

Technical Discussion Paper on Proposed Regulatory Changes and Environmental Activity and Sector Registry (EASR) Requirements: *Plant and Production Processes with Air and Noise Emissions*

This paper outlines a proposal to change the requirement for facilities needing an approval (or “ECA”) under section 9 of the EPA because of air and/or noise emissions to register instead in the Environmental Activity and Sector Registry (EASR).

What you will find in this paper

Included for your review and comment are details about:

1. Proposed EASR Requirements for Air and Noise Activities
 - 1.1. Prescribed Activities
 - 1.2. Proposed Eligibility Criteria
 - 1.3. Proposed Operating Requirements
2. Proposed Section 9 Approval Exemptions
3. Requirements for Qualified Persons
4. Maintaining Compliance with Registrations
5. Appendices
 - 5.1. High-Risk, Complex Sectors
 - 5.2. Current Regulatory Context
 - 5.3. The North American Industry Classification System
6. Glossary

This paper is step three of a six-step process leading to a final regulation and implementation. By submitting your feedback, you can help MOECC design a regulation that works for you.

Six Step Process Leading to New EASR regulation

- | | |
|---------------|--|
| Step 1 | Detailed scoping and technical assessment of activity/sector |
| Step 2 | Development of draft Registry criteria and requirements |
| Step 3 | Public consultation on a technical discussion paper |
| Step 4 | Development of a draft regulation |
| Step 5 | Public consultation on a draft regulation |
| Step 6 | Finalizing and implementation of new EASR regulation |

Why propose a new EASR regulation?

In 2011, the Ministry of the Environment and Climate Change (MOECC/ministry) implemented the Environmental Activity and Sector Registry (EASR) as part of its risk-based environmental approvals program, requiring businesses to register prescribed activities in the EASR instead of seeking a ministry approval through an application and review process. The EASR is an online self-registration system implemented by the MOECC and is part of Ontario's Business Growth Initiative to reduce unnecessary regulatory requirements, eliminate duplication and improve the delivery of government services. To date, over 4,400 registrations have been filed. The proposed changes discussed in this paper would ensure ongoing environmental protection while modernizing the ministry's approvals process and allow the ministry to focus resources on higher risk or more complex approvals.

1. Proposed EASR Requirements for Air and Noise Activities

The following proposed EASR requirements for activities with air and noise emissions help determine if a facility will be required to register in the EASR and if yes, outlines what other operational requirements must be met.

1.1 Prescribed Activities

The activities at facilities that are to be prescribed for the purposes of the proposed EASR regulation are described below.

Prescribed Activity:

Subject to the eligibility criteria set out below, the use, operation, construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing that is located at a facility and that may discharge or from which may be discharged a contaminant to the natural environment, other than to water.

An EASR regulation involves two types of rules: eligibility criteria and operating requirements.

- Eligibility criteria are rules that describe the range of activities that must be registered in the EASR. If the eligibility criteria are met, the activity is subject to the EASR regulation, including the requirement to register. If the eligibility criteria are not met, the activity may require ministry approval, such as an ECA, unless otherwise exempt.

The approach taken by this proposed EASR regulation is to identify which sectors and activities are not eligible for EASR registration versus describing which sectors and activities must register in the EASR, e.g. who's out versus who's in.

- If an activity is eligible, operating requirements specified in the EASR regulation must be met. The operating requirements can include required technical assessments, pollution controls, operational practices and other conditions to mitigate potential negative environmental impacts.

1.2 Proposed Eligibility Criteria (EC)

Guiding Question for EC-1

Do you agree with the proposed list of sectors that would be ineligible to register for the Plant and Production Processes EASR regulation?

EC-1: NAICS CODES (See appendix 5.3 for details on NAICS codes)

Proposed EC: If a facility is described within any of the following NAICS industry sectors, subsectors, industry groups or industries, the activities engaged in at the facility would not be eligible for the proposed EASR regulation:

NAICS Code	Title
2122	<i>Metal Ore Mining</i>
2123	<i>Non-Metallic Mineral Mining and Quarrying</i>
221112	<i>Fossil-Fuel Electric Power Generation if greater than 25 megawatts</i>
221320	<i>Sewage Treatment Facilities</i>
311614	<i>Rendering and Meat Processing from Carcasses</i>
321111	<i>Sawmills (except shingle and shake mills)</i>
3212	<i>Veneer, Plywood and Engineered Wood Product Manufacturing, other than a facility that is part of the class identified by NAICS 321211 (Hardwood Veneer and Plywood Mills)</i>
3221	<i>Pulp, Paper and Paperboard Mills</i>
324110	<i>Petroleum Refineries</i>
32412	<i>Asphalt Paving, Roofing and Saturated Materials Manufacturing</i>
324190	<i>Other Petroleum and Coal Products Manufacturing</i>
325	<i>Chemical Manufacturing</i>
3251	<i>Basic Chemical Manufacturing</i>
3252	<i>Resin, Synthetic Rubber, and Artificial and Synthetic Fibres and Filaments Manufacturing</i>
326150	<i>Urethane & Other Foam Product (except Polystyrene) Manufacturing</i>
3262	<i>Rubber Products Manufacturing</i>
327310	<i>Cement Manufacturing</i>
327320	<i>Ready-mix Concrete Manufacturing</i>
327410	<i>Lime Manufacturing</i>
3279	<i>Other Non-Metallic Mineral Product Manufacturing</i>
331	<i>Primary Metal Manufacturing</i>
3311	<i>Iron and Steel Mills and Ferro-Alloy Manufacturing</i>

331410	<i>Non-Ferrous Metal (except Aluminum) Smelting and Refining</i>
3321	<i>Forging and Stamping</i>
332810	<i>Coating, Engraving, Heat Treating and Allied Activities</i>
332999	<i>All Other Miscellaneous Fabricated Metal Product Manufacturing</i>
336	<i>Transportation Equipment Manufacturing</i>
5622	<i>Waste Treatment and Disposal</i>
56291	<i>Remediation Services</i>
812220	<i>Cemeteries and Crematoria</i>

Rationale: These sectors are considered high-risk and/or complex and would still require an ECA. For more information on what is meant by high-risk or complex sectors, see Appendix 5.1.

Guiding Question for EC-2

Do you agree with the proposed list of activities that would be ineligible to register for the Plant and Production Processes EASR regulation?

EC-2: FACILITY ACTIVITIES

Proposed EC: *The activity is not located at a facility where any of the following activities are undertaken:*

- i. disposal of waste by depositing it into the land (i.e. landfill waste);*
- ii. processing waste via thermal treatment;*
- iii. the use of wood-fired combustion equipment over 3 megawatts ;*
- iv. plating processes using cyanide, chromium or nickel, such as chrome plating, electroplating, and electroless plating;or*
- v. processing of ferrous and non-ferrous metal outdoors, including torching, shearing, and plasma cutting;*

Rationale: These activities typically require additional testing and monitoring beyond the scope of this proposal. For example:

- Activities i, ii and iii are complex and/or high-risk activities and require specific terms and conditions to be included in ECAs issued in respect of these activities to reflect existing guidelines (e.g. Policy Guideline A-7 and A-13) for the control of air emissions.
- Activity iv - plating processes poses a higher risk to human health as a result of the contaminants emitted. As well, this activity can span across manufacturing operations with NAICS codes beyond those identified in EC-1.
- Activity v - the processing of ferrous and non-ferrous metals outdoors poses a higher risk to human health if not controlled adequately. As a result this activity requires technical review through the existing ECA process.

EC-3: SITE SPECIFIC STANDARD

Proposed EC: If a facility has requested or has been issued a site specific air standard under sections 32 and 35 of O. Reg. 419/05 in respect of a contaminant discharged from the facility, the activities engaged in at the facility will not be eligible for the proposed EASR regulation.

Rationale: Only facilities that are able to meet the air standards in O. Reg 419/05 are eligible for this EASR regulation. The ministry's existing risk management framework for air standards indicates that facilities that can meet or are below these standards are protective of human health and the environment. Facilities that are above these standards pose an increased risk and therefore require technical review through the existing ECA process.

EC-4: TECHNICAL STANDARD

Proposed EC: If a facility has registered to a published technical standard under O. Reg. 419/05 the activities engaged in at the facility will not be eligible to register in the EASR.

If a facility has requested or been issued an equipment standard under section 39 of O. Reg. 419/05 in respect of a contaminant discharged from the facility, the activities engaged in at the facility will not be eligible to register in the EASR.

Rationale: Facilities or facilities with equipment that may not be able to meet an air standard due to technical or economic limitations will not be eligible for registration in the EASR. The ministry's existing risk management framework for air standards indicates that facilities that can meet or are below these air standards are protective of human health and the environment. Facilities that are above these air standards pose an increased risk and therefore require technical review through the existing ECA process.

Guiding Question for EC-5

Do you agree that mobile activities require specific terms and conditions and should not be eligible for this proposed EASR regulation?

EC-5: MOBILE ACTIVITIES

Proposed EC: If a prescribed activity is a mobile operation (i.e. the use of the equipment may not be at a stationary address) it is not eligible to register in the EASR.

Rationale: Mobile activities require specific terms and conditions to be met based on the equipment used, location and duration of the operation of this equipment. For example, a mobile rock crushing operation that travels from site to site to perform the activity of crushing rock. It is proposed that these types of activities will still require an ECA.

EC-6: DEEMED SINGLE PROPERTY

Proposed EC: The facility at which the activities are undertaken is not located on a property that has been deemed to be a single property upon notification under subsection 4(2) of O. Reg. 419/05.

Rationale: The EASR registration process is designed for activities on a single property. The complexity of assessing emissions from adjacent properties requires technical review through the existing ECA process.

What is an “adjacent property”?

According to O. Reg. 419/05, two properties are considered to be adjacent if:

- The boundary of one property touches or, were it not for an intervening highway, road allowance, railway line, railway allowance or utility corridor, would touch the boundary of the other property;
- Two or more adjacent properties may be deemed to be a single property if:
- The persons responsible for the sources of contaminant have jointly notified the Director in writing that they wish the properties to be deemed to be a single property with respect to all contaminants or the Director has issued a notice under subsection 4(2) of the Regulation; and
- Every property on which a source of contaminant is located uses raw materials, products or services from one or more of the other properties on which the sources of contaminant are located or provides raw materials, products or services to one or more of the other properties on which the sources of contaminant are located.

1.3 Proposed Operating Requirements (OR)

If an activity must be registered in the EASR, it is proposed that the following operating requirements must be followed by the person undertaking the activity (e.g. the facility owner).

These ORs are intended to minimize environmental impacts, ensure that emissions and potential impacts to the natural environment are evaluated by a person qualified to make that assessment, and to prevent environmental issues from emerging.

Guiding Question for OR-1 to OR-10

Do you agree with the proposed list of operational requirements for the Plant and Production Processes EASR regulation?

OR-1: EMISSION SUMMARY AND DISPERSION MODELLING (ESDM) REPORT REQUIREMENTS

Proposed OR: Upon registration, the person engaging in the prescribed activity has an Emission Summary and Dispersion Modelling (ESDM) report that is reflective of the current or proposed operation, prepared by a Qualified Person in accordance with sections 9 to 17 and section 26 of O. Reg. 419/05.

The ESDM shall demonstrate that the concentration of each contaminant discharged by the facility predicted by the approved dispersion model for the point of impingement with the highest concentration is:

- i. at or below the standards set out in Schedules 2 or 3 in O. Reg. 419/05, as applicable, for that contaminant;*
- ii. at or below the guideline limits set out in the ministry document “Summary of Standards and Guidelines to support O. Reg. 419/05 – Air Pollution – Local Air Quality (as amended)”, as applicable, for that contaminant;*
- iii. at or below the level published by the Ministry in the “Jurisdictional Screening Level (JSL) List - A Screening Tool for Ontario Regulation 419: Air Pollution – Local Air Quality” (as amended) (“JSL List”) for that contaminant; or*
- iv. above the level published by the Ministry in the “Jurisdictional Screening Level (JSL) List - A Screening Tool for Ontario Regulation 419: Air Pollution – Local Air Quality” (as amended) (“JSL List”) for that contaminant and not likely to cause an adverse effect through an assessment of the concentration of the contaminant verified by a Qualified Person; or*
- v. not likely to cause an adverse effect through an assessment of the concentration of the contaminant verified by a Qualified Person for contaminants that do not have a standard set out in Schedule 2 or 3 in O. Reg. 419/05 or guideline limit set out in the ministry document “Summary of Standards and Guidelines to support O.Reg. 419/05 – Air Pollution – Local Air Quality (as amended)”; and*

The Qualified Person shall set out the operating conditions that were assumed for the purpose of section 10 of O. Reg. 419/05 and the emission rates that were assumed for the purpose of section 11 of O. Reg. 419/05.

The person engaging in the prescribed activities shall make the Emission Summary Table (see section 27 of O. Reg. 419/05) available for examination by any person, without charge, by posting it on the Internet or by making it available during regular business hours at the Facility and is given, without charge, to any person within fifteen (15) days after the person requests it.

The person engaging in the prescribed activity shall create and maintain a Log that contains a record of each change that has been made to the ESDM Report including the date on which the change occurred. (For example, a record would have to be made of a more accurate emission rate for a source of contaminant, more accurate meteorological data)

Prior to making any modification to the facility, the person engaging in the prescribed activity must have a Qualified Person prepare an updated ESDM report that is reflective of the proposed operation in accordance with section 26 of O. Reg. 419/05. In cases where the modifications are minor in that they do not alter the maximum POI concentrations, an addendum may be attached to the ESDM report outlining the modifications and the rationale(s) for why the ESDM report does not need to be updated prior to the modifications being made.

Explanatory notes: The requirements are similar to those already prescribed in O. Reg. 419/05 and the associated published guidance. The ESDM assessment will confirm that the facility emissions have been assessed against, and are in compliance with, Ontario’s air standards. This OR is being proposed because under the ministry’s existing risk management framework for air standards,

facilities that can meet or that are below the standards are protective of human health and the environment.

If the ESDM cannot demonstrate the above requirements, then section 28 and 29 of O. Reg. 419/05 would apply to the person engaging in the activity.

OR-1 requires that the ESDM report contain an assessment of the likelihood of the proposed concentrations potential to cause an adverse effect at Points of Impingement for i (d) and i (e). This approach is similar to the requirements imposed through ECAs with limited operational flexibility. The proposed auditing process that will be developed to support this EASR regulation will monitor these reported contaminants.

It is proposed that the contents for the Emission Summary Table are to be submitted electronically during the registration process. This ESDM information would be made available to the public through the ministry's website and the information may, over time, be used to inform the ministry across various program areas (e.g. air standard setting).

Nothing in this proposal removes the obligation for the person engaging in the activity to comply with Section 14(1) of the EPA.

OR-2: FUGITIVE DUST CONTROL BEST MANAGEMENT PRACTICES PLAN

Proposed OR - Where an ESDM report identifies fugitive dust sources, the person engaging in the prescribed activity shall have a Qualified Person develop and prepare a Best Management Practices Plan, for the control of fugitive dust emissions. This Best Management Practices Plan shall include, at minimum:

- 1. identification of the main sources of fugitive dust emissions such as:*
 - a. on-site traffic;*
 - b. paved roads/areas;*
 - c. unpaved roads/areas;*
 - d. material stock piles;*
 - e. loading/unloading areas and loading/unloading techniques;*
 - f. material spills;*
 - g. material conveyance systems;*
 - h. exposed openings in process and storage buildings; and,*
 - i. general work areas.*

- 2. potential causes for main sources of fugitive dust emissions;*

3. *preventative and control measures in place or required to minimize the likelihood of high dust emissions from the main sources of fugitive dust emissions identified above. Details of the preventative and control measures shall include:*
 - a. *a description of the control equipment to be installed;*
 - b. *a description of the preventative procedures to be implemented; and/or*
 - c. *the frequency of occurrence of periodic preventative activities, including material application rates, as applicable.*
4. *an implementation schedule with timelines for each preventative and control measure for the Best Management Practices Plan, including training of facility personnel;*
5. *inspection and maintenance procedures and monitoring initiatives to ensure effective implementation of the preventative and control measures; and,*
6. *the person engaging in the activity shall ensure that if any comment on the BMPP is received from the ministry, a record is created that includes a description of the comment and a description of what measures, if any were taken to address the comment, including any revisions to the BMPP for the control of dust; and,*
7. *the BMPP must be reviewed every 5 years and updated if necessary to be consistent with OR-11.*
8. *The name and licence number of the Qualified Person that signed and sealed the BMPP.*

The person engaged in the prescribed activities shall implement the BMPP for the control of fugitive dust emissions to provide effective dust suppression measures to any potential sources of fugitive dust emissions resulting from the operation of the facility.

The person engaging in the prescribed activities shall make the BMPP available for examination by any person, without charge, during regular business hours at the facility and shall give, without charge, a copy of the BMPP to any person within fifteen (15) days after the person requests it.

Upon registration the person engaging in the prescribed activity shall notify the ministry that a fugitive dust control BMPP has been developed for the facility.

Explanatory notes: If required, OR-2 requires that the facility develop and implement a Best Management Practices Plan (BMPP) to address any potential sources of fugitive dust emissions. Fugitive dust, if not properly managed following this proposed OR, can result in the loss of enjoyment and use of neighbouring properties.

If a facility has developed a BMPP for fugitive dust, this information will be collected during the registration process. The contents of the BMPP will not be required to be uploaded as part of the registration process, but the BMPP may be reviewed by the ministry as part of the ministry's compliance and/or auditing processes. The BMPP should also be made available for public review upon request.

OR-3: ESDM REPORT, ADDITIONAL MANDATORY CONTENT

Proposed OR- In addition to the ESDM report prepared for the purposes of the prescribed activity under OR-1, the person engaging in the prescribed activity must prepare, maintain on site and make available if requested a document setting out the following information:

- i. The legal name, operating name and site address of the facility.*
- ii. The primary NAICS code for the facility, and if applicable, any other NAICS codes for the facility.*
- iii. The name and licence number of each Qualified Person who contributed to the reporting and checking of the documentation, calculations, analysis, modelling, summaries and conclusions for the report required under OR-1.*
- iv. A statement from a Qualified Person confirming that the ESDM report was prepared in accordance with the ministry guidelines as described in OR-1.*
- v. The name and licence number of the Qualified Person that signed and sealed the ESDM report required under OR-1.*
- vi. A description of the methods and procedures that were employed to ensure all calculations, analysis, modelling was prepared to minimize errors and omissions.*
- vii. A description, by the Qualified Person, of the operating and maintenance procedures required to ensure that the facility is operating in accordance with the operating assumptions.*
- viii. A statement from the person engaging in the prescribed activity or a person who is authorized by them to make the statement certifying that the information given to the person that prepared the ESDM report is complete and accurate.*

Explanatory notes: OR-3 requires an additional mandatory document to support the ESDM Report for the purposes of this proposed EASR regulation to ensure that the air assessment was signed and sealed by a Qualified Person. The rationale for requiring a Qualified Person to complete the ESDM is detailed in section 3 of this document.

OR-4: NOISE ASSESSMENT REQUIREMENTS

Proposed OR - Upon registration, the person engaging in the prescribed activity has an assessment of the noise emissions that is reflective of the current or proposed operation, prepared by a Qualified Person concluding that one of the requirements below is satisfied

- i. The distance between the facility and the property boundary of the nearest noise receptor is greater than 1000 metres:*
- ii. The distance measured between the facility and the property boundary of the nearest noise receptors is greater than 500 metres, but less than 1000 metres, and none of the following equipment or processes are used at the facility:*
 - a) Flares*
 - b) Gas turbines, cogeneration facilities or any other continuous or peak shaving electrical power generation equipment*
 - c) Arc furnaces*

- d) *High velocity or pressure atmospheric vents such as gas process blow down devices*
 - e) *Rock, asphalt, metal or concrete crushing operations*
 - f) *Individual fans with flow rates in excess of 47 cubic metres per second based on manufacturer's specifications or operating manual*
 - g) *Individual pressure blowers or positive displacement blowers with static pressures in excess of 1.25 kilopascals.*
- iii. *The facility meets the minimum setback distance requirements from the ministry's noise screening process as set out in the document "Primary Noise Screening Process for S.9 Applications Supplement to Application for Approval" (as amended);*
- iv. *the noise impacts at each noise receptor meet the ministry noise limits, assessed by completing the requirements of the ministry's noise screening process as detailed in the document "Secondary Noise Screening Process for S.9 Applications Supplement to Application for Approval" (as amended) provided,*
- a) *there are no significant impulsive or vibration sources, including, but not limited to stamping presses or forging hammers, present at the facility,*
 - b) *there are no trucks that have refrigeration units or loading/unloading of trucks utilizing blowers or outdoor pumps on site;*
- v. *an Acoustic Assessment Report (AAR) prepared in accordance with the requirements in the ministry document "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300"; or*

The report prepared by the Qualified Person shall set out the operating conditions that were assumed for the purpose of each assessment of noise required under this operating requirement.

- vi. *(vi) if the facility commenced operation before the proposed regulation came into force, the person engaging in the prescribed activity has a Noise Abatement Action Plan prepared by a Qualified Person that outlines the preventative and control measures required to meet the noise limits set out in the ministry document "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300". The Noise Abatement Action Plan shall include:*
- a) *a description of the Noise Control Measures to be installed;*
 - b) *a description of the preventative procedures to be implemented; and*
 - c) *an implementation schedule including the identification of specific dates for achieving compliance with specific milestones.*

The person engaging in the prescribed activities shall implement the Noise Abatement Action Plan in accordance with the schedule.

Upon registration the person engaging in the prescribed activity shall notify the ministry that a Noise Abatement Action Plan has been developed for the facility.

The person engaging in the prescribed activity shall create and maintain a Log that contains a record of each change that has been made to the Noise Assessment including the date on which

the change occurred. (For example, a record would have to be made if there is a new point of reception).

Prior to making any modification to the facility, the person engaging in the prescribed activity must have a Qualified Person prepare an assessment of the noise emissions that is reflective of the proposed modification. If the modification does not require the noise assessment to be updated, the person engaging in the prescribed activity must have a Qualified Person prepare an addendum attached to the noise assessment outlining the modifications and the rationale(s) for why the noise assessment does not need to be updated prior to the modifications being made.

The person engaging in the prescribed activities shall make the Acoustic Assessment Summary Table available for examination by any person, without charge, by posting it on the Internet or by making it available during regular business hours at the Facility and is given, without charge, to any person within fifteen (15) days after the person requests it.

Explanatory notes: This OR is being proposed in order to assess and mitigate where required potential impacts from noise. Noise issues can cause loss of enjoyment and use of neighbouring properties.

OR-4 requires that an assessment of noise emissions from the facility be conducted through the use of ministry screening techniques or through the preparation of an Acoustic Assessment Report (AAR) by a Qualified Person prior to registration. Ministry expectations and guidance on preparing an AAR are available in Publication NPC-233 “Information to be Submitted for Approval of Stationary Sources of Sound”, October 1995 as amended, and Appendix A of the Basic Comprehensive User Guide.

At the time of registration, new facilities must demonstrate that they meet ministry noise limits because they have the ability to implement appropriate noise controls prior to construction and operation.

Facilities which existed prior to the date this proposed EASR regulation comes into force that cannot meet the noise criteria must develop a Noise Abatement Action Plan (NAAP). If a facility has developed a NAAP, this information will be collected during the registration process. The contents of the NAAP will not be required to be uploaded as part of the registration process, but the NAAP may be requested and reviewed by the ministry as part of the ministry’s compliance and/or auditing processes.

If applicable, the contents for the Acoustic Assessment Summary Table from the AAR report are proposed to be submitted electronically during the registration process. The information on the noise emissions from the facility will be made available to the public through the ministry’s website. The information provided during the registration process can be used to further inform the ministry across various program areas.

For the purposes of this discussion paper, “Noise Assessment” means the Noise Screening Processes, Acoustic Assessment Report and Noise Abatement Action Plan.

OR-5: NOISE ASSESSMENT, ADDITIONAL MANDATORY CONTENT

Proposed OR - If an assessment prepared for the purpose of OR-4 indicates that the facility meets the noise screening requirements in OR-4(i, ii, or iii), the most current version of the following documentation is required to be retained while the facility is in operation,

- 1. A statement by the Qualified Person that completed the noise assessment that either:*
 - a) identifies that the facility meets the minimum setback requirements to any point of reception outlined in OR-4(i or ii); or*
 - b) identifies that the facility meets the requirements of the ministry's noise screening process as detailed in the document "Primary Noise Screening Process for s. 9 Applications Supplement to Application for Approval" (as amended), including the rationale for that conclusion.*

If an assessment prepared for the purpose of OR-4 indicates that the facility meets the noise screening requirements in OR-4(iv), or OR-4(v) the person engaging in the prescribed activity shall retain a report prepared by a Qualified Person, consisting of the following:

- i. The legal name, operating name and site address of the facility.*
- ii. The primary NAICS code for the facility, and if applicable, any other NAICS codes for the facility.*
- iii. The names and licence number(s) of the Qualified Person(s) involved in preparing and reviewing the documentation, calculations, analysis, modelling, summaries and conclusions.*
- iv. The name and licence number of the Qualified Person that signed and sealed the assessment of noise emissions of the facility.*
- v. The evaluation and summary of the noise emissions from the facility.*
- vi. A statement by the Qualified Person that the assessment was prepared in accordance with the appropriate ministry guidelines (Secondary Noise Screening Process or NPC-300).*
- vii. A description of the methods and procedures that were employed to ensure all calculations, analysis, modelling was prepared to minimize errors and omissions.*
- viii. The Qualified Person shall set out the operating conditions that were assumed for the purpose of each assessment of noise required under OR-4.*
- ix. A statement from the person engaging in the prescribed activity or a person who is authorized by them to make the statement certifying that the information given to the person that prepared the noise assessment is complete and accurate.*

Explanatory notes: OR-3 and OR-5 ensure that air and noise assessments are prepared by a Qualified Person(s). Furthermore, OR-3 and OR-5 require that the reports contain statements by the Qualified Person demonstrating the air and noise assessments were completed using good engineering practices, which are achieved through use of techniques that are well-known, widely available and generally acceptable. Furthermore, there is a requirement that the reports contain a statement by the person who provided information to the Qualified Person that the information provided to prepare the reports was complete and accurate. The rationale for requiring a Qualified Person to complete the Noise Assessments is detailed in section 3 of this document.

OR-6: ODOUR ASSESSMENT REQUIREMENTS

Proposed OR –If applicable, prior to registering, the person engaging in the prescribed activity has a Qualified Person prepare an assessment of the odour emissions concluding that the facility meets the minimum setback distance requirements from the ministry’s Odour Screening Process currently under development.

If the setbacks cannot be met it is also proposed that the person engaging in the prescribed activity shall develop a Best Management Practices Plan (BMPP), prepared by a Qualified Person, for the control of odour emissions that includes:

- 1. an implementation schedule for the BMPP, including training of facility personnel;*
- 2. inspection and maintenance procedures and monitoring initiatives to ensure effective odour preventative and control measures; and*
- 3. a list of all Ministry comments received, if any, on the BMPP, and a description of how each Ministry comment was addressed in the BMPP.*
- 4. the name of the qualified person that signed and sealed the BMPP*

If a BMPP is required, the person engaging in the prescribed activity must notify the District Manager in writing that a BMPP has been prepared a minimum of 60 days prior to registering or making a modification that will increase odour emissions

The person engaging in the prescribed activity shall implement the BMPP.

If the setbacks cannot be met an Odour Control Technology Report must be prepared by a Qualified Person within 6 months of registration and in accordance with OR-10 will also be required to be retained while the facility is in operation and include:

- 1. A comparison of other methods used by same/similar sectors and other jurisdictions to reduce odours;*
- 2. An assessment of transferring technology from other sectors and consideration of inherently less odorous processes/practices; and*
- 3. A list of all technically feasible odour controls for all sources and identification of best available controls.*

The person engaging in the prescribed activity shall create and maintain a Log that contains a record of each change that has been made to the Odour Assessment including the date on which the change occurred.

The person engaging in the prescribed activities shall make available the BMPP for Odour and the Odour Control Technology Report, if developed, for examination by any person, without charge, during regular business hours at the facility and shall give, without charge, a copy of the BMPP for Odour and the Odour Control Technology Report, if developed, to any person within fifteen (15) days after the person requests it.

Prior to making any modification to the facility, the person engaging in the prescribed activity must have a Qualified Person prepare an assessment of the odour emissions. If modifications to the facility do not require the Best Management Practices Plan for odour and the Odour Control Technology Report to be updated, the person engaging in the prescribed activity must have a Qualified Person prepare an addendum attached to the odour assessment outlining the modifications and the rationale(s) for why the odour assessment does not need to be updated prior to the modifications being made.

Explanatory notes: The ministry is currently in the process of developing an Odour Policy Framework that will provide detailed information and requirements for completing an Odour Assessment. The ministry is proposing this OR as odour impacts have the ability to cause loss of enjoyment and use of neighbouring properties and may cause discomfort to people.

For the purposes of this discussion paper, “Odour Assessment” means the Odour Screening Process, BMPP for Odour and Odour Control Technology Report.

OR-7 NO_x EMISSION LIMIT FOR BOILERS AND HEATERS

Proposed OR - Upon registration, the person engaging in the prescribed activity has a statement prepared by a Qualified Person verifying that each boiler or heater at the facility will emit oxides of nitrogen below the nitrogen oxides intensity rate in Table 1, if the boiler or heater,

- a. uses oil or gas fuel;*
- b. has a maximum rate of energy input greater than 10.5 gigajoules per hour; and*
- c. operates at least 500 hours per year.*

This operating requirement does not apply to,

- a. existing, unmodified boilers or heaters installed at the facility before March 2001; and,*
- b. By-product Fuel boilers.*

TABLE 1: Nitrogen Oxides Emission Limit

Maximum Rate of Energy Input (gigajoules per hour)	Primary Fuel	Nitrogen Oxides Emission Intensity Rate (grams per gigajoule)
10.5 to 105	Gaseous Fuel	26
Greater than 105	Gaseous Fuel	40
10.5 to 105	Distillate Oil	40
Greater than 105	Distillate Oil	50
10.5 to 105	Residual Oil less than 0.35% Nitrogen	90
Greater than 105	Residual Oil less than 0.35% Nitrogen	90
10.5 to 105	Residual Oil greater than or equal to 0.35% Nitrogen	110
Greater than 105	Residual Oil greater than or equal to 0.35% Nitrogen	125

Explanatory note: OR-7 is proposed to ensure requirements for emissions limits that are protective of human health and the environment are met as outlined in Policy Guideline A-9 – NO_x Emissions from Boilers and Heaters. This policy guideline focuses on large boilers and heaters over 10.5 gigajoules/hour. These types of boilers and heaters can be found across a variety of commercial and industrial operations.

OR-8: OPERATION AND MAINTENANCE REQUIREMENTS

The person engaging in the prescribed activities shall prepare and implement operating procedures and maintenance programs for all sources of contaminants, which shall specify as a minimum:

- a. routine operating, maintenance and monitoring procedures as recommended by the Equipment suppliers;*
- b. frequency of inspections and scheduled preventative maintenance;*
- c. procedures to ensure that the facility is operating in accordance with the operating and emission rate assumptions required to be set out by the Qualified Person in OR-1.*
- d. procedures to ensure that the facility is operating in accordance with the operating assumptions required to be set out by the Qualified Person in OR-4.*
- e. procedures to prevent and respond to upset conditions and spills;*
- f. procedures to minimize all fugitive emissions as set out in OR-2;*
- g. procedures to prevent and/or minimize odorous emissions as set out by the Qualified Person in OR-6;*
- h. procedures to prevent and/or minimize noise emissions;*

- i. procedures for record keeping activities relating to the operation and maintenance programs.*
- j. procedures for recording and responding to environmental complaints relating to the operation of the Facility; and*
- k. list of trained personnel and training records responsible for the operation and maintenance of the Facility.*

The person engaging in the prescribed activities shall ensure that any source that has the potential to discharge a contaminant is operated and maintained in accordance with the operating procedures and maintenance programs.

Explanatory notes: The ministry is proposing this OR as proper operating procedures and maintenance programs minimize contaminant emissions, reduce equipment malfunctions, and ensures continued compliance with environmental regulations and guidelines.

OR-9: COMPLAINTS REPORTING REQUIREMENTS

Proposed OR - If the person engaging in the prescribed activities receives a complaint with respect to the facility, and the complaint relates to the natural environment, the Local MOECC District Manager must be notified of the complaint no later than two (2) business days after the complaint is received. Measures taken to address the cause of the complaint must also be provided to the District Manager

Explanatory notes: OR-9 is proposed so that the local Ministry District Office is notified in the event that there is a problem that has the potential for environmental impacts so that they may follow-up with the facility if necessary.

OR-10: RECORD KEEPING REQUIREMENTS

Proposed OR - Any information requested by any employee in or agent of the Ministry concerning the Facility and its operation related to the EASR requirements, shall be provided to the employee in or agent of the Ministry, upon request, in a timely manner.

The person engaging in the prescribed activity shall have on-site at the facility, until the facility ceases to operate from the date of their creation all reports, records and information, including,

- a. copy of the Original ESDM report and each updated version;*
- b. copy of each version of the primary noise screening, where applicable;*
- c. copy of each version of the secondary noise screening, where applicable;*
- d. copy of each version of the Acoustic Assessment Report, where applicable;*
- e. copy of each version of the Noise Abatement Action Plan, where applicable;*
- f. copy of each version of the Acoustic Audit Report, where applicable;*
- g. copy of each version of the Odour Assessment Report and screening form, where applicable;*
- h. supporting information used in the emission rate calculations performed in the ESDM Reports, the Acoustic Assessment Reports and Odour Assessments;*

- i. fugitive dust BMPP;*
- j. statements/reports and other documentation from any Qualified Persons;*
- k. copy of operating procedures and maintenance programs for all sources of contaminants described in OR-8;*
- l. copy of procedures to prevent and respond to upset conditions and spills;*
- m. operator training records related to maintenance, operating procedures and complaints;*
- n. records in the Log documenting changes that need to be recorded related to ESDMs, odour assessment and noise assessments;*
- o. records of maintenance, repair and inspection of equipment related to all sources of contaminants;*
- p. records of process upsets and equipment failures causing increased emissions to the atmosphere; and,*
- q. all records related to environmental complaints made by the public as required by OR-8 and OR-9.*

Explanatory notes: The documents required to be retained by OR-10 are consistent with the documents that are required to be submitted for an Environmental Compliance Approval application and other EASR regulations to ensure the facility is operating in compliance with all proposed EASR requirements and to support the ministry's compliance/audit process for this EASR regulation.

Guiding Question for OR-11

Do you agree with the proposed 5 year updating requirements for the Plant and Production Processes EASR regulation?

OR-11: UPDATING REQUIREMENT

Proposed OR - The person engaging in the prescribed activity must update the ESDM report, the noise assessment and/or the odour assessment, every five (5) years from the last update. The updated reports/assessments must be prepared by a Qualified Person. If any updates to the reports or facility are made prior to the 5 years, the information in the registry must be updated within 30 days.

The Log is required to be updated for any changes that are made to the ESDM Report, the noise assessment and the odour assessment, including the date on which the change occurred.

The person engaging in the prescribed activity shall ensure that the Ministry is notified that the updated reports/assessment have been completed and that the current Emission Summary Table and Acoustic Summary Table are uploaded to the registry.

For those facilities that had not yet sped up to the more advanced air dispersion models and were assessing compliance against the air standards in Schedule 2 of O. Reg. 419/05 at the time of registration, the person engaging in the prescribed activity must update the ESDM report by February 1, 2020 to assess compliance in accordance with section 20 of O. Reg. 419/05.

Explanatory notes: To ensure continued protection of human health and the environment, OR-11 has been proposed to confirm that facilities continue to be in compliance with the most current ministry guidelines and standards. This OR also ensures that facilities meet the requirements for assessing emissions using the advanced air dispersion models that come into effect for all facilities in 2020. This OR will support the ministry's mandate of increased environmental protection as many existing ECAs do not require updating or renewing unless modifications are made.

Guiding Question for OR-12

Do you agree with the proposed transition dates for the Plant and Production Processes EASR regulation?

OR-12: PRESCRIBED DATE APPROVAL CEASES TO HAVE EFFECT

Proposed OR - For the purposes of clause 20.17 (b) of the EPA, the prescribed date on which an ECA issued in respect of any activity to which this EASR regulation applies will cease to have effect is as follows:

- a. For a facility with an air and noise ECA without limited operational flexibility (LOF), January 1, 2022;*
- b. For a facility with an air and noise ECA with LOF, the date the LOF condition expires or January 1, 2022 whichever is earlier; or*
- c. For a facility with an air and noise ECA and a modification is being proposed, prior to making the modification or January 1, 2022 whichever occurs first.*

Explanatory notes: If the activities prescribed under this proposal are operating under an ECA, the prescribed activities would have to transition from the ECA to registration in the EASR by January 1, 2022 at the latest.

In most EASR regulations, transition periods are provided to provide a timeframe within which a facility that is operating under an ECA for an EASR-prescribed activity would have to transition from the ECA to registration in the EASR. To provide for operational flexibility, the transition period allows facilities to continue to operate under existing ECAs prior to transitioning to being registered in the EASR.

2. Proposed Section 9 Exemptions

Based on technical analysis, the ministry is proposing to exempt some activities from section 9 of the EPA. In order to be eligible for the proposed exemption, the activity, in most cases, must meet a number of criteria. If the activity does not meet the proposed criteria, the activity will require an ECA from the ministry.

Guiding Questions for Proposed Exemptions

Do you agree with the proposed list of exemptions from Section 9 of the ECA?

Proposed Exemptions

The following section provides an overview of section 9 EPA exemptions that the ministry is proposing to move forward with. The intent of exempting the following activities/facilities is to reduce the regulatory burden on less-complex facilities whose emissions do not pose a significant risk to the environment or human-health. The types of facilities where these activities occur generally include:

- Multi-residential properties such as apartments and condominiums;
- Retail operations such as grocery stores;
- Warehousing operations;
- Office buildings and other commercial spaces; and,
- Institutions such as private and public schools.

Some examples of existing section 9 EPA exemptions include:

- Routine facility maintenance on the building or equipment;
- Equipment used for construction of buildings;
- Air ventilation systems (with some limitations);
- Equipment used to prepare food or beverages in restaurants, cafeterias etc.; and,
- Mobile equipment that is used for snow-making, duct cleaning, or removing asbestos.

These existing exemptions are detailed in subsection 9 (3) of the EPA and in O. Reg. 524/98: Environmental Compliance Approvals – Exemption from Section 9 of the Act.

The following activities/facilities are being considered for exemption from section 9 of the EPA:

1. Public and Private Schools
2. Heating, Ventilation and Air Conditioning Systems
3. Standby Power Systems
4. Small Wood Burning Equipment

Public and Private Schools

Activities conducted in a public or private primary or secondary school for educational purposes will be exempt from the requirement of s.9 of the EPA.

This exemption will not apply to:

- 1. Any activities relating to wood fired combustion or biomass combustors with a thermal output greater than 50 kW.*
- 2. The production of electricity using waste heat from any production process or the use of steam from electric power generation as a source of heat (i.e. no co-gen)*
- 3. Power systems that are used to provide power to the transmission grid.*
- 4. Power systems that are used to provide power on-site in non-emergency situations.*

Rationale: Exclusions from the exemption are proposed to ensure specific equipment operating at public and private schools continue to meet the requirements of section 9 of the EPA and prevent exposure to emissions from the continuous operation of on-site power systems.

Wood burning equipment greater than 50 kW and cogeneration facilities are not proposed for exemption as the emissions need to be assessed to ensure compliance with standards and guidelines.

Heating, Ventilation and Air Conditioning (HVAC) Systems

An HVAC system used only for the purposes of comfort heating, cooling or refrigeration in any building or structure that meets the following criteria:

- 1. If the HVAC system includes one or more combustion units,*
 - i. each combustion unit uses only natural gas, propane or both natural gas and propane as fuel, and*
 - ii. the thermal input rating of each combustion unit is not greater than 10.5 million kilojoules per hour.*
- 2. If the HVAC system includes a cooling tower, drift loss from the cooling tower is controlled by drift eliminators.*
 - i. shall be installed, used, operated and maintained in a manner that satisfies the recommendations of the manufacturer of the drift eliminator*

This exemption will not apply to:

- 1. Any HVAC system that also provides heat, cooling or ventilation to an industrial or manufacturing process.*
- 2. Any HVAC system that derives its heat, cooling or ventilation from an industrial or manufacturing process.*

Rationale: Analysis has shown that the use of other fuel types for the purpose of comfort heating is low (<1%) within the province. In addition, this requirement helps to promote the use of cleaner burning fuels.

Any individual comfort heating system that is greater than 10.5 million kJ/h is currently subject to the ministry's guideline A-9. This policy guideline was developed to address smog in Ontario, by reducing the emission of nitrogen oxide (NOx) by new (or modified), large boilers and heaters.

Drift eliminators are standard on all new cooling towers and are designed to reduce the level of particulate dispersed to the atmosphere. This requirement is to ensure that drift eliminators are maintained periodically and the volume of drift dispersed from the cooling tower does not exceed manufacturer's recommendations.

HVAC systems that derive or provide heat to industrial or manufacturing processes are typically larger than those used only for the purposes of comfort heating, cooling or refrigeration resulting in potentially higher emissions that need to be assessed to ensure compliance with standards and guidelines.

Standby Power Systems

A standby power source if all of the following criteria are met:

- 1. Testing and maintenance of the standby power source is done in accordance with any applicable manufacturer's recommendations and generally accepted standards.*
- 2. The standby power source is operated for one of the following purposes:*
 - i. Solely for testing or maintenance purposes.*
 - ii. Used for its intended purpose.*
- 3. The standby power source shall be used and operated for the purpose of testing or performing maintenance for a maximum of 60 hours per calendar year.*
- 4. The system shall be used and operated for the purpose of testing or performing maintenance only between the hours of 7 a.m. and 11 p.m.*
- 5. The exhaust stacks that discharge contaminants, other than noise, from the system into the air shall be oriented vertically and shall be free of any impediments that would prevent the flow of the emissions.*
- 6. The standby power system uses only one or more of the following as fuel:*
 - i. Biodiesel.*
 - ii. Diesel.*
 - iii. Natural gas.*
 - iv. Propane.*
- 7. Each generation unit that is part of the standby power system,*
 - i. if the unit uses diesel or biodiesel as fuel,*
 - a) is specified by the manufacturer of the unit to, at a minimum, conform to the Tier 1 Emission Standards set out in Table 1 of 40 CFR 89.112 (United States), or*
 - b) is equipped with pollution control equipment specified by the manufacturer of the equipment to limit the discharge of contaminants so that the unit, at a minimum, conforms to the Tier 1 Emission Standards set out in Table 1 of 40 CFR 89.112 (United States), and*

- ii. *if the unit uses propane or natural gas as fuel,*
 - a) *is designed by the manufacturer of the unit to discharge a maximum of 9.2 grams of nitrogen oxides per kilowatt hour, or*
 - b) *is equipped with pollution control equipment specified by the manufacturer of the equipment to limit the discharge of nitrogen oxides to a maximum of 9.2 grams per kilowatt hour.*

Rationale: The standby power source is only for equipment that is intended to be used for the purpose of producing power to maintain essential operating conditions when the power produced by the normal sources of power is cut off or reduced. The intent of this proposed exemption does not include power sources used for peak shaving, demand response, power systems that are used to provide power to the transmission grid or power systems that are used for prime power.

The 60 hours a year requirement is consistent with current limitations applied in Ontario with respect to testing and/or maintenance and is also common in other jurisdictions.

Analysis determined that defining normal operation (testing and maintenance) of the standby power system within the timeframe of 7 a.m. to 11 p.m. would limit potential noise impacts.

The vertical unimpeded flow requirement is based on the existing requirements for standby power systems in Ontario and is to prevent the use of rain caps.

The analysis determined that biodiesel, diesel, natural gas and propane are the most typical fuels used for this activity and the intention is to ensure that waste-fuel and fuel oil is not being used.

Small Wood Burning Equipment

Wood fuel burning equipment used to provide comfort heating in a building, if,

- i. the equipment is a masonry fireplace constructed on site (as described in the Ontario Building Code), or,
- ii. the equipment is certified to either: CSA Standard B415.1-10 “Performance testing of solid-fuel-burning heating appliances” (March 2010), USEPA 40 CFR Part 60 “Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces” (March 2015) or European Standard EN303-5 “Heating boilers – Part 5: Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW – Terminology, requirements, testing and marking” (June 2012), and
- iii. the maximum thermal output of each individual wood fuel burning device is rated at 50 kilowatts (equivalent to 180,000 kilojoules per hour) or less, and
- iv. the wood fuel used is either manufactured fire logs, or is untreated wood including wood pellets, wood chips, wood briquettes and firewood.

Rationale: This exemption includes size limits which are not specified in the existing exemption found in O. Reg. 524/98 and would also better match requirements already included in the Ontario Building Code. The requirements provide clarity for the new types of wood fuel available for heating purposes to enable the use of modern, efficient wood fuels and would enable facilities to install wood burning equipment to displace the use of fossil fuels and reduce greenhouse gas emissions at a lower cost.

Guiding Questions for Section 3

Do you agree with the ministry's proposal to require licenced professional engineers to complete required technical assessments for the Plant and Production Processes EASR regulation?

3. Qualified Persons

For the purpose of this proposed EASR regulation, the ministry is proposing to define a Qualified Person (QP) to be a person with a licence or limited licence under the Professional Engineers Act.

Today, when an ECA application is submitted to the ministry for approval, a detailed technical review of the application is performed by an engineer that is employed by the ministry. The review ensures that the application submitted by the proponent meets ministry requirements prior to the Director issuing an ECA for the facility.

It is proposed that in order to register in the EASR, the person engaging in the activity will need to have a QP conduct assessments in respect of any of the air, noise and odour emissions from the facility. The assessments must be signed and sealed by the QP in accordance with the Professional Engineers of Ontario Guideline "Use of the Professional Engineers Seal". The QP can be directly employed or contracted by the person engaging in the activity and have experience in completing air, noise, and odour assessments. It is also proposed that the regulation would require that a QP's report includes a statement that the assessments conducted for the air, noise and odour emissions from the facility have been performed in accordance with the ministry's regulations and guidelines as per the regulation.

A person with a licence or limited licence under the Professional Engineers Act is accountable to the public through a tribunal process for discipline and enforcement that is prescribed in the Professional Engineers Act and regulations. The ministry, the client or the public can use this process to make a complaint through the Professional Engineers of Ontario to address the concerns.

This proposal also puts forward the requirement for the name and licence number of the QP to be included in the information provided in the EASR as part of the registration process that will become part of information in the Registry that is available to the public.

4. Maintaining Compliance with Registrations

Consistent with the ministry's overall approach, the compliance approach for the activities prescribed for the EASR will be risk-based in accordance with the ministry's Compliance Policy. As with other compliance programs, this approach will utilize existing tools to promote, assess, enforce and manage compliance-related matters. Such tools may include compliance assistance, desktop and engineering audits, inspections, incident response, voluntary abatement plans, orders, investigations and registry suspension and removal.

In addition to the compliance actions taken by the ministry, the online EASR registry enables increased transparency, allowing the public to search and find registrations related to persons conducting the activity. This allows the public to gain an understanding of the activities that are occurring within their communities.

5. Appendices

5.1 Overview of High-Risk, Complex Sectors

In the development of O.Reg. 419/05, one of the main concepts was to identify sectors based on the toxicity of the contaminants they emitted and the extent and magnitude of possible exceedances of air quality objectives. The result of this work led to the development of Schedule 4 and 5 of O. Reg. 419/05 that sets out various sectors.

Schedule 4 sectors were identified to be sources of contaminants of concern with respect to bioaccumulative toxic metals and particularly toxic organic compounds including: arsenic, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, silver, vanadium, benzo[a]pyrene, dioxins and furans, and vinyl chloride.

Schedule 5 sectors were identified to be sources of contaminants of concern with respect to other higher risk contaminants including: acetaldehyde, acetonitrile, acrolein, acrylonitrile, ammonia, chlorine, chloroform, copper, cyclohexane, dichloromethane, hydrochloric acid, methyl ethyl ketone, methylenebis (phenyl isocyanate), n-hexane, phenol, polymeric diphenyl diisocyanate, propylene oxide, selenium, tetrachloroethylene, toluene diisocyanate, and trichloroethylene.

After examining current NPRI data (2014) and the O.Reg. 419/05 approach to identifying target sectors with respect to the key toxic contaminants, the 2014 NPRI data shows that this approach continues to be relevant today and that these target sectors continue to account for a significant portion of these key toxic contaminants.

Building on the approach embedded in O. Reg. 419/05, and the 2014 NPRI data review, the technical analysis undertaken for this proposed EASR regulation applied the following additional lenses to determine if activities engaged in additional sectors, beyond those in Schedules 4 and 5 should be ineligible for registration in the EASR:

- New Air Standards (post 2005)
- Odour Impacts
- Noise Impacts
- Multimedia Considerations (e.g. are risks associated some multi-media ECAs (waste activities) comparable to Schedule 4/5?)
- Site Specific Standards and Technical Standards
- Compliance History

Based on this analysis, the following additional sectors (in addition to Schedules 4 and 5 of O. Reg. 419/05) were identified as those that are high-risk and/or are more complex in nature and it is proposed that activities engaged in these sectors not be eligible to register in the EASR:

- Asphalt Paving, Roofing, and Saturated Materials Manufacturing due to benzo[a]pyrene emissions (technical standard currently under development), odour and noise emissions and tend to be an activity that is mobile;
- Cement Manufacturing due to ammonia emissions, benzene emissions, mercury emissions, dioxins and furans emissions, polycyclic aromatic hydrocarbons (PAHs) emissions, noise

emissions and due to the fact that they are eligible for the Alternative Low Carbon Fuels Regulation which exempts this sector from requiring a waste approval if they have an ECA for air emissions;

- Cemeteries and Crematoria due to incineration and noise emissions;
- Forging and Stamping due to noise and vibration emissions as the ministry does not have any screening guidelines for vibration as impacts are site specific;
- Lime Manufacturing due to the fact that they are eligible for the Alternative Low Carbon Fuels Regulation which exempts this sector from requiring a waste approval if they have an ECA for air emissions;
- Non-Metallic Mineral Mining and Quarrying due to noise emissions and the complexity associated with the various ministries and regulations that apply to this sector;
- Ready-mix Concrete Manufacturing due to noise emissions and tend to be an activity that is mobile;
- Remediation and Other Waste Management Services due to in-situ remediation, multimedia considerations and odour emissions;
- Rendering and Meat Processing from Carcasses due to odour emissions;
- Rubber Products Manufacturing based on toxicity (cancer classification, stringent jurisdictional guidelines, previous toxicity assessment information)
- Sawmills (except shingle and shake mills) due to technical standard (for acrolein) and noise emissions;
- Sewage Treatment Facilities due to ammonia emissions, mercury emissions, silver emissions, odour emissions, noise emissions and multimedia considerations;
- Veneer, Plywood and Engineered Wood Product Manufacturing due to technical standard (for acrolein), acetaldehyde emissions, and MDI monomer emissions; and,
- Waste Treatment and Disposal (includes everything that falls under this sector beyond what is targeted in Schedule 5 of O. Reg. 419/05) due to multimedia considerations, odour emissions and noise emissions.

Considerations Regarding Odour

To support the development of the Plant and Production Processes EASR the ministry has identified sectors which are likely sources of odour concerns based on equipment, process or products produced at the facility. Requiring these sectors to submit an ECA application instead of registering in the EASR allows the ministry to better assess facility odour emissions and odour technologies prior to operation, and affords the ministry an opportunity to apply site and equipment specific terms and conditions as needed to minimize odour emissions.

When considering which sectors are more likely to cause an adverse effect due to odours, the ministry reviewed ECAs with specific terms and conditions for controlling odour emissions, as well as the ministry's source testing database. The ministry also reviewed facility complaint histories and requests for leave to appeal over the last 10 years. The sectors proposed as being ineligible to register in the EASR include facilities with significant equipment/site specific ECA terms and conditions to reduce odour emissions, including source testing conditions and a significant volume of odour complaints.

The following manufacturing sectors are still under review by the ministry and may be considered for EASR ineligibility:

- 31122 - Starch and Vegetable Fat and Oil Manufacturing
- 31161 - Animal Slaughtering and Processing

5.2 Current Regulatory Context

Under section 9 of the EPA, a person is prohibited from operating, constructing, altering, extending or replacing anything in a facility that may discharge a contaminant into the air except in accordance with the terms and conditions provided in an ECA. Certain equipment, apparatus and processes are currently exempt from the requirement in section 9 of the EPA to obtain an ECA. These existing exemptions are listed in subsection 9 (3) of the EPA and in O. Reg. 524/98: Environmental Compliance Approvals – Exemption from Section 9 of the Act.

The following sub-sections provide a general overview of the potential environmental impacts from the range of targeted sectors for this proposed EASR regulation and the related regulatory context in which they operate.

Pollutant Emissions to Air

Sources of air emissions from facilities vary based on numerous factors such as energy use (e.g. type and amount of energy used), the types of processes used (e.g. mechanical and/or chemical processes), the equipment used (e.g. older equipment versus latest technology), size of facility, types of raw materials handled and types of products produced.

Ontario Regulation 419/05: Air Pollution – Local Air Quality (O. Reg. 419/05) made under the EPA works within the province’s air management framework by regulating air contaminants released into the air by various sources including local industrial and commercial facilities. O. Reg. 419/05 aims to limit exposure to substances released into air that can affect human health and the environment while allowing industry to operate responsibly under a set of rules that are publicly transparent.

There are three approaches for facilities to demonstrate compliance with O.Reg. 419/05:

- Meet the concentration of the air standard for the contaminant set out in O. Reg. 419/05 (referred to as an “air standard” in this paper);
- Request (from the ministry) and meet a site-specific standard for the contaminant; or
- Register and meet the requirements under a sector-based technical standard, if available, in respect of the contaminant.

O. Reg. 419/05 sets out a number of air standards for contaminants. Sections 19 and 20 of the regulation prohibit a discharge that results in the concentration at a point of impingement (POI) exceeding the concentration set out in the regulation (e.g. Schedule 2 or 3). Air standards are used to assess the discharges of a contaminant to air by a facility. Under this approach, compliance with the applicable air standard is assessed by comparing the estimated maximum POI concentration resulting from a facility’s emission to the air standard. Most facilities in Ontario choose to be regulated by the requirements of the general air standards set out in O. Reg. 419/05 rather than request a site-specific standard or register for a technical standard.

Some facilities can face challenges in meeting a required air standard for a contaminant and therefore may be eligible to submit a request for a site-specific standard for the contaminant. This is a concentration of contaminant approved by a Ministry of the Environment and Climate Change Director for an individual facility. Such requests require detailed assessment and consultation with the ministry and the public prior to approval.

A technical standard is a technology-based standard set out in the Technical Standards publication by the Minister for two or more facilities in a sector that may not be able to meet an air standard for technical or economic reasons. Technical standards may be developed at the request of industry or if the ministry identifies certain sectors that may be better controlled, monitored or managed by the technical standard compliance approach.

Once a technical standard has been published, a facility in that sector may register on the ministry's Technical Standards Registry – Air Pollution. If a facility is registered in respect of a contaminant under a technical standard, then it will be exempt from the air standard set out in O. Reg. 419/05 for that contaminant, but it must meet the requirements of the technical standard. Public consultation may be required in respect of a facility prior to registering to a technical standard.

Regardless of which compliance option a facility chooses to utilize, most facilities are required to obtain an ECA. Generally an Emission Summary and Dispersion Modeling (ESDM) report that includes an assessment of all contaminants emitted from the facility including contaminants with no ministry standards or guidelines must be submitted as part of an application for an ECA (see s.22 of O. Reg. 419/05). ESDM reports that assess contaminants that do not have an air standard (or guideline value) may require additional analysis of the potential for the discharge of the contaminant to cause an adverse effect by the ministry before the issuance of an ECA.

An ECA typically contains operating, documentation and reporting requirements as well as limits on production or materials to ensure continued compliance with the applicable air standards.

Noise Emissions

Noise is defined as a contaminant that is discharged to air and is therefore captured by Section 9 of the EPA. Unless exempted, many facilities often contain one or more stationary sources of noise (e.g. machinery, generators, fans, and other accessory equipment) that require an approval under section 9 of the EPA. Existing exemptions are listed in subsection 9 (3) of the EPA and in O. Reg. 524/98: Environmental Compliance Approvals – Exemption from section 9 of the Act. Some examples of existing exemptions include:

- Routine facility maintenance on the structure or equipment;
- Equipment used for building construction
- Air ventilation systems (with some limitations)
- Equipment used to prepare food or beverages in restaurants, cafeterias etc.
- Mobile equipment that is used for snow-making, duct cleaning, removing asbestos or below-grade rock/aggregate crushing

In order to obtain approval, facilities that are less than 1,000 metres from a point of reception, such as a residence, place of worship daycare or school, are required to assess and document the impacts of all noise emissions from their facility on any noise sensitive locations.

To determine the potential for adverse effect from noise, the ministry has set out a Primary and Secondary Noise screening process, and a guideline for evaluating the environmental impact of any noise sources from the facility and site in its Noise Pollution Control (NPC) guideline document NPC-300. The guideline sets out procedures and limits that vary depending on location (e.g. urban, suburban, rural), hours of operation (e.g. daytime, day and evening, 24-hour), as well as whether noise receptors are already exposed to elevated background noise such as noise from road traffic. The ministry may also require the preparation of a Noise Abatement Action Plan and an Acoustic Audit Report if the facility does not meet the required guidelines.

Sewage and Waste

Some facilities also generate sewage, which may include stormwater runoff from the facility or the property, and/or engage in waste management activities (e.g. thermal treatment including incineration, haulage of waste) that may also trigger the need to obtain an ECA (see section 53 of the Ontario Water Resources Act (OWRA)). Like ECA applications in respect of air and noise emissions, applications for approval in respect of sewage or waste activities may require adherence to recommended practices and design criteria in applicable ministry regulations and guidelines.

The proposed Plant and Production Processes EASR regulation will only relate to a facility's air and noise emissions; accordingly, any requirement to obtain a waste or sewage approval will continue to apply.

Other Regulatory Bodies and Approval Requirements

In addition to the requirements noted above, most facilities are also required to follow additional regulatory requirements, guidelines or rules, including, but not limited to those listed below:

- Environmental Assessment Act
- Municipal by-laws that control the location and building of structures;
- O. Reg. 213/07 (Fire Code) under the Fire Protection and Prevention Act, 1997 which regulates fire safety standards for equipment, buildings, structures, land and premises;
- Transportation of Dangerous Goods Act, 1992 and associated regulations;
- Building Code Act, 1992 and associated codes/regulations;
- Electricity Act, 1998, and associated codes/regulations;
- Technical Standards and Safety Act, 2000 and associated codes/regulations; and,
- Occupational Health and Safety Act, and related regulations.

All facilities will still be required to follow all other regulatory requirements, guidelines or rules, even if registered in the EASR.

5.3 The North American Industry Classification System

This paper utilizes the North American Industry Classification System (NAICS) when discussing the sectors and activities that are ineligible for registration in the EASR.

The NAICS is an industry classification system of codes developed by the statistical agencies of Canada, Mexico and the United States. Created against the background of the North American Free Trade Agreement, it is designed to provide common definitions of the industrial structure of the three participant countries and a common statistical framework to facilitate the analysis of the three economies.

NAICS is based on production-oriented or supply-based conceptual framework in that establishments are grouped into industries according to similarities. Under this framework the activity of an establishment can be described in terms of what is produced, namely the type of goods and services produced, or how they are produced, namely, the raw material and service inputs used and the process of production or skills and technology used.

The structure of NAICS is hierarchical. It is composed of sectors (two-digit codes), subsectors (three-digit codes), industry groups (four-digit codes), industries (five-digit codes) and Canadian industries (six-digit).

Further information on NAICS can be found at the Statistics Canada website at www.statscan.gc.ca.

In the context of this proposed EASR regulation, if a three-digit NAICS code is set out in the regulation then all activities engaged in at facilities described in the three-digit NAICS code and the four, five and six-digit NAICS codes falling under that three-digit NAICS code are ineligible for this EASR regulation. If a six-digit NAICS code is listed as ineligible, for example 324111 – Petroleum Refineries, then activities engaged in at facilities described in the five, four and three-digit NAICS codes may still be eligible to register in the EASR if they meet all other eligibility requirements. It should also be noted that if a facility is eligible for EASR registration based on its NAICS code, but utilizes an activity that is not eligible, then the facility is not eligible for registration as a result.

6 Glossary

Acoustic Assessment Report: means the report, prepared in accordance with Publication NPC-233 and Appendix A of the Basic Comprehensive User Guide, by a Qualified Person, that documents all sources of noise emissions and Noise Control Measures present at the Facility.

Best Management Practices Plan: means a document or a set of documents which describe measures to minimize dust or odour emissions from the Facility and/or Equipment.

By-product Fuel: means a fuel derived from any primary process (or operation) but not intentionally produced for commercial purposes that contains constituents that carry a certain caloric value and that may or may not contain sensible or latent heat. Thermal oxidation (or combustion) of the by-product fuel is required to release the caloric content of the fuel in the form of heat.

Contaminant: means any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that causes or may cause an adverse effect.

District Manager: means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located.

Emission Summary Table: means a table described in paragraph 14 of subsection 26 (1) of O. Reg. 419/05; namely a table in the ESDM report that compares the Point of Impingement concentration for each Contaminant of Concern to the corresponding Ministry Point of Impingement Limit or other screening levels.

EPA: means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended.

ESDM Report: means the Emission Summary and Dispersion Modelling report, prepared in accordance with section 26 of O. Reg. 419/05 and the published guidance associated with O. Reg. 419/05, that documents all sources of air emissions present at the Facility.

Facility: means the entire operation located on the property where the prescribed activity is located.

Limited Operational Flexibility: An Environmental Compliance Approval with Limited Operational Flexibility provides the facility with the flexibility to make certain modifications without the need to obtain an amendment to the approval.

Log: means a document that contains a record of each change that is required to be made to the ESDM Report, the noise assessment and the odour assessment, including the date on which the change occurred. For example, a record would have to be made of a more accurate emission rate for a source of contaminant, more accurate meteorological data, a more accurate value of a parameter that is related to a source of contaminant, a change to a Point of Impingement and all changes to information associated with a Modification to the Facility that satisfies OR-1, OR-4 and OR-6.

Minister: means the Minister of the Environment and Climate Change or such other member of the Executive Council as may be assigned the administration of the EPA under the Executive Council Act.

Ministry: means the ministry of the Minister.

Modification: means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the Facility that may discharge or alter the rate or manner of discharge of a contaminant to the air or discharge or alter noise, vibration or odour emissions from the Facility.

NAICS: means the North American Industry Classification System maintained for Canada by Statistics Canada, as amended or revised from time to time.

Noise Abatement Action Plan: means the noise abatement program, developed by the person engaging in the prescribed activity, designed to achieve compliance with the sound level limits set in the ministry document “Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300”.

Noise Control Measures: means measures to reduce the noise emissions from the facility including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers.

Nitrogen Oxides: means the sum of nitric oxide and nitrogen dioxide expressed collectively as a nitrogen dioxide equivalent.

Publication NPC-300: means the Ministry Publication NPC-300 “Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning” published by the Ministry as amended.

O. Reg. 419/05: means Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended.

Points of Impingement: includes a point that is located on the same property as the source of contaminant, if that point is located on a child care facility; or a structure, if the primary purpose of the property on which the structure is located, and the structure is to serve as a health care facility, a senior citizens’ residence or long-term care facility, or an educational facility. Point of impingement has the same meaning as in section 2 of O. Reg. 419/05.

Point of Reception: means any location on a noise sensitive land use where noise from a stationary source is received. Noise sensitive land uses may have one or more points of reception. Additional information can be found in the ministry document “Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300”.

Primary Fuel: means any fuel used as the main source of energy input to the boiler or heater for more than 500 hours per year.

Residual Oil: means any fuel oil that complies with the specifications of fuel oils #4, 5, or 6, as defined by the American Society for Testing Materials (ASTM) burner fuel specification D396-78.

Qualified Person: means is a person who holds a licence, or limited licence under the Professional Engineers Act.