



New Revised Air Standards (Cont'd from page 3) Both the new and revised standards are based largely on recent health effects data assembled by the U.S. Environmental Protection Agency, the California EPA and/or the World Health Organization (WHO). MOE has also considered odour and environmental issues in arriving at some of these limits.

US Air Dispersion Models

MOE intends to adopt a suite of pollution dispersion models developed by the U.S. EPA to replace the Reg. 346 calculations now used to predict compliance. The new models include SCREEN3, AERSCREEN (currently under development), ISC-PRIME, AERMOD, and AERMOD-PRIME. These models require input of local meteorological and site data. The U.S. models predict higher off-property contaminant concentrations under some meteorological conditions. In some cases, the new models could seemingly demonstrate a three-fold or higher increase in estimated POI concentrations as compared with those estimated using the current Reg. 346 model.

The new models generally supply one hour averaging times, requiring additional calculation and interpretation to correlate with Ontario's new averaging times, ranging from 10 minutes to 24 hours (or more in rare cases). Care must be taken to use the appropriate model for site conditions, and ensure that all background data is correct. While some of the new models are relatively straightforward to run (SCREEN3 and AERSCREEN), others are quite complex, requiring significant data input and may require analysis by experts to interpret. Where preliminary results exceed regulatory compliance levels, it is important to interpret, explain or verify the modeling predictions.

The new dispersion models will be phased in over a three-year period after being adopted into the Regulation. Proposed details on MOE's plan to phase in the models is contained in Air Dispersion Modelling Guideline for Ontario (ADMGO) and in Updating Ontario's Regulatory Framework for Local Air Quality (June 2004).

To better assess whether facilities are complying with the new provisions, MOE is proposing that each emitter prepare an

Emission Summary and Dispersion Modelling (ESDM) report, update it as required, and submit it upon request. The ESDM rules will be phased in concurrently with the air dispersion models and the MOE is considering what exemptions may be appropriate.

What If You Can't Comply? Risk-Based Implementation

The combined effects of the revised standards and the new dispersion models "may create implementation issues for some stakeholders." The Guideline for the Implementation of Air Standards in Ontario (June 2004) (GIASO) proposes a decision-making process that considers, on a case-by-case basis, the health and environmental risks, technological alternatives, timing, cost considerations, and community/stakeholder input.

If a facility claims economic hardship or considers an abatement option "cost prohibitive", GIASO provides benchmarks for assessing affordability. Detailed and extensive financial disclosure to MOE will be required to justify consideration. Presumably MOE will have to make some information public. Companies claiming inability to comply or economic hardship will likely be expected to apply for a temporary exemption within a year after an amendment to Reg. 346 takes effect. Even if a plant obtains some regulatory relief, the site-specific limit would be periodically reviewed to ensure continual improvement towards achieving the effects-based standard.

CONSTRUCTION & ABATEMENT MOULD GUIDELINES

The Canadian Construction Association has released Mould Guidelines for the Canadian Construction Industry (CCA 82-2004). The Guidelines deal with insurance issues, health risks, constructions practices, mould assessment and remediation, demolition and disposal. The CCA guideline can be downloaded from the CCA website www.cca-acc.com or from our Online Compliance Centre. The Environmental Abatement Council of Ontario (EACO) released Mould Abatement Guidelines. These Guidelines deal with safe work practices, the use of personal protective equipment, worker awareness and training and are consistent with the more general CCA guidelines. The EACO guideline will

likely be accepted as a Ministry of Labour Code of Practice. The EACO guideline can be purchased directly from EACO at 416-499-4000.

Minister Can Scope EAA (Continued from page 1) located in the current Minister's riding, while the terms of reference for its EA were approved by a previous Minister. Prior to her election, Environment Minister Dombrowsky opposed the expansion. The Court of Appeal decision means that the terms of reference are valid, and Waste Management (formerly Canadian Waste) can move forward. Given the Minister's (and the Premier's) opposition, she will be in a difficult position once the EA study is submitted for approval. The Minister will have to decide whether to approve, refuse, amend or send the EA to a tribunal hearing. Presumably, public opposition will prompt her to require a public hearing.

While the court drama plays out, the expert panel appointed by the Minister on June 24, 2004, to fix the EAA process, will continue to work on solutions for waste management facilities, transit and transportation and clean energy. The panel's recommendations to the MOE will be submitted by year's end, but it is unlikely that any resulting policies will take effect until sometime in 2005.

You can download the Court of Appeal and Divisional Court decisions from our Online Compliance Centre at www.willmsshier.com/compliance.

ENGAGEMENTS OF NOTE

Paula Lombardi will be speaking on Controlling the Risk of Mould in Construction for the Toronto Construction Association on September 30, 2004.

Marc McAree is chairing and Donna Shier is speaking at the Law Society of Upper Canada Ontario's New Brownfields Laws on October 14, 2004.

Marc McAree is chairing the OBA program Addressing Contamination in Land Transactions on November 4, 2004.

Marc McAree and Barry Spiegel will be teaching The New Brownfields Law in Ontario - Regulatory and Due Diligence Aspects for Engineers at Ryerson University on November 16, 2004.



ENVIRONMENTAL LAW

ONTARIO'S NEW AIR POLLUTION REGULATIONS WILL HAVE MAJOR IMPACT ON INDUSTRY

MOE plans to phase in a mix of regulatory and non-regulatory initiatives to combat smog and improve local air quality over the next three to five years. Once operational, they may fundamentally change the way you do business.

Your operation may be in compliance; your air emissions well within the limits stipulated in your Certificate of Approval. However, proposed changes to Ontario's air standards, in combination with more complex and sensitive air dispersion models, may force you to upgrade pollution abatement equipment, abandon the use of some common industrial solvents, or look for other ways to reduce air emissions. New odour limits will pose particular challenges to some operations.

The MOE posted notices and discussion papers on the Environmental Registry in June and July, containing proposals for tightening air regulations, capping industrial smog-precursor emissions, adopting new air

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COURT OF APPEAL: MINISTER CAN SCOPE EAA

Ontario's Court of Appeal has upheld the right of the Environment Minister to tailor the requirements of the Environmental Assessment Act (EAA) to a particular project. This could remove a roadblock that's paralyzed many projects since the June 2003 decision of the Divisional Court in Sutcliffe v. Canadian Waste Services Inc. and MOE. However, the resident and First Nation plaintiffs are seeking leave to appeal to the Supreme Court of Canada. This could leave proponents with approved terms of reference in limbo for another six months or more.

In June 2003, projects in the EAA pipeline were sideswiped by the Sutcliffe decision. The Divisional Court held that 1997 EAA amendments did not allow the Minister to permit proponents to ignore generic requirements of the Act, even if not relevant to the proposed project. The decision also cast doubt on the legal validity of any project where a Minister had scoped the EA requirements. Proponents did not know whether to complete the missing EA studies, start from scratch, or wait for the courts to sort it out.

The Court of Appeal decision of August 25, 2004, affirmed the right of the Minister to customize the EAA process, so long as the Minister is satisfied that the final assessment will be consistent with the purpose of the Act and in the public interest. Under the Act, responsibility for balancing social, political and environmental factors rests with the government, through ministerial discretion and Cabinet appeals.

The flexibility accorded future projects will vary according to how individual ministers choose to exercise their discretion. For example, the Richmond Landfill expansion (the subject of the Sutcliffe decision) is

dispersion models and imposing tighter limits on a number of contaminants and odours. The public comment period will extend over the summer and early fall. MOE proposes to promulgate many of these by year's end, phasing in application to existing point sources over the next three to five years.

MOE has already initiated emission reduction programs for the transportation and electricity generating sectors. The new package of initiatives is aimed squarely at industrial emitters.

Industry caps on smog precursors place tougher limits for nitrogen oxides (NOx) and sulphur dioxide (SO2) on specific industrial emitters: the iron and steel, cement, petroleum refining, pulp and paper, glass, and carbon black sectors. The controls will be tightened in future years, leading to a 45% cut in NOx and a 50% cut in SO2 (from 1990 levels) by 2015.

New effects-based air standards for 29 air contaminants will be incorporated into O. Reg. 346 to improve enforcement and compliance (see chart pp. 2/3). In addition, an odour limit of one odour unit (10 minute average) is proposed for a wider range of sensitive receptors.

New air dispersion models will replace the 30-year-old air pollution dispersion calculations in Reg. 346 with a suite of more flexible and sensitive U.S. air dispersion models.

New Air Pollution Regs. (Continued on page 3)

Minister Can Scope EAA (Continued on page 4)

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Chart of Current and Proposed POI and AAQC Values With Effects Based Rationale

Substance (CAS No.)	Current AAQC ^{1,2} (ug/m ³)	Proposed AAQC ^{1,2} (ug/m ³)	Current POI ^{1,3} (ug/m ³)	Proposed POI ^{1,3} (ug/m ³)	Rationale for Standard/Guideline
Acetone (67-64-1)	48,000 (24 hr)	11,880 (24 hr)	48,000 (½ hr)	35,640 (½ hr)	Current standards are based on odour; proposed standards based on irritation and neurological effects
Acetonitrile (75-05-8)	n/a	70 (24 hr)	n/a	210 (½ hr)	Proposed standards are based on respiratory effects
Acrolein (107-02-8)	23.3 (1 hr)	0.08 (24 hr)	28 (½ hr)	0.24 (½ hr)	Current standards are health-based; proposed standards are based on the development of nasal lesions following chronic exposure
Arsenic & compounds (7440-38-2)	0.3 (24 hr)	under development	1.0 (½ hr)	under development	Current standards are based on potential for irritation, sensitization, immunosuppression, teratogenesis, genotoxicity and carcinogenicity
Cadmium & compounds (7440-43-9)	2.0 (24 hr)	under development	5.0 (½ hr)	under development	Current standards are health-based
Chromium VI & III compounds (7440-47-3)	1.5 (24 hr)	under development	5.0 (½ hr)	under development	Current standards are health-based; Ontario proposes to redefine the existing standard for total chromium to include only Cr III and Cr VI forms
Cyclohexane (110-82-7)	100,000 (24 hr)	6,100 (24 hr)	300,000 (½ hr)	18,300 (½ hr)	Current standards are health-based; proposed standards are based on developmental effects
Di(2-ethylhexyl)phthalate, DEHP (117-81-7)	50 (24 hr)	50 (24 hr)	100 (½ hr)	100 (½ hr)	Current standards health-based; the proposed AAQC is based on reproductive effects, and the POI on reproductive and particulate effects
Di-n-octylphthalate, DNOP (117-84-0)	120 (24 hr)	120 (24 hr)	100 (½ hr)	100 (½ hr)	The proposed standards are based on particulate considerations and potential effects on the liver
Hexamethylene diisocyanate (HDI) monomer (822-06-0)	0.5 (24 hr)	0.03 (24 hr)	1.5 (½ hr)	1.0 (½ hr)	Current standards are health-based; proposed standards are based on nasal lesions, including degeneration of the olfactory epithelium
HDI biuret (HDI-BT) (4035-89-6)	1.0 (24 hr)	1.0 (24 hr)	3.0 (½ hr)	3.0 (½ hr)	Proposed standards are based on lung effects
HDI isocyanurate (HDI-IC) (3779-63-3)	n/a	1.0 (24 hr)	n/a	3.0 (½ hr)	Proposed standards are based on lung effects
HDI-BT & HDI-IC mixture (28182-81-2)	n/a	1.0 (24 hr)	n/a	3.0 (½ hr)	Proposed standards are based on lung effects
Hexane (110-54-3)	12,000 (24 hr)	2,500 (24 hr)	35,000 (½ hr)	7,500 (½ hr)	Current standards are health-based; proposed standards are based on neurotoxic effects
Hydrogen cyanide (74-90-8)	575 (24 hr)	8 (24 hr)	1150 (½ hr)	24 (½ hr)	Current standards are health-based; proposed standards based on CNS and thyroid effects
Hydrogen fluoride (7664-39-3)	0.34-3.44 (24 hr/30 days)	0.86 (24 hr) 0.34 (30 day)	4.3-17.2 (½ hr)	4.3 (½ hr)	Current standards, based on health and vegetation effects, vary by form (total fluorides, gaseous HF, total HF) and growing season; proposed standards are based on the adverse effects on vegetation and accumulation in forage
Isopropanol (67-63-0)	24,000 (24 hr)	7,300 (24 hr)	24,000 (½ hr)	22,000 (½ hr)	Current standards are based on odour; the proposed standards are based on kidney effects
Methane diphenyl diisocyanurate (MDI) monomer (101-68-8)	1.0 (24 hr)	0.7 (24 hr)	3.0 (½ hr)	2.0 (½ hr)	Current standards are health-based; proposed standards based on pathological change in nasal tissues
Polymeric MDI (9016-87-9)	n/a	0.7 (24 hr)	n/a	2.0 (½ hr)	The proposed standards are based on pathological change in nasal tissues
Methylene chloride (75-09-2)	220 (24 hr) 44 (annual)	220 (24 hr) 44 (annual)	5,300 (½ hr)	660 (½ hr)	Current standards are health-based; proposed standards based on carcinogenic effects
Methyl isocyanate (624-83-9)	n/a	1.0 (24 hr)	n/a	3.0 (½ hr)	Proposed standards are based on respiratory tract lesions
Nickel & compounds (7440-02-0)	2.0 (24 hr)	under development	5.0 (½ hr)	under development	Current standards are based on vegetation effects; the revised standards will be based, in part, on nickel's carcinogenic potential and on the effects of various nickel species



Substance (CAS No.)	Current AAQC ^{1,2} (ug/m ³)	Proposed AAQC ^{1,2} (ug/m ³)	Current POI ^{1,3} (ug/m ³)	Proposed POI ^{1,3} (ug/m ³)	Rationale for Standard/Guideline
Phenol (108-95-2)	100 (24 hr)	30 (24 hr)	100 (½ hr)	100 (½ hr)	Current standards are health-based; proposals are based on CNS and hepatic effects
Tetrachloethylene (PERC) (127-18-4)	360 (24 hr)	360 (24 hr)	10,000 (½ hr)	1,080 (½ hr)	Current standards are health-based; proposals are based on respiratory and kidney effects
Trichloroethylene (TCE) (79-01-6)	115 (24 hr) 2.3 (annual)	12 (24 hr) 2.3 (annual)	3,500 (½ hr)	36 (½ hr)	Current standards are health-based; proposed standards are based on the carcinogenic effects
Vinyl chloride (75-01-4)	1.0 (24 hr) 0.2 (annual)	1.0 (24 hr) 0.2 (annual)	3.0 (½ hr)	3.0 (½ hr)	Current standards are health-based; proposed standards are based on the tumorigenic effect
Xylenes (1330-20-7)	2,300 (24 hr)	730 (24 hr) 3,000 (10 min)	2,300 (½ hr)	2,200 (½ hr)	Current standards are based on odour; the proposed 24-hr AAQC and POI are based on the adverse neurological and irritation effects, while the 10-min AAQC is based on odour
2,4-Toluene diisocyanate (584-84-9)	0.5 (24 hr)	0.2 (24 hr)	1.0 (½ hr)	0.6 (½ hr)	Current standards are health-based; proposed standards are based on lung function decline
2,4-TDI & 2,6-TDI (mixed isomers) (26471-62-5)	n/a	0.2 (24 hr)	n/a	0.6 (½ hr)	Proposed standards are based on lung function decline

1. Current POI/AAQC are taken from *Summary of Point of Impingement Standards, Point of Impingement Guidelines, and Ambient Air Quality Criteria*, issued by the Standards Development Branch, Ontario Ministry of the Environment, and dated September 2001, while proposed POI/AAQC are taken from the policy proposals posted on the Environmental Registry in June/July 2004, and are available on-line at: <www.ene.gov.on.ca/envision/air/airquality/standards.htm>
2. Ambient Air Quality Criteria (AAQC), averaged over a specified time period (usually 24 hours), are used by the Ministry to assess general air quality and the likelihood for causing an adverse effect. MOE also considers AAQs in assessing Certificate of Approval conditions.
3. Point of Impingement (POI) standards, established under Regulation 346, are used to review and issue Certificates of Approval for air emissions, as well as for compliance assessment and enforcement purposes. In addition to the POI standards established under Reg. 346, the Ministry also has a larger number of AAQCs and POI guidelines which are derived from AAQCs.

New Air Pollution Regs. (Continued from page 1)

A risk-based compliance / enforcement decision-making approach is intended to provide greater flexibility for industrial facilities that will need to comply with more stringent limits on emissions impacting a wider range of sensitive receptors, or face non-compliance resulting from predictions by new dispersion models. The challenging decision-making process will consider risks, technological alternatives, cost considerations and community/stakeholder input.

Smog Reduction Activities

The Ministry has also released *Ontario's Clean Air Action Plan*, which outlines the province's plan to combat smog by implementing the Canada-wide Standards for particulate matter and ozone developed by the Canadian Council of Ministers of the Environment. However, the Plan is mostly "old news" and includes capping emissions on power plants and nickel smelters, banning coal burning at the Lakeview

generating station, imposing NOx emission limits on new or modified large industrial boilers and heaters, and slapping stricter tail pipe limits on trucks and buses.

You can find links to all the MOE Discussion Papers at our Online Compliance Centre:

www.willmsshier.com/compliance.

New / Revised Air Standards

A handful of the 29 proposed air standards cover compounds that had previously escaped notice. However, most are more stringent versions of existing Ambient Air Quality Criteria (AAQCs) and/or Point of Impingement (POI) standards/guidelines. In some cases, they are significantly more stringent: the existing AAQC for acetone would be cut by more than 75%, phenol by 70%, trichloroethylene by nearly 90%, and cyclohexane by 94%. The new standards may restrict the future use of a number of popular solvents -- including acetone, isopropanol, PERC and TCE -- all volatile

organic compounds targeted for their adverse health effects. Final limits are still under development for some heavy metals.

Individual Environmental Registry notices were posted for each of the proposed standards, with links to the respective rationale document or proposed information draft. The submissions deadline is October 19, 2004. Once promulgated, the new standards will be phased in over a three to five-year period.

The Chart on Pages 2-3 compares the proposed standards with the existing standards/guidelines and identifies the adverse effects driving the revisions. Note that the limits in the chart have been adjusted to half-hour average POI limits to facilitate comparison. However, many of the proposed or new standards will have different averaging times. Achieving compliance with shorter averaging times may require significant changes in a facility's pollution abatement program.

(Continued on page 4)