U.S. CHROME

CORPORATION OF NEW YORK

February 29, 2012

Scott Nelson
United States Environmental Protection Agency
Office of Federal Activities
International Compliance Assurance Division
Ariel Rios Building: (2254 A)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: **CY 2011 Annual Hazardous Waste Export Report**

Dear Mr. Nelson:

Please find attached U. S. Chrome Corporation of New York's (USC) CY 2011 annual Hazardous Waste Export Report. The completion of this document was based upon Hazardous Waste Manifests and shipment volumes provided by Stablex of Canada.

If you have any questions concerning the information presented, please contact me directly.

Very truly your,
U.S. Chrome Corporation of New York

Michael Klotzbach
General Manager

Attachment

received
SDN 3/7/12

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BATAVIA, NEW YORK 14020

US EPA - Scott Nelson
Office of Federal Activities
International Compliance Assurance Div.
Ariel Rios Bldg 2254A
1200 Pennsylvania Ave NW
Washington, DC. 20460

Route

EPA Mail

To: Nelson, Scott

Mailstop: ARIEL RIOS SOUTH
Department: 2254A
Phone: OFA

CY 2011 Export Report Attachment 1

Hazardous Waste Export Reports

ANNUAL HAZARDOUS WASTE EXPORT REPORT
CALENDER YEAR 2011

1. PRIMARY EXPORTER (Consignor)

Name:	U.S. Chrome Corporation of New York
USEPA ID#:	NYD990774206
Mailing Address:	31 Swan Street Batavia, New York 14020
Site Address:	31 Swan Street Batavia, New York 14020

2. EXPORT INTERMEDIARY

Name:	Gulfstream TLC, Inc.
USEPA ID#:	NYR000156539
Mailing Address:	1080 Military Turnpike Unit 410 Plattsburg, New York 12901

3. CONSIGNEE

Name:	Stablex Canada, Inc.
USEPA ID#:	NYD980756415
Mailing Address:	760 Boul. Industriel Blainsville, Quebec J7C 3V4

4. TRANSPORTER #1

Name:	Transport Rollex Ltee
USEPA ID#:	NYF006000053

5. WASTE INFORMATION

Description:	Spent Chromic Acid Tank Bottom Sludge
USEPA Waste #:	D002, D007
USDOT Shipping Name:	RQ Waste Corrosive Solid, Acidic, Inorganic nos
USDOT Hazard Class:	8
USDOT ID Code:	UN3260

6. SHIPPING INFORMATION

Total Shipments:	3
Shipment Dates:	1/20/11, 10/5/11 & 12/20/11
Total Volume Shipped:	1.45 tons

7. WASTE MINIMIZATION

Report attached for even numbered years.

8. CERTIFICATION

I certify under the penalty of the law that I have personally examined and am familiar with the information submitted in this report, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Signed: _____ Date: 3/29/12

ANNUAL HAZARDOUS WASTE EXPORT REPORT
CALENDER YEAR 2011

1. PRIMARY EXPORTER (Consignor)

Name:	U.S. Chrome Corporation of New York
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3. CONSIGNEE

Name:	Stablex Canada, Inc.
USEPA ID#:	NYD980756415
Mailing Address:	760 Boul. Industriel Blainsville, Quebec J7C 3V4

4. TRANSPORTER #1

Name:	Transport Rollex Ltee
USEPA ID#:	NYF006000053

5. WASTE INFORMATION

Description:	Alkaline Strip Solution
EPA Waste #:	D002, D007
DOT Shipping Name:	RQ Waste Corrosive Liquid, Basic, Inorganic nos
DOT Hazard Class:	8
DOT ID Code:	UN3266

6. SHIPPING INFORMATION

Total Shipments:	1
Shipment Dates:	6/2/11
Total Volume Shipped:	4.40 tons

7. WASTE MINIMIZATION

Report attached for even numbered years.

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Signed: _____ Date: 2/29/12

ANNUAL HAZARDOUS WASTE EXPORT REPORT
CALENDER YEAR 2011

1. PRIMARY EXPORTER (Consignor)

Name:	U.S. Chrome Corporation of New York
USEPA ID#:	NYD990774206
Mailing Address:	31 Swan Street Batavia, New York 14020
Site Address:	31 Swan Street Batavia, New York 14020

2. EXPORT INTERMEDIARY

Name:	Gulfstream TLC, Inc.
USEPA ID#:	NYR000156539
Mailing Address:	1080 Military Turnpike Unit 410 Plattsburg, New York 12901

3. CONSIGNEE

Name:	Stablex Canada, Inc.
USEPA ID#:	NYD980756415
Mailing Address:	760 Boul. Industriel Blainsville, Quebec J7C 3V4

4. TRANSPORTER #1

Name:	Transport Rollex Ltee
USEPA ID#:	NYF006000053

5. WASTE INFORMATION

Description:	Waste Chromic Acid Solution
EPA Waste #:	D002, D007
DOT Shipping Name:	RQ Waste Chromic Acid Solution
DOT Hazard Class:	8
DOT ID Code:	UN1755

6. SHIPPING INFORMATION

Total Shipments:	5
Shipment Dates:	1/20/11, 5/3/11, 6/2/11, 10/5/11 & 12/20/11
Total Volume Shipped:	9.42 tons

7. WASTE MINIMIZATION

Report attached for even numbered years.

8. CERTIFICATION

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Signed: _____ Date: 2/29/12

ANNUAL HAZARDOUS WASTE EXPORT REPORT
CALENDER YEAR 2011

1. PRIMARY EXPORTER (Consignor)

Name:	U.S. Chrome Corporation of New York
USEPA ID#:	NYD990774206
Mailing Address:	31 Swan Street Batavia, New York 14020
Site Address:	31 Swan Street

2. EXPORT INTERMEDIARY

Name:	Gulfstream TLC, Inc.
USEPA ID#:	NYR000156539
Mailing Address:	1080 Military Turnpike Unit 410 Plattsburg, New York 12901 Batavia, New York 14020

3. CONSIGNEE

Name:	Stablex Canada, Inc.
USEPA ID#:	NYD980756415
Mailing Address:	760 Boul. Industriel Blainsville, Quebec J7C 3V4

4. TRANSPORTER #1

Name:	Transport Rollex Ltee
USEPA ID#:	NYF006000053

5. WASTE INFORMATION

Description:	Chrome Contaminated Debris
EPA Waste #:	D007, D008
DOT Shipping Name:	RQ Waste Environmentally Hazardous Substance Solid nos
DOT Hazard Class:	9
DOT ID Code:	UN3077

6. SHIPPING INFORMATION

Total Shipments:	4
Shipment Dates:	1/20/11, 6/2/11, 10/5/11 & 12/20/11
Total Volume Shipped:	8.55 tons

7. WASTE MINIMIZATION — Report attached for even numbered years.

8. CERTIFICATION

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Signed: _____ Date: 2/29/12

ANNUAL HAZARDOUS WASTE EXPORT REPORT
CALENDER YEAR 2011

1. PRIMARY EXPORTER (Consignor)

Name:	U.S. Chrome Corporation of New York
USEPA ID#:	NYD990774206
Mailing Address:	31 Swan Street Batavia, New York 14020
Site Address:	31 Swan Street Batavia, New York 14020

2. EXPORT INTERMEDIARY

Name:	Gulfstream TLC, Inc.
USEPA ID#:	NYR000156539
Mailing Address:	1080 Military Turnpike Unit 410 Plattsburg, New York 12901

3. CONSIGNEE

Name:	Stablex Canada, Inc.
USEPA ID#:	NYD980756415
Mailing Address:	760 Boul. Industriel Blainsville, Quebec J7C 3V4

4. TRANSPORTER #1

Name:	Transport Rollex Ltee
USEPA ID#:	NYF006000053

5. WASTE INFORMATION

Description:	Waste De-burring Solution
EPA Waste #:	D007, D008
DOT Shipping Name:	RQ Waste Environmentally Hazardous Substances, Liquid nos
DOT Hazard Class:	9
DOT ID Code:	UN3082

6. SHIPPING INFORMATION

Total Shipments:	1
Shipment Dates:	12/20/11
Total Volume Shipped:	5.40 tons

7. WASTE MINIMIZATION

Report attached for even numbered years.

8. CERTIFICATION

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ANNUAL HAZARDOUS WASTE EXPORT REPORT
CALENDER YEAR 2011

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Site Address:	31 Swan Street Batavia, New York 14020

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Mailing Address:	1080 Military Turnpike Unit 410 Plattsburg, New York 12901

3. CONSIGNEE

Name:	Stablex Canada, Inc.
USEPA ID#:	NYD980756415
Mailing Address:	760 Boul. Industriel Blainsville, Quebec J7C 3V4

4. TRANSPORTER #1

Name:	Transport Rollex Ltee
USEPA ID#:	NYF006000053

5. WASTE INFORMATION

Description:	Waste Lacquer Thinner (Chrome-Contaminated)
EPA Waste #:	D002, D007
DOT Shipping Name:	RQ Waste Chromic Acid Solution
DOT Hazard Class:	8
DOT ID Code:	UN1755

6. SHIPPING INFORMATION

Total Shipments:	1
Shipment Dates:	12/20/11
Total Volume Shipped:	3.00 tons

7. WASTE MINIMIZATION

Report attached for even numbered years.

8. CERTIFICATION

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Signed: _____ Date: 2/29/12

ANNUAL HAZARDOUS WASTE EXPORT REPORT
CALENDER YEAR 2011

1. PRIMARY EXPORTER (Consignor)

Name:	U.S. Chrome Corporation of New York
USEPA ID#:	NYD990774206
Mailing Address:	31 Swan Street Batavia, New York 14020
Site Address:	31 Swan Street Batavia, New York 14020

2. EXPORT INTERMEDIARY

Name:	Gulfstream TLC, Inc.
USEPA ID#:	NYR000156539
Mailing Address:	1080 Military Turnpike Unit 410 Plattsburg, New York 12901

3. CONSIGNEE

Name:	Stablex Canada, Inc.
USEPA ID#:	NYD980756415
Mailing Address:	760 Boul. Industriel Blainsville, Quebec J7C 3V4

4. TRANSPORTER #1

Name:	Transport Rollex Ltee
USEPA ID#:	NYF006000053

5. WASTE INFORMATION

Description:	Waste Water Treatment Filter Cake
EPA Waste #:	F006
DOT Shipping Name:	RQ Waste Environmentally Hazardous Substances, Solids nos
DOT Hazard Class:	8
DOT ID Code:	UN3077

6. SHIPPING INFORMATION

Total Shipments:	2
Shipment Dates:	1/20/11 & 10/5/11
Total Volume Shipped:	1.5 tons

7. WASTE MINIMIZATION

Report attached for even numbered years.

8. CERTIFICATION

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Signed: _____ Date: 2/29/12

CY 2011 Export Report Attachment 2

Current Hazardous Waste Reduction Plan

HAZARDOUS WASTE REDUCTION PLAN
2010 Biennial Update

Prepared For:
U.S. Chrome Corporation of New York
31 Swan Street
Batavia, New York

Prepared By:
Hazard Evaluations, Inc.
3752 North Buffalo Road
Orchard Park, New York 14127

June 29, 2011

1.0 INTRODUCTION

1.1 Background

The U.S. Chrome Corporation of New York (USC) facility, located at 31 Swan Street, Batavia, New York, specializes in Hard Chrome electroplating of metal parts. The operations performed on-site to produce the facility's end products include very limited machining of metal parts, alkaline cleaning, non-cyanide Chromium electroplating and rinsing. Hazardous waste generation is related to the cleaning and processing of metal parts, and the treatment of the resulting wastewaters. The alkaline cleaning involves use of a caustic solution, while the electroplating bath consists of a solution containing Hexavalent Chromium. In 2010, these operations resulted in the generation of six separate hazardous waste streams, including: 1) Hazardous wastewater treatment plant filter cake; 2) Chromic Acid tank sludge; 3) Chromium contaminated debris and floor sweeping residues; 4) Waste Chromic Acid solution; 5) Alkaline Stripping Solution; and 6) Electroplating process wastewater. The electroplating process wastewater is treated on-site for metals precipitation and clarification prior to being discharged to the local POTW. All other wastes are shipped off-site for treatment, stabilization and landfill disposal.

1.2 Corporate Hazardous Waste Reduction Policy

It is the policy of USC to operate its facility both with the highest regard for the protection of human health and the environment, and in accordance with applicable federal, state and local environmental laws and regulations. Furthermore, it is USC's long term goal to: 1) Reduce the overall quantity of hazardous waste(s) generated; and/or 2) Recover, reuse or recycle any hazardous wastes generated when possible. To that end, USC has already initiated various waste reduction efforts over the past several years.

USC's management has authorized its General Manager to implement those waste reduction measures which have been deemed technically feasible and economically practical. This individual is also responsible for implementing both the hazardous waste reduction policy and the provisions of the Hazardous Waste Reduction Plan (HWRP).

USC's primary goal is to maintain its existing waste reduction efforts in a manner which maximizes efficiency and effectiveness. The use of "Porous Pots" in the plating baths has helped reduce waste Chromic Acid solution by removing impurities and extend the life of this process solution. USC will also continue to monitor industry research regarding more efficient methods of managing or recovering the alkaline stripping solution and minimizing the amount of wastewater from the electroplating process. To enhance these efforts, USC plans to provide employee training focusing on the implementation, benefits and applicability of waste reduction measures. Achieving this goal will reduce both disposal costs and the regulatory requirements for hazardous wastes generated throughout the facility.

2.0 HAZARDOUS WASTE GENERATION

2.1 General

During calendar year 2010, USC generated a total of 14.65 tons of RCRA hazardous wastes that were shipped off-site. These wastes included the following;

1) 4.5 tons of Chromium contaminated debris (D007, D008);
2) 3.0 tons of waste Chromic Acid solution (D002, D007);
3) 6.05 tons of Alkaline Stripping Solution (D002, D007);

In addition, a total of 362.8 tons of hazardous process wastewater were treated on-site before being discharged to the local POTW. There were no acute hazardous wastes generated by USC during 2010.

2.2 Hazardous Waste Streams

As indicated above, all of the reportable hazardous wastes generated by USC result directly from the facility's cleaning and processing of metal parts. The operation may involve cleaning (stripping) the parts in an alkaline solution (Tetra Potassium Pyrophosphate - TKPP) and then rinsing the parts with fresh water. Over time, the alkaline solution may become spent and have to be disposed. This disposal process typically occurs about once every two years. The parts are then charged and placed in an electroplating bath containing Chromic acid. Wastes generated from this process may include waste Chromic acid solution and Chromic acid tank sludges that are removed from the electroplating bath tanks. The plated parts are then rinsed, and the rinse water is treated in the on-site wastewater treatment system via metal precipitation and clarification. The water treatment system includes a filter press which results in production of a filter cake waste. The final waste stream consists of debris produced during processing, including gloves, tape, floor sweepings and other ancillary materials.

Of the various hazardous wastes generated by USC during 2010, four of the six waste streams will be addressed in this HWRP update, including the chrome contaminated debris, waste chromic acid solution, alkaline stripping solution, and process wastewater. The remaining hazardous wastes generated on-site (Chromic acid tank sludge and wastewater treatment plant filter cake) continued to be generated at well below the five ton reporting threshold, and are not further addressed in this HWRP.

2.3 Production Rate Index

A Production Rate Index (PRI) has been developed for this facility to measure, and account for, changes in the annual amount of parts processed. These data will be used to facilitate the assessment of hazardous waste reduction efforts by allowing USC's management to distinguish inter-year quantity changes that resulted from waste reduction activity from those caused by economic and/or other factors. The PRI for Calendar Year 2010 was calculated based on past production information provided by USC personnel, as follows:

2010 Production =	$1,948,449
2009 Production =	$2,077,073
Production Rate Index =	$1,948,449 / $2,077,073= 0.94

2.4 Hazardous Waste Management Costs

To date, the costs of managing USC's hazardous wastes have resulted from the following activities (based on USC estimates):

Labor and Materials for Waste Management (Annual)	
Labor (i.e., operators, technicians):	$ 40,982
Other/Miscellaneous Expenses:	2,495
Transportation & Disposal of Wastes (Annual)	11,543
Total	**$ 55,020**

3.0 HAZARDOUS WASTE STREAM REDUCTION MEASURES

3.1 General

As indicated in the previous sections, USC's hard chrome plating operations may result in the generation of six types of hazardous waste. USC has already committed resources to determining and evaluating various measures for reducing the facility's overall hazardous waste generation rate and volume. The waste reduction measures which are currently utilized (and/or scheduled for implementation) at this facility include research regarding more efficient methods of managing or recovering the alkaline stripping solution, minimizing debris associated with the plating process, and minimizing the amount of wastewater from the electroplating process. Additionally, enhanced employee training will be pursued to improve waste management. These measures are discussed in the following section.

3.2 Waste Reduction Measures

To minimize the quantity of hazardous wastes produced, USC has already implemented various production-related activities. These include limited use of Porous Pots in the Chromic acid baths to prolong process solution life and reduce tank sludges and continued use of the treatment system sludge dryer to reduce sludge weight. In addition, the implementation of new methods of masking parts to be plated has continually reduced the generation rate for this waste over time. USC is also committed to reviewing industry journals and trade publications for improved methods of using the alkaline cleaning solution. Reduced waste production may result from lengthening the useful life of the solution by filtration, by-product removal, etc., although no solution has been identified to date. The investigation into reducing the amount wastewater produced from rinsing plated parts concluded with the selection of lower flow rinsing nozzle, with the recirculation of rinse waters being allowed for some select operations.

A final waste reduction technique which is continually being used by USC is employee training. Currently, all personnel, regardless of their possible exposure to hazardous materials and/or hazardous wastes, receive OSHA Hazard Communications

Standard training. RCRA Hazardous Waste training is also provided to a select group of employees that are involved with hazardous management or generation. These training programs are provided annually and cover a variety of topics including, but not limited to, compliance with applicable federal and state regulations; solid and hazardous waste identification definitions; sources of hazard information; the "cradle to grave" waste tracking system and employee responsibilities regarding waste identification and characterization. USC will continue to revise and expand these training programs to include additional information focusing on hazardous waste reduction. Among the new topics proposed are applicable waste reduction regulations, corporate waste reduction policy, benefits and incentives for hazardous waste reduction, and implementation of waste reduction techniques.

4.0 IMPACT OF WASTE REDUCTION IMPLEMENTATION

4.1 Schedule

The proposed schedule of implementation for the proposed waste reduction measures identified in Section 3.2 is summarized in Table 2.

4.2 Future Waste Transference Estimate

The implementation of the proposed waste reduction techniques identified in Section 3.2 will not result in the transference of waste to any other environmental media. The continued training program will provide employees with valuable information on the benefits of waste reduction and include basic techniques for reducing wastes at the USC facility. This program should help to promote the concept of waste reduction throughout the facility.

4.3 Economic Practicality

When adjusted for the production decrease between 2009 and 2010 of 6%, the actual cost savings have increased due to increased transportation and disposal fees. In 2010 USC estimated the total cost of managing and disposing hazardous waste to be **$55,020.** Future waste management costs will be estimated with more production and waste generation data. Implementation of USC's waste reduction measures will continue to be evaluated relative to hazardous waste generation volume, management cost, and production. Estimation of cost savings will be reported in future Hazardous Waste Reduction Plans.

4.4 Waste Reduction Assessments

The measurement of waste reduction effectiveness was completed for each reportable hazardous waste stream generated by USC during 2010. This measurement was completed using a method developed and identified in USC's CY 1996 Hazardous Waste Reduction Plan, with the exception of the calculation of the Actual Hazardous Waste Reduction Rate presented below as Step 5. This calculation has been modified to reflect an example obtained from the NYSDEC during 2000.

Chrome Contaminated Debris

Step 1 Percentage change (C) in the waste stream's generation volume from one year to the next (Note: A negative number represents a reduction in the generation volume):

Comparing 2010 to 2009 (Prior Year)

$$C = \frac{(\text{Waste current year [2010]}) - (\text{Waste prior year [2009]})}{(\text{Waste prior year [2009]})} \times 100$$

$$C = \frac{(4.5 - 8.5)}{(8.5)} = -0.47 \times 100$$

C = **-47%** Volume **decrease** from 2009 (Prior Year) to 2010

Comparing 2010 to 2003 (Base Year)

$$C = \frac{(\text{Waste current year [2010]}) - (\text{Waste base year [2003]})}{(\text{Waste base year [2003]})} \times 100$$

$$C = \frac{(4.5 - 3.47)}{(3.47)} = 0.30 \times 100$$

C = **30%** Volume **increase** from 2003 (Base Year) to 2010

Step 2 Production Rate Index (PRI) (Note: A number less than 1.0 will represent a reduction in the facility's production):

Comparing 2010 to 2009 (Prior Year)

$$PRI = \frac{(\text{Production current year [2010]})}{(\text{Production prior year [2009]})}$$

$$PRI = \frac{(\$1{,}948{,}449)}{(\$2{,}077{,}073)}$$

PRI = **0.94**

Comparing 2010 to 2003 (Base Year)

$$PRI = \frac{(\text{Production current year [2010]})}{(\text{Production base year [2003]})}$$

$$PRI = \frac{(\$1{,}948{,}449)}{(\$1{,}266{,}404)}$$

PRI = **1.54**

Step 3 Expected amount of hazardous waste generated (EHW) in 2010 relative to production in previous year (2009) and base year (2003):

Comparing 2010 to 2009 (Previous Year)
EHW = 2010/2009 PRI x Hazardous waste generated during 2009:

EHW = 0.94 x 8.5 tons

EHW = **7.99 tons** (expected in 2010)

Comparing 2010 to 2003 (Base Year)
EHW = 2010/2003 PRI x hazardous waste generated during 2003:

EHW = 1.54 x 3.47 tons

EHW = **5.34 tons** (expected in 2010)

Step 4 Hazardous Waste Reduction (HWR) for CY 2010 represents the theoretical volume of increase or decrease of the current year's actual generated waste volume relative to the volume of hazardous waste "expected" to be generated when accounting for production differences between the previous/current year and base/current year [Note: A negative number indicates an increase in volume of hazardous waste generated (adjusted for production)]:

Comparing 2010 to 2009 (Previous Year)
HWR = 2010/2009 EHW - Actual hazardous waste generated during 2010.

HWR = 7.99 tons – 4.5 tons

HWR = **3.49 tons** adjusted hazardous waste **decrease** from 2009 to 2010.

Comparing 2010 to 2003 (Base Year)
HWR = 2010/2003 EHW - Actual hazardous waste generated during 2010.

HWR = 5.34 tons – 4.5 tons

HWR = **0.84 tons** adjusted hazardous waste **decrease** from 2003 to 2010.

Step 5 Estimate of the actual hazardous waste reduction rate (RR) achieved is a representation of the percentage difference between the Expected Hazardous Waste volume (relative to production) and the theoretical Hazardous Waste Reduction (or increase) volume [Notes: A negative number indicates an increase of hazardous waste generated for the current year, expressed as a percentage of the Expected Hazardous

Waste (which is adjusted for production)]:

Using 2010/2009 (Previous Year) HWR & EHW

$$RR = \frac{\text{2010/2009 HWR}}{\text{2010/2009 EHW}} \times 100$$

$$RR = \frac{\text{3.49 tons}}{\text{7.99 tons}} = 0.44 \times 100$$

RR = **44% decrease** from 2009 to 2010

Using 2010/2003 (Base Year) HWR & EHW

$$RR = \frac{\text{2010/2003 HWR}}{\text{2010/2003 EHW}} \times 100$$

$$RR = \frac{\text{0.84 tons}}{\text{5.34 tons}} = 0.16 \times 100$$

RR = **16% decrease** from 2003 to 2010

Waste Chromic Acid Solution

Step 1 Percentage change (C) in the waste stream's generation volume from one year to the next (Note: A negative number represents a reduction in the generation volume):

Comparing 2010 to 2009

$$C = \frac{\text{(Unit waste current year [2010]) - (Unit waste prior year [2009])}}{\text{(Unit waste prior year [2009])}} \times 100$$

$$C = \frac{(3.0 - 10.85)}{(10.85)} = -0.72 \times 100$$

C = **-72%** Volume **decrease** from 2009 to 2010

Comparing 2010 to 1996 (Base Year)

$$C = \frac{\text{(Waste current year [2010]) - (Waste base year [1996])}}{\text{(Waste base year [1996])}} \times 100$$

$$C = \frac{(3.0 - 6.44)}{(6.44)} = -0.53 \times 100$$

C = **-53%** Volume **decrease** from 1996 (Base Year) to 2010

Step 2 Production Rate Index (PRI) (Note: A number less than 1.0 will represent a reduction in the facility's production rate):

Comparing 2010 to 2009 (Prior Year)

$$PRI = \frac{\text{(Production current year [2010])}}{\text{(Production prior year [2009])}}$$

$$PRI = \frac{\$1,948,449}{\$2,077,073}$$

PRI = **0.94**

Comparing 2010 to 1996 (Base Year)

$$PRI = \frac{\text{(Production current year [2010])}}{\text{(Production base year [1996])}}$$

$$PRI = \frac{\$1,948,449}{\$844,668}$$

PRI = **2.31**

Step 3 Expected amount of hazardous waste generated (EHW) in 2010 relative to production in previous year (2009) and base year (1996):

Comparing 2010 to 2009 (Previous Year)

EHW = 2010/2009 PRI x Hazardous waste generated during 2009:

EHW = 0.94 x 10.85 tons

EHW = **10.2 tons** (expected in 2010)

Comparing 2010 to 1996 (Base Year)

EHW = 2010/1996 PRI x hazardous waste generated during 1996:

EHW = 2.31 x 6.44 tons

EHW = 14.9 **tons** (expected in 2010)

Step 4 Hazardous Waste Reduction (HWR) for CY 2010 represents the theoretical volume of increase or decrease of the current year's actual generated waste volume relative to the volume of hazardous waste "expected" to be generated when accounting for production differences between the previous/current year and base/current year [Note: A negative number indicates an increase in volume of hazardous waste generated (adjusted for production)]:

Comparing 2010 to 2009 (Previous Year)
HWR = 2010/2009 EHW - Actual hazardous waste generated during 2010.

HWR = 10.2 tons – 3.0 tons

HWR = **7.2 tons** adjusted hazardous waste **decrease** from 2009 to 2010.

Comparing 2010 to 1996 (Base Year)
HWR = 2010/1996 EHW - Actual hazardous waste generated during 2010.

HWR = 14.9 tons – 3.0 tons

HWR = **11.9 tons** adjusted hazardous waste **decrease** from 1996 to 2010.

Step 5 Estimate of the actual hazardous waste reduction rate (RR) achieved is a representation of the percentage difference between the Expected Hazardous Waste volume (relative to production) and the theoretical Hazardous Waste Reduction (or increase) volume [Note: A negative number indicates an increase of hazardous waste generated for the current year, expressed as a percentage of the Expected Hazardous Waste (which is adjusted for production)]:

Using 2010/2009 (Previous Year) HWR & EHW

$$RR = \frac{\text{2010/2009 HWR}}{\text{2010/2009 EHW}} \times 100$$

$$RR = \frac{\text{7.2 tons}}{\text{10.2 tons}} = 0.71 \times 100$$

RR = **71% decrease** from 2009 to 2010

Using 2010/1996 (Base Year) HWR & EHW

$$RR = \frac{\text{2010/1996 HWR}}{\text{2010/1996 EHW}} \times 100$$

$$RR = \frac{\text{11.9 tons}}{\text{14.9 tons}} = 0.80 \times 100$$

RR = **80% decrease** from 1996 to 2010

Process Wastewater

Step 1 Percentage change (C) in the waste stream's generation volume from one year to the next (Note: A negative number represents a reduction in the generation volume):

Comparing 2010 to 2009

$$C = \frac{(\text{Unit waste current year [2010]}) - (\text{Unit waste prior year [2009]})}{(\text{Unit waste prior year [2009]})} \times 100$$

$$C = \frac{(362.8 - 500.4)}{(500.4)} = -0.27 \times 100$$

C = **27.0%** Volume **decrease** from 2009 to 2010

Comparing 2010 to 1995 (Base Year)

$$C = \frac{(\text{Waste current year [2010]}) - (\text{Waste base year [1995]})}{(\text{Waste base year [1995]})} \times 100$$

$$C = \frac{(362.8 - 228)}{(228)} = 0.59 \times 100$$

C = **59%** Volume **increase** from 1995 (Base Year) to 2010

Step 2 Production Rate Index (PRI) (Note: A number less than 1.0 will represent a reduction in the facility's production rate):

Comparing 2010 to 2009 (Prior Year)

$$PRI = \frac{(\text{Production current year [2010]})}{(\text{Production prior year [2009]})}$$

$$PRI = \frac{(\$1{,}948{,}449)}{(\$2{,}077{,}073)}$$

PRI = **0.94**

Comparing 2010 to 1995 (Base Year)

$$PRI = \frac{(\text{Production current year [2010]})}{(\text{Production base year [1995]})}$$

$$PRI = \frac{(\$1{,}948{,}449)}{(\$795{,}979)}$$

PRI = **2.45**

Step 3 Expected amount of hazardous waste generated (EHW) in 2010 relative to production in previous year (2009) and base year (1995):

Comparing 2010 to 2009 (Previous Year)
EHW = 2010/2009 PRI x Hazardous waste generated during 2009:

EHW = 0.94 x 500.4 tons

EHW = **470 tons** (expected in 2010)

Comparing 2010 to 1995 (Base Year)
EHW = 2010/1995 PRI x hazardous waste generated during 1995:

EHW = 2.45 x 228 tons

EHW = **558.6 tons** (expected in 2010)

Step 4 Hazardous Waste Reduction (HWR) for CY 2010 represents the theoretical volume of increase or decrease of the current year's actual generated waste volume relative to the volume of hazardous waste "expected" to be generated when accounting for production differences between the previous/current year and base/current year [Note: A negative number indicates an increase in volume of hazardous waste generated (adjusted for production)]:

Comparing 2010 to 2009 (Previous Year)
HWR = 2010/2009 EHW - Actual hazardous waste generated during 2010.

HWR = 470 tons – 362.8 tons

HWR = **107.2 tons** adjusted hazardous waste **decrease** from 2009 to 2010.

Comparing 2010 to 1995 (Base Year)
HWR = 2010/1995 EHW - Actual hazardous waste generated during 2010.

HWR = 558.6 tons – 362.8 tons

HWR = **195.8 tons** adjusted hazardous waste **decrease** from 1995 to 2010.

Step 5 Estimate of the actual hazardous waste reduction rate (RR) achieved is a representation of the percentage difference between the Expected Hazardous Waste volume (relative to production) and the theoretical Hazardous Waste Reduction (or increase) volume [Note: A negative number indicates an increase of hazardous waste generated for the current year, expressed as a percentage of the Expected Hazardous Waste (which is adjusted for production)]:

Using 2010/2009 (Previous Year) HWR & EHW

$$RR = \frac{\text{2010/2009 HWR}}{\text{2010/2009 EHW}} \times 100$$

$$RR = \frac{\text{107.2 tons}}{\text{470 tons}} = 0.23 \times 100$$

RR = **23% decrease** from 2009 to 2010

Using 2010/1995 (Base Year) HWR & EHW

$$RR = \frac{\text{2010/1995 HWR}}{\text{2010/1995 EHW}} \times 100$$

$$RR = \frac{\text{195.8 tons}}{\text{558.6 tons}} = 0.35 \times 100$$

RR = **35% decrease** from 1995 to 2010

Alkaline Stripping Solution

Step 1 Percentage change (C) in the waste stream's generation volume from one year to the next (Note: A negative number represents a reduction in the generation volume):

Comparing 2010 to 2008 (Prior Year)

$$C = \frac{\text{(Waste current year [2010]) - (Waste prior year [2008])}}{\text{(Waste prior year [2008])}} \times 100$$

$$C = \frac{(6.05 - 8.25)}{(8.25)} = -0.27 \times 100$$

C = **-27%** Volume **decrease** from 2008 (Prior Year) to 2010

Comparing 2010 to 1996 (Base Year)

$$C = \frac{\text{(Waste current year [2010]) - (Waste base year [1996])}}{\text{(Waste base year [1996])}} \times 100$$

$$C = \frac{(6.05 - 5.66)}{(5.66)} = 0.07 \times 100$$

C = **7%** Volume **increase** from 1996 (Base Year) to 2010

Step 2 Production Rate Index (PRI) (Notes: A number less than 1.0 will represent a reduction in the facility's production and the 1996 Production expressed in dollars has not been adjusted for inflation).

Comparing 2010 to 2008 (Prior Year)

$$PRI = \frac{\text{(Production current year [2010])}}{\text{(Production prior year [2008])}}$$

PRI = ($1,948,449) / ($2,680,456)

PRI = **0.73**

Comparing 2010 to 1996 (Base Year)

PRI = (Production current year [2010]) / (Production base year [1996])

PRI = ($1,948,449) / ($844,668)

PRI = **2.31**

Step 3 Expected amount of hazardous waste generated (EHW) in 2010 relative to production in previous year (2008) and base year (1996):

Comparing 2010 to 2008 (Previous Year)

EHW = 2010/2008 PRI x Hazardous waste generated during 2008:

EHW = 0.73 x 8.25 tons

EHW = **6.02 tons** (expected in 2010)

Comparing 2010 to 1996 (Base Year)

EHW = 2010/1996 PRI x hazardous waste generated during 1996:

EHW = 2.31 x 5.66 tons

EHW = **13.07 tons** (expected in 2010)

Step 4 Hazardous Waste Reduction (HWR) for CY 2010 represents the theoretical volume of increase or decrease of the current year's actual generated waste volume relative to the volume of hazardous waste "expected" to be generated when accounting for production differences between the previous/current year and base/current year. (Note: A negative number indicates an increase in volume of hazardous waste generated (adjusted for production):

Comparing 2010 to 2008 (Previous Year)

HWR = 2010/2008 EHW - Actual hazardous waste generated during 2010.

HWR = 6.02 tons – 6.05 tons

HWR = **-0.03 tons** adjusted hazardous waste **increase** from 2008 to 2010.

Comparing 2010 to 1996 (Base Year)

HWR = 2010/1996 EHW - Actual hazardous waste generated during 2010.

HWR = 13.07 tons – 6.05 tons

HWR = **7.02 tons** adjusted hazardous waste **decrease** from 1996 to 2010.

Step 5 Estimate of the actual hazardous waste reduction rate (RR) achieved is a representation of the percentage difference between the Expected Hazardous Waste volume (relative to production) and the theoretical Hazardous Waste Reduction (or increase) volume. [Note: A negative number indicates an increase of hazardous waste generated for the current year, expressed as a percentage of the Expected Hazardous Waste (which is adjusted for production)]:

Using 2010/2008 (Previous Year) HWR & EHW

$$RR = \frac{2010/2008\ HWR}{2010/2008\ EHW} \times 100$$

$$RR = \frac{-0.03\ tons}{6.02\ tons} = -0.005 \times 100$$

RR = **-0.5% increase** from 2008 to 2010

Using 2010/1996 (Base Year) HWR & EHW

$$RR = \frac{2010/1996\ HWR}{2010/1996\ EHW} \times 100$$

$$RR = \frac{7.02\ tons}{13.07\ tons} = 0.54 \times 100$$

RR = **54% decrease** from 1996 to 2010

HAZARDOUS WASTE GENERATION SUMMARY

COMPANY NAME	EPA I.D. NUMBER
US Chrome Corporation of New York	NYD990774200

TABLE 1

WASTE STREAM ID NUMBER	NAME OF WASTE	SOURCE OF GENERATION	DISPOSAL METHOD	QUANTITY OF WASTE GENERATED (TONS)				PRODUCTIVITY INDEX BASE INDEX = 1 (YEAR HWRP FIRST SUBMITTED)			
				1995	1996	1997	1998	1995	1996	1997	1998
001	Chromic Acid	Plating solution	Treat/Recycle		6.44	1.19	9.87		0.33	3.0	0.2
	Solution (D)	with impurities									
002	Chromic Acid	Sediment on	Stabilization		2.63	2.33	6.60		0.30	0.94	0.33
	Tank Sludge (E)	bottom of tank	& Secure Landfill								
003	Waste Treatment	WW Metals removal	Stabilization	8.1	2.1	2.37	3.34	0.55	1.28	0.664	0.652
	Filter Cake (A)		& Secure Landfill								
004	waste Water (B)	Plating & Rinsing	On-Site Treatment	228	266.5	263.8	260.54	0.62	1.28	0.664	0.652
005	Stripping Solution	Spent Alkaline	Treatment &		5.66	3.65	8.73		0.09	1.496	0.4
		Strip Solution	Secure Landfill								

THIS FORM DEVELOPED BY: THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS, BUREAU OF WASTE REDUCTION & RECYCLING

HAZARDOUS WASTE GENERATION SUMMARY

COMPANY NAME	EPA I.D. NUMBER
US Chrome Corporation of New York	NYD990774200

TABLE 1

WASTE STREAM ID NUMBER	NAME OF WASTE	SOURCE OF GENERATION	DISPOSAL METHOD	QUANTITY OF WASTE GENERATED (TONS)				PRODUCTIVITY INDEX BASE INDEX = 1 (YEAR HWRP FIRST SUBMITTED)			
				2003	2004	2005	2006	2003	2004	2005	2006
001	Chromic Acid	Plating solution	Treat/Recycle	8.89	3.79	2.24	3.05	0.99	1.47	0.96	1.13
	Solution (D)	with impurities									
002	Chromic Acid	Sediment on	Stabilization	1.66	2.15	2.80	1.40	0.99	1.47	0.96	1.13
	Tank Sludge (E)	bottom of tank	& Secure Landfill								
003	Waste Treatment	WW Metals removal	Stabilization	5.94	9.55	9.33	3.75	0.99	1.47	0.96	1.13
	Filter Cake (A)		& Secure Landfill								
004	waste Water (B)	Plating & Rinsing	On-Site Treatment	722.0	980.0	571.0	421.17	0.99	1.47	0.96	1.13
005	Stripping Solution	Spent Alkaline	Treatment &	2.13	2.84	6.40	6.88	0.99	1.47	0.96	1.13
		Strip Solution	Secure Landfill								
006	Chrome Debris	Tape,gloves, etc.	Stabilizartion	3.47	5.80	15.0	11.4	0.99	1.47	0.96	1.13
			& Secure Landfill								

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DIVISION OF SOLID & HAZARDOUS MATERIALS, BUREAU OF WASTE REDUCTION & RECYCLING

HAZARDOUS WASTE GENERATION SUMMARY

COMPANY NAME U.S. Chrome Corporation of New York	EPA I.D. NUMBER NYD990774200

TABLE 1 (continuation #1)

WASTE STREAM ID NUMBER	NAME OF WASTE	SOURCE OF GENERATION	DISPOSAL METHOD	QUANTITY OF WASTE GENERATED (TONS)				PRODUCTIVITY INDEX BASE INDEX = 1 (YEAR HWRP FIRST SUBMITTED)			
				2007	2008	2009	2010	2007	2008	2009	2010
001	Chromic Acid	Plating Solution	Treat/Recycle	5.95	8.75	10.85	3.0	1.0	1.32	0.77	0.94
	Solution (D)	with impurities									
002	Chromic Acid	Sediment on	Stabilization	3.85	0.7	0.7	0.35	1.0	1.32	0.77	0.94
	Tank Sludge (E)	Bottom of Tank	& Secure Landfill								
003	Waste Treatment	WW Metals removal	Stabilizaion	2.25	3.75	0.75	0.75	1.0	1.32	0.77	0.94
	Filter Cake (A)		& Secure Landfill								
004	Waste Water (B)	Plating & Rinsing	On site Treatment	417	462.3	500.4	362.8	1.0	1.32	0.77	0.94
005	Stripping Solution	Spent Alkaline	Treatment &	2.75	8.25	0	6.05	1.0	1.32	0.77	0.94
		Strip Solution	Secure Landfill								
006	Chrome Debris	Tape,gloves,etc.	Stabilization	4.8	7.2	8.5	4.5	1.0	1.32	0.77	0.94
			& Secure Landfill								

HAZARDOUS WASTE GENERATION SUMMARY

COMPANY NAME U.S. Chrome Corporation of New York	EPA I.D. NUMBER NYD990774200

TABLE 1 (continuation #1)

WASTE STREAM ID NUMBER	NAME OF WASTE	SOURCE OF GENERATION	DISPOSAL METHOD	QUANTITY OF WASTE GENERATED (TONS)				PRODUCTIVITY INDEX BASE INDEX = 1 (YEAR HWRP FIRST SUBMITTED)			
				1999	2000	2001	2002	1999	2000	2001	2002
001	Chromic Acid	Plating Solution	treat/Recycle	3.80	6.25	0.00	0.00	1.5	1.2	1.3	0.97
	Solution (D)	with impurities									
002	Chromic Acid	Sediment on	Stabilization	0.44	3.90	0.30	1.6	0.11	0.9	0.80	0.97
	Tank Sludge (E)	Bottom of Tank	& Secure Landfill								
003	Waste Treatment	WW Metals removal	Stabilizaion	4.02	3.21	3.13	1.51	0.640	0.631	0.623	0.97
	Filter Cake (A)		& Secure Landfill								
004	Waste Water (B)	Plating & Rinsing	On site Treatment	264.68	258.21	253.98	1017.0	0.642	0.631	0.623	0.97
005	Stripping Solution	Spent Alkaline	Treatment &	8.15	3.48	5.44	6.05	0.45	0.40	0.42	0.97
		Strip Solution	Secure Landfill								