, and drain pans/tank covers to reduce splashing and material lost through drag out.</p> <p>We plan to continue to monitor for new/alternate technologies that are technically and economically feasible that will further reduce the usage of Hex-Cr at our facility.</p>
Target:	We plan to reduce the use by 1,000 to 10,000 kg (10 %) in the next 12 months.

Facility Wide Accounting Information

Facility Level Quantifications of Hex-Cr	
Form of Involvement	Amount of Substance (kg)
Enters the Facility (Use)	10,000 to 100,0000
Created at the Facility	0.00
Contained In Product	0.00
Released (air) from the Facility	0.95
Released (water) from the Facility	0.00
Released (land) from the Facility	0.00
Transferred (for recycling) from the Facility	9,472.80
Disposed of (off-site) by the Facility	7,356.60
Remained in Storage at the Facility	0.00

Changes in Methods/Combination of Methods/Incidents out of the Normal Course of Events:

- There has been no change in the method or combination of methods used to track and quantify the substance during the previous calendar year; nor has there been a significant process change.
- There has been no incident of the normal course of events during the previous calendar year.
- There has been no amendment to the plan during the reporting year.

Comparison of Results

Comparison of Results to Previous Reporting Period expressed in Quantity and %						
Description	Quantity (kg)	Last Reported Quantity (kg)	Reporting Period of Last Reported Quantity	Change (kg)	% Change	Reason for Change
Enters the Facility (Use)	10,000 to 100,000	10,000 to 100,000	2010	1,000 to 10,000	10.57	No Significant Change
Creation	0.00	0.00	NA	0.00	0.00	NA
Contained In Product	0.00	0.00	NA	0.00	0.00	NA
Releases to Air	0.95	1.44	2010	-0.49	-34.03	ESDM data Re-done
Releases to Water	0.00	0.00	NA	0.00	0.00	NA
Releases to Land	0.00	0.00	NA	0.00	0.00	NA
Total On Site Disposals	0.00	0.00	NA	0.00	0.00	NA
Total Off Site Disposals	6625.973	2497.4	2010	4128.573	165.31	Business/Economic Reasons
Total Off Site Transfer for Tx Prior to Final Disposal	730.449	4627.334	2010	-3896.885	-84.21	Business/Economic Reasons
Total Off Site Transfer for Recycling	9472.795	6702.2668	2010	2770.5282	41.34	Receiver able to take more material

Timeline for Implementation of Options and Assessment and Effectiveness of Implementation

Description and Timetable for Implementation of Options		Assessment & Effectiveness of Options
Steps	Estimated Timelines	
Send racks out for repair(s) Modify racks at same time so that parts drain towards overflow when removed from the plating tank	6-12 months	t.b.c.
Order anode rail covers (HS-A) and drain pan (HA) Install anode rail covers and drain pan	6-12 months 6-12 months	t.b.c.
List Additional Options Not Included in Plan here:	NA	NA

Estimate of Reductions

Estimate of Reduction of Hex-Cr as by Implementation of Options		
Type	Estimated Reductions in (kg) (percent)	Anticipated Date(s) for Achieving Reductions
Use	1,000 to 10,000 kg (10%)	12-24 months
Creation	0.00 kg (0 %)	Not applicable
Release to Air	0.00 kg (0 %)	Not applicable
Release to Water	0.00 kg (0%)	Not applicable
Release to land	0.00 kg (0%)	Not applicable
Disposal Off Site	551.75 kg (7.5%)	12-24 months
Transfer Off Site for Recycling	710.46 (7.5%)	12-24 months
Contained in Product	0.00 kg (0%)	Not applicable


Summary of Amendments Made to the Plant during the Reporting Year:

There have been no changes made the TSRP for Hex-Cr during the reporting year.

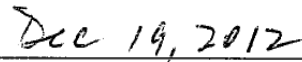
Certification Statements

Plan Certification for Copper and its Compounds:

As of December 19, 2012, I, John Hohmeier, certify that I have read the toxic substance reduction plan for copper and its compounds and I am familiar with its contents and to my knowledge the plan is factually accurate and complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09.



John Hohmeier
President and CEO, KEI



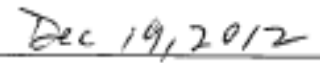
Date

Plan Certification for Sulphuric Acid:

As of December 19, 2012, I, John Hohmeier, certify that I have read the toxic substance reduction plan for sulphuric acid and I am familiar with its contents and to my knowledge the plan is factually accurate and complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09.



John Hohmeier
President and CEO, KEI



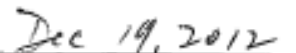
Date

Plan Certification for Hydrochloric Acid:

As of December 19, 2012, I, John Hohmeier, certify that I have read the toxic substance reduction plan for hydrochloric acid and I am familiar with its contents and to my knowledge the plan is factually accurate and complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09.



John Hohmeier
President and CEO, KEI



Date

Plan Certification for Nickel and Its Compounds:

As of December 19, 2012, I, John Hohmeier, certify that I have read the toxic substance reduction plan for nickel and its compounds and I am familiar with its contents and to my knowledge the plan is factually accurate and complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09.



John Hohmeier
President and CEO, KEI

Dec 19, 2012
Date

Plan Certification for Hexavalent Chromium:

As of December 19, 2012, I, John Hohmeier, certify that I have read the toxic substance reduction plan for hexavalent chromium and I am familiar with its contents and to my knowledge the plan is factually accurate and complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09.



John Hohmeier
President and CEO, KEI

Dec 19, 2012
Date