

# Part Lot 175; Parts 2-4 on Registered Plan 59R-10776, Niagara Falls, ON

D-6 Land Use Compatibility – Air Quality Study

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# 1. Legal Notification

This report was prepared by EXP Services Inc. for the account of Rudanco Inc. c/o Thornton Tomasetti.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.



## 2. Introduction

EXP Services Inc. (EXP) was retained by Rudanco Inc. c/o Thornton Tomasetti to conduct a D-6 Land Use Compatibility Air Quality Study of the compatibility of the proposed residential development at Part Lot 175; Parts 2-4 on Registered Plan 59R-10776, in Niagara Falls, ON, hereinafter referred to as the 'Subject Site'. This report has been prepared to fulfill the requirements of the Official Plan Amendment and Zoning By-law Amendment for the City of Niagara Falls for an air quality study. A noise assessment is being addressed in a separate study.

The Subject Site is currently a vacant lot and is zoned as Tourist Commercial (TC). The Subject Site measured approximately 1.3 hectares (3.2 acres) and is bound by vacant land to the north, a transformer station to the south, a spur line to west, and Portage Road to the east. A Site Plan and land zoning within 1000 m of the Subject Site are shown in Figures 1 and 2.

EXP understands that the proposed development consists of a two (2)-tower high-rise residential building (25 and 35 storeys). The development plan, surrounding industrial activities and provincial regulations and guidelines have been considered in this assessment. This report assesses the potential impact by industrial facilities and major transportation corridors on the air quality on the proposed development and potential compliance issues on nearby industry.



# 3. Description of Development and Surrounding Area

#### 3.1 Proposed Development

The proposed development consists of an area of 1.3 hectares (3.2 acres) and will consist of a two (2)-tower high-rise residential building. The proposed development will have a total gross floor area of 54,416 square metres, with 623 residential units and 775 parking spaces between a two (2)-level underground parking structure and above-grade parking spaces. Tower heights will be 35 stories (Tower A) and 25 stories (Tower B), with two (2) stories proposed for the landscaped podium surrounding the towers. Outdoor tennis and basketball courts are proposed on the northwest portion of the Site, west the podium. The podium will have a twenty (20) m setback from an existing off-Site spur line.

#### 3.2 Nearby Industries – Database Searches

A search of environmental risk databases (National Pollutant Release Inventory (NPRI), Environmental Activity and Sector Registry (EASR) and Environmental Compliance Approvals (ECAs)) identified two (2) addresses of interest from an air quality perspective that are located within 1,000 m of the proposed development.

A summary of the noteworthy findings provided in Table 1 below:

Location	Facility	Database	Activity
7780 Stanly Avenue	Washington Mills Electro Minerals Corporation		<ul> <li>Washington Mills Electro Minerals Corporation is an abrasive grain and specialty electro-fused mineral manufacturing facility and has approval for the following processes and support units: <ul> <li>Briquetting</li> <li>Furnaces</li> <li>Pouring and casting</li> <li>Crushing and screening</li> <li>Sack and paper bags packaging</li> <li>Natural gas fired comfort heating units</li> </ul> </li> <li>The facility also has approval for the addition of ferrovanadium to their existing materials that are processed one at a time in No. 14 furnace and two (2) baghouse dust collectors used to control emissions/fugitive emissions from material grinding and separating processes that extend 15.24 and 18.9 meters above grade.</li> </ul>
	Washington Mills	NPRI	Washington Mills was listed on the NPRI for on-Site releases of chromium (and its compounds) from 1993 until 2020, for the off-site disposal of chromium (and its compounds) from 1995 until 2020, and fugitive/stack/point releases of TPM, PM2.5, and PM10 to air from 2004 until 2020.
7771 Stanley Avenue	Myer Salit Limited	EASR - Air Emissions	Myer Salit Limited was registered for an EASR – Air Emissions on January 30, 2020. The operation processes at the facility include receiving/shipping carbon steel beams, plates and rebar and manipulating the steel by shearing, band saw cutting, hydraulic bending, oxy-propane metal cutting, and plasma metal cutting. It is noted in the EASR confirmation that no oxy-propane or plasma metal cutting occurs outdoors and that no metal products are manufactured at the facility. It was additionally noted that the EASR Emissions Summary and Dispersion Modelling report did not identify a source of fugitive dust at the facility, the Odour Screening report did not suggest

#### Table 1. Identified Commercial/Industrial Facilities of Potential Air Quality Concern



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Location	Facility	Database	Activity
			that a Best Management Practices Plan was required to address odour from the facility, and a Noise Abatement Action Plan has been developed for the facility.

Facilities with approvals for water and sewer systems only are not listed as they are not anticipated contribute to air emissions.

The following two (2) facilities identified in the database searches was considered insignificant from an air quality perspective. These are summarized in Table 2.

#### Table 2. Identified Facilities Considered Insignificant or Not Applicable

Location	Facility	Approval	Description/Assessment
6815 Stanly Avenue	The Corporation of the City of Niagara Falls	The Corporation of the City of Niagara Falls has approval for one (1) standby natural gas generator set.	Insignificant.
7657 Portage Road	Marineland Of Canada Inc.	Marineland of Canada Inc. has approval for a Waste Disposal Site that is used for the landfilling of municipal waste, limited to dead animals generated at the property.	Insignificant due to the nature and scale of operations associated with these activities.

#### 3.3 Site Visit Observation

A site visit was conducted by Emily Woronchak of EXP on February 22, 2022. The site visit comprised a walk through within a onekilometer (1,000 m) radius (Study Area) of the Subject Site to characterize the operations of facilities in the area and identify odours and potential emissions which may affect the proposed development. Meteorological conditions during the site visit (approximately 11:30 am to 3:30 pm) were overcast skies, with temperature ranging from 3.8 to 8.7°C, with wind ranging between approximately 3 to 21 to km/h from the west/south and precipitation in the form of rain.

The Subject Site is surrounded by industrial, light industrial, commercial, recreational, and residential facilities. During the Odour Screening Assessment (refer to Section 3.4) no odours were detected above the Nasal Ranger's measurable threshold level, illustrated in Figure 5 (Appendix A). Meteorological conditions during the odour assessment (approximately 12:00 pm to 12:15 am) were overcast skies, temperature of approximately 8°C, with wind approximately 19 km/h from the south. No odours were detected with <2 odour units (OU) at all locations. The only odours, as detected by human senses, were odours typical of an urban environment (traffic). No significant dust impacts, other odours, or off-site odours were noted at the Subject Site at the time of the site visit from approximately 11:30 am to 3:30 pm.

Table 3 lists commercial, light industrial, and industrial facilities that were observed within the Study Area but not identified in the database searches.



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#### Table 3. Industrial/Commercial Facilities Observed during Site Visit

Location	Facility	Description/Assessment	Potential issue?
6663 Stanley Avenue	Rodeway inn Fallsview Zappi's Pizza & Pasta	Hotel Restaurant	No, based on inferred operations
6815 Stanley Avenue	Niagara Falls Convention Centre	Convention center	No, based on inferred operations
7020 Stanley Avenue	Monastery Cellars Monastery Store	Winery Religious goods store	Yes, based on winery operations
7197 Stanley Avenue	Korean Garden Restaurant	Restaurant	No, based on inferred operations
7527 Stanley Avenue	Best In Show Walter L. & Sons Excavating Ltd.	Pet groomer Excavating contractor	Yes, based on excavating contractor operations
7656 Stanly Avenue	Marineland	Theme park	No, based on inferred operations
7885 Stanly Avenue	Marineland Administration	Office	No, based on inferred operations
6650 Niagara Parkway	Table Rock Welcome Centre	Various restaurants Various retail	No, based on inferred operations
6541 Main Street	My Cousin Vinny's	Restaurant	No, based on inferred operations
6546 Fallsview Boulevard	Applebee's Grill + Bar The Oakes Hotel	Restaurant Hotel	No, based on inferred operations
6654 Fallsview Boulevard	Comfort Inn	Hotel	No, based on inferred operations
6683 Fallsview Boulevard	OK Gift Shop Canada	Gift shop	No, based on inferred operations
6700 Fallsview Boulevard	Embassy Suites The Keg Steakhouse & Bar Starbucks TGI Friday's	Hotel Restaurants	No, based on inferred operations
6732 Fallsview Boulevard	The Tower Hotel Sky Fallsview Steakhouse IHOP	Hotel Restaurants	No, based on inferred operations



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Location	Facility	Description/Assessment	Potential issue?
6733 Fallsview Boulevard	Outback Steakhouse Radisson Hotel & Suites Turtle Jacks	Restaurant Hotel Restaurant	No, based on inferred operations
6740 Fallsview Boulevard	Marriott Fallsview & Spa Morton's Grille	Hotel Spa Restaurant	No, based on inferred operations
6755 Fallsview Boulevard	Marriott on the Falls Starbucks Milestones	Hotel Restaurants	No, based on inferred operations
5630 Dunn Street	Ritz Hotel Niagara	Hotel	No, based on inferred operations
7400 – 7500 Portage Road	400 – 7500 Portage Oak Hall Road		No, based on inferred operations
7373 Portage Road	Not applicable	Transformer station	Yes, refer to Section 6.5

#### 3.4 Odour Screening Assessment

An odour screening assessment was conducted in conjunction with the D-6 site visit by EXP on February 22, 2022 to assess any potential off-site odour sources at the Subject Site.

At the time of the odour screening assessment, the Subject Site was vacant. Odour measurements were taken using a St. Croix Nasal Ranger Field Olfactometer at five (5) locations from approximately 12:00 pm to 12:15 pm, illustrated in Figure 5 (Appendix A). Meteorological conditions during the odour assessment were overcast skies, temperature of approximately 8 °C, with wind approximately 19 km/h from the south. No odours were detected with <2 odour units (OU) at all locations. The only odours, as detected by human senses, were odours typical of an urban environment (traffic). No significant dust impacts, other odours, or other off-site odours were noted at the Subject Site at the time of the site visit from approximately 11:30 am to 3:30 pm.

During the site visit, no significant odours were detected within the 1 km Study Area radius of the Site.

#### 3.5 Site Meteorology

Based on three-year (January 2019 to December 2021) Environment Canada historical meteorological data from St. Catharines/Niagara District Airport, approximately 15 km northwest from the Site, the annual resultant vector is from the west (264°) with an average wind speed of 16.9 m/s. Annual and seasonal wind rose diagrams showing wind direction (blowing from) and wind speed distribution are provided in Figures 1 to 5.

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Figure 1. Annual Wind Rose- Niagara Falls, ON



Figure 2. Spring Wind Rose – Niagara Falls, ON



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Figure 3. Summer Wind Rose – Niagara Falls, ON



Figure 4. Fall Wind Rose – Niagara Falls, ON



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Figure 5. Winter Wind Rose – Niagara Falls, ON



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## 4. Provincial Guidelines and Regulations

The Ministry of the Environment, Conservation and Parks (MECP) D-series of guidelines are meant to identify potential compatibility issues between land uses. In the case of proposed sensitive uses in proximity to industrial uses, the initial assessment determines if there are any potential adverse effects of nearby industrial operations on the proposed location of the sensitive use. Where the potential for compatibility issues are identified a more detailed assessment may be performed.

#### 4.1 D-Series of Guidelines

The MECP guideline, "D-6 Compatibility between Industrial Facilities" (the 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 recommends minimum separation distances of new developments from industrial facilities. These industrial facilities are defined as follows:

- Class I facilities are generally described as 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.
- Class II facilities are generally described as a medium-scale processing and manufacturing plant with outdoor storage of wastes or material (i.e. has an open process) and/or there are periodic outputs of minor annoyance.
- Class III facilities are generally described as 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. They have a high probability of fugitive emissions.

The recommended minimum separation distances for new developments from Class I, II and III facilities are 20, 70, and 300 metres respectively. The potential influence areas for Class I, II, and III facilities are 70, 300, and 1000 metres respectively. The guideline allows less than the minimum separation distance based on an evaluation of the industrial processes and the potential for off-site impacts.

#### 4.2 Risk Assessment Guidelines

Some municipalities require a risk assessment to further assess compatibility with existing industrial facilities in the area. This assessment is based on the Canadian Environmental Protection Act (CEPA) list of hazardous substances and thresholds and the Conseil pour la réduction des accidents industriels majeurs" (CRAIM) list of hazardous substances which was developed using a multi-stakeholder process that reviewed and adopted all the hazardous substances from the Risk Management Program (RMP) developed by the U.S. Environmental Protection Agency (EPA) and a selection of chemicals from the Major Industrial Accident Council of Canada (MIACC) lists. The revised CRAIM List of 174 substances contains: 63 inflammables (RMP), 77 toxics (RMP), 10 inflammables (MIACC / Occupational Safety and Health Administration (OSHA) or National Fire Protection Association (NFPA)), 20 toxic (MIACC / OSHA or NFPA), 3 explosives and 1 miscellaneous. It was designed to take into account the List of hazardous substances from the EPA Risk Management Program (RMP) while also retaining the most hazardous substances from MIACC List 2: (CRAIM 2001). An E2 plan is required for facilities with charge, management or control of a listed substance that is at or above the quantity set out in column 3 of Schedule 1 of the E2 Regulations.



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# 5. D-6 Classification and Nearby Industries

Based on the database search results and the observations from the Site visit (Table 3), facilities considered for further assessment are provided in Table 4, along with their distance to the Subject Site, facility Class, potential air quality issues, and location (inside or outside) relative to the minimum separation distance and area of influence.

#### Table 4. D-6 Facility Classifications and Assessment

No.	Facility	Address	Distance to Site (m)	Class*	Potential Issue	Rationale for Classification	Issue Identified?**
1	Washington Mills Electro Minerals Corporation	7780 Stanly Avenue	295 m south	III	PHC/VOC emissions, fugitive emissions, dust	Large-scale abrasive grain and specialty electro-fused mineral manufacturing, facility with ECA-Air, presence of two (2) stacks, outdoor storage of raw materials based on aerial imagery, continuous movement of products and employees, 24/7 continuous shift operations, and open process manufacturing including pouring and casting.	Yes. Inside minimum separation distance and area of influence. However, outside minimum separation distance when wetland vegetation buffer is considered (refer to Section 6.1).
2	Myer Salit Limited	7771 Stanley Avenue	452 m southwest	II	PHC/VOC emissions, fugitive emissions, noise	Large-scale rebar fabricator and distributor, facility with EASR- Air Emissions, no metal products manufacturing on site, outdoor storage/movement of steel beams, shift operations permitted, no odours or stacks observed, and may have frequent movement of heavy trucks.	No. Outside minimum separation distance and area of influence.



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No.	Facility	Address	Distance to Site (m)	Class*	Potential Issue	Rationale for Classification	Issue Identified?**
3	Monastery Cellars	7020 Stanley Avenue	124 m northwest	I	Fugitive emissions	Small-scale winery, no outdoor storage of wastes or materials, self-contained building, no odours or stacks observed, and infrequent movement of heavy trucks.	No. Outside minimum separation distance and area of influence.
4	Walter L. & Sons Excavating Ltd.	7527 Stanley Avenue	452 m southwest II FILE PHC emissions, fugitive emissions, noise Stack observed, and may have frequent movement of heavy trucks with the majority of movements during daytime hours.		No. Outside minimum separation distance and area of influence.		

#### 5.1 Provincial Guidelines and Regulations for Potentially Incompatible Uses

The MECP D-6 Guideline and D-Series Guidelines and regulations used for assessing environmental compliance are used for assessing land-use compatibility. The following sections describe the regulations and guidelines which are used in this assessment.

#### 5.1.1 Air Quality Contaminants

Under Ontario Regulation 419/05 – Air Pollution – Local Air Quality (O.Reg. 419/05) of the Environmental Protection Act, a facility is required to meet prescribed standards for air quality contaminants at any location off-site but is not required to assess their emissions at elevated points off-site if a receptor does not exist at that elevated location. The proposed development, building heights of 25 and 35 storeys, introduces elevated receptors that will require a nearby facility to assess their emissions at elevated heights beyond their property line.

For new developments near industrial sources the existing land uses, and their approvals must be considered and an industry has the right to object to a land use which may impact their ability to operate under their existing provincial approval. A developer can support compliance through design (e.g. removing elevated receptors), mitigation (e.g. sealed windows, filtration systems, etc.) or collaborating on at-source mitigation with the industry.

#### 5.1.2 Dust

Under Ontario Regulation 419/05 – Air Pollution – Local Air Quality (O.Reg. 419/05) of the Environmental Protection Act, a facility is required to meet prescribed standards for particulates (dust) at any location off-site but is not required to assess their emissions



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at elevated points off-site if a receptor does not exist at that elevated location. The proposed development introduces elevated receptors that will require a facility to assess their emissions at these locations.

For new developments near industrial sources, the existing land uses, and their approvals must be considered and an industry has the right to object to a land use which may impact their ability to operate under their existing provincial approval. A developer can support compliance through design or mitigation (e.g. sealed windows, filtration systems, etc.) or collaborating on at-source mitigation with the industry.

#### 5.1.3 Odour

Odour is the sensation when receptors in the nose are stimulated. Individual response to odour varies and is subjective. Whilst some contaminants are specifically regulated based on odour effects, there is no formal regulation with respect to mixed odours. The MECP apply odour-based standards to locations "where human activities regularly occur at a time when those (odour emitting) activities regularly occur," such as residences and public meeting places. Most odours do not pose a health risk, but exposure to some can lead to headaches, nausea and other symptoms. They are generally only considered and regulated by the MECP in the presence of persistent complaints. Typically, odours are assessed against the following five criteria:

- Frequency how often a receptor is likely to be exposed to an odour;
- Intensity strength of the odour;
- Duration the length of time the odour is likely to be detected by a receptor;
- Offensiveness subjective character of odour pleasantness or unpleasantness (hedonic tone); and
- Location where the odour is likely to occur and with respect to land use. For example, rural smells would be more accepted in rural areas versus urban areas

#### 5.1.4 Traffic Related Air Pollution

The Subject Site is located approximately 3.3 km east of Queen Elizabeth Way. The impact of transportation related air pollutants (TRAP) is well recognized in urban centres, including many existing buildings and sensitive communities in the Greater Toronto Area. The health risk from TRAP is higher within 500 metres of highways with an average daily traffic volume (ADTV) of 100,000 vehicles or more, and within 100 metres of arterial roads with an ADTV of 15,000 vehicles or more (Toronto Public Health, 2017).

Given that Toronto Public Health considers TRAP to be a major local contributor to air pollution and of amplified adverse health impacts due to air pollution, developers should consider reducing exposure to TRAP by implementing on-site mitigation measures for developments residing in close proximity to highways and roads. Queen Elizabeth Way, a highway with significant traffic volumes, is located beyond 500 m of the Site. As such, a review of TRAP emissions is not warranted at this time.

#### 5.1.5 Toxic (CRAIM Risk) Substances

A search of environmental risk databases (National Pollutant Release Inventory (NPRI), Environmental Activity and Sector Registry (EASR) and Environmental Compliance Approvals (ECAs)) did not identify any addresses located within 1000 m of the proposed development that would be considered a risk based on the revised CRAIM List of 174 substances contains. No facilities with charge, management or control of a listed substance that is at or above the quantity set out in column 3 of Schedule 1 of the E2 Regulations were identified.



# 6. Assessment – Potential Air Quality Impacts

#### 6.1 General Air Quality Contaminants

#### 7780 Stanly Avenue

The Class III facility located at 7780 Stanley Avenue is Washington Mills Electro Minerals Corporation (Washington Mills), an abrasive grain and specialty electro-fused mineral manufacturing facility (Map Icon Number 1, Figures 3 and 4). The facility was considered a Class III facility due to its overall size and scale, large production levels, continuous movement of products and employees, 24/7 continuous shift operations, and open process manufacturing including pouring and casting. During the site visit, no odours were detected in the vicinity of the facility and noise emissions from the facility were not audible at the proposed development. The facility is within the minimum separation distance and inside the area of influence as defined under the D6 Guidelines. Washington Mills has an ECA-Air for its operations. As such, they are required to meet the standards for air quality at their property line and beyond. Since the Subject Site is vacant, it may not have been considered in the approval process and could be impacted by the emissions from this facility.

While these impacts cannot be quantified at this time, it is noted that existing residences are present within the area of influence of Washington Mills, with the closest building located approximately 315 m southwest of the facility. In addition, the Niagara Falls Slough Forest Wetland Complex is included in the property boundary of Washington Mills and provides a buffer of approximately 133 m. This buffer increases the separation distance from the Subject Site, making the facility outside of the minimum separation distance and inside the area of influence. Due to the presence of existing residential properties in the area and the requirements of facilities to meet O.Reg. 419/05, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, potential air quality impacts on the proposed site can be managed for compatibility.

#### 6.2 Dust

During the site visit, no significant fugitive dust emissions were observed on the Subject Site or within the 1 km Study Area radius. Review of existing ECAs within the buffer areas did not identify significant particulate sources. In addition, the surrounding road network is paved within the Study Area.

#### 6.3 Odour

Odours are only required to be assessed at locations where human activity (receptors) is likely to occur. Nearby identified industries would not have been required to assess odours outside of their boundaries as a condition of their provincial Environmental Compliance Approval (ECA) applications if receptors did not exist at the time of their approval.

During the Odour Screening Assessment (refer to Section 3.4), no odours were detected above the Nasal Ranger's measurable threshold level. The only odours, as detected by human senses, were odours typical of an urban environment (traffic). No significant dust impacts, other odours, or off-site odours were noted at the Subject Site at the time of the site visit from approximately 11:30 am to 3:30 pm.

Given the proximity of the Subject Site to the commercial and industrial businesses surrounding the Subject Site, there is a potential for members of the proposed development to experience odours, or periodic odours and/or general urban occurrences of odour. As such, it is recommended that best practices of building pressurization and filtration be included in the mechanical design or installed in the future if complaints arise.

#### 6.4 Transportation Sources

The city of Niagara Falls has no specific guideline document related to TRAP, however, the City of Toronto has developed the following reference guide for TRAP mitigation:



• City of Toronto. Avoiding the TRAP: Traffic-Related Air Pollution in Toronto and Options for Reducing Exposure. Technical Report. October 2017.

The proposed development is located beyond 500 from a highway with a high traffic volume. As such, a review of TRAP emissions is not warranted at this time.

The closest railway west adjacent to the Subject Site is a Canadian Pacific freight spur line. This is inside the standard building setbacks (15m for spur and branch lines, 30 m for secondary and principle main, 300 m for Freight Rail Yard) for new residential developments recommended by the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations (May 2013).

#### 6.5 Other Facilities

Based on observations made at the time of the site visit, a transformer substation was identified south adjacent to the Subject Site at 7373 Portage Road. According to Section 4.1, a transformer substation does not meet the definition of a Class I, II, or III facility under the D-6 Guidelines.



## 7. Conclusions

Based on the information obtained from the database searches, site visit and web searches, the following findings have been obtained:

- The proposed location of the development is surrounded by industrial, light industrial, commercial, recreational, and residential facilities.
- One (I) Class III facility was identified as a facility with potential air quality issues.
- One (1) Class III facility, Washington Mills, is within the minimum separation distance and area of influence, as defined under the D6 Guidelines, with environmental permissions (EASR or ECA). Having an ECA, emissions are controlled and, as such, the abrasive grain and specialty electro-fused mineral manufacturing facility is required to meet the standards for air quality at their property line and beyond. The proposed development may not have been considered in the approval process as the Subject Site is vacant and could be impacted by the emissions from this facility. While these impacts cannot be quantified at this time, it is noted that existing residences are present within the area of influence of Washington Mills, with the closest building located approximately 315 m southwest of the facility. In addition, the Niagara Falls Slough Forest Wetland Complex is included in the property boundary of Washington Mills and provides a buffer of approximately 133 m. This buffer increases the separation distance from the Subject Site, making the facility outside of the minimum separation distance and inside the area of influence.
- During the Odour Screening Assessment (refer to Section 3.4), no odours were detected above the Nasal Ranger's measurable threshold level, illustrated in Figure 5 (Appendix A). The only odours, as detected by human senses, were odours typical of an urban environment (traffic). No significant dust impacts, other odours, or off-site odours were noted at the Subject Site at the time of the Site visit.
- The closest railway west adjacent to the Subject Site is a Canadian Pacific freight spur line.



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## 8. Recommendations

With the presence of a Class III facility, Washington Mills, within the minimum separation distance and area of influence, it is recognized that air emissions are regulated through their ECA. It is important to note however, that any existing approvals may have not considered the proposed development, which includes elevated receptors. The Niagara Falls Slough Forest Wetland Complex is included in the property boundary of Washington Mills and provides a buffer of approximately 133 m. This buffer increases the separation distance from the Subject Site, making the facility outside of the minimum separation distance and inside the area of influence. It is noted that existing residences are present within the area of influence of Washington Mills, with the closest building located approximately 315 m southwest of the facility. In addition, based on three-year (January 2019 to December 2021) Environment Canada historical meteorological data from St. Catharines/Niagara District Airport, the annual resultant vector is from the west (264°) with an average wind speed of 16.9 km/h.

The proposed development will have elevated receptors that may be impacted by the emissions of Washington Mills. Since this facility is within the area of influence, and given that there is a potential for members of the proposed development to experience odours, or periodic odours and/or general urban occurrences of odour, it is recommended that best practices of building pressurization and filtration be included in the mechanical design or able to be installed in the future if complaints arise.

The closest railway west adjacent to the Subject Site is a Canadian Pacific freight spur line. This is inside the standard building setbacks (15 m for spur and branch lines, 30 m for secondary and principle main, 300 m for Freight Rail Yard) for new residential developments recommended by the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations (May 2013). As such, a minimum 20 m setback between the podium of the proposed development and the spur line is recommended.



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D-6 Compatibility – Air Quality– Part Lot 175; Parts 2-4 on Registered Plan 59R-10776, Niagara Falls, ON Project Number: GTR-22002817-A0 July 13, 2022

## 10. General Limitations

The information and conclusions in this report are considered to be privileged and confidential and have been prepared exclusively for Rudanco Inc. c/o Thornton Tomasetti. The purpose of this report is to provide Rudanco Inc. c/o Thornton Tomasetti with an assessment of the potential impacts from operation of commercial and industrial facilities where the proposed developments fall within the industrial facility Potential Influence Area.

The information presented in this report is based on information provided by others and visual observations as identified herein. Achieving the objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Air quality conditions at various times may differ from those assessed. In addition, any changes to the proposed design or introduction of new processes and/or sources may render the conclusions of this report inaccurate or invalid. In the event of any such changes, EXP should be contacted to re-evaluate the conditions within the assessed areas and make appropriate revisions to the original conclusions of this report.

We trust this summary report is satisfactory for your purposes. If you have any questions regarding our submission, please do not hesitate to contact this office.

Sincerely,

**EXP** Services Inc.

Court Mallery

Emily Woronchak Environmental Scientist Environmental Services

Buy

Ron Taylor, M.Sc., C.Chem., CIH Discipline Lead, Air Quality & Industrial Hygiene Environmental Services



D-6 Compatibility – Air Quality– Part Lot 175; Parts 2-4 on Registered Plan 59R-10776, Niagara Falls, ON Project Number: GTR-22002817-A0 July 13, 2022

Appendix A – Figures













D-6 Compatibility – Air Quality– Part Lot 175; Parts 2-4 on Registered Plan 59R-10776, Niagara Falls, ON Project Number: GTR-22002817-A0 July 13, 2022

Appendix B – Site Plan Drawings





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# RUDANCO INC.

# PORTAGE RD

LOT 175 PORTAGE ROAD, CITY OF NIAGARA FALLS, ONTARIO L2J0C5 SHEET TITLE

# SURVEY

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