

# Environmental Management Newsletter

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Welcome to Pollutech's Environmental Management Newsletter. The newsletter focuses on new and proposed regulations that may affect your business operations as well as provide you with news briefs on various items of environmental concern.

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## **MOE Amendments to Ontario Regulation 455/09 – Toxics Reduction Act**

As of January 1<sup>st</sup>, 2010, regulated facilities in the manufacturing and minerals processing sectors:

- with NAICS codes beginning with “31, 32, 33 and 212” digits,
- with a minimum of 20,000 employee hours worked in 2010,
- who manufacture, process, or otherwise use any of the prescribed toxic substances in any amount that meets or exceeds the prescribed thresholds,

are required to track, report, and prepare toxic reduction plans for the toxic substances that they use. The preparation of toxic substance reduction plans is mandatory; however implementation of the reduction plan is voluntary.

On November 30<sup>th</sup>, 2010, the Ontario Ministry of the Environment (MOE) posted on the Environmental Registry notice proposed changes to Ontario Regulation 455/09:

1. Extend – the due date for Phase I Toxic Substance (listed in Table A of O. Reg. 455/09) reduction plans & plan summaries – by **December 31, 2012**,
2. Address – requirements related to “toxic substance reduction planners”,
3. Revise the exemption criteria for dioxins, furans and hexachlorobenzene.

Please note that the first annual report for Phase I Substances would continue to be due to the Ministry by **June 1, 2011**. This first report would be based on the tracking and quantification data from 2010. The Toxics Reduction Act, 2009 can be viewed at:

[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_09t19\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_09t19_e.htm)

[http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws\\_src\\_regs\\_r09455\\_e.htm](http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09455_e.htm)

## **Health Protection Air Quality, By-Law No.2010-035, Oakville** **IN EFFECT FROM FEBRUARY 1<sup>st</sup>, 2010**

The Town of Oakville passed Health Protection Air Quality, By-Law No.2010-035 on February 1<sup>st</sup>, 2010. The by-law **will immediately apply to new facilities** that are major emitters of fine PM (PM<sub>2.5</sub>) and Nitrogen oxides, Ammonia, Sulphur dioxide, Volatile Organic Compounds (“Precursor Pollutants”) while transition conditions will apply to existing facilities located in Oakville.

Under the by-law, existing emitters who currently operate under a Certificate of Approval for their air emissions from the Ontario government will be required to report to the Town on their emissions of “Precursor Pollutants” by May 1, 2011. Emitters that do not currently require a Certificate of Approval will be required to report by September 1, 2012. If you emit a “Precursor Pollutant” to the atmosphere from your facility in a “negligible amount” than a only a one time report is required unless a change occurs that would increase the concentrations of pollutants being emitted.

The facility is required to prepare the application with the application fee for the Town if discharged emissions exceed the following thresholds:

- (a) Directly emitted fine Particulate Matter, more than 300 kilograms per year;
- (b) Volatile Organic Compounds, more than 10,000 kilograms per year;
- (c) Nitrogen oxides (as NO<sub>2</sub> equivalent), more than 20,000 kilograms per year;

- (d) Sulphur dioxide, more than 20,000 kilograms per year; or,
- (e) Ammonia, more than 10,000 kilograms per year.

Facilities that receive approval from the Town are required to prepare annual reports that would include their average and worst-case rates of daily and annual health-risk air pollutant emissions from the facility for at least three years following approval.

Facilities that fail to report or obtain an approval could be fined up to \$100,000. Subsequent offences would be subject to a penalty of up to \$10,000 a day.

Please visit: <http://www.oakville.ca/nr-10feb02.htm> and/or [Health Protection Air Quality By-law 2010-035](#)

### ***Green-House-Gases (GHGs) Regulation, Ontario Regulation 452/09 IN EFFECT FROM JANUARY 1<sup>st</sup>, 2010***

The new Green-House-Gases (GHGs) Regulation came into force on January 01, 2010. The new Regulation clarifies who has to report, how to collect, analyze, and verify data, and when the annual submissions are due. Reporting deadlines are summarized below:

1. If the facility at which a greenhouse gas is generated starts operation on or before January 1, 2010, the first reporting period is the calendar year beginning on January 1, 2010.
2. If the facility at which a greenhouse gas is generated starts operation after January 1, 2010, the first reporting period is the calendar year in which the facility commences operation.
3. If the facility finishes operation permanently before the end of a reporting period, the end of that reporting period is deemed to be the last day on which the facility operates.

The emissions report is due on June 1, 2011 for the 2010 operating year. For the 2011 operating year the emissions report is due on June 1, 2012 and an "Emissions Verification Report" will be required to be completed and submitted to the director on September 1, 2012 for the 2011 operating year.

Documents and records in a paper or electronic format must be kept for a period of at least seven years after the reporting period.

For more information on this Regulation please visit the following website:

[http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws\\_src\\_regs\\_r09452\\_e.htm](http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09452_e.htm) and/or:

<http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTA3NzU2&statusId=MTYxODc1>

### ***Environmental Reporting & Disclosure Program, By-Law No.1293-2008, Toronto IN EFFECT FROM JANUARY 1<sup>st</sup>, 2010***

The Environmental Reporting and Disclosure Program require businesses that are located in Toronto to annually report their use and release of 25 hazardous chemicals:

Reporting is phased in over a four year period:

- **Phase I sector industries:** food and beverage manufacturing, printing and publishing, chemical manufacturing, wood industries, power generation and waste and water facilities, are required to track their 2010 data of the chemical use and emissions. **Reporting deadline - June 30, 2011.**
- **Phase II sector industries:** chemical wholesale, waste management and remediation services, medical and diagnostic laboratories, dry cleaning and laundry services, auto body repair, and funeral services establishments are required to track their 2011 data. Reporting deadline (along with Phase I sector industry 2011 data) - June 30, 2012.
- **Phase III sector industries:** "Other manufacturing" are required to track their 2012 data. Reporting deadline (along with Phase I and II sector industry 2012 data) - June 30, 2013.

The public database available for search by facility, chemical or neighborhood, with health and environmental information about the substances will be available to the public by January 2012.

For more information about the Toronto By-Law No. 1293-2009 and list of substances with their thresholds please visit:

<http://www.toronto.ca/legdocs/bylaws/2008/law1293.pdf> and/or: [http://www.toronto.ca/health/hphe/enviro\\_info.htm](http://www.toronto.ca/health/hphe/enviro_info.htm)

***Air Pollution - Local Air Quality, Ontario Regulation 419/05  
 NOW IN EFFECT AS OF FEBRUARY 1<sup>st</sup>, 2010.***

Facilities that have a North American Industry Classification System (NAICS) Code listed in Schedule 4 below are required to use the approved advanced air dispersion model programs (**SCREEN3, ISCRIME, ASHRAE, AERMOD**) for all new Certificates of Approvals (Air & Noise). Facilities that have an existing C of A and fall under Schedule 4 below are required to update their existing Emission Summary and Dispersion Model (ESDM) Report using one of the above approved dispersion models.

<b>Schedule 4: Target Sectors for 2010</b>	
<b>NAICS Code</b>	<b>Sector Description</b>
2122	Metal Ore Mining
221112	Fossil-Fuel Electric Power Generation
324110	Petroleum Refineries
3251	Basic Chemical Manufacturing
3252	Resin, Synthetic Rubber, and Artificial and Synthetic Fibres and Filaments Manufacturing
3311	Iron and Steel Mills and Ferro-Alloy Manufacturing
331410	Non-Ferrous Metal (Except Aluminum) Smelting and Refining
3315	Foundries

**There is potential for facilities that are currently in compliance with Regulation 346 to exceed the new standards outlined in Regulation 419 using the updated dispersion models.** For this reason, the MOE has permitted a phased-in approach for all industries, based on their facility NAICS code, to evaluate compliance using the new “approved” dispersion models (i.e. AERMOD) and, if necessary, request an “Alteration of Standards” if they are unable to meet the new regulatory point of impingement limits. The following schedule outlines when a facility can evaluate compliance using the updated dispersion models and request an “Alteration of Standard” if required:

<b>Schedule 5: Target Sectors for 2013</b>	
<b>NAICS Code</b>	<b>Sector Description</b>
3221	Pulp, Paper and Paperboard
324190	Other petroleum and coal product manufacturing
325	Chemical manufacturing
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
3279	Other Non-Metallic Mineral Product Manufacturing
331	Primary Metal Manufacturing
332	Fabricated Metal Product Manufacturing
336	Transportation Equipment Manufacturing
5622	Waste Treatment and Disposal

All other Facilities, not listed above, can assess their emissions using the new dispersion modelling software as of February 1, 2013 – October 31, 2017.

A request for approval of an Alteration of Standard:

- for Schedule 5 Facilities is to be made between February 01, 2010 and October 31, 2011,
- for All Other Facilities is to be made between February 01, 2013 and October 31, 2017.

O. Reg. 419/05 legislation can be viewed at:

[http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_050419\\_e.htm](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_050419_e.htm) and/or:

<http://www.ene.gov.on.ca/envision/air/regulations/localquality.htm>

## **Proposed Federal Harmonization Strategy for Municipal Sanitary Effluent Dischargers**

In March 2010, Environment Canada published the proposed Wastewater Systems Effluent Regulations, pursuant to the federal Fisheries Act, that would apply to municipal wastewater effluents. The proposed regulations fulfill a commitment under the 2009 CCME (Canadian Council of Ministers of the Environment) Canada-wide Strategy for the Management of Municipal Wastewater Effluent to harmonize effluent quality standards nationally.

The proposed regulations outline the conditions that must be met before municipal sanitary effluent containing deleterious substances may be discharged. Deleterious substances under the proposed regulation include **biochemical oxygen demanding (BOD) matter, suspended solids, total residual chlorine** and **un-ionized ammonia**. In addition, the effluent discharge must not be acutely lethal to rainbow trout. The upgrade of wastewater systems in Canada currently not meeting the national standards would lead directly to a reduction in the mass of pollutants being deposited to surface water.

The proposed regulation includes requirements concerning occurrence of acute toxicity (i.e., no greater than 50% rainbow trout mortality within 100% volume sample), effluent monitoring frequency, monitoring of the receiving environment, record-keeping and reporting.

Further information regarding the proposed municipal effluent regulations can be found at:

<http://gazette.gc.ca/rp-pr/p1/2010/2010-03-20/html/reg1-eng.html>

### **WHAT DO I DO WHEN MY EFFLUENT TOXICITY TEST IS OUT OF COMPLIANCE?**

When standard toxicity testing identifies a sample as being “toxic”, the first question is often “**What is causing this toxicity?**” A toxicity identification evaluation (TIE) is an organized progression through a number of published methods, to isolate and identify the toxicity-causing agent.

Once the toxicity-causing agent is identified, toxicity reduction evaluation (TRE) addresses the “**How can we resolve this toxicity?**” question. TRE employs another set of recognized methods to determine the most efficient and effective method for reducing or neutralizing the toxic effect.

The three phases of a typical TIE/TRE program, developed by the U.S. EPA are:

- Phase 1) Toxicant Characterization - Completion of toxicity test manipulations that can categorize the toxicants as cationic metals, non-polar organics, oxidants, substances whose toxicity is pH dependent, etc. as well as development of physical/chemical characteristics of the toxicant such as filterability, degradability, volatility and solubility.
- Phase 2) Toxicant Identification - The major objective of this phase is to identify the suspected toxicants by isolating the non-toxic compounds from those associated with toxicity.
- Phase 3) Toxicant Confirmation Procedures – These procedures are generic to all toxicants. When the results are collectively considered they provide a “weight of evidence” that the toxicant has been identified.

It has been our experience that, though the EPA has developed specific protocols for TIE/TRE investigations, most users of these protocols utilizes them as a guide for evaluating toxicity problems. We approach the problem of effluent toxicity similar to how one would evaluate and solve any problem: through the review, assessment, and implementation of common sense investigative techniques.

*Vol. 10 No. 4 January 2011*

Pollutech's experts are well experienced in the TIE/TRE process, having completed numerous investigations for a wide variety of effluents from municipal and industry sources including petrochemical, organic, inorganic, thermal electric, mining, food processing, and textile sources to name a few.

Pollutech's ecotoxicity laboratory TIE/TRE skills along with our wastewater process engineering group are well suited and experienced to tackle any effluent toxicity issue from identification and source evaluation through to technical assessment of existing wastewater treatment facilities to achieve compliance. Each TIE/TRE evaluation is unique, and each expands our ability to effectively help our clients to solve their effluent toxicity compliance issue.

### **POLLUTECH'S ECOTOXICITY LABORATORY ACHIEVES RENEWED ACCREDITATION**

Pollutech's ecotoxicity testing laboratory has successfully renewed its accreditation to the standard of ISO/IEC 17025:2005 with the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific aquatic, sediment and soil ecotoxicity testing procedures. Accreditation is limited to those ecotoxicity tests associated with Pollutech's current scope of testing. Pollutech's accreditation to the standard of ISO/IEC 17025:2005 means that Pollutech's ecotoxicity testing laboratory quality assurance program also meets the principles of ISO 9001:2008.

Pollutech is a participant in the CALA Proficiency Testing (PT) Program. In this program, Pollutech receives toxicants which are tested as routine samples. The results are reported to CALA, and a PT report is generated, where the results of Pollutech are compared to the consensus of results calculated from all participants from across Canada.

Accreditation is maintained by consistently adhering to our quality policy. Since 1997, the first year CALA accreditation was offered and first year it was received by Pollutech, and every other year thereafter, Pollutech is visited by a team of CALA assessors. The assessors determine the level of compliance of our quality system with ISO17025:2005, and our laboratory methods with current Environment Canada toxicity testing methods. This assessment is very detailed and includes interviews with key laboratory staff, meetings with management, and an item-by-item evaluation of each ISO/IEC 17025:2005 requirement.

CALA accreditation has become an integral component of validation for acceptance by clientele and has been incorporated as a requirement of regulations by various levels of government.

Further information regarding the CALA program and Pollutech's scope of aquatic, sediment and soil ecotoxicity tests for which Pollutech has received accreditation can be found at [www.cala.ca](http://www.cala.ca), by contacting us at [info@pollutechgroup.com](mailto:info@pollutechgroup.com), or by calling our Sarnia or Oakville office. Further information regarding Pollutech and the various environmental services provided can be obtained by visiting our webpage at [www.pollutechgroup.com](http://www.pollutechgroup.com).

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**For more information on these and other environmental related topics please feel free to visit our website at: [www.pollutechgroup.com](http://www.pollutechgroup.com) or contact us directly at our Oakville office at (905) 847-0065, Sarnia office at (519) 339-8787, or [info@pollutechgroup.com](mailto:info@pollutechgroup.com) and one of our staff members will be happy to assist you. For your convenience we have attached a copy of our business services page which provides a brief summary of the services we provide.**

## Environmental Consultants

### Corporate Overview

Pollutech Group of Companies Inc. is a partnership among Pollutech Environmental Limited, Pollutech EnviroQuatics Limited and Pollutech GeoEnvironmental Limited, offering independent, wholly Canadian-owned environmental consulting services nationally and internationally from offices in Oakville and Sarnia, Ontario.

Since 1969 Pollutech has carried out pioneering environmental consulting and science projects in a wide range of sectors, working with industry and governments at the federal, provincial and municipal levels. Industrial clientele include members of the petroleum and petrochemical industry, automotive industry, mining, milling and smelting industry, pulp and paper industry, textile industry, primary steel producers, food processing industry, organic and inorganic chemical industry, and a variety of secondary manufacturing industries.

Pollutech's Sarnia laboratory facility has performed routine compliance toxicity tests, together with design and development of new and innovative bioassay and biomonitoring techniques. This biological research expertise adds a unique dimension to Pollutech's environmental project teams.

Pollutech offers diverse technical expertise with a solid reputation for focussing on practical, cost effective recommendations to enhance clients' environmental performance. Pollutech has successfully completed over 1,000 Environmental Approvals and assisted clients to comply with various regulatory orders. Pollutech has also completed international projects in over 60 countries across Europe, Asia, Central/South America, and Africa.



Pollutech's experienced team of professional engineers, biologists, geologists, chemists, and technicians, is well qualified to tackle a broad range of environmental projects. Services are readily accessible and offered through a customer focused relationship to our many industrial, commercial, institutional, regulatory agency, and public sector clients. See Over for a listing of our major areas of expertise. For further detail on these services please feel free to call, visit our website [www.pollutechgroup.com](http://www.pollutechgroup.com) or view our additional service information brochures.

*Let us help "bring clarity to your environment"*

# Pollutech Areas of Expertise

## Corporate Services

- certificates of approval (air/water/waste)
- compliance audits
- corporate consulting
- designated substance surveys
- emergency response
- industrial hygiene
- litigation support / expert testimony
- project management
- regulatory review and interpretation
- spill prevention and control plans
- waste audits and waste reduction
- MISA compliance monitoring
- EMS implementation and support



## Air & Noise

- acoustical assessments & audits
- ambient air monitoring
- reporting for NPRI & O. Reg. 127
- advanced USEPA dispersion modelling
- emissions inventories
- greenhouse gas assessments
- source & odour emissions testing
- air pollution control assessments



## Water & Wastewater

- biological monitoring
- commercial diving
- emergency response
- environmental effects monitoring
- marine services
- water/wastewater process design
- storm water control studies
- bench-scale & pilot treatability testing
- water and sediment quality evaluations
- wetland development
- mussel infestation evaluations



## Soil & Groundwater

- phase I & 2 assessments
- financial assurance review
- plume modelling
- remediation
- monitoring

## Toxicity Testing

- acute and chronic testing
- compliance testing
- CALA accredited\* scope of testing
- *in situ* toxicity testing
- toxicity identification evaluations / toxicity reduction evaluations (TIE/TRE)
- water, sediment & soil toxicity testing



## Call Us Today

Pollutech Environmental Limited - 768 Westgate Road, Oakville, Ontario, L6L 5N2, (905) 847-0065

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*Let us help "bring clarity to your environment"*

\* Accreditation by Canadian Association for Laboratory Accreditation Inc. (CALA) to ISO/IEC 17025; accreditation is limited to those tests on the laboratory's scope of testing.

**pollutech**  
environmental consultants