

**Regulation 455/09**  
***TOXICS REDUCTION ACT, 2009***

**COMPLIANCE INFORMATION SESSION**

**January – February 2010**



# OUTLINE

## **INTRODUCTION**

- Context
- Approach to regulation development
- Next steps

## **REGULATION**

- Toxic substances, class of facility, thresholds
- Toxic substance accounting
- Toxic substance reduction plans
- Summaries of toxic substance reduction plans
- Reports on toxic substance reduction plans
- Additional matters

## **PROGRAM DEVELOPMENT AND SUPPORT TO INDUSTRY**

- Compliance Information and Technical Assistance Sessions
- Fact Sheets and Technical Guidance Documents
- Industry Assistance Programs and Availability of Grants
- Toxic Reporting and Information System (TRAIS)



# TOXICS REDUCTION STRATEGY

## Why does Ontario need the Toxics Reduction Strategy?

- Despite action by leading industries in Ontario, the province is among the highest toxics-releasing jurisdictions in North America
- Ontario industries:
  - release the second largest amount of recognized developmental and reproductive toxicants in North America, behind Tennessee;<sup>1</sup>
  - release the fourth largest amount of known and suspected carcinogens in North America behind Texas, Ohio and Indiana.<sup>1</sup>

1. Commission for Environmental Cooperation, 2006



# TOXICS REDUCTION STRATEGY

## Why does Ontario need the Toxics Reduction Strategy?

- Release of toxics into the environment is a serious environmental and health issue.
  - Exposure to environmental pollution has been linked to: cancer; learning, developmental and behavioural disabilities; impaired endocrine function; and respiratory problems, such as asthma.
- Ontarians want the government to act:
  - Surveys of public opinion in 2008-09 have consistently indicated strong support for government actions to reduce toxics, including the development of toxics reduction plans.



## Why was the toxics reduction planning approach adopted?

A proven approach to address toxics by:

- Complementing existing regulatory approaches
  - While environmental programs and standards are critical for protecting the environment and safeguarding human health, **augmenting the traditional “end of pipe” approach** with toxics reduction planning, which focuses on inputs versus outputs, can lead to the identification of additional opportunities for toxics reduction



# TOXICS REDUCTION STRATEGY

## Why was the toxics reduction planning approach adopted?

A proven approach to address toxics by:

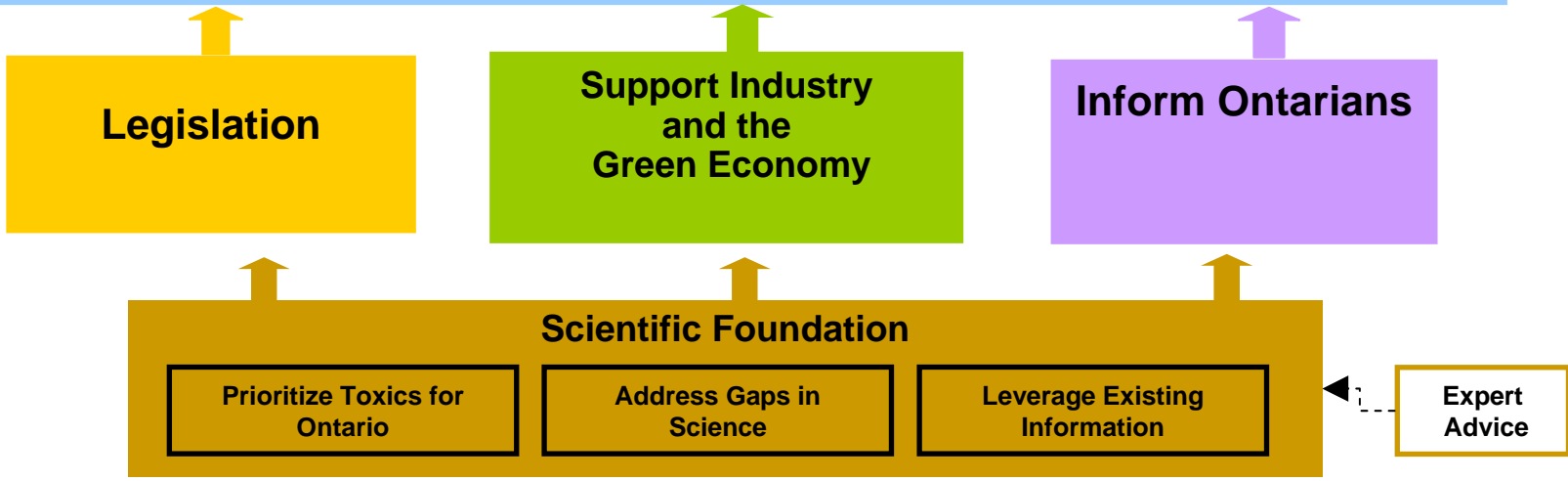
- Building on successes found in other jurisdictions
  - Other leading jurisdictions have achieved reductions in toxics use and releases using similar approaches that include substance accounting and reduction planning elements
    - The Massachusetts Toxics Use Reduction Act achieved a 50% reduction in generation of toxic by-products within 10 years
    - New Jersey's Pollution Prevention Act reduced hazardous waste output by 50%, also over 10 years, while production increased by 25%.



# TOXICS REDUCTION STRATEGY

## Ontario's Toxics Reduction Strategy

**OBJECTIVE:** To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products.



# TOXICS REDUCTION STRATEGY

## How will the strategy's objective be achieved?

- **Legislation Framework** that outlines the requirements for toxics reduction planning
- **Support for Industry and a Green Economy**
  - Provide industry assistance programs, grants, and guidance manuals to help facilities develop rigorous plans.
  - Invest in green economy by supporting green chemistry and engineering initiatives
- **Informing Ontarians** through access to information on the use and creation of toxic substances, reduction planning efforts, and information on toxic substances to support informed choices
- Toxics reporting and information system (TRAIS): a web-based system to facilitate collection of information from facilities and sharing with the public



# New Requirements - Timing

## Timing

- The Act and Regulation came into force on January 1, 2010, however no document is required to be submitted to the Ministry until June 1, 2011.
- Note: Some sections of the Act are not yet in force. Future regulations would include:
  - Accredited Toxics Reduction Planners – Subsections 4(3) and 4(4) of the Act
  - Substances of Concern – Section 11 of the Act
  - Administrative Penalties – Sections 30 and 38 of the Act
- Draft regulations will be posted for public comment via the Environmental Registry



# TOXICS REDUCTION STRATEGY

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QUESTIONS?

# REGULATORY REQUIREMENTS OVERVIEW

- REGULATED COMMUNITY**
- ✓ Prescribed class of facility
  - ✓ Meets substance threshold
  - ✓ Meets employee threshold
  - ✓ Meet other prescribed criteria
- (Sections 4-11 from O. Reg. 455/09)

**TOXIC SUBSTANCE REDUCTION PLAN**

- Review every 5 years or if significant process change

**TOXIC SUBSTANCE ACCOUNTING**

- Annual

**Submitted Electronically**

**PLAN SUMMARY**

- Provided to public
- Reflects current plan

**REPORT TO PUBLIC**

- Annual

**REPORT TO GOV'T**

- Annual

# TOXIC SUBSTANCES , CLASS OF FACILITY, THRESHOLDS

## REGULATED COMMUNITY

- ✓ In prescribed class of facility (i.e. sector)
- ✓ Meets substance threshold
- ✓ Meets employee threshold
- ✓ Meet other prescribed criteria

(Sections 4-11 of O. Reg. 455/09)

## TOXIC SUBSTANCE REDUCTION PLAN

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## TOXIC SUBSTANCE ACCOUNTING

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# TOXIC SUBSTANCES , CLASS OF FACILITY, THRESHOLDS

## Toxic substances are defined as:

- All substances and substance groupings on the NPRI Notice and O. Reg. 127 (Acetone).
- Substances were separated in two Phases to focus on priority substances first:
  - **Phase I:** 47 priority substances and substance groupings
    - Tracking January 1, 2010 – December 31, 2010
    - First report due by June 1, 2011
  - **Phase II:** All remaining substances on the NPRI Notice and Acetone
    - Tracking January 1, 2012 – December 31, 2012
    - First report due by June 1, 2013

# TOXIC SUBSTANCES , CLASS OF FACILITY, THRESHOLDS

## Prescribed Class of facility defined as:

- Prescribed class of facilities are defined as:
  - Facilities at which manufacturing takes place
    - This includes facilities identified using the NAICS code commencing with the digits 31, 32 or 33; and
    - Facilities commencing with the digits 212 that process minerals using chemicals to extract, refine or concentrate an ore
  - These sectors are a good starting point as they represent approximately 75% of the emissions tracked through NPRI.

# TOXIC SUBSTANCES , CLASS OF FACILITY, THRESHOLDS

## Thresholds

- The substance and employee thresholds align with the rules, exemptions and thresholds in NPRI.
  - NPRI substances are grouped into 5 Parts:
    - Part 1a Substances
    - Part 1b Substances Alternate Thresholds (e.g. Lead)
    - Part 2 – Polycyclic Aromatic Hydrocarbons (e.g. Fluorene)
    - Part 3 - Dioxins and Furans (e.g. Octachlorodibenzofuran)
    - Part 4 – Criteria Air Contaminants (e.g. Particulate Matter)
    - Part 5 – Volatile Organic Compounds

Each Part contains different types of substances, and hence, different rules, exemptions and thresholds apply

**It is the facility's obligation to review and determine whether the criteria is met**

For information on the NPRI, please refer to:

<http://www.ec.gc.ca/inrp-npri/default.asp?lang=En&n=4A577BB9-1>

Environment Canada  
9th 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](mailto:inrp-npri@ec.gc.ca)

# TOXIC SUBSTANCES , CLASS OF FACILITY, THRESHOLDS

## Thresholds (Cont'd)

- For acetone, the thresholds are 3 tonnes and 20,000 employee hours worked (approximately 10 full-time employee equivalents).

For information on the criteria related to acetone, please refer to Ontario Regulation 127/01,  
**AIRBORNE CONTAMINANT DISCHARGE MONITORING AND REPORTING**,  
under the Environmental Protection Act

[http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_010127\\_e.htm](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_010127_e.htm)

**It is the facility's obligation to review and determine whether the criteria is met**

# TOXIC SUBSTANCES , CLASS OF FACILITY, THRESHOLDS

## Examples of different rules, exemptions and thresholds:

### No employee threshold

- There are some activities involving substances (e.g., wood preservation) for which facilities are required to report to NPRI regardless of the number of employees

### No mass reporting threshold

- There are some instances in which facilities are required to report to NPRI where there is no mass reporting threshold for a substance (e.g., PAHs when creosote is used for wood preservation)

As a result, sections 5 and 6 of the Regulation establish the baseline for  
The substance and employee thresholds as *zero*

# TOXIC SUBSTANCES , CLASS OF FACILITY, THRESHOLDS

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QUESTIONS?



# TOXIC SUBSTANCE ACCOUNTING

## REGULATED COMMUNITY

- ✓ In prescribed class of facility
- ✓ Meets substance threshold
- ✓ Meets employee threshold
- ✓ Meet other prescribed criteria

(Sections 4-11 from O. Reg. 455/09)

## TOXIC SUBSTANCE REDUCTION PLAN

- Review every 5 years or if significant process change

**TOXIC SUBSTANCE ACCOUNTING**

- Annual

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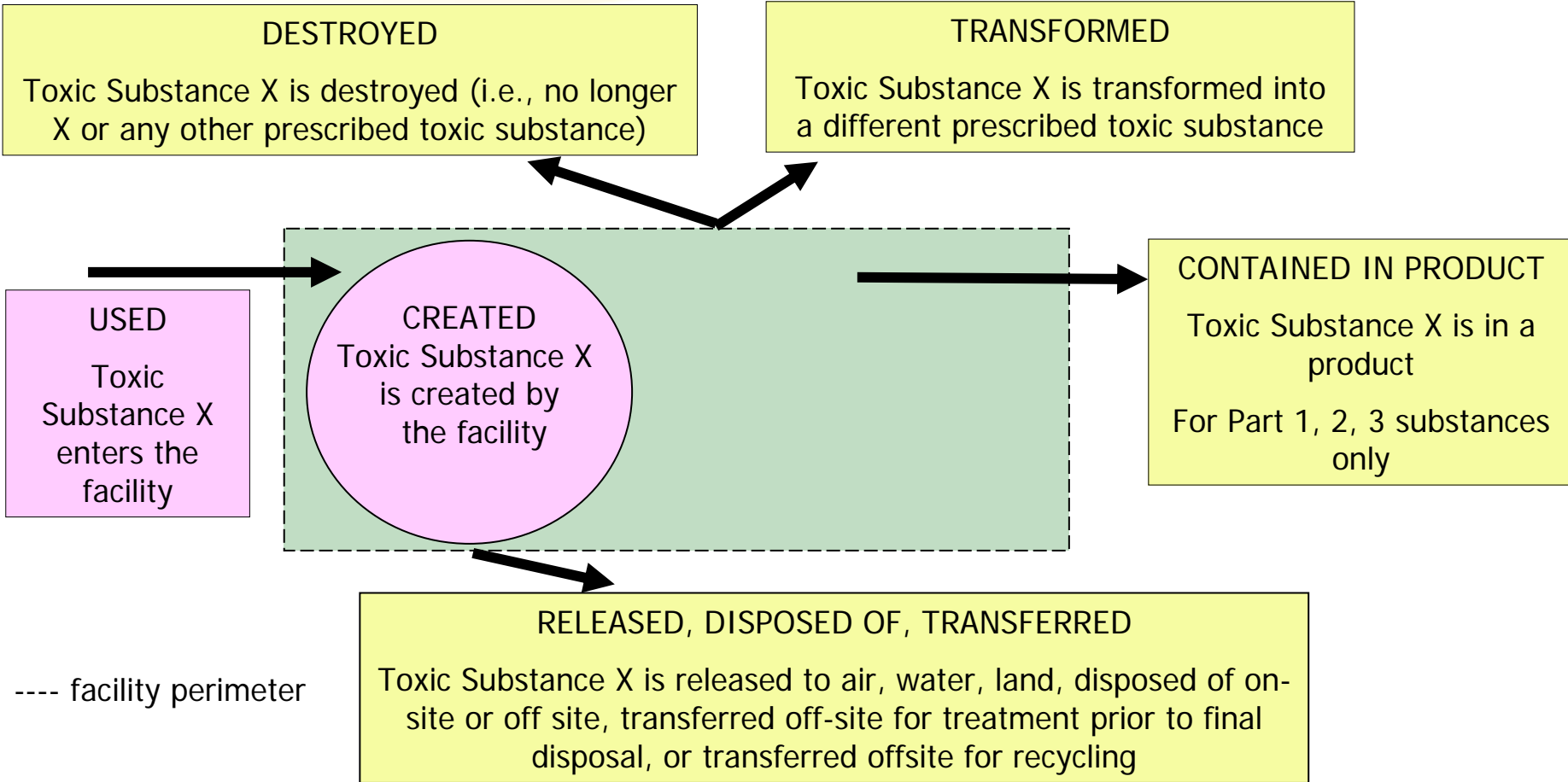
# TOXIC SUBSTANCE ACCOUNTING

## What is the intent of the toxic substance accounting requirements?

- Toxic substance accounting is a method of tracking and quantifying substances to identify the **inputs** and **outputs** of a substance at a facility.
- It is valuable in determining:
  - The extent to which a toxic substance is used or created at a facility and what happens to it as a result of the facility's activities
  - Aspects of the facility's operations which are good targets for toxics reduction
  - A baseline to track progress in reducing toxics



# INPUTS AND OUTPUTS OF SUBSTANCES AT A FACILITY (using example, substance X)



**USED + CREATED ≈ DESTROYED + TRANSFERRED + CONTAINED IN PRODUCT + RELEASED + DISPOSED OF + TRANSFERRED**

# TOXIC SUBSTANCE ACCOUNTING

## What are the toxic substance accounting requirements?

### 1. Tracking

- The Act and regulation require facilities to track toxic substances used, created and released at the facility by developing process flow diagrams of every process at the facility.
  - Identifies how the substance enters the process, what happens to it during the process, how it leaves the process and what happens to it after it leaves the process.
  - It is important to break the stages into sufficiently small processes as this increases the likelihood of discovering areas for toxics reduction, which may not be apparent otherwise.

**The facility must keep a record of the process flow diagrams  
(also to be included in the Toxic Substance Reduction Plan)**

# TOXIC SUBSTANCE ACCOUNTING

## What are the toxic substance accounting requirements?

### 2. Quantifying

- Facilities must quantify the toxic substance **used, created, transformed, destroyed, contained in product, released, disposed of and transferred** for each process.
  - For substances in Parts 1, 2 and 3 of Schedule 1 to the NPRI Notice, facilities must quantify the amount that is contained in product (not required for substances in Parts 4 and 5, and acetone).
- Facilities must use the best available method or combination of methods to track and quantify for each process (i.e. monitoring, source testing or using engineering estimates).
  - When facilities are undertaking tracking and quantification, the same exemptions and calculation rules that NPRI sets out in the Notice, apply. For example, facilities do not have to track and quantify the substance when it is used in an activity related to research and testing, retail sale of the substance, etc nor do they have to include them in the calculations when they are contained in articles, materials used for janitorial purposes, etc.
  - For dioxins and furans the tracking and quantification would also only need to be done in relation to the activities that are listed under the NPRI Notice (e.g. sewage sludge incineration, etc)



# TOXIC SUBSTANCE ACCOUNTING

## What are the toxic substance accounting requirements?

### 2. Quantifying (Cont'd)

- The regulation lays out several considerations for facilities when selecting the best available method:
  - The best way to quantify the substance in question (liquid versus gaseous, contained in product versus fugitive emissions)
  - Industry standards (What do similar sectors use?)
  - Economic achievability
  - Established and recognized methods (i.e. continuous monitoring, published emission factors)
  - Methods required by other laws

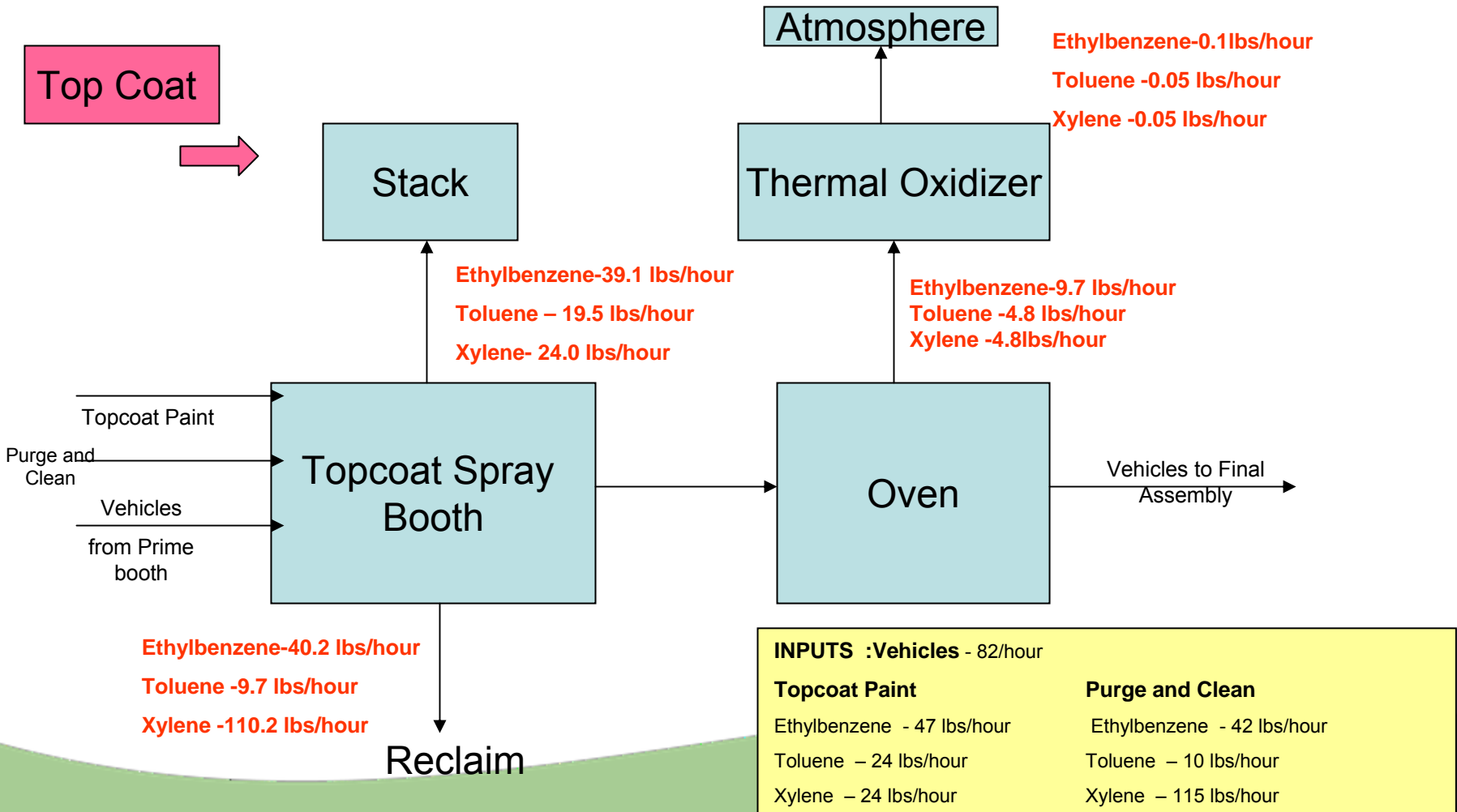
**Facilities are required to keep a record of the method or combination of methods chosen and the rationale why they were selected.**

**Methods must remain the same unless changed through a plan review, or required by another law**

**Methods must remain the same to ensure consistency in data, and to monitor progress**

# TOXIC SUBSTANCE ACCOUNTING

Process Flow Diagrams (Tracking and Quantifying) Example: Automotive Assembly Plant  
 (For illustrative purposes only)



# TOXIC SUBSTANCE ACCOUNTING

## What are the toxic substance accounting requirements?

### 3. Explanation of input-output balance

- For each process, if the sum of inputs is not approximately equal to the sum of outputs, for each substance, facilities must provide an explanation.
  - If the inputs and the outputs are approximately equal, substances likely have been tracked and quantified appropriately, that is, all fates of the substance were captured (used, created, transformed, destroyed, contained in product, released, disposed of and transferred).
  - If the inputs and outputs are not approximately equal, estimation methods may need to be reviewed, or the fate of a substance may have been overlooked and the process flow diagram should be revised. Alternatively, there may be another reason they are not equal and the explanation is required.

A record of the sum of quantities of the substance that are used and created in each process, as well as an input-output balance explanation, must be completed by June 1 of the following year

**This record must be kept at the facility**

# TOXIC SUBSTANCE ACCOUNTING

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QUESTIONS?

# TOXIC SUBSTANCE REDUCTION PLANS

## REGULATED COMMUNITY

- ✓ In prescribed class of facility
- ✓ Meets substance threshold
- ✓ Meets employee threshold
- ✓ Meet other prescribed criteria

(Sections 4-11 from O. Reg. 455/09)

**TOXIC SUBSTANCE REDUCTION PLAN**

- Review every 5 years or if significant process change

**TOXIC SUBSTANCE ACCOUNTING**

- Annual

**Submitted Electronically**

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**REPORT TO PUBLIC**

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# TOXIC SUBSTANCE REDUCTION PLANS

## What is the intent of the planning requirements?

- Toxic substance reduction planning is a systematic, comprehensive method of identifying and planning for the implementation of toxics reduction options
- It is designed to assist facilities in:
  - Identifying the costs associated with a toxic substance that are borne by a facility
  - Identifying and evaluating options to reduce toxics and related costs
  - Determining options best suited for implementation and mapping out implementation steps and timelines



# TOXIC SUBSTANCE REDUCTION PLANS

## What is the intent of the planning requirements?

One plan must be created for each substance

Developing the plan is mandatory.

Implementation is voluntary.

- Mandatory planning ensures facilities go through a rigorous planning exercise of examining the inputs and outputs of the substances throughout the facility, and evaluating where toxics reduction options could occur.

The plan must be kept on site

# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing a Toxic Substance Reduction Plan

### 1. Establish a team (recommended best practice – non regulatory)

- The first step in developing a rigorous plan is to assemble a team that builds on the expertise and experience found in the workplace.

### 2. Estimate the direct and indirect annual costs related to the toxic substance.

This may include:

- The cost to dispose of the wastes created
- The costs to comply with other environmental legislation
- Liability
- Purchasing
- Health and safety-related costs

These estimates will be used when evaluating the toxic reduction options for implementation. It may become clear that implementing some options will result in economic benefits.

# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 3. Identify options for toxics reduction

- Review process flow diagrams and quantification data and identify options for toxics reduction.
- In considering toxics reduction options for each substance, facilities must identify at least one option from each of the following categories or explain why no option could be identified for the category:
  - Materials or feedstock substitution
  - Product design or reformulation
  - Equipment or process modifications
  - Spill and leak prevention
  - On-site reuse or recycling
  - Improved inventory management or purchasing techniques
  - Training or improved operating practices

(These are the categories of pollution prevention methods identified in NPRI)

- Options may not include those that contravene laws or result in a net negative impact on human health and the environment



# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 4. Analysis of options

- For each option identified: Facilities must analyse the effects of implementing the option by estimating the reduction in the facility's use, creation and discharges to air, land and water of the toxic substance, and the reduction in the amount contained in product:
  - This is intended to highlight the amounts of the toxic substance that can be reduced, or even, completely eliminated by implementing one or more options.
  - Facilities are not required to estimate the reductions of Parts 4&5 substances that are contained in product (see slide 21 and 23)
- For each option identified, facilities must determine which options are technically feasible.
  - Examples include whether the option can be incorporated relatively easily into the facility, as well as the availability and applicability of the options

# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 5. Analysis of options – For technically feasible options:

- For each option determined to be technically feasible, an analysis of the economic feasibility must be conducted, including calculations of any anticipated savings that could result from implementing the option, and the anticipated payback period.
  - Facilities may not be aware of the potential savings and of the shorter than expected payback period.
  - An Ontario-based toxics reduction program for small and medium facilities showed that the average payback period for implementing toxic reduction options is 11 months.

Facilities must list the options that have been determined to be both technically and economically feasible.

These would become the options a facility could chose to implement

# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 6. Options to be implemented

- For each option that the facility plans to implement, facilities must estimate the amount by which the use, creation, discharge to air, land and water, and amount contained in product of the toxic substance would be reduced.
  - A Plan for a substance listed in Part 1,2 or 3, of Schedule 1 of the NPRI Notice shall include an estimate of the amount by which the substance contained in product leaving the facility will be reduced.
  - Estimates must be developed in good faith using the best available information
  - Estimates must be calculated using the quantifications used to prepare the current version of the plan.
  - Estimates must be expressed as a percentage and in the unit specified by NPRI
  - If no options are being implemented, a statement to that effect

# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 6. Options to be implemented (Cont'd)

- Facilities must include a description of the implementation steps and create a timetable for implementing the options, as well as anticipated timelines for achieving the estimated reductions of the use and creation of the substance.

**Facilities must keep a record of the information and methods used to generate these estimates in the Plan**

# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 7. Additional components a plan must include:

- Basic facility information
- Statement of intent to reduce use and creation of the toxic substance or reason for not including one
- Objectives, including any targets, for reducing the use or creation of the toxic substance
- Description of processes at the facility that use or create the toxic substance including:
  - How, when, where and why the substance is used or created
  - Toxic substance accounting information



# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 8. Certification of the Plan by the highest ranking employee at the facility

- The plan must be certified by the highest ranking employee at the facility with management responsibilities relating to the facility.

"As of [*insert date*] I certify that I have read the toxic substance reduction plan for [*insert the name of the substance*] and am familiar with its contents, and to my knowledge that plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act."



# TOXIC SUBSTANCE REDUCTION PLANS

## Steps to developing Toxic Substance Reduction Plans

### 9. Certification of the Plan by the person with prescribed qualifications

- The plan must be certified by a person with prescribed qualifications (“Toxics Planner”).
- A future regulation will include the details regarding Planners and will be posted on the Environmental Registry for public comment.

**The highest ranking employee at the facility and the person with prescribed qualifications cannot be the same person**

# TOXIC SUBSTANCE REDUCTION PLANS

Repeat these steps for each toxic substance at the facility to create a toxic substance reduction plan for each substance, as required by the Act.

A certification by the highest ranking employee is required for each plan.

For the purposes of maintaining records, the plans may be combined into a single document

# TOXIC SUBSTANCE REDUCTION PLANS

## Timing

- Plans must be completed by December 31 of the year following the calendar year in which the facility meets all of the prescribed substance thresholds, employee thresholds, and other criteria.

Plans for Phase 1 substances are to be completed by December 31, 2011. These plans are developed using 2010 toxic substance accounting data

Plans for Phase 2 substances are to be completed by December 31, 2013. These plans are developed using 2012 toxic substance accounting data.

# CONTENT OF TOXIC SUBSTANCE REDUCTION PLANS

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

# TOXIC SUBSTANCE REDUCTION PLANS

## Review of Plans

- All plans are reviewed every 5 years, more frequently if there is a significant process change at the facility. The first review for all plans is 2018, and every 5 years thereafter.
- A significant process change corresponds to:
  - The addition of a new process at the facility that uses or creates a toxic substance; or,
  - An alteration to a process that uses or creates a toxic substance at the facility, and that alteration results in an increase in the use or creation of the substance in the process by at least 15% from the quantifications set out in the current version of your plan.
    - this does not include increases in substances used and created due to increases in production

**No review is required if the new process is a result of implementing a toxics reduction option**

# TOXIC SUBSTANCE REDUCTION PLANS

## Review of Plans (Cont'd)

- Through a review, a facility conducts the necessary research to identify new options, undertakes the corresponding technical and economic analyses, conducts calculations to determine new estimates of reduction and develops a new implementation timetable.
- The new version of the Plan should include updated statements and objectives in order to reflect any revised business decisions.

**You must keep all records associated with the review of your plan**

# TOXIC SUBSTANCE REDUCTION PLAN SUMMARY

## REGULATED COMMUNITY

- ✓ In prescribed class of facility
- ✓ Meets substance threshold
- ✓ Meets employee threshold
- ✓ Meet other prescribed criteria

(Sections 4-11 from O. Reg. 455/09)

## TOXIC SUBSTANCE REDUCTION PLAN

- Review every 5 years or if significant process change

## TOXIC SUBSTANCE ACCOUNTING

- Annual

## Submitted Electronically

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# TOXIC SUBSTANCE REDUCTION PLAN SUMMARY

- Facilities will be required to develop a plan summary derived from their complete toxic substance reduction plan(s). Plan summaries are valuable in communicating to Ontarians:
  - Why, how and the extent to which a facility is using or creating a toxic substance
  - Whether the facility intends to reduce its use and creation of a toxic substance

**The Facility may indicate other toxics reduction activities and initiatives that it is currently, or has already, undertaken**



# CONTENT OF TOXIC SUBSTANCE REDUCTION PLAN SUMMARY

Summaries of Toxic Substance Reduction Plans
<b>Basic facility information</b> (with a few exclusions, please consult regulation)
<b>List of toxic substances</b> at the facility for which a plan is required
<b>Objectives and any targets</b> <ul style="list-style-type: none"> <li>• Copy of the statement of intent to reduce or reasons for not including one</li> <li>• Description of why the substance is used or created at the facility</li> </ul>
<b>Description of options, estimated reductions and projection of effectiveness</b> <ul style="list-style-type: none"> <li>• Description of options to be implemented or statement that no option is to be implemented.</li> <li>• If no option is to be implemented, an explanation of why.</li> <li>• For each option to be implemented, the estimated reductions in use, creation, release and contained in product as a result of implementing the option</li> <li>• Anticipated timelines for achieving the estimated reductions</li> <li>• A projection of how effective the plan will be in meeting the objectives</li> </ul>
<ul style="list-style-type: none"> <li>• A <b>statement</b> that summary accurately reflects current version of the plan</li> </ul>
<b>Optional content</b> <ul style="list-style-type: none"> <li>• Actions taken to reduce toxics not identified in the plan</li> <li>• Rationale for why options to be implemented were selected</li> </ul>
<b>Copies of certifications</b> of the plan

# TOXIC SUBSTANCE REDUCTION PLAN SUMMARY

## Timing

- Plan summaries would be due to the government and to the public on the Internet by December 31 of the year the plan is developed.
- Notice of the availability of Plan summaries must be given to the facility's employees on the same day as plan summaries are made available to the public.
- Plan summaries will be submitted electronically (likely through TRAIS).

**\*\*The first set of plan summaries are due by December 31, 2011\*\***

QUESTIONS?

# ANNUAL REPORTS ON TOXIC SUBSTANCE REDUCTION PLAN

## REGULATED COMMUNITY

- ✓ In prescribed class of facility
- ✓ Meets substance threshold
- ✓ Meets employee threshold
- ✓ Meet other prescribed criteria

(Sections 4-11 from O. Reg. 455/09)

## TOXIC SUBSTANCE REDUCTION PLAN

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## What is the purpose of annual reports on toxic substance reduction plans?

- Reports on toxic substance reduction plans provide an opportunity to communicate to the government and to the public on an annual basis the progress that the facility is making in implementing its plan(s), where applicable, and reducing toxics.
- The report will be submitted to the government electronically. Not all this information is included in the public report (see next slides).

# ANNUAL REPORTS ON TOXIC SUBSTANCE REDUCTION PLAN

## Timing

- Reports would be submitted annually by June 1 covering information from the previous calendar year
  - For example, the reports due by June 1, 2011 will reflect data from January to December, 2010. Reports due on June 1, 2014 will reflect data from January to December 2013.
- Notice of the provision of the information to the public must be given to all employees at the facility on the same day the information is made available to the public.

**\*\* The first set of reports are due by June 1, 2011 \*\***

# ANNUAL REPORT ON TOXIC SUBSTANCE REDUCTION PLAN

Report to Government	Public Information
<b>FIRST report only includes:</b>	
<b>Basic facility information</b>	Similar info, except no business number and contact info only for the public contact
<b>List of toxic substances</b> at the facility for which a plan is required	✓
<b>Summarize tracking and quantification*</b> <ul style="list-style-type: none"> <li>• Facility-wide quantities, used, created, contained in product, released, disposed of, transferred</li> <li>• Indication of changes in methods, significant process changes, non-routine events</li> </ul>	Similar info except: <ul style="list-style-type: none"> <li>• Used, created, contained in product expressed in ranges</li> <li>• No information on methods, significant process changes, non-routine events</li> </ul>

- The first report will not contain the same amount of information as subsequent reports, as much of the information required can only be determined after developing a plan (reports are due by June 1, plan(s) are due by December 31)

\*Act requirement for Reports

# ANNUAL REPORT ON TOXIC SUBSTANCE REDUCTION PLAN

Report to Government	Public Information
<b>Reports include:</b>	
<b>Basic facility information</b>	Similar info, except no business number and contact info only for the public contact
<b>List of toxic substances</b> at the facility for which a plan is required	✓
<b>Summarize tracking and quantification*</b> <ul style="list-style-type: none"> <li>• Facility-wide quantities, used, created, contained in product, released, disposed of, transferred</li> <li>• Indication of changes in methods, significant process changes, non-routine events</li> </ul>	Similar info except: <ul style="list-style-type: none"> <li>• Used, created, contained in product expressed in ranges</li> <li>• No information on methods, significant process changes, non-routine events</li> </ul>
<b>Comparison of tracking and quantification to previous reporting period*</b> <ul style="list-style-type: none"> <li>• Reasons for changes from previous year</li> </ul>	<ul style="list-style-type: none"> <li>• Summary only of the reasons for changes from previous year</li> </ul>
<b>Describe steps taken to achieve objectives and assess effectiveness*</b> <ul style="list-style-type: none"> <li>• Include objectives and any targets</li> <li>• Include estimate of toxics reduction achieved</li> <li>• Difference between steps taken and those in the plan and indication of whether timetable for steps will be met</li> </ul>	Similar info except: <ul style="list-style-type: none"> <li>• Summary only of estimated toxics reduction achieved, steps taken and the difference between steps taken and those set out in the plan</li> </ul>
<b>Optional</b> <ul style="list-style-type: none"> <li>• Actions taken to reduce toxics not identified in the plan and estimate of toxics reduction achieved</li> </ul>	Summary only
Describe <b>amendments</b> to the plan*	Summary only
<b>Certification</b> by highest-ranking employee	✓

\*Act requirement for Reports

# ADDITIONAL MATTERS

## What additional matters are included in the regulation?

### Documents and Records retention

- Documents and records related to the development of the plans and reports must be retained at the facility for seven years, including the Toxic Substance Reduction Plans.
- It is also recommended to keep all plans and supporting documents on-site for record management purposes when there are changes in staff.

**If requested by the Ministry, (typically during an inspection) the owner and operator are required to provide a copy of the plan(s)**

### Notice of errors and change of ownership

- If the owner or operator has changed, the new owner or operator of the facility must notify the Ministry within 30 days.
- A facility has 30 days to submit the correct information to the Ministry after becoming aware of errors or inaccuracies.

# ADDITIONAL MATTERS

## What additional matters are included in the regulation?

### Forms

- Submission of documents under the Act and Regulation must be in an electronic form provided by or approved by the Ministry.

**The Ministry will provide you with a method of submitting annual reports and plan summaries electronically.**

**If you are not able to submit them electronically, the Ministry will work to accommodate you.**



# EXEMPTION, CRITERIA NO LONGER MET

There are several circumstances in which the requirements under the Act and regulation would no longer apply to a facility:

- Facility is no longer manufacturing or mineral processing
- The number of employees at the facility has been permanently reduced to 0
- Facility permanently ceases to use and create the toxic substance in all processes
- Facility has not met the substance or employee thresholds or other criteria for three consecutive years (not before 2015).
- If the substance is a dioxin, furan or hexachlorobenzene and the facility has determined through continuous emissions monitoring, predictive emissions monitoring or source testing that the quantity released, disposed or transferred is less than the estimated level of quantification set out in the NPRI Notice for three consecutive years (not before 2015).



# EXEMPTION, CRITERIA NO LONGER MET

- The exemption only applies if a facility provides Notice to the Ministry.
  - In circumstances where a facility must demonstrate that it has not met the criteria or the estimated level of quantification for three consecutive years, the Notice must be provided to the Ministry on or before June 1 in the year following the third year in respect of which the notice applies.
- The Notice must include:
  1. a description of the circumstances and
  2. a certification by the highest ranking employee at the facility
  - In circumstances where a facility must demonstrate that it has not met the criteria or estimated level of quantification for three consecutive years, the Notice must also include:
    - a copy of the annual report or
    - a copy of the record that contains the determination that the facility did not meet the applicable criteria for a given calendar year.

The Notice shall be made available to the public and on the Internet



# EXEMPTION, CRITERIA NO LONGER MET

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- If at a later date, a facility that had previously been granted an exemption meets all of the applicable criteria for preparing a plan in a calendar year, the facility must prepare a new plan by December 31 of the following year.



QUESTIONS?

# PROGRAM DEVELOPMENT AND SUPPORT TO INDUSTRY

## What types of programs are being developed to assist you?

Ontario has also committed funding to help facilities meet the requirements of the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09.

- The government will fund programs to help support industries transform their processes, find green chemistry alternatives and reduce the use of toxics in their operations, including:

### Fact Sheets and Technical Guidance Documents

- Plain language guides are expected to be available in Spring 2010
- Technical Guidance Documents are anticipated for Spring 2010.

### Industry Assistance and Availability of Grants

- Industry assistance programs and grants will be made available to facilities to help offset the cost of toxic substance reduction planning.

**Details of these programs will be made available to facilities shortly**

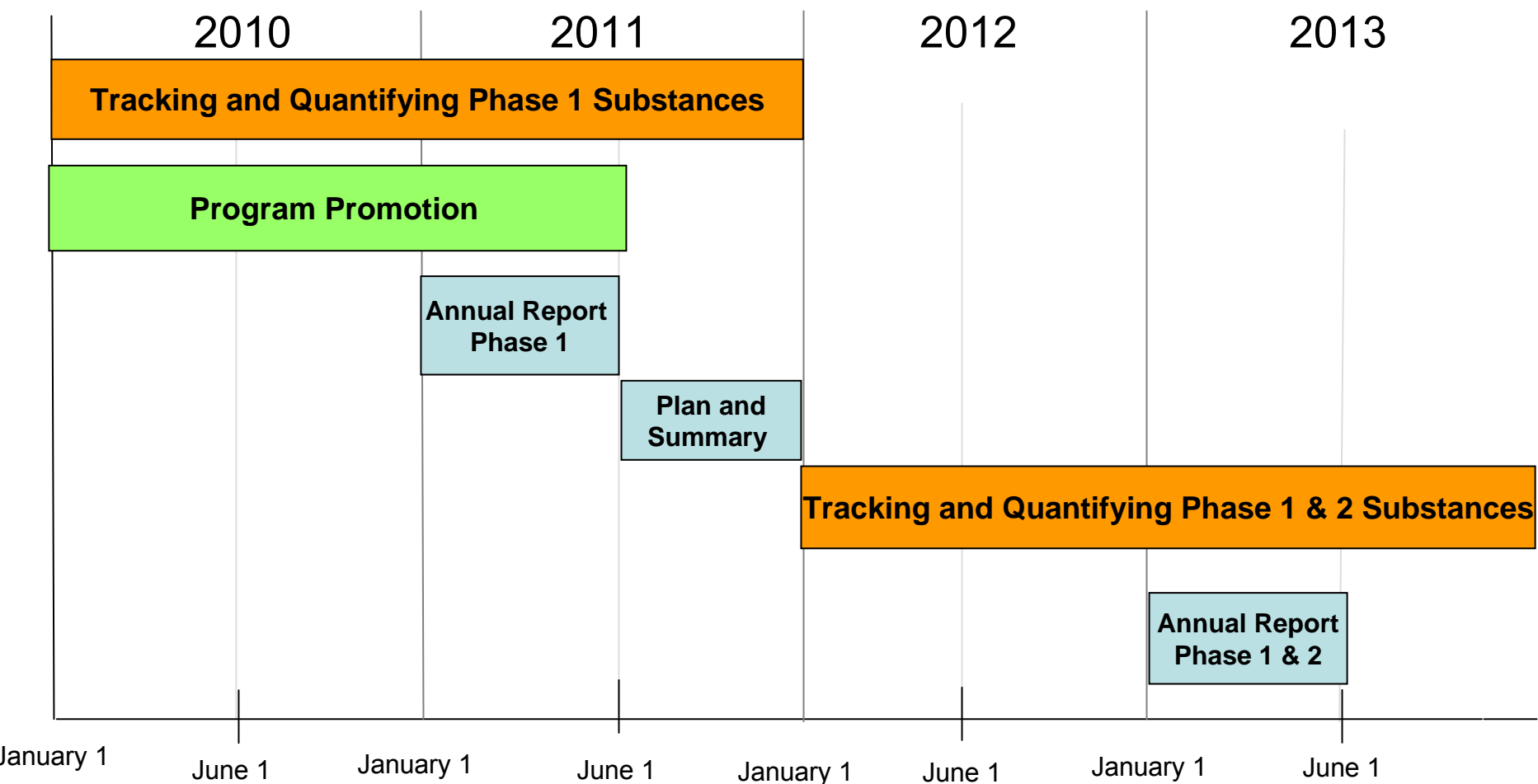
# PROGRAM DEVELOPMENT AND SUPPORT TO INDUSTRY

## Informing Ontarians and TRAIS

- TRAIS (Toxic Reporting and Information System) will facilitate the collection of information from facilities and will share that information with the public. It is the intention of the Ministry to enhance the system, but initially it will include:
  - Forms for facilities to use to upload required information
  - Capability of generating reports
  - Simple search functions for the public to find reports and plan summaries
- As the system is enhanced in the future, it may also include:
  - GIS mapping of facilities in communities
  - Various search functions to locate facilities by address or substances used, for instance
- The Ministry website will be used to provide:
  - Case studies
  - Recognize facilities taking the initiative to reduce their reliance on toxics
  - Promote toxics literacy by providing information to Ontarians on toxic substances, health and environment impacts, with a view to providing context and building understanding of the Toxics Reduction Strategy.



# TIMELINES



# COMPLIANCE APPROACH

- The following slides will give a brief overview of the Ministry of the Environment's proposed compliance approach and will include:
  - An outline of the Ministry's general compliance and enforcement model;
  - Key dates for compliance with the Act and regulation;
  - A description of the environmental officer's role relating to compliance;
  - A general description of the types of inspections you can expect; and
  - Some suggestions on how to prepare for an inspection under the Toxic's legislation and environmental inspections in general.



# COMPLIANCE APPROACH

## 2009-June 1, 2011

- MOE has sent electronic notifications of the upcoming legislative requirements to facilities currently reporting to NPRI. A record of who was notified is available for each facility.
- Education and outreach activities are planned (such as this one) to inform the regulated community of the new requirements.
- Facilities known to be subject to the Toxics legislation, that are inspected under other provincial environmental legislation will likely be reminded about the requirements and provided with fact sheets.

## Post-June 1, 2011

- Facilities subject to Toxics legislation will be inspected to evaluate compliance.



# GENERAL COMPLIANCE AND ENFORCEMENT MODEL

*Compliance Promotion* → *Inspection* → *Compliance/Enforcement*

- *Education & Outreach*
- *Compliance Assistance*
- *Information Sessions*
- *Ministry Internet Site*
- *Stakeholder Consultation*
- *Regular liaison with regulated communities*
  - *Industry Associations*
  - *Medical Officers of Health*
  - *Conservation Authorities*
  - *Municipalities*

- *Planned Risk Based Approach*
- *Reactive inspections in response to spills, incidents, notifications*
- *Physical Inspection*
- *Assess Inspection Findings*
- *Identify non-compliance & situations where impacts are possible*

- *Select appropriate compliance and/or enforcement tool*
- *Consider:*
  - *the actual or potential health or environmental consequences*
  - *the compliance history*
  - *the response*

# ROLE OF ENVIRONMENTAL OFFICER

- Fiscal Year 2010/11 – primary role with regards to Toxic legislation will be education and outreach to regulated community to increase the likelihood of a high percentage of facilities reporting in the first year.
- Fiscal Year 2011/12 – Inspections will be conducted to evaluate compliance and may include:
  - ensuring accounting reports were submitted;
  - a review of accounting records; and
  - a facility tour to cross reference processes utilizing toxics vs. submitted toxic accounting report.
- In order to achieve compliance and enforcement objectives, Ministry legislation authorizes a variety of tools. The response to any violation must be proportionate to the risk presented by the violation, the compliance history, and the response of the violator to the incident. Tools include education and outreach, warnings, orders and prosecutions.



# GENERAL TYPES OF INSPECTIONS

- Comprehensive - inspections conducted for compliance with multiple applicable Acts and regulations.
- Focused – inspections that typically only involve determining compliance with a single media type (e.g., wastewater).
- Announced/Unannounced – inspections may or may not be scheduled with the facility ahead of time.
- Inspections by District Officers – generally, but not exclusively, announced focused inspections (both proactive and reactive) conducted by one officer.
- Inspections by Sector Compliance Officers – generally proactive unannounced comprehensive inspections conducted by one officer or by teams (i.e. 2 or more officers).



# HOW CAN FACILITIES PREPARE?

- ✓ Understand your regulatory obligations – make sure your plans cover all processes that use the prescribed toxic substance(s).
- ✓ Participate in training programs, conferences to keep current and enhance your knowledge.
- ✓ Pro-actively contact your local MOE office to discuss any issues – if unsure about requirements.
- ✓ Consider conducting a self-assessment of your facility.
- ✓ Keep your records organized and readily accessible – keeping records easily accessible can help keep inspection time to a minimum.



## RECOMMENDED ACTIONS DURING AND POST INSPECTION

- ✓ Work cooperatively with the Environmental Officer inspecting your facility, learn from this experience.
- ✓ Follow up on all inspection results.
- ✓ Monitor ongoing operations.

To find out more about the Ministry visit us at <http://www.ene.gov.on.ca/>

*“What to Expect When an Environmental Officer Inspects Your Facility”,  
Posted on MOE website, December 2004 –*



QUESTIONS?

## FOR FURTHER INFORMATION

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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/en/mailing/subscribe.php>

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](mailto:picemail.moe@ontario.ca).

For information on the NPRI, please refer to:

<http://www.ec.gc.ca/inrp-npri/default.asp?lang=En&n=4A577BB9-1>

