Report No. 26980

ORTECH
a Kontrol Technologies Company

Report:

9695443 Canada Inc.
An Air Quality Assessment
for a Proposed Residential Development on
Brock Street, Town of Perth, Lanark County, Ontario

Date: February 27, 2023



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Report No.: 26980
15 pages, 5 Appendices

Revision History

Version	Date	Summary Changes/Purpose of Revision
1	February 27, 2023	None

Table of Contents

1. INTRODUCTION

Construction of a residential apartment building is proposed for a vacant plot of land at Brock Street in the Town of Perth (Perth), Lanark County, Ontario. As part of an application for approval of the proposed development, the developer is required to demonstrate that the residences, as a sensitive land use, will be compatible with air quality emissions from industrial land uses and other land uses in the area near the development based on separation distances. Demonstrating compatibility is generally based on the procedures described in Guideline D-1 Land Use and Compatibility, issued by the Ontario Ministry of the Environment, Conservation and Parks (MECP). Additional guidelines, including Guideline D-6, Compatibility between Industrial Facilities, provide instructions on how to apply Guideline D-1 to a new development on sensitive land which usually requires a zoning amendment. The air quality components of Guideline D-6 are odour and dust only.

ORTECH Consulting (ORTECH) was requested by 9695443 Ontario Inc. to prepare this report which describes the application of Guideline D-6 to the proposed development and determines if it will be compatible with nearby industrial facilities and other facilities which may discharge odour or dust emissions.

2. LOCATION OF THE PROPOSED DEVELOPMENT LAND

The land for the proposed development is shown on a partial map of Perth in Appendix 1 and is currently zoned R4. A plan of the development is shown in Appendix 2. The development will be located on a severed portion of the plot of land between Brock Street, Irwin Street, Cockburn Street and Provost Street, which is described as Lot 16 and Part Lots 15 &17. The other severed portion is an old disused landfill site.

3. PROPOSED DEVELOPMENT DESCRIPTION

The proposed residential apartment building will have three storeys and 63 units. Building dimensions will be 56.1 m by 16.6 m for a total area of 935.8 m^2. The building will be adjacent to Provost Street at the southwest of the severed land. A car park will be located between the building and Irwin Street to the northeast.

4. MECP GUIDELINE D-1 LAND USE AND COMPATIBILITY

Guideline D-1 was prepared by the MECP to provide recommendations for preventing or minimizing adverse effects from industrial facilities during planning for sensitive land development, such as residential construction. The guideline usually only applies when there is a change of land use which requires a zoning amendment.

A specific application of Guideline D-1, which is described in this report and is most relevant to the proposed development in Perth, is Guideline D-6 Compatibility between Industrial Facilities. Guideline D-4 Land Use On or Near Landfills and Dumps is not described in the report since the disused landfill site is not expected to affect the air quality at the proposed development.

5. MECP GUIDELINE D-6 COMPATIBILITY BETWEEN INDUSTRIAL FACILITIES

Guideline D-6 Compatibility between Industrial Facilities

Guideline D-6 is used to prevent or minimize land use problems due to encroachment of a sensitive land use area towards an industrial facility area, or vice versa, when there is a change in land use. This applies to the proposed development and the guideline is a practical application of Guideline D-1 Land Use and Compatibility. The purpose of Guideline D-6 is to ensure that there is an adequate buffer zone between the sensitive land use and an industrial facility whenever there is a change in the land use at either of these two areas. Guideline D-6 is attached as Appendix 3.

Guideline D-6 applies only to normal operations at an industrial facility for production, maintenance, storage and transportation. It is not intended to replace adequate controls for nuisance emissions from the facility which may otherwise cause adverse effects at the sensitive land.

Three Classes of industrial facilities are described in Guideline D-6 based on several criteria. The expected quantity of nuisance emissions, facility size, production rate and operating schedule are some of the criteria which are used to determine an appropriate Class for a specific industrial facility. Sensitive land uses include residences on a 24-hour basis, as well as other amenities for humans such as recreational facilities and schools Nuisance emissions are noise, odour, dust and vibration which occur as either point sources of emissions such as stacks, area sources such as storage piles, or fugitive emissions such as road dust. Guideline D-6 does not apply to non-stationary sources of emissions and would apply to truck traffic within an industrial facility but not on a public road.

A Potential Influence Area is the area around and outside an industrial facility within which there may be adverse nuisance effects. Guideline D-6 provides different Potential Influence Area distances for the three industrial facility Classes although site-specific Actual Influence Area distances may be used if there is sufficient technical data available, including mitigation of air emissions or other nuisances, to assess the range of adverse effects and perhaps lower the facility Class.

Separation Distances are the shortest distances between the industrial facility property lines and sensitive land property lines. Guideline D-6 also provides different minimum Recommended Separation Distances for the three industrial facility Classes which are applied even if there is mitigation of air emissions or other nuisances. Setbacks at either property or non-sensitive features such as a car park may be included to increase the Actual Separation Distances. Sensitive land uses are not allowed within the Recommended Separation Distances unless an impact assessment shows that there will be no adverse effects or that mitigation will prevent adverse effects.

Guideline D-6-1 Industrial Categorization Criteria

Guideline D-6-1 provides information which can be used to determine if an industrial facility should be categorized as Class I, Class II or Class III. Criteria are given for determining the category of a specific industrial facility. These criteria are the level of nuisance output expected from the facility (noise, dust, odour and vibration), the scale of the facility (level of production and inside or outside storage), the type of production (frequency of, and probability of, fugitive emissions). The guideline also gives examples of specific industries which are typical for each of the three Classes.

Guideline D-6-3 Separation Distances

Guideline D-6-3 provides information on the distances between an industrial facility and a sensitive land which are used to determine their compatibility. The first distance is the Potential Influence Area (or Actual Influence Area), which defines the area around the facility in which a nuisance output may be experienced. The second distance is the minimum Recommended Separation Distance between the industrial facility property lines and the sensitive land use property lines.

The Potential Influence Area distances are 70 m, 300 m and 1000 m for Class I, Class II and Class III, respectively. The minimum Recommended Separation Distances are 20 m, 70 m and 300 m, respectively.

Where the sensitive land has a component which is non-sensitive, the Separation Distances may be measured from the edge of the sensitive use. For example, the car park at an industrial plant or residential development may be considered non-sensitive and the minimum separation distances would be measured, in some directions, from the actual plant operations or actual residential buildings.

6. SITE VISIT TO THE DEVELOPMENT AREA

ORTECH staff visited the area around the proposed development land. The purpose of the visit was to observe the existing land use in the area and identify any industrial facilities or other facilities which may affect the air quality at the development. An industrial facility is defined as a business involved with one or more of assembling, storage of materials, processing, manufacturing, packaging and shipping. The area covered extended well beyond 1000 m from the development land.

The site visit was on January 18, 2023 and commenced at 13:00. At the start of the visit there was a northwest wind at 21 km/h, an air temperature of 1°C, 89% relative humidity and an overcast sky.

Initially, all businesses of interest were located from aerial maps. The objective of the visit was then to drive around the area to note the locations of these businesses based on the name of the business, the type of business and any obvious signs that they may affect air quality in the vicinity, specifically the discharge of odour or dust emissions from point sources, area sources or fugitive sources.

7. INDUSTRIAL FACILITIES WITH A POTENTIAL IMPACT AT THE DEVELOPMENT

The industrial facilities identified in the area from aerial maps were assessed during and after the site visit to determine if they were likely to have an air quality impact at the proposed development, based on an internet description of their activities, Environmental Compliance Approvals (ECA) which have been issued to some of these facilities by the MECP and on the observations made during the site visit. Some of these businesses with only minor air emissions may not have an ECA.

The results from the site visit are summarized as Table 1. This table includes the following components for the businesses which were identified and assessed during the visit:

- Industrial Facility Name
- Perth Address
- Type of Business
- Air Quality (Odour and Dust)
- D-6 Class
- Actual Separation Distance m (to the nearest 10 m)
- Recommended Separation Distance m
- Potential Influence Area m

After each facility was assessed during and after the site visit, it was assigned to Guideline D-6 if appropriate followed by an opinion about what Guideline D-6 Class should be assigned to each facility (Class I, Class II or Class III). These assignments are based only on the potential air quality effects (odour or dust) and may differ from any assignments based on other effects such as noise or vibration. Also, these Class assignments are based only on the operations which occur within the facility and the effects within the immediate surrounding area but not necessarily the effects at the development land.

Table 1 also includes the Actual Separation Distances measured from the facilities to the proposed development land, the minimum Recommended Separation Distances for each Guideline D-6 Class and the Potential Influence Areas for each Class. The Actual Separation Distances are measured from the apparent nearest approach of the facility land to the nearest part of the development land, except for the 3M Canada which is measured from the edge of the industrial area to the rear of the proposed residential building.

Even though the site visit to the development area extended to well over 1000 m radius from the development land, very few industrial facilities were identified. Only seven facilities are listed in Table 1 and three of these facilities (Home Hardware, Grenville Castings and Heritage Silversmiths) were obviously closed. They are included for completeness, but it appears unlikely that they will reopen. Two facilities (Perth Soup and Central Wire Industries) were assigned to Guideline D-6, Class I on the basis of their air quality. Perth Soup is located approximately 280 m from the development land and no odour or dust emissions were noted during the site visit. Central Wire Industries is located approximately 1020 m from the development land and slight dust emissions were noted during the site visit but no odour emissions.

The Shandex Personal Care manufacturing facility is located approximately 850 m from the development land and was assigned to Guideline D-6, Class II basis of the surrounding air quality, specifically the strong odour which was detected near this facility during the site visit. However, the separation distance of 850 m should ensure that this facility does not have an odour impact at the proposed development.

In addition to the facilities listed in Table 1, several small facilities in Perth were noted during the site visit as potential sources of minor odour or dust emissions. These facilities included warehouses, auto body shops and restaurants but it was concluded that none of them would have an air quality impact at the proposed development.

Therefore, the only industrial facility in Table 1 which might have an air quality impact at the proposed development is the 3M Canada plant. During the site visit, it was noted that there were approximately 100 vehicles in the plant parking lot and many visible plant exhaust plumes were observed. Therefore, it was concluded that the plant was operating normally although this was not confirmed with the plant. A slight odour was detected about 100 m downwind from the plant and no dust was detected. Based on these air quality observations the plant could be assigned to Guideline D-6, Class II. It is understood, however, that the plant has historically been assigned to Guideline D-6, Class III, and has been assigned to Class III in Table 1.

An aerial map in Appendix 4 shows various separation distances between the 3M Canada plant and the proposed development. The separation distances from the proposed development building to the edge of the industrial area and the actual industrial operations are 177 m and 232 m, respectively. This distance is lower at 157 m when measured from the nearest part of the proposed building car park to the edge of the industrial area, and Guideline D-6 allows a non-developed area, such as a car park or industrial land which will not be used for industrial purposes, to be used for extending the actual separation distance. The Guideline D-6 recommended Minimum Separation Distances are 70 m and 300 m for Class II and Class III, respectively. The proposed development complies with the Class II recommended Minimum Separation Distance but not the Class III distance. Guideline D-6 does allow these recommended distances to be reduced if can be demonstrated that the compatibility between an industrial facility and a sensitive receptor will not be compromised.

A record of odour or dust complaints for the 3M Canada plant is not presently available and it is unlikely that the plant will supply this information. It may be available from the MECP Freedom of Information and Privacy Protection Office, but it could take several months before the information is available and 3M Canada will have an option to not allow distribution of the information. The discussion in the next section of this report indicates that odour or dust complaints about the plant are unlikely to occur.

8. 3M CANADA PLANT AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

The 3M Canada plant at 2 Craig Street, Perth currently operates under Amended Environmental Compliance Approval, Air (ECA) No. 4950-8XLN4A, shown in Appendix 5, which was issued by the Ontario Ministry of the Environment, Conservation and Parks (MECP) on September 9, 2013. This appears to be the most recent ECA issued for the plant although it expires 10 years after the issue date. Selected contents of the ECA which are relevant to this air quality assessment are described below:

3M Canada Company
2 Craig St. Buildings 301 and 302
Perth, Ontario
K7H 3E2

A facility manufacturing woven and non-woven abrasives, pressure-sensitive tape and extruded film, consisting of the processes and support units:

Scotch Brite Making Process

- *spray booths equipped with venturi scrubbers*
- *powder booths equipped with dust collectors*

Tape and Extruded Film Process

- *coating ovens, complete with a natural gas fired Thermal Oxidizer*

For the purpose of this environmental compliance approval, the following definitions apply:

16. "Equipment with Specific Operational Limits" means the Thermal Oxidizer and any Equipment related to the thermal oxidation.

40. "Thermal Oxidizer" means the Thermal Oxidizer used to control solvent emissions from the pressure sensitive adhesive tape manufacturing process.

41. "Written Summary Form" means the electronic questionnaire form that documents the activities undertaken at the Facility in the previous calendar year that must be submitted annually to the Ministry as required by the section of this Approval titled Reporting Requirements.

1.GENERAL

1.1 Except as otherwise provided by this Approval, the Facility shall be designed, developed, built and maintained in accordance with the terms and conditions of this Approval

2. LIMITED OPERATIONAL FLEXIBILITY

2.1 Future construction, alterations, extensions or replacements are approved in this Approval if the future construction, alterations, extensions or replacements are Modifications to the Facility that:

(c) result in compliance with the Performance Limits

6. OPERATION AND MAINTENANCE

6.1 The Company shall prepare and implement operating procedures and maintenance programs for all Processes with significant Environmental Aspects, which shall specify as a minimum:

(b) procedures to prevent upset conditions

(c) procedures to minimize all fugitive emissions

(d) procedures to prevent and/or minimize odorous emissions

6.2 The company shall ensure that all Processes and Significant Environmental Aspects are operated and maintained at all times in accordance with this Approval, the operating procedures and maintenance programs.

7. COMPLAINTS RECORDING PROCEDURE

7.1 If at any time, the Company receives any environmental complaints from the public regarding the operation of the Equipment approved by this Approval, the Company shall respond to these complaints according to the following procedure:

(a) the Company shall record and number each complaint

(b) the Company, upon notification of a complaint, shall initiate appropriate steps to determine all possible causes of the complaint, and shall proceed to take the necessary actions to appropriately deal with the cause of the subject matter of the complaint, and

(c) the company shall complete and retain on-site a report written within one (1) week of the complaint date, listing the actions taken to appropriately deal with the cause of the subject matter of the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents.

8. RECORD KEEPING REQUIREMENTS

8.2 The Company shall retain, for a minimum of five (5) years from the date of their creation, except as noted below, all reports, records and information described in this Approval and shall include but not be limited to:

(h) the complaints recording procedure, including records related to all complaints made by the public as required by Condition 7.1 of this Approval

9. EQUIPMENT WITH SPECIFIC OPERATIONAL LIMITS

9.1 The company shall ensure that the Thermal Oxidizer is designed and operated to comply, at all times when the Equipment is in operation, with the following requirements:

(a) The combustion chamber is maintained at an operating temperature of 843 degrees Celsius, as measured by the continuous monitoring and recording system, at all times, when the Thermal Oxidizer is in full operational mode and the solvent laden gases are directed to the thermal oxidizer.

(c) The concentration of organic matter in the undiluted exhaust gases leaving the Thermal Oxidizer, expressed as the equivalent methane shall not be greater than 100 parts per million by volume (ppmv).

9. 3M CANADA PLANT AIR QUALITY ASSESSMENT

Amended Environmental Compliance Approval, Air No. 4950-8XLN4A (ECA) for the 3M Canada plant was reviewed to determine if the plant may cause adverse air quality effects at the proposed development, based on an interpretation of the ECA components:

The Scotch Brite Making Process includes spray booths equipped with venturi scrubbers to remove organic matter from the air emissions and dust collectors to remove particulate matter from the powder booths. With this equipment to remove particulate matter from the air emissions, dust complaints at the proposed development will not occur under normal operating conditions.

The Tape and Extruded Film Process generates gaseous organic solvent emissions which are likely to be very odorous. A Thermal Oxidizer operating at a high temperature is used to destroy these solvents before the gaseous emissions are discharged to the atmosphere. A monitoring system is used to ensure that the temperature is maintained at a specific value of 843°C or higher and the organic compound concentration in the undiluted gaseous emissions must not exceed 100 ppmv, as the equivalent amount of methane. With this destruction equipment and monitoring of the organic solvent emissions, adverse odour effects from this process at the proposed development will not occur.

The 3M Canada Plant is required to record any public complaints and maintain a record of each complaint, including possible causes for the complaint and any necessary actions for dealing with the causes of the complaint to ensure that similar complaints do not reoccur. The records must be retained for five years and provided to the MECP on request. With these records available, it is unlikely that the MECP would tolerate repeated complaints about air quality without requiring mitigation at the sources of these complaints.

When the MECP issues an ECA for a new or existing facility, the ECA will usually include a requirement for a source testing program, if adverse air quality impacts at sensitive receptors near the facility are expected or have occurred. These impacts may be caused by odour, particulate matter (dust) or specific contaminants which have environmental standards. Amended Environmental Compliance Approval, Air No. 4950-8XLN4A was issued for the existing 3M Canada plant and does not have any source testing requirements. This is strong evidence that the MECP was satisfied that few or no odour or dust complaints were expected when this ECA was issued.

10. CONCLUSIONS

A residential development is proposed for a vacant plot of severed land on Brock Street in the Town of Perth, Lanark County, Ontario. To support an application to the Town of Perth for the development to proceed, ORTECH was requested to conduct an air quality assessment to determine if the development will be compatible with surrounding industrial facilities based on the principles described in the MECP Guideline D-6 Compatibility between Industrial Facilities.

The Guideline D-6 assessment commenced with a site visit to the surrounding area to identify any industrial or other facilities which might not be compatible with the development based on adverse air quality effects. Seven facilities were identified. Three facilities were closed, and it seemed unlikely that they would reopen. Two facilities were assigned to Class I under Guideline D-6 because they were observed to have either slight or no odour or dust air quality emissions. The Shandex Personal Care facility had a strong downwind odour but is approximately 850 m separation distance from the proposed development. There were also several very minor facilities which would not cause adverse effects at the development.

The only Guideline D-6 facility which might cause adverse air quality effects at the proposed development is the 3M Canada plant which manufactures woven and non-woven abrasives, pressure-sensitive tape and extruded film. The plant could be assigned in this assessment to Guideline D-6 Class II based on air quality, although historically it has been regarded as a Class III facility overall. The separation distance between the plant and the development building is approximately 177 m to the edge of the industrial area or 232 m to the edge of the industrial operations. These distances are within the recommended separation distance of 70 m for a Class II facility but not within the distance of 300 m for a Class III facility.

The 3M Canada plant currently operates under Amended Environmental Compliance Approval, Air (ECA) No. 4950-8XLN4A which was issued by the Ontario Ministry of the Environment, Conservation and Parks (MECP) on September 9, 2013. ORTECH reviewed this ECA to determine if the actual separation distance was likely to result in adverse air quality effects at the development. Significant comments about the review are summarized below:

(a) The plant has venturi scrubbing and dust collectors to mitigate odour and particulate air emissions
(b) The plant has a high temperature Thermal Oxidizer to mitigate odorous solvent air emissions
(c) The Thermal Oxidizer has a minimum recorded operating temperature of 843°C or higher
(d) The Thermal Oxidizer undiluted exhaust gas organic compound concentration must not exceed 100 ppmv
(e) Any air quality complaints must be recorded and retained for five years
(f) Complaints must be investigated, and mitigation applied to minimize repeat complaints
(g) Source testing for odour and particulate matter is not required by the MECP via the ECA, indicating that air quality emissions from the plant are not a concern

It is concluded from the actual separation distance and the conditions of Amended Environmental Compliance Approval, Air No. 4950-8XLN4A that the 3M Canada plant will not cause adverse odour or dust effects at the proposed development under normal plant operations. On this basis, it is recommended that Perth should approve the proposed residential building.

Stephen Thorndyke, M.Eng., P.Eng.
Principal, Odour Assessment/Analytical Services

ORTECH a Kontrol Technologies Company

TABLE 1: Guideline D-6 Industrial Facilities near the Development

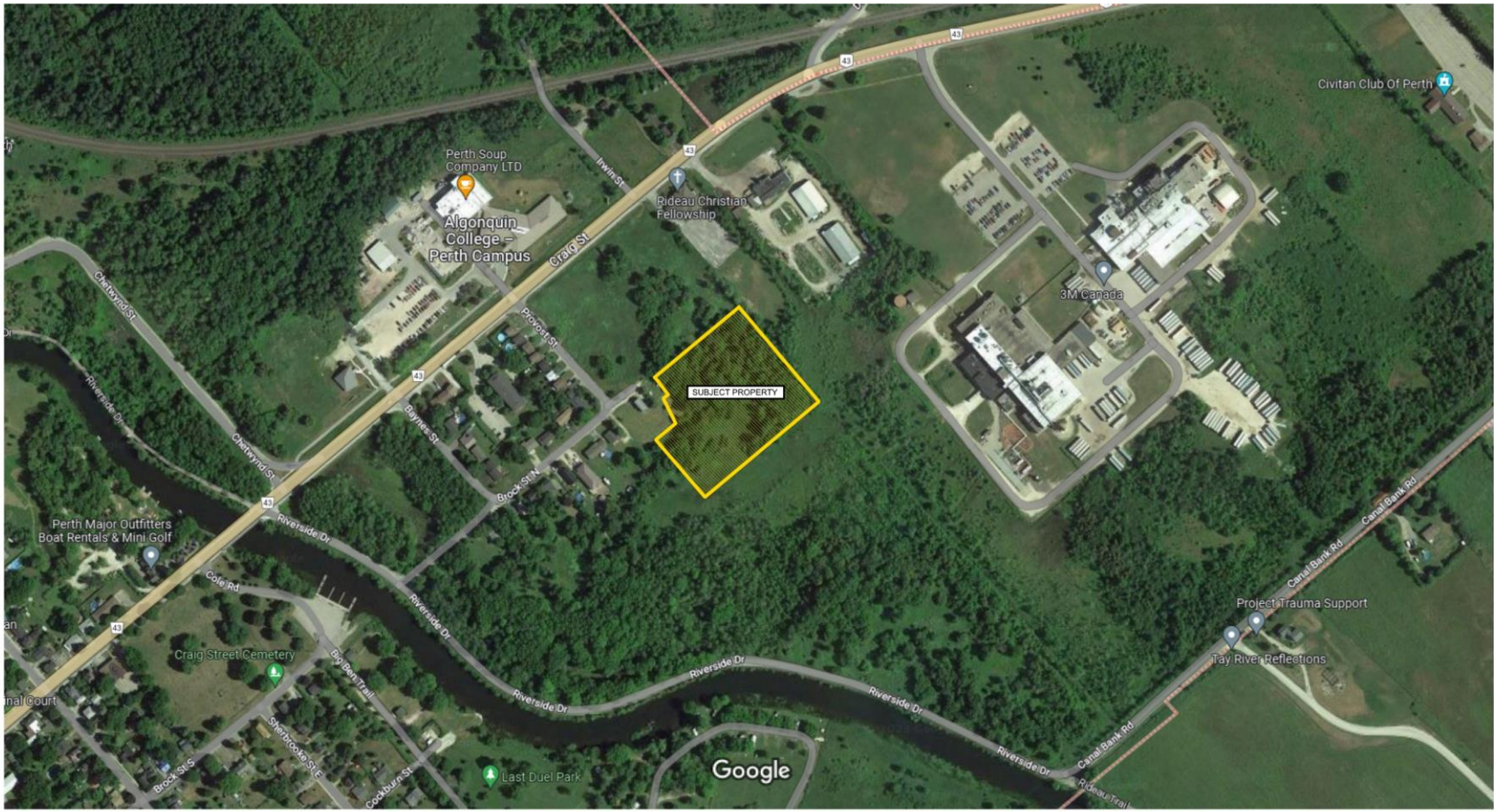
No.	Industrial Facility Name	Perth Address	Type of Business	Air Quality		D-6 Class	Actual Separation Distance m	Rcommended Separation Distance m	Potential Influence Area m
				Odour	Dust				
1	3M Canada	2 Craig Street	Abrasives/Tape Manufacturing	Slight	None	Class III	160	300	1000
2	Home Hardware	8 Craig Street	Hardware Yard (closed)	-	-	-	40	-	-
3	Perth Soup Co.	7 Craig Street	Food Preparation	None	None	Class I	280	20	70
4	Shandex Personal Care	5 Heriot Street	Personal Care Manufacturing	Strong	None	Class II	850	70	300
5	Grenville Castings	8 Conlon Drive	Casting Manufacturing (closed)	-	-	-	1800	-	-
6	Heritage Silversmiths	1847 Rogers Road	Silverware (closed)	-	-	-	1550	-	-
7	Central Wire Industries	1 North Street	Wire Manufacturing	None	Slight	Class I	1020	20	70

The 3M Canada Actual Separation Distance is measured from the edge of the industrial area to the rear of the residential building

APPENDIX 1

Partial Map of Perth Ontario
(1 page)

Google Maps Perth



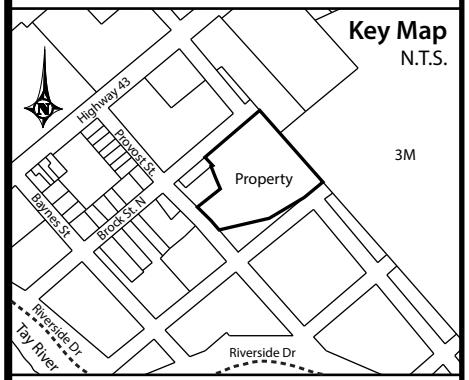
Imagery ©2023 CNES / Airbus, Maxar Technologies, USDA/FPAC/GEO, Map data ©2023 50 m

APPENDIX 2

Site Plan of the Development
(1 page)

Site Plan Sketch

Vacant Parcel on Brock Street
Lot 16, Part Lots 15 & 17, South Side of Brock Street, Part Lots 15 to 17, North Side of Cockburn Street, and Part of Irwin Street.
Compiled Plan No. 8828
Town of Perth
COUNTY OF LANARK



Legend

- No Parking Areas
- 1.5m Manoeuvering Aisle
- Fire Route (12m Turn Radius)
- 132.59m Contour Line
- Limit of Wet / Marshy Area
- EV — Electric Vehicle Station
- DC — Depressed Curb

Notes:

1. The new apartment building consisting of 63 units will offer primarily bachelor style units with some 1-bedroom options.
2. The proposed severance is to remove some contaminated ground identified on the property during an Environmental Site Assessment.
3. Boundary and dimensions of the subject property derived from a Topographic Plan of Survey completed by IN Engineering and Surveying in 2021.

Version Date: October 26, 2021 | File No. 19-141

zanderPLAN
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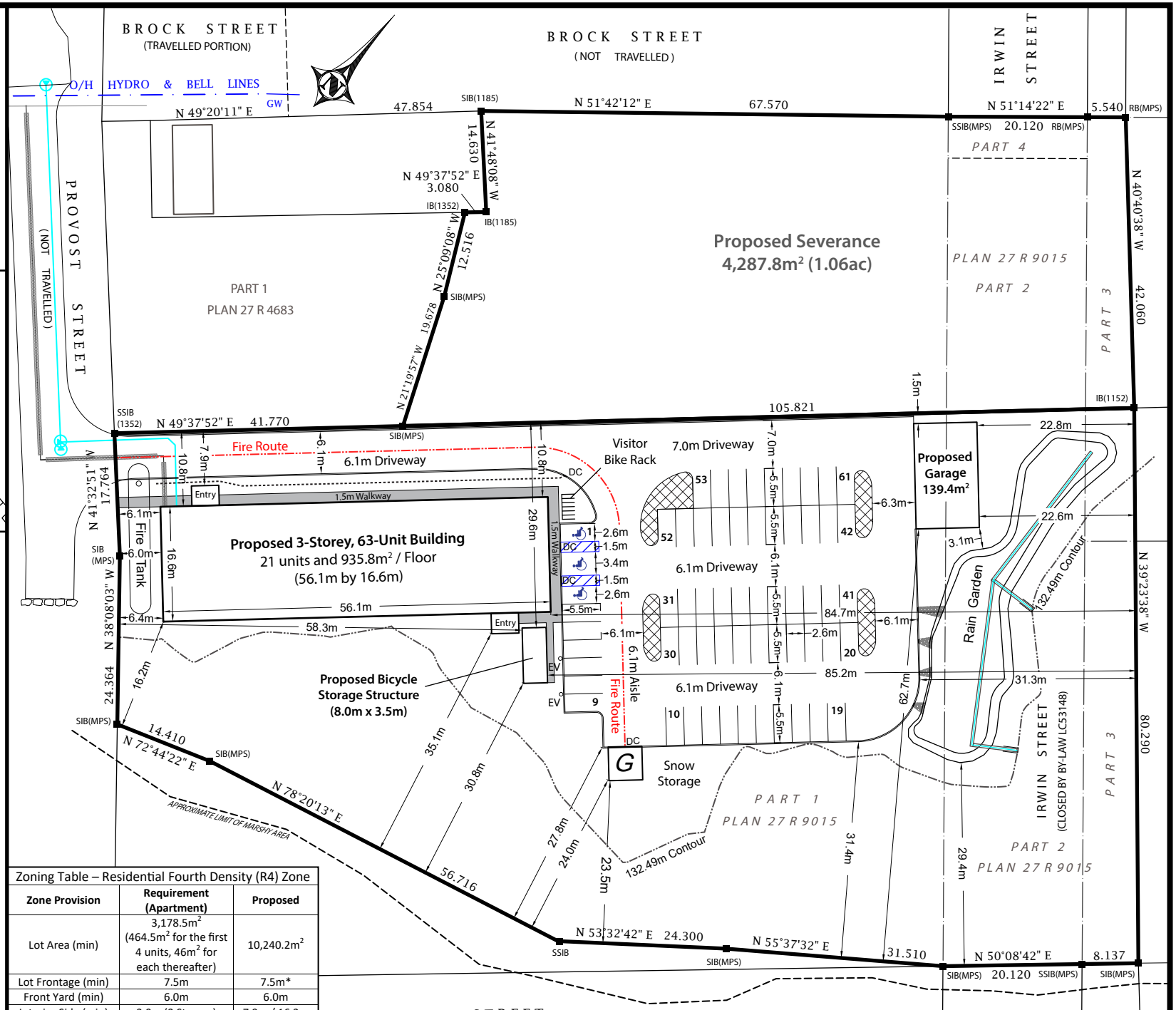

Zoning Table – Residential Fourth Density (R4) Zone

Zone Provision	Requirement (Apartment)	Proposed
Lot Area (min)	3,178.5m² (464.5m² for the first 4 units, 46m² for each thereafter)	10,240.2m²
Lot Frontage (min)	7.5m	7.5m*
Front Yard (min)	6.0m	6.0m
Interior Side (min)	3.0m (3 Storeys)	7.9m / 16.2m
Exterior Side (min)	4.5m	N/A
Rear Yard (min)	6.0m	84.6m
Height (max)	12.0m	~10m
Lot Coverage (max)	35%	9.63%
Landscaped Open Space (min)	35%	63.1%

***- The property has 42.1m of width on the unopened portion of Provost Street, the new road (paved portion) will be extended 7.5m along the lot width to provide the minimum frontage.**

APPENDIX 3

Guideline D-6
(40 pages)

Ontario (https://www.ontario.ca/page/government-ontario)

D-6 Compatibility between Industrial Facilities

A guide for land use planning authorities on how to decide what types of land uses are appropriate near industrial areas.

Legislative Authority:
Environmental Protection Act, RSO 1990, Section 14
Environmental Assessment Act, RSO 1990, Section 5(3)
Planning Act, RSO 1990, Sections 2 (a) (b) (c) (f) (g) (h), 17(9), 22(3), 41(4) and 51(3)
Condominium Act, RSO 1990, Section 50(3)
Niagara Escarpment Planning & Development Act, RSO 1990, Section 9

Responsible Director:
Director, Environmental Planning & Analysis Branch

Last revision date:
July 1995

Synopsis

This guideline is intended to be applied in the land use planning process to prevent or minimize future land use problems due to the encroachment of sensitive land uses and industrial land uses on one another. The guideline is a direct application of Ministry Guideline D-1, "Land Use Compatibility" (https://www.ontario.ca/page/d-1-land-use-and-compatibility) (formerly Policy 07-03).

This guideline encourages informed decision-making for Ministry staff as well as land use approval authorities and consultants, and assists in determining compatible mixed land uses and compatible intensification of land uses. The guideline is intended to apply when a change in land use is proposed, and the range of situations are set out in Section 2.0 "Application" of Guideline D-1 (https://www.ontario.ca/page/d-1-land-use-and-compatibility#section-2) . Responsibilities and various implementation techniques are discussed in Procedure D-1-1, "Land Use Compatibility: Implementation" (https://www.ontario.ca/page/d-1-1-land-use-compatibility-procedure-implementation) .

Adequate buffering of incompatible land uses is intended to supplement, not replace, controls which are required by legislation for both point source and fugitive emissions at the facility source. These emissions, which are difficult to control on-site, under all circumstances, all of the time, are associated with normal operating procedures. Appendix B contains information on the Ministry's legislative requirements (e.g. Certificates of Approval) which may apply to industrial facilities.

The Ministry shall not be held liable for municipal planning decisions that disregard Ministry policies and guidelines. When

there is a contravention of Ministry legislation, Ministry staff shall enforce compliance.

Nothing in this guideline is intended to alter or modify the definition of "adverse effect" in the *Environmental Protection Act*.

Introduction (1.0)

Objective (1.1)

The objective of this guideline is to prevent or minimize the encroachment of sensitive land use upon industrial land use and vice versa, as these two types of land uses are normally incompatible, due to possible adverse effects on sensitive land use created by industrial operations.

To assist planning authorities in achieving the objective,

Appendix A of this guideline (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) categorizes industrial facilities into three Classes according to the objectionable nature of their emissions, their physical size/scale, production volumes and/or the intensity and scheduling of operations. One or more of these factors may cause an adverse effect.

Scope (1.2)

Sensitive land uses (1.2.1)

For the purposes of this guideline, (i.e. where industry is concerned) sensitive land use may include:

- recreational uses which are deemed by the municipality or provincial agency to be sensitive; and/or
- any building or associated amenity area (i.e. may be indoor or outdoor space) which is not directly associated with the industrial use, where humans or the natural environment may be adversely affected by emissions generated by the operation of a nearby industrial facility. For example, the building or amenity area may be associated with residences, senior citizen homes, schools, day care facilities, hospitals, churches and other similar institutional uses, or campgrounds.

See also Section 4.4.4, "Ancillary Land Uses (Sensitive Land Use)" for more information on the types of uses, the land areas and the related activities affected by this guideline.

Note: Residential land use shall be considered sensitive 24 hours/day.

Industrial land uses (1.2.2)

The guideline applies to all types of proposed, committed and/or existing industrial land uses which have the potential to produce point source and/or fugitive air emissions such as noise, vibration, odour, dust and others, either through normal operations, procedures, maintenance or storage activities, and/or from associated traffic/transportation.

This guideline also considers ground borne vibration, but does not deal with other emissions into the soil or ground and surface water. These other matters are addressed through the *Environmental Protection Act* (EP Act), in particular *Regulation 346* and *Regulation 347*, the *Ontario Water Resources Act* (OWR Act) in general, and the Municipal Industrial Strategy for Abatement (MISA).

Non-stationary industrial facilities (1.2.3)

This guideline is not intended to apply to non-stationary industrial facilities such as a portable asphalt plant.

Other facilities (1.2.4)

This guideline does not apply to the following provincial, municipal or private facilities, land uses or related activities, nor to any on-site industrial-type facilities associated with them, except as noted below:

- sewage treatment facilities
- landfills or dumps, transfer stations and other waste management facilities and waste processing facilities that require a Waste Certificate of Approval (e.g. facilities for waste oil refining, waste wood chipping and materials recovery facilities [MRFs])
- agricultural operations
- roadways (except for ancillary transportation facilities and transportation-related activities for an industrial land use including shipping and receiving)

- airports
- railways (but it does apply to railway yards and other ancillary rail facilities)
- pits and quarries (However, in the absence of site specific studies, this guideline should be utilized when sensitive land use encroaches on an existing pit and/or quarry. In these situations the appropriate criteria are the potential influence area and recommended minimum separation distance for a Class III industrial facility as set out in Sections 4.1.1 and 4.3 of this guideline.)

A list of publications which deal with land use compatibility for some of these land uses is provided in Procedure D-1-2, "Land Use Compatibility: Specific Applications" (https://www.ontario.ca/page/d-1-2-land-use-compatibility-specific-applications) .

Land uses compatible with industrial facilities (1.3)

The land uses listed in Section 1.2.4 above are normally compatible with industrial facilities.

Approach (1.4)

The general approach in Section 3.0 of Guideline D-1: "Land Use Compatibility" (https://www.ontario.ca/page/d-1-land-use-and-compatibility#section-3) shall be followed to protect incompatible land uses from each other.

Definitions (2.0)

Note: Definitions in addition to those below are provided in Procedure D-1-3, "Land Use Compatibility: Definitions" (https://www.ontario.ca/page/d-1-3-land-use-compatibility-definitions) .

Amenity Area
An outdoor space or facility that is used for the enjoyment of persons residing in or utilizing any building(s) on the premises.

Class I Industrial Facility
A place of business for a small scale, self contained plant or building which produces/stores a product which is contained in a package and has low probability of fugitive emissions. Outputs are infrequent, and could be point source or fugitive emissions for any of the following: noise, odour, dust and/or vibration. There are daytime operations only, with infrequent movement of products and/or heavy trucks and no outside storage. See Appendix A of this guideline (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) for classification criteria and examples to categorize a specific industry.

Class II Industrial Facility
A place of business for medium scale processing and manufacturing with outdoor storage of wastes or materials (i.e. it has an open process) and/or there are periodic outputs of minor annoyance. There are occasional outputs of either point source or fugitive emissions for any of the following: noise, odour, dust and/or vibration, and low probability of fugitive emissions. Shift operations are permitted and there is frequent movement of products and/or heavy trucks during daytime hours. See Appendix A of this guideline (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) for classification criteria and examples to categorize a specific industry.

Class III Industrial Facility

A place of business for large scale manufacturing or processing, characterized by: large physical size, outside storage of raw and finished products, large production volumes and continuous movement of products and employees during daily shift operations. It has frequent outputs of major annoyance and there is high probability of fugitive emissions. See Appendix A of this guideline (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) for classification criteria and examples to categorize a specific industry.

Fugitive Emissions
Reasonably expected/predictable contaminant occurrences associated with normal operational practices and procedures (e.g. materials handling or outdoor storage) of industrial facilities, which are generally difficult to practically control at the source or on-site. These emissions are not point sources (i.e. not from stacks or vents). Fugitive emissions are from all sources. These emissions may include odour, noise, vibration and particulate such as dust. Emissions from a breakdown are also not considered 'fugitive'. Breakdown emissions would be covered under a Certificate of Approval contingency plan, or are considered to be a 'spill'.

Industry, Industrial Land Use or Industrial Facility
A facility or activity relating to: the assemblage and/or storage of substances/goods/raw materials; their processing and/or manufacturing; and/or the packaging and shipping of finished products. Industrial facilities are further refined through categorization into 3 Classes in this guideline (see Appendix A of this guideline (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria)).

Infilling
Development on a vacant lot or an underdeveloped lot within a built-up area; not redevelopment/re-use.

Redevelopment
Where existing land uses are being phased out and replaced by another type of designated land use as part of a land use plan or proposal which has been substantiated by studies and is in

accordance with a municipal official plan policy or other formally approved plan.

Application (3.0)

The information set out Section 2.0 of Guideline D-1, "Land Use Compatibility" (https://www.ontario.ca/page/d-1-land-use-and-compatibility#section-2) shall apply for this guideline also.

Implementation (4.0)

Areas of Responsibility for Ministry Staff or the Delegated Authority, Municipalities and Other Planning Authorities and Proponents are identified in Procedure D-1-1, Sections 1, 2 and 3 respectively.

See Procedure D-1-1, "Land Use Compatibility: Implementation" (https://www.ontario.ca/page/d-1-1-land-use-compatibility-procedure-implementation) also for general information on legislative and administrative tools.

Influence area concept (4.1)

Potential influence areas for industrial land uses (4.1.1)

The Ministry has identified, through case studies and past experience, the following potential influence areas (i.e. areas within which adverse effects may be experienced) for industrial

land uses (Illustrated in Appendix C (https://www.ontario.ca/page/d-6-3-separation-distances)):

Class I—70 metres
Class II—300 metres
Class III—1000 metres
(See Section 4.4, "Measuring Separation Distance" also)

Actual influence areas for industrial land uses (4.1.2)

The actual influence area (overall range within which an adverse effect would be or is experienced) for a particular facility is site-specific, and may be defined within, or in exceptional circumstances (see Section 4.5.2, Separation Distance Greater than the Potential Influence Area"), beyond the potential influence area either before, or where applicable, after buffers have been used to reduce, eliminate or otherwise intercept adverse effects.

In the absence of specific substantiating information (normally obtained through technical studies—see Section 4.6, "Studies") which identifies an actual influence area, the potential influence areas set out in Section 4.1.1 of this guideline shall be used.

Influence area reduced through industrial controls (4.1.3)

Mitigation at the industrial source, if it affects the criteria considered in Appendix A (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) , may enable an industry to be categorized as a lesser Class (e.g. from a Class II to a Class I), thereby reducing the minimum separation distance requirements set out in Section 4.3, "Recommended Minimum Separation

Distances". For example, a rendering plant can be an extremely noxious use, but an enzyme digester can make it "cleaner".

In cases where the separation distance is reduced through other buffering techniques, where feasible the Ministry recommends some site-specific notification (e.g. spot zoning or requirement for re-zoning by the municipality) to deal with future changes in use which would not normally require re-zoning.

Land use planning (4.2)

Purpose of general land use plans (4.2.1)

Impacts from industrial sources relate to operating and maintenance procedures rather than general land use. Land use documents normally do not control the operation of a land use, as the operational details are not normally known when lands are designated for industrial use, and most operational aspects cannot be controlled by municipalities through the land use planning process.

As well, municipal official plans (O.P.s) give general policy direction. Official plans and associated policies have no power of enforcement. There is no allowance for “performance” zoning. Therefore, it is difficult to calculate actual influence areas at the time the O.P. is contemplated. Uses within a given designation or zoning could have totally different influence areas.

Determining permitted uses within industrial land use designations (4.2.2)

Permitted uses should be based on operational aspects (e.g. plant emissions, hours of operation, traffic movement) and mitigation employed. Zoning by-laws, however, do not normally use such factors in the definition of permitted uses. Therefore, it shall be necessary to consult Appendix A of this guideline (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) , to determine permitted uses within a general land use designation.

Existing and committed industrial land use (4.2.3)

When there are existing and committed industrial uses, the Ministry recommends that the category designation of "Class I", "Class II" or "Class III", according to Appendix A of this policy (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) , be indicated in the land use plans by the approval authority.

Plan approval agencies are encouraged to delineate all potential influence areas or, where known, the actual influence areas, around existing and committed industrial land uses within their jurisdiction, to be used as a 'flag' when a change in land use is proposed within them.

This should be done on a scaled land use plan or map, and included in an easily accessible document, such as an official plan schedule.

Note: It would be advisable to include locations of former industrial facilities as well, since decommissioning and soil clean up may be required for site re-use. See Section 4.10.8, "Site Clean Up and Decommissioning" also.

On-site separation distance (4.2.4)

There is merit in providing a required separation distance on the facility site. However, there may be a change in industrial land use that does not require a change in zoning, but which nevertheless produces a different influence area not covered off by the existing on-site buffer area.

Therefore, when separation distance is provided partially or entirely on-site, the Ministry recommends that where feasible, some site-specific notification (e.g. spot zoning or requirement for re-zoning by the municipality) is put in place to ensure future changes in use which would not normally require re-zoning will comply with this guideline. The same problem could occur when a buffer area is provided on the sensitive site.

Off-site separation distance (4.2.5)

When the separation distance extends beyond the facility/sensitive site boundary or the industrial/sensitive zoned or designated lands, the intervening lands may be of a use or activity compatible with both the facility and the sensitive land use.

For example, depending upon the amount of intervening space, uses could include: warehousing, various commercial uses that relate to types of industries or the neighbouring lands, open/green space, road allowance or, for Class III and Class II industrial uses, Class I industrial uses. If a lower Class of industrial use is used, there must still be adequate separation and/or buffering as established in this guideline to avoid or eliminate adverse effects on any sensitive land uses in the vicinity.

Recommended minimum separation distances (4.3)

No incompatible development other than that identified in Section 4.10, "Redevelopment, Infilling and Mixed Use Areas" should occur in the areas identified below and illustrated in Appendix C (https://www.ontario.ca/page/d-6-3-separation-distances) , even if additional mitigation for adverse effects, as discussed in Section 4.2 of Procedure D-1-1, "Types of Buffers" (https://www.ontario.ca/page/d-1-1-land-use-compatibility-procedure-implementation#section-3) , is provided:

Class I—20 metres minimum separation distance
Class II—70 metres minimum separation distance
Class III—300 metres minimum separation distance
(See Section 4.4, "Measuring Separation Distance" also).

These minimums are based on Ministry studies and historical complaint data. They also make allowance for the fact that conventional zoning classifications usually permit a broad range of uses with varying potential to create land use conflicts.

Measuring separation distance (4.4)

Depending upon the situation, separation distances may be measured from different points:

General land use plans (4.4.1)

Measurement shall be from the area(s) designated for industrial use to the area(s) designated for sensitive land use. This would apply for such matters as municipal official plans and Ministry of Natural Resources District Land Guidelines.

Site specific plans (4.4.2)

Measurement shall normally be from the closest existing, committed or proposed property/lot line of the industrial land use to the property/lot line of the closest existing, committed or proposed sensitive land use. This approach provides for the full use and enjoyment of both the sensitive land use and the industrial properties. See Sections 4.4.3 and 4.4.4 for exceptional situations.

Zoning/site plan control (industrial lands) (4.4.3)

Where site-specific zoning or site plan control precludes the use of the setback for any activity associated with the industrial use that could create an adverse effect such as shipping and receiving or outside storage/stockpiling of materials (e.g. front yard must be landscaped, and functions as a buffer), then the setback can be included as part of the measurement, rather than measuring from the industrial property line.

Note: This approach could restrict future expansion of existing land uses.

On-site buffers could be required by a municipality through zoning by-law setback requirements in industrial subdivisions, but this may not be practical, as the provision of very deep lots would be necessary. See Section 4.2.4, "On-Site Separation Distance" also. The use of other forms of mitigation may have to wait until a specific industry and/or sensitive land use has been identified/established.

Ancillary land uses (sensitive land use) (4.4.4)

For sensitive land uses, where the established use of on-site lands are not of a sensitive nature, such as a parking lot servicing a hospital, the land area comprising the parking lot may be included within the separation distance (i.e. measure from where the actual sensitive activities occur).

Note: This approach could restrict future expansion of existing land uses. See Section 4.2.4, "On-Site Separation Distance" also.

Vacant industrial land (4.4.5)

Where there is no existing industrial facility within the area designated/zoned for industrial land use, determination of the potential influence area shall be based upon a hypothetical "worst case scenario" for which the zoned area is committed. Therefore, Ministry staff or the delegated authority shall use the outside range of the potential influence area to determine an appropriate separation distance. See Section 4.2.2, "Determining Permitted Uses Within Industrial Land Use Designations" also.

Changing industrial uses (4.4.6)

Where an influence area has been established based upon existing industrial land uses, it will be the responsibility of the local municipality to restrict, through zoning or any other available means, the types of future industrial uses that can occur, so that they are compatible with the influence area used.

Note: Zoning by-laws cannot control the level of emissions produced (related to specific products) or technology used, hours

of operation or traffic movements. It is difficult to correlate zoning by-laws with the industrial classifications set out in Appendix A (https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria) , and therefore site-specific/spot zoning or a requirement for re-zoning by the municipality may be necessary to ensure that the establishment of new industrial uses comply with this guideline. See Section 4.2.2, "Determining Permitted Uses Within Industrial Land Use Designations" also.

Commenting on land use proposals (4.5)

Considerations when a change in land use is proposed within an influence area or potential influence area (4.5.1)

The potential influence areas, or where known, the actual influence areas (see Section 4.1 of this guideline) should act as a “flag”, and no sensitive land uses shall be permitted within the actual or potential influence areas of Class I, II or III industrial land uses, without evidence to substantiate the absence of a problem. When studies are needed to identify problems and mitigative measures, see Section 4.6, "Studies".

When a land use proposal places sensitive land use beyond a facility’s potential influence area, or where known, actual influence area, the Ministry shall not normally object to the change in land use on the basis of land use compatibility. For exceptional situations, see Section 4.5.2 "Separation Distance Greater than the Potential Influence Area".

Separation distance greater than the potential influence area (4.5.2)

In exceptional circumstances the Ministry shall recommend separation distances greater than the outer limit of the potential influence areas identified in Section 4.1.1 of this guideline. In such cases, the Ministry shall demonstrate the need for greater distance, such as historical data for similar facilities. Studies (see Section 4.6) may be required even if a separation distance beyond the potential influence area is proposed.

Irreconcilable incompatibilities (4.5.3)

When impacts from industrial activities cannot be mitigated or prevented to the level of a trivial impact (i.e. no adverse effects), new development, whether it be an industrial facility or a sensitive land use, shall not be permitted.

There may be situations where development or redevelopment can be phased until such time that an adverse effect would no longer exist (e.g. the facility ceases to operate or the problem is rectified by new technology).

Studies (4.6)

Air quality studies for noise, dust and odour should be provided by the proponent to the approving authority.

Note: Studies shall be provided prior to Ministry staff commenting on draft approval, to see if draft approval can be supported (in principle).

Noise (4.6.1)

Noise shall be addressed through Ministry Publication LU-131for all situations applicable to this guideline.

Dust (4.6.2)

Contaminant emission sources can be classified as point sources or fugitive sources. Most facilities will produce both point source and fugitive emissions, and it is difficult to allocate emissions to one or the other source.

Regulation 346 sets out standards for contaminants, including suspended particulate matter and dust fall. The document entitled "General Information: Certificates of Approval (Air)" that is referenced in Appendix B provides information on the approval requirements and procedures. Details for assessing emissions from point sources such as stacks and vents, and standards and interim standards are also provided.

Even if *Regulation 346* standards are met at the property line of the industrial site, there may still be complaints from neighbouring land uses because:

- dispersion modelling is not 100% accurate and it cannot be guaranteed that point source emissions will be controlled 100% of the time
- the standards, which are based upon acceptable risk with regard to health, odour and vegetation, are based on 1/2 hour averages, and at some point within a 1/2 hour there may be a high level of emissions

Emissions from fugitive sources such as dust from traffic and storage piles are more difficult to quantify, and a plan in itself to minimize fugitive emissions also may not be 100% effective. The Ministry is preparing an interim guideline that addresses areas such as measuring and minimizing fugitive emissions. Therefore, separation of incompatible land uses will help to minimize potential adverse effects from fugitive emissions.

Odour (4.6.3)

Odorous contaminants are particularly difficult to control on-site. Although the contaminants emitted may meet the Ministry's standards and interim standards, experience indicates that complaints may still be received from residents living in proximity to the industry, for the reasons set out in Section 4.6.2. Emissions of odorous contaminants may result in off-site odour problems which could constitute an "adverse effect". An "adverse effect" is a violation of Section 14 of the *Environmental Protection Act*. Stack testing under a worst case scenario, odour panel tests and odour control equipment may be required to minimize odour concerns.

Mitigation (4.7)

Additional mitigation measures (see Procedure D-1-1, "Land Use Compatibility: Implementation", Section 4.2, "Types of Buffers" (https://www.ontario.ca/page/d-1-1-land-use-compatibility-procedure-implementation#section-3)) may need to be incorporated on either the development lands or the surrounding properties, at the expense of the developer, where the industrial facility is operating in compliance with legislated Ministry requirements.

Legal agreements (4.8)

When mitigative controls are to be installed on surrounding properties, the local municipality or other approving authority should require an agreement between the developer and the affected property owners, to ensure mitigation of adverse effects to the greatest degree possible.

The legal agreement between the developer and other affected parties to ensure adequate mitigation should be reviewed and endorsed by Ministry staff and/or the delegated authority prior to development approval.

Financial assurance (4.9)

The Ministry recommends that bonds be required by the approving authority to ensure that mitigation will be carried out.

Redevelopment, infilling & mixed use areas (4.10)

It may not be possible to achieve the recommended minimum separation distances set out in Section 4.3 of this guideline in areas where infilling, urban redevelopment and/or a transition to mixed use is taking place.

The following requirements shall apply if this Ministry or a delegated authority is to consider proposals for urban redevelopment, infilling and/or a transition to mixed use within less than the Ministry's recommended separation distances set out in Section 4.3 of this guideline:

Official status (4.10.1)

Such proposals must be in accordance with official plan policy or a formal planning approval process, with the boundaries of the redevelopment, infilling or mixed use area clearly defined by the planning authority.

Zoning (4.10.2)

The Ministry or delegated authority shall only consider redevelopment, infill and mixed use proposals which put industrial and sensitive land uses together within less than the recommended minimum separation distances (see Section4.3), if the zoning is use specific (i.e. only the existing or proposed industrial or sensitive use is permitted by the municipality or other approving authority), or if planning considerations are based on the "worst case scenario" based on permitted uses in the industrial zoning by-law.

Feasibility analysis (4.10.3)

When a change in land use is proposed for either industrial or sensitive land use, less than the minimum separation distance set out in Section 4.3 may be acceptable subject to either the municipality or the proponent providing a justifying impact assessment (i.e. a use specific evaluation of the industrial processes and the potential for off-site impacts on existing and proposed sensitive land uses). Mitigation is the key to dealing with less than the minimum to the greatest extent possible.

The overall feasibility of the proposal, from a land use compatibility perspective, should be based on the anticipated adverse effects from each specific industry, and the effectiveness

of proposed mitigative measures to lessen impacts on sensitive land uses within the context of planning for the area.

The Ministry or delegated authority shall require the following in order to make an assessment for allowing less than the recommended minimum separation distance:

- Detailed mapping showing the area subject to the proposed development and all industrial facilities and any other sources of adverse effects (e.g. rail lines).
- Mapping shall also indicate all vacant properties currently zoned and/or designated for industrial use along with relevant excerpts from the official plan and/or zoning by-law to indicate the full range of permitted uses. Attempts shall also be made to predict the types and levels of adverse impact that would result in a "worst case scenario" should an industrial use be developed upon any of the vacant parcels.
- Assessment of the types and levels of contaminant discharges being generated by current industrial facilities, including those associated with transportation facilities which serve the industries.
- Based upon actual and anticipated impacts, necessary mitigative measures should be identified based upon technical assessments. Noise and other technical studies shall be submitted to appropriate Ministry staff for review. See Sections 4.6 "Studies" and 4.7, "Mitigation" for more details.
- An indication shall be given as to the methods by which the mitigative measures (approved by the land use authority) will

be implemented, i.e. the types of agreements that must be entered into. See Section 4.8, "Legal Agreements" also.

- Where mitigative measures are to be applied off-site to an existing industrial facility, the proponent shall demonstrate that the industrial facility has no objection to the proposed use or to the addition of the necessary mitigative measures. Implementation of approved mitigation measures shall be required as a condition of draft approval.
- Proponents should demonstrate to the approving authority that no objections to the proposed use have been raised by area residents, industries, etc. See Section 4.10.5, "Public Consultation".

New use of existing buildings (4.10.4)

The requirement for a feasibility analysis identified in Section 4.10.3 above shall apply as well where a new use is proposed for an existing building.

Public consultation (4.10.5)

When development is proposed at less than the recommended minimum distances identified in Section 4.3, the approving authority is encouraged to require public consultation with all land owners within the influence area or potential influence area of the industrial facility/facilities.

Environmental warnings for sensitive land uses (4.10.6)

When the new development is sensitive, the Ministry recommends that a warning of anticipated nuisance effects be included in any offers of purchase and sale. A means of notifying ensuing purchasers should be determined by the local municipality. A warning may be included in a document which can be registered on title according to the Ministry of Consumer and Commercial Relations Bulletin No. 91003, "Environmental Warnings/Restrictions" (Appendix D) (https://www.ontario.ca/page/d-6-4-mccr-bulletin-no-91003) .

Phased/sequential development (4.10.7)

When industry is being phased out as part of a large-scale plan, consideration may be given to staging redevelopment and/or infilling to coincide with the closure of those industries which create a significant impact on the proposed sensitive land use(s).

Site clean up & decommissioning (4.10.8)

Guideline C-15 (former Ministry Policy 14-17), "Guidelines for the Clean Up of Contaminated Sites in Ontario" may applying conjunction with re-use of industrial properties. In such instances, the approving authority should ensure that the level of clean up is appropriate for both the re-use of the site and the protection of sensitive land use receptors.

Note: Municipal O.P.s should establish a policy to indicate when site rehabilitation (especially for mixed use, redevelopment and infilling) is required. A policy should also require that there be a qualified individual on-site to oversee the rehabilitation. It is recommended that this requirement be incorporated in a

development agreement between the developer and the municipality.

Accessory residential uses (4.11)

Some municipalities may permit "accessory residential uses" in industrial official plan designations or zoning by-laws (i.e. the owner's residence is on the same property as the business/industry). When the residence will no longer be occupied by the on-site business/industry owner, any re-use of the residence shall be subject to the requirements set out inspection 4.10, "Redevelopment, Infilling & Mixed Use", particularly Section 4.10.4, "New Use of Existing Buildings" and Section 4.10.8, "Site Clean Up & Decommissioning".

Where there are provisions for "accessory residential uses", it may be appropriate for municipalities to prohibit such residential uses where none exist, through an official plan amendment or a site-specific zoning-bylaw (see Section 4.10.2,"Zoning").

Reference documents

a. Guideline C-15, "Guidelines for the Clean Up of Contaminated Sites in Ontario"

b. Guideline D-1, "Land Use Compatibility" (https://www.ontario.ca/page/d-1-land-use-and-compatibility)

c. Procedure D-1-1, "Land Use Compatibility: Implementation" (https://www.ontario.ca/page/d-1-1-land-use-compatibility-

procedure-implementation)

d. Procedure D-1-2, "Land Use Compatibility: Specific Applications" (https://www.ontario.ca/page/d-1-2-land-use-compatibility-specific-applications)

e. Procedure D-1-3, "Land Use Compatibility: Definitions" (https://www.ontario.ca/page/d-1-3-land-use-compatibility-definitions)

f. Publication LU-131, "Noise Assessment Criteria in Land Use Planning"

Related

Environmental land use planning guides (D-series) (https://www.ontario.ca/page/environmental-land-use-planning-guides)

Updated: July 13, 2021
Published: May 19, 2016

Ontario (https://www.ontario.ca/page/government-ontario)

D-6-1 Industrial Categorization Criteria

A guide for land use planning authorities on the appropriate distances between industrial areas and sensitive land uses like people's homes and workplaces.

Industrial categorization criteria *

Category	Outputs	Scale	Process

Category	Outputs	Scale	Process
Class I	• Noise: Sound not audible off property • Dust and/or Odour: Infrequent and not intense • Vibration: No ground borne vibration on plant property	• No outside storage • Small scale plant or scale is irrelevant in relation to all other criteria for this Class	• Self contained plant or building which produces/store a packaged product. Low probability of fugitive emissions

Category	Outputs	Scale	Process
Class II	• Noise: Sound occasionally audible off property • Dust and/or Odour: Frequent and occasionally intense • Vibration: Possible groundborne vibration, but cannot be perceived off property	• Outside storage permitted • Medium level of production allowed	• Open process • Periodic outputs of minor annoyance • Low probability of fugitive emissions

Category	Outputs	Scale	Process
Class III	• Noise: sound frequently audible off property • Dust and/or Odour: Persistent and/or intense • Vibration: Ground-borne vibration can frequently be perceived off property	• Outside storage of raw and finished products • Large production levels	• Open process • Frequent outputs of major annoyances • High probabilit of fugitive emissions

Note: Emissions may be point source or fugitive.

* Note: This Table should not be considered a comprehensive list but is to be used to provide examples of industrial categories.

** Note: The following examples are not limited to the Class indicated on the Table. The categorization of a particular industry will vary with the specifics of the case.

Source: The criteria for categorizing industries into Class I, II or III are derived from Ministry experience and the investigation of complaints related to industrial facilities.

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Ontario (https://www.ontario.ca/page/government-ontario)

D-6-3 Separation Distances

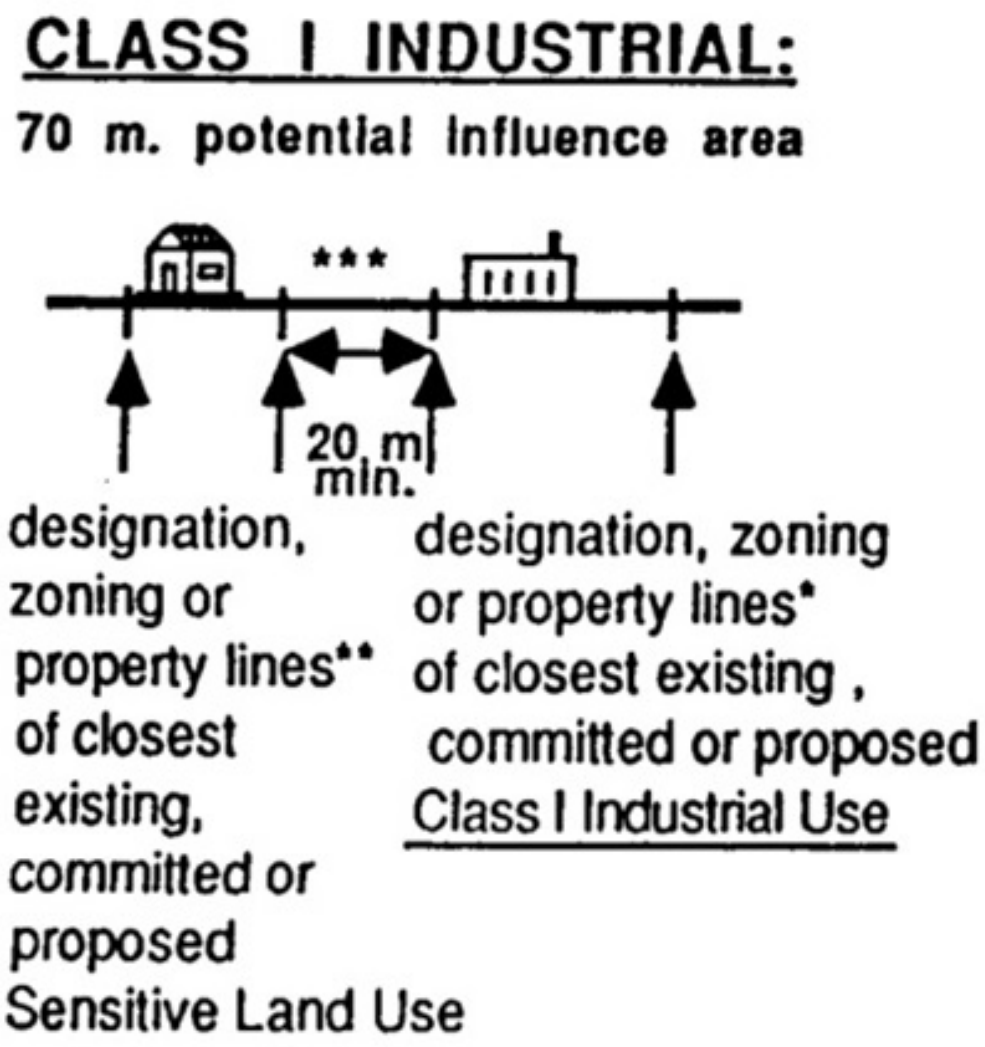
A guide for land use planning authorities on how to measure recommended distances between industrial areas and sensitive land uses to protect people and the environment.

Class I industrial

- 70 metre potential influence area
- 20 metre recommended minimum in which incompatible development should not normally take place

Section view

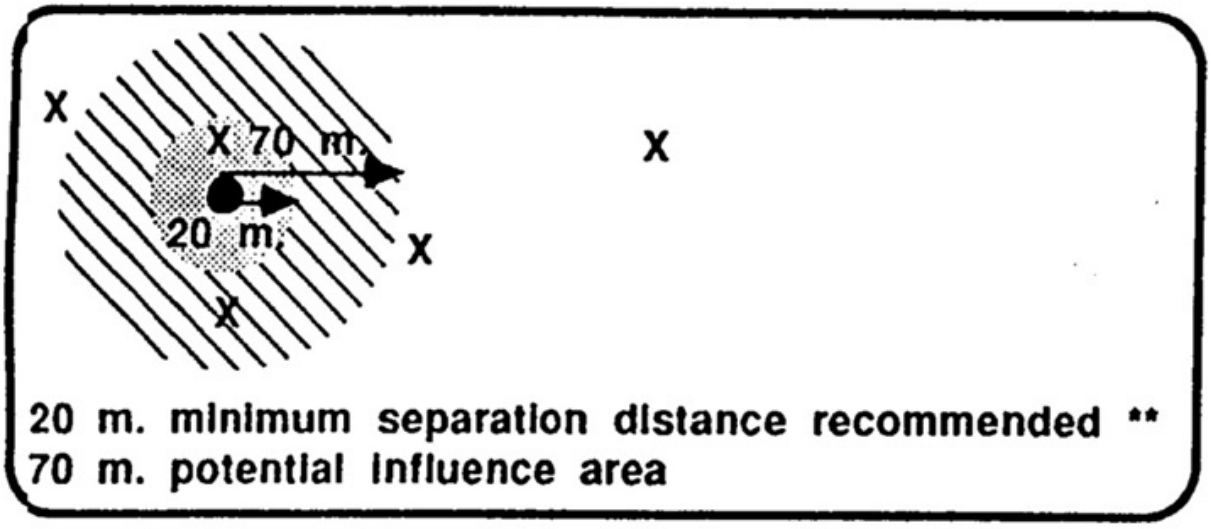
This diagram shows the designation, zoning or property lines of an existing, committed or proposed sensitive land use in relation to the designation, zoning or property lines of the closest existing, committed or proposed Class I industrial use.



Plan view

This diagram shows an overhead view of the recommended minimum separation distance (20 metres), potential or actual influence area distance (70 metres), and acceptable range (greater than 70 metres) between sensitive land use and Class I industrial use.

The solid black dot indicates an existing land use, and the Xs indicate a proposed land use.

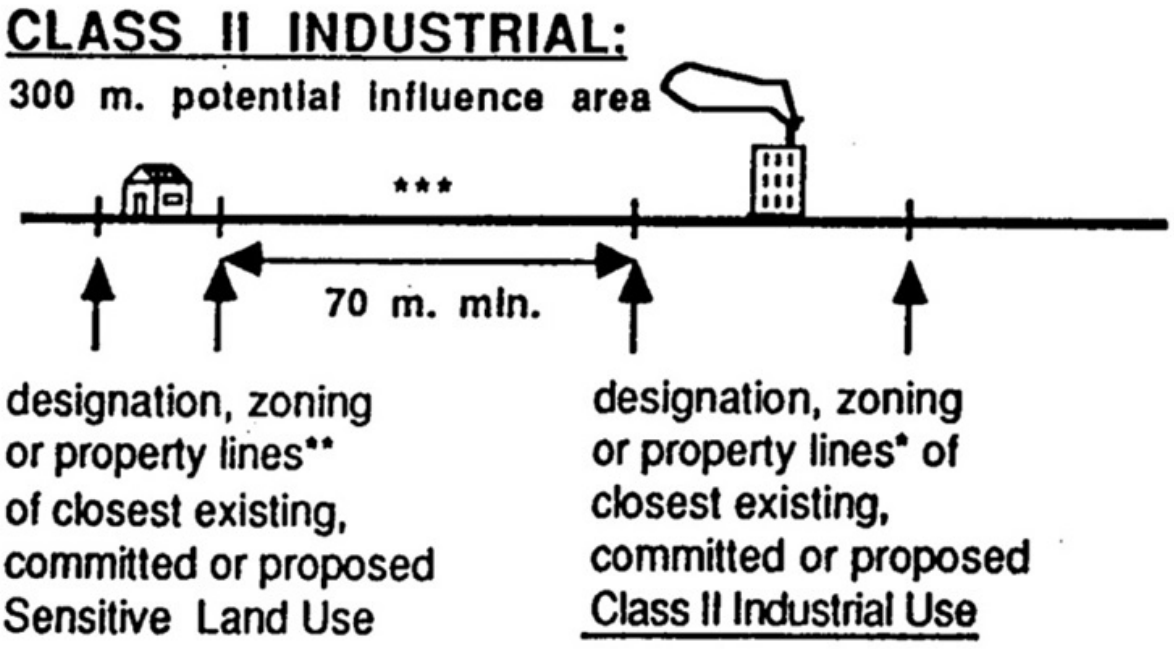


Class II industrial

- 300 metre potential influence area
- 70 metre recommended minimum in which incompatible development should not normally take place

Section view

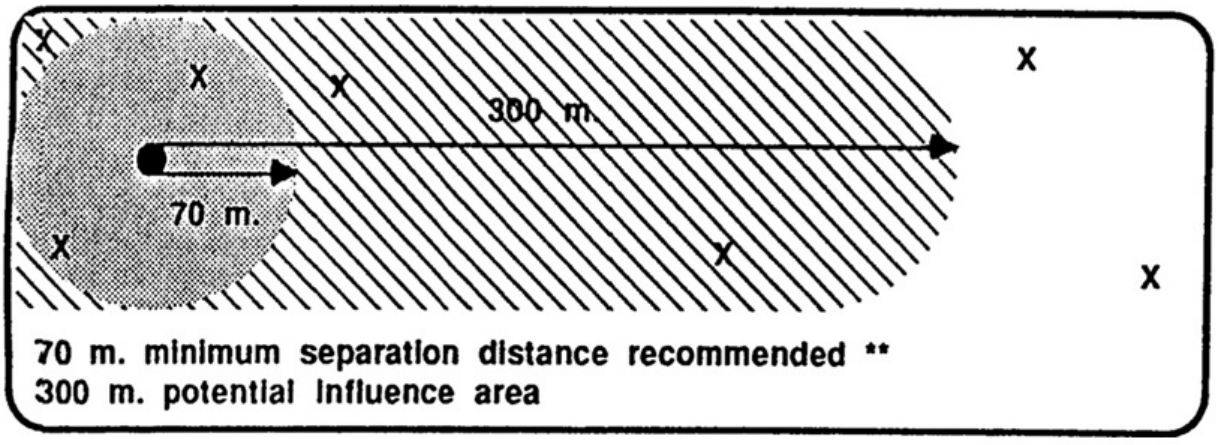
This diagram shows the designation, zoning or property lines of an existing, committed or proposed sensitive land use in relation to the designation, zoning or property lines of the closest existing, committed or proposed Class II Industrial Use.



Plan view

This diagram shows an overhead view of the recommended minimum separation distance (70 metres), potential or actual influence area (300 metres), and acceptable range (greater than 300 metres) between sensitive land use and Class II industrial use.

The solid black dot indicates an existing land use, and the Xs indicate a proposed land use.

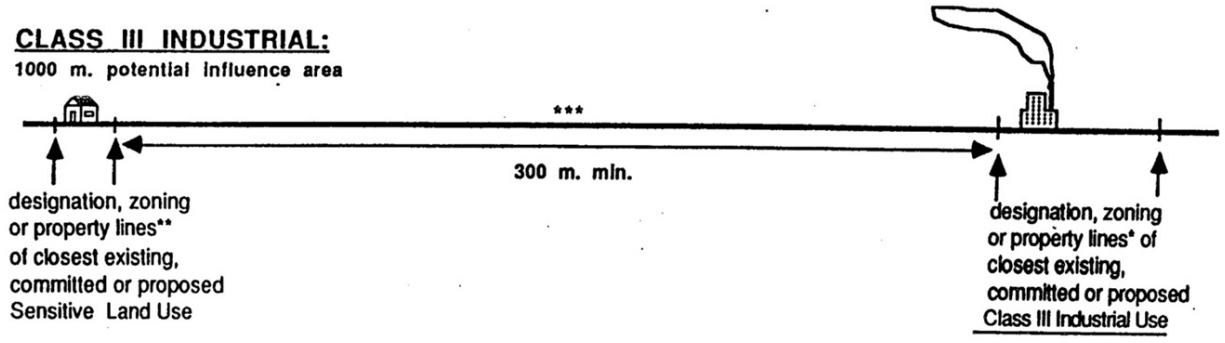


Class III industrial

- 1000 metre potential influence area
- 300 metre recommended minimum in which incompatible development should not normally take place

Section view

This diagram shows the designation, zoning or property lines of an existing, committed or proposed Sensitive Land Use in relation to the designation, zoning or property lines of the closest existing, committed or proposed Class III Industrial Use.



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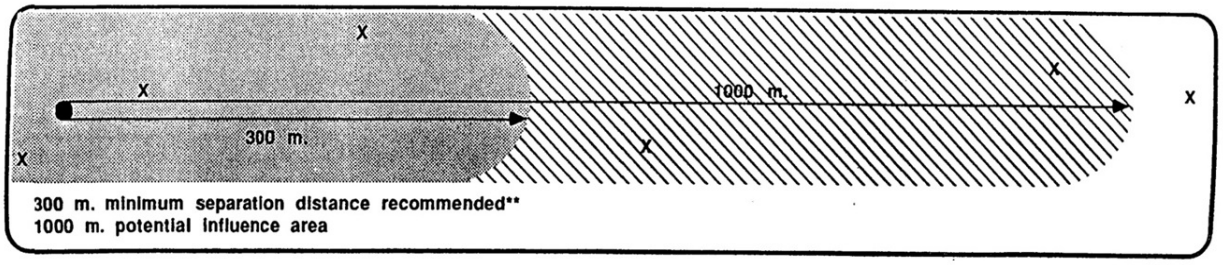
Plan view

This diagram shows an overhead view of the recommended minimum separation distance (300 metres), potential or actual influence area (1000 metres), and acceptable range (greater than 1000 metres) between sensitive land use and Class III industrial use.

The solid black dot indicates an existing land use, and the Xs indicate a proposed land use.



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References

Recommended minimum separation distance

Incompatible development should not normally be permitted within the recommended minimum.

See the following Sections:

- Section 4.3 Recommended Minimum
- Section 4.10 Redevelopment, Infilling and Mixed Use Areas
- Section 4.2.5 Off-Site Separation Distances

Recommended potential area of influence or actual area of influence

“Adverse effects” need to be identified, mitigation proposed and an assessment made on the acceptability of the proposal. See “Section 4.1 Influence of Area Concept”.

Acceptable range

Beyond the potential area of influence, therefore normally development in this range should not pose a compatibility problem. See “Section 4.5.2 Separation Distances Greater than the Potential Area of Influence” for exceptions**.**

Measuring separation distance

See Section 4.4 Measuring Separation Distances.

The set backs established in zoning by-law can be included in the separation distance measurement if the by-law or site plan control precludes the use of the set back for activities that could create an adverse effect. See “Section 4.4.3, Zoning/Site Plan Control (Industrial Land Uses)”.

Where the established use on-site and ancillary lands associated with a sensitive land use are not of a sensitive nature (e.g., parking lot or roadway), measurement may be taken to where the sensitive activities actually begin.

See the following Sections:

- Section 4.4.2 Site Specific Plans
- Section 4.4.4 Ancillary use (Sensitive Land Use)

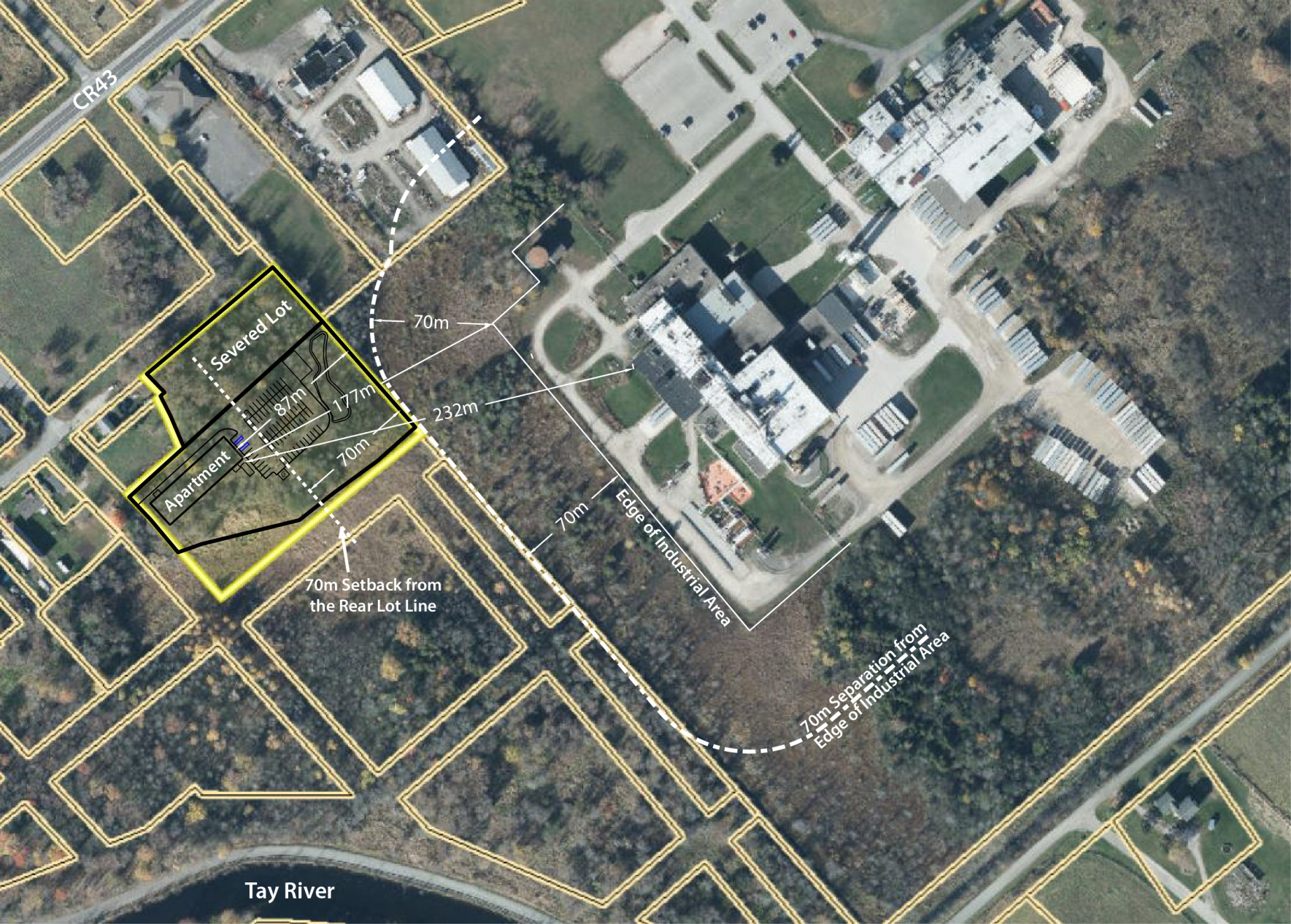
This approach may be particularly appropriate for redevelopment/infill proposals. “See Section 4.10 Redevelopment, Infilling and Mixed Use Areas.”

If the existing land use is industrial, then the proposed land use is sensitive, and vice versa.

Updated: July 13, 2021
Published: September 26, 2016

APPENDIX 4

3M Canada Separation Distances
(1 page)


CR43
Severed Lot
Apartment
87m
177m
232m
70m
70m
70m
Edge of Industrial Area
70m Setback from
the Rear Lot Line
70m Separation from
Edge of Industrial Area
Tay River

APPENDIX 5

3M Canada ECA
(13 page)

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 4950-8XLN4A
Issue Date: September 9, 2013

3M Canada Company
2 Craig St, Buildings 301 and 302
Perth, Ontario
K7H 3E2

Site Location: 2 Craig Street, Buildings 301 and 302, Perth, Ontario

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

A facility manufacturing woven and non-woven abrasives, pressure-sensitive tape and extruded films, consisting of the following processes and support units:

Scotch Brite Making Process

- roll coat solution applicators;
- spray booths equipped with venturi scrubbers;
- curing ovens;
- powder booths equipped with dust collectors;

Tape and Extruded Film Process

- film surface treaters;
- precoat application stations;
- coating ovens, complete with a natural gas fired *Thermal Oxidizer* ;
- adhesive application stations;

including the *Equipment* and any other ancillary and support processes and activities, operating at a *Facility Production Limit* of up to:

15 million square metres per year of woven and non-woven abrasives;
820 million square metres per year of pressure-sensitive tape and extruded films,

discharging to the air as described in the *Original ESDM Report.*

For the purpose of this environmental compliance approval, the following definitions apply:

1. " *Acceptable Maximum Ground Level Concentration"* means a concentration accepted by the *Ministry,* as described in the Guide to Applying for Approval (Air & Noise), for a *Compound of Concern* listed in the *Original ESDM Report* that:

(a) has no *Ministry Point of Impingement Limit* and no *Jurisdictional Screening Level,* or

(b) has a concentration at a *Point of Impingement* that exceeds the *Jurisdictional Screening Level.*

2. "*Acoustic Assessment Report"* means the report, prepared in accordance with *Publication NPC-233* and Appendix A of the *Basic Comprehensive User Guide,* by Sarah Tebbutt / Conestoga-Rovers & Associates Ltd. and dated June 2012 submitted in support of the application, that documents all sources of noise emissions and *Noise Control Measures* present at the *Facility* and includes all up-dated *Acoustic Assessment Reports* as required by the Documentation Requirements conditions of this *Approval* to demonstrate continued compliance with the *Performance Limits* following the implementation of any *Modification.*

3. "*Acoustic Assessment Summary Table"* means a table prepared in accordance with the *Basic Comprehensive User Guide* summarising the results of the *Acoustic Assessment Report,* up-dated as required by the Documentation Requirements conditions of this *Approval.*

4. "*Air Standards Manager"* means the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, as those duties relate to the conditions of this *Approval.*

5. "*Approval"* means this entire Environmental Compliance Approval and any *Schedules* to it.

6. "*Basic Comprehensive User Guide"* means the *Ministry* document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated March 2011, as amended.

7. "*Company"* means 3M Canada Company that is responsible for the construction or operation of the *Facility* and includes any successors and assigns in accordance with section 19 of the *EPA.*

8. "*Compound of Concern"* means a contaminant that, based on generally available information, may be discharged to the air in a quantity from the *Facility* that:

(a) is non-negligible in accordance with section 26(1)4 of *O. Reg. 419/05* in comparison to the relevant *Ministry Point of Impingement Limit;* or

(b) if a *Ministry Point of Impingement Limit* is not available for the compound, may cause an adverse effect at a *Point of Impingement* based on generally available toxicological information.

9. "*Description Section"* means the section on page one of this *Approval* describing the *Company's* operations and the *Equipment* located at the *Facility* and specifying the *Facility Production Limit* for the *Facility.*

10. "*Director"* means a person appointed by the Minister pursuant to section 5 of the *EPA.*

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

12. "*Emission Summary Table"* means the most updated table contained in the *ESDM Report,* which is prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* listing the appropriate *Point of Impingement* concentration for each *Compound of Concern* from the *Facility* and providing comparison to the corresponding *Ministry Point of Impingement Limit* or *Maximum Concentration Level Assessment,* or *Jurisdictional Screening Level.*

13. "*Environmental Assessment Act"* means the Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended.

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

15. "*Equipment"* means equipment or processes described in the *ESDM Report,* this *Approval* and in the *Schedules* referred to herein and any other equipment or processes.

16. "*Equipment with Specific Operational Limits"* means the *Thermal Oxidizer*and any

Equipment related to the thermal oxidation of waste or waste derived fuels, fume incinerators or any other *Equipment* that is specifically referenced in any published *Ministry* document that outlines specific operational guidance that must be considered by the *Director* in issuing an *Approval.*

17. "*ESDM Report"* means the most current Emission Summary and Dispersion Modelling Report that describes the *Facility.* The *ESDM Report* is based on the *Original ESDM Report,* is prepared after the issuance of this *Approval* in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by the *Company* or its consultant.

18. "*Facility"* means the entire operation located on the property where the *Equipment* is located.

19. "*Facility Production Limit"* means the production limit placed by the *Director* on the main product(s) or raw materials used by the *Facility.*

20. "*Jurisdictional Screening Level"* means a screening level for a *Compound of Concern* that is listed in the *Ministry* publication titled "Jurisdictional Screening Level (JSL) List, A Screening Tool for Ontario Regulation 419: Air Pollution - Local Air Quality", dated February 2008, as amended.

21. "*Log"* means the up-to-date log that is used to track all *Modifications* to the *Facility* since the date of this *Approval* as required by the Documentation Requirements conditions of this *Approval.*

22. "*Maximum Concentration Level Assessment"* means the Maximum Concentration Level Assessment for the purposes of an *Approval,* described in the *Basic Comprehensive User Guide,* prepared by a *Toxicologist* using currently available toxicological information, that demonstrates that the concentration at any *Point of Impingement* for a *Compound of Concern* that does not have a *Ministry Point of Impingement Limit* is not likely to cause an adverse effect as defined by the *EPA.*

23. "*Ministry"* means the ministry of the government of Ontario responsible for the *EPA* and its regulations and includes all officials, employees or other persons acting on its behalf.

24. "*Ministry Point of Impingement Limit"* means the applicable Standard set out in Schedule 2 or 3 of *O.Reg. 419/05* or a limit set out in the *Ministry* publication titled "Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution - Local Air Quality (including Schedule 6 of O. Reg. 419 on Upper Risk Thresholds)", dated April 2012, as amended.

25. "*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 *Compound of Concern* to the air or discharge or alter noise or vibration emissions from the *Facility.*

26. "*Noise Control Measures"* means measures to reduce the noise emissions from the *Facility* and/or *Equipment* including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers.

27. "*O. Reg. 419/05"* means the Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended.

28. "*Original ESDM Report"* means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by Conestoga-Rovers & Associates and dated June 11, 2012, submitted in support of the application, and includes any changes to the report made up to the date of issuance of this *Approval.*

29. "*Performance Limits"* means the performance limits specified in Condition 3.2 of this *Approval* titled Performance Limits.

30. "*Point of Impingement"* has the same meaning as in section 2 of *O. Reg. 419/05.*

31. "*Point of Reception"* means Point of Reception as defined by *Publication NPC-205* and/or *Publication NPC-232,* as applicable.

32. "*Procedure Document"* means *Ministry* guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2009, as amended.

33. "*Processes with Significant Environmental Aspects"* means the *Equipment* which, during regular operation, would discharge a contaminant or contaminants into the air at an amount which is not considered as negligible in accordance with section 26(1)4 of *O. Reg. 419/05* and the *Procedure Document.*

34. "*Publication NPC-205"* means the *Ministry* Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October, 1995, as amended.

35. "*Publication NPC-207"* means the *Ministry* draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, published by the *Ministry,* August 1978, as amended.

36. "*Publication NPC-232"* means the *Ministry* Publication NPC-232, "Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)", October, 1995, as amended.

37. "*Publication NPC-233"* means the *Ministry* Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended.

38. "*Schedules"* means the following schedules attached to this *Approval* and forming part of this *Approval* namely:

Schedule A - Supporting Documentation;
Schedule B - Temperature Monitor.

39. "*Toxicologist"* means a qualified professional currently active in the field of risk assessment and toxicology that has a combination of formal university education, training and experience necessary to assess contaminants..

40. *"Thermal Oxidizer"* means the Thermal Oxidizer used to control solvent emissions from the pressure sensitive adhesive tape manufacturing process, described in the Company's application, this Certificate and in the supporting documentation submitted with the application, to the extent approved by this Certificate.

41. "*Written Summary Form"* means the electronic questionnaire form, available on the *Ministry* website, and supporting documentation, that documents the activities undertaken at the *Facility* in the previous calendar year that must be submitted annually to the *Ministry* as required by the section of this *Approval* titled Reporting Requirements.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL

1.1 Except as otherwise provided by this *Approval,* the *Facility* shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this *Approval* and in accordance with the following *Schedules* attached hereto:

Schedule A - Supporting Documentation

Schedule B - Temperature Monitor.

2. LIMITED OPERATIONAL FLEXIBILITY

2.1 Pursuant to section 20.6(1) of the *EPA* and subject to Conditions 2.2 and 2.3 of this *Approval,* future construction, alterations, extensions or replacements are approved in this *Approval* if the future construction, alterations, extensions or replacements are *Modifications* to the *Facility* that:

(a) are within the scope of the operations of the *Facility* as described in the *Description Section* of this *Approval;*

(b) do not result in an increase of the *Facility Production Limit* above the level specified in the *Description Section* of this *Approval;* and

(c) result in compliance with the *Performance Limits.*

2.2 Condition 2.1 does not apply to:

(a) the addition of any new *Equipment with Specific Operational Limits* or to the *Modification* of any existing *Equipment with Specific Operational Limits* at the *Facility;* or

(b) *Modifications* to the *Facility* that would be subject to the *Environmental Assessment Act.*

2.3 Condition 2.1 of this *Approval* shall expire ten (10) years from the date of this *Approval,* unless this *Approval* is revoked prior to the expiry date. The *Company* may apply for renewal of Condition 2.1 of this *Approval* by including an *ESDM Report* and an *Acoustic Assessment Report* that describes the *Facility* as of the date of the renewal application.

3. REQUEST FOR *MAXIMUM CONCENTRATION LEVEL ASSESSMENT* AND *PERFORMANCE LIMITS*

3.1 **REQUEST FOR *MAXIMUM CONCENTRATION LEVEL ASSESSMENT***

3.1.1 If the *Company* proposes to make a *Modification* to the *Facility,* the *Company* shall determine if the proposed *Modification* will result in:

(a) a discharge of a *Compound of Concern* that was not previously discharged; or

(b) an increase in the concentration at a *Point of Impingement* of a *Compound of Concern.*

3.1.2 If a proposed *Modification* mentioned in Condition 3.1.1 will result in the discharge of a *Compound of Concern* that was not previously discharged, the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the following circumstances:

(a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level.*

(b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level.*

(c) Prior to the proposed *Modification,* a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern* and the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level.*

(d) Prior to the proposed *Modification,* a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern.* Additionally, the *Compound of Concern* does not have a *Ministry Point of Impingement*

Limit and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level.*

3.1.3 If a proposed *Modification* mentioned in Condition 3.1.1 will result in an increase in the concentration at a *Point of Impingement* of a *Compound of Concern,* the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the following circumstances:

(a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the *Acceptable Maximum Ground Level Concentration.*

(b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.

(c) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the *Acceptable Maximum Ground Level Concentration.*

(d) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.

(e) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit, Acceptable Maximum Ground Level Concentration* or a *Maximum Concentration Level Assessment* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level.*

3.1.4 Subject to the Operational Flexibility set out in Condition 2 of this *Approval,* the *Company* may make the *Modification* if the submission of a *Maximum Concentration Level Assessment* under Condition 3.1.2 or 3.1.3 is not required.

3.1.5 A *Company* that is required to submit an assessment under Condition 3.1.2 or 3.1.3 shall submit the assessment at least thirty (30) days before the proposed *Modification* occurs.

3.1.6 The *Ministry* shall provide to the *Company* written confirmation of the receipt of the assessment under Condition 3.1.2 or 3.1.3.

3.1.7 If an assessment is submitted under Condition 3.1.2 or 3.1.3, the *Company* shall not modify the *Facility* unless the *Ministry* accepts the assessment.

3.1.8 If the *Ministry* notifies the *Company* that it does not accept the assessment submitted under Condition 3.1.2 or 3.1.3, the *Company* shall:

(a) revise and resubmit the assessment; or

(b) notify the *Ministry* that the *Company* will not be modifying the *Facility.*

3.1.9 The re-submission under Condition 3.1.8 (a) is considered by the *Ministry* as a new submission.

3.2. ***PERFORMANCE LIMITS***

3.2.1 Subject to Condition 3.2.2, the *Company* shall, at all times, ensure that all *Equipment* that is a source of a *Compound of Concern* is operated to comply with the following *Performance Limits:*

(a) for a *Compound of Concern* that has a *Ministry Point of Impingement Limit,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the corresponding *Ministry Point of Impingement Limit;*

(b) for a *Compound of Concern* that has an *Acceptable Maximum Ground Level Concentration* and no *Maximum Concentration Level Assessment,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the corresponding *Acceptable Maximum Ground Level Concentration;* and

(c) for a *Compound of Concern* that has a *Maximum Concentration Level Assessment,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the most recently accepted corresponding *Maximum Concentration Level Assessment.*

3.2.2 If the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, the *Company* shall, at all times, ensure that all *Equipment* that is a source of the *Compound of Concern* is operated such that the maximum concentration of the *Compound of Concern* shall not exceed the concentration listed for the *Compound of Concern* in the most recent version of the *ESDM Report.*

3.2.3 The *Company* shall, at all times, ensure that the noise emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-205.*

3.2.4 The *Company* shall, at all times, ensure that the vibration emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-207.*

3.2.5 The *Company* shall, at all times, operate any *Equipment with Specific Operational Limits* approved by this *Approval* in accordance with the *Original ESDM Report* and Conditions 9 and 10 in this *Approval.*

4. **DOCUMENTATION REQUIREMENTS**

4.1 The *Company* shall, at all times, maintain documentation that describes the current operations of the *Facility,* including but not limited to:

(a) an *ESDM Report* that demonstrates compliance with the *Performance Limits* for the *Facility;*

(b) an *Acoustic Assessment Report* that demonstrates compliance with the *Performance Limits* for the *Facility;*

(c) an up-to-date *Log* that describes each *Modification* to the *Facility;* and

(d) a record of the changes to the *ESDM Report* and the *Acoustic Assessment Report* that documents how each *Modification* is in compliance with the *Performance Limits.*

4.2 The *Company* shall, during regular business hours, make the current *Emission Summary Table* and *Acoustic Assessment Summary Table* available for inspection at the *Facility* by any interested member of the public.

4.3 Subject to Condition 4.5, the *Company* shall prepare and complete no later than June 15 of each year documentation that describes the activities undertaken at the *Facility* in the previous calendar year, including but not limited to:

(a) a list of all *Compounds of Concern* for which a *Maximum Concentration Level Assessment* was submitted to the *Director* for review by the *Air Standards Manager* pursuant to Condition 3.1.2 or 3.1.3 of this *Approval;*

(b) if the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, a list and concentration level of all such *Compounds of Concern;*

(c) a review of any changes to *Ministry Point of Impingement Limits* that affect any *Compounds of Concern* emitted from the *Facility;* and

(d) a table of the changes in the emission rate of any *Compound of Concern* and the resultant increase or decrease in the *Point of Impingement* concentration reported in the *ESDM Report.*

4.4 Subject to Condition 4.5, the *Company* shall, at all times, maintain the documentation described in Condition 4.3.

4.5 Conditions 4.3 and 4.4 do not apply if Condition 2.1 has expired.

4.6 The *Company* shall, within three (3) months after the expiry of Condition 2.1 of this *Approval,* update the *ESDM Report* and the *Acoustic Assessment Report* such that they describe the *Facility* as it was at the time that Condition 2.1 of this *Approval* expired.

5. REPORTING REQUIREMENTS

5.1 Subject to Condition 5.2, the *Company* shall provide the *Ministry* and the *Director* no later than June 15 of each year, a *Written Summary Form* that shall include the following:

(a) a declaration of whether the *Facility* was in compliance with section 9 of the *EPA, O.Reg. 419/05* and the conditions of this *Approval;*

(b) a summary of each *Modification* that took place in the previous calendar year that resulted in a change in the previously calculated concentration at the *Point of Impingement* for any *Compound of Concern* or resulted in a change in the sound levels reported in the *Acoustic Assessment Summary Table* at any *Point of Reception.*

5.2 Condition 5.1 does not apply if Condition 2.1 has expired.

6. OPERATION AND MAINTENANCE

6.1 The *Company* shall prepare and implement, not later than three (3) months from the date of this *Approval,* operating procedures and maintenance programs for all *Processes with Significant Environmental Aspects,* which shall specify as a minimum:

(a) frequency of inspections and scheduled preventative maintenance;

(b) procedures to prevent upset conditions;

(c) procedures to minimize all fugitive emissions;

(d) procedures to prevent and/or minimize odorous emissions;

(e) procedures to prevent and/or minimize noise emissions; and

(f) procedures for record keeping activities relating to the operation and maintenance programs.

6.2 The *Company* shall ensure that all *Processes with Significant Environmental Aspects* are operated and maintained at all times in accordance with this *Approval,* the operating procedures and maintenance programs.

7. COMPLAINTS RECORDING PROCEDURE

7.1 If at any time, the *Company* receives any environmental complaints from the public regarding the operation of the *Equipment* approved by this *Approval,* the *Company* shall respond to these complaints according to the following procedure:

(a) the *Company* shall record and number each complaint, either electronically or in a log book, and shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to

which the complaint relates and, if known, the address of the complainant;

(b) the *Company,* upon notification of a complaint, shall initiate appropriate steps to determine all possible causes of the complaint, and shall proceed to take the necessary actions to appropriately deal with the cause of the subject matter of the complaint; and

(c) the *Company* shall complete and retain on-site a report written within one (1) week of the complaint date, listing the actions taken to appropriately deal with the cause of the subject matter of the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents**.**

8. RECORD KEEPING REQUIREMENTS

8.1 Any information requested by any employee in or agent of the *Ministry* concerning the *Facility* and its operation under this *Approval,* including, but not limited to, any records required to be kept by this *Approval,* shall be provided to the employee in or agent of the *Ministry,* upon request**,** in a timely manner.

8.2 The *Company* shall retain, for a minimum of five (5) years from the date of their creation, except as noted below, all reports, records and information described in this *Approval* and shall include but not be limited to:

(a) If the *Company* has updated the *ESDM Report* in order to comply with Condition 4.1(a) of this *Approval,* a copy of each new version of the *ESDM Report;*

(b) If the *Company* has updated the *Acoustic Assessment Report,* in order to comply with Condition 4.1(b) of this *Approval,* a copy of each new version of the *Acoustic Assessment Report;*

(c) supporting information used in the emission rate calculations performed in the *ESDM Reports* and *Acoustic Assessment Reports* to document compliance with the *Performance Limits*(superseded information must be retained for a period of three (3) years after *Modification);*

(d) the *Log* that describes each *Modification* to the *Facility;*

(e) all documentation prepared in accordance with Condition 4.3 of this *Approval;*

(f) copies of any *Written Summary Forms* provided to the *Ministry* under Condition 5.1 of this *Approval;*

(g) the operating procedures and maintenance programs, including records on the maintenance, repair and inspection of the *Equipment* related to all *Processes with Significant Environmental Aspects;* and

(h) the complaints recording procedure, including records related to all environmental complaints made by the public as required by Condition 7.1 of this *Approval.*

9. EQUIPMENT WITH SPECIFIC OPERATIONAL LIMITS

Thermal Oxidizer

9.1 The Company shall ensure that the *Thermal Oxidizer* is designed and operated to comply, at all times when the Equipment is in operation **,** with the following requirements:

(a) The combustion chamber is maintained at an operating temperature of 843 degrees Celsius, as measured by the continuous monitoring and recording system, at all times, when the *Thermal Oxidizer* is in full operational mode and the solvent laden gases are directed to the *Thermal Oxidizer.*

(b) No substances containing chlorinated and/or fluorinated compounds, are burned in the *Thermal*

Oxidizer.

(c) The concentration of organic matter in the undiluted exhaust gases leaving the *Thermal Oxidizer* , having a carbon content, expressed as equivalent methane, being an average of ten measurements taken at approximately one minute intervals, shall not be greater than 100 parts per million by volume.

9.2 The Company shall, prior to the commencement of operation of the *Thermal Oxidizer* , install and subsequently conduct and maintain a program to continuously monitor the minimum temperature of the gases leaving the *Thermal Oxidizer* . The temperature monitor shall be equipped with continuous recording devices and shall comply with the requirements outlined in the attached Schedule B.

10. REVOCATION OF PREVIOUS APPROVALS

10.1 This *Approval* replaces and revokes all Certificates of Approval (Air) issued under section 9 *EPA* and Environmental Compliance Approvals issued under Part II.1 *EPA* to the *Facility* in regards to the activities mentioned in subsection 9(1) of the *EPA* and dated prior to the date of this *Approval.*

SCHEDULE A

Supporting Documentation

(a) Application for Approval (Air & Noise), dated June 11, 2012, signed by Bill Sommers and submitted by the *Company.*

(b) Emission Summary and Dispersion Modelling Report, prepared by Conestoga-Rovers & Associates and dated June 11, 2012.

(c) Acoustic Assessment Report prepared by Conestoga-Rovers & Associates Ltd., dated June 2012 and signed by Sarah Tebbutt.

SCHEDULE B

PARAMETER: TEMPERATURE

LOCATION:

The sample point for the continuous temperature monitoring and recording system shall be located in the combustion chamber at a location where the measurements are representative of the minimum temperature of the gases leaving the *Thermal Oxidizer.*

PERFORMANCE:

The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters:

	PARAMETERS	SPECIFICATION
1.	Type:	shielded "K" type thermocouple, or equivalent
2.	Accuracy:	± 1.5 percent of the minimum gas temperature

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 1 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

The reasons for the imposition of these terms and conditions are as follows:

GENERAL

1. Condition No. 1 is included to require the *Approval* holder to build, operate and maintain the *Facility* in accordance with the Supporting Documentation in Schedule A considered by the *Director* in issuing this *Approval.*

LIMITED OPERATIONAL FLEXIBILITY, REQUEST FOR *MAXIMUM CONCENTRATION LEVEL ASSESSMENT* AND *PERFORMANCE LIMITS*

2. Conditions No. 2 and 3 are included to limit and define the *Modifications* permitted by this *Approval,* and to set out the circumstances in which the *Company* shall submit a *Maximum Concentration Level Assessment* prior to making *Modifications.* The holder of the *Approval* is approved for operational flexibility for the *Facility* that is consistent with the description of the operations included with the application up to the *Facility Production Limit.* In return for the operational flexibility, the *Approval* places performance based limits that cannot be exceeded under the terms of this *Approval. Approval* holders will still have to obtain other relevant approvals required to operate the *Facility,* including requirements under other environmental legislation such as the *Environmental Assessment Act.*

DOCUMENTATION REQUIREMENTS

3. Condition No. 4 is included to require the *Company* to maintain ongoing documentation that demonstrates compliance with the *Performance Limits* of this *Approval* and allows the *Ministry* to monitor on-going compliance with these *Performance Limits.* The *Company* is required to have an up to date *ESDM Report* and *Acoustic Assessment Report* that describe the *Facility* at all times and make the *Emission Summary Table* and *Acoustic Assessment Summary Table* from these reports available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the *Facility.*

REPORTING REQUIREMENTS

4. Condition No. 5 is included to require the *Company* to provide a yearly *Written Summary Form* to the *Ministry,* to assist the *Ministry* with the review of the site's compliance with the *EPA,* the regulations and this *Approval.*

OPERATION AND MAINTENANCE

5. Condition No. 6 is included to require the *Company* to properly operate and maintain the *Processes with Significant Environmental Aspects* to minimize the impact to the environment from these processes.

COMPLAINTS RECORDING PROCEDURE

6. Condition No. 7 is included to require the *Company* to respond to any environmental complaints

regarding the operation of the *Equipment,* according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.

RECORD KEEPING REQUIREMENTS

7. Condition No. 8 is included to require the *Company* to retain all documentation related to this *Approval* and provide access to employees in or agents of the *Ministry,* upon request, so that the *Ministry* can determine if a more detailed review of compliance with the *Performance Limits* is necessary.

EQUIPMENT WITH SPECIFIC OPERATIONAL LIMITS

8. Condition No. 9.1 is included to provide minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the *Facility/Equipment.*

Condition No. 9.2 is included to require the *Company* to gather accurate information on a continuous basis so that compliance with the operating requirements of this *Approval* can be verified.

REVOCATION OF PREVIOUS APPROVALS

9. Condition No. 10 is included to identify that this *Approval* replaces all Section 9 Certificate(s) of Approval and Part II.1 Approvals in regards to the activities mentioned in subsection 9(1) of the *EPA* and dated prior to the date of this *Approval.*

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 8310-76HJK8 issued on September 30, 2007.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993 , S.O. 1993, c. 28 (Environmental Bill of Rights), the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary* Environmental Review Tribunal 655 Bay Street, Suite 1500 Toronto, Ontario M5G 1E5	AND	The Environmental Commissioner 1075 Bay Street, Suite 605 Toronto, Ontario M5S 2B1	AND	The Director appointed for the purposes of Part II.1 of the Environmental Protection Act Ministry of the Environment 2 St. Clair Avenue West, Floor 12A Toronto, Ontario M4V 1L5

*** Further information on the Environmental Review Tribunal 's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca , you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 9th day of September, 2013

Rudolf Wan, P.Eng.
Director
appointed for the purposes of Part II.1 of
the *Environmental Protection Act*

QN/
c: District Manager, MOE Ottawa
Sarah Tebbutt, Conestoga-Rovers & Associates Ltd.