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**Local Air Quality Regulation (O. Reg. 419/05)  
Proposed New or Updated Guidance  
Review of Other Compliance Options**

Presentation by SDB to Air Practitioners Group  
November 30, 2011

# Purpose of Presentation

- To provide an overview of:
  - Stakeholders comments received on the proposed new or updated guidance - next steps;
  - Status of upcoming proposed standards; and
  - Overview of Site-Specific Standards and Technical Standards Compliance Options

# Background

- July 2011 Amendments to the Local Air Quality Regulation included:
  - Nine new or updated air standards for eight substances to be phased in over five years and become effective on July 1, 2016; and
  - Changes to the site-specific standards process (formerly referred to as the altered standards process):
    - Terminology;
    - Minimum duration;
    - Renewal without a public meeting (unless requested)
- New or updated guidance was presented and discussed with stakeholders at the following sessions:
  - August 10, 2011 (*External Working Group*); August 17, 2011 (*Air Practitioners*), and September 14, 2011 (*General Stakeholder Session*)).

# Overview of Comments Received

- New or updated guidance was developed in response to the 2011 regulatory decisions as well as consultations with stakeholders.
- A total of 7 comments were received by the October 15 and are summarized below.

## **Proposed Assessment Values:**

- The concept has value but needs additional information to explain how it will be implemented and to ensure regulatory certainty.
- Adds to the complexity of the approvals process. Requires extra modelling work (suggestions provided to minimize modelling impacts).
- Requires more clarity and certainty regarding the need for “further assessment” if value is exceeded in different contexts (i.e. approvals or abatement).

# Overview of Comments Received (cont)

## Summary of General comments:

- The need to clearly indicate that examples used are only explanatory and other approaches are valid.
- Full interaction within MOE (SDB and Approvals) is recommended to assure consistent interpretation of regulatory requirements.
- Guidance on site-specific standards needs to include references to cost-effectiveness tool for new facilities and facility expansions.
- Examples should be added to the “Fugitive dust/metals” section of the guidance.
- Some stakeholders have expressed concerns that the newer version of AERMOD would put facilities in non-compliance compromising approvals and abatement plans already in place.
- Stakeholders requested that the updates to the guidance documents be circulated for comment before they are finalized.

# Proposed Next steps for Guidance

- Proposed new or updated guidance will be incorporated into existing guidance documents which include:
  - Procedure for Preparing an Emission Summary and Dispersion Modelling Report [ESDM Procedure\*];
  - Guideline for the Implementation of Air Standards in Ontario [GIASO];
  - Guide to Applying for a Site-Specific Standard (currently known as Guide to Applying for Alternative Standards [GRAAS]); and
  - Air Dispersion Modelling Guideline for Ontario [ADMGO].
- \*Proposed update to ESDM Procedure includes a proposal to update Appendix E (guidance on Combined Analysis for Modelling and Monitoring (CAMM)) and create a stand alone Technical Bulletin.

# Proposed Next steps for Guidance (cont)

- Updates to the existing Guidance material to include:
  - new guidance resulting from changes brought in by the 2011 amendments (i.e. annual standards, screening values, etc).
  - updates to include changes brought in by previous regulatory amendments (2007 and 2009) (e.g. renumbering of sections, technical standards, etc); and
  - other suggestions by stakeholders to improve clarity.
- An MOE internal working group (which includes SDB, EAB, EMRB, legal, Operations Division, etc) will meet to discuss responses to comments and proposed updates to the guidance documents.

# Stakeholder Communications Outreach

- In June 2011 (with the announcement of the new air standards), MOE invited stakeholders to identify communications gaps around the need to improve understanding of the Local Air Quality Regulation.
- Input was obtained from recent stakeholders sessions.
- Consensus was that the MOE could provide greater support to the full implementation of the regulation by increasing understanding and developing and disseminating communications material that clearly explain the regulation and the three compliance options.
- In response, the MOE is undertaking several communications initiatives to address the needs of industry, public health and ENGOs.
- Communication products may include: updated fact sheets; simplified Q&As; an overview presentation - Introduction to Ontario's Local Air Quality Regulation; etc.



# Proposed Standards under Review

- MOE is currently reviewing the following seven substances for new or updated air standards:
  - Arsenic; Copper; Ethylene; Mercury; Toluene; Vanadium; Zinc
- Each proposal will undergo the usual two step consultation process.
- In addition, MOE is also developing a plan to review previous decisions for some standards (e.g. carcinogens, etc.) to determine if the averaging times for these substances should be updated.



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# **Site-Specific Standards and Technical Standards Compliance Options**

# Local Air Quality Regulation

- There are three compliance options under the regulation:
  - Meet the air standard by the phase-in date; OR
  - Request a site-specific standard; OR
  - Register under a technical standard, if available.
- These compliance options provide industry with a flexible approach and allow for technical or economic barriers to be taken into account as facilities work towards continuous improvement and innovation.
- Some facilities may not ever be able to achieve the standard.

# Site-Specific Standard Compliance Option

- The regulation created a new type of “Director’s Approval” (and associated order) for a Site-Specific Standard which differs from the approval under section 9 (EPA) – Environmental Compliance Approvals (Air). The following are requirements of the site-specific standards process:
  - Emission Summary and Dispersion Modelling Report (with emissions that were determined via a Combined Analysis for Modelling and Monitoring (CAMM))
  - Technology Benchmarking Report
  - Economic Feasibility/Cost Effectiveness (optional)
  - Public Meeting (prior to submission)
  - Proposed Action Plan with dates

# Summary of Requests for Site-Specific Standards

## Approvals Issued:

- Oxy Vinyls, Niagara: Approved from Jan 2009 to Feb 2017 [Vinyl Chloride].
- ArcelorMittal Dofasco, Hamilton: Approved from July 2010 to July 2014 [Suspended Particulate Matter; Total Reduced Sulphur; included review of Benzo-a-pyrene (BaP) and Benzene].
- Xstrata-Copper, Timmins; Approved from Feb 2010 to Feb 2014 [Sulphur Dioxide; Lead].

## Requests Submitted and Under review:

- Vale, Sudbury: Nickel
- Xstrata-Nickel, Sudbury: Sulphur Dioxide
- Xstrata-Nickel, Sudbury: Cadmium
- U.S. Steel Canada, Hamilton Works: Suspended Particulate Matter; Sulphur Dioxide; includes review of Benzo-a-pyrene (BaP) and Benzene
- U.S. Steel Canada, Lake Erie Works – Nanticoke: Suspended Particulate Matter; Sulphur Dioxide; includes review of Benzo-a-pyrene (BaP); and Benzene

## Future Requests Pending:

- Vale, Sudbury: Submission for Sulphur Dioxide due December 31, 2011.
- Others.

# Technical Standards Compliance Option

- Minister has the authority to establish Technical Standards. There are two types of technical standards:
  - **Industry standards** (deals with all sources of specified contaminants from a specific sector), and
  - **Equipment standards** (only addresses one source of contaminant, but may apply to multiple sectors).
- A Technical Standard includes any requirement relating to technology used at the facility, operation of the facility, the monitoring and reporting of information and any other related matter.
- Newest compliance option introduced in 2009 and currently available for two sectors: Foundries – Industry Standard; Forest Products – Industry Standard.

# Intent & Development of Technical Standards

- MOE assesses all sources of a contaminant (related to a NAICS sector code) and makes a decision as to whether or not that source needs to be better controlled, monitored or managed.
  - Specific requirements are included in the technical standard for those sources that are determined to need better management or control.
  - Generally, the focus is on the types of sources that would contribute most to the maximum POI (i.e. exposures to local community).
  - The specific requirements have specified timeframes for implementation.
  - Development of a technical standard also considers economics.
- Facilities registered to a technical standard are no longer required to include these sources in their ESDM report (Note: sources linked to NAICs codes).

# Registration to a Technical Standards

- Each facility who requests registration under a technical standard must be posted on the EBR Environmental Registry for a minimum 30 day comment period.
- In addition, the Ministry must publish on the website the Technical Standards Registry – Air Pollution that lists all registered facilities.
- In some situations, similar to the site-specific standard process, a facility may be required to do further notification and consultation with affected stakeholders as part of the registration process for a Technical Standard
- Environmental Compliance Approvals (Air) are still required for all sources at a facility regardless if they are included in a Technical Standard.
- Director may refuse or revoke registrations.



# Development of New Technical Standards

- Industry Sectors that have approached MOE with a formal request to develop a proposed Technical Standard:
  - Update to Forest Products (emphasis on pulp and paper mills).
  - Integrated Iron and Steel Mills (equipment standard on Coke plants).
  - Electroplaters including chrome plating facilities.
  - Update to Foundries technical standard (e.g., addition of products of combustion and other substances).
  - Mining operations (focus on fugitive dust for mine sites).
- All proposed technical standards will undergo public consultation.

# Appendix

## Overview of Technical Standards Requirements

# Technical Standards – Reporting Requirements

- All registered facilities are required to document summary reports of information which include:
  - Operating Parameter Summary Table;
  - Deviation Summary Table (i.e. operating outside acceptable range);
  - Implementation Summary Table.
- Reports must be updated annually, by March 31<sup>st</sup>
- Highest ranking officer certifies in writing that reports have been received.
- These three reports were specifically developed to assist both the facility and the Ministry better understand their compliance requirements and to drive continuous improvement.

# Technical Standards – Reporting Requirements Cont'd

- **Operating Parameter Summary Table** includes:
  - Type of air pollution control equipment (e.g. baghouse)
  - Source of contaminant (e.g. melt furnace)
  - Relevant operating parameters (e.g. pressure differential or temperature, etc.)
  - Normal operating range (e.g. temperature between 450 to 600 F)
  - If applicable, notification range (e.g. temperatures are too low or too high)
- Some operating ranges are specified in Technical Standard and some allow for facility to determine the appropriate operating range based on manufacturers' specifications.

# Technical Standards – Reporting Requirements Cont'd

- **Deviation Summary Table** includes a summary of:
  - All deviations from required operating ranges, inspections and preventive maintenance;
  - Suspected cause, corrective actions taken and when completed;
  - Explanation of changes from previous year.
  
- **Implementation Summary Table** includes a quick summary of:
  - All requirements the facility is required to record and report on;
  - Timeframes (e.g. compliance dates);
  - If the requirement was met and the date it was met.

# Highlights of Foundries - Industry Standard

## Foundries include: NAICS 3315

### 1. Identification of Contaminants:

- Suspended Particulate Matter and specific contaminants, such as lead, cadmium, chromium, manganese, etc;
- Volatile Organic Compounds (VOCs) and specific contaminants, such as benzene, ethyl benzene, ethanol; and
- Sulphur Dioxide.

### 2. Identification of Major Emission Sources, such as:

- Furnaces to melt metal bars, pouring of liquid metal

### 3. Technical solutions to reduce air emissions from major sources, such as:

- Install abatement equipment for certain sources;
- Conduct study to assess emissions from general ventilation;
- Optimize collection of metal fumes inside the building to ensure they do not escape into the environment.

### 4. Operating and Maintenance Requirements to ensure technical solutions are working properly.

### 5. Reporting Requirements:

- Operating, monitoring, maintenance records
- Notification requirements for specific situations

### 6. Specified Timelines/Schedule to implement changes

# Technical Standard - Overview

- **If the technical standards available address all sources of that contaminant from a facility, then the registered facility is exempt from the air contaminant standard – and instead must abide by the requirements of the technical standard.**
- For example, facilities registered under the Forest Products Industry Standard exclude all significant and negligible sources of acrolein from their ESDMs. There would be no requirement for emission calculations, modelling or comparison to the air standard for acrolein. All other contaminants, except acrolein, would have to be included.
- ESDMs are then only required for any other contaminants that are emitted from a facility that the facility is not registered for.

# Technical Standard - Overview

- If a facility has multiple NAICS codes, then a facility must be registered to all applicable industry standards (or equipment standards) before it can exclude all sources of registered contaminants from its ESDM.
- If not, it may only exclude from their ESDM those sources addressed by the NAICS code of that industry standard (or equipment standard) – the remaining sources that belong to other NAICS code would be modelled as usual and compared to the air standard/guideline.
- Any contaminant can be listed in a technical standard (not limited to standards or guidelines).
- NOTE:
  - Director may give notice requiring an ESDM even if facility is registered.