TOXICS REDUCTION:
THE NEW PARADIGM IN ONTARIO ENVIRONMENTAL LAW

Prepared by:
Joseph F. Castrilli
Counsel
Canadian Environmental Law Association

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INTRODUCTION

- The *Toxics Reduction Act, 2009*, S.O. 2009, c. 19 ("*TRA 2009*" or the "Act") came into force in January 2010. The purpose of the Act is to (1) prevent pollution and protect human health and the environment by reducing the use and creation of toxic substances, and (2) inform Ontarians about toxic substances [s. 1(a)(b)].

- *TRA 2009* represents a new paradigm in Ontario environmental law in at least two major respects. First, the Act represents the first Ontario environmental law to focus predominantly on pollution prevention not pollution control or abatement in the context of toxic substances. Second, the *TRA 2009* also represents the first Ontario environmental law to be based on the concept of information-based regulation and not command and control regulation.

- In addition to summarizing the Act, the regulations, and potential benefits of such a regime, this review begins by briefly exploring the paradigm shifts contained in the Act and their implications.

POLLUTION PREVENTION

- The basic assumption of environmental law and regulation since its inception in Canada has been that pollution problems, including those posed by toxic substances, are solvable through abatement of that pollution, "end-of-pipe" treatment, or reduction of emissions. That is the approach employed in several key provincial environmental statutes since their first enactment in the mid-twentieth century: the *Environmental Protection Act*, R.S.O. 1990, c. E.19 ("*EPA*"), and *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 ("*OWRA*"). The *TRA 2009* turns that concept around by focusing on toxic substances going into the front end of the industrial process with a view to possible reductions in the use and creation of such substances.

- Though *TRA 2009* does not define "pollution prevention", the term is defined under federal environmental law (*Canadian Environmental Protection Act, 1999*, S.C. 1999, c. 33 – *"CEPA 1999"*) as "the use of processes, practices, materials, products, substances or energy that avoid or minimize the creation of pollutants and waste and reduce the overall risk to the environment or human health" [*CEPA 1999*, s. 3(1)].

- The policies of the Ontario Ministry of the Environment ("MOE"), the ministry that administers the Act, have been characterized as including reduction of the release, generation, or use of toxic substances.[1] The *TRA 2009* is the codification of this approach by defining a variety of methods by which facilities under the Act must look for pollution reductions including materials and feedstock substitution, product design or reformulation, equipment or process modification, spill and leak prevention, on-site re-use or recycling, improved inventory management, and training and improved operating practices.[2] *TRA 2009* is based on several state laws in the United States (Massachusetts and New Jersey) that have been very successful in reducing the use of toxic substances in their respective jurisdictions.[3]

- Given the high levels of release of toxic substances, carcinogens, and developmental/reproductive toxicants in the Ontario environment, and the failure of Ontario's traditional pollution laws and *CEPA 1999* to grapple effectively with that problem, which has had the effect of making the province one of the top emitters of such substances in North America,[4] the expectation is that a law that focused primarily on reduction in the use and creation of such substances could improve environmental health in the province.

INFORMATION-BASED REGULATION

- A further traditional assumption of Ontario environmental law has been that pollution problems are best managed through a "command and control" approach to environmental protection. Under such an approach, the law specifies the technologies to be used to meet environmental standards. Laws such as the *EPA*, the *OWRA*, or the federal *Fisheries Act*, R.S.C. 1985, c. F-14 and, more specifically, the regulations promulgated thereunder, are examples of this approach.

- However, toxics reduction laws like *TRA 2009*, and several state laws that have operated in the United States for several decades, are best described as "information-based regulation". Such laws seek to spur reductions in industrial

[1] *Moreau v. Ontario (Ministry of the Environment, Director)*, [2010] O.E.R.T.D. No 49 at para 31.
[2] *Ibid.* See *General Regulation*, O. Reg. 455/09, s. 17(1), para 1.
[3] *Toxics Use Reduction Act*, Mass. Gen. L. ch. 211; *Pollution Prevention Act*, N.J. Stat. Ann. Title 13: 1D-36 to 1D-50.
[4] Joseph F. Castrilli, *Annotated Guide to the Ontario Toxics Reduction Act*, loose-leaf (Toronto: Canada Law Book, 2011) at I-3 to I-7.

emissions by uncovering and disclosing information on pollution sources to industry managers, regulators, and the public while augmenting traditional regulatory approaches.

- Therefore, laws such as *TRA 2009* are designed to change industrial behaviour not through hard regulation ("command and control") but rather through "soft" regulation (i.e. a requirement to produce a toxics substance reduction plan, and a public summary thereof, combined with other public reporting obligations, but without a mandatory obligation to implement the plan). In short, mandatory plan preparation, but voluntary implementation.

- The thinking behind such a regime is that, unlike voluntarily prepared environmental audits[5] that remain confidential in certain circumstances,[6] [7] toxic substance reduction plans are required by law to be prepared and may be scrutinized by government at any time. Therefore, their mandatory existence and the requirement to report to government (and to a lesser degree the public) with respect thereto may be sufficient incentive, in conjunction with what the plans themselves reveal, for industrial-decision-makers to implement voluntarily the measures contained in the plans in the interests of their companies.

BENEFITS OF TOXICS REDUCTION

- Based on the experience in other jurisdictions, the benefits of a toxics reduction regime in Ontario may be expected to include:

    - Less pollution, leading to a cleaner environment and safer products;
    - Reduction in public health risks, and contribution to safer and cleaner workplaces;
    - Savings in money to companies through implementation of pollution prevention plans;
    - Promotion of cleaner, more innovative technologies and development of greener products;
    - Lower compliance costs for companies and lower enforcement costs for government agencies; and

[5] Environmental audits have been defined as voluntary internal evaluations by companies to verify their compliance with legal requirements and internal company policies. Audits can identify compliance problems, weaknesses in management systems, or areas of risk. *Ontario (Ministry of Environment) v. McCarthy Tetrault* (1992), [1993] 9 C.E.L.R. (N.S.) 12 at 21 (Ont. Prov. Ct.).

[6] In *McCarthy*, a company claim of privilege was upheld where documents in issue confirmed evidence of company's solicitor that purpose for which documents prepared was to receive confidential information and obtain legal advice concerning compliance of facility with environmental legislation. Characterization of document as environmental audit was not determinative of whether information was communicated to solicitor for purpose of obtaining legal advice and therefore material was privileged. *Ibid.* at 21-25.

[7] MOE also has a policy on limiting government access to environmental audits in certain circumstances that acknowledges that ensuring the confidentiality of such evaluations will help to promote their use. Ontario Ministry of the Environment, *Guideline H-9: Policy and Guideline on Access to Environmental Evaluations* (Toronto: MOE, 1996) at 1.

- Reduction in the need for further management of hazardous wastes.

SUMMARY OF THE STATUTE AND REGULATIONS

- Key provisions of the *TRA 2009* address such matters as:

  - Regulated facilities;
  - Toxic substances and substances of concern;
  - Toxic substance accounting;
  - Toxic substance reduction planning, including plans, plan summaries, and planners;
  - Toxic substance reduction reporting;
  - Public disclosure; and
  - Compliance and enforcement.

Regulated Facilities

- Facilities are subject to the Act if:

  - They belong to a class of facilities prescribed by the regulations;
  - The number of persons employed at the facility exceeds the number of persons prescribed by the regulations;
  - A toxic substance, prescribed by the regulations, is used or created at the facility in amounts that meet the criteria prescribed by the regulations; and
  - They meet other requirements prescribed by the regulations [*TRA 2009*, S.O. 2009, c. 19, s. 3(1)].

- In this regard, the regulations prescribe two classes of facility that are subject to the Act:

  - Manufacturing; and
  - Mineral processing, where the processing involves the use of chemicals to separate, concentrate, smelt or refine metallic or non-metallic minerals from an ore [O. Reg. 455/09, s. 4(2)].

- The thresholds for the number of facility employees and quantity of toxic substance used or created are the same as those used under the National Pollutant Release Inventory ("NPRI") notices issued under the authority of *CEPA 1999*. In general, this means 10 employees and 10,000 kg, except where with respect to the latter, the NPRI uses a different threshold for a particular substance, in which case *TRA 2009* follows suit. One substance, acetone, relies on thresholds established under regulations promulgated under the *EPA*.[8]

[8] *Airborne Contaminant Discharge Monitoring and Reporting Regulations*, O. Reg. 127/01. See *General Regulation*, O. Reg. 455/09, s. 7 (10 employees and three tonnes).

Substances

- The Act addresses two categories of substances: (1) toxic substances; and (2) substances of concern.

Toxic Substances

- The Act defines a toxic substance by reference to whether it is prescribed as such by regulation under the Act [*TRA 2009*, s. 2]. The regulations prescribe as a toxic substance any substance listed pursuant to NPRI notices issued under the authority of *CEPA 1999*, and acetone [O. Reg. 455/09, s. 3]. Table A to the regulations lists 47 high priority substances from NPRI that are now subject to the Act's requirements. The Act will apply to NPRI substances (some 300 in number) not listed in Table A commencing in January 2012 [O. Reg. 455/09, s. 10].

Substances of Concern

- The Act defines a substance of concern by whether it is prescribed as such by regulation under the Act [*TRA 2009*, s. 2].

- The Act requires that the owner and operator of a facility must ensure that a report on a substance of concern is prepared and given to the MOE Director if:

    - The facility is part of a class of facilities prescribed by the regulations;
    - The substance of concern is used or created at the facility and the amounts that are used or created meet the criteria prescribed by the regulations; and
    - Other criteria are prescribed by regulation [*TRA 2009*, s. 11].

- These provisions are designed to address substances that are not identified under the NPRI. As of September 2011, there were no substances of concern listed by regulation pursuant to the Act.

Toxic Substance Accounting

- The Act requires that the owner and operator of a facility, who are required to prepare a toxic substance reduction plan for a toxic substance under section 3 of the Act, ensure that for each process at the facility that uses or creates the substance, that the substance is tracked and quantified, in accordance with the regulations, to show:

    - How the substance enters the process;
    - Whether it is created, destroyed, or transformed during the process;
    - How it leaves the process; and
    - What happens to it after it leaves the process [*TRA 2009*, s. 9].

- MOE describes this as "toxic substance accounting" and views it as a method for tracking and quantifying substances to identify the inputs and outputs of a substance at a facility.[9]

- The regulations require owners and operators of facilities to:

    - Identify their processes that use or create toxic substances that are subject to the Act;
    - Track and quantify the process-level quantities that are used, created, destroyed, transformed, contained in product, released, disposed of, or transferred;
    - Use the best available methods to track and quantify how the toxic substance is used in each process identified; and
    - Explain for each process if the sum of the quantities of the substance that are used and created in a calendar year is not approximately equal to the sum of the quantities of the substance that are destroyed, transformed, and leave the process [O. Reg. 455/09, s. 12].

Toxic Substance Reduction Planning

- The heart of the Act is the obligation of an owner and operator of a facility to engage in toxic substance reduction planning as a "systematic, comprehensive method of identifying and planning for the implementation of toxics reduction options".[10]

- The intent of the planning requirements is that a plan must be created by a facility for each substance used at the facility that is subject to the Act and regulations. However, like its sister statute in Massachusetts, under the *TRA 2009*, developing a plan is mandatory, but implementing the plan is voluntary. The theory behind this approach is that engaging in mandatory planning ensures that facilities will examine the inputs and outputs of substances throughout the facility, and consider where toxics reduction could occur.

- There are three key aspects to toxics substance reduction planning: (1) plans, (2) plan summaries, and (3) planners.

Plans

- The Act requires that the owner and operator of a facility must ensure that a toxic substance reduction plan is prepared for a toxic substance in accordance with the Act and regulations [*TRA 2009*, s. 3(1)]. The plans for the 47 toxic substances currently subject to the Act are due by the end of December 2012. Plans for the approximately 300 other toxic substances on NPRI that are to be incorporated into

[9] Ontario Ministry of the Environment, "Regulation 455/09, Toxics Reduction Act, 2009: Compliance Information Session" (Toronto: MOE, 2010) at 20.
[10] *Ibid*. at 29.

Table A will be due by the end of December 2013 [O. Reg. 455/09, ss. 11.1 – 11.2].

- The Act and regulations set out an extensive number of matters to be addressed in toxic substance reduction plans. In general, facility owners and operators must (1) identify options for toxics reduction, (2) determine estimated reductions, (3) conduct a technical feasibility analysis, and (4) conduct an economic feasibility analysis that considers direct and indirect annual costs. In particular, selected facility plan requirements include:

    - Statement of intent to reduce use and creation of a toxic substance, or reasons for not including such a statement;
    - Objectives, including any targets, for reducing use and creation of toxic substances;
    - Description of any process that uses or creates a toxic substance, including how, when, where, and why the substance is created, accounting quantifications and methods employed, and process flow diagrams in relation thereto;
    - Description, analysis, and feasibility of options considered for reducing the use and creation of a toxic substance;
    - Statement of the options that will be implemented, including their technical and economic feasibility [*TRA 2009*, s. 4(1); O. Reg. 455/09, ss. 16, 17(1), 18(1)].

- A plan also must be certified by two people: the highest ranking employee at the facility with management responsibilities, and a qualified person familiar with facility processes (toxic substance reduction planner) that the plan is accurate and complies with the Act and regulations [*TRA 2009*, ss. 4(2)(3); O. Reg. 455/09, s. 19].

- Plans do not have to be submitted to MOE but must be available at the facility for inspection for up to seven years after they are created [O. Reg. 455/09, s. 28].

- Finally, plans must be reviewed every five years, or during a calendar year if, during the previous calendar year, there was a "significant process change" at the facility [O. Reg. 455/09, s. 21(1)(3)]. A "significant process change" is defined in the regulations as one that: (1) adds a new process at the facility that uses or creates a toxic substance; or (2) alters a process that uses or creates a toxic substances and that results in at least a 15% increase in the use or creation of the substance [O. Reg. 455/09, s. 1(3)(a)(b)].

Plan Summaries

- Owners and operators of facilities that are required to prepare a toxic substance reduction plan under section 3 of the Act must also prepare a summary of the plan and provide it to the MOE Director and make it available to the public on the

Internet, or directly to a member of the public upon request [*TRA 2009*, s. 8(1); O. Reg. 455/09, s. 23(2)].

- The contents of plan summaries must include such matters as: (1) plan objectives, including reduction targets, if any, and, if not, reasons for not having targets; (2) a projection of plan effectiveness in meeting objectives, including any targets; (3) copies of the certifications issued by the highest ranking employee having management responsibilities at the facility and the qualified person (toxics reduction planner); (4) description of why the toxic substance is used or created at the facility; (5) description of the options to be implemented, estimated toxic substance reductions expected, anticipated timeframe for reductions, or statement that no option is to be implemented and reasons with respect thereto; and (6) statement that plan summary accurately reflects the plan itself [*TRA 2009*, s. 8(2); O. Reg. 455/09, s. 24(1)(2)].

Planners

- Certification of plans by persons with prescribed qualifications also is a requirement of the Act [*TRA 2009*, s. 4(3)]. These qualified persons, known as toxic substance reduction planners, have been an important feature under Massachusetts law where they are trained and certified by an institute established by that law to recognize opportunities for pollution prevention.

- The Act also provides enabling authority for establishing by regulation the qualifications, role, and oversight of planners [*TRA 2009*, s. 50(1)(f)]. The regulations addressing these matters became law in July 2011. An individual seeking to become licensed as a planner must hold certain degrees, have relevant work experience of varying length depending upon the extent of his or her formal educational training, complete a course and pass an examination approved by the MOE Director, and pay the requisite fees [O. Reg. 455/09, ss. 27.1(2)-(4), 29.1]. Planners also must complete professional development requirements in order to be re-licensed [O. Reg. 455/09, ss. 27.2]. The MOE Director also has authority to suspend or revoke a licence subject to appeal by the licence holder to the Environmental Review Tribunal [O. Reg. 455/09, ss. 27.4-27.6].

Toxic Substance Reduction Reporting

- The Act requires that the owner and operator of a facility required to prepare a toxic substance reduction plan must ensure that annual reports covering the previous year are prepared and given to MOE [*TRA 2009*, s. 10(1); O. Reg. 455/09, s. 25]. The first reports by regulated facilities were due in June 2011.

- The purpose of the reporting requirement is to provide an opportunity to communicate to the provincial government and to the public progress the facility is making in implementing its plan and reducing toxics.[11]

- The Act and regulations set out extensive requirements for the contents of both first and subsequent annual reports to the provincial government and, to a lesser degree, the public. Examples of some of the report information destined for the government include:

    - Methods used to quantify toxic substances;
    - Comparisons of accounting results from previous reporting periods;
    - Any significant process changes at the facility in the previous calendar year;
    - Objectives and targets (if any) for reducing the use and creation of a substance at a facility;
    - Steps taken to implement an option in furtherance of plan objectives and effectiveness of the steps, including in respect of any targets;
    - Information about incidents out of the normal course of events that influenced tracking and quantifying of a substance in a previous calendar year, and how;
    - Certification of the report by the highest ranking employee at the facility with management responsibilities that the report is accurate and complies with the Act and regulations [*TRA 2009*, s. 10(2); O. Reg. 455/09, s. 26(1)-(4)].

- Examples of some of the report information destined for the public (available through Internet or by direct response to request) include:

    - List of toxic substances used or created at the facility meeting the reporting thresholds;
    - Comparison of quantities (in ranges) to previous reporting period, and explanations for changes;
    - Plan objectives, including reduction targets, if any;
    - Summary of steps taken to implement options, including results;
    - Certification of the report by the highest ranking employee at the facility with management responsibilities that the report is accurate and complies with the Act and regulations [*TRA 2009*, s. 10(4); O. Reg. 455/09, s. 27(1)(2)(3)].

- The public is not entitled to receive information in actual quantities, only in ranges [O. Reg. 455/09, s. 27(2)(3)]. The public also is not entitled to receive information on significant process changes, or incidents out of the normal course of events,[12] among other matters.

[11] *Ibid*. at 51.
[12] *Ibid*. at 53.

Public Disclosure

- As noted above, both toxic substance reduction plan summaries and parts of annual reports will be public information. The theory behind this approach is that the public, including the local community, will be made aware of the extent to which a facility is using or creating a toxic substance, whether the facility intends to reduce use and creation, and the extent of any progress made in implementing the plan.

- The regulated community, in turn, will be concerned about release of confidential business information. The extent to which the Act strikes the right balance between disclosure and confidentiality remains to be seen.

Compliance and Enforcement

- The *TRA 2009* contains an extensive, if typical, array of compliance and enforcement measures that also are found in other Ontario environmental laws. These include the authority to:

    - Conduct inspections;
    - Issue orders, as well as consider appeals of orders;
    - Impose administrative penalties (s. 30 of Act but not in force because no regulations promulgated to date);
    - Seize, detain, and remove things; and
    - Prosecute individuals, corporations, officers, directors, employees, or agents of corporations [*TRA 2009*, ss. 13-44].

CONCLUSIONS

- Ontario has embarked on a new paradigm in environmental law; one that focuses on pollution prevention, not pollution control as well as one that is information-based, not command and control driven. How successful the regime will be in meeting the Act's twin purposes of (1) preventing pollution and protecting human health and the environment by reducing the use and creation of toxic substances, and (2) informing Ontarians about toxic substances, will bear watching in the coming years.

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