

**2012 Toxics Reduction Act  
Plan Summary**  
*Reporting Under Toxics Reduction Act, 2009  
and O. Reg. 450/09*

December 21, 2012

**Thunder Bay, Broadway Avenue Plant**  
**ERCO Worldwide, A division of Superior Plus LP**  
2001 Neebing Avenue  
Thunder Bay, Ontario  
P7B 6T9



# 2012 Toxics Substance Plan

Reporting Under Toxics Reduction Act, 2009 and O. Reg. 455/09

**This Report is for Public Release**

*All inquiries regarding this report should be forwarded to the following:*

**Plant Manager  
ERCO Worldwide, A division of Superior Plus LP  
2001 Neebing Avenue, P.O. Box 10464  
Thunder Bay, ON, P7B 6T9  
(807) 623-7632**

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## Section 1: General Information

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### Broadway Avenue Plant Information

**Street Address:**

**ERCO Worldwide, A division of Superior Plus LP**  
Broadway Avenue Plant  
2001 Neebing Avenue  
Thunder Bay, ON  
P7E 6S3

**Mailing Address:**

**ERCO Worldwide, A division of Superior Plus LP**  
Broadway Avenue Plant  
2001 Neebing Avenue, PO Box 10464  
Thunder Bay, ON  
P7B 6T9

**NPRI ID:** 11144  
**D&B D-U-N-S Number:** 25-327-7073  
**Federal Business Number:** 840149926  
**Full Time Employees:** 19

**NAICS 2, 4, and 6 digit codes:** 31-33, 3251, 325189

**UTM Coordinates:** 329150 m East, 5358340 m North  
**Zone:** 16

**Legal name of Canadian parent company, if your facility is a subsidiary of a Canadian parent company:**  
**Address:**

**Superior Plus**  
1400, 840 -7 Avenue SW  
Calgary, Alberta  
T2P 3G2  
99.90%

**Percent Ownership:**

## Report Contact Information

The Certifying and Public Contact for this report is as follows:

**David Birch**

Plant Manager  
ERCO Worldwide, A division of Superior Plus LP  
2001 Neebing Avenue, P.O. Box 10464  
Thunder Bay, ON, P7B 6T9  
(807) 623-7632

The Technical Contact for this report is as follows:

**Carl Taylor**

Technical & Environmental Manager  
ERCO Worldwide, A division of Superior Plus LP  
2001 Neebing Avenue, P.O. Box 10464  
Thunder Bay, ON, P7B 6T9  
(807) 623-7632

The following licensed TRA Planner reviewed the plan, provided recommendations, and certified the plan meets the requirements of the Act and that the Plan Summary accurately reflects the plan:

**Carl Taylor**

Technical & Environmental Manager  
ERCO Worldwide, A division of Superior Plus LP  
2001 Neebing Avenue, P.O. Box 10464  
Thunder Bay, ON, P7B 6T9  
(807) 623-7632  
**Licence: TSRP0173**  
Expiry: 6/30/2017

## Prescribed Toxic Substances on Site

The onsite toxic substances that are included in the Phase I Toxics Reduction Act (O. Reg. 455/09) for this TRA Plan include:

1. Sulphuric Acid (CAS 7664-93-9)
2. Chlorine (CAS 7782-50-5)

To quantify these substances under the Act, ERCO utilized facility wide amounts used, created, as well as amounts released, disposed of and transferred.

## Toxics Reduction Act Plan Objectives

ERCO Worldwide, in compliance with the Toxics Reduction Act (2009) and O. Reg. 455/09, was to complete the following objectives in the creation of their Toxic Substance Reduction Plan:

1. Evaluate the direct and indirect costs associated with the use and/or creation of sulphuric acid and chlorine at the plant site.
2. Identify and evaluate potential options to reduce the use and/or creation of chlorine and sulphuric acid.
3. Evaluate identified options to determine if they are both technically and economically feasible to proceed.
4. Evaluate potential toxics reductions and implementation plans for identified options that are both technically and economically feasible.

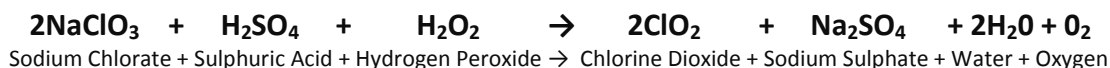
## Section 2: Toxic Substance - Sulphuric Acid

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### Sulphuric Acid in the R11 Sodium Chlorite Manufacturing Operation

Sulphuric acid is delivered to the plant as a raw material for the ERCO R11 Sodium Chlorite generation process. Sulphuric acid is metered into a crystallizer to generate chlorine dioxide gas when mixed with sodium chlorate and hydrogen peroxide in continuously recirculating slurry.

The sulphuric acid reacts immediately to form sodium sulphate crystal during the reaction that forms chlorine dioxide as follows:



**NOTE:** Refer to the 2011 Ontario Toxic Substances Accounting Report for the amounts of sulphuric acid used, created, disposed, and transferred.

### Sulphuric Acid: Statement of Intent and Objectives

ERCO Worldwide, in compliance with the Toxics Reduction Act (2009) and O. Reg. 455/09, intends to reduce the use and/or creation of sulphuric acid where it is deemed to be technically and economically feasible to do so.

## Sulphuric Acid: Reduction Option Evaluation

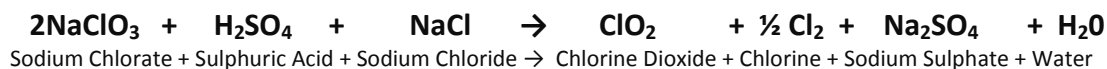
The plant site environmental stewardship team participated in the review of toxics reduction options for sulphuric acid. Although the review team determined that one potential option existed, it was deemed not technically feasible for implementation.

## Section Three: Toxic Substance - Chlorine

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### Chlorine in the R11 Sodium Chlorite Manufacturing Operation

During the creation of chlorine dioxide in the R11 generator, a side reaction also occurs in which sodium chloride reacts with sodium chlorate and sulphuric acid to create chlorine gas. Sodium chloride is an impurity contained in the sodium chlorate raw material. The chlorine gas generated in this reaction is not used at the facility.



**NOTE:** Refer to the 2011 Ontario Toxic Substances Accounting Report for the amounts of chlorine used, created, disposed, and transferred.

### Chlorine: Statement of Intent and Objectives

ERCO Worldwide, in compliance with the Toxics Reduction Act (2009) and O. Reg. 455/09, intends to reduce the use and/or creation of chlorine where it is deemed to be technically and economically feasible to do so.

### Chlorine: Reduction Option Evaluation

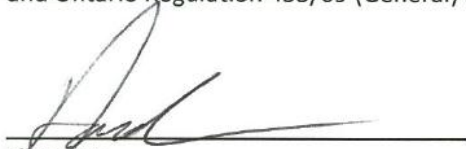
The plant site environmental stewardship team participated in the review of toxics reduction options for chlorine. Although the review team determined that one potential option existed, it was deemed not economically feasible for implementation.

**Appendix A: Certifications and Submission Receipt**

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**Certification by Highest Ranking Employee**

As of December 21, 2012, I David Birch, certify that I have read the toxic substance reduction plans for the toxic substance contained in this plan (sulphuric acid and chlorine) 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.

  
Signature

**Certification by Toxic Substance Reduction Planner**

As of December 21, 2012, I Carl Taylor (TSRP0173) certify that I am familiar with the processes at the ERCO Worldwide Thunder Bay Facility that uses or creates the toxic substances contained in this plan (sulphuric acid and chlorine), 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 21, 2012) and that the plan complies with that act and Ontario Regulation 455/09 (General) made under that act.

  
Signature





## Single Window Reporting

### Facility Reporting ?

The list below contains a snapshot of the status of the reports you have access to under the selected company, for the selected reporting year. To create a new report, select **Add New** and identify the facility or facilities you wish to report on. Once the reports have been created, select one to work on using the radio buttons. Below each facility name is a drop-down list containing a set of available actions for each report. The available actions change depending on the report status. Select **Edit** to work on the report. Select **Report Preview** to produce a version that can be easily printed or saved to your computer. Once the report is complete, you will have the option to **Submit** it here. Once you have selected the action, press **Continue** to proceed.

### Company

ERCO Worldwide, A division of Superior Plus LP  
840 7th Avenue SW Avenue Southwest, Calgary (Alberta)

### Report(s)

[Add New](#)

#### Report Details

[Expand All](#) [Collapse All](#)

<input type="checkbox"/> <input checked="" type="radio"/> Broadway Avenue Plant	
Inventory Report Status:	Submitted (06/28/2012 14:23:36)
Facility Name:	Broadway Avenue Plant
Facility Address:	Thunder Bay
Modified Date/Time:	06/28/2012 14:23:36
Plan Summary Status:	Submitted
Plan Summary Modified Date/Time:	12/21/2012 12:18:47
Action:	Update Inventory Report

Version: 3.0.0.2