



Toxics Reduction Act Backgrounder for OABA Members October 22, 2009

Background:

The Toxics Reduction Act is part of a strategy being implemented by Ontario's Ministry of Environment (MOE) that will add another level of regulation to Ontario manufacturers who already comply with the National Pollutant Release Inventory (NPRI). MOE cites statistics from the Commission for Environmental Cooperation (2006) that places Ontario among the highest toxics-releasing jurisdictions in North America. Research suggests that Ontario industries release the second largest amount of recognized developmental and reproductive toxicants in North America, and the fourth largest amount of known and suspected carcinogens in North America.

The Toxics Reduction Act:

The legislation will require facilities that use or create prescribed toxic substances which meet the criteria set out in the regulation to:

- Track and quantify the toxic substances used or created at the facility;
- Prepare a toxic substance reduction plan (plan) for each toxic substance used or created at the facility and have the plan certified both by the highest ranking employee at the facility with management responsibilities and by a proposed accredited toxics reduction planner;
- Prepare summaries of their plans and make them available to the public in accordance with regulations;
- Report to the MOE on their progress in reducing toxic substances or why reductions will not be made and make certain information available to the public in accordance with regulations; and,
- Report to the MOE on any substances of concern used or created at the facility (likely to be a one-time information gathering exercise).

MOE defines toxic substances as "all substances on the federal National Pollutant Release Inventory (NPRI) and acetone." The initial focus will be on 47 priority substances and substance groupings in Phase 1 commencing January 1, 2010, with Phase 2 substances commencing January 1, 2012.

Planning Requirements:

It is the OABA understanding that planning requirements will be onerous. Every facility will be required to have a plan onsite, and available to submit to MOE is requested. Plans require facilities to provide detailed descriptions of what substance (from the list of 47 in Phase 1) is being used or released, a visual flow chart of the processes each substance is involved with, a cost analysis of using each substance, and a plan for what substances can be used to substitute all or part of the toxic substance. Companies are also required to map out annual costs associated with using each substance, and any anticipated cost saving they might realized by using a substitute.

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What it means for Ontario Agri Business Operations:

Based on information available to OABA, it is readily apparent that the Ontario agri business sector would be directly impacted by this legislation. The flour produced at our Ontario grain milling facilities would be considered a form of non-specific particulate matter under the regulations and would have to be reported in a public registry of toxic emissions associated with the Act. This could stigmatize flour and the many food products in which it is used, even though flour is obviously not toxic. Indeed, it is a healthy and vital ingredient in a wide range of food products most of us eat regularly. The regulations would also apply to animal feed ingredients, some that are by-products of grain and oilseed processing for food, such as canola, soybean and wheat. From a crop production perspective, phosphorus, an essential plant nutrient is also named in the list of toxic substances.

It should be noted that the regulations adopt by reference the substances listed in NPRI. Certain substances are considered slightly higher priority and will be subject to earlier reporting requirements. These higher priority substances were published as Table A of the draft regulation. Non-specific particulate was not included in Table A.

Non-specific particulate (i.e., total particulate matter, PM 10 and PM 2.5) appears in Part 4 of the NPRI list of substances, reproduced below for your convenience. The reporting thresholds listed in Table 2 below are emission thresholds.

**Table 2: Mass Reporting Threshold for Substances
Listed in Part 4 of Schedule 1**

Item	Column 1 Substances in Part 4 of Schedule 1	Column 2 Mass Reporting Threshold
1.	Carbon monoxide	20 tonnes
2.	Oxides of nitrogen (expressed as NO ₂)	20 tonnes
3.	PM _{2.5}	0.3 tonnes
4.	PM ₁₀	0.5 tonnes
5.	Sulphur dioxide	20 tonnes
6.	Total particulate matter	20 tonnes
7.	Volatile organic compounds	10 tonnes

The Ontario Agri Business Association is working with other agri-food industry stakeholders to seek an exemption from the Toxics Reduction Act. OABA strongly believes that consumers who buy Ontario foods and beverages should have no doubt about the safety of their food or Ontario's food production system. OABA Members are encouraged to contact their MPP with their industry concerns.

Guelph, Ontario
October 22, 2009

Schedule 1: Priority List of NPRI Toxics and Carcinogens
PROPOSED LIST OF TOXIC SUBSTANCES - PHASE 1 – January 1, 2010

Substance	CAS Number ¹
PRIORITY TOXICS	7429-90-5
Aluminum (fume dust)	**
Arsenic and compounds	92-52-4
Biphenyl	**
Cadmium and compounds	7782-50-5
Chlorine	**
Chromium and compounds	**
Hexavalent Chromium and compounds	**
Cobalt and compounds	**
Copper and compounds	57-12-5
Cyanides	107-06-2
Dichloroethane-1,2	100-41-4
Ethylbenzene	50-00-0
Formaldehyde	118-74-1
Hexachlorobenzene	7647-01-0
Hydrochloric acid	**
Lead and compounds	**
Manganese and compounds	**
Mercury and compounds	**
Methanol	**
Nickel and compounds	108-95-2
Phenol	**
Selenium and compounds	**
Silver and compounds	127-18-4
Tetrachloroethylene	108-88-3
Toluene	***
Total PAHs ²	121-44-8
Triethylamine	7440-62-2
Vanadium and its compounds (except when in its alloy)	75-01-4
Vinyl Chloride	1330-20-7
Xylene	**
Zinc and compounds	101-14-4
PRIORITY CARCINOGENS	79-06-1
4,4'-methylenebis(2-chloroaniline)	1332-21-4
Acrylamide	71-43-2
Asbestos	106-99-0
Benzene	100-44-7, 98-88-4
Butadiene 1,3 -	8001-58-9
Chlorinated toluenes (Benzoyl chloride and Benzyl chloride)	*
Creosote	106-89-8
Dioxins and Furans ³	75-21-8
Epichlorohydrin	96-09-3
Ethylene Oxide	7664-93-9
Styrene Oxide	1314-20-1
Sulfuric Acid	79-01-6
Thorium Dioxide	
Trichloroethylene	

1 Chemical Abstract Service (CAS) number defined by the National Pollutant Release Inventory (NPRI), 2006. Reporting requirement: the pure metal of any substance, metal or alloy as the equivalent weight of the metal itself. Lead and compounds does not include tetraethyl lead or when contained in stainless steel, brass or bronze alloys.

2 Includes seventeen (17) congeners as defined by the NPRI, 2006

3 Total PAHs (polyaromatic hydrocarbons) reported under the NPRI, 2006

PROPOSED LIST OF TOXIC SUBSTANCES – PHASE 2 – January 1, 2012

1,1,1,2-Tetrachloroethane	2-Ethoxyethanol
1,1,2,2-Tetrachloroethane	2-Ethoxyethyl acetate
1,1,2-Trichloroethane	2-Mercaptobenzothiazole
1,1-Methylenebis(4-isocyanatocyclohexane)	2-Methoxyethanol
1,2,4-Trichlorobenzene	2-Methoxyethyl acetate
1,2,4-Trimethylbenzene	2-Methyl-3-hexanone
1,2-Butylene oxide	2-Methylpyridine
1,2-Dichloropropane	2-Nitropropane
1,4-Dioxane	3,3'-Dichlorobenzidine dihydrochloride
1-Bromo-2-chloroethane	3-Chloro-2-methyl-1-propene
2,2,4-Trimethylhexamethylene diisocyanate	3-Chloropropionitrile
2,4,4-Trimethylhexamethylene diisocyanate	4,6-Dinitro- <i>o</i> -cresol
2,4-Diaminotoluene	Acetaldehyde
2,4-Dichlorophenol	Acetone
2,4-Dinitrotoluene	Acetonitrile
2,6-Dinitrotoluene	Acetophenone
2,6-Di- <i>t</i> -butyl-4-methylphenol	Acetylene
2-Butoxyethanol	Acrolein
Acrylic acid	Calcium fluoride
Acrylonitrile	Carbon disulphide
Adipic acid	Carbon monoxide
Alkanes, C ₁₀₋₁₃ , chloro	Carbon tetrachloride
Alkanes, C ₆₋₁₈ , chloro	Carbonyl sulphide
Allyl alcohol	Catechol
Allyl chloride	CFC-11
Alpha-Pinene	CFC-114
Aluminum oxide	CFC-115
Ammonia (total)	CFC-12
Aniline	CFC-13
Aniline	Chlorendic acid
Anthraquinone	Chlorine dioxide
Antimony	Chloroacetic acid
Benzoyl peroxide	Chlorobenzene
Beta-Phellandrene	Chloroethane
Beta-Pinene	Chloroform
<i>Bis</i> (2-ethylhexyl) adipate	Chloromethane
<i>Bis</i> (2-ethylhexyl) phthalate	Cresol
Boron trifluoride	Crotonaldehyde
Bromine	Cumene
Bromomethane	Cumene hydroperoxide
Butane	Cycloheptane
Butene	Cyclohexane
Butyl acrylate	Cyclohexanol
Butyl benzyl phthalate	Cyclohexene
Butyraldehyde	Cyclooctane
C.I. Acid Green 3	Decabromodiphenyl oxide
C.I. Basic Green 4	Decane
C.I. Basic Red 1	Dibutyl phthalate
C.I. Direct Blue 218	Dichloromethane
C.I. Disperse Yellow 3	Dicyclopentadiene
C.I. Food Red 15	Diethanolamine
C.I. Solvent Orange 7	Diethyl phthalate
C.I. Solvent Yellow 14	Diethyl sulphate
Calcium cyanamide	Diethylene glycol butyl ether

Diethylene glycol ethyl ether acetate	Maleic anhydride
Dihydronaphthalene	Methyl acrylate
Dimethyl phenol	Methyl ethyl ketone
Dimethyl phthalate	Methyl iodide
Dimethyl sulphate	Methyl isobutyl ketone
Dimethylamine	Methyl methacrylate
Dimethylether	Methyl <i>tert</i> -butyl ether
Dinitrotoluene	Methylenebis(phenylisocyanate)
Di- <i>n</i> -octyl phthalate	Methylindan
Diphenylamine	Michler's ketone
D-Limonene	Mineral spirits
Dodecane	Molybdenum trioxide
Ethyl acetate	Myrcene
Ethyl acrylate	N,N-Dimethylaniline
Ethyl alcohol	N,N-Dimethylformamide
Ethyl chloroformate	Naphtha
Ethylene	<i>n</i> -Butyl alcohol
Ethylene glycol	<i>n</i> -Hexane
Ethylene glycol butyl ether acetate	Nitrate ion
Ethylene glycol hexyl ether	Nitric acid
Ethylene thiourea	Nitrilotriacetic acid
Fluorine	Nitrobenzene
Formic acid	Nitroglycerin
Furfuryl alcohol	N-Methyl-2-pyrrolidone
Halon 1211	N-Methylolacrylamide
Halon 1301	N-Nitrosodiphenylamine
HCFC 124 and all isomers	Nonane
HCFC-122 and all isomers	Nonylphenol and its ethoxylates
HCFC-123 and all isomers	Octane
HCFC-141b	Octylphenol and its ethoxylates
HCFC-142b	<i>o</i> -Dichlorobenzene
HCFC-22	<i>o</i> -Phenylphenol
Heavy alkylate naphtha	Oxides of nitrogen (expressed as NO ₂)
Heavy aromatic solvent naphtha	<i>p,p'</i> -Isopropylidenediphenol
Heptane	<i>p,p'</i> -Methylenedianiline
Hexachlorocyclopentadiene	Paraldehyde
Hexachloroethane	<i>p</i> -Dichlorobenzene
Hexachlorophene	Pentachloroethane
Hexane	Pentane
Hexene	Pentene
Hydrazine	Peracetic acid
Hydrogen cyanide	Phenyl isocyanate
Hydrogen fluoride	Phosgene
Hydrogen sulphide	Phosphorus
Hydroquinone	Phosphorus (total)
Hydrotreated heavy naphtha	Phthalic anhydride
Hydrotreated light distillate	PM ₁₀
<i>i</i> -Butyl alcohol	PM _{2.5}
Iron pentacarbonyl	<i>p</i> -Nitroaniline
Isobutyraldehyde	<i>p</i> -Nitrophenol
Isophorone diisocyanate	Polymeric diphenylmethane diisocyanate
Isoprene	Potassium bromate
Isopropyl alcohol	<i>p</i> -Phenylenediamine
Isosafrole	<i>p</i> -Quinone
Light aromatic solvent naphtha	Propane
Lithium carbonate	Propargyl alcohol

Propionaldehyde
Propylene
Propylene glycol butyl ether
Propylene glycol methyl ether acetate
Propylene oxide
Pyridine
Quinoline
Safrole
sec-Butyl alcohol
Sodium fluoride
Sodium nitrite
Solvent naptha light aliphatic
Solvent naptha medium aliphatic
Stoddard solvent
Styrene
Sulphur dioxide
Sulphur hexafluoride
Terpene

tert-Butyl alcohol
Tetracycline hydrochloride
Tetraethyl lead
Tetrahydrofuran
Thiourea
Titanium tetrachloride
Toluene-2,4-diisocyanate
Toluene-2,6-diisocyanate
Toluenediisocyanate
Total particulate matter
Trimethylbenzene
Trimethylfluorosilane
Vinyl acetate
Vinylidene chloride
VM & P naptha
Volatile organic compounds
White mineral oil