



**AWMA Breakfast Sessions
Fall 2013
Toxics Reduction Program**

Agenda

Overview

Frequently Asked Questions

- Regulated Community
- Extensions
- Criteria Air Contaminants
- Changing Ownership

Lesson's Learned

- Submitting Plan Summaries Through Single Window

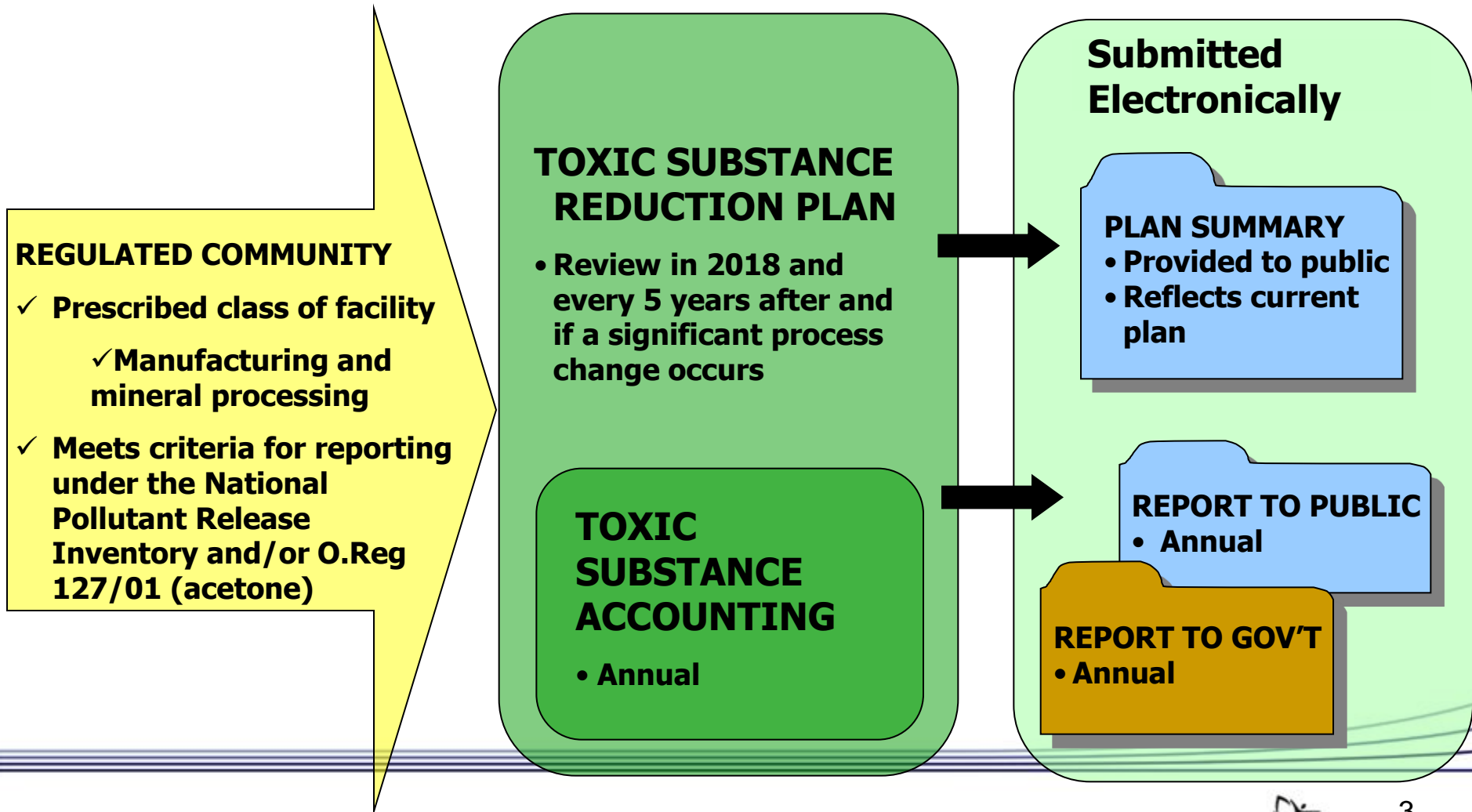
Successes and Opportunities

Resources and More Information

Overview of Key Requirements

Toxic Substance:

All NPRI substances listed in the current NPRI Notice plus acetone (O. Reg. 127/01)



Overview of Key Dates

Annual Reports and Exit/Exemption Records

- Annual toxics reduction reports and exit/exemption records are due by June 1 on the previous year's information.

Developing New Plan and Plan Summaries

- The first toxic substance reduction plans and plan summaries are due by December 31 in the same year that the first annual report is due.

Review of Plans and Updated Plan Summaries

- Generally, plans and plan summaries are reviewed and updated every 5 years by December 31, beginning in 2018.

$$2018 + 5(x + 1)$$

where,

$x = (y - 2018)/5$, rounded down to the nearest whole number, and

$y =$ the year in which the plan was required to be prepared.

Amending Plans and Updated Plan Summaries

- Amendments to plans can happen at any time; plan summaries must be updated within 30 days after amending plan (re-cert. by HRE and planner)

Prescribed class of facility

A facility at which manufacturing takes place

As a guide, NAICS codes are used

	Manufacturing	Mineral Processing
NAICS Code (starts with)	31, 32, 33	212*

- * 212 (mining – except oil and gas – that processes minerals, but only if the mineral processing at the facility involves the use of chemicals to separate, refine, smelt or concentrate metallic or non-metallic minerals from an ore.)

Food and Beverage Manufacturing

- Subsection 3(2) in the regulation is **not** an exemption
 - For greater certainty, a product that contains a NPRI substance that is intended for human or animal consumption and that is manufactured at a food manufacturing or beverage manufacturing facility identified by a NAICS code commencing with the digits "311" or "3121" is not a toxic substance. O. Reg. 455/09, s. 3 (2); O. Reg. 125/10, s. 3 (2).
- Clarification clause
- Not the product that is being manufactured that is prescribed, it is the NPRI substance that is prescribed as toxic

Content of Toxic Substance Reduction Plans

Basic facility information (see Appendix 1)
Statement of intent to reduce or reasons for not including one
Objectives and any optional targets
Description of each process •Description of how, when, where & why the substance is used or created at the facility
Toxic substance accounting info <ul style="list-style-type: none">• Record containing description of stages of manufacturing/mineral processing operations• Process flow diagrams• Record of methods used to track and quantify toxic• Quantifications used to prepare the plan• If applicable, record of explanation of “no approximate balance” of inputs and outputs• Estimate of indirect and direct annual costs associated with the toxic substance
Options considered for reduction <ul style="list-style-type: none">• Consideration of 7 toxic reduction categories or explanation of why no option could be identified• Estimate of potential toxics reduction achieved if option were implemented• Identification of technically feasible options• Analysis of economic feasibility of technically feasible options, including anticipated savings and payback
Option(s) to be implemented , or statement that no option(s) are to be implemented <ul style="list-style-type: none">•For each, a description of implementation steps and timetable•For each, a summary of estimated toxics reduction and anticipated timelines for achieving use and creation reductions
Recommendations made by toxic substance reduction planner
Certifications by highest ranking employee and toxic substance reduction planner

Frequently Asked Question: Extensions for Plans

- The Toxics Reduction Act, unlike some other pieces of legislation, does not provide designated ministry staff with the authority to change reporting deadlines.

Plan and Plan Summaries

- If HRE and planner did **not** certify the same version of the plan by December 31, the plan does **not** comply with the act and regulation and the certification statements as provided in the regulation cannot be used.

Confirmation Statement

- Toxic substance reduction planner should confirm in writing that s/he is familiar with the processes at the facility, agrees with the estimates of reduction for those options that will be implemented and, with the exception of the regulatory deadline, the plan meets all other requirements of the act and regulation. This confirmation should also be signed.
- Highest ranking employee should provide a rationale as to why the December 31st deadline has not been met. In addition, s/he should confirm in writing that s/he has read the plan, is familiar with its contents and, to his/her knowledge, the plan is factually accurate and, with the exception of the regulatory deadline, the plan meets all other requirements of the act and regulation. The confirmation should be signed.

Frequently Asked Question: Criteria Air Contaminants

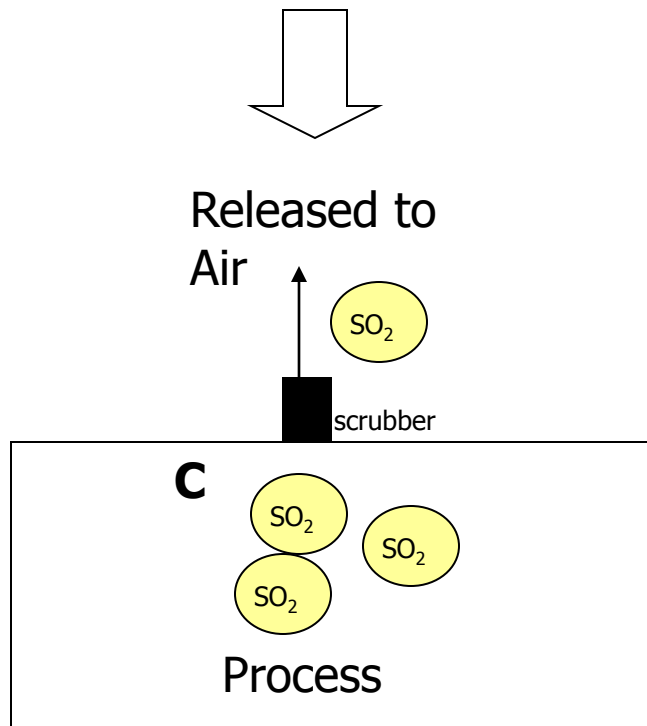
National Pollutant Release Inventory Gazette:

A person subject to this notice shall report information in relation to a substance listed in Part 4 of Schedule 1 if the substance is **released to air** from a facility in a quantity equal to or greater than the mass reporting threshold set out in column 2 of Table 2 for that substance.

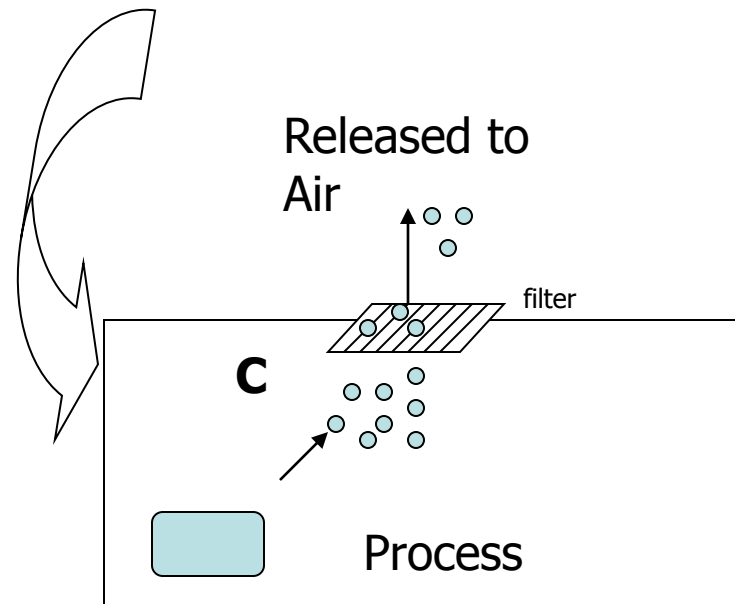
Carbon monoxide	630-08-0	20 tonnes
Nitrogen oxides (expressed as NO ₂)	11104-93-1	20 tonnes
PM _{2.5}	Particulate matter with a diameter less than or equal to 2.5 micrometres. Filterable particulate matter, on a dry basis. Excludes condensable particulate matter.	0.3 tonnes
PM ₁₀	Particulate matter with a diameter less than or equal to 10 micrometres. Filterable particulate matter, on a dry basis. Excludes condensable particulate matter.	0.5 tonnes
Sulphur dioxide	7446-09-5	20 tonnes
Total particulate matter	Particulate matter with a diameter less than 100 micrometres.	20 tonnes
Volatile organic compounds	Volatile organic compounds as set out in section 65 of the List of Toxic Substances in Schedule 1 of the <i>Canadian Environmental Protection Act, 1999</i> . N.B. only speciated VOCs.	10 tonnes

Pollution Control and Toxics Reduction

Pollution Control aims to affect...

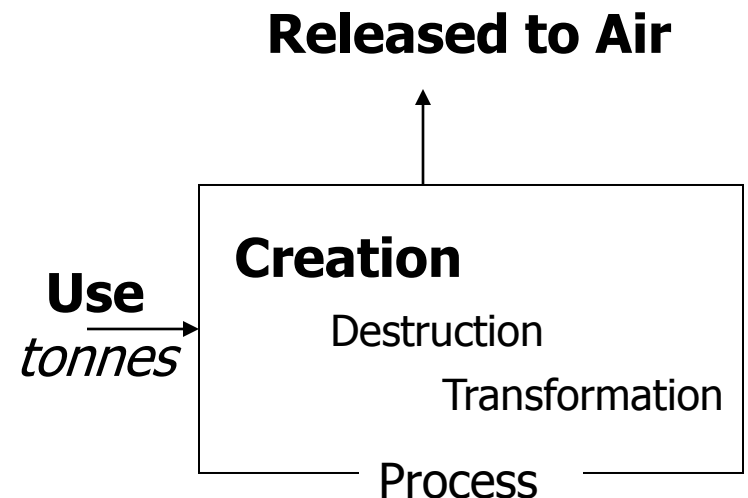


Toxics Reduction aims to effect...



Criteria Air Contaminants under the Toxics Reduction Program

- Once a facility meets the threshold(s) for release to air, under the Toxics Reduction Program, at the process-level, facility must track and quantify amounts:
 - Enters the process (used)
 - Intentionally or unintentionally
 - Created
 - Intentionally or unintentionally
 - Destroyed
 - Transformed
 - Released to Air – as defined by NPRI
- **Report** at the facility-level:
 - Enters the process (used)
 - Created
 - Released to Air – as defined by NRPI
- Not required to track/quantify, report, or plan for VOC-total under TRA; only for Speciated VOCs (Part 5)



Criteria Air Contaminants: Destruction and Transformation

Destruction is when

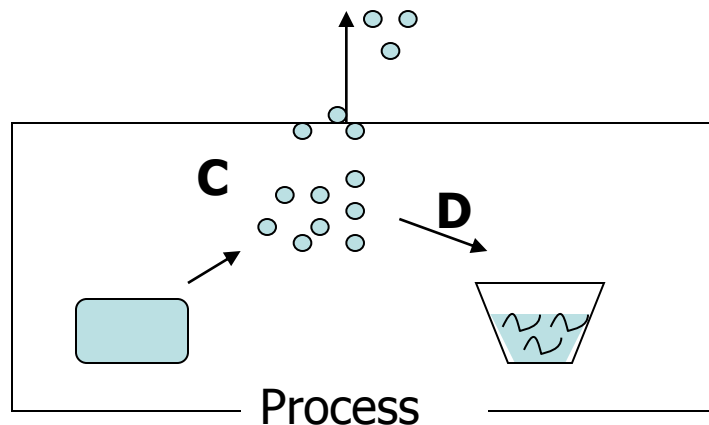
- In the case of PM, no longer dry
- transformed into a substance not prescribed under the Toxics Reduction Act

Transformation is when the CAC transforms to another prescribed toxic substance

DESTRUCTION

Particulate Matter ($PM_{2.5}$, PM_{10} , PM_{Tot})

Released to Air

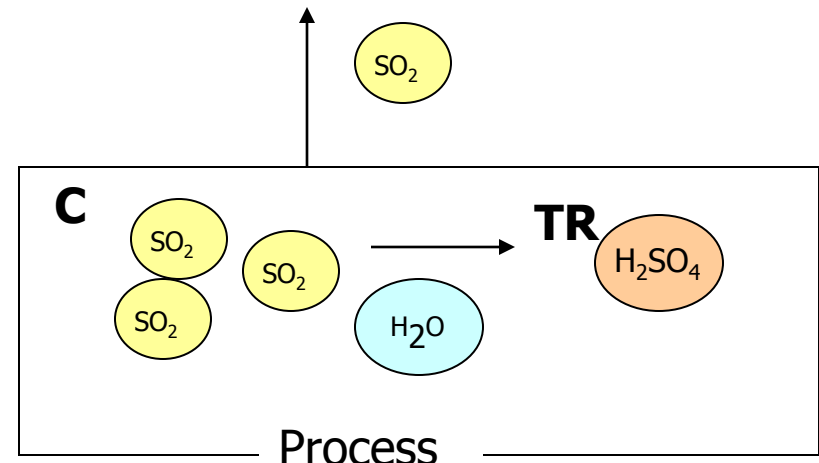


D – destruction

TRANSFORMATION

Substances (CO , NO_{2} , SO_{2} , VOC)

Released to Air



C – creation

TR – transformation

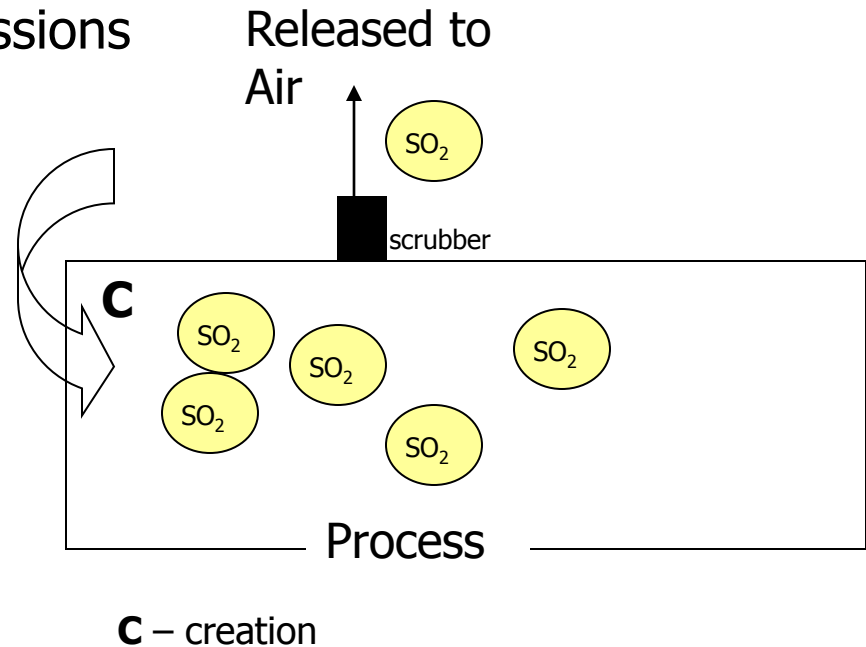
Guidance for Calculating Creation from Controlled Emissions

Using outputs to calculate back to inputs

Creation derived from controlled emissions

$$= A \times EF \times (1-ER/100)$$

- Where:
- A = Activity Rate
- EF = Emission Factor
- ER = emission reduction efficiency, per cent



Guidance for Toxics Reduction for CACs

Creation = Uncontrolled emissions

$$A \times EF$$

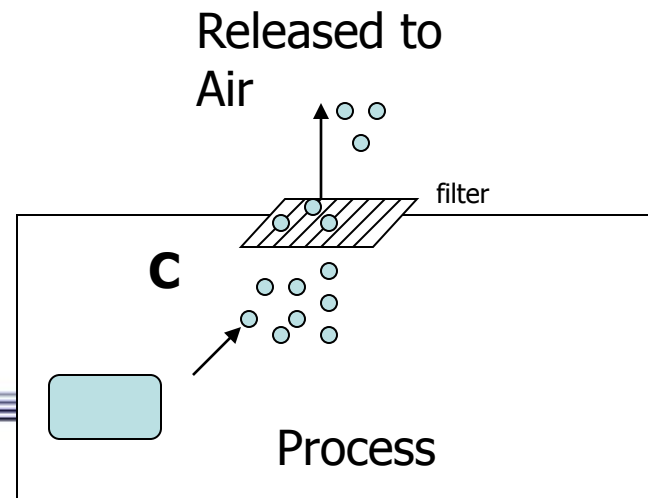
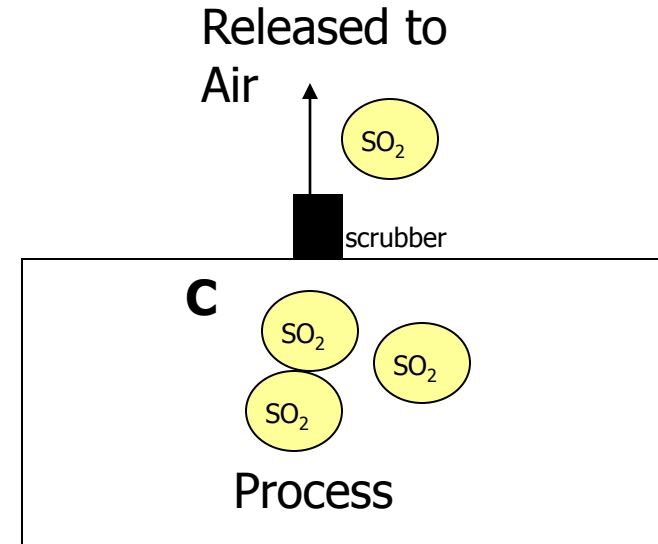
- A = Activity Rate
- EF = Emission Factor

Facilities may be able to modify activity rates, or;

Variables that determine the emission factor

– OR

Facilities may be able to influence precursors to the creation of CACs even if precursor is not prescribed toxic substance



Summaries of Toxics Substance Reduction Plans

Requirement:

- A facility must provide a summary of its plan to the ministry through Single Window
- Your facility needs to provide the summary to the public:
 - On the Internet (for example, on the facility or parent company website or on an association's website)
 - In print form, upon request from a member of the public.
 - In addition, your facility needs to notify employees that it has released the summary on the day that it makes the summary available to the public on the Internet.
- The required content of the summary provided to ministry is the same as that provided to the public

Overview of Plan Summary Content

Basic facility information (Appendix 1 - with a few exclusions, please consult regulation)

List of toxic substances at the facility for which a plan is required

Objectives and any optional targets

- Copy of the statement of intent to reduce or reasons for not including one
- Description of why the substance is used or created at the facility

Description of options, estimated reductions and projection of effectiveness

- Description of options to be implemented or statement that no option is to be implemented.
- If no option is to be implemented, copy of the explanation
- For each option to be implemented, the estimated reductions in use, creation, release and contained in product as a result of implementing the option
- Anticipated timelines for achieving the estimated reductions
- A projection of how effective the plan will be in meeting the objectives

•A **statement** that summary accurately reflects current version of the plan

Optional content

- Actions taken to reduce toxics not identified in the plan
- Rationale for why options to be implemented were selected

Copies of certifications of the plan

Examples the 2011 Plan Summaries:

Statement of Intent:

- The International Group Inc. is committed to playing a leadership role in protecting the environment. Wherever feasible, we will reduce the use and discharge of Toluene in full compliance with all federal, provincial and municipal regulations. All employees are encouraged to participate in all types of toxic substance reduction activities. Toxic substance reduction will be an ongoing effort at The International Group Inc. and we will continue to monitor technological advancements to ensure that options that are both technologically and financially viable are implemented at our facility.

Objectives (optional Targets):

- Reduce the use of Toluene by 1 % per year and the fugitive emission by 2 % per year respectively by December 31, 2018. (Note: this is in addition to the 11.7 % reduction from 2009 to 2010) – (IGI)

Rationale for not implementing:

- Due to a lack of feasible reduction opportunities, [facility] will not be implementing any options at this time. In recent history, [facility] has converted over 90% of their business to a solvent reduced resin version and implemented a semi-continuous process for their product to reduce xylene emissions.

Posting Data Online

(<http://www.ene.gov.on.ca/environment/en/mapping/trais/index.htm>)

[FEEDBACK](#) [EMAIL](#) [PRINT](#)

Toxics Reduction Program

▶ Reducing Toxics

▶ Data Downloads

▶ Help

▶ Accessible Version

Additional Information

▶ Interactive Maps

▶ District Locator

▶ Permits to Take Water

▶ Provincial Groundwater
Monitoring Network

▶ Guide to Eating Ontario Sport
Fish

▶ Great Lakes Watershed Locator

▶ Lake Partner Program

▶ Provincial Water Quality
Monitoring Network

Toxics Reduction Program

This tool allows you to search and view information from Ontario facilities that have reported under the **Toxics Reduction Program** on prescribed **toxic substances**.

Search interactive map

- Search Map Location or Facility
- Search Substance
- Search Sector
- Current Map Display

Search **city, facility name, company, sector, substance** or see help for more advanced options.



Submitting Plan Summaries Through Single Window

 Daniella Molnar

NPRI Reporting Dashboard

* indicates a required field

Reporting Details

Reporting Period

Company Selection

NPRI Reporting Dashboard

Company

ACME Inc.

4 Testing Way East, Toronto (Ontario)

Report(s)

To create a new report, select **Add New** and identify the facility or facilities you wish to report on.

Add New

To prefill a report with previously submitted data, click the "**Prepopulation**" button.

Prepopulation

Report Details

ACME - Facility

[View Facility Details](#)

34 Wow, Wowville (Ontario)

Inventory DNMC Plan Summary **Sale/Close/Purchase**

Status:

 New

Modified Date/Time:

26/08/2013 9:22:14 AM

Action:*

Create

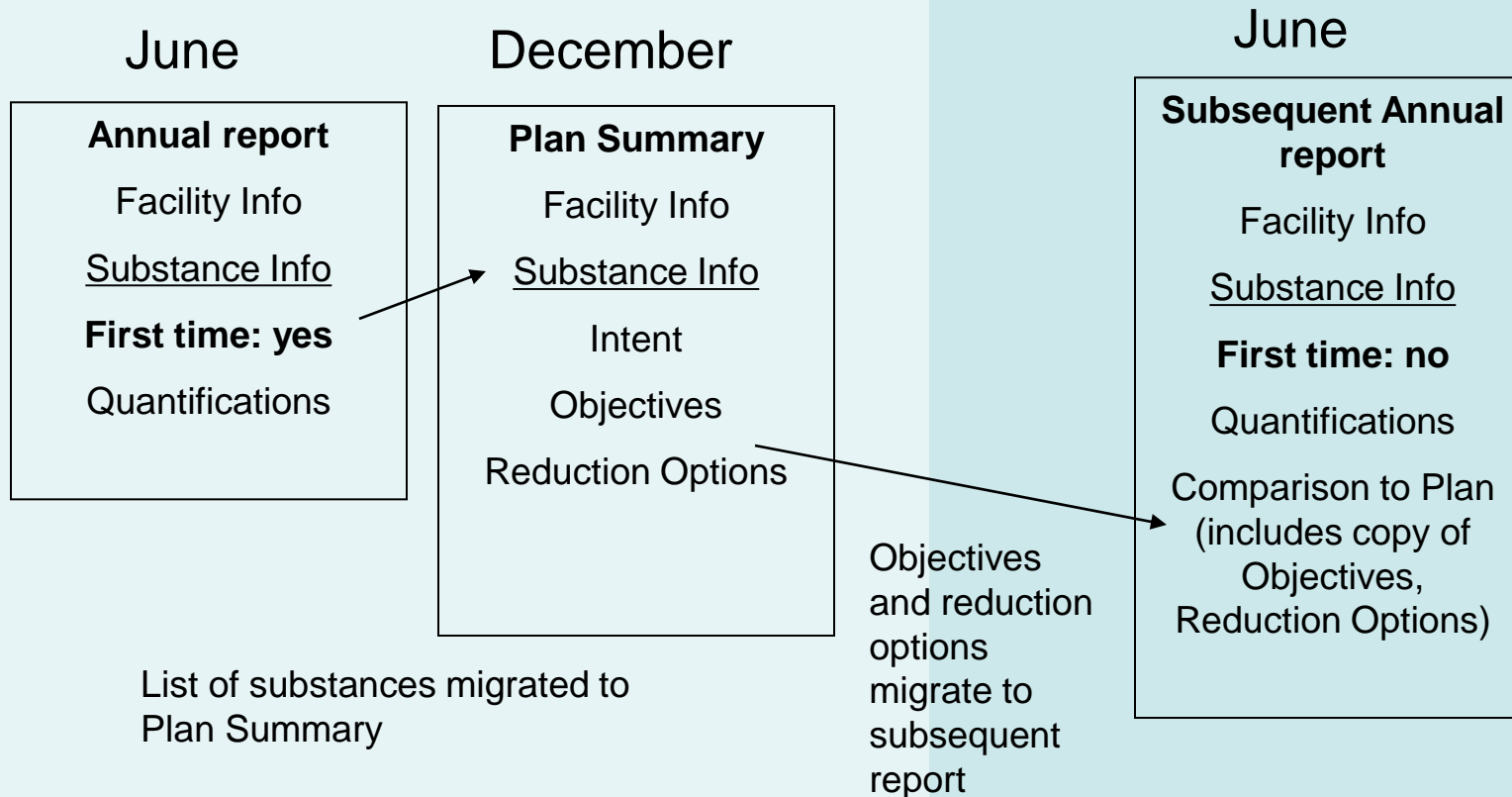


Continue

Lessons Learned from Phase I – Inter-linkage between Annual Reports and Plan Summaries in Single Window

Reporting Period X

Reporting Period X+1



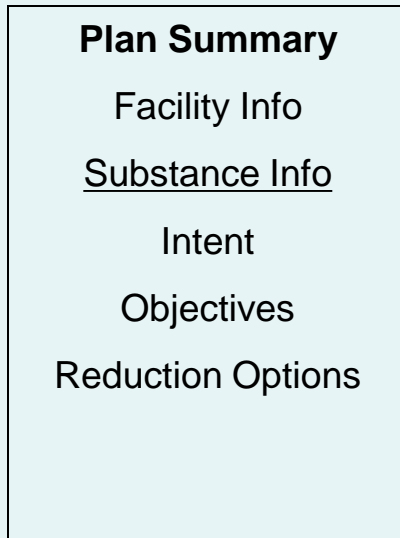
See Appendix 2 for Summary of Annual Report Contents

Lessons Learned from Phase I –Plan Summaries and Subsequent Annual Reports in Single Window

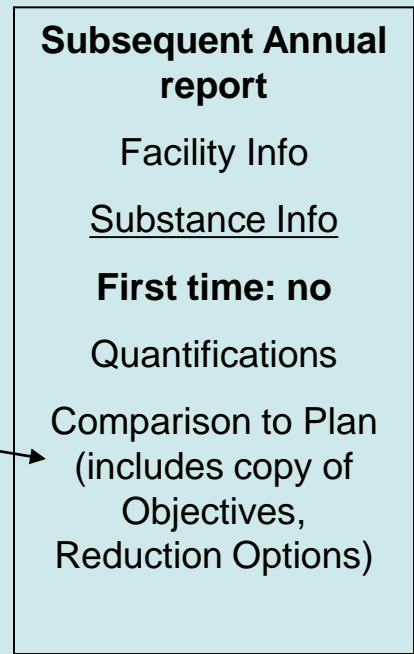
Reporting Period Y

Reporting Period Y+1

Update: Corrections, Amendment or Review



June



“Refresh”

Updated objectives and reduction options migrate to subsequent report

Frequently Asked Question – Facilities Changing Ownership

- If a facility changes ownership, the new owner has to notify the director within 30 days – can do this through Single Window

Previous Owner (i.e Seller):

- Provide hard copies of the annual reports, exit/exemption records, toxics reduction plans and plan summary submission to new owner
- Complete Sale portion of “Sale/Purchase/Closure” (Appendix 3)
- Delete the facility from SWIM (see Appendix 4) **prior** to new owner adding facility to their Organization in SWIM

New Owner (ie. Buyer):

- Historic records will not follow the facility under the new organization in Single Window
 - Obtain a previous hard copy of the annual reports, exit/exemption records, toxics reduction plans and plan summary submission from previous owner
- Complete Purchase portion in “Sale/Purchase/Closure” tab (Appendix 3)
- Add new facility to your Organization in SWIM **after** previous owner deletes it

← ACME - Facility [View Facility Details](#)

34 Wow, Wowsville (Ontario)

Inventory DNMC Plan Summary **Sale/Close/Purchase**

Status: New

Modified Date/Time: 13/09/2013 3:19:24 PM

Action:* ▼

Help Desk Information

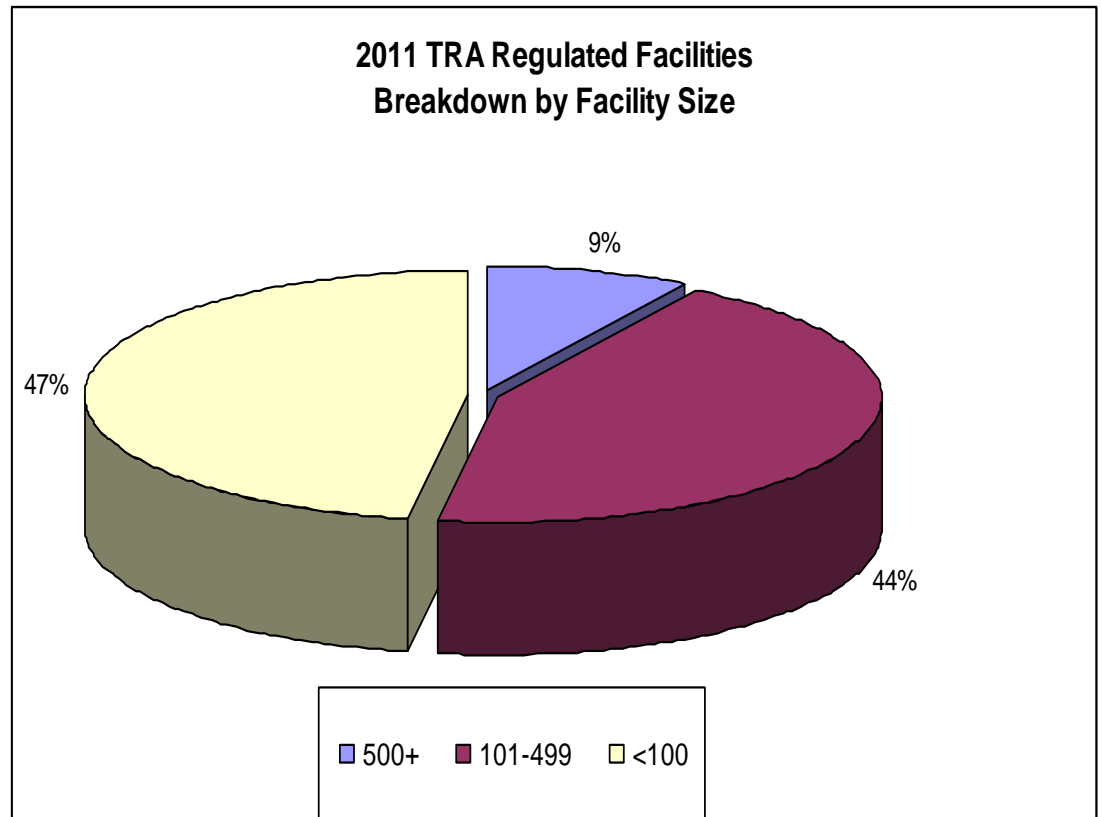
**Experiencing technical difficulties or
have questions about submissions?**

Email Us: ToxicsReporting@ontario.ca

Call: 1-855-815-6400

Phase I – Program Status Update

- Approx. 800 facilities reported for the 2010 and 2011 reporting year
- Most facilities reported 5 or less Phase I substances
- Posted 2010 public data online – interactive Google-map format and downloadable spreadsheet



Successes

OUR PURPOSE

Dextran Products Limited manufactures and sells bulk quantities of dextran and derivative products to large pharmaceutical companies throughout the world.

The company's management team is always exploring opportunities to increase distribution chains for existing Dextran products. Expanding current market

GLOBAL MARKETS

Dextran Products reaches markets around the world. We have been successfully supplied by several large pharmaceutical companies from Canada, USA and Europe.

With a wide array of applications for our dextran based product line, we have established a loyal customer base in Europe, United States, Canada, the Pacific Rim and other locations across the globe.

When a potential customer in New Zealand

DEXTRAN BIOSYNTHESIZED

The Dextran supplied by Dextran Products Limited is biosynthesized by the non-pathogenic *Leuconostoc mesenteroides* NRRL B-512.

The product is enzymatically synthesized by the transfer of glucosyl groups from sucrose to the growing Dextran chain.

The enzyme, Dextran-Sucrose performs the following reaction:

A Subsidiary of Polydex Pharmaceuticals Limited

- **Dextran Products** manufactures dextran and its derivatives for human and animal consumption
- Will be reducing use of Cyanides (ion), Hydrochloric Acid, and Methanol
- In addition, will be focusing on water conservation efforts

SGS International

SGS EUROPE | SGS ASIA PACIFIC

Manufacturing Customer Services Workflow Technology Our Company Cost Management Opportunity Investor Information

“Big or small...we can do it all”

SGS is a recognized leader in advanced flexo and gravure technologies, delivering over 80,000 cylinders and 3 million square feet of flexo plates annually.

- **Southern Graphic Systems** manufactures flexo plates and cylinders
- Will reduce use of copper and hexavalent chromium

Potential Opportunities

Ontario: Ontario Centre for Excellence	Bringing together industry and academia. Offers various programs	http://www.occ-ontario.org
Ontario: Innovation Demonstration Fund	Funding to pilot an innovative clean technology	Irfan Mandozai 416.326.8458 idf@ontario.ca
Canadian: Sustainable Development Technology Canada	Finances and supports the development and demonstration of clean technologies which provide solutions to issues of climate change, clean air, water quality and soil	http://www.sdte.ca 613-234-6313 ext 302
Canadian: Scientific Research and Experimental Development Program	<p>Tax incentive program to encourage Canadian businesses of all sizes and in all sectors to conduct research and development in Canada that will lead to new, improved, or technologically advanced products or processes</p> <ul style="list-style-type: none"> • Ontario Research & Development Tax Credit (replaces the Ontario Scientific Research and Experimental Development deduction) • Ontario Innovation Tax Credit • Ontario Business-Research Institute Tax Credit and • Ontario Tax Exemption for Commercialization 	http://www.cra-arc.gc.ca/txcrdt/sred-rsde/smnr-eng.html

Potential Opportunities

Name	Description	
Ontario: GreenFIT	Ontario's GreenFIT strategy is aimed at creating opportunities for businesses to bring their emerging and innovative technologies to the Ontario public sector	http://www.doingbusiness.mgs.gov.on.ca/mbs/psb/psb.nsf/EN/GreenFIT-Participate greenfit@ontario.ca
Canada: Buy and Sell Canada	The federal government is a significant purchaser in Canada: Policy objective include, <ul style="list-style-type: none"> •Reducing greenhouse gas emissions and air contaminants; •Improving energy and water efficiency; •Reducing ozone depleting substances; •Reducing waste and supporting reuse and recycling; •Reducing hazardous waste; and •Reducing toxic and hazardous chemicals and substances. 	https://buyandsell.gc.ca/initiatives-and-programs/green-procurement
Ontario: Co-operative Education Tax Credit	The CETC is based on salaries and wages paid to a student in a co-operative education work placement. The maximum credit for each work placement is \$3,000. Most work placements are for a minimum employment period of 10 weeks up to a maximum of four months.	

QUESTIONS?

Toxics Reduction Program – Resources

- Toxics Reduction Act, 2009: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_09t19_e.htm
- Ontario Regulation 455/09: http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_090455_e.htm
- To receive updates and notifications related to the Toxics Reduction Act, 2009 and O. Reg.455/09, please subscribe to our email newsletter at <http://www.ene.gov.on.ca/environment/en/main/subscription/index.htm>
- For general information on the act and regulation you may contact the Ministry's Public Information Centre at 1-800-565-4923 or in Toronto at 416 325-4000 or email picemail.moe@ontario.ca. Contact information

For More Information

- Technical guidance documents available on the ministry website:
http://www.ene.gov.on.ca/environment/en/subject/toxics/STDPR OD_078157.html
 - Ontario's Toxics Reduction Program: A Guide for Regulated Facilities
 - Toolkit for Toxic Substance Accounting
 - Reference Tool for Assessing Safer Chemical Alternatives
- Technical guidance documents available by request* (text-only versions):
 - Toolkit for Toxic Substance Reduction Planning
 - Toolkit for Reporting and Helpful Information
 - Examples of a Toxic Substance Reduction Plan

*Send an email to toxics.reduction@ontario.ca with the subject line "text-only toolkits"

NPRI Contact

For questions related to NPRI, please refer to the NPRI Notice applicable in that year or ask an NPRI Specialist:

Environment Canada
10th Floor, Fontaine Building
200 Sacre-Coeur Blvd.
Gatineau, QC
K1A 0H3
Tel: 1-877-877-8375
Fax: (819) 953-0461
E-mail: inrp-npri@ec.gc.ca
Web: www.ec.gc.ca/inrp-npri

Appendix 1 – Basic Facility Information

<ul style="list-style-type: none"> • Substance name and Chemical Abstracts Service (CAS) Registry number, if any 	
<ul style="list-style-type: none"> • The National Pollutant Release Inventory (NPRI) identification number and the identification number assigned by the MOE under Regulation 127/01 (Airborne Contaminant Discharge Monitoring and Reporting), if assigned. 	
<ul style="list-style-type: none"> • The legal and trade names of the owner and the operator of the facility, the street address of the facility and the mailing address of the facility, if different 	
<ul style="list-style-type: none"> • The number of full-time employee equivalents at the facility. 	
<ul style="list-style-type: none"> • The two- and four-digit North American Industry Classification System (NAICS) codes and the six-digit NAICS Canada code 	
<ul style="list-style-type: none"> • If applicable, the name, position and telephone number for the following individuals, and mailing addresses, if different: 	
<ul style="list-style-type: none"> • public contact 	
<ul style="list-style-type: none"> • technical contact 	
<ul style="list-style-type: none"> • the person who is responsible for coordinating Plan preparation 	
<ul style="list-style-type: none"> • the person who prepared the Plan, if different from coordinator 	
<ul style="list-style-type: none"> • Highest Ranking Employee at the facility who has management responsibilities relating to the facility and who is responsible for making the certification 	
<ul style="list-style-type: none"> • The licence number of the planner who made recommendations and the licence number of the planner who certified the plan 	
<ul style="list-style-type: none"> • The spatial coordinates of the facility expressed in Universal Transverse Mercator (UTM) within a North American Datum 83 (NAD83) datum. 	
<p>If the facility is a subsidiary of a Canadian parent company, also provide:</p> <ul style="list-style-type: none"> •the legal name of the parent company •street and mailing address of the company •what percentage of the facility is owned by the parent company •the business number assigned by Canada Customs and Revenue Agency 	

Appendix 2 - Contents of Annual Reports

Content of Report	First report to Government (pre-plan)	All subsequent reports (post plan)	Public Information
Basic facility information	✓	✓	Similar info, except no business number and contact info only for the public contact
List of toxic substances at the facility	✓	✓	Same information
Indication of changes in non-routine events	✓	✓	No information on non-routine events
Summarize tracking and quantification •Facility-wide quantities, used, created, contained in product, released, disposed of, transferred	✓	✓	Similar info except: Used, created, contained in product expressed in ranges
Indication of changes in methods		✓	No information on methods
Comparison of tracking and quantification to previous reporting period •Reasons for changes from previous year		✓	Summary only of the reasons for changes from previous year

Appendix 2 - Contents of Annual Reports

Content of Report	First report to Government (pre-plan)	All subsequent reports (post plan)	Public Information
<p>Describe steps taken to achieve objectives and assess effectiveness</p> <ul style="list-style-type: none"> •Include objectives and any targets •Include estimate of toxics reduction achieved •Difference between steps taken and those in the plan and indication of whether timetable for steps will be met 		✓	Similar info except: Summary only of estimated toxics reduction achieved, steps taken and the difference between steps taken and those set out in the plan
Indication of significant process changes		✓	No information on significant process changes
<p>Optional</p> <ul style="list-style-type: none"> •Actions taken to reduce toxics not identified in the plan and estimate of toxics reduction achieved 		✓	Summary only
Describe amendments to the plan		✓	Summary only
Certification by highest-ranking employee	✓	✓	Same information

Appendix 3 – “Sale, Close or Purchase” form

 Daniella Molnar

Sale, Close or Purchase

* indicates a required field

** indicates a conditionally required field

Reporting Details

Reporting Period

Company Selection

NPRI Reporting Dashboard

Page Status: Incomplete


Use the form below to notify Environment Canada of a facility sale, closure or purchase. When you have completed the form you must submit it from the **Facility Reporting Dashboard** to complete the notification.

▲ Sale, Close or Purchase

Select Type: *

- Sale
- Close
- Purchase

Effective Date: *

mm/dd/yyyy 

▲ If Sale or Purchase

Previous Company Information**

Company Name:

Address Line 1:

City:

Province/Territory/State:

Postal Code/Zip Code:

Appendix 3 – “Sale, Close or Purchase” form

New Company Information**

Company Name:

Address Line 1:

City:

Province/Territory/State:

Postal Code/Zip Code:

Person/Company who purchased the facility**

Company/Person Name:

Phone Number:

Email:

▲ If Sale:

The seller understands that the NPRI records will be released to the buyer.*

Please indicate the last year this facility reported to the NPRI.**

Back

Save/Continue

Appendix 4 – Deleting a facility from SWIM

Single Window Information Manager

Home My Profile Redeem EC Key Request Access Organizations ec.gc.ca

Home > TRA Plan Summary > Facilities

Single Window Information Manager

Home

My Profile

Redeem EC Key

Request Access

Organizations

TRA Plan Summary

Contacts

Parent Organizations

Manage Access

Facilities

Guidance

Logout

Facilities

The table below contains all of the facilities that are linked to your organization. To add a facility click on the Add a New Facility button. To remove a facility from your list click on the Delete all selected button. To update a facility please click on the facility name. Note: Deleting a facility does not remove it from the

	Facility Name	Address
<input checked="" type="checkbox"/>	Acme Anvil Manufacturing Plant	

<<< ≤ Page 1 / 3 ≥ >>>

Delete all selected

Add a New Facility