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16 February 2016

Cathy Grant
Buyer
Ministry of the Environment
40 St. Clair Avenue West, 6th Floor
Toronto, Ontario
M4V1M2

Dear Ms. Grant

**Re: Practitioners Response and Comments to Various O.Reg. 419 Guidance Documents
Posted Dec 18, 2015.**

The consulting and industrial members of the Ontario Air Practitioners¹ have reviewed the latest updates and revisions to the Ministry of the Environment and Climate Change (MOECC) guidance documents for O.Reg. 419.

It is one of our primary concerns that there be full and complete interaction between Approvals and SDB to ensure there is no difference in interpretations of regulatory requirements. This is important for long standing guidance but continues to be important for the new and expanded guidance. As such, we continue to review and comment on these guidance documents knowing that they will not only be used for O.Reg. 419 interpretation, but also in the day-to-day review of ECA applications.

We are providing the attached comments on the guidance documents. These were developed by the Practitioners. Initial draft comments were circulated to the full Practitioners. Edits and additional comments were then provided by a number of Practitioners. The final comments

¹ **The Ontario Air Practitioners Group**

The Ontario Air Practitioners Group (Practitioners) are environmental professionals and representatives from the Ministry of the Environment and Climate Change (MOECC) that have gathered from time to time to informally discuss issues related to regulatory compliance. The group has developed Frequently Asked Questions, guidance materials and best practice documents; these documents are posted on the website of the Air & Waste Management Association – Ontario Section (<http://awma.on.ca/>). It has also provided a discussion forum and input for the practical aspects of regulatory compliance for S.9 approvals, O.Reg. 419/05, and other regulatory initiatives. In our view this approach has proven useful to both Practitioners and several different branches within the MOECC, and has positively affected the quality of work submitted to the MOECC.

With over 120 active and corresponding representatives from consulting firms and industries whose day-to-day roles are heavily involved in the permitting process reporting and compliance, we are in a unique position to offer our combined experience to assist in developing effective and meaningful regulations and associated guidance materials. Our members have literally hundreds of person-years of direct experience on Ontario environmental issues.

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represent a compilation of the full comments received and do not necessarily represent the views or position of any single Practitioner or their organization.

The Practitioners continue to appreciate the efforts taken by the MOECC to improve guidance and clarity. We are anxious to continue to work with the MOECC on any of these issues and look forward to discussing some of these at the upcoming Practitioners meeting on February 29th.

Yours truly,
Amec Foster Wheeler

A handwritten signature in black ink, appearing to read "Tony van der Vooren", with a long horizontal line extending to the right.

Tony van der Vooren Ph.D., P.Eng., QEP
Senior Environmental Consultant
Environmental Department

On behalf of the Ontario Air Practitioners

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cc Air Practitioners

Note: highlighted rows are comments considered most significant (raised by many practitioners)

PROCEDURE FOR PREPARING AN ESDM REPORT

Location	Comment
Page 15	Paragraphs starting with “Annual update requirements apply to ESDM reports that are required to be submitted to the ministry because of...” are nice and concise, and it’s clear what the regulation is trying to say within these paragraphs. The guidance could use more of these.
Page 15	Regulatory Requirements for Preparing ESDM reports heading – should this be a separate section number?
Page 15	Last paragraph starting with “In general...” is this a new section or still applicable to regulatory requirements section?
Notifications page 15-17	Section is very confusing. Recognize that this has not been altered, but opportunity to clarify requirements should be taken. Most of the section is simply a copy of the regulatory wording. A summary paragraph such as is used on Page 20 that starts with “Subsection-22(1.2)...” would be really beneficial.
Page 22, blue box	In the bolded section of the first paragraph of the blue box it says “unless the Director has exercised <u>her</u> discretion...”. Should there be a gender associated with the Director?
Page 23, Table 3-1	This is a great table. It provides a description and a regulatory citation. This sort of formatting could be useful for things like notification requirements, ESDM updates, etc.
Page 23, Table 3-1	In operating conditions add the word “reasonably” so that it reads “...that the facility is <i>reasonably</i> capable of”
Page 24, Table 3-1	Source and Emissions Summary Table – Minimum Requirements, can we add that it’s for significant contaminants? And that it may be possible to not have an EST or SST if all contaminants have screened out as negligible?
Section 3	First paragraph should be “Chapters 4 through 13”.
Table B3.	Appendix B Table B-3 – Screening out sources that may emit contaminants in negligible amounts MOECC proposes to remove: <ul style="list-style-type: none"> • maintenance welding operations • standby power generators

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	<ul style="list-style-type: none"> • natural gas fired equipment with a total facility wide heat input less than 20 million kJ/hr • low temperature handling of compounds with a vapour pressure less than 1 kPa. <p>All of the emission sources that the MOECC proposes to remove from Table B-3, should remain. By removing the emission sources from Table B-3, industry would have to provide even more detailed calculations to demonstrate negligibility. This would be burdensome and low value work for industry on emissions that are negligible and this information would provide little value to the MOECC. Reviewing negligible emission calculations definitely will not speed up the MOECC’s review of ECA applications.</p> <p>We understand that there has been “abuse” in using this table, but the exceptions should be dealt with through further guidance. MOECC always has the opportunity to ask for further information when warranted.</p>
Table B3	<p>“sources that are exempt from obtaining a C of A”. It is not clear if this is intended as obvious sources that do not need to be included in an ESDM or if it is intended that even sources that are exempt need to be assessed for significance in the ESDM. If the former, clarification should be provided in the guidance document, if the latter, we strongly suggest this be reconsidered. Extraordinary efforts and costs are incurred in assessing insignificance of minor sources.</p>
Section 4	<p>Edit says “Under Sections 27 and 51”. Should be “Under Sections 27 and 54”</p>
Section 5, page 27	<p>“A statement within a Facility Description might indicate that a maximum...” This makes it sound like we’re to have a statement for each averaging period. Having multiple production numbers for multiple averaging times could get very confusing. Either keep it to daily or annual or maybe allow us to refer to the sample calculations that show how emissions are calculated. This will avoid repeated information.</p>
Section 6.0, page 28 and 29	<p>Second bullet “However, if a contaminant is not considered in the dispersion modelling then a specific list of these contaminants (and not just the types of contaminants)...” Does this mean that if we deem VOCs from welding as negligible, for example, and haven’t included them in the modelling that we have to spell out each VOC? Same with products of natural gas combustion?</p>
Section 6.0 page 29	<p>Optional reference to method used to identify the expected contaminants. As soon as it’s stated that it’s optional we’ll get pushback from the reviewers.</p>
Section 6.1	<p>Discussion of EASRs and ECAs. MOA is moving towards clarifying the requirements for EASRs and ECAs. Namely that if you need an ECA, then you cannot EASR the sources. EASRs will only apply if you don’t require and ECA for other sources. It is hoped this change will be imminent.</p>

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Section 6.1 very last paragraph	This paragraph is confusing. We believe this is in reference to an old odd situation where MOECC was not able to issue an ECA for equipment that was in place but did not already have an ECA. Not sure this is necessary any more. If this needs to stay in, there should be greater clarification
Section 6.1.1	There is still a challenge with the “inclusive” list. There are very small facilities that fit these NAICS codes that do not have storage piles, open handing, or “on-site” roads. These are small facilities that can be part of an industrial strip mall and only have shared parking. Some discussion should be provided that these types of smaller facilities to not need a fugitive dust plan. This situation will only be exacerbated by the inclusion of the “other miscellaneous”.
Section 6.4	Should also include in this list sources that are exempt by regulation. This is the first place that multiple ESDM reports are discussed. Maybe a section previous on why there might be multiple reports?
Section 7, page 37	“In summary....” This is well written, and an “In summary” type of commentary could benefit several of the sections.
Table 7.1	It would be helpful to include the summary table of conversions from the modelling guide in this section.
Section 7.3	Will there be guidance on how to submit site specific assessments on negligibility prior to inclusion in an ESDM report?
Section 7.4	<p>The “such as” list should be expanded. At present, ONLY stockpiles and roadways are considered exempt if a Best Management Plan is available. All other fugitive sources are still required to be modelled. It would be very helpful if other difficult to model sources such as bull dozing, grading and material handling were also considered. This is especially significant in that the BMP requirements are for ALL fugitive sources, not just roadways and stockpiles.</p> <p>The requirements should also be very clear that this addresses on-site roads managed by the facility. In some cases BMPs have been required for parking lots shared with other facilities. (see comment above on Section 6.1.1.).</p>
Section 8	Well written. Provides good discussion on realistic operating scenarios
Section 8.1, page 45	“Although subsection 10(1) allows a choice of operating conditions, section 12 may require the use of the scenario described in paragraph 2 of subsection 10(1)...”. This paragraph, and others like it, would benefit from some words attached to the section numbers. For example, after Section 12, you could add in brackets (refinement). See how the text just under the regulation citation on page 50 is worded. On that page it’s clear what the section refers to “ESDM reports prepared for URT exceedances (s.30) and Site-Specific Standards (s.32)...”

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Section 8.1, page 45	Last paragraph. Please add that it is possible that the operating conditions may be the same for all averaging periods, such as with steady state assumptions.
Section 8.1	Paragraph starting with “Many facilities have a combination...”. It’s nice to see acknowledgment that it may not be realistic to have all sources operating at maximum conditions at the same time.
Section 8.1	Misplaced apostrophe in “The following example scenario’s”. Scenarios doesn’t need an apostrophe.
Table 8.1	It would be nice to have a column in this table as to the applicability of when each of these examples would apply? When would the second example apply? Also, do we need to have the phrase (beginning Feb 1, 2010) in the first example? It’s out of date.
Table 8.3.1	(Should be Table 8.4.1). Is stack testing considered Monitoring Data? Does Example 2.1a imply that we use the maximum of each individual test in triplicate testing? This would be a major deviation from the Ontario Stack Testing Code and compliance testing for ECAs.
Table 8.3.2	(Should be Table 8.4.2). Is the Five Days per week relevant in each of the examples or is it meant to imply that it’s a regular occurrence? Also the third example says that “one approach is to develop...”, this implies that there might be other approaches?
Section 9.1, page 57	“In many cases, emission rate estimating is an iterative process...” This might be a good place to clarify when notifications to the MOE are expected. It’s well understood that URT exceedances have notification requirements regardless of refinement, but where in the iteration process do we have to notify for a potential exceedance of a guideline or standard?
Section 9.1.2	“Typically mass balance calculations assume...” should end with “to be considered conservative”. Also, the field verification is new. What does this mean?
Section 9.1.3	Fourth bullet. We are not aware of situations where the final report for source testing was reviewed and accepted by the ministry. This bullet should be removed or clarified that silence implies review and acceptance.
Section 9.2	Full compliance testing done as a condition of an ECA under maximum operating conditions should be accepted as “highest data quality”. This type of compliance testing would be considered “above average”. Current approach could allow for a fully compliant test under an ECA to be deemed “non-compliant” under O.Reg. 419 if a higher emission rate was available from other sources or approaches.
Section 9.2	Mass balance. Under the “highest data quality”, it states that mass balance “may” be considered highest data quality, but under “above average quality” it states that mass balance “can” be considered above-average. Both mass balance approaches are exactly the same. It is not clear why there are differences and when different data quality applies.

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Section 9.2	“validated” source testing. It is not clear what the difference is between validated source testing and partially validated source testing. The “partially’ validated testing would seem to imply that this is consistent with compliance testing for an ECA.
Section 12.0	First bullet – add minutes so that we’re not saying that 10 minute averages are 1/6 th of an hour. Third bullet, should “uses” be “used”?
Section 12.2	Blue box, page 79 “for each contaminant with no Ministry POI limit”. Add the word significant in front of contaminant. Some contaminants can be screened out using threshold calculations.
Section 13.1	There are four pages of regulations quoted but no context. Perhaps a summary paragraph of the requirements (i.e., refined ESDM report, abatement plan, etc)?
Table B-1	For the 20 m, add the words “up to” to show that we can use this row for distances up to 20 m or include it in a footnote. This used to be described in the now unpublished FAQs.
Page 100	Guidance for welding operations – note that maintenance welding has been removed from the table B-3 (though we want it back in). Also, the links to approximating isocyanate emissions are no longer valid.
Page 106, Checklist	Section 5, SST – should be clear that the source summary table is in one format or the other, and that we’re not expected to provide both. Different review engineers have expressed preferences for either contaminant based or source based. It should be clear that either is acceptable.
Table D-2a	I like the recognition that alternative table formats can be used. The sample calculation identifier is a potential source of errors since there could be significant copying and pasting to include it. It’s also not required.
Table D-4	It would make the table easier and more compact if the Air Dispersion Model Used including version code could be listed as a footnote since for many facilities it would be the same for all contaminants

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AIR DISPERSION MODELLING GUIDELINE

Location	Comment
Section 4 - Model Input data, Subsection 4.5.3 - Special Considerations, page 58	<p>Current Wording: “Pits and Quarries; It should be noted that when using the OPENPIT source type in AERMOD, the model simulates the release of emissions at the top of the pit, from an “effective” area source. As such, modifying the terrain or source elevation of the pit will incorrectly result in the model seeing the top of the pit at specified terrain height (i.e. the top of the pit will be incorrectly placed at the bottom). It is therefore not appropriate to modify the source elevation OR the DEM files when using the OPENPIT source. In cases where the pit is “seen” in the DEM files (i.e. large existing pits) it may be more appropriate to model these sources using different approaches, such as volume or area sources, depending on the situation. Proponents should contact EMRB for further guidance, as necessary.”</p> <p>Issue: In mining operations the top soil removal is done mainly using heavy machinery and some initial surface blasting prior to developing of the open pit itself. In this case the open pit's "active area" will be defined by the project elevation after the top soil removal is complete. This parameter will stay constant for the whole life of the pit. It seems more accurate to consider this elevation in the modelling rather than the elevation of the undisturbed surface generated by initial DEM files. The use of area and volume sources for open pit operations will eliminate the effect of the active area of the pit which is a unique characteristic of this type of source. Area and volume sources were used previously as a surrogate approach prior to the AERMOD upgrade adding OPENPIT sources.</p> <p>Proposed Wording: Pits and Quarries; It should be noted that when using the OPENPIT source type in AERMOD, the model simulates the release of emissions at the top of the pit, from an “effective” area source. As such, modifying the terrain or source base elevation should be done based on project development information to account only for the initial top soil removal. It is incorrect to assign the modelling parameter "base elevation of the pit" to the bottom of the pit.</p>
Section 3.8.1 – Aermod Volume Sources	Both the Initial Lateral Dimension and the Initial Vertical Dimension bullets have an error message – “Error! Reference not found”.
Section 7.3 Justification for Alternative Model Use.	The text indicates that MOECC will require an assessment using SCREEN3 to see if shoreline effects could occur if a source is within approximately one km of a major water body. The text goes on to state that if there are possible shoreline effects, a facility must then go to MOECC to use a different model for compliance assessment. The SCREEN3 requirement and using an alternate model for

Practitioner's Comments to MOECC Revised Guidance Documents Under O.Reg. 419
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	compliance is totally against the "approved model" and "tiered model" approach established in O.Reg. 419 where a facility demonstrates compliance with the approved models and met data. A facility doesn't need to demonstrate compliance with all of the approved models or be found out of compliance by picking another approved model or approved met set. Adding the shoreline assessment and requirement to use an alternate model violates the basis of O.Reg. 419.
Section 11.2	Public roadways between two parcels of the same facility are not considered points-of-impingement. We recommend that adjacent road ways as well as utility corridors be treated in the same way (i.e. not considered points-of-impingement).
Section 11.2	For clarity also include facades of high-rise buildings at locations where there are no intakes or openings to the building.
Appendix C – Section 2.3	List of Routines needs to be reformatted.

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TECHNICAL BULLETIN ON USE OF "ASSESSMENT VALUES" FOR CONTAMINANTS WITH ANNUAL AIR STANDARDS

Location	Comment
Page 7, Step 1	add a bullet point for the frequency of the operation that causes the exceedance
Page 8, Step 2	It would be handy to reference both the section (23 and 25) and what they mean (ESDM before implementation of standards, update of standards)
Page 8, Step 3	Should include an additional category where MOECC allows a screening based on frequency of occurrence and frequency of exceedance. MOECC could use the odour tech bulletin as a framework (i.e., the facility would be allowed to look at the 99.5 th percentile for operations that occur less than xx days per month).

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GUIDELINE FOR THE IMPLEMENTATION OF AIR STANDARDS

Location	Comment
Page 12	Is the Note correct in when can they make the request? It reads that Sch 5 facilities <u>must</u> use the reg 346 model
Section 2.1.1	Little is gained by pasting in 3 pages of text from the regulation. Guidance should help interpret and understand the regulation. Not just copy and paste.
Section 3.2	The first paragraph which summarizes the requirements of S.30 of O.Reg 410/05 is helpful. Rather than pasting in 1.5 pages of regulation below that paragraph, it would be helpful to further expand the first paragraph. The regulation is difficult to read at best.
page 73	Percentiles plots could be considered a tool and are easily generated in AERMOD (i.e, max at 99.9%, 99.5% etc) to show frequency and magnitude of exceedance

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GUIDE TO REQUESTING A SITE-SPECIFIC STANDARD

Location	Comment
Foreword Section	MOECC should double check that the reference to the link to the MOECC site is still applicable. For example, on the GRSS draft it says to follow the links to Rules on Air Quality and Pollution, but those links can’t be found.
Foreword Section	2 nd paragraph – remove “for” from “Additional Information is provided for in this guide” 4 th paragraph – remove the “]” at end of the paragraph
Page A6	Percentile plots would be useful tools.
Overall	Does this need to be a separate document from GIASO. There is a lot of duplication in both documents. This could be an Appendix to GIASO.
Overall	The document uses the term “exposure” in numerous places as a broad statement in relation to limiting or reducing emissions to air. O.Reg 419 only deals with emissions from a specific facility and does not deal with cumulative exposure or background levels. The document should be specific to indicating site specific or technical standards only deal with emissions and point-of-impingement concentrations from a specific facility.