

## WALKER ENVIRONMENTAL GROUP INC.

NIAGARA FALLS, ONTARIO

AIR QUALITY ASSESSMENT REPORTS (DRAFT): SOUTHWESTERN  
LANDFILL PROPOSAL ENVIRONMENTAL ASSESSMENT

RWDI # 1800160

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## LIST OF ATTACHMENTS

- Attachment 1:** Air Quality Report - Odour Study: Southwestern Landfill Proposal Environmental Assessment
- Attachment 2:** Air Quality Report - Landfill Gas Study: Southwestern Landfill Proposal Environmental Assessment
- Attachment 3:** Air Quality Report - Dust Study: Southwestern Landfill Proposal Environmental Assessment
- Attachment 4:** Air Quality Report - Haul Route Study: Southwestern Landfill Proposal Environmental Assessment
- Attachment 5:** Air Quality Report - Blowing Litter Study: Southwestern Landfill Proposal Environmental Assessment
- Attachment 6:** Quarterly Ambient Air Quality Monitoring Reports: Southwestern Landfill Proposal Environmental Assessment



## WALKER ENVIRONMENTAL GROUP INC.

THOROLD, ONTARIO

### **AIR QUALITY REPORT-ODOUR STUDY | SOUTHWESTERN LANDFILL PROPOSAL ENVIRONMENTAL ASSESSMENT**

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# 1 INTRODUCTION

An Environmental Assessment (“EA”) is being prepared by Walker Environmental Group Inc. (“Walker”) under Ontario’s Environmental Assessment Act (“Act”) for the ‘provision of future landfill capacity at the Carmeuse Lime (Canada) Ltd. (Carmeuse) site in Oxford County for solid, non-hazardous waste generated in the Province of Ontario’.

This is one in a series of technical studies that have been completed by qualified experts to examine the potential effects of the proposed landfill site on the environment, all in accordance with the requirements set out in the Approved Amended Terms of Reference (“ToR”) dated May 10, 2016. This report accompanies and supports the Environmental Assessment Report prepared by Walker.

Note that Walker has carried out extensive consultation with government agencies, Aboriginal groups and interested members of the public regarding this study; details are provided separately in the EA report.

# 2 PURPOSE & OBJECTIVES

The purpose of this study is to complete an odour assessment of the landfill proposed by Walker.

The overall objectives of the study are listed below, in general accordance with the requirements for the assessment of an undertaking as set out in Section 6.1(2)(c) of the Environmental Assessment Act, and as specifically detailed in Section 8.1 of the ToR:

- a. Describe the environment potentially affected by the proposed undertaking, including both the existing environment as well as the environment that would otherwise be likely to exist in the future without the proposed undertaking.
- b. Carry out an evaluation of the environmental effects of the proposed undertaking, using the relevant environmental assessment criteria set out in the ToR (see **Appendix B**).
- c. Carry out an evaluation of any additional impact management actions that may be necessary to prevent, change or mitigate any (negative) environmental effects.
- d. Prepare a description and evaluation of the environmental advantages and disadvantages of the proposed undertaking, based on the net environmental effects that will result following mitigation.
- e. Prepare monitoring, contingency and impact management plans to remedy the environmental effects of the proposed undertaking.



### 3 THE PROPOSED UNDERTAKING

The landfill proposed by Walker is described in detail in the Environmental Assessment Report. Following is a brief summary for the benefit of the reader, highlighting aspects of the proposal most relevant to this study.

The landfill is to be located on a portion of Carmeuse's landholdings at its Beachville Quarry Operations in the Township of Zorra, Oxford County. Approximately 17.4 million m<sup>3</sup> of solid, non-hazardous waste and daily/intermediate cover will be deposited within a footprint of about 59 ha. The balance of the of the 81.6 ha site will be comprised of buffer areas for monitoring, maintenance, environmental controls and other necessary infrastructure. (Figure 1).

Landfill construction will proceed progressively in a series of cells, generally from north-to-south (Figure 1). The former quarry floor will be backfilled to within about 30 to 40 metres below ground surface with engineered fill, and then a Generic Design Option II – Double Liner system (as specified by the Ministry of Environment, Conservation & Parks in the Landfill Standards under O. Reg. 232/98; see Figure 2) will be constructed across the bottom and up the sides of the landfill to contain and collect leachate (Figure 3). Up to 850,000 tonnes per year of solid, non-hazardous waste, and up to 250,000 tonnes per year of daily/intermediate cover soils<sup>1</sup> will then be placed and compacted above the liner in a series of small working areas approximately 0.2 ha in size at any given time, in order to minimize the exposed waste. Waste will be covered with soil on a daily basis, and a final cover with vegetation will be applied as the landfill reaches its final height, which peaks at about 15 m above ground (Figure 4). A landfill gas collection system will also be installed as the landfill/cell development progresses.

Most of the supporting infrastructure for the landfill will be located in the buffer area along the northern site perimeter, including the leachate and gas treatment plants. Leachate collected from the liner system will be treated on-site and the clean effluent from the treatment plant will be discharged into the Patterson-Robbins Drain next to the treatment plant. Clean precipitation and groundwater that has not come into contact with waste will be segregated and treated in stormwater management pond before being discharged from the site (Figure 1). Landfill gas will be collected in a network of extraction wells and pipes. Initially the landfill gas will be flared (combusted), but when the quantities permit the gas will be beneficially utilized as a renewable fuel.

The site will be open for waste deliveries from 7:00 a.m. to 5:00 p.m. on weekdays and from 7:00 a.m. to 1:00 p.m. on Saturdays but closed on Sundays and statutory holidays. On-site construction activities may start up to one hour before opening and continue up to two hours after closure. The primary designated haul route (i.e., for all waste trucks except deliveries from the local area, (if any) is from Highway 401 north along County Road #6, then west into the quarry property; trucks will then follow a newly constructed haul route across the quarry site to a landfill site entrance at the northwestern corner of the site (Figure 5). Vehicle traffic, including waste trucks as well as construction vehicles and staff, is expected to average approximately 210 trips per day.

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<sup>1</sup> The daily/intermediate cover soil could consist of acceptable and suitable waste soils, and would be reported as waste, so the total reported waste receipts could be up to 1,100,000 tonnes per year.



Nuisance controls will include speed enforcement, regular haul road cleaning (on- and off-site), litter fencing and pick-up, and bird/pest management, with a public complaint reporting and response system.

There will be monitoring programs for equipment operations, leachate, groundwater, surface water, air emissions, gas, noise, and particulates (dust).

The landfill is anticipated to receive waste for approximately 20 years commencing in about 2023. After closure, maintenance and operation of the relevant environmental controls and monitoring will carry on during the post-closure period, until there is no further risk of environmental contamination. The end-use is assumed to be passive green space and agriculture, but the design is flexible to accommodate other potential end-uses.

The odour assessment considered a waste filling rate of 850,000 tonnes per year of solid, non-hazardous waste, of which 70% consisted of biodegradable material. This waste was assumed to be distributed evenly throughout the landfill over the course of the 20-year lifespan, with filling occurring for approximately 5 years within each Stage, as follows:

- **Stage 1:** 2023-2027;
- **Stage 2:** 2028-2032;
- **Stage 3:** 2033-2037; and,
- **Stage 4:** 2038-2042.

Each Stage of the landfill will accommodate approximately 5 cells. The gas collection system consisting of both vertical and horizontal extraction wells will be progressively installed in each cell as the cells are developed and filled. The landfill gas collection system was assumed to have an 85% collection efficiency for Stages of the landfill under final cap, and conservatively assumed to be 50% for the current active Stage. All collected landfill gas was assumed to be combusted in an enclosed flare. Although the active face (working area) of the landfill is normally approximately 2,000 m<sup>2</sup> (0.2 ha) in size, the assessment also considered a maximum active face size of 4,000 m<sup>2</sup> (0.4 ha) as a contingency measure.

The odour assessment also considered the presence of a waste soil storage pile with a footprint area of up to 32,500 m<sup>2</sup>, present in one of two locations, depending on the current Stage.

The leachate plant will be located to the northwest of the landfill area. The leachate plant will consist of a 3,000 m<sup>2</sup> aeration pond, a 15,500 m<sup>2</sup> raw leachate holding pond, a leachate treatment building, a 2,000 m<sup>2</sup> effluent holding pond, and a 4,100 m<sup>2</sup> polishing wetland.



## 4 ENVIRONMENTAL ASSESSMENT CRITERIA & INDICATORS

The environmental assessment criteria, as approved in the ToR, are tabulated in **Appendix B**, Table B-1. In the table, check marks indicate which technical studies are assigned primary (“lead”) responsibility for assessing each of the criteria.

Furthermore, the criteria for this EA were designed to be cross-disciplinary to permit an assessment of cumulative effects. Table B-2 in **Appendix B**, from the ToR, illustrates some (though not necessarily all) of the key interconnectivities between the studies. As a result, this study provides input/data to additional environmental criteria that will be addressed through studies conducted by other experts including (but not limited to):

- Agricultural;
- Ecology;
- Economic/Financial;
- Human Health; and,
- Social/Cultural.

This odour assessment provides key input to several of the EA criteria related to potential nuisance effects at off-site receptors, as discussed further below.

Indicators identify how the potential environmental effects will be measured for each criterion. Following are the indicators that were applied to each of the primary EA criteria addressed in this assessment:

**Table 1:** Environmental Assessment Indicators

EA Criteria	Proposed Indicators/Measures
<b>Effects due to exposure to air emissions</b>	Ontario Regulation 419 Standards and Guidelines, Ambient Air Quality Criteria, Canadian Air Quality Objectives (CAAQS) and MECP Guidance Documents (Odour)
<b>Effects due to fine particulate exposure</b>	Ontario Regulation 419 Standards and Guidelines, Ambient Air Quality Criteria, Canadian Air Quality Objectives (CAAQS) and Canada Wide Standards (PM <sub>2.5</sub> )

Regulation 419/05 (Reg. 419) provides air quality standards for use in Ontario. However, Reg. 419 does not include a standard for “odour” as a mixture of compounds. According to Section 14 of the Ontario Environmental Protection Act, an odour is deemed to be a nuisance if it is detected and considered to be unpleasant. The MECP does provide some guidance regarding the assessment of odour impacts in their document “Methodology for Modelling Assessments of Contaminants with 10-Minute Average Standards and Guidelines under O. Reg. 419/05”, dated September 2016. This guidance document indicates that odour concentrations need only be assessed at odour-sensitive receptor locations, such as residences, commercial buildings, and outdoor parks and recreation areas. As well odour impacts that are greater than 1 odour unit (OU) per cubic metre (m<sup>3</sup>) are considered acceptable at sensitive receptor locations, as long as the frequency of exceedance is less than 0.5% of the time.





An odour unit is defined as the quantity of odourous substance that, when dispersed in 1 m<sup>3</sup> of odour free air, becomes just detectable by a “normal” human observer whose sensitivity to the odorant represents the mean of the population. The average odour detection threshold is 1 OU/m<sup>3</sup>, although odours at this level are not necessarily a nuisance. Odour concentrations that may cause a complaint due to their ability to annoy typically range from 3 to 5 OU/m<sup>3</sup>. Through RWDI’s experience with other landfills in Southern Ontario, the objectionable level for odour was generally in the range of 3 to 5 OU/m<sup>3</sup>. These levels are more closely related to public complaints. For the purposes of this assessment, the predicted site-wide odours from the Southwestern Landfill operations were compared to both the 1 OU/m<sup>3</sup> detection threshold and the 3 OU/m<sup>3</sup> and 5 OU/m<sup>3</sup> annoyance thresholds.

Although certain contaminants known to be present in the landfill gas (LFG), such as hydrogen sulphide, have odour-based standards under O. Reg. 419, these standards are not applicable to the overall mixture of compounds that form the LFG odours. Comparisons of the impacts from individual contaminants to their odour-based O. Reg. 419 Standards are provided in the companion document – Air Quality Report, Landfill Gas Study. Odours are generally best evaluated by the human response to smell (olfactory response).

## 5 STUDY DURATIONS

Two main study durations (or time frames) for this proposed landfill have been identified in the ToR:

<b>Operational Period</b>	The time during which the waste disposal facility is constructed, filled with waste, and capped. These activities are combined since they occur progressively (i.e., overlap) on a cell-by-cell basis, and they have a similar range of potential effects (e.g., there is heavy equipment active on the site).
<b>Post-Closure Period</b>	The time after the site is closed to waste receipt. Activities are normally limited to operation of control systems, routine property maintenance and monitoring, and thus have a more limited range of potential effects.

The approved EA Criteria located in Table B-1, **Appendix B** includes the relevant study duration(s) or time periods associated with each of the criteria used in this assessment.

The odour study considered both the operational period and the post-closure period, assessed under the following scenarios:

- Stage 1: 2027;
- Stage 3: 2037;
- Stage 4: 2042; and,
- Post-Closure: 2043

The final year of operation in each Stage of the landfill was considered, as the waste in place and thus the gas volumes produced in the landfill mound by anaerobic decomposition would be greatest during the final year of activity. The post-closure period assessed the first-year post-closure, as the produced landfill gas volumes would be greatest at this time.



## 6 STUDY AREAS

For the purposes of this EA, three general study areas were established in the ToR:

<b>On-Site and in the Site Vicinity:</b>	<i>On-site</i> includes the proposed waste disposal facility plus the associated buffer zones. <i>Site vicinity</i> is the area immediately adjacent to the waste disposal facility property that is directly affected by the on-site activities. Its size is variable depending on the particular criteria being addressed.
<b>Along the Haul Routes:</b>	The primary route along which the waste disposal facility truck traffic would move between a major provincial highway and the proposed waste disposal facility site entrance, plus the properties directly adjacent to these roads.
<b>Wider Area:</b>	The broader community, generally beyond the immediate site vicinity. Depending on the particular criteria this may include neighborhoods, local municipalities, the Oxford County, or the Province of Ontario.

The tables of approved EA Criteria in **Appendix B** indicate the relevant study area(s) associated with each of the criteria in this assessment.

Although these three general study areas were common across all the studies, their actual physical boundaries were not necessarily identical for every study or criterion; a flexible approach was used, and the study area boundaries were adjusted as the work progressed to ensure that they adequately encompassed the significant effects of the proposed landfill.

For this assessment, the final study area considered on-site and in the site vicinity. For the purposes of this study, the on-site and in the site vicinity area extends to approximately 5 kilometres from the proposed landfill. This is based on the maximum extent of air quality effects that can be anticipated. Since there are no emissions of equivalent (i.e., similar) odours from the existing Carmeuse site, the Carmeuse site will be included in the receptor grid used in the predictive modelling. The receptor grid used for the odour modelling is illustrated in Figure 6.

Where appropriate and relevant, common receptor points were also selected collaboratively by the technical experts so that the potential overlapping, or cumulative effects of the proposed landfill could be assessed at these common receptor points. Of the 50 common receptor points selected, a total of 43 were identified as relevant receptors for the Air Quality discipline. An additional receptor point called ZOR-13, was not identified as a receptor for air quality but has been included at the discretion of the air quality team. Only receptors representing residential locations or other locations where human activity regularly occurs were used to assess compliance with the criteria as discussed in Section 4. The common receptor points for air quality used for the odour modelling are illustrated in Figure 7.



## 7 METHODOLOGIES

The following section outlines the key items that will be used to assess the baseline conditions, future (build) and post closure predicted impact scenarios:

- Estimate the level of odour emissions from proposed waste disposal facility operations;
- Estimate the amount and quality of gas emissions from the proposed waste disposal facility operations, considering the capture rate for the proposed landfill gas collection system and related odour emissions; and
- Air dispersion modelling to simulate the effects of the proposed waste disposal facility compared to the baseline (existing before proposed waste disposal site) conditions, predicting odour at critical receptor points in the site vicinity.

The sections below outline the detailed approach including data to be collected, locations, and methodologies. For the odour assessment, the following scenarios will be examined:

- Baseline conditions;
- Up to three future operating scenarios, representing different phasing of the proposed site, based on our review of multiple possible scenarios developed by Walker; and
- Post-closure scenario.

This odour study defines and documents the potential impact on the atmospheric environment from the proposed landfill, including the potential effects, mitigation, and net effects.

Although exposure to odours does not necessarily relate to a health risk to individuals residing adjacent to a landfill, the odours can potentially become a considerable nuisance. Site-wide odours from the landfill operation, including landfill, leachate, and waste soil odours, have been evaluated due to their potential for nuisance impacts on the environment surrounding the landfill. Although these odours are distinct from one another, as a conservative approach they have been treated as cumulative odours for the purpose of this odour study.

The odours from the landfill itself are based on a mixture of compounds contained within the landfill gas and surface emissions (e.g., active face odour). The odours from other landfill-related sources are based on a mixture of compounds contained in the leachate area sources and in the waste soil piles.

Potential odour sources were identified based on data collected from other landfill sites within the Province of Ontario and the review of the background information on the proposed operational plans including technical support documents. Typical odour sources are discussed in the following section.



## 7.1 Emission Sources

Under normal operating conditions, solid waste landfills have the potential to produce odours from several areas, including:

- Landfill gas (LFG) and waste odours from the landfill and waste acceptance activities: working face, interim cover areas, final cap areas, waste transport, excavation of exposed waste, and seepage through the landfill cap;
- Leachate odours from the leachate collection, storage and treatment system; and,
- Hydrocarbon odours from the use of contaminated soils as cover materials.

Each of these odour emission sources is discussed in the following sections.

### 7.1.1 Landfill Mound under Final Cap

The landfill mound under final cap is the portion of the landfill where waste is no longer being deposited. This area is characterized by the presence of a landfill cap and LFG collection system.

Odour from the landfill mound under final cap results from the fugitive emissions of LFG released through the surface of the landfill. The LFG collection system in the final cap area of the landfill serves to apply a vacuum and extract the LFG from the mound, thus reducing the amount of LFG available to escape through the surface of the mound. In addition, the cap material filters and limits the ability of the LFG to be released through the surface of the landfill. However, even with the LFG collection system and cap in place, some LFG can be released to the atmosphere from seepage through the landfill cap soils. The overall LFG collection efficiency from areas under final cap is assumed to be 85%, with the remaining 15% of the gas released through the surface of the landfill. The final cap area was included in the quantitative assessment.

### 7.1.2 Active Stage (Interim Cover Area)

The active stage of the landfill is the area where waste has been deposited within the modelled year. The active stage is characterized by the presence of an interim cover. The active stage does not have a completely installed LFG collection system, therefore only collecting the LFG with a collection efficiency of 50%. Although some cells within of a given stage of the landfill may be under final cap for the purposes of the assessment, the entire stage was assumed to be under interim cover as a conservative approach. The interim cover area was included in the quantitative assessment.



### **7.1.3 Active Working Face**

The active face is the area where landfilling is actively occurring, where fresh waste is deposited during normal daily operations. Odours from the active face include contributions from the waste itself, as well as LFG seepage from underlying aged waste. Under normal operations, the typical active face would be approximately 2,000 m<sup>2</sup> in size; however, as a contingency, allowances have been made for an active face of up to 4,000 m<sup>2</sup> if required on a temporary basis. As a modelling conservatism, the larger active face area of 4,000 m<sup>2</sup> was included in the quantitative assessment.

### **7.1.4 Waste Transport**

Waste hauling trucks arriving or leaving the site have the potential to be odorous. The odour levels from individual vehicles vary and are dependent on the operator and type of waste being received. When travelling along the off-site haul routes any potential odours from these vehicles will be transitory and are not expected to be significant at any single receptor location. When on-site, emissions from the waste vehicles are typically small relative to the overall landfill operation, and as such, were not considered in the dispersion modelling assessment. Instead, this activity is best assessed through the development of Best Management Practices to minimize potential odour impacts, as outlined in Section 11.2.

### **7.1.5 Excavation of Exposed Waste**

On occasion, it may become necessary to excavate exposed waste at the landfill for purposes such as installation of a landfill gas well. This activity is expected to occur infrequently.

The process of excavation produces odours from two sources – the exposure of partially decomposed waste and the release of LFG from the mound. Excavating through the landfill cover, especially the final cap, opens a conduit for this normally contained LFG to escape untreated directly into the atmosphere. Excavation through landfill cover or final cap represents an upset condition, and as such, was not considered in the quantitative assessment. Instead, this activity is best assessed through the development of Best Management Practices to minimize potential impacts, as outlined in Section 11.2.

### **7.1.6 Cracks/Fissures in Landfill Cap**

The final cap of the landfill limits the migration of LFG through the surface of the landfill. However, cracks and fissures can form in this layer, allowing LFG to pass through unchecked. These cracks and fissures can form for a variety of reasons, including the effect of freeze/thaw cycles, erosion due to surface water runoff, and heavy equipment operating on the capped area. These cracks and fissures in the landfill cap represent upset conditions, and as such, were not considered in the in the quantitative assessment. Instead, this activity is best assessed through the development of Best Management Practices to minimize potential odour impacts, as outlined in Section 11.2.



### **7.1.7 Leachate Collection System**

Leachate produces a strong, unpleasant odour that is distinct from the LFG odours. The leachate collection mains are placed under negative pressure so that no odours escape from the manholes or other open points in the leachate management system. All manholes were assumed to be sealed and the leachate collection system was assumed to be under negative pressure with collected gases diverted to the flare for combustion, and Walker will have an inspection and maintenance program in place to ensure that the system is operating as designed. The leachate collection system was therefore excluded from the quantitative assessment.

### **7.1.8 Leachate Treatment System**

The leachate plant located to the northwest of the landfill area consists of an aeration pond, a raw leachate holding pond, a leachate treatment building, an effluent holding pond, and a polishing wetland. Both the aeration pond and the raw leachate holding pond are area sources of leachate odours, which were included in the quantitative assessment. The leachate treatment building was assumed to be placed under negative pressure and include appropriate controls such that odour emissions from this operation are negligible relative to the other leachate sources. The effluent holding pond and polishing wetland contain treated leachate and are not expected to be odourous so were excluded from the quantitative modelling.

### **7.1.9 Leachate Seepage**

Leachate seepage occurs when leachate “breaks through” the cap of the landfill and pools on the surface. Leachate seepage can occur due to poor drainage, cracks and fissures in the landfill cap, or blockage of the leachate collection system. Leachate seepage represents an upset condition and as such was not considered in the quantitative assessment, instead, this activity is best assessed through the development of Best Management Practices to minimize potential odour impacts, as outlined in Section 11.2.

### **7.1.10 Contaminated Soil Stockpiles**

The landfill would receive contaminated soil, requiring disposal at an approved facility, from off-site locations for use as daily cover. Some of this soil is petroleum fuel-contaminated and contains fuel-related VOCs such as benzene and other light aromatics, which can be odourous. The contaminated soil odours are distinct from landfill odours. The contaminated soil will be stockpiled in one of two locations, located to the northwest (S1-wsoil) or west central (S3-wsoil), each with a maximum footprint area of 32,500 m<sup>2</sup> as shown in Figure 8.

### **7.1.11 Compost Spreading**

No composting of organic matter will be carried out on site, but finished and cured compost may be trucked in and occasionally spread on top of the clay cap to facilitate vegetative growth on the landfill mound. This activity is intermittent in nature and produces odours similar to the background odour from agriculture farming in the area; therefore, it was not included in the quantitative odour assessment.



## 7.2 Assessment Scenarios

The assessment of odour impacts resulting from the proposed landfilling activities focused on emissions generated from the following identified emission sources:

- landfill active face;
- fugitive LFG releases from various landfilling stages under interim and final cap;
- waste soil storage piles;
- raw leachate storage pond; and,
- leachate aeration pond.

The potential odour impacts from the significant odour sources were assessed at various stages of landfill operation, as described in Section 5. The future build scenarios were assessed by determining odour associated with the significant emission sources in each scenario and determining the potential off-site impacts through dispersion modelling. For the purposes of this evaluation, it was assumed that there were no existing sources of landfill related odours. Therefore, the baseline scenario and the future no-build scenarios for the odour study were not assessed through dispersion modelling as no landfill odour emission sources would be present.

An overview of the modelling scenarios assessed in this study is presented in **Table 2**. The locations of these sources are presented in Figure 8.

**Table 2:** Summary of Modelled Emission Scenarios

Scenario Assessed	Sources Modelled															
	Stage 1 Active Face	Stage 2 Active Face	Stage 3 Active Face	Stage 4 Active Face	Stage 1 Interim Cover	Stage 2 Interim Cover	Stage 3 Interim Cover	Stage 4 Interim Cover	Stage 1 Final Cover	Stage 2 Final Cover	Stage 3 Final Cover	Stage 4 Final Cover	S1-Contaminated Soil	S3-Contaminated Soil	Aeration Pond	Raw Leachate Pond
Stage 1: 2027	X				X								X		X	X
Stage 2: 2032		X				X			X				X		X	X
Stage 3: 2037			X				X		X	X				X	X	X
Stage 4: 2042				X				X	X	X	X			X	X	X
Post-Closure: 2043									X	X	X	X			X	X



## 7.3 Emission Calculations

### 7.3.1 Final Cap Areas

The odour emission rates for fugitive emissions of LFG from the final cap area of the landfill mound were based on the quantity of LFG released by the landfill and the odour concentration in this gas.

The odour emission rates were estimated using emission factors based on LFG generation rates and the MECP recommended odour concentration of 10,000 OU/m<sup>3</sup> of landfill gas, outlined in the MECP's "Interim Guide to Estimate and Assess Landfill Air Impacts" (MECP 1992).

The U.S.EPA's Landfill Gas Emissions Model (LANDGEM) model was used to calculate landfill gas generation for each stage of the landfill for each of the assessment years. Inputs to LANDGEM include the methane generation rate (k), the methane generation potential of the waste (Lo), the concentration of methane in the LFG, and the waste deposition history of the landfill. The k and Lo values were obtained from the MECP's "Interim Guide to Estimate and Assess Landfill Air Impacts". The methane concentration was based on the maximum methane concentration from samples of raw landfill gas at the Walker South and East landfills in Niagara Falls, Ontario. A filling rate of 850,000 tonnes of waste per year for the 20-year life of the landfill was entered into LANDGEM.

The total landfill gas in m<sup>3</sup>/year, output from the LANDGEM model, was then adjusted by a factor of 70% to account for the expected proportion of biodegradable material in the waste. Eighty-five percent of the generated LFG was assumed to be collected with the remaining 15% emitted through the final cap area. The 10,000 OU/m<sup>3</sup> emission factor was applied to the quantity of LFG released to develop an odour emission rate. The total footprint area of each landfill stage was used to calculate the odour flux rate through the final cap, in terms of OU/m<sup>2</sup>/s.

Please refer to **Appendix C** for full details on the odour emission calculations for the final cover areas and all other modelled odour emission sources.

### 7.3.2 Other Odour Sources

Emissions from all other sources were based on measured odour emission rates from the Walker East Landfill, in Niagara Falls, Ontario in support of the Walker South Landfill approval. Therefore, no emission calculations were conducted for these sources except for scaling of the emission flux rates on **Appendix C** to the proposed areas for this Project.

Please refer to **Appendix C** for full details on the odour emission rates used for the other odour sources.





## 7.4 Dispersion Modelling

The odour impacts from the proposed landfill operations were determined using a dispersion model and reasonable maximum emission rates. Dispersion modelling was performed using the U.S. EPA's AERMOD dispersion model (AERMOD) to predict concentrations of odour emitted from the landfill operations at various receptors in the vicinity. The AERMOD model is an advanced dispersion model that has been approved for use in Ontario by the MECP. AERMOD is a steady-state Gaussian model that is capable of handling multiple emission sources. Within the model, receptor grids as well as discrete receptor locations of interest can be considered. The modelling assessment was conducted in accordance with MECP Guideline A11: "Air Dispersion Modelling Guideline for Ontario", February and the MECP Technical Bulletin "Methodology for Modelling Assessments of Contaminants with 10-Minute Average Standards and Guidelines under O. Reg. 419/05", dated September 2016.

The odour emission rates listed in **Table 2** of Appendix C-1 were applied in the AERMOD dispersion model to predict the off-site odour concentrations. The frequency of time that the predicted concentrations exceeded the 1 OU/m<sup>3</sup> detection threshold and the 3 OU/m<sup>3</sup> annoyance threshold were also calculated from the dispersion modelling results.

Additional elements of the dispersion modelling assessment are discussed in the following sections.

### 7.4.1 Sources Modelled

The sources included in the dispersion model were the landfill active face, the interim cover areas, the final cap areas, the waste soil storage piles, the raw leachate storage pond, and the leachate aeration pond. Each of these sources were modelled as an area source. The landfill active face, which moves throughout the entire landfill over the course of its life, was modelled in a single worst-case location (i.e., closest to the landfill property line and closest to the nearest residential receptor) during each landfill stage. All modelled sources were assumed to emit maximum odour emissions concurrently throughout the entire modelled period.

For the majority of the landfill life, landfilling operations will be occurring below grade although the final landfill mound will extend 15 m above grade. Sensitivity testing was conducted with landfill sources at grade, as well as at elevated heights of 15 m (top of landfill mound above grade) and 7.5 m (mid-height of landfill mound). The worst-case results occurred with the landfill at grade, so all landfill area sources were modelled at grade.

The locations of all modelled sources are shown in Figure 8.

### 7.4.2 Meteorological Data

Five years of local meteorological data (2013-2017) were used in the AERMOD model. The meteorological data set was developed by the MECP's Environmental Monitoring and Reporting Branch (EMRB) and provided on January 21, 2019. The data set was based on wind-sector dependent land use specific to the landfill site, surface meteorological data collected from Environment and Climate Change Canada's London Airport station, and upper air meteorological data from the U.S. National Weather Service's Detroit station. The data set provided by the EMRB was used directly in the model, with no changes or alterations conducted by RWDI.

The modelling considers a five-year set of hourly meteorological data. Predicted impacts are based on the worst-case conditions within this data set. The future wind climate and meteorological conditions are not expected to change to a degree that would affect the odour assessment.



### 7.4.3 Area of Modelling

Typically, when modelling odours, impacts are assessed only at odour sensitive receptor locations, not at the property line. In the MECP guidance, odour sensitive receptors are defined as “any locations where and when human activities regularly occur”. All common receptor points identified for the EA were included in this study, however, only receptors representing residential locations or other locations where human activity regularly occurs were used to assess compliance with the criteria. For all cases, humans were conservatively assumed to be present at these receptors for 24-hours per day. These discrete receptors were modelled at flagpole heights of 1.5 m above grade to represent the normal breathing zone. The locations of these discrete receptors are shown on Figure 7.

In addition, the modelling was performed using a receptor grid covering the Site-Vicinity Study Area to produce isopleths of predicted odour concentrations. This receptor grid covers the lands within approximately 3 to 5 km of the site emission sources. These receptor grid results were only used for visual representation of the predicted odour impacts. The grid results were not used for comparison to the odour guidelines; rather, the compliance assessment was based on the sensitive receptor results.

### 7.4.4 Terrain Data

Terrain information for the area surrounding the proposed landfill was obtained from the MECP Ontario Digital Elevation Model Data web site. The terrain data is based on the North American Datum 1983 (NAD83) horizontal reference datum. These data were run through the AERMAP terrain pre-processor to estimate base elevations for receptors and to help the model account for changes in elevation of the surrounding terrain. The base elevations for the landfill sources were based on elevation drawings from the Facility Characteristics Assumptions (FCA) report supplied by Walker (since incorporated into the accompanying Environmental Assessment Report, Section 7.2). The base elevations for the quarry extraction sources were obtained from figures provided by Carmeuse.

### 7.4.5 Building Information

The Building Profile Input Program (BPIP) is used to calculate the effects of building downwash on point sources, such as stacks. All sources in the odour study were modelled as area sources; therefore, building downwash is not applicable.

### 7.4.6 Averaging Periods Used

The results from the dispersion model, which represent a 1-hour averaging period, were converted to a 10-minute averaging period for comparison with the applicable odour guidelines. A conversion factor of 1.65 was used to convert 1-hour results to 10-minute averages, based on guidance provided in the MECP’s “Procedure for Preparing an Emission Summary and Dispersion Modelling Report”, dated March 2018.



## 8 DATA COLLECTION

Data used to quantify odour emissions from the site were collected either through published emission factors or field data from previous odour testing conducted at the Walker East and South landfills in Niagara Falls, Ontario. The following sections provide details regarding the data collection.

### 8.1 Background Data

#### 8.1.1 Emission Calculations

Background data used for the emission calculations included historical methane concentrations from the Walker East and South landfills, used in the LANDGEM model for the calculation of odour emissions from the final cap areas.

Please refer to **Appendix C** for full details on the odour emission calculations for the final cover areas and other area sources.

### 8.2 Field Data

No new field data was collected or utilized as part of the odour study. Emissions of odour from the landfill active face, landfill interim cover areas, the leachate aeration pond, the raw leachate holding pond, and the waste soil storage piles were based on previous source testing conducted at the Walker East Landfill in Niagara Falls, Ontario, as part of the Environmental Assessment for the Walker South Landfill. The odour flux rates from the Walker East Landfill testing were used directly in the dispersion modelling.

## 9 ENVIRONMENT POTENTIALLY AFFECTED BY THE UNDERTAKING

Section 6.1(2)(c)(i) of the Act requires a “description of the environment that will be affected or might reasonably be expected to be affected, directly or indirectly”. Section 8.2 of the ToR describes the methodology by which the environment potentially affected by the proposed landfill is to be developed, notably including both the existing environment as well as the environment that would be expected to exist in the future without the proposed undertaking (i.e., the environmental baseline conditions, or the “do nothing” alternative).



## 9.1 Baseline Assumptions

### 9.1.1 Land Use Forecast

A common set of assumptions were provided by MHBC Planning on behalf of Walker regarding the forecast land uses in the area, so that this study could reflect any reasonably foreseeable changes in the uses of the land on and around the proposed landfill site (including the expected ongoing operation of the quarries and lime plants in the vicinity of the site). These assumptions are detailed in Walker's Environmental Assessment Report, while a brief summary of the aspects relevant to this study follows.

In order to address cumulative effects, in accordance with the methodology set out in Section 8.2 of the Approved Amended Terms of Reference, this study will compare the potential effects of the proposed landfill at its different stages of development to the forecast baseline conditions at that same period (i.e., the "do nothing" alternative). In order to guide the forecasting of future baseline conditions, MHBC Planning on behalf of Walker has provided a set of working assumptions regarding future land uses (including community growth, other industrial activities such as quarrying, etc.) at the site, in the surrounding area and in the broader community (Landuse Planning Forecast Draft Report; October, 2016).

- Existing Conditions (Section 4.0);
- Aggregate Operations (Section 5.0); and
- Landuse Forecast (Section 6.0).

Based on the land use forecast, there are no new sources of landfill-related odours predicted to be developed in the future.

### 9.1.2 Climate Change Forecast

Another set of common assumptions that were established for the purpose of this EA is the potential for climate change, so that these could be considered in the individual studies of the potential effects of the proposed landfill. These assumptions are detailed in Walker's Environmental Assessment Report and basically adopt the guidance in the Ontario Ministry of Natural Resources and Forestry's Climate change projections for Ontario: An updated synthesis for policymakers and planners.

Minister's amendment #12 to the Approved Amended Terms of Reference required that climate change should be considered in this environmental assessment. The following table summarizes the mean climate change (temperature and precipitation) assumptions to be considered during this study, where relevant.



**Table 3:** Climate Change Forecast

	Temperature (°C)			Precipitation (mm)		
	Annual	Summer	Winter	Annual	Summer	Winter
<b>2011-2040</b>	+2.3	+2.0	+2.2	+52.0	-2.7	+28.3
<b>2041-2070</b>	+3.9	+3.2	+4.5	+87.0	-2.5	+34.9
<b>2071-2100+</b>	+4.8	+4.1	+5.5	+89.0	-4.4	+46.8

**Source:** McDermid, J., S. Fera and A. Hogg. 2015. Climate change projections for Ontario: An updated synthesis for policymakers and planners. Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, Ontario. Climate Change Research Report CCRR-44.

The Ministry of Natural Resources and Forestry document from which the data is sourced includes other information that can be used if and where appropriate in this and other studies.

The modelling considers a five-year set of hourly meteorological data. Predicted impacts are based on the worst-case conditions within this data set. The future wind climate and meteorological conditions are not expected to change to a degree that would affect the odour assessment.

## 9.2 Environmental Baseline Conditions

### 9.2.1 Existing Conditions

The odours produced by a landfill are distinctive. For the purposes of this evaluation, it was assumed that there are no existing sources of landfill related odours. Therefore, the background or baseline will assume no landfill related odours. Other odours within the immediate community will likely exist including agricultural emissions. Although agricultural odours can be related to landfill type odours, the study did not include farming activities as local background sources. The predicted odour levels from the proposed waste disposal site will evaluate the change in perceived odours from no odours (baseline) and will evaluate the potential for odour impacts based on the MECP's 1 OU target level and frequency of occurrence for odour events above 1 OU, 3 OU and 5 OU at sensitive receptor locations.

### 9.2.2 Future Baseline Conditions

No new sources of landfill-related odours are expected to be developed in the future; therefore, the future baseline conditions remain the same as the existing baseline with no sources of landfill-related odours.



## 10 EVALUATION OF THE PROPOSED LANDFILL

Section 6.1 (2)(c) and (d) of the Act, and the ToR, require an evaluation of:

- The effects that will be caused on the environment;
- The actions necessary to prevent, change, mitigate or remedy the effects on the environment; and
- An evaluation of the advantages and disadvantages (net effects) to the environment.

This section presents the assessment of these matters as it relates to the odour study and for each of the EA criteria

### 10.1 Effects due to exposure to air emissions

#### 10.1.1 Potential Effects

The maximum modelled off-site concentrations predicted at the property line of the landfill site for combined odours from all landfill-related operations are summarized in **Table 4**.

**Table 4:** Maximum off-site Odour Concentrations from Landfill Operations

Scenario	10-Minute Average Concentration (OU/m <sup>3</sup> )		
	All	Landfill Only	Leachate Only
Stage 1	29.6	7.1	29.6
Stage 3	29.6	9.4	29.6
Stage 4	29.6	11.8	29.6
Post Closure	29.6	1.8	29.6

**Table 5** lists the maximum predicted concentration associated with the landfill and leachate sources at any point offsite. The presented results represent the single highest concentration modelled over the five-year period, so all other predicted concentrations are less than this value.

The results for “All” represent the combined impact from all odour sources at the facility. “Landfill only” represents the combined impact from the landfill sources: the active face, interim cover area, final cap areas, and the waste soil pile, while “leachate only” represents the combined impact from the leachate sources: the aeration pond and the raw leachate holding pond. These results represent the odour impacts of each group assessed independently at their worst-case grid receptor. The location of the worst-case receptor may vary by group due to the location of the individual source within that group. These results cannot be summed to obtain the cumulative odour impacts but are a good indicator of the maximum contribution from each individual group.



The maximum overall predicted concentration from all odour sources at the facility is dominated by the leachate ponds due to their proximity to the property line. The elevated odour results are occurring in a localized area, adjacent to the leachate ponds. Odour levels decrease with increasing distance from the leachate ponds. Since the leachate ponds are present during all stages, the maximum predicted concentration is not expected to change over time. For this reason, the results for the “leachate only” group and the “all” group are identical.

The maximum predicted odour concentration occurring from the landfill sources are influenced by the proximity of these sources to the property line. The active face was generally the most dominant landfill source in causing off-site impacts. The active face was positioned in a worst-case location relative to the property line and the nearest residential receptors. The active face represents the landfill source with the highest emission flux rate (odour emissions per square meter), due to the deposit and handling of fresh waste, reduced gas collection efficiency, and a lack of cover material when receiving the fresh waste in this area. The predicted impacts from the landfill are expected to increase over time, as a result of increased waste present in the landfill in future years, which results in increased LFG generation, and thus increased odour emissions, from this source. Post-closure results decrease relative to the operational stages, since during the post-closure period all landfill areas are under final cap with full gas collection and the active face, interim cover area, and waste soil pile are no longer present.

Although the maximum predicted odour concentrations at the property line are predicted to exceed the 3 OU/m<sup>3</sup> annoyance threshold from time to time, the MECP guidance document indicates that odour concentrations need only be assessed at odour-sensitive receptor locations, such as residences, commercial buildings, and outdoor parks and recreation areas. Therefore, the assessment of odour impacts from the landfill operations at the odour-sensitive discrete receptor locations is discussed in the following section.

Dispersion modelling analysis was completed for odour at each of the identified air quality receptors. Some of the receptors represented residential locations, while others represented other key points of interest, such as intersections, wetlands, etc. These non-residential receptors often have residences in the vicinity, so they have been included in the modelling; however, the discrete receptor table below focuses on residential receptors only. The results for all modelled receptors for each scenario are presented in **Appendix D**. The maximum 10-minute average at the top 10 residential receptors for each stage and the number of hours per year above the 1 OU detection level are summarized in **Table 5**.

Detailed results for all discrete receptors over a five-year period are presented in **Appendix D**.



**Table 5:** Predicted Maximum 10-Minute Average Odour Concentrations at Residential Receptors

Receptor ID	Stage 1 (2027)		Stage 3 (2037)		Stage 4 (2042)		Post Closure (2043)	
	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU
ZOR-5	3.9	54	3.2	32	3.2	28	3.1	31
ZOR-6	3.4	74	3.4	56	3.4	50	3.4	56
ZOR-8	2.2	21	2.2	21	2.2	17	2.2	21
ZOR-9	2.8	13	2.8	12	2.8	11	2.8	12
ZOR-10	1.6	5	1.6	2	1.6	2	1.6	2
ZOR-11	2.2	19	2.9	96	1.7	13	1.7	4
SWO-1	1.7	13	2.9	42	1.7	22	1.6	5
SWO-2	3.1	27	2.2	26	3.3	49	2.2	13
SWO-3	2.8	25	1.8	12	2.0	32	1.8	8
SWO-10	1.3	1	2.1	12	1.0	0	1.0	0
SWO-11	1.4	8	2.3	21	1.4	8	1.2	1
SWO-12	1.8	7	2.4	16	1.9	13	1.3	3
SWO-14	2.3	17	1.5	6	1.9	15	1.6	6
SWO-15	2.2	11	1.4	3	1.6	8	1.5	3
SWO-16	2.1	11	1.4	3	1.5	3	1.4	2
ING-3	1.2	2	1.9	11	1.0	0	1.0	0

**Note:** Shaded values indicate values predicted to exceed 1 OU/m<sup>3</sup> greater than 0.5% of the time (greater than 44 hours per year).

The predicted concentrations at each of these receptors were below the annoyance threshold (3 OU) at all receptors except for ZOR-5, ZOR-6, and SWO-2. The highest odour concentration at a discrete receptor was predicted to occur in Year 2027 at ZOR-5 with a value of 3.9 OU. Receptor ZOR-11 was predicted to have the highest number of hours with predicted concentrations exceeding the 1 OU/m<sup>3</sup> threshold. Concentrations are predicted to exceed the 1 OU detection threshold concentrations at ZOR-11 for 96 hours (1.11% of the time) in Year 2037.

These maximum predicted odour results and frequencies of exceedance of the 1 OU/m<sup>3</sup> detection threshold are based on normal maximum operations with the working face of the landfill at the closest location relative to the nearest residential receptor locations. Under this scenario, the predicted odour impacts were predicted to exceed the odour detection threshold 1.11% of the time at the closest residential receptor. However, the active face of the landfill, which was shown to be a main source of odour impacts at ZOR-11, would be in this worst-case location for only a portion of the year. Therefore, it is expected that the actual frequency of odour impacts above the detection threshold to be less than the 96 hours per year predicted by the model.





In addition, some of the predicted concentrations greater than 1 OU/m<sup>3</sup> occur during the evening and overnight hours. The active face would have a daily cover applied during this time period, which will reduce the odour emission for this source by at least a factor of 2. It was conservatively assumed that the maximum active face odours would be emitted 24-hours per day. Therefore, in reality the odour occurrences are expected to be less frequent than the predictive analysis suggests.

The modelling considers a five-year set of hourly meteorological data for the period, 2013 to 2017. Predicted impacts are based on the worst-case conditions within this data set. The future wind climate and meteorological conditions are not expected to change to a degree that would affect the results of the odour assessment.

### 10.1.2 Potential for Cumulative Effects

As there are no other identified sources of landfill-related odours in the area, there is no potential for cumulative effects.

### 10.1.3 Additional Mitigation Recommendations

The odour assessment incorporated several mitigation measures that are part of the design of the proposed landfill. These emission control measures include the following:

- Development of an Odour Best Management Practices (BMP) Plan;
- Progressive installation of the LFG collection system;
- Flaring or otherwise combusting all collected LFG;
- Ensuring emergency measures are available should a power failure or lightning strike occur that disrupts the flare for an extended period of time (including notification to staff or alarm system);
- Maintaining the leachate collection system under negative pressure and sending the collected gas to the LFG collection system;
- Monitoring interim cover and final cap to minimize LFG leakage;
- Minimizing the size of the active face; and,
- Daily covering of the active face.

These mitigation measures were considered in the assessment and, as such, the predicted impacts presented in Section 10.1.1 incorporate the effect of these measures. In addition to these mitigation measures, the following additional mitigation strategies are recommended to further reduce odour impacts off-site. The recommended additional mitigation measures included the following:

- Using a cover or other control technologies to reduce the surface area of the two leachate ponds (the aeration pond and raw leachate holding pond) by a minimum of 30%; and,
- Avoid expanding the working face beyond 2,000 m<sup>2</sup> as a contingency when working in the northwestern portion of Stage 1 and the southern portion of Stage 4.

Dispersion modelling was conducted to assess the benefit in implementing these additional mitigation strategies for odour reduction and these results are presented in Section 10.1.4.



### 10.1.4 Net Effects

The maximum modelled off-site concentrations predicted at the property line of the landfill site for combined odours from all landfill-related operations with the additional mitigation recommendations noted in Section 10.1.3 in place are summarized in **Table 6**. Contour plots of maximum predicted odour concentrations across the entire receptor grid are presented in **Appendix E**.

**Table 6:** Predicted Maximum 10-minute Average Odour Concentrations from Landfill Operations with Additional Mitigation Measures

Scenario	10-Minute Average Concentration (OU/m <sup>3</sup> )		
	All	Landfill Only	Leachate Only
Stage 1	20.7	7.1	20.7
Stage 3	20.7	9.4	20.7
Stage 4	20.7	9.8	20.7
Post Closure	20.7	1.8	20.7

The predicted maximum 10-minute average at the residential receptors for each stage and the number of hours per year above the 1 OU detection level with the mitigation measures applied are summarized in **Table 7**.



**Table 7:** Predicted maximum 10-Minute Average Odour Concentrations at Residential Receptors with Additional Mitigation Measures

Receptor ID	Stage 1 (2027)		Stage 3 (2037)		Stage 4 (2042)		Post Closure (2043)	
	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU	Maximum 10-Minute Average Concentration (OU)	Number of Hours per Year >1 OU
ZOR-5	2.9	32	2.3	20	2.3	20	2.3	20
ZOR-6	2.4	41	2.4	31	2.4	33	2.4	31
ZOR-8	1.5	7	1.5	7	1.5	7	1.5	7
ZOR-9	2.0	4	2.0	4	2.0	4	2.0	4
ZOR-10	1.2	2	1.1	0	1.1	0	1.1	0
ZOR-11	2.0	13	2.9	93	1.7	8	1.2	1
SWO-1	1.7	10	2.6	41	1.4	17	1.2	1
SWO-2	2.6	23	1.7	22	2.9	42	1.8	9
SWO-3	2.4	18	1.4	9	1.6	25	1.4	4
SWO-10	1.2	1	2.1	12	0.9	0	0.7	0
SWO-11	1.3	5	2.1	18	1.1	3	0.9	0
SWO-12	1.6	6	2.1	15	1.7	10	1.0	1
SWO-14	2.0	11	1.1	1	1.6	11	1.2	3
SWO-15	1.8	7	1.1	0	1.2	5	1.1	0
SWO-16	1.8	5	1.1	1	1.1	1	1.1	1
ING-3	1.1	1	1.9	11	0.8	0	0.7	0

**Note:** Shaded values indicate values predicted to exceed 1 OU/m<sup>3</sup> greater than 0.5% of the time (greater than 44 hours per year).

The application of the additional mitigation measures reduces the maximum predicted concentration to below the annoyance threshold of 3 OU/m<sup>3</sup> at all residential receptors except for ZOR-11. The frequency of exceedance of the 1 OU/m<sup>3</sup> detection threshold is below 0.5% of the time (44 hours per year) at all residential receptors except for ZOR-11 where 93 hours per year >1 OU were predicted to occur.



# 11 MONITORING, CONTINGENCY & IMPACT MANAGEMENT RECOMMENDATIONS

## 11.1 Monitoring & Contingency Plans

Monitoring will aid in identifying and correcting problems before they cause off-site impacts. The following monitoring measures are recommended for the landfill facility:

- Development of Best Management Practices for odour monitoring which would include inspection of leachate collection manholes, cap integrity for cracks/fissures or other areas where LFG may be escaping from the landfill;
- Continuous monitoring for temperature and flow on the LFG flare to ensure proper operation; and,
- Immediate tracking of any strong odours noted on-site and off-site complaints. Document, address and investigate all odour complaints to determine odour source and prevent or minimize future off-site odour impacts.

Through the implementation of a monitoring program, Walker will be able to detect any unusual landfill gas emissions from the site. It is recommended that Walker develop a contingency plan to address any issues that may be detected. It is also recommended that Walker include possible process upsets due to unusually odourous waste loads and landfill /leachate gas collection system malfunctions in their contingency plan.

## 11.2 Impact Management

This section provides recommendations for managing any residual negative effects of the landfill expansion that cannot be directly mitigated.

Additional mitigation measures were included in the dispersion model and were found to reduce the predicted landfill related odour impacts. Some measures that may further reduce the impact of landfill related odour emissions, include:

- The landfill working face should be kept as small as practical to reduce emissions;
- Final cap or interim cover should be applied as soon as possible to reduce the potential for fugitive gas releases; and
- Regular inspections and maintenance of the landfill cap and interim cover areas should be conducted to reduce the cracks and fissures due to erosion and settling.

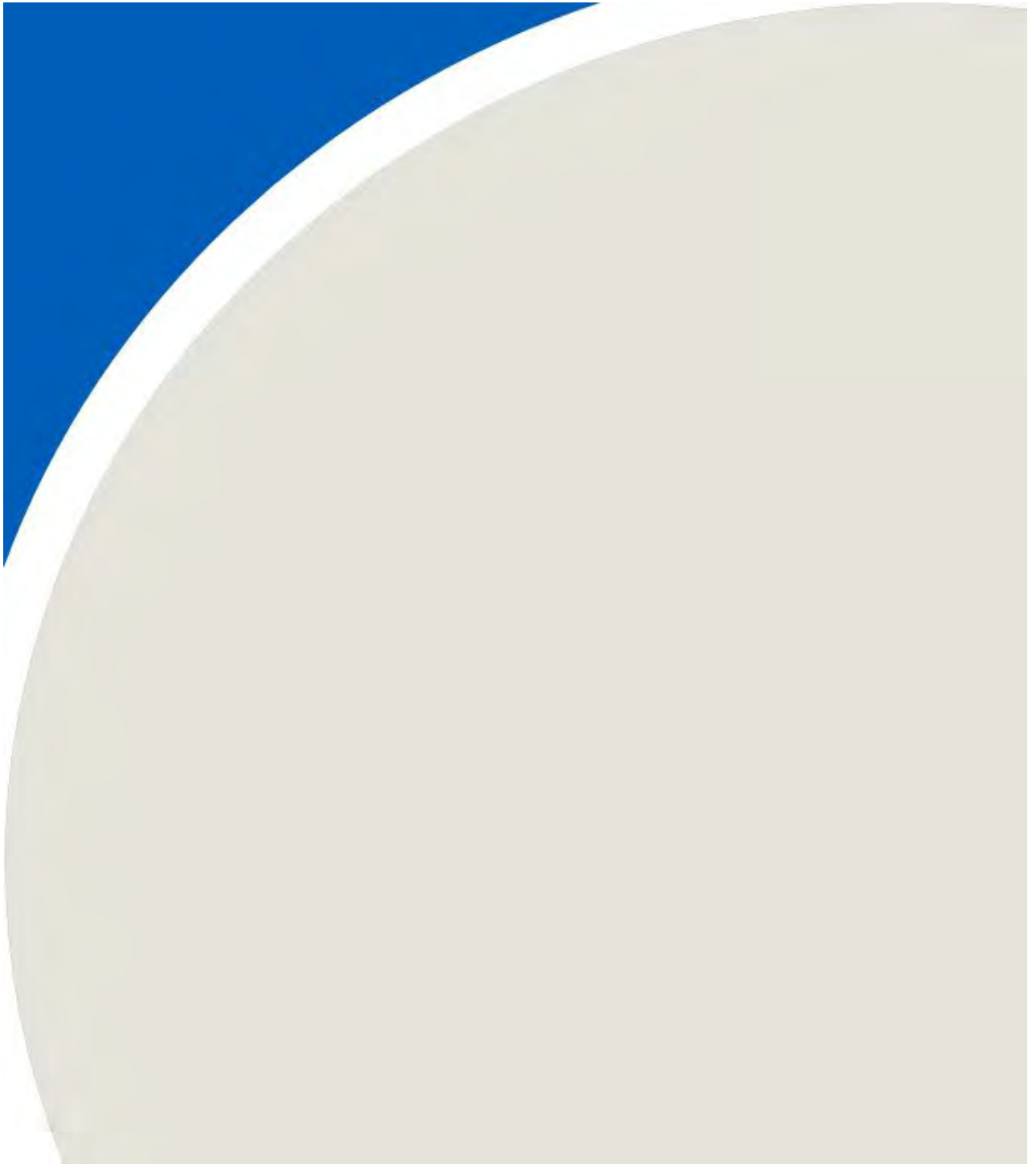
Although these measures were not quantified in the dispersion model, it can be intuitively determined that the odour impacts will likely be further reduced by some amount through the implementation of these measures.



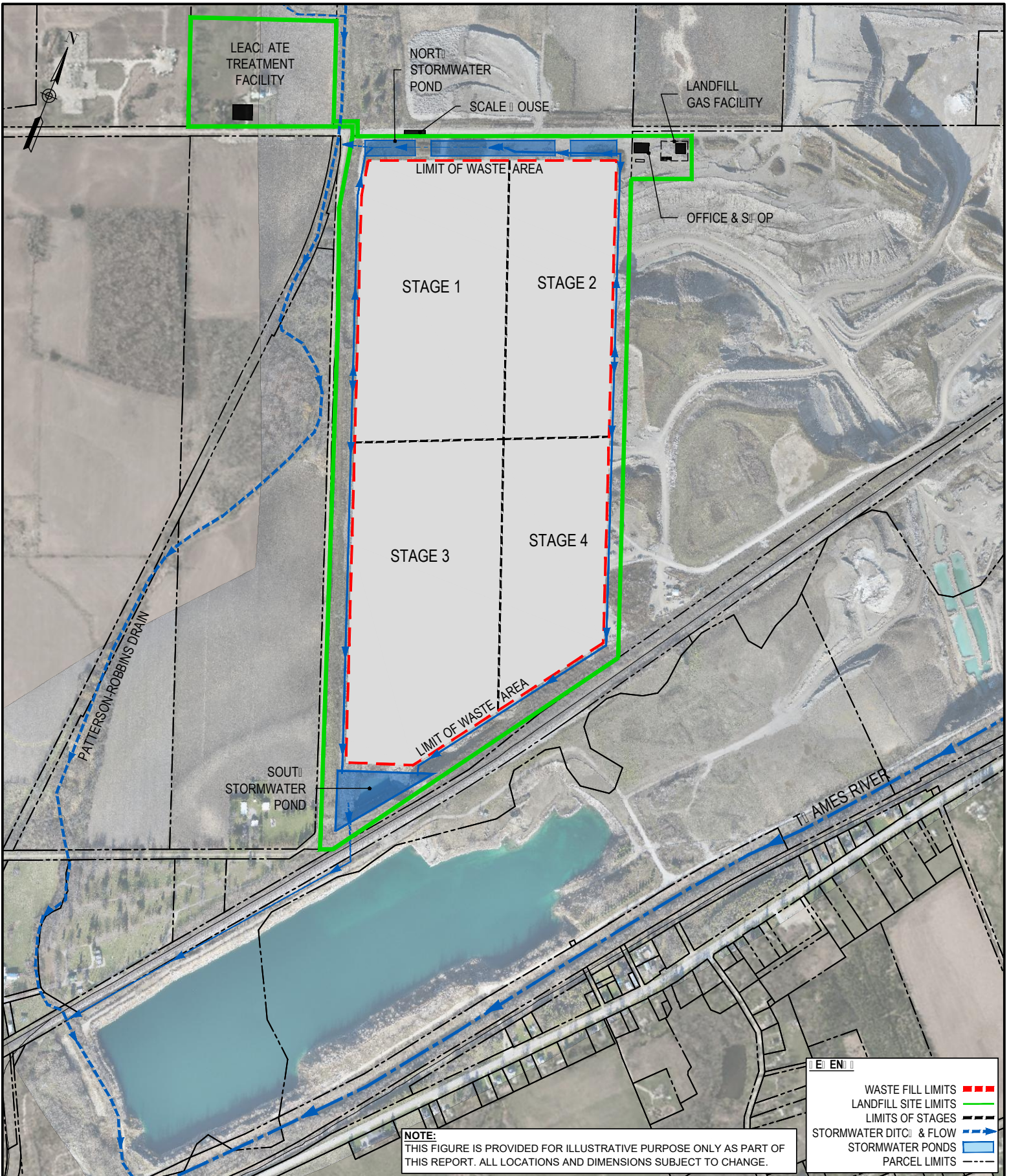
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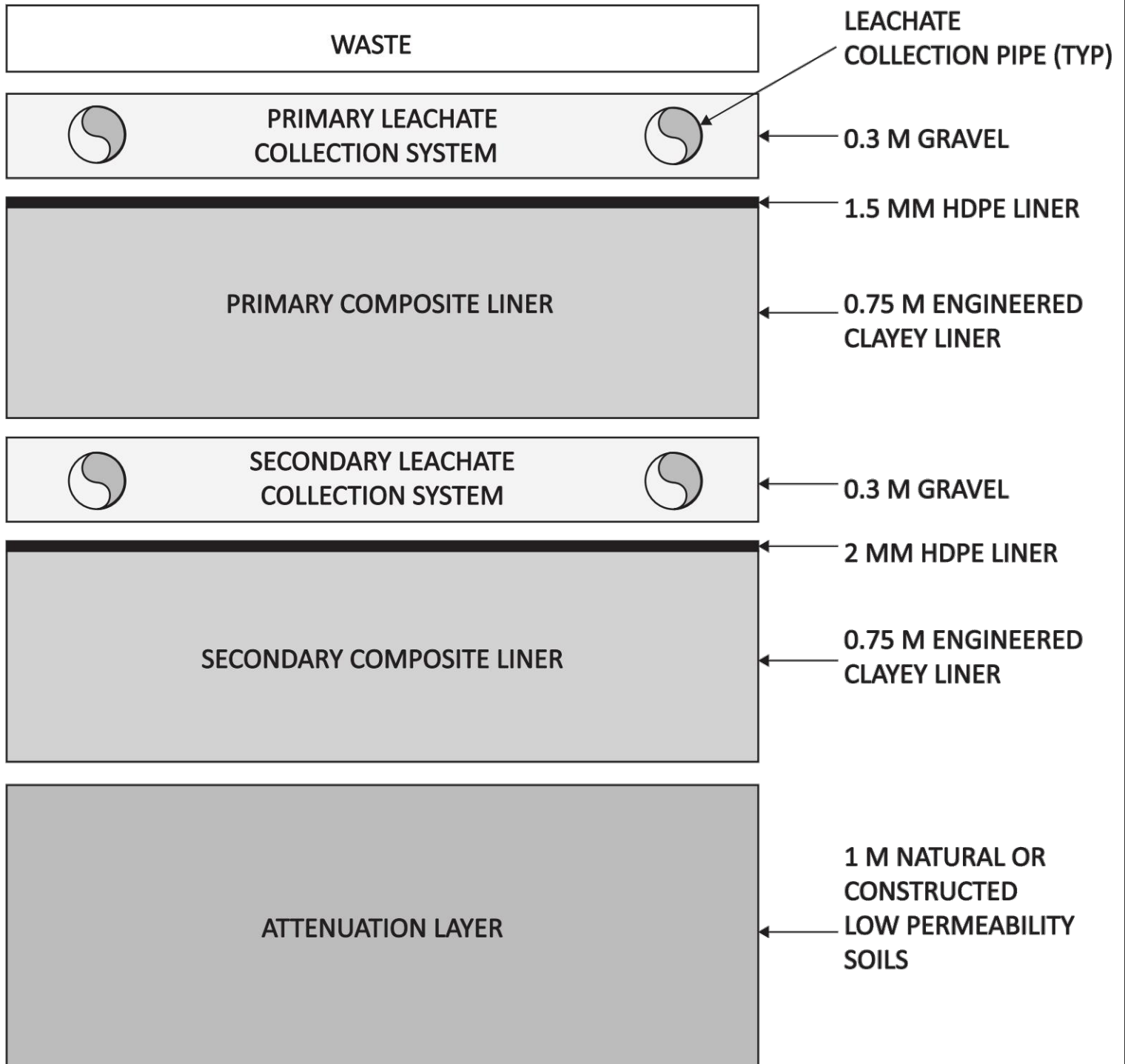
## FIGURES








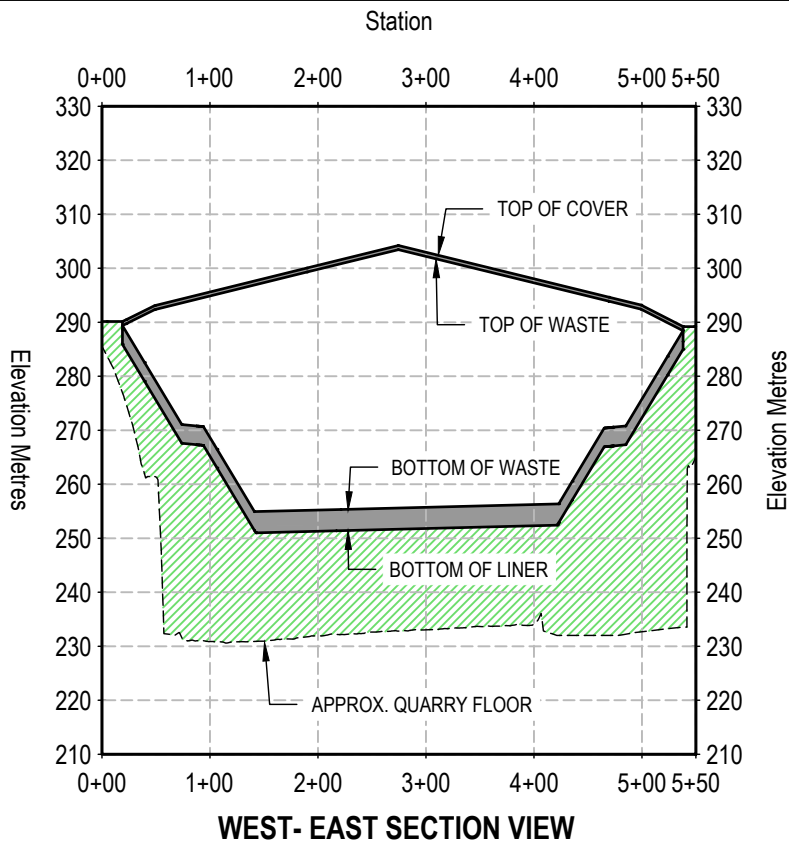
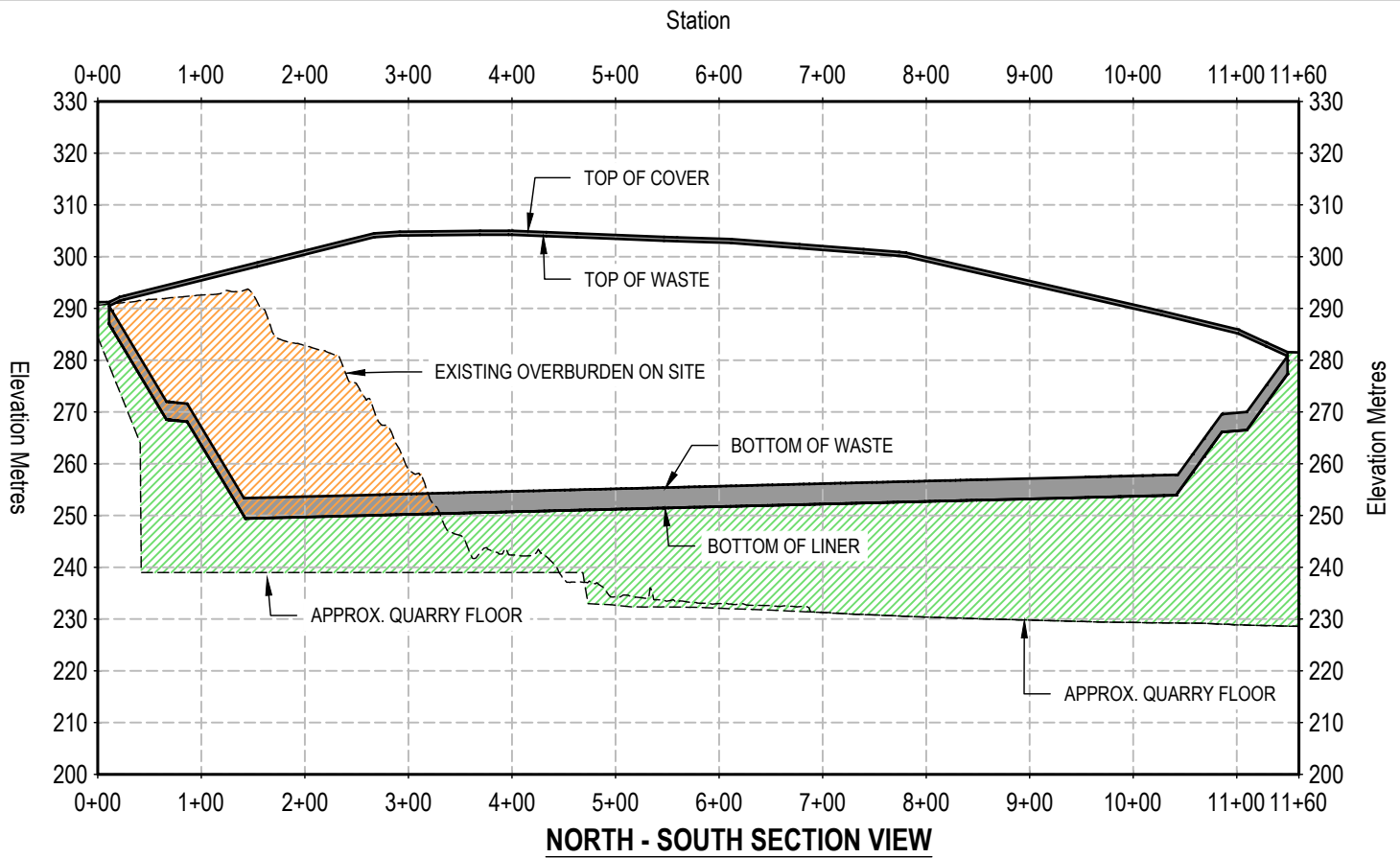
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	Drawing	SITE PLAN		Drawn	JThompson	Scale	1"=1000'
				Approved	DFry	Date (DD/M/YY)	01/JAN/20
						Drawing No.	Figure G




**NOTE:**  
THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar		
	Drawing	<b>LANDFILL LINER SYSTEM</b>		Drawn	TT	Scale	NTS	Date (p.m/y)	7 JAN 09
		Approved	DFry		Drawing No.	<b>Figure</b>		Revision No.	<b>C</b>

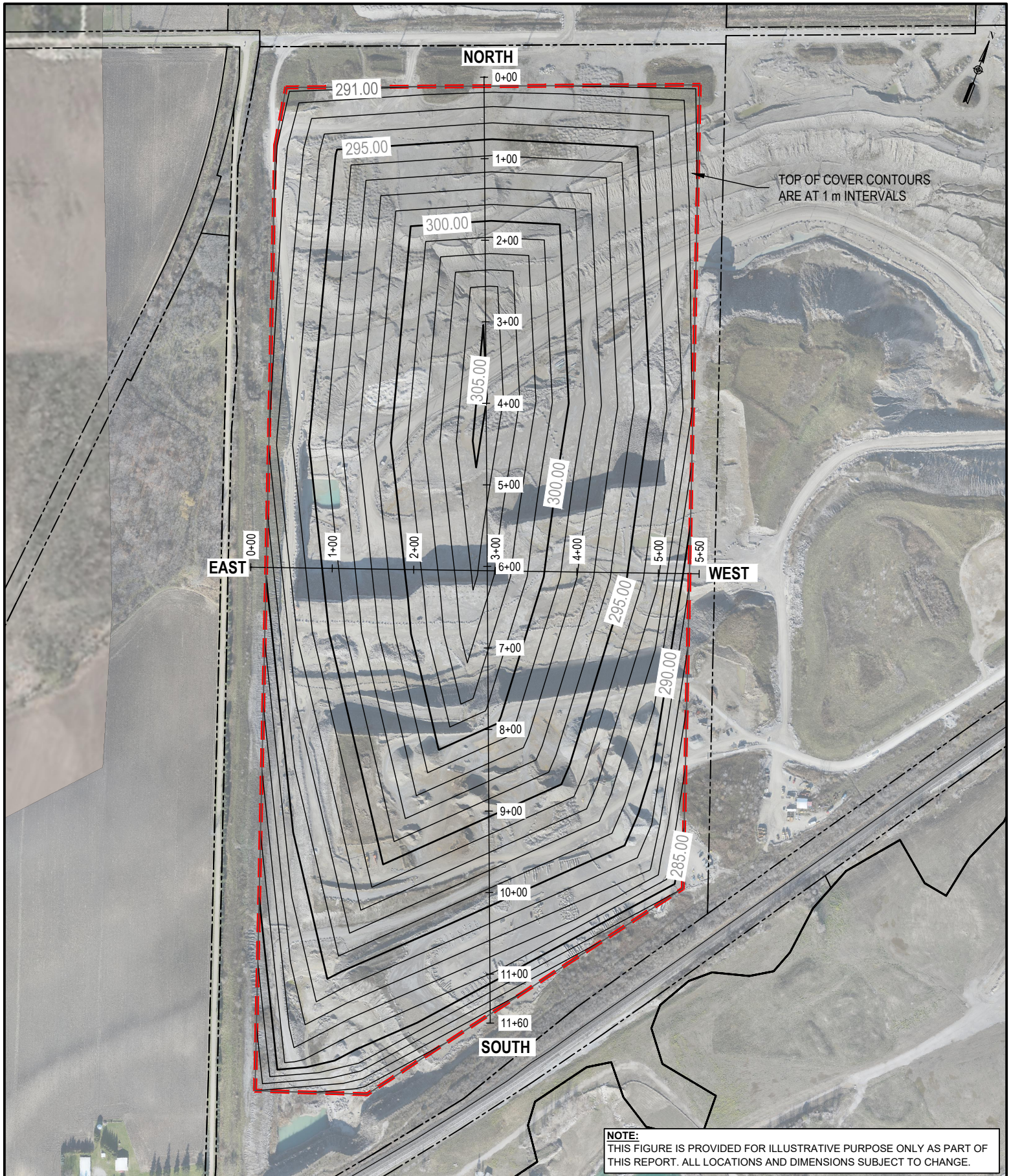




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	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar		
	Drawing	<b>SECTION VIEWS</b>		Drawn	JThompson	Scale	NTS	Date (P.M.Y)	07JAN20
				Approved	DFry	Drawing No.	<b>Figure 3</b>	Revision No.	<b>E</b>

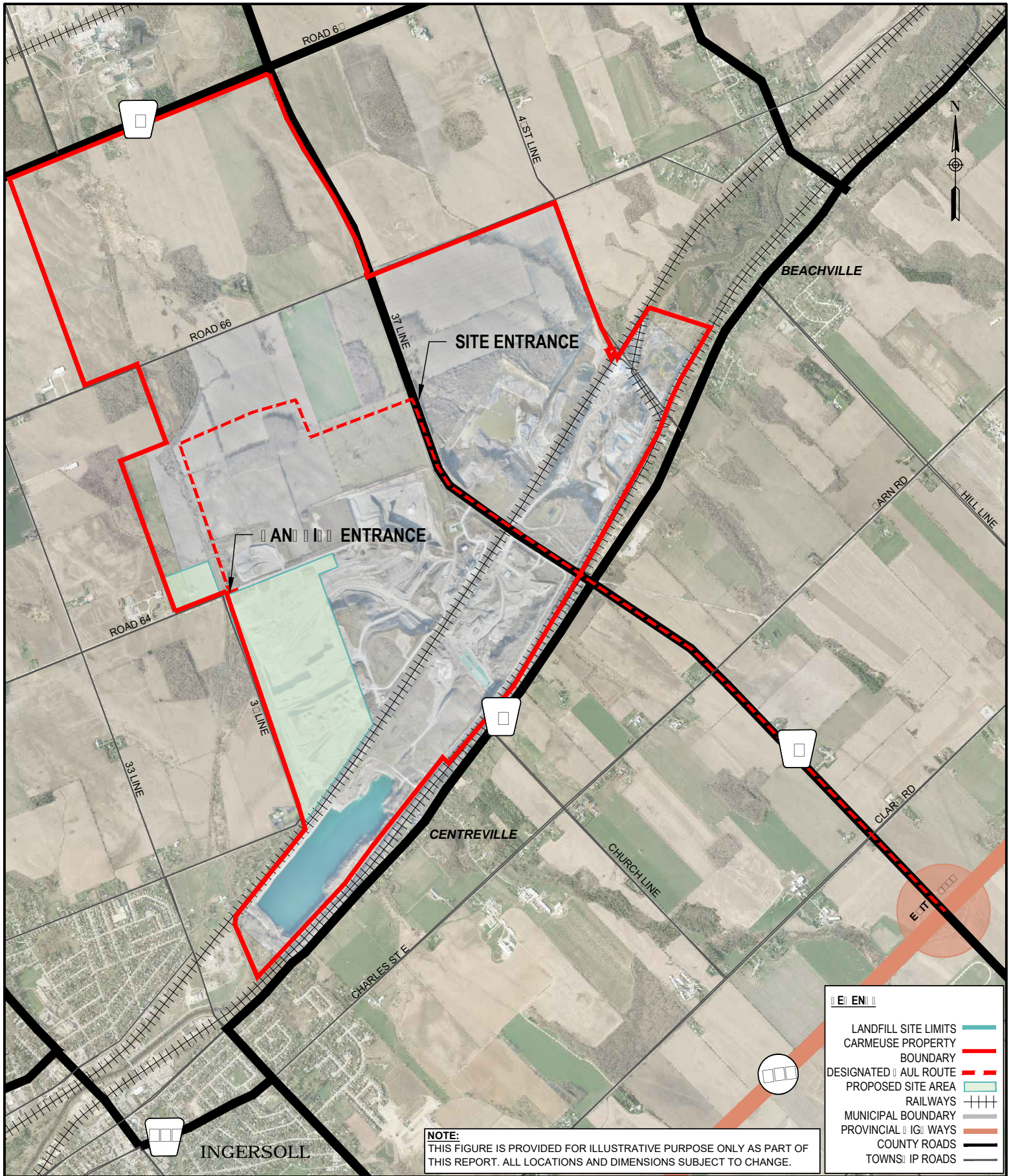




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 THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

	Project <b>SOUTHWESTERN LANDFILL</b>	Project No. 967243	Scale Bar 
	Drawing <input type="checkbox"/> LAN VIEW TO <input type="checkbox"/> OF COVER	Drawn JThompson	Scale NTS
		Approved DFry	Drawing No. <b>Figure</b> <input type="checkbox"/>
			Revision No. <b>E</b>





**NOTE:**  
 THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF  
 THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

	LANDFILL SITE LIMITS
	CARMEUSE PROPERTY BOUNDARY
	DESIGNATED HAUL ROUTE
	PROPOSED SITE AREA
	RAILWAYS
	MUNICIPAL BOUNDARY
	PROVINCIAL HIGHWAYS
	COUNTY ROADS
	TOWNSHIP ROADS



Owner: **walker environmental**

Project: **SOUTHWESTERN LANDFILL**

Drawing: **SITE LOCATION & HAUL ROUTE**

Project No. 967243

Scale: 1:30000

Date: 01 JAN 20

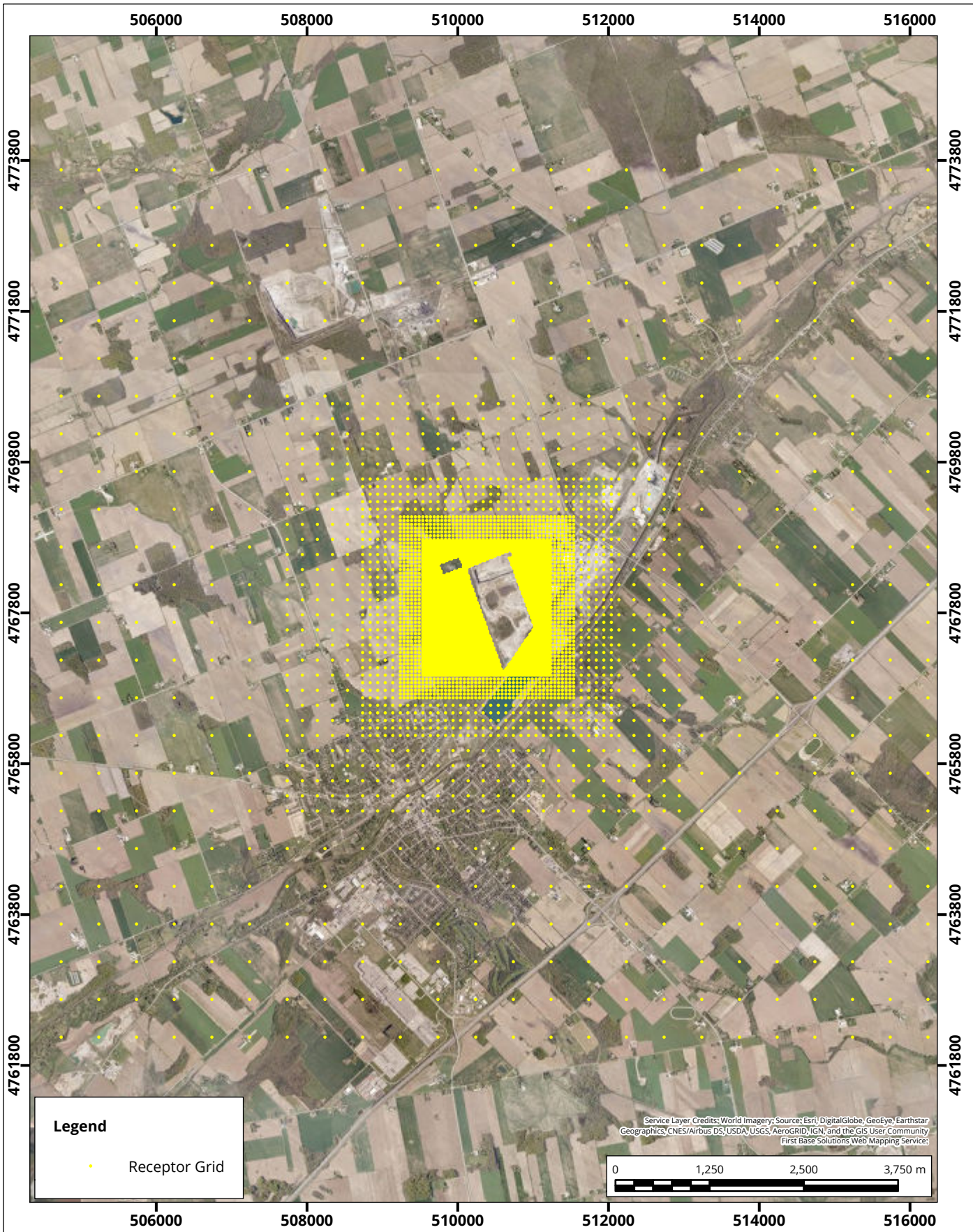
Drawn: JThompson

Approved: DFry

Scale Bar: 0 to 1000 Meters

Revision No. **Figure E**





Map Document: C:\GIS\05 Walkers SWMLP02 Walkers SWMLP02 Walkers SWMLP02.aprx

## Modelled Receptor Grid

Map Projection: NAD 1983 UTM Zone 17N  
WEG Southwestern Landfill- Beachville, Ontario



Project #: 1800160

Drawn by: MDKB	Figure: 6
Exact Scale: 1:70,000	
Date Revised: Dec 16, 2019	







Map Document: C:\GIS\05 Walkers\_SWMLP02\_Work\Walkers\_SWMLP02.aprx

## Discrete Receptor Locations

Map Projection: NAD 1983 UTM Zone 17N  
WEG Southwestern Landfill- Beachville, Ontario

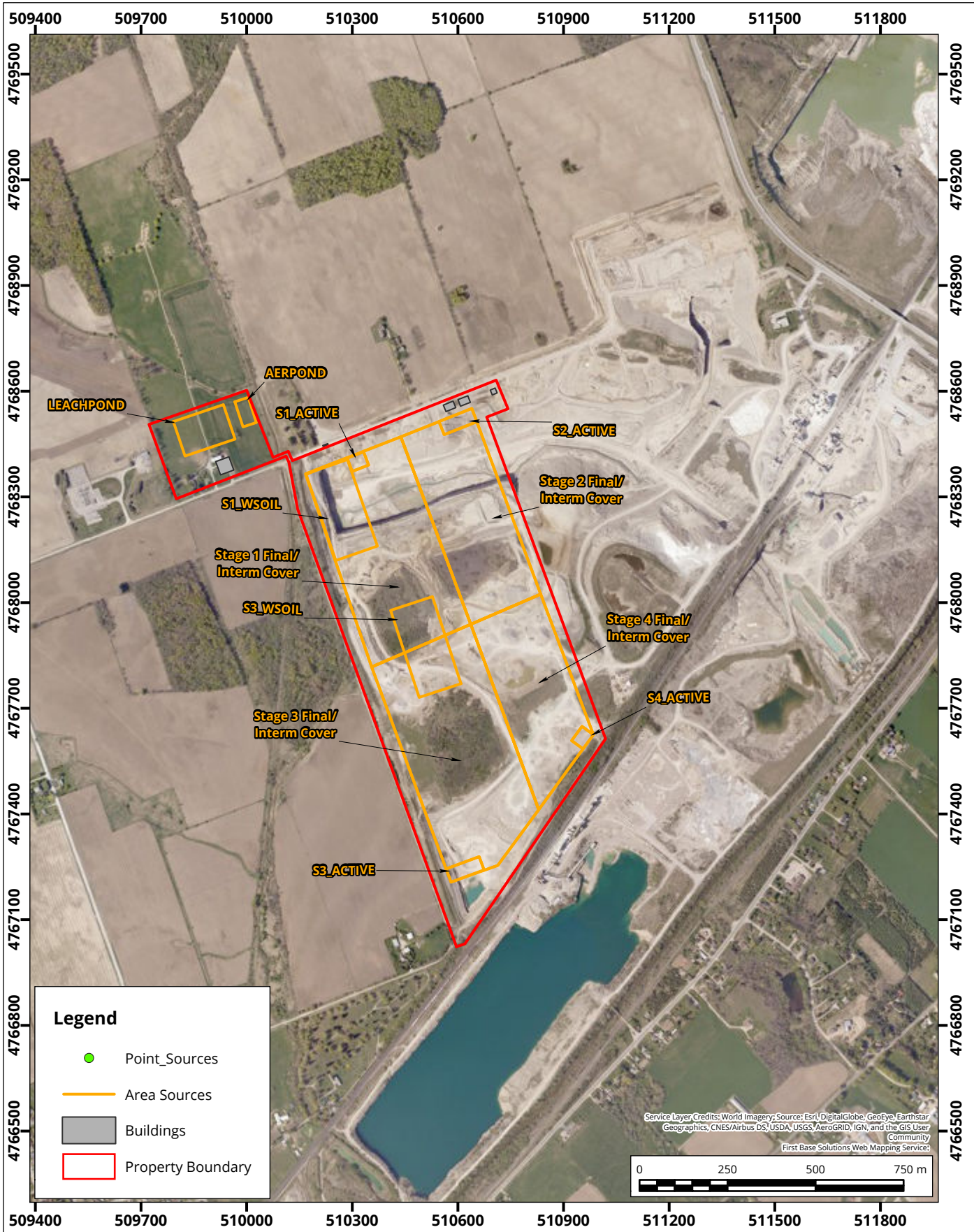


Project #: 1800160

Drawn by: MDKB	Figure: 7
Exact Scale: 1:70,000	
Date Revised: Dec 16, 2019	







Map Document: C:\GIS\05 Walkers\_SVM\FW\Walkers\_SVM\_Papprx

## Significant Sources, Buildings, and Property Line Odour Assessment

Map Projection: NAD 1983 UTM Zone 17N  
WEG Southwestern Landfill- Beachville, Ontario



Project #: 1800160

Drawn by: MDKB	Figure: 8
Exact Scale: 1:15,000	
Date Revised: Dec 17, 2019	



# APPENDIX A:

## GLOSSARY OF TERMS



## 13 GLOSSARY OF TERMS USED IN AIR IMPACT ASSESSMENTS

ADT	Average daily traffic
AADT	Annual average daily traffic
AAQC	Ambient Air Quality Criteria as defined by the Ontario Ministry of the Environment, Conservation and Parks
AERMOD	An air dispersion model developed by AERMIC to support the US EPA's regulatory modelling programs. AERMOD is the next-generation air dispersion model that incorporates concepts such as planetary boundary layer theory and advanced methods for handling complex terrain.
Baseline	Refers to the existing air quality surrounding the landfill. The baseline is used to determine if there will be a change in the existing environment before the proposed landfill.
CO	Carbon monoxide; a regulated air pollutant and product of incomplete combustion
Conservative	Implementing a number of assumptions in an analysis that are intended to lead to a deliberate over-estimation of impacts
Clod Samples	Refer to the large clumps of native or typical soil at the landfill typically used for cover.
Deposition Routine	Refers to dust particles that travel downwind in a plume, larger particles fall out of the air through gravitational settling and other factors and are not replaced. Using this deposition routine provides a simulation of this process. By doing so, a more realistic prediction of dust impacts is produced.
Dustfall	Refers to larger particles that settle at a sufficient rate to produce a dust film on surfaces. Dustfall is a nuisance due to its soiling nature.
FCA	Facility Characteristics Assumptions
Flux Chamber	Is a stainless-steel vessel of volume 0.5 m <sup>2</sup> . It is used to measure minute emissions from near passive sources that do not have any mechanical fans to discharge the contaminants of interest.
g/veh/mi	Grams of emissions per vehicle per mile traveled
HC	Hydrocarbons; generally defined in terms of volatile organic compounds (VOC's) and semi-volatile compounds (SVOC's)
MECP	Ontario Ministry of the Environment, Conservation and Parks
NO	Nitric oxide; an air pollutant and constituent of NOX generated by combustion
NO <sub>2</sub>	Nitrogen dioxide; an air pollutant and regulated constituent of NOX generated by chemical or photochemical reactions generally involving NO





NO <sub>x</sub>	Total oxides of nitrogen; a generic air pollutant category that includes the sum of all NO and NO <sub>2</sub> concentrations
O <sub>3</sub>	Ozone; a photochemical oxidant generally formed in the presence of sunlight, oxides of nitrogen and reactive hydrocarbons
Odour	Odour can generally be described as a person's perception to a particular smell. This may be considered a "good" or "bad" smell as a subjective observation from a particular person. An odour is deemed to be a nuisance, if it is detected and considered to be unpleasant. When odour levels are elevated and occur frequently, they can be construed as an adverse effect.
Odour Unit	One odour unit (OU) is the concentration at which 50% of a population will detect an odour.
PAHs	Polycyclic aromatic hydrocarbons; a class of airborne contaminants that exist with both solids and gaseous fractions; individual species include fluoranthene and benzo(a)pyrene
ppm, ppmv	Parts per million by volume; unit of concentration; mixing ratio
PM <sub>10</sub>	Inhalable particulate matter; airborne particles of aerodynamic diameter less than 10 microns
PM <sub>2.5</sub>	Respirable particulate matter; airborne particles of aerodynamic diameter less than 2.5 microns
SO <sub>2</sub>	Sulphur dioxide; an air pollutant usually associated with the combustion of sulphur-laden fuel
Tedlar Bags	A bag used to collect air samples that is comprised of a skin is made from inert materials like Teflon to minimize any chemical reactions that may compromise the sample
TSP	Total suspended particulates; airborne particulate matter that is generally small (less than about 44 microns in diameter) enough so as not to be greatly affected by gravitational forces
µg/m <sup>3</sup>	Micrograms per cubic metre; a unit of concentration
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle miles traveled
VOCs	Volatile organic compounds; a class of airborne gaseous contaminants that includes individual chemical species such as vinyl chloride, benzene, xylenes, etc.

**APPENDIX B:**  
**ENVIRONMENTAL ASSESSMENT CRITERIA AND STUDIES**  
(FROM THE APPROVED AMENDED TERMS OF REFERENCE)



Table B-a-EA Criteria Table

	Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration		
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period
	<b>Public Health &amp; Safety</b>																		
1	Explosive hazard due to combustible gas accumulation in confined spaces.	Gas produced within a waste disposal facility (e.g., methane) can move through the ground and accumulate in confined spaces (e.g., manholes, basements, etc.) on or immediately adjacent to the waste disposal facility. There is potential for the gas to combust, creating an explosion and fire hazard.						<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Effects due to exposure to air emissions.	Waste disposal facilities can produce gases containing contaminants that degrade air quality if they are emitted to the atmosphere. Other operations, such as leachate collection facilities, can also produce emissions that could degrade air quality in the vicinity of the site. Air quality in the vicinity of the site should meet regulated air quality standards in order to protect public health.		<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Effects due to fine particulate exposure.	Construction, operation, and truck haulage activities at a waste disposal facility can lead to increased levels of particulate (dust) in the air. Airborne fine particulate is a health concern in certain size ranges exposure durations.		<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Effects due to contact with contaminated groundwater or surface water.	Contaminants associated with a waste disposal site have the potential to seep into the groundwater or surface water. This could pose a public health concern if it enters local drinking water supplies, or if it mixes with surface water.						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Flood hazard.	The construction of a waste disposal facility can disrupt natural surface water drainage patterns, causing a potential for increased flooding.						<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

	Criteria	Definition/ Rationale	Studies Addressing the Criteria												Study Areas			Duration		
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																				
6	Disease transmission <i>via</i> insects or vermin.	Insects and vermin drawn to a waste disposal facility may have the potential to transmit diseases.																	✓	✓
<b>Public Health &amp; Safety (continued)</b>																				
7	Potential for traffic collisions.	The risk of traffic collisions may increase along the haul routes to the waste disposal facility. This includes the risk to pedestrian, bicycle and farm machinery.																	✓	✓
8	Aviation impacts due to bird interference.	Birds may be attracted to waste disposal facilities. This can pose a risk of bird strikes on aircraft in the vicinity of the site, especially during take-off and landing altitudes.																	✓	✓
<b>Social and Cultural</b>																				
9	• Displacement of residents from houses.	Any residents living on a future waste disposal site will have to relocate, which can cause inconvenience and stress to the residents.																	✓	✓
10	Disruption to use and enjoyment of residential properties.	Potential nuisance effects associated with the waste disposal facility operation, or traffic moving to and from the waste disposal facility along the haul route, may disturb the daily activities and uses of residential properties. Disturbances could result from noise, dust, litter, odour, visibility, birds and traffic congestion.																	✓	✓
11	Disruption to use and enjoyment of public facilities and institutions.	Potential nuisance effects associated with waste disposal facility operations, or traffic moving to and from the waste disposal facility, may disturb the daily activities at community facilities. Disturbances could result from noise, dust, litter, odour, visibility, birds and traffic congestion.																	✓	✓
12	Disruption to local traffic networks.	Increased traffic volume resulting from a waste disposal facility could disturb the overall traffic flow along the haul routes, and effectively reduce the available road capacity.																	✓	✓
13	Visual impact of the waste disposal facility.	Development and operation of a waste disposal facility can affect the visual appeal of a landscape.																	✓	✓

	Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration	
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																				
14	Nuisance associated with vermin.	Waste disposal facilities can attract vermin and birds, which can be a nuisance and lead to a decrease in property enjoyment by area residents. Vermin and birds can also be a nuisance to agricultural operations.												<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
<b>Social and Cultural (continued)</b>																				
15	Displacement/disturbance of cultural/heritage resources.	Cultural resources (including heritage buildings, cemeteries and cultural landscapes) are an important component of human heritage. These non-renewable cultural resources may be displaced by the construction of a waste disposal facility. The use and enjoyment of cultural resources may also be disturbed by the ongoing operation and traffic. Disturbances could result from noise, dust, odour, visibility, birds, litter and traffic congestion.				<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	Effects on land resources, traditional activities or other interests of Aboriginal Communities.	Major new developments of any type may have positive or negative effects on the interests of Aboriginal Communities (i.e., businesses opportunities, joint ventures)												<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	Displacement/destruction of archaeological resources.	Archaeological resources are non-renewable cultural resources that can be destroyed by the construction and operation of a waste disposal facility.			<input checked="" type="checkbox"/>													<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
18	Level of public service provided by the waste disposal facility.	The presence of a waste disposal operation within a municipality can provide an increased level of public service (e.g., convenient access to waste disposal services) to local residents and businesses, as well as those in the broader community(ies).																<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
19	Effects on other public services.	The presence of a waste disposal facility may have positive or negative spin-off effects on other public services in the community (e.g., leachate trucking, waste water treatment capacity, if there is discharge to the sewer system).																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

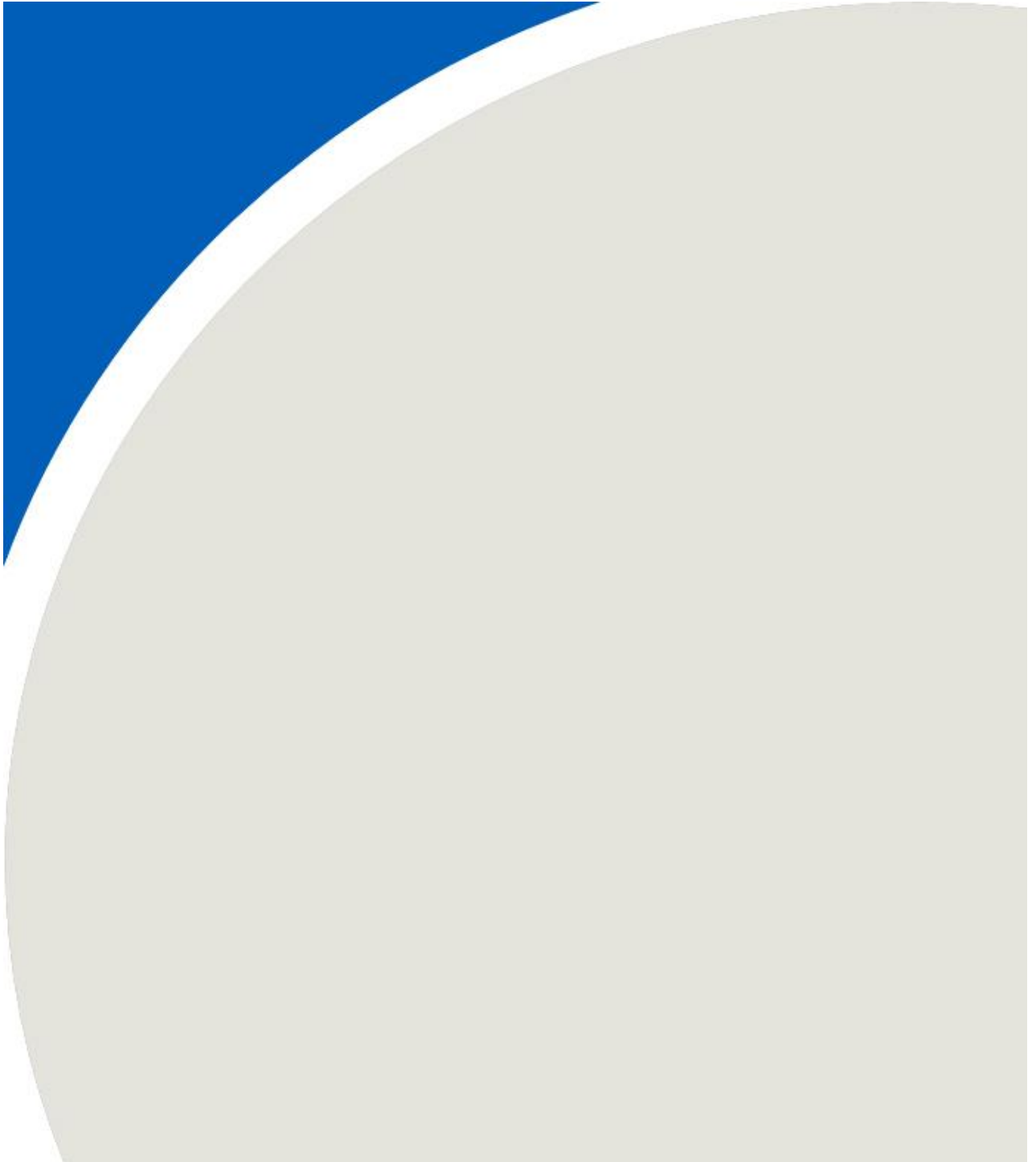


	Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration	
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																				
<b>Economics (continued)</b>																				
26	New business opportunities related directly to waste disposal facility construction and operation.	A large capital project, such as the construction and operation of a waste disposal facility, can create new opportunities for local businesses supplying products or services.																		
27	New business opportunities in related industries and services.	New opportunities may be created for local businesses, or as secondary suppliers to industries working for the waste disposal facility (e.g., restaurants, gas stations, machine shops, repair shops, welding shops, equipment rentals, etc.).																		
28	Public costs for indirect liabilities.	Some public services may have to be upgraded to accommodate the establishment and operation of a waste disposal facility (e.g., snow removal, sewer and water connections, etc.).																		
29	Effects on the municipal tax base.	A waste disposal facility has the potential to affect municipal tax revenues from the site it occupies.																		
30	Effect on the cost of service to customers.	The costs of constructing a waste disposal facility will effect the price of tipping fees to the site. This affects the cost of service to customers in Oxford County and the province.																		
31	Effects on the provincial/ federal tax base.	A waste disposal facility has the potential to affect provincial/federal tax revenues.																		
<b>Natural Environment &amp; Resources</b>																				
32	Loss/displacement of surface water resources.	Construction of a waste disposal facility may cause the removal of all or part of a natural stream or pond.																		
33	Impact on the availability of groundwater supply to wells.	A waste disposal facility can impact the availability of groundwater supply if groundwater is pumped from aquifers or if recharge to aquifers is reduced.																		
34	Effects on stream baseflow quantity/quality.	The presence of a waste disposal facility has the potential to affect the quality or quantity of baseflow to surface water.																		

Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration	
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																			
<b>Natural Environment &amp; Resources (Continued)</b>																			
35	Loss/disturbance of terrestrial ecosystems.					<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	Loss/disturbance of aquatic ecosystems.					<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	Displacement of agricultural land.	<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	Disruption of farm operations.	<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	Sterilization of industrial mineral resources.								<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
40	Displacement of forestry resources.								<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
41	Loss/disruption of recreational resources.											<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



## APPENDIX C



**Appendix C: Landfill Odour Emission Rate Calculations**

**Table 1: Southwest Landfill Final Cover Odour Emission Rate Calculation**

Source ID	Approximate Landfill Area (m <sup>2</sup> )	Stage 2 2028-2032				Stage 3 2033-2037				Stage 4 2038-2042				Post-Closure 2043			
		Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted LFG for Bio Fraction (m <sup>3</sup> s <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> s <sup>-1</sup> )	Emission Flux Rate (OU m <sup>-2</sup> s <sup>-1</sup> )	Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted LFG for Bio Fraction (m <sup>3</sup> s <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> s <sup>-1</sup> )	Emission Flux Rate (OU m <sup>-2</sup> s <sup>-1</sup> )	Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted LFG for Bio Fraction (m <sup>3</sup> s <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> s <sup>-1</sup> )	Emission Flux Rate (OU m <sup>-2</sup> s <sup>-1</sup> )	Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted LFG for Bio Fraction (m <sup>3</sup> s <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> s <sup>-1</sup> )	Emission Flux Rate (OU m <sup>-2</sup> s <sup>-1</sup> )
S1_COVER	170938	3.16E+07	7.02E-01	1.05E-01	6.16E-03	2.59E+07	5.75E-01	8.62E-02	5.04E-03	2.12E+07	4.71E-01	7.06E-02	4.13E-03	2.04E+07	4.52E-01	6.78E-02	3.97E-03
S2_COVER	122403	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E+07	7.02E-01	1.05E-01	8.60E-03	2.59E+07	5.75E-01	8.62E-02	7.04E-03	2.49E+07	5.52E-01	8.28E-02	6.77E-03
S3_COVER	192774	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E+07	7.02E-01	1.05E-01	5.46E-03	3.04E+07	6.74E-01	1.01E-01	5.25E-03
S4_COVER	107397	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E+07	8.24E-01	1.24E-01	1.15E-02

Notes:

Emission rate calculations are based on the MECP emission factor of 10000 OU/m<sup>3</sup> of landfill gas produced.

Final cover gas collections efficiency is: 85%

Landfill Waste Biodegradable Fraction: 70%

**Table 2: Odour Emission Rates from East Landfill Source Testing**

Source	Emission Rate (OU/m <sup>2</sup> /s)
Active Face	0.244
Interm Cover	0.025
Aeration Pond	0.305
Aeration Pond @ 30% Control	0.214
Leachate Pond	0.305
Leachate Pond @ 30% Control	0.214
Waste Pile	0.051

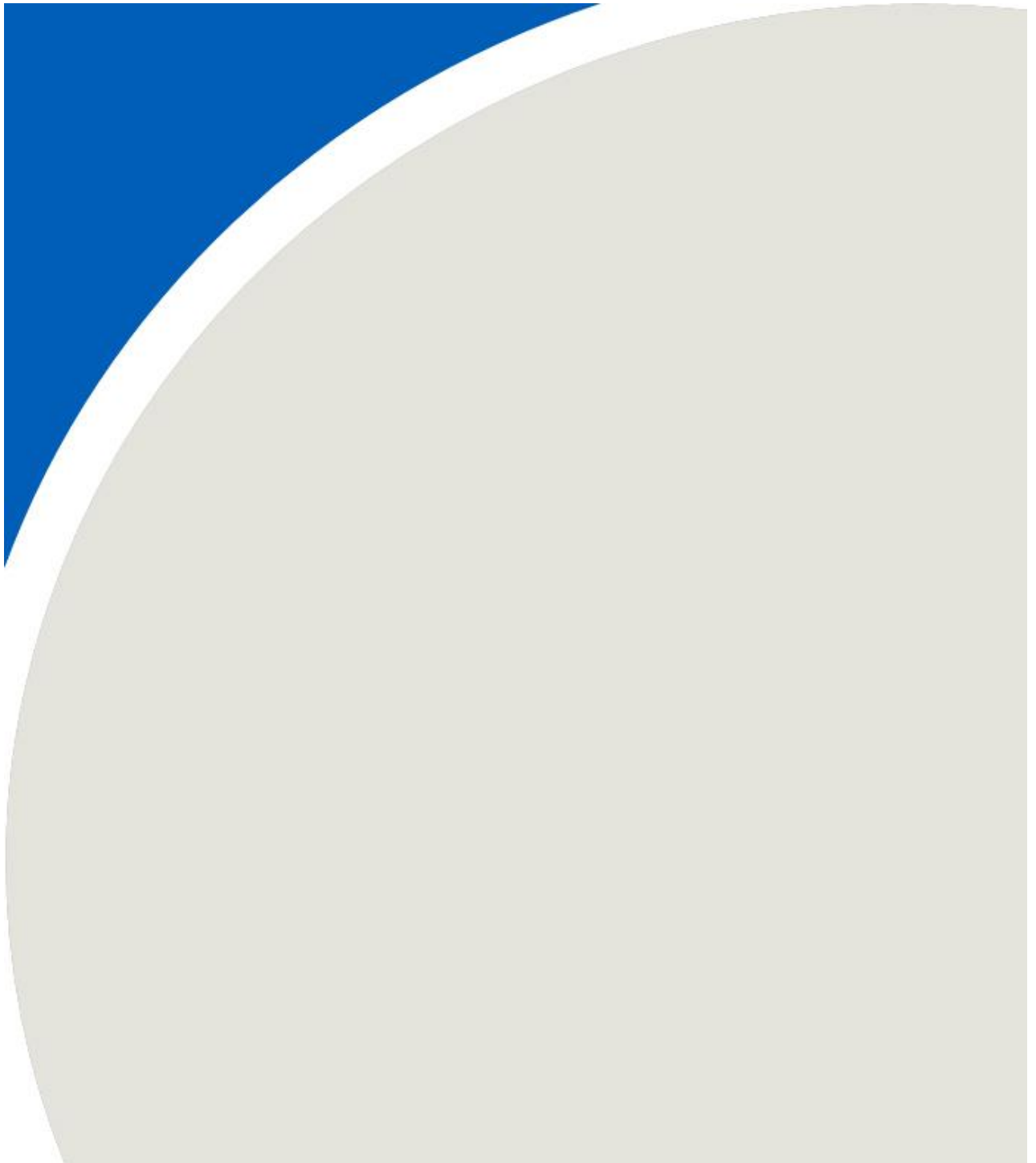
[1] Emission rates obtained from Flux chamber analysis performed for the Walker South Landfill Environmental Assessment.

Operating Years	Source ID	Emission Rate (OU/m <sup>2</sup> /s)
2023-2027	S1_ACTIVE	0.244
	S1_INTERM	0.025
	AERPOND	0.305
	LEACHPOND	0.305
	S1_WSOIL	0.051
2028-2032	S2_ACTIVE	0.244
	S2_INTERM	0.025
	AERPOND	0.305
	LEACHPOND	0.305
	S1_WSOIL	0.051
2033-2037	S3_ACTIVE	0.244
	S3_INTERM	0.025
	AERPOND	0.305
	LEACHPOND	0.305
	S3_WSOIL	0.051
2038-2042	S4_ACTIVE	0.244
	S4_INTERM	0.025
	AERPOND	0.305
	LEACHPOND	0.305
	S3_WSOIL	0.051
2043	ACTIVE	0
	INTERM	0
	AERPOND	0.305
	LEACHPOND	0.305
	WSOIL	0.051

**Table 3: Summary of Odour Emission Rates**

Stage	Years	S1_ACTIVE	S2_ACTIVE	S3_ACTIVE	S4_ACTIVE	S1_INTERM	S2_INTERM	S3_INTERM	S4_INTERM	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_WSOIL	S3_WSOIL	AERPOND	LEACHPOND
1	2023-2027	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-02	0.00E+00	3.05E-01	3.05E-01
2	2028-2032	0.00E+00	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	6.16E-03	0.00E+00	0.00E+00	0.00E+00	5.10E-02	0.00E+00	3.05E-01	3.05E-01
3	2033-2037	0.00E+00	0.00E+00	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	5.04E-03	8.60E-03	0.00E+00	0.00E+00	0.00E+00	5.10E-02	3.05E-01	3.05E-01
4	2038-2042	0.00E+00	0.00E+00	0.00E+00	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.50E-02	4.13E-03	7.04E-03	5.46E-03	0.00E+00	0.00E+00	5.10E-02	3.05E-01	3.05E-01
PC	2043	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-03	6.77E-03	5.25E-03	1.15E-02	0.00E+00	0.00E+00	3.05E-01	3.05E-01

# APPENDIX D



**Table 1: Odour Concentrations and Frequency Analysis - Stage 1 (2023-2027)**

Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	1.69	20	0.05%
ZOR-2	508703.00	4769450.00	2.34	86	0.20%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	1.20	3	0.01%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	1.16	5	0.01%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	3.91	269	0.62%	11	0.03%	0	0.00%
ZOR-6	509185.00	4768350.00	3.44	371	0.86%	6	0.01%	0	0.00%
ZOR-7	512505.00	4770060.00	0.94	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	2.16	103	0.24%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	2.78	67	0.15%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.58	24	0.06%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	2.16	97	0.22%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	1.41	18	0.04%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.79	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.55	21	0.05%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.92	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	1.24	10	0.02%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.70	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.82	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	0.90	0	0.00%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.52	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.62	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	0.94	0	0.00%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	0.72	0	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	1.73	65	0.15%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	3.06	135	0.31%	2	0.00%	0	0.00%
SWO-3	511722.00	4767480.00	2.84	124	0.29%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	1.55	24	0.06%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	1.09	3	0.01%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.69	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.49	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.27	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.22	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	1.27	6	0.01%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	1.44	38	0.09%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	1.75	35	0.08%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	2.28	89	0.21%	0	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	2.32	83	0.19%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	2.19	57	0.13%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	2.14	57	0.13%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	1.69	20	0.05%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	1.54	21	0.05%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	1.30	9	0.02%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.42	0	0.00%	0	0.00%	0	0.00%

\*Values shown in green represent residential receptors.

**Table 2: Odour Concentrations and Frequency Analysis - Stage 3 (2033 - 2037)**

Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	1.32	12	0.03%
ZOR-2	508703.00	4769450.00	2.02	86	0.20%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	1.20	6	0.01%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	1.16	5	0.01%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	3.19	159	0.37%	4	0.01%	0	0.00%
ZOR-6	509185.00	4768350.00	3.44	280	0.65%	6	0.01%	0	0.00%
ZOR-7	512505.00	4770060.00	0.93	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	2.16	103	0.24%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	2.78	58	0.13%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.58	12	0.03%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	2.91	481	1.11%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	1.60	58	0.13%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.79	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.55	8	0.02%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.92	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	1.87	54	0.12%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.74	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.82	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	1.27	9	0.02%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.68	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.90	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	1.45	20	0.05%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	1.02	1	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	2.88	211	0.49%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	2.20	132	0.31%	0	0.00%	0	0.00%
SWO-3	511722.00	4767480.00	1.81	60	0.14%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	1.28	13	0.03%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	1.02	2	0.00%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.66	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.48	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.23	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.19	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	2.09	62	0.14%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	2.31	106	0.25%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	2.44	81	0.19%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	2.40	129	0.30%	0	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	1.52	32	0.07%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	1.43	15	0.03%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	1.43	15	0.03%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	1.24	5	0.01%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	1.25	10	0.02%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	0.94	0	0.00%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.37	0	0.00%	0	0.00%	0	0.00%

\*Values shown in green represent residential receptors.

**Table 3: Odour Concentrations and Frequency Analysis - Stage 4 (2038 - 2042)**

Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	1.30	12	0.03%
ZOR-2	508703.00	4769450.00	2.31	72	0.17%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	1.20	3	0.01%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	1.16	4	0.01%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	3.15	139	0.32%	4	0.01%	0	0.00%
ZOR-6	509185.00	4768350.00	3.44	251	0.58%	6	0.01%	0	0.00%
ZOR-7	512505.00	4770060.00	0.93	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	2.16	84	0.19%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	2.78	55	0.13%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.58	12	0.03%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	1.72	66	0.15%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	1.28	8	0.02%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.79	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.55	8	0.02%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.92	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	0.99	0	0.00%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.70	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.82	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	0.80	0	0.00%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.46	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.54	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	0.82	0	0.00%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	0.59	0	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	1.74	111	0.26%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	3.32	246	0.57%	8	0.02%	0	0.00%
SWO-3	511722.00	4767480.00	1.99	160	0.37%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	1.25	12	0.03%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	1.01	2	0.00%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.66	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.48	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.23	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.19	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	0.99	0	0.00%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	1.38	42	0.10%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	1.95	64	0.15%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	3.02	136	0.31%	1	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	1.94	77	0.18%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	1.58	42	0.10%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	1.47	16	0.04%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	1.21	4	0.01%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	1.22	5	0.01%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	0.92	0	0.00%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.37	0	0.00%	0	0.00%	0	0.00%

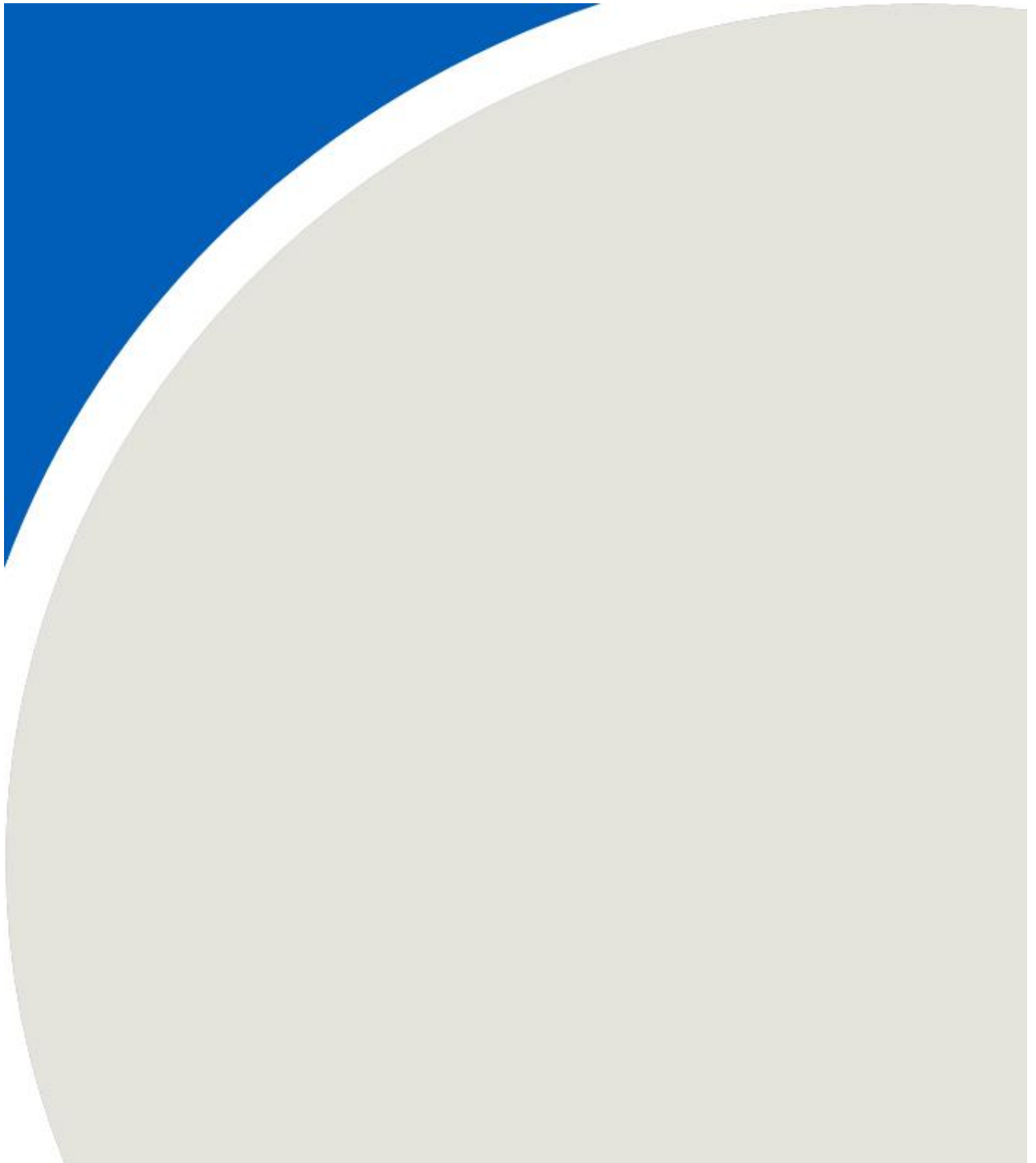
\*Values shown in green represent residential receptors.

**Table 4: Odour Concentrations and Frequency Analysis - Post Closure (2043)**

Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	1.29	12	0.03%
ZOR-2	508703.00	4769450.00	1.79	47	0.11%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	1.20	3	0.01%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	1.16	5	0.01%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	3.15	156	0.36%	4	0.01%	0	0.00%
ZOR-6	509185.00	4768350.00	3.44	278	0.64%	6	0.01%	0	0.00%
ZOR-7	512505.00	4770060.00	0.93	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	2.16	103	0.24%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	2.78	58	0.13%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.58	12	0.03%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	1.72	21	0.05%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	1.28	9	0.02%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.79	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.55	8	0.02%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.92	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	0.99	0	0.00%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.70	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.82	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	0.80	0	0.00%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.46	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.54	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	0.74	0	0.00%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	0.51	0	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	1.56	25	0.06%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	2.20	67	0.15%	0	0.00%	0	0.00%
SWO-3	511722.00	4767480.00	1.84	39	0.09%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	1.25	13	0.03%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	1.01	2	0.00%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.66	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.48	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.23	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.19	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	0.99	0	0.00%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	1.23	5	0.01%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	1.31	16	0.04%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	1.67	34	0.08%	0	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	1.60	29	0.07%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	1.47	15	0.03%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	1.42	11	0.03%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	1.20	5	0.01%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	1.22	5	0.01%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	0.91	0	0.00%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.37	0	0.00%	0	0.00%	0	0.00%

\*Values shown in green represent residential receptors.

# APPENDIX E





**Table 1: Odour Concentrations and Frequency Analysis - Stage 1 (2023-2027) - Additional Mitigation**

Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	1.25	10	0.02%
ZOR-2	508703.00	4769450.00	1.89	59	0.14%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	0.86	0	0.00%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	0.82	0	0.00%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	2.92	162	0.37%	0	0.00%	0	0.00%
ZOR-6	509185.00	4768350.00	2.41	203	0.47%	0	0.00%	0	0.00%
ZOR-7	512505.00	4770060.00	0.66	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	1.52	35	0.08%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	1.95	18	0.04%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.22	10	0.02%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	2.00	64	0.15%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	1.27	5	0.01%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.55	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.20	8	0.02%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.65	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	1.15	5	0.01%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.64	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.57	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	0.84	0	0.00%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.48	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.58	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	0.88	0	0.00%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	0.66	0	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	1.67	50	0.12%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	2.61	113	0.26%	0	0.00%	0	0.00%
SWO-3	511722.00	4767480.00	2.39	90	0.21%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	1.10	5	0.01%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	0.76	0	0.00%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.49	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.34	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.24	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.20	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	1.20	3	0.01%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	1.33	23	0.05%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	1.55	30	0.07%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	1.95	52	0.12%	0	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	1.96	54	0.12%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	1.82	33	0.08%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	1.78	27	0.06%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	1.29	9	0.02%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	1.10	7	0.02%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	1.02	1	0.00%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.31	0	0.00%	0	0.00%	0	0.00%

\*Values shown in green represent residential receptors.

**Table 2: Odour Concentrations and Frequency Analysis - Stage 3 (2033 - 2037) - Additional Mitigation**

Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	0.96	0	0.00%
ZOR-2	508703.00	4769450.00	1.60	24	0.06%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	1.07	3	0.01%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	0.82	0	0.00%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	2.30	102	0.24%	0	0.00%	0	0.00%
ZOR-6	509185.00	4768350.00	2.41	157	0.36%	0	0.00%	0	0.00%
ZOR-7	512505.00	4770060.00	0.65	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	1.52	35	0.08%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	1.95	18	0.04%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.11	1	0.00%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	2.91	466	1.08%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	1.60	50	0.12%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.55	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.09	1	0.00%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.65	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	1.87	54	0.12%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.74	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.57	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	1.27	9	0.02%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.68	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.90	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	1.44	14	0.03%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	1.02	1	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	2.57	206	0.48%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	1.75	110	0.25%	0	0.00%	0	0.00%
SWO-3	511722.00	4767480.00	1.37	44	0.10%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	0.93	0	0.00%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	0.72	0	0.00%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.46	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.34	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.19	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.15	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	2.09	61	0.14%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	2.05	91	0.21%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	2.15	77	0.18%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	2.09	110	0.25%	0	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	1.15	7	0.02%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	1.07	1	0.00%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	1.07	3	0.01%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	0.92	0	0.00%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	0.91	0	0.00%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	0.70	0	0.00%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.26	0	0.00%	0	0.00%	0	0.00%

\*Values shown in green represent residential receptors.

**Table 3: Odour Concentrations and Frequency Analysis - Stage 4 (2038 - 2042) - Additional Mitigation**

Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	0.94	0	0.00%
ZOR-2	508703.00	4769450.00	1.80	43	0.10%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	0.85	0	0.00%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	0.82	0	0.00%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	2.27	102	0.24%	0	0.00%	0	0.00%
ZOR-6	509185.00	4768350.00	2.41	165	0.38%	0	0.00%	0	0.00%
ZOR-7	512505.00	4770060.00	0.65	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	1.52	35	0.08%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	1.95	18	0.04%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.11	1	0.00%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	1.67	38	0.09%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	0.99	0	0.00%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.55	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.09	1	0.00%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.65	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	0.82	0	0.00%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.49	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.57	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	0.65	0	0.00%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.39	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.47	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	0.75	0	0.00%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	0.55	0	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	1.44	85	0.20%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	2.86	208	0.48%	0	0.00%	0	0.00%
SWO-3	511722.00	4767480.00	1.65	127	0.29%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	0.91	0	0.00%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	0.72	0	0.00%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.46	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.34	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.16	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.13	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	0.87	0	0.00%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	1.14	16	0.04%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	1.67	52	0.12%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	2.37	120	0.28%	0	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	1.57	55	0.13%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	1.22	25	0.06%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	1.11	3	0.01%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	0.89	0	0.00%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	0.89	0	0.00%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	0.68	0	0.00%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.26	0	0.00%	0	0.00%	0	0.00%

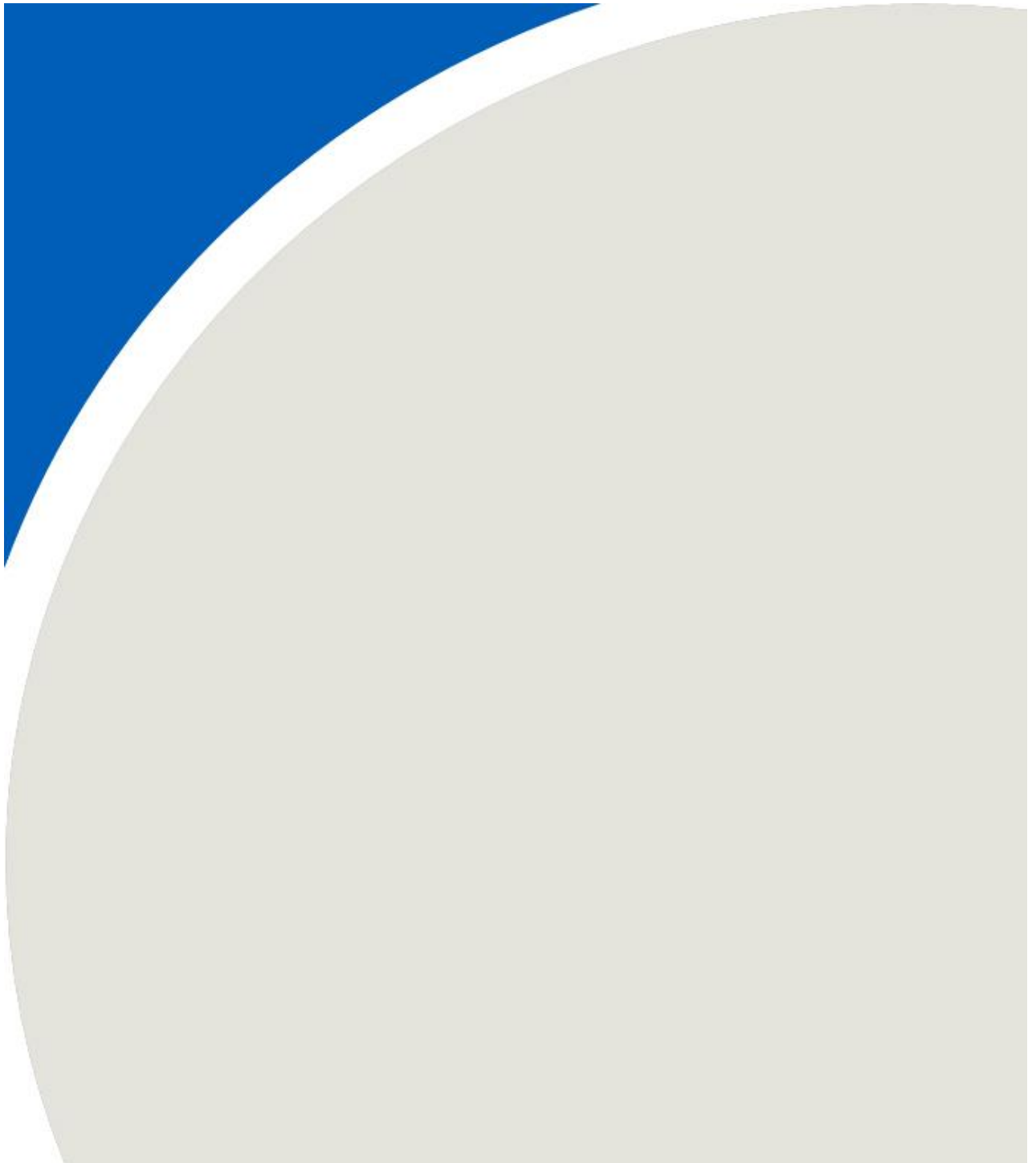
\*Values shown in green represent residential receptors.

**Table 4: Odour Concentrations and Frequency Analysis - Post Closure (2043) - Additional Mitigation**

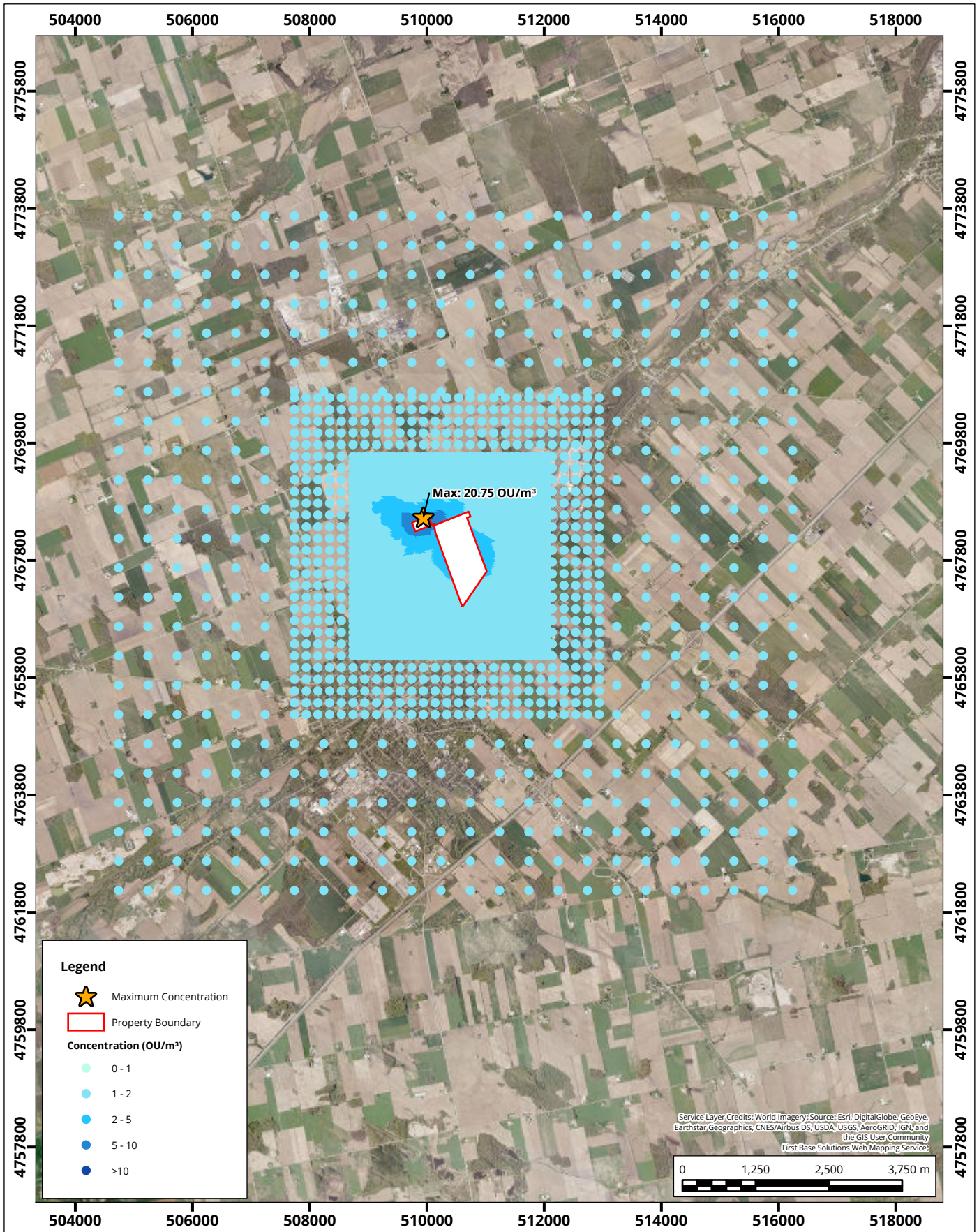
Receptor ID	X (m)	Y (m)	Maximum Concentration (OU/m <sup>3</sup> )	Events > 1 OU		Events > 3 OU		Events > 5 OU	
				Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance	Count (over 5 years)	Frequency of Exceedance
				ZOR-1	507552.00	4768980.00	0.94	0	0.00%
ZOR-2	508703.00	4769450.00	1.34	10	0.02%	0	0.00%	0	0.00%
ZOR-3	510216.00	4770270.00	0.85	0	0.00%	0	0.00%	0	0.00%
ZOR-4	511004.00	4770360.00	0.82	0	0.00%	0	0.00%	0	0.00%
ZOR-5	508931.00	4768760.00	2.26	102	0.24%	0	0.00%	0	0.00%
ZOR-6	509185.00	4768350.00	2.41	157	0.36%	0	0.00%	0	0.00%
ZOR-7	512505.00	4770060.00	0.65	0	0.00%	0	0.00%	0	0.00%
ZOR-8	508940.00	4767980.00	1.52	35	0.08%	0	0.00%	0	0.00%
ZOR-9	509437.00	4767450.00	1.95	18	0.04%	0	0.00%	0	0.00%
ZOR-10	509739.00	4766780.00	1.11	1	0.00%	0	0.00%	0	0.00%
ZOR-11	510446.00	4767010.00	1.20	4	0.01%	0	0.00%	0	0.00%
ZOR-12	510224.00	4766570.00	0.90	0	0.00%	0	0.00%	0	0.00%
ZOR-13	512141.00	4770850.00	0.55	0	0.00%	0	0.00%	0	0.00%
ING-1	509757.00	4766670.00	1.09	1	0.00%	0	0.00%	0	0.00%
ING-2	509019.00	4765860.00	0.65	0	0.00%	0	0.00%	0	0.00%
ING-3	510512.00	4766230.00	0.69	0	0.00%	0	0.00%	0	0.00%
ING-4	509480.00	4765180.00	0.49	0	0.00%	0	0.00%	0	0.00%
ING-5	508623.00	4765540.00	0.57	0	0.00%	0	0.00%	0	0.00%
ING-6	510337.00	4765360.00	0.56	0	0.00%	0	0.00%	0	0.00%
ING-7	509587.00	4763660.00	0.33	0	0.00%	0	0.00%	0	0.00%
ING-8	510135.00	4764360.00	0.38	0	0.00%	0	0.00%	0	0.00%
ING-9	511353.00	4765370.00	0.52	0	0.00%	0	0.00%	0	0.00%
ING-10	511429.00	4764360.00	0.36	0	0.00%	0	0.00%	0	0.00%
SWO-1	511124.00	4766750.00	1.20	4	0.01%	0	0.00%	0	0.00%
SWO-2	511535.00	4767260.00	1.75	46	0.11%	0	0.00%	0	0.00%
SWO-3	511722.00	4767480.00	1.41	22	0.05%	0	0.00%	0	0.00%
SWO-4	512361.00	4768470.00	0.91	0	0.00%	0	0.00%	0	0.00%
SWO-5	512702.00	4769030.00	0.71	0	0.00%	0	0.00%	0	0.00%
SWO-6	513588.00	4770070.00	0.46	0	0.00%	0	0.00%	0	0.00%
SWO-7	513672.00	4771030.00	0.34	0	0.00%	0	0.00%	0	0.00%
SWO-8	516009.00	4772770.00	0.16	0	0.00%	0	0.00%	0	0.00%
SWO-9	517966.00	4774070.00	0.13	0	0.00%	0	0.00%	0	0.00%
SWO-10	510980.00	4765990.00	0.69	0	0.00%	0	0.00%	0	0.00%
SWO-11	511396.00	4766310.00	0.94	0	0.00%	0	0.00%	0	0.00%
SWO-12	511616.00	4766520.00	1.01	4	0.01%	0	0.00%	0	0.00%
SWO-13	511570.00	4766920.00	1.33	21	0.05%	0	0.00%	0	0.00%
SWO-14	512109.00	4766980.00	1.23	14	0.03%	0	0.00%	0	0.00%
SWO-15	512251.00	4767100.00	1.11	1	0.00%	0	0.00%	0	0.00%
SWO-16	512389.00	4767250.00	1.06	3	0.01%	0	0.00%	0	0.00%
SWO-17	512958.00	4767760.00	0.88	0	0.00%	0	0.00%	0	0.00%
SWO-18	513114.00	4767940.00	0.88	0	0.00%	0	0.00%	0	0.00%
SWO-19	514069.00	4766910.00	0.67	0	0.00%	0	0.00%	0	0.00%
SWO-20	516680.00	4769480.00	0.26	0	0.00%	0	0.00%	0	0.00%

\*Values shown in green represent residential receptors.

# APPENDIX F







## Predicted 10-Minute Odour Contours (in OU/m<sup>3</sup>) With 30% Control on Leachate Treatment Sources

Stage 1 - 2023 - 2027

Map Projection: NAD 1983 UTM Zone 17N

WEG Southwestern Landfill- Beachville, Ontario

True North



Drawn by: MDKB Figure: H1

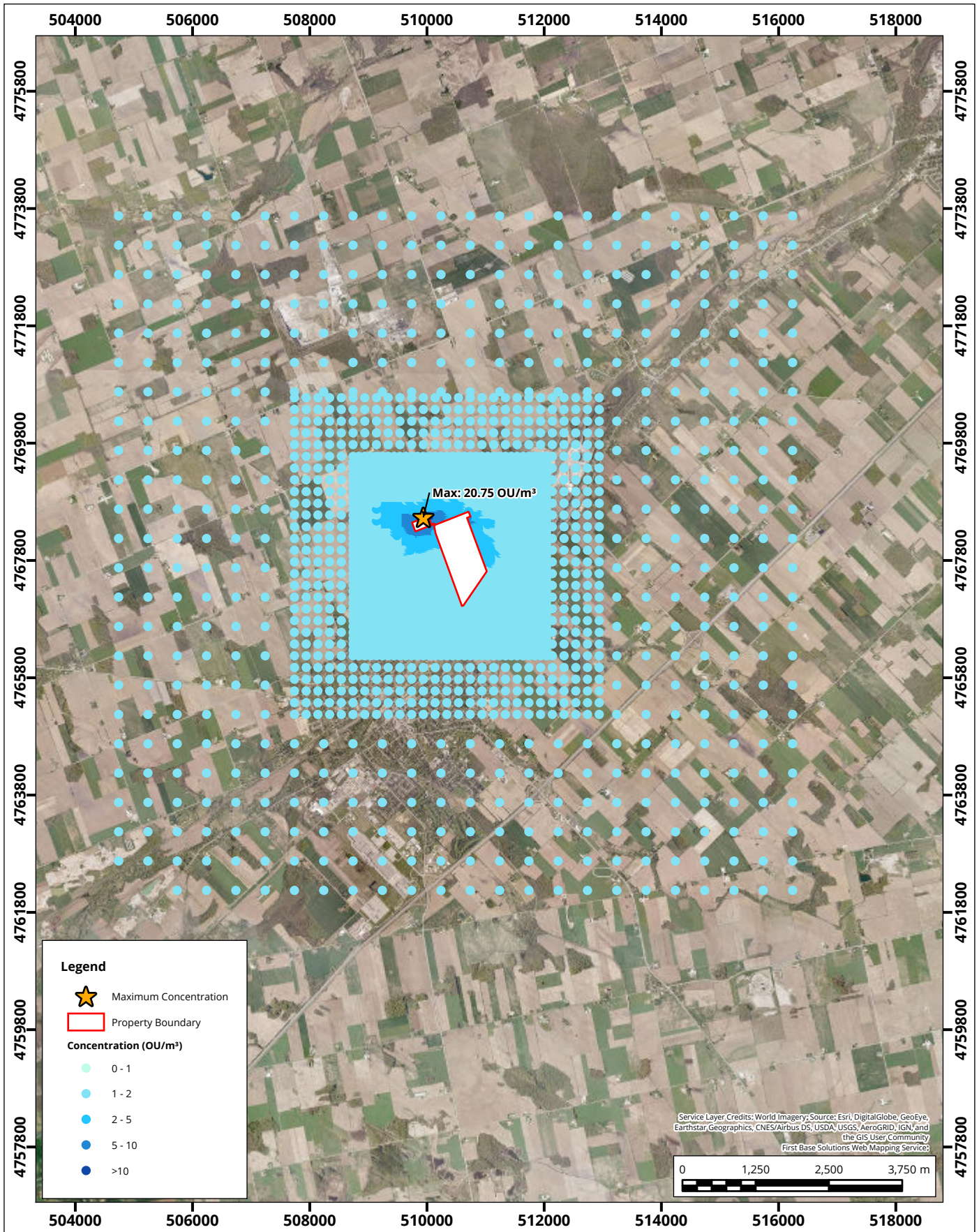
Approx. Scale: 1:90,000

Date Revised: Dec 16, 2019

Project #: 1800160







## Predicted 10-Minute Odour Contours (in OU/m<sup>3</sup>) With 30% Control on Leachate Treatment Sources

Stage 2 - 2028 - 2032

Map Projection: NAD 1983 UTM Zone 17N

WEG Southwestern Landfill- Beachville, Ontario

True North



Drawn by: MDKB Figure: H2

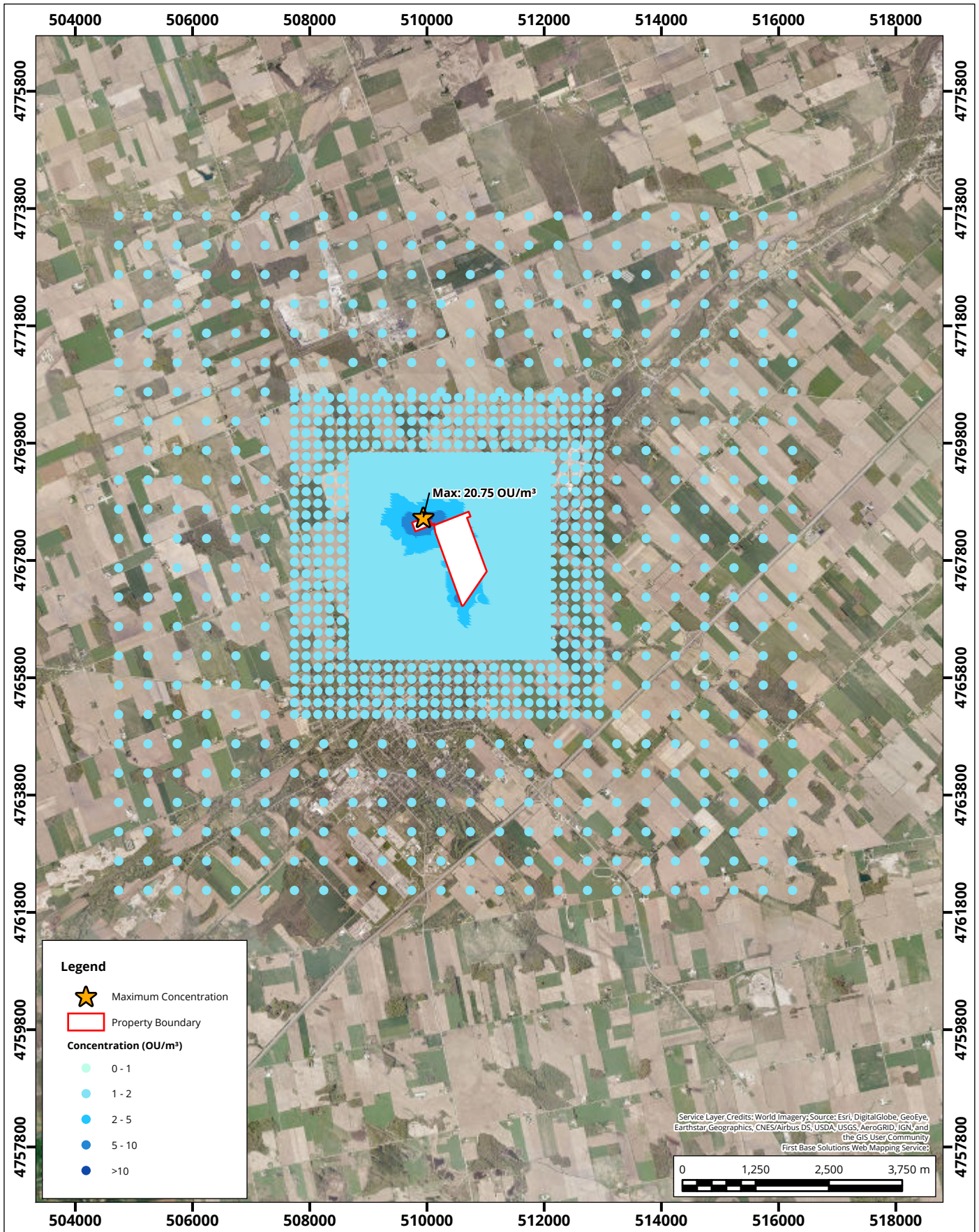
Approx. Scale: 1:90,000

Date Revised: Dec 16, 2019



Project #: 1800160





## Predicted 10-Minute Odour Contours (in OU/m<sup>3</sup>) With 30% Control on Leachate Treatment Sources

Stage 3 - 2033 - 2037

Map Projection: NAD 1983 UTM Zone 17N

WEG Southwestern Landfill- Beachville, Ontario

True North



Drawn by: MDKB Figure: H3

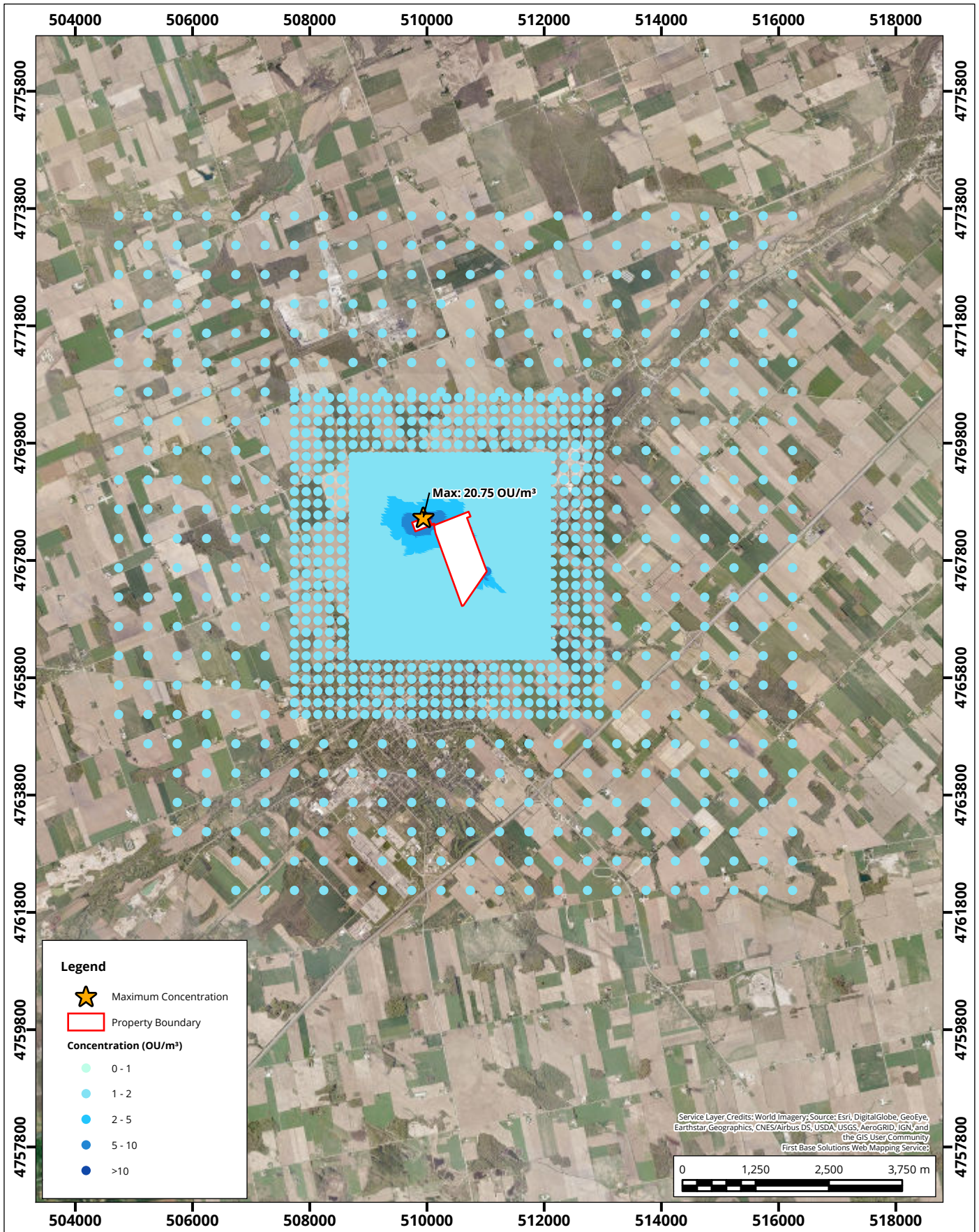
Approx. Scale: 1:90,000

Date Revised: Dec 16, 2019

Project #: 1800160







## Predicted 10-Minute Odour Contours (in OU/m<sup>3</sup>) With 30% Control on Leachate Treatment Sources

Stage 4 - 2038 - 2042

Map Projection: NAD 1983 UTM Zone 17N

WEG Southwestern Landfill- Beachville, Ontario

True North



Drawn by: MDKB Figure: H4

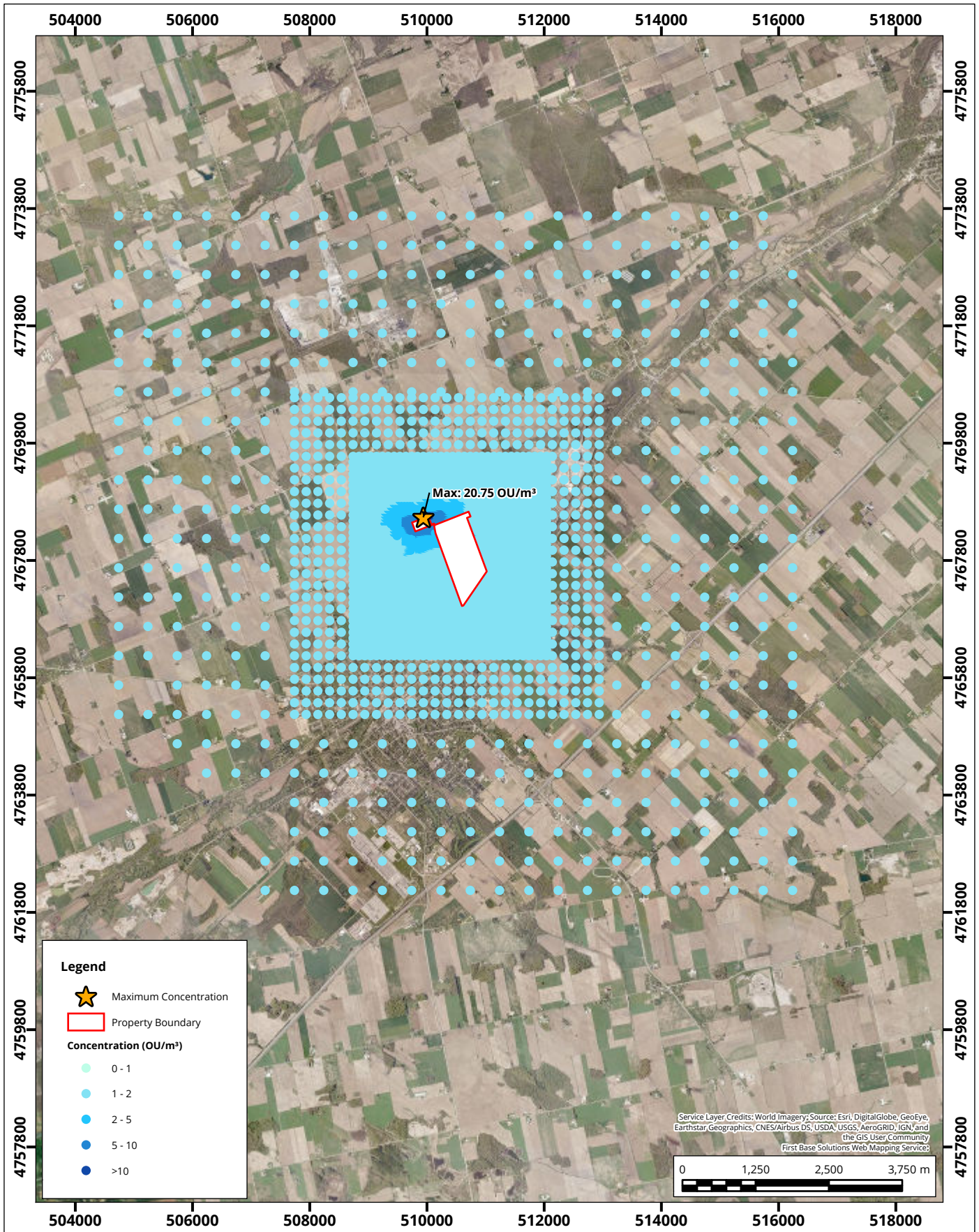
Approx. Scale: 1:90,000

Date Revised: Dec 16, 2019

Project #: 1800160







## Predicted 10-Minute Odour Contours (in OU/m³) With 30% Control on Leachate Treatment Sources

Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N

WEG Southwestern Landfill- Beachville, Ontario

True North



Drawn by: MDKB Figure: H5

Approx. Scale: 1:90,000

Date Revised: Dec 16, 2019

Project #: 1800160



## WALKER ENVIRONMENTAL GROUP INC.

NIAGARA FALLS, ONTARIO

### **PROPOSED SOUTHWESTERN LANDFILL: ENVIRONMENTAL ASSESSMENT | LANDFILL GAS STUDY**

RWDI #1800160

February 18, 2020

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# 1 INTRODUCTION

An Environmental Assessment (“EA”) is being prepared by Walker Environmental Group Inc. (“Walker”) under Ontario’s Environmental Assessment Act (“Act”) for the ‘provision of future landfill capacity at the Carmeuse Lime (Canada) Ltd. (Carmeuse) site in Oxford County for solid, non-hazardous waste generated in the Province of Ontario’.

This is one in a series of technical studies that have been completed by qualified experts to examine the potential effects of the proposed landfill site on the environment, all in accordance with the requirements set out in the Approved Amended Terms of Reference (“ToR”) dated May 10, 2016. This report accompanies and supports the Environmental Assessment Report prepared by Walker.

Note that Walker has carried out extensive consultation with government agencies, Aboriginal groups and interested members of the public regarding this study; details are provided separately in the EA report.

# 2 PURPOSE & OBJECTIVES

The purpose of this study is to complete a landfill gas assessment of the landfill proposed by Walker.

The overall objectives of the study are listed below, in general accordance with the requirements for the assessment of an undertaking as set out in Section 6.1(2)(c) of the Environmental Assessment Act, and as specifically detailed in Section 8.1 of the ToR:

- a. Describe the environment potentially affected by the proposed undertaking, including both the existing environment as well as the environment that would otherwise be likely to exist in the future without the proposed undertaking.
- b. Carry out an evaluation of the environmental effects of the proposed undertaking, using the relevant environmental assessment criteria set out in the ToR (see Appendix B).
- c. Carry out an evaluation of any additional impact management actions that may be necessary to prevent, change or mitigate any (negative) environmental effects.
- d. Prepare a description and evaluation of the environmental advantages and disadvantages of the proposed undertaking, based on the net environmental effects that will result following mitigation.
- e. Prepare monitoring, contingency and impact management plans to remedy the environmental effects of the proposed undertaking.





### 3 THE PROPOSED UNDERTAKING

The landfill proposed by Walker is described in detail in the Environmental Assessment Report. Following is a brief summary for the benefit of the reader, highlighting aspects of the proposal most relevant to this study.

The landfill is to be located on a portion of Carmeuse's landholdings at its Beachville Quarry Operations in the Township of Zorra, Oxford County. Approximately 17.4 million m<sup>3</sup> of solid, non-hazardous waste and daily/intermediate cover will be deposited within a footprint of about 59 ha. The balance of the 81.6 ha site will be comprised of buffer areas for monitoring, maintenance, environmental controls and other necessary infrastructure. (**Figure 1**).

Landfill construction will proceed progressively in a series of cells, generally from north-to-south (**Figure 1**). The former quarry floor will be backfilled to within about 30 to 40 metres below ground surface with engineered fill, and then a Generic Design Option II – Double Liner system (as specified by the Ministry of Environment, Conservation & Parks in the Landfill Standards under O. Reg. 232/98; see **Figure 2**) will be constructed across the bottom and up the sides of the landfill to contain and collect leachate (**Figure 3**). Up to 850,000 tonnes per year of solid, non-hazardous waste, and up to 250,000 tonnes per year of daily/intermediate cover soils<sup>1</sup> will then be placed and compacted above the liner in a series of small working areas approximately 0.2 ha in size at any given time, in order to minimize the exposed waste. Waste will be covered with soil on a daily basis, and a final cover with vegetation will be applied as the landfill reaches its final height, which peaks at about 15 m above ground (**Figure 4**). A landfill gas collection system will also be installed as the landfill/cell development progresses.

Most of the supporting infrastructure for the landfill will be located in the buffer area along the northern site perimeter, including the leachate and gas treatment plants. Leachate collected from the liner system will be treated on-site and the clean effluent from the treatment plant will be discharged into the Patterson-Robbins Drain next to the treatment plant. Clean precipitation and groundwater that has not come into contact with waste will be segregated and treated in a stormwater management pond before being discharged from the site (**Figure 1**). Landfill gas will be collected in a network of extraction wells and pipes. Initially the landfill gas will be flared (combusted), but when the quantities permit, the gas will be beneficially utilized as a renewable fuel.

The site will be open for waste deliveries from 7:00 a.m. to 5:00 p.m. on weekdays and from 7:00 a.m. to 1:00 p.m. on Saturdays but closed on Sundays and statutory holidays. On-site construction activities may start up to one hour before opening and continue up to two hours after closure. The primary designated haul route (i.e., for all waste trucks except deliveries from the local area, if any) is from Highway 401 north along County Road #6, then west into the quarry property; trucks will then follow a newly constructed haul route across the quarry site to a landfill site entrance at the northwestern corner of the site (**Figure 5**). Vehicle traffic, including waste trucks as well as construction vehicles and staff, is expected to average approximately 210 trips per day.

---

<sup>1</sup> The daily/intermediate cover soil could consist of acceptable and suitable waste soils, and would be reported as waste, so the total reported waste receipts could be up to 1,100,000 tonnes per year.



Nuisance controls will include speed enforcement, regular haul road cleaning (on- and off-site), litter fencing and pick-up, and bird/pest management, with a public complaint reporting and response system.

There will be monitoring programs for equipment operations, leachate, groundwater, surface water, air emissions, gas, noise, and particulates (dust).

The landfill is anticipated to receive waste for approximately 20 years commencing in about 2023. After closure, maintenance and operation of the relevant environmental controls and monitoring will carry on during the post-closure period, until there is no further risk of environmental contamination. The end-use is assumed to be passive green space and agriculture, but the design is flexible to accommodate other potential end-uses.

The landfill gas (LFG) assessment considered a waste filling rate of 850,000 tonnes per year of solid, non-hazardous waste, of which 70% consisted of biodegradable material. This waste filling rate is exclusive of waste soils used as cover. This waste was assumed to be distributed evenly throughout the landfill over the course of the 20-year lifespan, with filling occurring for 5 years within each Stage, as follows:

- Stage 1: 2023-2027;
- Stage 2: 2028-2032;
- Stage 3: 2033-2037; and
- Stage 4: 2038-2042.

Each Stage of the landfill will accommodate approximately 5 cells. The gas collection system consisting of both vertical and horizontal extraction wells will be progressively installed in each cell as the cells are developed and filled. The LFG collection system was assumed to have an 85% collection efficiency for Stages of the landfill under final cover, and conservatively assumed to be 50% for the current active Stage. All collected LFG was assumed to be combusted in an enclosed flare. Although the active face (working area) of the landfill is normally approximately 2,000 m<sup>2</sup> (0.2 ha) in size, the assessment considered a maximum active face size of 4,000 m<sup>2</sup> (0.4 ha) as a contingency measure.

Collected LFG will be combusted in a flare, similar to the existing flares in use at Walker's South Landfill, in Niagara Falls, Ontario.

Approximately 250,000 tonnes of waste soil will be imported per year to be used as daily cover for the active landfill cell. This waste soil is in addition to the 850,000 tonnes per year of solid, non-hazardous waste mentioned above. The LFG assessment also considered the presence of a waste soil storage pile with a footprint area of up to 32,500 m<sup>2</sup>, present in one of two locations, depending on the current Stage of operations.

The leachate plant will be located to the northwest of the landfill area. The leachate plant will consist of a 3,000 m<sup>2</sup> aeration pond, a 15,500 m<sup>2</sup> raw leachate holding pond, a leachate treatment building, a 2,000 m<sup>2</sup> effluent holding pond, and a 4,100 m<sup>2</sup> polishing wetland.



## 4 ENVIRONMENTAL ASSESSMENT CRITERIA & INDICATORS

The environmental assessment criteria, as approved in the ToR, are tabulated in **Appendix B**, Table B-1. In the table, check marks indicate which technical studies are assigned primary (“lead”) responsibility for assessing each of the criteria. Following are the EA criteria which are assigned to this study:

**Table 1:** Environmental Assessment Criteria

EA Criteria	Definition/Rationale
<b>Effects due to exposure to air emissions.</b>	Waste disposal facilities can produce gases containing contaminants that degrade air quality if they are emitted to the atmosphere. Other operations, such as leachate collection facilities, can also produce emissions that could degrade air quality in the vicinity of the site. Air quality in the vicinity of the site should meet regulated air quality standards in order to protect public health.

Furthermore, the criteria for this EA were designed to be cross-disciplinary to permit an assessment of cumulative effects. Table B-2 in **Appendix B**, from the ToR, illustrates some (though not necessarily all) of the key interconnectivities between the studies. As a result, this study provides input/data to additional environmental criteria that will be addressed through studies conducted by other experts including (but not limited to):

- Agricultural;
- Ecology;
- Economic/Financial;
- Human Health; and,
- Social/Cultural.

Indicators identify how the potential environmental effects will be measured for each criterion. Following are the indicators that were applied to each of the primary EA criteria addressed in this assessment:

**Table 2:** Environmental Assessment Indicators

EA Criteria	Proposed Indicators/Measures
<b>Effects due to exposure to air emissions</b>	Ontario Regulation 419 Standards and Guidelines, Ambient Air Quality Criteria, Canadian Air Quality Objectives (CAAQS) and MECP Guidance Documents (Odour)

For the LFG assessment, the primary EA Criteria is “Effects due to exposure to air emissions” with proposed indicators from MECP’s Ontario Regulation 419 Standards and Guidelines, Ambient Air Quality Criteria, and other guideline values.

Based on comments provided by the MECP, **Table 3** provides a list of Volatile Organic Compounds (VOCs) and Sulphur compounds to be used for the evaluation.



**Table 3:** Summary of Landfill Gas Assessment Criteria

Contaminant	CAS	Criteria (ug m-3)	Averaging Period
1,1,2-Trichloro-1,2,2-Trifluoromethane	76-13-1	800000	24
1,2,3-Trimethyl Benzene	526-73-8	220	24
1,2,4-Trimethyl Benzene	95-63-6	220	24
1,3,5-Trimethyl Benzene	108-67-8	200	24
2-Methyl Hexane	591-76-4	1228	24
2-Methyl Pentane	107-83-5	1750	24
2-Methyl Butane	78-78-4	7080	24
3-Methyl Pentane	96-14-0	1400	24
3-Methyl Hexane	589-34-4	1535	24
Acetone	67-64-1	11880	24
Benzene	71-43-2	2.3	24
		0.45	Annual
Butyl Acetate	123-86-4	1000	10-minute
		15000	1
Decane	124-18-5	60000	1
Dichlorodifluoromethane	75-71-8	500000	24
		220	24
Dichloromethane	75-09-2	44	Annual
		1900	10-minute
Ethyl Benzene	100-41-4	1000	24
		11000	24
Heptane	142-82-5	11000	24
Hexane	110-54-3	2500	24
Isopropyl Alcohol	67-63-0	7300	24
Limonene	5989-27-5	550	24
Vinyl Chloride	75-01-4	1	24
		0.2	Annual
Carbon Tetrachloride	56-23-5	2.4	24
Chloroform	67-66-3	1	24
		0.2	Annual
Ethylene Dibromide	106-93-4	3	24
Ethylene Dichloride	107-06-2	2	24
		0.4	Annual
Chloroethane	75-00-3	5600	24
1,2-Dichloroethylene (cis)	156-59-2	105	24
1,2-Dichloroethane	75-34-3	165	24
1,2-Dichloroethylene (trans)	156-60-5	105	24
Chlorobenzene	108-90-7	3500	1
		4500	10-minute
Chloromethane	74-87-3	320	24
m/p-Ethyl Toluene	620-14-4	62.5	24
m/p-Xylene	108-38-3	100	24
		3000	10-minute
m-Cymene	535-77-3	137.5	24
Methyl Ethyl Ketone	78-93-3	1000	24



Contaminant	CAS	Criteria (ug m-3)	Averaging Period
Methyl Cyclohexane	108-87-2	6440	24
Methyl Isobutyl Ketone	108-10-1	1200	24
Chlorodifluoromethane	75-45-6	350000	24
Naphthalene	91-20-3	22.5	24
		50	10-minute
Nonane	111-84-2	4200	24
o-Ethyl Toluene	611-14-3	n/a [1]	24
o-Xylene	95-47-6	100	24
Pentane	109-66-0	4200	24
Ethanol	64-17-5	19000	1
Propyl Benzene	103-65-1	20	24
Styrene	100-42-5	400	24
Tetrachloroethylene	127-18-4	360	24
Toluene	108-88-3	2000	24
Trichlorofluoromethane	75-69-4	6000	24
Trichloroethylene	79-01-6	12	24
		2.3	Annual
Ethyl Acetate	141-78-6	19000	1
1,1,1-Trichloroethane	71-55-6	115000	24
Vinylidene Chloride	75-35-4	10	24
1,2-Dichloroethene	540-59-0	105	24
2-Butanol	78-92-2	496	24
Bromodichloromethane	75-27-4	350	24
Octane	111-65-9	61800	10-minute
1,1,2,2-Tetrachloroethane	79-34-5	n/a [1]	24
1,1,2-Trichloroethane	79-00-5	0.3	24
Dichlorobenzene	106-46-7	95	24
Dichlorofluoromethane	75-43-4	500	24
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute
Hydrogen Sulphide	7783-06-4	13	10-minute
		7	24
Dimethyl Sulphide	75-18-3	30	10-minute
Dimethyl Disulphide	624-92-0	56	10-minute
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute
		7	24

O-ethyl toluene, 1,1,2,2-tetrachloroethane, and 1,1,2-Trichloroethane do not have a current criterion (AAQC or Reg. 419/05 Standard); instead the criteria listed in the workplan is based on a screening level value published by the MECP. Predicted concentrations above the screening level values do not necessarily indicate problematic levels; instead, when screening level values are exceeded further assessment by an accredited toxicologist is required. O-Ethyl toluene and 1,1,2,2- Tetrachloroethane have been reviewed by the human health risk assessment team, who confirmed there are no available regulatory agency-established acute standards or benchmarks for these chemicals. O-ethyl toluene and 1,1,2,2-tetrachloroethane were evaluated in the human health risk assessment, which concluded that these compounds were not considered a potential health risk.



## 5 STUDY DURATIONS

Two main study durations (or time frames) for this proposed landfill have been identified in the ToR:

<b>Operational Period</b>	The time during which the waste disposal facility is constructed, filled with waste, and capped. These activities are combined since they occur progressively (i.e., overlap) on a cell-by-cell basis, and they have a similar range of potential effects (e.g., there is heavy equipment active on the site).
<b>Post-Closure Period</b>	The time after the site is closed to waste receipt. Activities are normally limited to operation of control systems, routine property maintenance and monitoring, and thus have a more limited range of potential effects.

The approved EA Criteria in Table B-1, **Appendix B** indicate the relevant study duration(s) associated with each of the criteria used in this assessment.

The LFG study considered both the operational period and the post-closure period, assessed under the following scenarios:

- **Stage 1:** 2027;
- **Stage 3:** 2037;
- **Stage 4:** 2042; and
- **Post-Closure:** 2043

The final year of operation in each Stage of the landfill was considered, as the waste in place and thus the gas volumes produced would be greatest during the final year of activity. The post-closure period assessed the first-year post-closure, as landfill gas volumes would be greatest at this time.

## 6 STUDY AREAS

For the purposes of this EA, three general study areas were established in the ToR:

<b>On-Site and in the Site Vicinity:</b>	<i>On-site</i> includes the proposed waste disposal facility plus the associated buffer zones. <i>Site vicinity</i> is the area immediately adjacent to the waste disposal facility property that is directly affected by the on-site activities. Its size is variable depending on the particular criteria being addressed.
<b>Along the Haul Routes:</b>	The primary route along which the waste disposal facility truck traffic would move between a major provincial highway and the proposed waste disposal facility site entrance, plus the properties directly adjacent to these roads.
<b>Wider Area:</b>	The broader community, generally beyond the immediate site vicinity. Depending on the particular criteria this may include neighbourhoods, local municipalities, the Oxford County, or the Province of Ontario.



The tables of approved EA Criteria in Appendix B indicate the relevant study area(s) associated with each of the criteria in this assessment.

Although these three general study areas were common across all of the studies, their actual physical boundaries were not necessarily identical for every study or criterion; a flexible approach was used, and the study area boundaries were adjusted as the work progressed to ensure that they adequately encompassed the significant effects of the proposed landfill.

For this assessment, the final study area considered on-site and in the site vicinity. For the purposes of this study, the on-site and in the site vicinity area extends to approximately 5 kilometers from the proposed landfill. This is based on the maximum extent of air quality effects that can be anticipated. Since there are some emissions of contaminants in common with the LFG study from the Carmeuse site, the Carmeuse property line has been used as the boundary. The receptor grid used for the LFG modelling is illustrated in **Figure 6**.

Where appropriate and relevant, common receptor points were also selected collaboratively by the technical experts so that the potential overlapping or cumulative effects of the proposed landfill could be assessed at these common receptor points. Of the 50 common receptor points selected, a total of 43 were identified as relevant receptors for the Air Quality discipline. An additional receptor point ZOR-13, was not identified as a receptor for air quality but has been included at the discretion of the air quality team. Only receptors representing residential locations or other locations where human activity regularly occurs were used to assess compliance with the criteria. The common receptor points for air quality used for the LFG modelling are illustrated in **Figure 7**.

## 7 METHODOLOGIES

The following section outlines the key items that will be used to assess the baseline conditions, future (build) and post closure predicted impact scenarios:

- Complete ambient monitoring for VOCs and Sulphurs to determine the existing baseline conditions.
- Estimate the level of dust and air emissions from the proposed landfill operations.
- Estimate the amount and quality of gas emissions from the proposed waste disposal facility operations, considering the capture rate for the proposed landfill gas collection system.
- Run computer models to simulate the effects of the proposed waste disposal facility compared to the baseline (existing before proposed waste disposal site) conditions, predicting dust, odour and air quality at critical receptor points in the site vicinity and along the haul routes. This evaluation will also consider the cumulative effects from the Carmeuse site operations.

The sections below outline the detailed approach including data to be collected, locations, methodologies. For the air quality assessment, the following scenarios will be examined:

- Baseline conditions;
- Three future operating scenarios, representing different phasing of the proposed site; and,
- Post-closure scenario.



This LFG study defines and documents the potential impact on the atmospheric environment from the proposed landfill, including the potential effects, mitigation or compensation measures, and net effects.

The baseline, future proposed and post-closure scenarios for the LFG assessment have been completed using an ambient air quality monitoring program in conjunction with a numerical modelling assessment. The ambient air quality monitoring program allowed for the development of site-specific data that can more accurately reflect predicted impacts from both the baseline case as well as the proposed waste disposal site alternatives.

Potential LFG sources were identified based on data collected from other landfill sites within the Province of Ontario and the review of the background information on the proposed operational plans including technical support documents. Typical LFG sources are discussed in the following section.

## **7.1 Emission Sources**

Gas generated by decomposing waste in a landfill can migrate through the soil cover to the surface of the landfill, mix into the atmosphere and disperse downwind and off-site. The landfill gas consists primarily of methane, carbon dioxide and trace amounts of volatile organic compounds (VOCs) and reduced Sulphur gases (Sulphur's). Although the levels of VOC and Sulphur compounds account for less than one percent by volume of the gas escaping from a landfill, the concentrations of these gases must be considered because of the potential for health or odour impacts at residences or businesses that surround the landfill.

Under normal operating conditions, solid waste landfills have the potential to emit LFG contaminants, including VOCs and Sulphur's from several areas, including:

- Fugitive emissions of LFG through the surface of the landfill, through both final cap and interim cover areas, excavation of exposed waste, and cracks/fissures in the landfill covers;
- VOCs from the leachate collection and treatment system;
- Hydrocarbon VOCs from the use of contaminated soils as cover materials;
- Uncombusted LFG compounds emitted from the flare; and,
- Tailpipe emissions of benzene and toluene.

Each of these sources is discussed in the following sections.

In addition, the Carmeuse kilns emit some VOC contaminants in common with the landfill sources, so they have been included in the assessment.

### **7.1.1 Landfill Mound under Final Cover**

The landfill mound under final cover is the portion of the landfill where waste is no longer being deposited. This area is characterized by the presence of a landfill cap and final LFG collection systems have been put in place.

LFG contaminants from the landfill mound under final cover result from the fugitive emissions of LFG through the surface of the landfill. The LFG collection system in the final capped areas of the landfill serves to help maximize





extraction of LFG from the mound, thus reducing the amount of LFG available to escape through the surface of the mound. In addition, the capping materials filter and limit the ability of the LFG to be released through the surface of the landfill. However, even with the LFG collection system and cap in place, some LFG is released to the atmosphere through the final cover. The overall LFG collection efficiency from areas under final cap is assumed to be 85%, with the remaining 15% of the gas released through the surface of the landfill. The final capped area was included in the quantitative assessment.

### **7.1.2 Active Stage (Interim Cover Area)**

The active stage of the landfill is the area where waste has been deposited within the modelled year. The active stage is characterized by the presence of an interim cover. The active stage does not have a completely installed LFG collection system, therefore collecting the LFG with a lower overall collection efficiency conservatively assumed to be 50%. Although some cells within of a given stage of the landfill may be under final cap, for the purposes of the assessment, the entire stage was assumed to be under interim cover as a conservative approach. The interim cover area was included in the quantitative assessment.

### **7.1.3 Landfill Gas Flare**

Collected landfill gas will be combusted in fully enclosed flare(s). One flare will be needed initially, but up to three may be required over the life of the landfill to match the gas production rate. The flares are designed to operate at temperatures between 875 °C and 950 °C with a residence time of 0.75 seconds to ensure air quality standards are met in the exhaust. Flaring of the landfill gas typically converts about 98% of the methane to carbon dioxide and consumes more than 99.9% of the trace organic compounds. The overall destruction efficiency was capped at 98% for all contaminants as a conservative approach. The flare parameters were assumed to be similar to the existing flare at the Walker's South Landfill, in Niagara Falls, Ontario. As a conservative approach, all collected LFG was assumed to be combusted in a single flare throughout the entire life of the landfill.

At approximately operating year 5 of the landfill, LFG utilization is expected. Any impacts from utilization are expected to be less than the baseline of flaring onsite.

Emissions from the LFG flare was included in the quantitative assessment.

### **7.1.4 Excavation of Exposed Waste**

On occasion, it may become necessary to excavate exposed waste at the landfill for purposes such as installation of a landfill gas well. This activity is expected to occur infrequently.

Excavating through the landfill interim cover, or especially the final clay cap, opens a conduit for this LFG to escape directly into the atmosphere. This type of excavation can represent upset conditions and as such was not considered in the quantitative assessment, instead, this activity is best addressed through the development of Best Management Practices to minimize potential impacts if/when required, as outlined in Section 11.2.



### **7.1.5 Cracks/Fissures in Landfill Cap**

The final cap of the landfill limits the migration of LFG through the surface of the landfill. However, cracks and fissures can form in the cap, allowing LFG to pass through unchecked. These cracks and fissures can form for a variety of reasons, including the effect of freeze/thaw cycles, erosion due to surface water runoff, and heavy equipment operating on the capped area. These cracks and fissures in the landfill cap can represent upset conditions and, as such, were not considered in the quantitative assessment, instead, this activity is best assessed through the development of Best Management Practices to minimize potential impacts if/when necessary, as outlined in Section 11.2.

### **7.1.6 Leachate Collection System**

Leachate contains many of the same contaminants that are contained in LFG. The leachate collection mains are placed under negative pressure so that no gases escape from the manholes or other open points in the leachate management system. All manholes were assumed to be sealed and the leachate collection system was assumed to be under negative pressure with collected gases diverted to the flare. The leachate collection system was therefore excluded from the quantitative assessment.

### **7.1.7 Leachate Treatment System**

The leachate plant located to the northwest of the landfill area consists of an aeration pond, a raw leachate holding pond, a leachate treatment building, an effluent holding pond, and a polishing wetland. Both the aeration pond and the raw leachate holding pond are sources of VOCs, which were included in the quantitative assessment. The leachate treatment building was assumed to be placed under negative pressure and include appropriate controls such that VOC emissions from this operation are negligible relative to the other leachate sources. The effluent holding pond and polishing wetland contain treated leachate and are not expected to emit substantial quantities of VOCs.

### **7.1.8 Leachate Seepage**

Leachate seepage can occur if leachate “breaks through” the cap of the landfill and pools on the surface. Leachate seepage can occur due to poor drainage, or cracks and fissures in the landfill cap. Leachate seepage represents an upset condition and as such was not considered in the quantitative assessment, instead, this activity is best assessed through the development of Best Management Practices to minimize potential impacts if/when necessary, as outlined in Section 11.2.



### 7.1.9 Waste Soil Stockpiles

The landfill would receive waste soil from off-site locations for use as daily cover. The majority of this soil is petroleum fuel-contaminated and contains fuel-related VOCs such as benzene and other light aromatics. The waste soil is stockpiled in one of two locations, with a maximum footprint area of 32,500 m<sup>2</sup>. VOC emissions from the waste soil stockpiles were included in the quantitative assessment.

### 7.1.10 Tailpipe Emissions

Vehicles from the landfill and from non-landfill sources emit benzene and other light aromatic compounds from their tailpipes. The contribution from vehicle tailpipe emissions are not included in the LFG study; instead, they are assessed in the companion Haul Route Study.

## 7.2 Assessment Scenarios

The assessment of LFG impacts resulting from the proposed landfilling activities focused on emissions generated from the following landfilling activities:

- Fugitive landfill gas releases from landfill stages under final cover;
- Fugitive landfill gas releases from the active stages of the landfill under interim cover;
- The LFG flare;
- The waste soil storage piles;
- The raw leachate storage pond; and,
- The leachate aeration pond.

In addition, the following sources were considered as sources of like emissions:

- Carmeuse Kilns

The baseline condition is represented by monitoring data, based on the one year of ambient monitoring conducted by RWDI at the Carmeuse site. For the 24-hour averaging period, the 90th percentile of the measured 24-hour concentrations was used. For the annual averaging period, the annual average of the measured 24-hour concentrations was used. Further details are provided in Section 8.1.

The potential LFG contaminant impacts from the significant LFG sources were assessed at various stages of landfill operation, as described in Section 5. For the operational stages and post-closure, the assessment was based on emission calculations and dispersion modelling. For each of the operational scenarios, the assessment considered operation in the final year of each stage, as this period would have the most waste in place.

An overview of the modelling scenarios assessed in this study is presented in **Table 4**. The locations of these sources are presented in **Figure 8**.



**Table 4:** Summary of Modelled Scenarios

Scenario Assessed	Sources Modelled													
	Landfill													Carmeuse
	Stage 1 Interim Cover	Stage 2 Interim Cover	Stage 3 Interim Cover	Stage 4 Interim Cover	Stage 1 Final Cover	Stage 2 Final Cover	Stage 3 Final Cover	Stage 4 Final Cover	Flare	Northwestern Waste Soil Pile	Central Waste Soil Pile	Aeration Pond	Raw Leachate Pond	Kilns
Stage 1: 2027	X								X	X		X	X	X
Stage 2: 2032		X			X				X	X		X	X	X
Stage 3: 2037			X		X	X			X		X	X	X	X
Stage 4: 2042				X	X	X	X		X		X	X	X	X
Post-Closure: 2043					X	X	X	X	X			X	X	X

## 7.3 Emission Calculations

### 7.3.1 Final Cap and Interim Cover Areas

The emission rates for VOCs and Sulphur’s released through fugitive emissions of landfill gas from the final cap area of the landfill mound were based on the quantity of landfill gas released by the landfill and the concentration of each individual contaminant in this gas.

U.S. EPA’s LANDGEM landfill gas emission estimation model is the most direct method to determine first-order emission rates of VOCs and Sulphur’s from the proposed landfill. It is also recommended by the MECP; however, it can generate overly conservative estimates of VOC and Sulphur emissions. LANDGEM was used to calculate landfill gas generation for each stage of the landfill for each of the assessment years. Inputs to LANDGEM include the methane generation rate (k), the methane generation potential of the waste (Lo), the concentration of methane in the LFG, and the waste deposition history of the landfill. The k and Lo values were obtained from the MECP’s “Interim Guide to Estimate and Assess Landfill Air Impacts”. The methane concentration was based on the maximum methane concentration from samples of raw landfill gas at Walker’s South and East landfills in Niagara Falls, Ontario. A filling rate of 850,000 tonnes of waste per year for the 20-year life of the landfill was entered into LANDGEM.

The total landfill gas in m<sup>3</sup>/year, output from the LANDGEM model, was then adjusted by a factor of 70% to account for the expected proportion of biodegradable material in the waste. For the areas under final cover, 85% of the generated LFG is collected with the remaining 15% emitted through the final cover area. For the interim cover areas, 50% of the LFG was assumed to be collected with the remaining 50% emitted. As a conservative approach, the entire active stage of the landfill was assumed to be under interim cover for the purposes of this assessment.



The concentration of individual VOC and Sulphur compounds within the landfill gas were based on the worst-case concentration between U.S. EPA default values from AP-42 Chapter 2.4 (draft and final versions) and the maximum measurements of landfill gas composition at the Walker's East and South Landfills, in Niagara Falls, Ontario, taken in 2018. Two compounds listed in the workplan, m-cymene and limonene, did not have AP-42 default values or East and South landfill measured concentrations, therefore they have not been included in the assessment at this time.

The emission rates for each of the target LFG compounds from the landfill mound were calculated by applying the maximum concentration (milligrams per m<sup>3</sup>) to the amount of LFG released fugitively from the landfill (in m<sup>3</sup> per year). These emission rates were converted to flux rates (in g/m<sup>2</sup>/s) by dividing the total emission rate by the footprint area for each stage of the landfill.

Please refer to Appendix C for full details on the LFG emission calculations for the final and interim cover areas.

The emission calculations based on LANDGEM and the maximum concentration of each individual contaminant in the LFG resulted in conservative emission rates. For the Sulphurs, the elevated hydrogen sulphide concentrations in the raw landfill gas resulted in elevated emission estimates when following the LANDGEM approach. However, the LANDGEM Model has been developed as an LFG generation model and is not an LFG emission model. The approaches taken in this assessment also produce an estimate of LFG generation rather than LFG emission. This is a very critical distinction when assessing air quality. The effect of LFG passing through several feet of moistened soil, full of microbes and reactive minerals, greatly reduces the amount of many LFG compounds. This is particularly true for reduced Sulphur compounds such as hydrogen sulphide.

Therefore, for Sulphur compounds, emission rates from the landfill mound were developed based on source testing conducted at the existing Walker's South and East Landfills in October of 2019. This source testing used a flux chamber to collect samples of Sulphur species from various areas of the landfill, including the active face, interim cover areas, and final cover areas. Further details are provided in Section 8.2.

Please refer to Appendix D for full details on the Sulphur compound emission rates and testing.

### **7.3.2 LFG Flare**

All collected gas is sent to the flare, which was assumed to have a destruction efficiency of 98% for VOC and Sulphur compounds, based on AP-42. This 98% destruction efficiency is conservative relative to the expected 99.9% destruction efficiency for trace organic compounds. The concentration of VOCs and Sulphur's in the raw landfill gas were determined as described in the Section 7.3.1. The emissions of each individual contaminant were determined by applying the contaminant concentration to the total volume of LFG flared and reducing the predicted emissions by the 98% destruction efficiency.

The flare also emits combustion by-products. The combustion by-products from landfill gas flaring are not included in the LFG study; instead, they are assessed in the companion Haul Route Study.

Please refer to Appendix C for full details on the LFG emission calculations for the flare.



### 7.3.3 Waste Soil Piles

Emissions from the waste storage piles were based on flux chamber VOC sampling conducted at Walker's South Landfill, collected in October 2019. The average measured concentration for each VOC was used.

Please refer to Appendix D for full details on the waste soil piles emission rates and testing.

### 7.3.4 Leachate Ponds

Emissions from the aeration pond and leachate holding pond were based on sampling conducted at Walker's East Landfill aeration pond, as used for the South Landfill EA. These emission rates were used directly in the modelling for both the aeration pond and the raw leachate holding pond.

Please refer to **Appendix E** for full details on the emission rates used for the leachate pond sources.

### 7.3.5 Carmeuse Kilns

Emissions and source parameters from the Carmeuse kilns were obtained from Emission Summary and Dispersion Modelling Report tables dated January 13, 2017 provided by Carmeuse August 15, 2019 (Carmeuse ESDM). The source information was taken directly from these tables, with no alterations made by RWDI. A copy of the Carmeuse Source Summary Table is provided in **Appendix F**.

## 7.4 Dispersion Modelling

The VOC and Sulphur contaminant impact from the proposed landfill operations were determined using a dispersion model and reasonable worst-case emission rates. Dispersion modelling was performed using the U.S. EPA's AERMOD dispersion model (AERMOD) to predict concentrations of LFG contaminants emitted from the landfill operations at various receptors in the vicinity. The AERMOD model is an advanced dispersion model that has been approved for use in Ontario by the MECP. AERMOD is a steady-state Gaussian model that is capable of handling multiple emission sources. Within the model, receptor grids as well as discrete receptor locations of interest can be considered. The modelling assessment was conducted in accordance with MECP Guideline A11: "Air Dispersion Modelling Guideline for Ontario", February 2017 and the MECP Technical Bulletin "Methodology for Modelling Assessments of Contaminants with 10-Minute Average Standards and Guidelines under O. Reg. 419/05", September 2016.

The individual contaminant emission rates were applied to various sources in the dispersion model to predict the off-site concentrations.

Additional elements of the dispersion modelling assessment are discussed in the following sections.



### 7.4.1 Sources Modelled

The sources included in the dispersion model were the final cap areas, the interim cover areas, the LFG flare, the waste soil storage piles, the raw leachate storage pond, the leachate aeration pond, and the Carmeuse kilns. In addition, the landfill active face was also included in the modelling for the Sulphur contaminants, as the flux chamber testing measured the active face as a distinct source. Each of these sources were modelled as an area source, with the exception of the LFG flares and the Carmeuse kilns, which were modelled as point sources. The landfill active face, which moves throughout the entire landfill over the course of its life, was modelled in a single worst-case location during each landfill stage. All modelled sources were assumed to emit maximum emissions concurrently throughout the entire modelled period.

For the majority of the landfill life, landfilling operations will be occurring below grade although the final landfill mound will extend 15 m above grade. Sensitivity testing was conducted with landfill sources at grade, as well as at elevated heights of 15 m (top of landfill mound above grade) and 7.5 m (mid-height of landfill mound). The worst-case results occurred with the landfill at grade, so all landfill area sources were modelled at grade.

The locations of all modelled sources are shown in **Figure 8**.

### 7.4.2 Compounds Modelled

All VOC and Sulphur compounds listed in the workplan were modelled, with the exception of m-cymene and limonene, as discussed in section 3.1.

Scaling the dispersion model results was a possibility for some contaminants, since the emissions of these contaminants from all sources are based on the concentration of contaminants within the LFG (i.e., were emitted from the landfill final cover area, interim cover area, and flare only, with emission rates developed based on LANDGEM gas generation), and no non-LFG based sources emit these contaminants. Since the emissions from each source will maintain the same ratio to one another between contaminants, the percentage of contaminant released from each source will also be the same between contaminants. This approach allows for the scaling of the modelled results.

The results for 18 of the contaminants were scaled based on the chlorodifluoromethane results, using the ratio of their corresponding measured concentrations and the chlorodifluoromethane concentration. The following compounds were scaled from the chlorodifluoromethane results:

- 1,2,3-Trimethyl Benzene
- 1,2-Dichloroethene
- 2-Methyl Butane
- 2-Methyl Hexane
- 2-Methyl Pentane
- 3-Methyl Hexane
- 3-Methyl Pentane
- Butyl Acetate



- Dichlorofluoromethane
- Ethanol
- m/p-Ethyl Toluene
- Methyl Cyclohexane
- n-Butanal
- Nonane
- o-Ethyl Toluene
- Pentane
- Propyl Benzene
- Decane

The remaining contaminants were modelled individually using their respective calculated emission rates for each of the sources included in the model. Since these contaminants were emitted from non-LFG related sources (i.e., the leachate ponds, the waste soil pile, or the Carmeuse kilns) or from LFG sources whose emissions were based on source testing, rather than emission calculations, the emissions from each source did not maintain the same ratio between all contaminants, therefore the results could not be scaled from the chlorodifluoromethane results.

### 7.4.3 Meteorological Data

To ensure that a broad range of dispersion conditions are addressed, five years of local meteorological data (2013-2017) were used in the AERMOD model. The meteorological data set was developed by the MECP's Environmental Monitoring and Reporting Branch (EMRB) specifically for the study site and provided on January 21, 2019. The data set was based on wind-sector dependent land use specific to the landfill site, surface meteorological data collected from Environment and Climate Change Canada's London Airport station, and upper air meteorological data from the U.S. National Weather Service's Detroit station. The data set provided by the EMRB was used directly in the model, with no changes or alterations conducted by RWDI.

### 7.4.4 Area of Modelling

All common receptor points identified for the EA were included in this study, however, only receptors representing residential locations or other locations where human activity regularly occurs were used to assess compliance with the criteria. For all cases, humans were assumed to be present at these receptors for 24-hours per day. These discrete receptors were modelled at flagpole heights of 1.5 m above grade. The locations of these discrete receptors are shown on **Figure 7**.

In addition, the modelling was performed using a receptor grid covering the Site-Vicinity and Regional study areas to produce isopleths of predicted concentrations. The receptor grid covers the lands within approximately 3 to 5 kilometers from the proposed landfill site. The property line considered in the model included the proposed landfill facility as well as the Carmeuse site.





### 7.4.5 Terrain data

Terrain information for the area surrounding the proposed landfill was obtained from the MECP Ontario Digital Elevation Model Data web site. The terrain data is based on the North American Datum 1983 (NAD83) horizontal reference datum. These data were run through the AERMAP terrain pre-processor to estimate base elevations for receptors and to help the model account for changes in elevation of the surrounding terrain. The base elevations for the landfill sources were based on elevation drawings from the FCA report. The base elevations for the quarry extraction sources were obtained from figures provided by Carmeuse.

### 7.4.6 Building Information

The Building Profile Input Program (BPIP) is used to calculate the effects of building downwash on point sources, such as stacks. The proposed leachate building, scale house, maintenance shed, and existing Carmeuse buildings were included in the modelling, as these structures have the potential to affect emissions from the landfill gas flare and Carmeuse kilns. The BPIP model was run prior to running the AERMOD model in order to incorporate the potential building downwash effects.

The potential building downwash effects were only evaluated for the point sources within the dispersion model. Although the landfill mound may be considered as a “structure”, dispersion modelling tests completed by RWDI for a different landfill facility found that the effects of mound downwash have insignificant impacts on the maximum off-site concentrations. The effects of the mound downwash are insignificant as the sloping features of the mound do not act as a solid block building.

### 7.4.7 Averaging Periods Used

Emissions were modelled for 1-hour, 24-hour, and annual averaging times, to correspond with the criteria for the various compounds, as listed in **Table 3**. A conversion factor of 1.65 was used to convert 1-hour results to 10-minute averages, based on guidance provided in the MECP’s “Procedure for Preparing an Emission Summary and Dispersion Modelling Report”, March 2018.



## 8 DATA COLLECTION

Data used to quantify LFG emissions of VOCs and Sulphur compounds from the site were collected either through published emission factors or field data from testing conducted at the WEG East and South Landfills in Niagara Falls, Ontario. The following sections provides details regarding the data collection.

### 8.1 Background Data

#### 8.1.1 Landfill Gas Composition

A key input to the LFG emission calculations was the measured composition of VOC and Sulphur species within the landfill gas. These data were provided by Walker, based on accredited lab analysis performed in 2018 on the raw LFG from the Walker East and South Landfills in Niagara Falls, Ontario.

#### 8.1.2 Carmeuse Sources

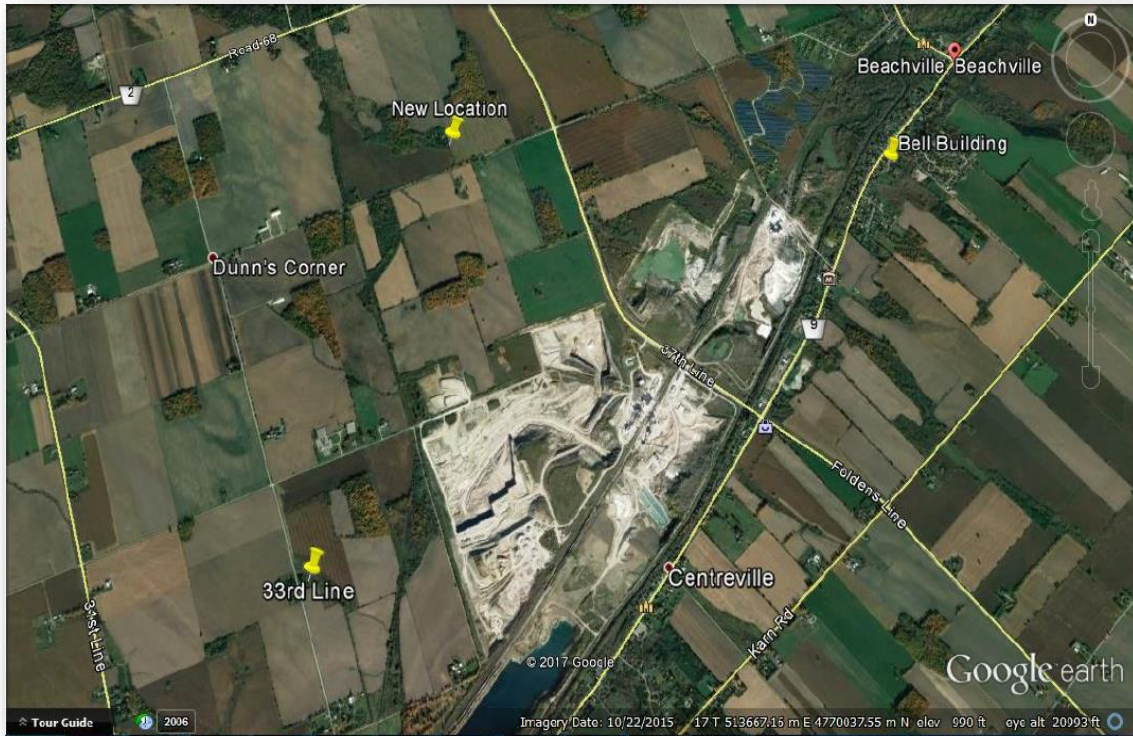
Stationary source information for Carmeuse manufacturing operations were obtained from an Emission Summary and Dispersion modelling report conducted by Stantec (Stantec, 2010), with updated ESDM tables dated January 13, 2017. This information was used as input information for the Carmeuse kiln sources. The data from these tables were used as is and no changes were made by RWDI.

### 8.2 Field Data

#### 8.2.1 Ambient Air Quality Monitoring

##### 8.2.1.1 *Volatile Organic Compounds*

A one-year ambient monitoring program for VOCs was used to determine the background air quality concentrations near the proposed landfill site for use as the baseline condition for the assessment. Samples for VOCs were collected at three ambient monitoring stations, as shown in **Figure 9**. The results from these data were used to establish background ambient levels.



**Figure 9:** Location of Ambient Monitoring Stations

The samples were collected and analyzed using methods defined in U.S. EPA Method TO-14/15 using evacuated canisters. Sampling for VOCs were collected over 24-hour durations (midnight to midnight, Eastern Standard Time (EST)) once every six (6) days in concurrence with the National Air Pollution Surveillance schedule provided by the U.S EPA and as outlined by the MECP. Sampling methodologies followed the Standard Operating Procedures (SOPs) as noted in the current version of the MECP Operations Manual, as amended. The list of VOCs monitored is presented in **Table 5**.



**Table 5:** List of VOCs in Ambient Monitoring Program

CAS No.	Compound	CAS No.	Compound
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	620-14-4/622-96-8	m/p-Ethyl Toluene
526-73-8	1,2,3-Trimethyl Benzene	108-38-3/106-42-3	m/p-Xylene
95-63-6	1,2,4 -Trimethyl Benzene	535-77-3	m-Cymene
108-67-8	1,3,5 -Trimethyl Benzene	78-93-3	MEK
591-76-4	2-Methyl Hexane	108-87-2	Methyl Cyclohexane
107-83-5	2-Methyl Pentane	108-10-1	MIBK
78-78-4	2-Methyl Butane	75-45-6	Chlorodifluoromethane
96-14-0	3-Methyl Pentane	123-72-8	n-Butanal
589-34-4	3-Methyl Hexane	91-20-3	Naphthalene
67-64-1	Acetone	111-84-2	Nonane
71-43-2	Benzene	611-14-3	o-Ethyl Toluene
123-86-4	Butyl Acetate	95-47-6	o-Xylene
124-18-5	Decane	109-66-0	Pentane
75-71-8	Dichlorodifluoromethane	64-17-5	Ethanol
75-09-2	Dichloromethane	103-65-1	Propyl Benzene
100-41-4	Ethyl Benzene	100-42-5	Styrene
142-82-5	Heptane	127-18-4	Tetrachloroethylene
110-54-3	Hexane	108-88-3	Toluene
67-63-0	Isopropyl Alcohol	75-69-4	Trichlorofluoromethane
5989-27-5	Limonene	79-01-6	Trichloroethylene
75-01-4	Vinyl Chloride	141-78-6	Ethyl Acetate
56-23-5	Carbon Tetrachloride	71-55-6	1,1,1-Trichloroethane
67-66-3	Chloroform	75-35-4	Vinylidene Chloride
106-93-4	Ethylene Dibromide	540-59-0	1,2-Dichloroethene
107-06-2	Ethylene Dichloride	108-90-7	Chlorobenzene
156-59-2	1,2-Dichloroethylene (cis)	74-87-3	Chloromethane
75-34-3	1,2-Dichloroethane	78-92-2	2-Butanol
156-60-5	1,2-Dichloroethylene (trans)	75-27-4	Bromodichloromethane
111-65-9	Octane	79-34-5	1,1,1,2-Tetrachloroethane
79-00-5	1,1,2-Trichloroethane	106-46-7	Dichlorobenzene
75-43-4	Dichlorofluoromethane	75-00-3	Chloroethane

Further details are provided in the Southwestern Landfill Environmental Assessment Air Quality Monitoring Reports (Q2 2018 through Q1 & Q2 2019), RWDI.

A summary of the monitoring data results is provided in **Appendix G**.



*8.2.1.2 Total Reduced Sulphur Compounds*

Ambient monitoring of total reduced Sulphur compounds near the site was also conducted to determine the background air quality concentrations near the proposed landfill site for use as the baseline condition for the assessment. The program consisted of samples collected at each of the three monitoring stations over a one-year period to be taken within the same type of evacuated canisters as the VOC samples noted above, as requested by the MECP. The results from these data will be used to establish background ambient levels.

The evacuated canisters were glass lined which are appropriate for Sulphur and VOC sample collection. The samples were sent to the accredited laboratory directly after collection of analysis (within 72-hours of collection), as per direction from the accredited laboratory. Total reduced sulphur samples were collected over 24-hour durations (midnight to midnight EST) once every six days from June 1 to September 30 and on a 12-day cycle outside of this timeframe, in concurrence with the National Air Pollution Surveillance and Environment and Climate Change Canada schedule. The list of total reduced Sulphur’s monitored is presented in **Table 6**.

**Table 6:** List of Reduced Sulphurs in Ambient Monitoring Program

CAS No.	Compound	CAS No.	Compound
7783-06-4	Hydrogen Sulphide	75-18-3	Dimethyl Sulphide
74-93-1	Methyl Mercaptan	624-92-0	Dimethyl Disulphide
N/A	Total Reduced Sulphurs	--	--

A summary of the monitoring data results is provided in **Appendix G**.

**8.2.2 Flux Chamber Measurements**

RWDI conducted flux chamber measurements for reduced Sulphur’s and VOC at the Walker’s East and South landfill sites located in Niagara Falls, Ontario. This sampling was conducted to determine the mitigative properties of the cover and landfill gas collection system at the Final Cap Area, Interim Cover Area, Daily Cover Area and Working Face Area for Sulphur compounds to refine the emission estimates used in the dispersion modelling. In addition, samples were collected from the waste soil pile to update the VOC speciation data from typical piles.

The sampling took place on October 9th and 10th, 2019, and consisted of: ten samples from South Landfill (Interim Cover Area), five samples from East Landfill (Final Cap Area), five samples from South Landfill (Final Cap Area), five samples from the South Landfill (Daily Cover Area (not exposed)); five samples from South Landfill (Working Face Area), and six samples from Waste Soil Piles, for a total of thirty-six samples taken.



Sulphur and VOC emissions from the areas were measured using three identical flux chambers. The flux chambers used are 40.6 cm in diameter and approximately 35 cm in height, and constructed of 14-gauge stainless steel, as per the designer’s specifications outlined in Ontario Stack Testing Code Method ON-6. All interior and exterior fittings are constructed from inert material being stainless steel and all lines were made from Teflon tubing. The flux chambers are equipped with four quick connect ports: one for the sweep gas line, one for the sample line, one for the temperature instrument and one for the pressure instrument.

Before taking measurements, each flux chamber was placed on the surface of the landfill and the inlet of the chamber was embedded slightly into the area to create a seal. Sand was also used to surround the chamber and the surface in areas where the chambers could not be inserted.

Ultra-high purity nitrogen gas was used as the sweep gas, which was metered into the chamber at a constant rate of 5 liters per minute. The sweep gas was allowed to run through the chambers for 30 minutes prior to sample collection.

Both the Sulphur and VOC samples were collected through a sample port on the flux chamber into an evacuated canister. The evacuated canister was filled over a 10-minute time frame for each of the thirty-six samples.

The landfill was operating under normal conditions and the landfill gas utilization system was operating under normal conditions. Waste soil samples were collected from newly deposited waste soils for the testing purposes. This is a conservative approach as VOC emissions from the waste soil piles tend to decrease with the age of the pile.

The results of the sampling are presented in **Tables 7** and **8**, below.

**Table 7:** Summary of 2019 Sampling Results–Sulphurs from Landfill Areas

	Average Flux (g/m <sup>2</sup> /s)- TRS				
	South Daily Cover Area	South Interim Cover Area	South Final Cover Area	South Working Face	East Final Cover Area
<b>Carbon Disulfide</b>	7.06E-09	4.51E-09	5.99E-09	5.31E-09	3.99E-09
<b>Carbonyl Sulfide</b>	2.78E-08	1.91E-08	1.11E-08	2.43E-08	2.71E-08
<b>Dimethyl Sulfide</b>	6.87E-09	6.51E-09	6.51E-09	6.51E-09	6.51E-09
<b>Dimethyl Disulfide</b>	3.26E-09	3.26E-09	3.26E-09	3.26E-09	3.26E-09
<b>Hydrogen Sulfide</b>	3.57E-09	3.57E-09	3.57E-09	3.57E-09	3.57E-09
<b>Methyl Mercaptan</b>	5.04E-09	5.04E-09	5.04E-09	5.04E-09	5.04E-09
<b>Total Reduced Sulfur</b>	2.13E-08	1.37E-08	9.13E-09	1.76E-08	1.88E-08



**Table 8:** Summary of 2019 Sampling Results-Volatile Organic Compounds from Waste Soil Pile

Compound	Waste Soil Pile- Average Flux (g/m <sup>2</sup> /s)- VOC	Compound	Waste Soil Pile- Average Flux (g/m <sup>2</sup> /s)- VOC
1,1,1-Trichloroethane	6.99E-10	cis-1,3-Dichloropropene	5.82E-10
1,1,2,2-Tetrachloroethane	9.09E-10	Cyclohexane	2.29E-09
1,1,2-Trichloroethane	6.99E-10	Dibromochloromethane	1.09E-09
1,1-Dichloroethane	5.19E-10	Dichlorodifluoromethane	1.15E-09
1,1-Dichloroethene	5.08E-10	Ethyl acetate	7.81E-10
1,2,4-Trichlorobenzene	9.51E-10	Ethylbenzene	4.22E-09
1,2,4-Trimethylbenzene	1.03E-08	Freon 113	9.82E-10
1,2-Dibromoethane	9.85E-10	Freon 114	8.96E-10
1,2-Dichlorobenzene	7.71E-10	Hexachlorobutadiene	1.49E-09
1,2-Dichloroethane	5.19E-10	Isooctane	1.39E-09
1,2-Dichloropropane	5.92E-10	Isopropyl alcohol	2.10E-09
1,3,5-Trimethylbenzene	5.26E-09	Isopropyl benzene	1.04E-09
1,3-Butadiene	2.84E-10	m&p-Xylene	2.36E-08
1,3-Dichlorobenzene	7.71E-10	Methyl ethyl ketone	2.47E-09
1,4-Dichlorobenzene	7.71E-10	Methyl isobutyl ketone	5.25E-10
1,4-Dioxane	4.62E-10	Methylene chloride	9.39E-10
2-Hexanone	6.34E-09	MTBE	4.62E-10
4-Ethyltoluene	3.07E-09	n-Heptane	1.60E-08
Acetone	1.88E-08	n-Hexane	8.34E-09
Allyl chloride	4.01E-10	o-Xylene	6.50E-09
Benzene	1.01E-09	Propylene	1.41E-09
Benzyl chloride	6.64E-10	Styrene	5.60E-10
Bromodichloromethane	8.59E-10	Tetrachloroethylene	8.69E-10
Bromoform	1.32E-09	Tetrahydrofuran	3.78E-10
Bromomethane	4.98E-10	Toluene	4.31E-09
Carbon Disulfide	7.17E-09	trans-1,2-Dichloroethene	5.08E-10
Carbon Tetrachloride	8.06E-10	trans-1,3-Dichloropropene	5.82E-10
Chlorobenzene	5.90E-10	Trichloroethylene	1.15E-08
Chloroethane	3.38E-10	Trichlorofluoromethane	7.44E-10
Chloroform	6.26E-10	Vinyl acetate	1.62E-09
Chloromethane	3.09E-10	Vinyl bromide	5.61E-10
cis-1,2-Dichloroethene	9.49E-10	Vinyl chloride	3.28E-10

A copy of the sampling report is provided in **Appendix D**.





## 9 ENVIRONMENT POTENTIALLY AFFECTED BY THE UNDERTAKING

Section 6.1(2)(c)(i) of the Act requires a “description of the environment that will be affected or might reasonably be expected to be affected, directly or indirectly”. Section 8.2 of the ToR describes the methodology by which the environment potentially affected by the proposed landfill is to be developed, notably including both the existing environment as well as the environment that would be expected to exist in the future without the proposed undertaking (i.e., the environmental baseline conditions, or the “do nothing” alternative).

### 9.1 Baseline Assumptions

#### 9.1.1 Land Use Forecast

A common set of assumptions were provided by MHBC Planning on behalf of Walker regarding the forecast land uses in the area, so that this study could reflect any reasonably foreseeable changes in the uses of the land on and around the proposed landfill site (including the expected ongoing operation of the quarries and lime plants in the vicinity of the site). These assumptions are detailed in Walker’s Environmental Assessment Report, while a brief summary of the aspects relevant to this study follows.

In order to address cumulative effects, in accordance with the methodology set out in Section 8.2 of the Approved Amended Terms of Reference, this study will compare the potential effects of the proposed landfill at its different stages of development to the forecast baseline conditions at that same period of time (i.e., the “do nothing” alternative). In order to guide the forecasting of future baseline conditions, MHBC provided a set of working assumptions regarding future land uses (including community growth, other industrial activities such as quarrying, etc.) at the site, in the surrounding area and in the broader community (*Land Use Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020).

- Existing Conditions (Section 4.0);
- Aggregate Operations (Section 5.0); and
- Land use Forecast (Section 6.0).

Based on the land use forecast, there are no new sources of LFG contaminants predicted to be developed in the future.



## 9.1.2 Climate Change Forecast

Another set of common assumptions that were established for the purpose of this EA is the potential for climate change, so that these could be considered in the individual studies of the potential effects of the proposed landfill. These assumptions are detailed in Walker’s Environmental Assessment Report and basically adopt the guidance in the Ontario Ministry of Natural Resources and Forestry’s Climate change projections for Ontario: An updated synthesis for policymakers and planners.

Minister’s amendment #12 to the Approved Amended Terms of Reference required that climate change should be considered in this environmental assessment. The following table summarizes the mean climate change (temperature and precipitation) assumptions to be considered during this study, where relevant.

**Table 9:** Climate Change Forecast

	Temperature (°C)			Precipitation (mm)		
	Annual	Summer	Winter	Annual	Summer	Winter
2011-2040	+2.3	+2.0	+2.2	+52.0	-2.7	+28.3
2041-2070	+3.9	+3.2	+4.5	+87.0	-2.5	+34.9
2071-2100+	+4.8	+4.1	+5.5	+89.0	-4.4	+46.8

**Source:** McDermid, J., S. Fera and A. Hogg. 2015. Climate change projections for Ontario: An updated synthesis for policymakers and planners. Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, Ontario. Climate Change Research Report CCRR-44.

The Ministry of Natural Resources and Forestry document from which the data is sourced includes other information that can be used if and where appropriate in this and other studies.

The modelling considers a five-year set of hourly meteorological data. Predicted impacts are based on the worst-case conditions within this data set. The future wind climate and meteorological conditions are not expected to change to a degree that would affect the landfill gas assessment.

## 9.2 Environmental Baseline Conditions

### 9.2.1 Existing Conditions

The existing conditions in the vicinity of the proposed landfill have been assessed through the ambient monitoring program, as described in Section 8.2.1. For the 24-hour and shorter averaging period, the baseline concentration was calculated as the 90th percentile of the 24-hour monitoring results across all three monitoring stations. For the annual averaging period, the average of the 24-hour monitoring results was used. Where sample results were found to be below the laboratory detection limit, the detection limit was used in the calculation as a conservative approach.

The baseline concentrations and a comparison to the applicable criteria are presented in **Table 10**.



**Table 10:** Baseline Results

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Background Concentration (ug m <sup>-3</sup> )	Percentage of Criteria
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	<1%
Acetone	67-64-1	11880	24	19.20	<1%
Benzene	71-43-2	2.3	24	0.59	25%
Benzene	71-43-2	0.45	Annual	0.38	84%
Butyl Acetate	123-86-4	1000	10-minute	4.75	<1%
Butyl Acetate	123-86-4	15000	1	4.75	<1%
Decane	124-18-5	60000	1	1.45	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	<1%
Dichloromethane	75-09-2	220	24	0.35	<1%
Dichloromethane	75-09-2	44	Annual	0.52	1%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	<1%
Ethyl Benzene	100-41-4	1000	24	0.44	<1%
Heptane	142-82-5	11000	24	0.41	<1%
Hexane	110-54-3	2500	24	0.76	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	<1%
Limonene	5989-27-5	550	24	5.50	1%
Vinyl Chloride	75-01-4	1	24	0.03	3%
Vinyl Chloride	75-01-4	0.2	Annual	0.03	13%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	21%
Chloroform	67-66-3	1	24	0.24	24%
Chloroform	67-66-3	0.2	Annual	0.24	120%
Ethylene Dibromide	106-93-4	3	24	0.04	1%
Ethylene Dichloride	107-06-2	2	24	0.09	4%
Ethylene Dichloride	107-06-2	0.4	Annual	0.06	15%
Chloroethane	75-00-3	5600	24	0.27	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	<1%

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Contaminant	CAS	Criteria (ug m-3)	Averaging Period	Background Concentration (ug m <sup>3</sup> )	Percentage of Criteria
Chlorobenzene	108-90-7	3500	1	0.46	<1%
Chlorobenzene	108-90-7	4500	10-minute	0.46	<1%
Chloromethane	74-87-3	320	24	1.26	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	2%
m/p-Xylene	108-38-3	100	24	0.85	<1%
m/p-Xylene	108-38-3	3000	10-minute	0.85	<1%
m-Cymene	535-77-3	137.5	24	5.50	4%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	<1%
Naphthalene	91-20-3	22.5	24	0.65	3%
Naphthalene	91-20-3	50	10-minute	0.65	1%
Nonane	111-84-2	4200	24	0.50	<1%
o-Ethyl Toluene	611-14-3	0.5	24	0.49	98%
o-Xylene	95-47-6	100	24	0.44	<1%
Pentane	109-66-0	4200	24	1.09	<1%
Ethanol	64-17-5	19000	1	7.70	<1%
Propyl Benzene	103-65-1	20	24	0.49	2%
Styrene	100-42-5	400	24	0.43	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	<1%
Toluene	108-88-3	2000	24	1.61	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	<1%
Trichloroethylene	79-01-6	12	24	0.06	<1%
Trichloroethylene	79-01-6	2.3	Annual	0.06	3%
Ethyl Acetate	141-78-6	19000	1	0.36	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	<1%
1,2-Dichloroethene	540-59-0	105	24	0.08	<1%
2-Butanol	78-92-2	496	24	3.05	<1%
Bromodichloromethane	75-27-4	350	24	0.34	<1%
Octane	111-65-9	61800	10-minute	0.47	<1%
1,1,2,2-Tetrachloroethane	79-34-5	0.1	24	0.03	35%
1,1,2-Trichloroethane	79-00-5	0.3	24	0.03	9%
Dichlorobenzene	106-46-7	95	24	0.34	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	30%



Contaminant	CAS	Criteria (ug m-3)	Averaging Period	Background Concentration (ug m <sup>-3</sup> )	Percentage of Criteria
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	27%
Hydrogen Sulphide	7783-06-4	7	24	3.50	50%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	25%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	7%
<b>Total Reduced Sulphurs (TRS)</b>	N/A-2	13	10-minute	5.00	38%
<b>Total Reduced Sulphurs (TRS)</b>	N/A-2	7	24	5.00	71%

**Note:** [1] n-butanal was not present in the ALS ambient monitoring samples reports and therefore has no background concentration.

The background concentrations for most compounds are low, relative to their criteria. The exceptions to this are annual chloroform, which exceeds its criteria (120% of its criteria), annual benzene (84% of its criteria), 24-hour o-ethyl toluene (98% of its criteria), and 24-hour total reduced Sulphur's (71% of its criteria).

For chloroform, the majority of the measured concentrations are low, however, there are a few occasions where the measured chloroform concentration spikes, skewing the annual average upwards such that the annual average concentration is actually slightly higher than the 90th percentile 24-hour concentration. If these spikes are removed from the dataset the annual average chloroform concentration decreases from 0.24 ug/m<sup>3</sup> to 0.125 ug/m<sup>3</sup>. The cause of these chloroform spikes is unknown at this time; therefore, they have not been eliminated from the dataset. Based on the emission data provided by Carmeuse, there is no chloroform associated with their facility operations. Therefore, based on this information and the meteorological conditions that occurred during the chloroform spikes the Carmeuse quarry is not the cause of these elevated concentrations.

## 9.2.2 Future Baseline Conditions

Future baseline conditions for background ambient VOC and Sulphur are assumed to be equivalent to existing baseline conditions. No new industrial sources of VOC or Sulphur compounds are expected to be developed in the immediate vicinity of the landfill in the future. The Carmeuse kilns are assumed to remain in operation throughout the life of the landfill. Data provided by the traffic consultant has indicated that traffic volumes in the area will grow at a yearly rate of 1.02% for both population and industry. However, this modest growth in background traffic will be offset by improved emissions levels from individual vehicles in the future. Therefore, the assessment assumes conservatively that the background concentrations are constant for the life of the landfill.





## 10 EVALUATION OF THE PROPOSED LANDFILL

Section 6.1 (2)(c) and (d) of the Act, and the ToR, require an evaluation of:

- The effects that will be caused on the environment;
- The actions necessary to prevent, change, mitigate or remedy the effects on the environment;
- An evaluation of the advantages and disadvantages (net effects) to the environment.

This section presents the assessment of these matters as it relates to the odour study and for each of the EA criteria related to this study.

### 10.1 Effects due to exposure to air emissions

#### 10.1.1 Potential Effects

The maximum modelled off-site concentrations predicted at or beyond the property line of the landfill and Carmeuse site from all landfill-related operations and the Carmeuse kilns are summarized in **Tables 11 to 14**.

**Tables 11-14** list the maximum predicted concentration at any point offsite for each of the three operation stages plus post-closure. The results presented represent the single highest concentration modelled over the five-year period, all other concentrations are less than this amount. The “Maximum Modelled Concentration” column represents the potential effects from the landfill operations for all contaminants, with the exception of benzene. The modeled benzene concentration includes the landfill sources but also includes the modelled contribution from the Carmeuse kilns. Benzene is the only VOC contaminant modelled from the kilns, as it was the only VOC contaminant listed in the Carmeuse ESDM report. The model results indicate that the contribution from the kilns are small relative to the fugitive landfill sources; therefore, including the kiln contribution when assessing the potential effects of the landfill is a conservative approach but does not affect the assessment meaningfully.

When considering the landfill contribution only, without ambient background applied, the maximum predicted concentrations at the property line are predicted to be below all established criteria for all contaminants. For vinyl chloride, meteorological anomalies have been removed from the results, following guidance from the MECP’s Guideline A11. For all other contaminants, meteorological anomaly removal was not performed as the maximum predicted concentrations were below criteria. This is a conservative approach.

The overall worst-case impacts tend to occur at locations along or immediately adjacent to the property line. These locations are not residential and are not representative of locations where members of the public would be expected to spend extended time. Of more importance are the predicted impacts at the discrete receptor locations, especially the residential locations. Therefore, the assessment of VOC and Sulphur impacts at the discrete receptor locations is presented, below.



The dispersion modelling analysis was completed for each contaminant at each of the identified air quality receptors. Some of the receptors represented residential locations, while others represented other key points of interest, such as intersections, wetlands, etc. These non-residential receptors often have residences in the vicinity, so they have been included in the modelling. The results for all modelled receptors for each contaminant for each scenario are presented in **Appendix F**. The maximum predicted concentration occurring at the worst-case residential receptor for each contaminant for each stage are presented in **Tables 15** through **18**.

Detailed results for all discrete receptors are presented in **Appendix H**.

The modelling considers a five-year set of hourly meteorological data. Predicted impacts are based on the worst-case conditions within this data set. The future wind climate and meteorological conditions are not expected to change to a degree that would affect the landfill gas assessment.

### **10.1.2 Potential for Cumulative Effects**

The potential for cumulative effects has been addressed through the inclusion of the ambient background monitoring data and through the addition of the Carmeuse kilns in the dispersion model (as discussed in Section 10.1.1) to the modelled results when comparing to the criteria. The cumulative effects are included in the results presented in **Tables 11** to **14**.

The background concentration reflects the concentrations measured during the ambient monitoring program and are equivalent to the baseline conditions. The maximum modelled concentration represents the combined contribution from all landfill sources and the Carmeuse kilns. The background concentration and the modelled concentration are summed together and compared to the criteria. Both the background concentrations and the modelled concentrations for benzene include the contribution from the Carmeuse kilns, as they are existing sources; however, the model results indicate that the ground-level contribution from the kilns is small (i.e.<1%) relative to the measured ambient background concentration. This is a conservative approach but does not affect the assessment meaningfully. Benzene is the only VOC listed as coming from the kilns in the Carmeuse ESDM; therefore, this conservatism has not been applied to any other contaminants in the LFG study.

The maximum predicted concentrations at the property line are predicted to exceed the criteria from time-to-time for the following contaminants:

- Benzene (annual); and,
- Chloroform (annual).

These worst-case impacts tend to occur at locations along or immediately adjacent to the property line. These locations are not residential and are not representative of locations where members of the public would be expected to spend extended time. Of more importance are the predicted impacts at the discrete receptor locations, especially the residential locations. Therefore, the assessment of VOC and Sulphur impacts at the discrete receptor locations is discussed later in this section.



The cumulative results for all modelled receptors for each contaminant for each scenario are presented in **Appendix F**. The maximum predicted concentration occurring at the worst-case residential receptor for each contaminant for each stage are presented in **Tables 15** through **18**.

Detailed results for all discrete receptors are presented in **Appendix H**.

The results indicate that the following contaminants exceed the applicable criteria at a residential receptor off-site:

- Chloroform – annual.

Additionally, the results at the top 10 residential discrete receptors are summarized for chloroform in **Table 19**.

For annual chloroform, the background concentration exceeds the standard on its own; the landfill contribution to off-site impacts is very small (<10% of the standard). The annual chloroform background concentration is high due to a few isolated samples, which are skewing the data but have not been ruled out; the source of the high chloroform background is not known. The predicted exceedances are a result of the background concentration and the incremental contribution from the proposed landfill is low.

### 10.1.3 Additional Mitigation Recommendations

The landfill gas assessment considered several mitigation measures that are part of the design of the proposed landfill. These mitigation measures include the following:

- Development of a Landfill Gas Best Management Practices (BMP) Plan;
- Progressive installation of the LFG collection system;
- Flaring or otherwise combusting all collected LFG;
- Ensuring emergency measures are in place should a power failure or lightning strike occur that disrupts the flare (including notification to staff or alarm system);
- Maintaining the leachate collection system under negative pressure and sending the collected gas to the LFG collection system;
- Minimizing the size of the active face; and,
- Daily covering of the active face.

These mitigation measures were considered in the assessment and, as such, the predicted impacts presented in Section 10.1.1 incorporate the effect of these measures. In addition to these current mitigation measures, the following additional mitigation strategy has been recommended through the companion odour study; this recommended additional mitigation measure also affects sources of VOCs; therefore, the mitigation has also been applied to the LFG assessment:

- Using a cover or other control technologies to reduce the surface area of the leachate ponds by a minimum of 30%.

Dispersion modelling was conducted to assess the benefit in implementing this additional mitigation strategy for LFG reduction. The results from the modelling assessment are presented in Section 10.1.4.



## 10.1.4 Net Effects

The net effects with the additional mitigation applied are presented in the following tables and contour plots. The tables include the modelled contribution from the landfill sources and benzene from the Carmeuse kilns, and the combined impacts from the measured background ambient concentrations. The measured background ambient concentrations include contribution from the existing sources in the area, including the contribution from vehicle exhausts on nearby roadways. The maximum modelled off-site concentrations predicted at the property line of the landfill site for VOCs and Sulphur's from all landfill-related operations with the additional mitigation recommendations in place are summarized in **Tables 20, 21, 22, and 23**. The maximum off-site concentrations predicted at a residential receptor for VOCs and Sulphur's from all landfill-related operations with the additional mitigation recommendations in place are summarized in **Tables 24, 25, 26, and 27**. Contour plots of maximum predicted concentrations across the entire receptor grid for all contaminants predicted to be greater than 10% of the applicable criteria at the worst-case residential receptor are presented in **Appendix I**.

Detailed results for all discrete receptors are presented in **Appendix J**.

Additionally, the results with the additional mitigation applied at the top 10 residential discrete receptors are summarized for chloroform is summarized in **Table 28**. The results at each of the receptor locations is highly dominated by the elevated background concentration.

The application of the additional mitigation measures reduces the maximum predicted concentration slightly for some contaminants but does not have a major impact on the overall results. The additional mitigation measures were developed for the purposes of odour control and were not specifically developed to reduce landfill gas-related VOC and Sulphur impacts. The net effects are similar to the predicted potential effects. The potential effects identified for chloroform are primarily related to high background concentrations and although mitigation measures reduce some landfill effects, mitigation measures will not address elevated background levels; therefore, the net effects are similar to the potential cumulative effects.

Under Regulation 419/05 (Reg. 419), facilities are required to comply with MECP Standards and Guidelines at points at and beyond the property line of the facility, without the consideration of cumulative effects. Since the modelled results from the landfill on its own are below Reg. 419/05 Standards and Guidelines, the proposed landfill is deemed capable of meeting Reg. 419 requirements. When the detailed design is developed and the Reg. 419 permits are being completed, additional design changes or mitigation measures may be incorporated to ensure that compliance under Reg. 419 is maintained at the property line under all scenarios.



After the LFG assessment was completed, the human health risk assessment team utilized the predicted concentrations in their assessment. The human health risk assessment identified a potential impact with the annual predicted concentration of ethylene dibromide at a residential receptor location. In order to mitigate this potential impact, the maximum predicted concentration from the landfill operations needed to be reduced to below  $0.0017 \mu\text{g}/\text{m}^3$  at all residential receptors. Applying 60% control on the leachate and aeration ponds, the worst-case sensitive receptor concentration of ethylene dibromide was reduced to  $0.00166 \mu\text{g}/\text{m}^3$  for the annual averaging period. This maximum modelled concentration occurs in stage 1 at ZOR-6 and represents the worst-case residential receptor over all modelling scenarios.

Overall, successful mitigation of ethylene dibromide emissions required the combined aeration and leachate pond surface areas to be reduced from  $18,200 \text{ m}^2$  to  $7,280 \text{ m}^2$ , or through otherwise applying a 60% emission control to these sources.

The results for ethylene dibromide with the additional mitigation applied is presented in **Table 28** for Stage 1, as this was the Stage with the potential impact as identified by the human health risk assessment team.

This additional control of the leachate plant was not applied to any of the other contaminants under any of the other scenarios. This is a conservative approach as applying the additional control would result in predicted concentrations that are the same or lower than what has been presented in this report. This application of this additional control would not impact the conclusions regarding chloroform, as the elevated chloroform concentrations are driven by ambient background concentrations, not modelled leachate plant emissions.

### 10.1.5 Summary

The results indicate that the following contaminants exceed the applicable criteria at a residential receptor off-site:

- Chloroform – annual;

Chloroform exceeds the annual standard based on background values alone. The maximum predicted landfill contributions are relatively low compared to the standard (<10%). The additional landfill contribution does not result in any predicted impacts at receptors that are not already impacted by the elevated background concentrations.





## 11 MONITORING, CONTINGENCY & IMPACT MANAGEMENT RECOMMENDATIONS

### 11.1 Monitoring & Contingency Plans

Monitoring will aid in identifying and correcting problems before they cause off-site impacts. The following monitoring measures are recommended for the landfill facility:

- Monitoring of the landfill gas collection system to ensure it is operating according to design (i.e. wellfield monitoring to include vacuum, flow, temperature, methane measurements)
- Continuous monitoring for temperature and flow on the LFG flare to ensure proper operation;
- Tracking of any strong odours noted on site. Document, address and investigate all odour complaints to determine odour source and prevent or minimize future off-site odour impacts.

Through the implementation of a monitoring program, Walker will be able to detect any upset conditions that could result in increased landfill gas emissions from the site. It is recommended that Walker develop a contingency plan to address any issues that may be detected. It is also recommended that Walker include possible process upsets due to unusually odorous waste loads and landfill gas collection system malfunctions in their contingency plan.

### 11.2 Impact Management

This section provides recommendations for managing any residual negative effects of the landfill expansion that cannot be directly mitigated.

Additional mitigation measures were included in the dispersion model and were found to reduce the predicted landfill related odour impacts. Some measures that may further reduce the impact of landfill related odour emissions, include:

- The landfill working face should be kept as small as practical to reduce emissions.
- Final or interim cover should be applied as soon as possible to the completed cells to reduce the potential for fugitive gas releases.
- Regular maintenance of the landfill cap and interim cover areas should be conducted to reduce the cracks and fissures due to erosion and settling.

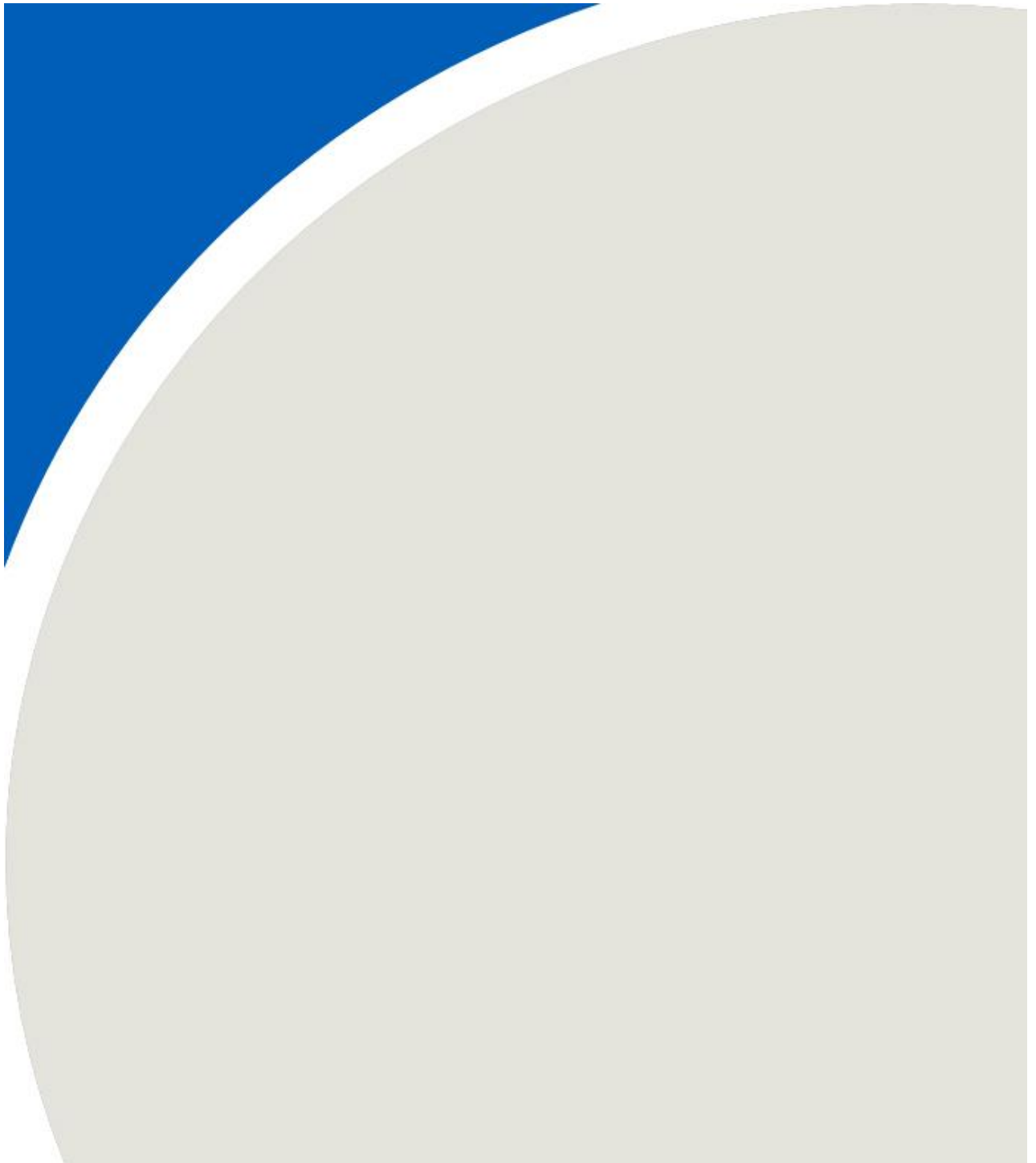
Although these measures were not quantified in the dispersion model, it can be intuitively determined that the landfill gas impacts will likely be locally reduced by some amount through the implementation of these measures.



## 12 REFERENCES

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# TABLES



**Table 11: Maximum off-site VOC and Sulphur Concentrations - Stage 1: 2023 - 2027**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.043	0.79	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.497	0.99	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	1.703	2.19	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.245	0.74	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.916	5.02	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.468	0.82	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	1.921	3.92	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.207	0.56	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	1.295	1.70	<1%
Acetone	67-64-1	11880	24	19.20	3.579	22.78	<1%
Benzene	71-43-2	2.3	24	0.59	1.324	1.91	83%
		0.45	Annual	0.38	0.165	0.54	121%
Butyl Acetate	123-86-4	1000	10-minute	4.75	4.723	9.47	<1%
		15000	1	4.75	2.862	7.61	<1%
Decane	124-18-5	60000	1	1.45	13.825	15.27	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	4.259	6.68	<1%
Dichloromethane	75-09-2	220	24	0.35	2.720	3.07	1%
		44	Annual	0.52	0.331	0.85	2%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	14.851	15.29	<1%
		1000	24	0.44	3.279	3.71	<1%
Heptane	142-82-5	11000	24	0.41	1.901	2.31	<1%
Hexane	110-54-3	2500	24	0.76	1.386	2.15	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	6.741	14.24	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.814	0.84	84%
		0.2	Annual	0.03	0.128	0.15	77%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.520	1.02	43%
Chloroform	67-66-3	1	24	0.24	0.343	0.58	58%
		0.2	Annual	0.24	0.033	0.27	137%
Ethylene Dibromide	106-93-4	3	24	0.04	0.672	0.71	24%
Ethylene Dichloride	107-06-2	2	24	0.09	0.090	0.18	9%
		0.4	Annual	0.06	0.011	0.07	17%
Chloroethane	75-00-3	5600	24	0.27	0.573	0.84	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.864	0.90	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.526	0.57	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.649	0.69	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.340	0.80	<1%
		4500	10-minute	0.46	0.561	1.02	<1%
Chloromethane	74-87-3	320	24	1.26	0.141	1.40	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	1.716	2.72	4%
m/p-Xylene	108-38-3	100	24	0.85	8.059	8.91	9%
		3000	10-minute	0.85	35.602	36.45	1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	5.499	6.89	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	1.175	1.57	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.690	1.10	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.250	1.27	<1%
n-Butanal	123-72-8	5.6	24	--	0.269	0.27	5%
Naphthalene	91-20-3	22.5	24	0.65	0.176	0.83	4%
		50	10-minute	0.65	0.812	1.46	3%
Nonane	111-84-2	4200	24	0.50	0.677	1.18	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.943	1.43	n/a
o-Xylene	95-47-6	100	24	0.44	3.063	3.50	3%
Pentane	109-66-0	4200	24	1.09	1.170	2.26	<1%
Ethanol	64-17-5	19000	1	7.70	11.292	18.99	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.703	1.19	6%
Styrene	100-42-5	400	24	0.43	0.104	0.53	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	1.391	1.46	<1%
Toluene	108-88-3	2000	24	1.61	8.133	9.74	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.092	1.39	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.997	1.05	9%
		2.3	Annual	0.06	0.123	0.18	8%
Ethyl Acetate	141-78-6	19000	1	0.36	2.917	3.28	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.409	0.96	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.826	0.87	9%
1,2-Dichloroethene	540-59-0	105	24	0.08	2.461	2.54	2%
2-Butanol	78-92-2	496	24	3.05	1.841	4.89	<1%
Bromodichloromethane	75-27-4	350	24	0.34	1.155	1.49	<1%
Octane	111-65-9	61800	10-minute	0.47	4.136	4.60	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.735	0.77	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.537	0.56	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.319	0.66	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.180	4.38	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.667	4.62	36%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.472	3.97	31%
		7	24	3.50	0.115	3.62	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.875	8.38	28%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.431	4.28	8%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	1.654	6.65	51%
		7	24	5.00	0.350	5.35	76%

**Table 12: Maximum off-site VOC and Sulphur Concentrations - Stage 3: 2033 - 2037**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.031	0.78	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.464	0.95	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	1.493	1.98	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.179	0.67	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.856	4.96	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.437	0.79	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	1.794	3.79	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.193	0.54	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	1.209	1.62	<1%
Acetone	67-64-1	11880	24	19.20	3.177	22.38	<1%
Benzene	71-43-2	2.3	24	0.59	1.227	1.81	79%
		0.45	Annual	0.38	0.165	0.54	121%
Butyl Acetate	123-86-4	1000	10-minute	4.75	4.751	9.50	<1%
		15000	1	4.75	2.879	7.63	<1%
Decane	124-18-5	60000	1	1.45	13.908	15.36	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	3.945	6.37	<1%
Dichloromethane	75-09-2	220	24	0.35	2.529	2.87	1%
		44	Annual	0.35	0.338	0.68	2%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	14.988	15.42	<1%
		1000	24	0.44	3.025	3.46	<1%
Heptane	142-82-5	11000	24	0.41	1.624	2.03	<1%
Hexane	110-54-3	2500	24	0.76	1.213	1.97	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	6.284	13.78	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.743	0.77	77%
		0.2	Annual	0.03	0.128	0.15	77%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.520	1.02	42%
Chloroform	67-66-3	1	24	0.24	0.343	0.58	58%
		0.2	Annual	0.24	0.033	0.27	135%
Ethylene Dibromide	106-93-4	3	24	0.04	0.671	0.71	24%
Ethylene Dichloride	107-06-2	2	24	0.09	0.084	0.17	9%
		0.4	Annual	0.09	0.011	0.10	25%
Chloroethane	75-00-3	5600	24	0.27	0.533	0.80	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.815	0.85	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.487	0.53	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.649	0.69	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.344	0.80	<1%
		4500	10-minute	0.46	0.567	1.03	<1%
Chloromethane	74-87-3	320	24	1.26	0.128	1.39	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	1.603	2.60	4%
m/p-Xylene	108-38-3	100	24	0.85	7.285	8.13	8%
		3000	10-minute	0.85	35.851	36.70	1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	5.118	6.51	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	1.097	1.50	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.639	1.05	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.234	1.25	<1%
n-Butanal	123-72-8	5.6	24	0.00	0.251	0.25	4%
Naphthalene	91-20-3	22.5	24	0.65	0.164	0.81	4%
		50	10-minute	0.65	0.816	1.47	3%
Nonane	111-84-2	4200	24	0.50	0.632	1.13	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.881	1.37	n/a
o-Xylene	95-47-6	100	24	0.44	2.807	3.24	3%
Pentane	109-66-0	4200	24	1.09	1.093	2.18	<1%
Ethanol	64-17-5	19000	1	7.70	11.359	19.06	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.656	1.15	6%
Styrene	100-42-5	400	24	0.43	0.092	0.52	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	1.291	1.36	<1%
Toluene	108-88-3	2000	24	1.61	7.549	9.16	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.079	1.38	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.822	0.88	7%
		2.3	Annual	0.06	0.107	0.16	7%
Ethyl Acetate	141-78-6	19000	1	0.36	2.942	3.30	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.407	0.96	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.826	0.87	9%
1,2-Dichloroethene	540-59-0	105	24	0.08	2.298	2.38	2%
2-Butanol	78-92-2	496	24	3.05	1.719	4.77	<1%
Bromodichloromethane	75-27-4	350	24	0.34	1.069	1.40	<1%
Octane	111-65-9	61800	10-minute	0.47	3.933	4.40	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.716	0.75	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.537	0.56	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.291	0.63	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.168	4.37	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.899	4.85	37%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.637	4.14	32%
		7	24	3.50	0.133	3.63	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	1.010	8.51	28%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	1.023	4.87	9%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	2.956	7.96	61%
		7	24	5.00	0.667	5.67	81%

**Table 13: Maximum off-site VOC and Sulphur Concentrations - Stage 4: 2038 - 2042**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.023	0.77	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.308	0.80	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	1.006	1.50	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.134	0.62	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.567	4.67	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.289	0.64	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	1.188	3.19	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.128	0.48	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	0.801	1.21	<1%
Acetone	67-64-1	11880	24	19.20	2.136	21.34	<1%
Benzene	71-43-2	2.3	24	0.59	0.813	1.40	61%
		0.45	Annual	0.38	0.106	0.48	108%
Butyl Acetate	123-86-4	1000	10-minute	4.75	3.556	8.31	<1%
		15000	1	4.75	2.155	6.91	<1%
Decane	124-18-5	60000	1	1.45	10.410	11.86	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	2.620	5.04	<1%
Dichloromethane	75-09-2	220	24	0.35	1.674	2.02	<1%
		44	Annual	0.35	0.216	0.56	1%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	11.199	11.63	<1%
		1000	24	0.44	2.014	2.45	<1%
Heptane	142-82-5	11000	24	0.41	1.106	1.52	<1%
Hexane	110-54-3	2500	24	0.76	0.818	1.58	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	4.153	11.65	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.526	0.55	55%
		0.2	Annual	0.03	0.083	0.11	54%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.520	1.02	42%
Chloroform	67-66-3	1	24	0.24	0.343	0.58	58%
		0.2	Annual	0.24	0.033	0.27	135%
Ethylene Dibromide	106-93-4	3	24	0.04	0.671	0.71	24%
Ethylene Dichloride	107-06-2	2	24	0.09	0.056	0.14	7%
		0.4	Annual	0.09	0.007	0.09	24%
Chloroethane	75-00-3	5600	24	0.27	0.414	0.68	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.814	0.85	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.329	0.37	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.649	0.69	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.256	0.72	<1%
		4500	10-minute	0.46	0.422	0.88	<1%
Chloromethane	74-87-3	320	24	1.26	0.085	1.35	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	1.061	2.06	3%
m/p-Xylene	108-38-3	100	24	0.85	4.868	5.72	6%
		3000	10-minute	0.85	26.722	27.57	<1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	3.382	4.77	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.727	1.13	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.425	0.83	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.155	1.17	<1%
n-Butanal	123-72-8	5.6	24	0.00	0.166	0.17	3%
Naphthalene	91-20-3	22.5	24	0.65	0.109	0.76	3%
		50	10-minute	0.65	0.610	1.26	3%
Nonane	111-84-2	4200	24	0.50	0.419	0.92	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.583	1.07	n/a
o-Xylene	95-47-6	100	24	0.44	1.870	2.30	2%
Pentane	109-66-0	4200	24	1.09	0.724	1.81	<1%
Ethanol	64-17-5	19000	1	7.70	8.503	16.20	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.435	0.92	5%
Styrene	100-42-5	400	24	0.43	0.062	0.49	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	0.855	0.93	<1%
Toluene	108-88-3	2000	24	1.61	5.002	6.61	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.054	1.35	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.567	0.62	5%
		2.3	Annual	0.06	0.073	0.13	6%
Ethyl Acetate	141-78-6	19000	1	0.36	1.891	2.25	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.407	0.96	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.826	0.87	9%
1,2-Dichloroethene	540-59-0	105	24	0.08	1.522	1.60	2%
2-Butanol	78-92-2	496	24	3.05	1.140	4.19	<1%
Bromodichloromethane	75-27-4	350	24	0.34	0.709	1.04	<1%
Octane	111-65-9	61800	10-minute	0.47	3.872	4.34	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.716	0.75	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.537	0.56	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.194	0.53	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.111	4.31	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.881	4.83	37%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.625	4.12	32%
		7	24	3.50	0.142	3.64	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.641	8.14	27%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	1.130	4.98	9%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	3.263	8.26	64%
		7	24	5.00	0.722	5.72	82%



**Table 14: Maximum off-site VOC and Sulphur Concentrations - Post Closure: 2043**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.011	0.76	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.201	0.69	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.627	1.12	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.068	0.56	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.371	4.47	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.190	0.54	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	0.778	2.78	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.084	0.43	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	0.524	0.93	<1%
Acetone	67-64-1	11880	24	19.20	1.341	20.54	<1%
Benzene	71-43-2	2.3	24	0.59	0.580	1.16	51%
		0.45	Annual	0.38	0.075	0.45	101%
Butyl Acetate	123-86-4	1000	10-minute	4.75	2.023	6.77	<1%
		15000	1	4.75	1.226	5.98	<1%
Decane	124-18-5	60000	1	1.45	5.923	7.37	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	1.712	4.13	<1%
Dichloromethane	75-09-2	220	24	0.35	1.097	1.44	<1%
		44	Annual	0.35	0.152	0.50	1%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	6.387	6.82	<1%
		1000	24	0.44	1.308	1.74	<1%
Heptane	142-82-5	11000	24	0.41	0.673	1.08	<1%
Hexane	110-54-3	2500	24	0.76	0.509	1.27	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	2.719	10.22	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.355	0.38	38%
		0.2	Annual	0.03	0.058	0.08	42%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.520	1.02	42%
Chloroform	67-66-3	1	24	0.24	0.342	0.58	58%
		0.2	Annual	0.24	0.033	0.27	135%
Ethylene Dibromide	106-93-4	3	24	0.04	0.671	0.71	24%
Ethylene Dichloride	107-06-2	2	24	0.09	0.037	0.12	6%
		0.4	Annual	0.09	0.005	0.09	23%
Chloroethane	75-00-3	5600	24	0.27	0.399	0.66	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.812	0.85	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.315	0.36	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.649	0.69	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.146	0.61	<1%
		4500	10-minute	0.46	0.240	0.70	<1%
Chloromethane	74-87-3	320	24	1.26	0.055	1.32	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.695	1.70	3%
m/p-Xylene	108-38-3	100	24	0.85	3.114	3.96	4%
		3000	10-minute	0.85	15.201	16.05	<1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	2.211	3.60	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.476	0.88	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.277	0.69	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.101	1.12	<1%
n-Butanal	123-72-8	5.6	24	0.00	0.109	0.11	2%
Naphthalene	91-20-3	22.5	24	0.65	0.071	0.72	3%
		50	10-minute	0.65	0.347	1.00	2%
Nonane	111-84-2	4200	24	0.50	0.274	0.77	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.382	0.87	n/a
o-Xylene	95-47-6	100	24	0.44	1.207	1.64	2%
Pentane	109-66-0	4200	24	1.09	0.474	1.56	<1%
Ethanol	64-17-5	19000	1	7.70	4.838	12.54	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.285	0.77	4%
Styrene	100-42-5	400	24	0.43	0.039	0.46	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	0.585	0.66	<1%
Toluene	108-88-3	2000	24	1.61	3.266	4.88	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.033	1.33	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.434	0.49	4%
		2.3	Annual	0.06	0.047	0.10	4%
Ethyl Acetate	141-78-6	19000	1	0.36	1.254	1.61	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.407	0.96	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.826	0.87	9%
1,2-Dichloroethene	540-59-0	105	24	0.08	0.997	1.08	1%
2-Butanol	78-92-2	496	24	3.05	0.745	3.80	<1%
Bromodichloromethane	75-27-4	350	24	0.34	0.554	0.89	<1%
Octane	111-65-9	61800	10-minute	0.47	3.862	4.33	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.714	0.75	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.537	0.56	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.125	0.46	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.073	4.27	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.881	4.83	37%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.625	4.12	32%
		7	24	3.50	0.159	3.66	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.570	8.07	27%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	1.138	4.99	9%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	3.288	8.29	64%
		7	24	5.00	0.746	5.75	82%

**Table 15: Maximum Residential Receptor VOC and Sulphur Concentrations - Stage 1: 2023 - 2027**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.004	0.754	<1%	ZOR-6
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.057	0.547	<1%	ZOR-6
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.185	0.675	<1%	ZOR-6
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.023	0.513	<1%	ZOR-6
2-Methyl Hexane	591-76-4	1228	24	4.10	0.105	4.205	<1%	ZOR-6
2-Methyl Pentane	107-83-5	1750	24	0.35	0.054	0.404	<1%	ZOR-6
2-Methyl Butane	78-78-4	7080	24	2.00	0.221	2.221	<1%	ZOR-6
3-Methyl Pentane	96-14-0	1400	24	0.35	0.024	0.374	<1%	ZOR-6
3-Methyl Hexane	589-34-4	1535	24	0.41	0.149	0.559	<1%	ZOR-6
Acetone	67-64-1	11880	24	19.20	0.392	19.592	<1%	ZOR-6
Benzene	71-43-2	2.3	24	0.59	0.155	0.740	32%	ZOR-6
		0.45	Annual	0.38	0.013	0.390	87%	ZOR-6
Butyl Acetate	123-86-4	1000	10-minute	4.75	1.927	6.677	<1%	ZOR-11
		15000	1	4.75	1.168	5.918	<1%	ZOR-11
Decane	124-18-5	60000	1	1.45	5.641	7.091	<1%	ZOR-11
Dichlorodifluoromethane	75-71-8	500000	24	2.42	0.489	2.909	<1%	ZOR-6
Dichloromethane	75-09-2	220	24	0.35	0.314	0.659	<1%	ZOR-6
		44	Annual	0.52	0.022	0.539	1%	ZOR-6
Ethyl Benzene	100-41-4	1900	10-minute	0.44	6.089	6.524	<1%	ZOR-11
		1000	24	0.44	0.373	0.808	<1%	ZOR-6
Heptane	142-82-5	11000	24	0.41	0.202	0.612	<1%	ZOR-6
Hexane	110-54-3	2500	24	0.76	0.151	0.911	<1%	ZOR-6
Isopropyl Alcohol	67-63-0	7300	24	7.50	0.773	8.273	<1%	ZOR-6
Vinyl Chloride	75-01-4	1	24	0.03	0.121	0.146	15%	ZOR-6
		0.2	Annual	0.03	0.010	0.035	18%	ZOR-6
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.047	0.547	23%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.032	0.269	27%	ZOR-6
		0.2	Annual	0.24	0.002	0.243	122%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.060	0.099	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.010	0.097	5%	ZOR-6
		0.4	Annual	0.06	0.001	0.060	15%	ZOR-6
Chloroethane	75-00-3	5600	24	0.27	0.071	0.336	<1%	ZOR-5
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.103	0.142	<1%	ZOR-6
1,2-Dichloroethane	75-34-3	165	24	0.04	0.062	0.103	<1%	ZOR-6
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.060	0.099	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.141	0.601	<1%	ZOR-11
		4500	10-minute	0.46	0.233	0.693	<1%	ZOR-11
Chloromethane	74-87-3	320	24	1.26	0.016	1.276	<1%	ZOR-6
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.197	1.197	2%	ZOR-6
m/p-Xylene	108-38-3	100	24	0.85	0.902	1.752	2%	ZOR-6
		3000	10-minute	0.85	14.692	15.542	<1%	ZOR-11
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	0.630	2.020	<1%	ZOR-6
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.135	0.535	<1%	ZOR-6
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.079	0.489	<1%	ZOR-6
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.029	1.049	<1%	ZOR-6
n-Butanal	123-72-8	5.6	24	-	0.031	0.031	<1%	ZOR-6
Naphthalene	91-20-3	22.5	24	0.65	0.020	0.670	3%	ZOR-6
		50	10-minute	0.65	0.331	0.981	2%	ZOR-11
Nonane	111-84-2	4200	24	0.50	0.078	0.578	<1%	ZOR-6
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.109	0.599	n/a	ZOR-6
o-Xylene	95-47-6	100	24	0.44	0.346	0.781	<1%	ZOR-6
Pentane	109-66-0	4200	24	1.09	0.135	1.225	<1%	ZOR-6
Ethanol	64-17-5	19000	1	7.70	4.607	12.307	<1%	ZOR-11
Propyl Benzene	103-65-1	20	24	0.49	0.081	0.571	3%	ZOR-6
Styrene	100-42-5	400	24	0.43	0.011	0.436	<1%	ZOR-6
Tetrachloroethylene	127-18-4	360	24	0.07	0.163	0.233	<1%	ZOR-6
Toluene	108-88-3	2000	24	1.61	0.931	2.541	<1%	ZOR-6
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.010	1.310	<1%	ZOR-6
Trichloroethylene	79-01-6	12	24	0.06	0.106	0.161	1%	ZOR-6
		2.3	Annual	0.06	0.009	0.070	3%	ZOR-6
Ethyl Acetate	141-78-6	19000	1	0.36	1.194	1.554	<1%	ZOR-11
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.044	0.594	<1%	ZOR-6
Vinylidene Chloride	75-35-4	10	24	0.04	0.076	0.116	1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.283	0.362	<1%	ZOR-6
2-Butanol	78-92-2	496	24	3.05	0.216	3.266	<1%	ZOR-6
Bromodichloromethane	75-27-4	350	24	0.34	0.136	0.471	<1%	ZOR-6
Octane	111-65-9	61800	10-minute	0.47	1.387	1.852	<1%	SWO-2
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.084	0.119	n/a	ZOR-6
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.050	0.078	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.036	0.376	<1%	ZOR-6
Dichlorofluoromethane	75-43-4	500	24	4.20	0.021	4.221	<1%	ZOR-6
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.265	4.215	32%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.188	3.688	28%	ZOR-11
		7	24	3.50	0.012	3.512	50%	ZOR-6
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.342	7.842	26%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.171	4.021	7%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	0.473	5.473	42%	ZOR-11
		7	24	5.00	0.029	5.029	72%	ZOR-6

**Table 16: Maximum Residential Receptor VOC and Sulphur Concentrations - Stage 3: 2033 - 2037**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.008	0.8	<1%	SWO-1
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.132	0.6	<1%	SWO-1
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.419	0.9	<1%	SWO-1
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.048	0.5	<1%	SWO-1
2-Methyl Hexane	591-76-4	1228	24	4.10	0.244	4.3	<1%	SWO-1
2-Methyl Pentane	107-83-5	1750	24	0.35	0.125	0.5	<1%	SWO-1
2-Methyl Butane	78-78-4	7080	24	2.00	0.511	2.5	<1%	SWO-1
3-Methyl Pentane	96-14-0	1400	24	0.35	0.055	0.4	<1%	SWO-1
3-Methyl Hexane	589-34-4	1535	24	0.41	0.345	0.8	<1%	SWO-1
Acetone	67-64-1	11880	24	19.20	0.894	20.1	<1%	SWO-1
Benzene	71-43-2	2.3	24	0.59	0.363	0.9	41%	SWO-1
		0.45	Annual	0.38	0.026	0.4	90%	ZOR-11
Butyl Acetate	123-86-4	1000	10-minute	4.75	2.990	7.7	<1%	ZOR-11
		15000	1	4.75	1.812	6.6	<1%	ZOR-11
Decane	124-18-5	60000	1	1.45	8.753	10.2	<1%	ZOR-11
Dichlorodifluoromethane	75-71-8	500000	24	2.42	1.124	3.5	<1%	SWO-1
Dichloromethane	75-09-2	220	24	0.35	0.727	1.1	<1%	SWO-1
		44	Annual	0.35	0.053	0.4	<1%	ZOR-11
Ethyl Benzene	100-41-4	1900	10-minute	0.44	9.446	9.9	<1%	ZOR-11
		1000	24	0.44	0.860	1.3	<1%	SWO-1
Heptane	142-82-5	11000	24	0.41	0.453	0.9	<1%	SWO-1
Hexane	110-54-3	2500	24	0.76	0.341	1.1	<1%	SWO-1
Isopropyl Alcohol	67-63-0	7300	24	7.50	1.790	9.3	<1%	SWO-1
Vinyl Chloride	75-01-4	1	24	0.03	0.283	0.3	31%	SWO-1
		0.2	Annual	0.03	0.020	0.0	23%	ZOR-11
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.047	0.5	23%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.032	0.3	27%	ZOR-6
		0.2	Annual	0.24	0.002	0.2	120%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.060	0.1	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.024	0.1	6%	SWO-1
		0.4	Annual	0.09	0.002	0.1	22%	ZOR-11
Chloroethane	75-00-3	5600	24	0.27	0.162	0.4	<1%	SWO-1
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.187	0.2	<1%	SWO-1
1,2-Dichloroethane	75-34-3	165	24	0.04	0.147	0.2	<1%	SWO-1
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.060	0.1	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.217	0.7	<1%	ZOR-11
		4500	10-minute	0.46	0.359	0.8	<1%	ZOR-11
Chloromethane	74-87-3	320	24	1.26	0.036	1.3	<1%	SWO-1
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.457	1.5	2%	SWO-1
m/p-Xylene	108-38-3	100	24	0.85	2.062	2.9	3%	SWO-1
		3000	10-minute	0.85	22.627	23.5	<1%	ZOR-11
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	1.457	2.8	<1%	SWO-1
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.313	0.7	<1%	SWO-1
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.182	0.6	<1%	SWO-1
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.067	1.1	<1%	SWO-1
n-Butanal	123-72-8	5.6	24	0.00	0.072	0.1	1%	SWO-1
Naphthalene	91-20-3	22.5	24	0.65	0.047	0.7	3%	SWO-1
		50	10-minute	0.65	0.513	1.2	2%	ZOR-11
Nonane	111-84-2	4200	24	0.50	0.180	0.7	<1%	SWO-1
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.251	0.7	n/a	SWO-1
o-Xylene	95-47-6	100	24	0.44	0.797	1.2	1%	SWO-1
Pentane	109-66-0	4200	24	1.09	0.312	1.4	<1%	SWO-1
Ethanol	64-17-5	19000	1	7.70	7.149	14.8	<1%	ZOR-11
Propyl Benzene	103-65-1	20	24	0.49	0.187	0.7	3%	SWO-1
Styrene	100-42-5	400	24	0.43	0.026	0.5	<1%	SWO-1
Tetrachloroethylene	127-18-4	360	24	0.07	0.381	0.5	<1%	SWO-1
Toluene	108-88-3	2000	24	1.61	2.149	3.8	<1%	SWO-1
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.022	1.3	<1%	SWO-1
Trichloroethylene	79-01-6	12	24	0.06	0.238	0.3	2%	SWO-1
		2.3	Annual	0.06	0.017	0.1	3%	ZOR-11
Ethyl Acetate	141-78-6	19000	1	0.36	1.853	2.2	<1%	ZOR-11
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.050	0.6	<1%	SWO-1
Vinylidene Chloride	75-35-4	10	24	0.04	0.077	0.1	1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.655	0.7	<1%	SWO-1
2-Butanol	78-92-2	496	24	3.05	0.505	3.6	<1%	SWO-1
Bromodichloromethane	75-27-4	350	24	0.34	0.318	0.7	<1%	SWO-1
Octane	111-65-9	61800	10-minute	0.47	2.147	2.6	<1%	ZOR-11
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.131	0.2	n/a	SWO-1
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.051	0.1	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.082	0.4	<1%	SWO-1
Dichlorofluoromethane	75-43-4	500	24	4.20	0.048	4.2	<1%	SWO-1
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.577	4.5	35%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.409	3.9	30%	ZOR-11
		7	24	3.50	0.038	3.5	51%	SWO-1
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.605	8.1	27%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.528	4.4	8%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	1.495	6.5	50%	ZOR-11
		7	24	5.00	0.130	5.1	73%	SWO-1

**Table 17: Maximum Residential Receptor VOC and Sulphur Concentrations - Stage 4: 2038 - 2042**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.009	0.8	<1%	SWO-3
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.146	0.6	<1%	SWO-3
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.462	1.0	<1%	SWO-3
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.053	0.5	<1%	SWO-3
2-Methyl Hexane	591-76-4	1228	24	4.10	0.269	4.4	<1%	SWO-3
2-Methyl Pentane	107-83-5	1750	24	0.35	0.137	0.5	<1%	SWO-3
2-Methyl Butane	78-78-4	7080	24	2.00	0.564	2.6	<1%	SWO-3
3-Methyl Pentane	96-14-0	1400	24	0.35	0.061	0.4	<1%	SWO-3
3-Methyl Hexane	589-34-4	1535	24	0.41	0.380	0.8	<1%	SWO-3
Acetone	67-64-1	11880	24	19.20	0.986	20.2	<1%	SWO-3
Benzene	71-43-2	2.3	24	0.59	0.387	1.0	42%	SWO-3
		0.45	Annual	0.38	0.031	0.4	91%	SWO-2
Butyl Acetate	123-86-4	1000	10-minute	4.75	3.089	7.8	<1%	SWO-1
		15000	1	4.75	1.872	6.6	<1%	SWO-1
Decane	124-18-5	60000	1	1.45	9.042	10.5	<1%	SWO-1
Dichlorodifluoromethane	75-71-8	500000	24	2.42	1.241	3.7	<1%	SWO-3
Dichloromethane	75-09-2	220	24	0.35	0.794	1.1	<1%	SWO-3
		44	Annual	0.35	0.062	0.4	<1%	SWO-2
Ethyl Benzene	100-41-4	1900	10-minute	0.44	9.716	10.2	<1%	SWO-1
		1000	24	0.44	0.949	1.4	<1%	SWO-3
Heptane	142-82-5	11000	24	0.41	0.501	0.9	<1%	SWO-3
Hexane	110-54-3	2500	24	0.76	0.376	1.1	<1%	SWO-3
Isopropyl Alcohol	67-63-0	7300	24	7.50	1.967	9.5	<1%	SWO-3
Vinyl Chloride	75-01-4	1	24	0.03	0.302	0.3	33%	SWO-3
		0.2	Annual	0.03	0.024	0.0	25%	SWO-2
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.047	0.5	23%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.032	0.3	27%	ZOR-6
		0.2	Annual	0.24	0.002	0.2	120%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.060	0.1	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.027	0.1	6%	SWO-3
		0.4	Annual	0.09	0.002	0.1	22%	SWO-2
Chloroethane	75-00-3	5600	24	0.27	0.169	0.4	<1%	SWO-3
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.185	0.2	<1%	SWO-3
1,2-Dichloroethane	75-34-3	165	24	0.04	0.154	0.2	<1%	SWO-3
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.060	0.1	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.222	0.7	<1%	SWO-1
		4500	10-minute	0.46	0.366	0.8	<1%	SWO-1
Chloromethane	74-87-3	320	24	1.26	0.040	1.3	<1%	SWO-3
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.504	1.5	2%	SWO-3
m/p-Xylene	108-38-3	100	24	0.85	2.276	3.1	3%	SWO-3
		3000	10-minute	0.85	23.209	24.1	<1%	SWO-1
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	1.601	3.0	<1%	SWO-3
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.345	0.7	<1%	SWO-3
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.201	0.6	<1%	SWO-3
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.074	1.1	<1%	SWO-3
n-Butanal	123-72-8	5.6	24	0.00	0.079	0.1	1%	SWO-3
Naphthalene	91-20-3	22.5	24	0.65	0.052	0.7	3%	SWO-3
		50	10-minute	0.65	0.530	1.2	2%	SWO-1
Nonane	111-84-2	4200	24	0.50	0.199	0.7	<1%	SWO-3
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.277	0.8	n/a	SWO-3
o-Xylene	95-47-6	100	24	0.44	0.878	1.3	1%	SWO-3
Pentane	109-66-0	4200	24	1.09	0.343	1.4	<1%	SWO-3
Ethanol	64-17-5	19000	1	7.70	7.386	15.1	<1%	SWO-1
Propyl Benzene	103-65-1	20	24	0.49	0.206	0.7	3%	SWO-3
Styrene	100-42-5	400	24	0.43	0.028	0.5	<1%	SWO-3
Tetrachloroethylene	127-18-4	360	24	0.07	0.407	0.5	<1%	SWO-3
Toluene	108-88-3	2000	24	1.61	2.367	4.0	<1%	SWO-3
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.024	1.3	<1%	SWO-3
Trichloroethylene	79-01-6	12	24	0.06	0.254	0.3	3%	SWO-3
		2.3	Annual	0.06	0.020	0.1	3%	SWO-2
Ethyl Acetate	141-78-6	19000	1	0.36	1.907	2.3	<1%	SWO-1
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.049	0.6	<1%	SWO-1
Vinylidene Chloride	75-35-4	10	24	0.04	0.076	0.1	1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.723	0.8	<1%	SWO-3
2-Butanol	78-92-2	496	24	3.05	0.544	3.6	<1%	SWO-3
Bromodichloromethane	75-27-4	350	24	0.34	0.338	0.7	<1%	SWO-3
Octane	111-65-9	61800	10-minute	0.47	2.348	2.8	<1%	SWO-2
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.127	0.2	n/a	SWO-1
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.051	0.1	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.091	0.4	<1%	SWO-3
Dichlorofluoromethane	75-43-4	500	24	4.20	0.053	4.3	<1%	SWO-3
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.587	4.5	35%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.417	3.9	30%	ZOR-11
		7	24	3.50	0.048	3.5	51%	SWO-1
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.452	8.0	27%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.752	4.6	8%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	2.171	7.2	55%	ZOR-11
		7	24	5.00	0.225	5.2	75%	SWO-1

**Table 18: Maximum Residential Receptor VOC and Sulphur Concentrations - Post Closure: 2043**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.004	0.8	<1%	SWO-1
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.077	0.6	<1%	SWO-1
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.241	0.7	<1%	SWO-1
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.026	0.5	<1%	SWO-1
2-Methyl Hexane	591-76-4	1228	24	4.10	0.143	4.2	<1%	SWO-1
2-Methyl Pentane	107-83-5	1750	24	0.35	0.073	0.4	<1%	SWO-1
2-Methyl Butane	78-78-4	7080	24	2.00	0.299	2.3	<1%	SWO-1
3-Methyl Pentane	96-14-0	1400	24	0.35	0.032	0.4	<1%	SWO-1
3-Methyl Hexane	589-34-4	1535	24	0.41	0.201	0.6	<1%	SWO-1
Acetone	67-64-1	11880	24	19.20	0.515	19.7	<1%	SWO-1
Benzene	71-43-2	2.3	24	0.59	0.218	0.8	35%	SWO-1
		0.45	Annual	0.38	0.017	0.4	88%	SWO-2
Butyl Acetate	123-86-4	1000	10-minute	4.75	1.450	6.2	<1%	SWO-1
		15000	1	4.75	0.879	5.6	<1%	SWO-1
Decane	124-18-5	60000	1	1.45	4.246	5.7	<1%	SWO-1
Dichlorodifluoromethane	75-71-8	500000	24	2.42	0.658	3.1	<1%	SWO-1
Dichloromethane	75-09-2	220	24	0.35	0.428	0.8	<1%	SWO-1
		44	Annual	0.35	0.034	0.4	<1%	SWO-2
Ethyl Benzene	100-41-4	1900	10-minute	0.44	4.577	5.0	<1%	SWO-1
		1000	24	0.44	0.503	0.9	<1%	SWO-1
Heptane	142-82-5	11000	24	0.41	0.259	0.7	<1%	SWO-1
Hexane	110-54-3	2500	24	0.76	0.196	1.0	<1%	SWO-1
Isopropyl Alcohol	67-63-0	7300	24	7.50	1.045	8.5	<1%	SWO-1
Vinyl Chloride	75-01-4	1	24	0.03	0.169	0.2	19%	SWO-1
		0.2	Annual	0.03	0.013	0.0	19%	SWO-2
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.047	0.5	23%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.031	0.3	27%	ZOR-6
		0.2	Annual	0.24	0.002	0.2	120%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.060	0.1	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.014	0.1	5%	SWO-1
		0.4	Annual	0.09	0.001	0.1	22%	SWO-2
Chloroethane	75-00-3	5600	24	0.27	0.099	0.4	<1%	SWO-1
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.118	0.2	<1%	SWO-1
1,2-Dichloroethane	75-34-3	165	24	0.04	0.089	0.1	<1%	SWO-1
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.059	0.1	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.104	0.6	<1%	SWO-1
		4500	10-minute	0.46	0.172	0.6	<1%	SWO-1
Chloromethane	74-87-3	320	24	1.26	0.021	1.3	<1%	SWO-1
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.267	1.3	2%	SWO-1
m/p-Xylene	108-38-3	100	24	0.85	1.196	2.0	2%	SWO-1
		3000	10-minute	0.85	10.885	11.7	<1%	SWO-1
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	0.849	2.2	<1%	SWO-1
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.183	0.6	<1%	SWO-1
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.106	0.5	<1%	SWO-1
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.039	1.1	<1%	SWO-1
n-Butanal	123-72-8	5.6	24	0.00	0.042	0.0	<1%	SWO-1
Naphthalene	91-20-3	22.5	24	0.65	0.027	0.7	3%	SWO-1
		50	10-minute	0.65	0.249	0.9	2%	SWO-1
Nonane	111-84-2	4200	24	0.50	0.105	0.6	<1%	SWO-1
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.147	0.6	n/a	SWO-1
o-Xylene	95-47-6	100	24	0.44	0.464	0.9	<1%	SWO-1
Pentane	109-66-0	4200	24	1.09	0.182	1.3	<1%	SWO-1
Ethanol	64-17-5	19000	1	7.70	3.468	11.2	<1%	SWO-1
Propyl Benzene	103-65-1	20	24	0.49	0.109	0.6	3%	SWO-1
Styrene	100-42-5	400	24	0.43	0.015	0.4	<1%	SWO-1
Tetrachloroethylene	127-18-4	360	24	0.07	0.228	0.3	<1%	SWO-1
Toluene	108-88-3	2000	24	1.61	1.254	2.9	<1%	SWO-1
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.013	1.3	<1%	SWO-1
Trichloroethylene	79-01-6	12	24	0.06	0.139	0.2	2%	SWO-1
		2.3	Annual	0.06	0.011	0.1	3%	SWO-2
Ethyl Acetate	141-78-6	19000	1	0.36	0.896	1.3	<1%	SWO-1
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.043	0.6	<1%	ZOR-6
Vinylidene Chloride	75-35-4	10	24	0.04	0.076	0.1	1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.383	0.5	<1%	SWO-1
2-Butanol	78-92-2	496	24	3.05	0.301	3.4	<1%	SWO-1
Bromodichloromethane	75-27-4	350	24	0.34	0.191	0.5	<1%	SWO-1
Octane	111-65-9	61800	10-minute	0.47	1.239	1.7	<1%	SWO-2
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.085	0.1	n/a	SWO-1
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.050	0.1	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.048	0.4	<1%	SWO-1
Dichlorofluoromethane	75-43-4	500	24	4.20	0.028	4.2	<1%	SWO-1
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.587	4.5	35%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.417	3.9	30%	ZOR-11
		7	24	3.50	0.053	3.6	51%	ZOR-6
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.380	7.9	26%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.759	4.6	8%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	2.191	7.2	55%	ZOR-11
		7	24	5.00	0.246	5.2	75%	SWO-1

**Table 19: Maximum Concentrations at Top 10 Residential Receptors – Annual Chloroform**

Rank	Criteria (ug m <sup>-3</sup> )	Receptor ID	Ambient Background Concentration <sup>[1]</sup> (ug m <sup>-3</sup> )	2023-2027			Receptor ID	2033-2037			Receptor ID	2038-2042			Receptor ID	2043 Post Closure		
				With Landfill				With Landfill				With Landfill				With Landfill		
				Maximum Modelled Concentration without Background (ug m <sup>-3</sup> ) <sup>[2]</sup>	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration without Background (ug m <sup>-3</sup> ) <sup>[2]</sup>	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration without Background (ug m <sup>-3</sup> ) <sup>[2]</sup>	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration without Background (ug m <sup>-3</sup> ) <sup>[2]</sup>	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	0.2	ZOR-6	0.24	0.0127	0.25	127%	ZOR-11	0.026	0.27	133%	SWO-2	0.031	0.27	136%	SWO-2	0.017	0.26	129%
2	0.2	SWO-3	0.24	0.0095	0.25	125%	SWO-2	0.022	0.26	132%	SWO-3	0.028	0.27	134%	SWO-3	0.016	0.26	128%
3	0.2	SWO-2	0.24	0.0092	0.25	125%	SWO-3	0.019	0.26	130%	ZOR-11	0.020	0.26	131%	ZOR-11	0.014	0.25	127%
4	0.2	ZOR-8	0.24	0.0090	0.25	125%	SWO-13	0.016	0.26	129%	SWO-1	0.018	0.26	129%	SWO-1	0.011	0.25	126%
5	0.2	ZOR-11	0.24	0.0087	0.25	125%	SWO-1	0.016	0.26	128%	SWO-13	0.018	0.26	129%	SWO-13	0.011	0.25	126%
6	0.2	ZOR-5	0.24	0.0078	0.25	124%	ZOR-9	0.015	0.26	128%	ZOR-9	0.015	0.26	128%	ZOR-6	0.010	0.25	125%
7	0.2	ZOR-9	0.24	0.0076	0.25	124%	ZOR-6	0.013	0.25	127%	ZOR-6	0.014	0.25	127%	ZOR-9	0.009	0.25	125%
8	0.2	SWO-1	0.24	0.0058	0.25	123%	ZOR-8	0.010	0.25	126%	SWO-14	0.013	0.25	127%	SWO-14	0.008	0.25	124%
9	0.2	SWO-13	0.24	0.0057	0.25	123%	SWO-14	0.010	0.25	125%	SWO-15	0.012	0.25	126%	ZOR-8	0.007	0.25	124%
10	0.2	SWO-14	0.24	0.0054	0.25	123%	SWO-15	0.009	0.25	125%	SWO-16	0.011	0.25	126%	SWO-15	0.007	0.25	124%

[1] Ambient background concentration based on ambient monitoring results

[2] Maximum modelled concentration based on landfill sources.



**Table 20: Maximum off-site VOC and Sulphur Concentrations - Stage 1: 2023 - 2027 - Mitigated**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.043	0.79	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.497	0.99	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	1.703	2.19	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.245	0.74	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.916	5.02	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.468	0.82	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	1.921	3.92	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.207	0.56	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	1.295	1.70	<1%
Acetone	67-64-1	11880	24	19.20	3.579	22.78	<1%
Benzene	71-43-2	2.3	24	0.59	1.324	1.91	83%
		0.45	Annual	0.38	0.163	0.54	120%
Butyl Acetate	123-86-4	1000	10-minute	4.75	4.723	9.47	<1%
		15000	1	4.75	2.862	7.61	<1%
Decane	124-18-5	60000	1	1.45	13.825	15.27	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	4.259	6.68	<1%
Dichloromethane	75-09-2	220	24	0.35	2.720	3.07	1%
		44	Annual	0.52	0.330	0.85	2%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	14.851	15.29	<1%
		1000	24	0.44	3.279	3.71	<1%
Heptane	142-82-5	11000	24	0.41	1.901	2.31	<1%
Hexane	110-54-3	2500	24	0.76	1.386	2.15	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	6.741	14.24	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.814	0.84	84%
		0.2	Annual	0.03	0.127	0.15	76%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.364	0.86	36%
Chloroform	67-66-3	1	24	0.24	0.240	0.48	48%
		0.2	Annual	0.24	0.023	0.26	132%
Ethylene Dibromide	106-93-4	3	24	0.04	0.470	0.51	17%
Ethylene Dichloride	107-06-2	2	24	0.09	0.090	0.18	9%
		0.4	Annual	0.06	0.011	0.07	17%
Chloroethane	75-00-3	5600	24	0.27	0.573	0.84	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.647	0.69	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.526	0.57	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.455	0.49	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.340	0.80	<1%
		4500	10-minute	0.46	0.561	1.02	<1%
Chloromethane	74-87-3	320	24	1.26	0.141	1.40	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	1.716	2.72	4%
m/p-Xylene	108-38-3	100	24	0.85	8.059	8.91	9%
		3000	10-minute	0.85	35.602	36.45	1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	5.499	6.89	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	1.175	1.57	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.690	1.10	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.250	1.27	<1%
n-Butanal	123-72-8	5.6	24	--	0.269	0.27	5%
Naphthalene	91-20-3	22.5	24	0.65	0.176	0.83	4%
		50	10-minute	0.65	0.812	1.46	3%
Nonane	111-84-2	4200	24	0.50	0.677	1.18	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.943	1.43	n/a
o-Xylene	95-47-6	100	24	0.44	3.063	3.50	3%
Pentane	109-66-0	4200	24	1.09	1.170	2.26	<1%
Ethanol	64-17-5	19000	1	7.70	11.292	18.99	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.703	1.19	6%
Styrene	100-42-5	400	24	0.43	0.104	0.53	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	1.391	1.46	<1%
Toluene	108-88-3	2000	24	1.61	8.133	9.74	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.092	1.39	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.997	1.05	9%
		2.3	Annual	0.06	0.122	0.18	8%
Ethyl Acetate	141-78-6	19000	1	0.36	2.917	3.28	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.290	0.84	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.579	0.62	6%
1,2-Dichloroethene	540-59-0	105	24	0.08	2.461	2.54	2%
2-Butanol	78-92-2	496	24	3.05	1.841	4.89	<1%
Bromodichloromethane	75-27-4	350	24	0.34	1.155	1.49	<1%
Octane	111-65-9	61800	10-minute	0.47	3.392	3.86	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.735	0.77	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.376	0.40	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.319	0.66	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.180	4.38	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.667	4.62	36%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.472	3.97	31%
		7	24	3.50	0.115	3.62	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.875	8.38	28%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.431	4.28	8%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	1.654	6.65	51%
		7	24	5.00	0.350	5.35	76%

**Table 21: Maximum off-site VOC and Sulphur Concentrations - Stage 3: 2033 - 2037 - Mitigated**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.031	0.78	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.464	0.95	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	1.493	1.98	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.179	0.67	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.856	4.96	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.437	0.79	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	1.794	3.79	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.193	0.54	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	1.209	1.62	<1%
Acetone	67-64-1	11880	24	19.20	3.177	22.38	<1%
Benzene	71-43-2	2.3	24	0.59	1.227	1.81	79%
		0.45	Annual	0.38	0.164	0.54	120%
Butyl Acetate	123-86-4	1000	10-minute	4.75	4.751	9.50	<1%
		15000	1	4.75	2.879	7.63	<1%
Decane	124-18-5	60000	1	1.45	13.908	15.36	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	3.945	6.37	<1%
Dichloromethane	75-09-2	220	24	0.35	2.529	2.87	1%
		44	Annual	0.35	0.337	0.68	2%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	14.988	15.42	<1%
		1000	24	0.44	3.025	3.46	<1%
Heptane	142-82-5	11000	24	0.41	1.624	2.03	<1%
Hexane	110-54-3	2500	24	0.76	1.213	1.97	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	6.284	13.78	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.743	0.77	77%
		0.2	Annual	0.03	0.128	0.15	77%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.364	0.86	36%
Chloroform	67-66-3	1	24	0.24	0.240	0.48	48%
		0.2	Annual	0.24	0.023	0.26	130%
Ethylene Dibromide	106-93-4	3	24	0.04	0.470	0.51	17%
Ethylene Dichloride	107-06-2	2	24	0.09	0.084	0.17	9%
		0.4	Annual	0.09	0.011	0.10	25%
Chloroethane	75-00-3	5600	24	0.27	0.533	0.80	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.587	0.63	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.487	0.53	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.454	0.49	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.344	0.80	<1%
		4500	10-minute	0.46	0.567	1.03	<1%
Chloromethane	74-87-3	320	24	1.26	0.128	1.39	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	1.603	2.60	4%
m/p-Xylene	108-38-3	100	24	0.85	7.285	8.13	8%
		3000	10-minute	0.85	35.851	36.70	1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	5.118	6.51	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	1.097	1.50	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.639	1.05	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.234	1.25	<1%
n-Butanal	123-72-8	5.6	24	0.00	0.251	0.25	4%
Naphthalene	91-20-3	22.5	24	0.65	0.164	0.81	4%
		50	10-minute	0.65	0.816	1.47	3%
Nonane	111-84-2	4200	24	0.50	0.632	1.13	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.881	1.37	n/a
o-Xylene	95-47-6	100	24	0.44	2.807	3.24	3%
Pentane	109-66-0	4200	24	1.09	1.093	2.18	<1%
Ethanol	64-17-5	19000	1	7.70	11.359	19.06	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.656	1.15	6%
Styrene	100-42-5	400	24	0.43	0.092	0.52	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	1.291	1.36	<1%
Toluene	108-88-3	2000	24	1.61	7.549	9.16	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.079	1.38	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.822	0.88	7%
		2.3	Annual	0.06	0.107	0.16	7%
Ethyl Acetate	141-78-6	19000	1	0.36	2.942	3.30	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.286	0.84	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.579	0.62	6%
1,2-Dichloroethene	540-59-0	105	24	0.08	2.298	2.38	2%
2-Butanol	78-92-2	496	24	3.05	1.719	4.77	<1%
Bromodichloromethane	75-27-4	350	24	0.34	1.069	1.40	<1%
Octane	111-65-9	61800	10-minute	0.47	3.412	3.88	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.716	0.75	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.375	0.40	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.291	0.63	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.168	4.37	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.899	4.85	37%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.637	4.14	32%
		7	24	3.50	0.133	3.63	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	1.010	8.51	28%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	1.023	4.87	9%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	2.956	7.96	61%
		7	24	5.00	0.667	5.67	81%

**Table 22: Maximum off-site VOC and Sulphur Concentrations - Stage 4: 2038 - 2042 - Mitigated**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.023	0.77	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.308	0.80	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	1.006	1.50	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.134	0.62	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.567	4.67	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.289	0.64	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	1.188	3.19	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.128	0.48	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	0.801	1.21	<1%
Acetone	67-64-1	11880	24	19.20	2.136	21.34	<1%
Benzene	71-43-2	2.3	24	0.59	0.813	1.40	61%
		0.45	Annual	0.38	0.106	0.48	107%
Butyl Acetate	123-86-4	1000	10-minute	4.75	3.556	8.31	<1%
		15000	1	4.75	2.155	6.91	<1%
Decane	124-18-5	60000	1	1.45	10.410	11.86	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	2.620	5.04	<1%
Dichloromethane	75-09-2	220	24	0.35	1.674	2.02	<1%
		44	Annual	0.35	0.216	0.56	1%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	11.199	11.63	<1%
		1000	24	0.44	2.014	2.45	<1%
Heptane	142-82-5	11000	24	0.41	1.106	1.52	<1%
Hexane	110-54-3	2500	24	0.76	0.818	1.58	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	4.153	11.65	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.526	0.55	55%
		0.2	Annual	0.03	0.082	0.11	54%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.364	0.86	36%
Chloroform	67-66-3	1	24	0.24	0.240	0.48	48%
		0.2	Annual	0.24	0.023	0.26	130%
Ethylene Dibromide	106-93-4	3	24	0.04	0.470	0.51	17%
Ethylene Dichloride	107-06-2	2	24	0.09	0.056	0.14	7%
		0.4	Annual	0.09	0.007	0.09	24%
Chloroethane	75-00-3	5600	24	0.27	0.352	0.62	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.593	0.63	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.322	0.36	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.454	0.49	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.256	0.72	<1%
		4500	10-minute	0.46	0.422	0.88	<1%
Chloromethane	74-87-3	320	24	1.26	0.085	1.35	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	1.061	2.06	3%
m/p-Xylene	108-38-3	100	24	0.85	4.868	5.72	6%
		3000	10-minute	0.85	26.722	27.57	<1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	3.382	4.77	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.727	1.13	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.425	0.83	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.155	1.17	<1%
n-Butanal	123-72-8	5.6	24	0.00	0.166	0.17	3%
Naphthalene	91-20-3	22.5	24	0.65	0.109	0.76	3%
		50	10-minute	0.65	0.610	1.26	3%
Nonane	111-84-2	4200	24	0.50	0.419	0.92	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.583	1.07	n/a
o-Xylene	95-47-6	100	24	0.44	1.870	2.30	2%
Pentane	109-66-0	4200	24	1.09	0.724	1.81	<1%
Ethanol	64-17-5	19000	1	7.70	8.503	16.20	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.435	0.92	5%
Styrene	100-42-5	400	24	0.43	0.062	0.49	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	0.855	0.93	<1%
Toluene	108-88-3	2000	24	1.61	5.002	6.61	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.054	1.35	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.567	0.62	5%
		2.3	Annual	0.06	0.073	0.13	6%
Ethyl Acetate	141-78-6	19000	1	0.36	2.198	2.56	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.286	0.84	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.579	0.62	6%
1,2-Dichloroethene	540-59-0	105	24	0.08	1.522	1.60	2%
2-Butanol	78-92-2	496	24	3.05	1.140	4.19	<1%
Bromodichloromethane	75-27-4	350	24	0.34	0.709	1.04	<1%
Octane	111-65-9	61800	10-minute	0.47	2.792	3.26	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.716	0.75	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.375	0.40	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.194	0.53	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.111	4.31	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.881	4.83	37%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.625	4.12	32%
		7	24	3.50	0.142	3.64	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.641	8.14	27%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	1.130	4.98	9%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	3.263	8.26	64%
		7	24	5.00	0.722	5.72	82%

**Table 23: Maximum off-site VOC and Sulphur Concentrations - Post Closure: 2043 - Mitigated**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration (ug m <sup>-3</sup> )	Maximum Modelled Concentration Without Background (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.011	0.76	<1%
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.201	0.69	<1%
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.627	1.12	<1%
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.068	0.56	<1%
2-Methyl Hexane	591-76-4	1228	24	4.10	0.371	4.47	<1%
2-Methyl Pentane	107-83-5	1750	24	0.35	0.190	0.54	<1%
2-Methyl Butane	78-78-4	7080	24	2.00	0.778	2.78	<1%
3-Methyl Pentane	96-14-0	1400	24	0.35	0.084	0.43	<1%
3-Methyl Hexane	589-34-4	1535	24	0.41	0.524	0.93	<1%
Acetone	67-64-1	11880	24	19.20	1.341	20.54	<1%
Benzene	71-43-2	2.3	24	0.59	0.530	1.12	48%
		0.45	Annual	0.38	0.074	0.45	100%
Butyl Acetate	123-86-4	1000	10-minute	4.75	2.023	6.77	<1%
		15000	1	4.75	1.226	5.98	<1%
Decane	124-18-5	60000	1	1.45	5.923	7.37	<1%
Dichlorodifluoromethane	75-71-8	500000	24	2.42	1.712	4.13	<1%
Dichloromethane	75-09-2	220	24	0.35	1.097	1.44	<1%
		44	Annual	0.35	0.152	0.50	1%
Ethyl Benzene	100-41-4	1900	10-minute	0.44	6.387	6.82	<1%
		1000	24	0.44	1.308	1.74	<1%
Heptane	142-82-5	11000	24	0.41	0.673	1.08	<1%
Hexane	110-54-3	2500	24	0.76	0.509	1.27	<1%
Isopropyl Alcohol	67-63-0	7300	24	7.50	2.719	10.22	<1%
Vinyl Chloride	75-01-4	1	24	0.03	0.317	0.34	34%
		0.2	Annual	0.03	0.058	0.08	42%
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.364	0.86	36%
Chloroform	67-66-3	1	24	0.24	0.240	0.48	48%
		0.2	Annual	0.24	0.023	0.26	130%
Ethylene Dibromide	106-93-4	3	24	0.04	0.470	0.51	17%
Ethylene Dichloride	107-06-2	2	24	0.09	0.037	0.12	6%
		0.4	Annual	0.09	0.005	0.09	23%
Chloroethane	75-00-3	5600	24	0.27	0.298	0.56	<1%
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.576	0.62	<1%
1,2-Dichloroethane	75-34-3	165	24	0.04	0.238	0.28	<1%
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.454	0.49	<1%
Chlorobenzene	108-90-7	3500	1	0.46	0.146	0.61	<1%
		4500	10-minute	0.46	0.240	0.70	<1%
Chloromethane	74-87-3	320	24	1.26	0.055	1.32	<1%
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.695	1.70	3%
m/p-Xylene	108-38-3	100	24	0.85	3.114	3.96	4%
		3000	10-minute	0.85	15.201	16.05	<1%
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	2.211	3.60	<1%
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.476	0.88	<1%
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.277	0.69	<1%
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.101	1.12	<1%
n-Butanal	123-72-8	5.6	24	0.00	0.109	0.11	2%
Naphthalene	91-20-3	22.5	24	0.65	0.071	0.72	3%
		50	10-minute	0.65	0.347	1.00	2%
Nonane	111-84-2	4200	24	0.50	0.274	0.77	<1%
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.382	0.87	n/a
o-Xylene	95-47-6	100	24	0.44	1.207	1.64	2%
Pentane	109-66-0	4200	24	1.09	0.474	1.56	<1%
Ethanol	64-17-5	19000	1	7.70	4.838	12.54	<1%
Propyl Benzene	103-65-1	20	24	0.49	0.285	0.77	4%
Styrene	100-42-5	400	24	0.43	0.039	0.46	<1%
Tetrachloroethylene	127-18-4	360	24	0.07	0.559	0.63	<1%
Toluene	108-88-3	2000	24	1.61	3.266	4.88	<1%
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.033	1.33	<1%
Trichloroethylene	79-01-6	12	24	0.06	0.334	0.39	3%
		2.3	Annual	0.06	0.047	0.10	4%
Ethyl Acetate	141-78-6	19000	1	0.36	1.254	1.61	<1%
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.285	0.84	<1%
Vinylidene Chloride	75-35-4	10	24	0.04	0.578	0.62	6%
1,2-Dichloroethene	540-59-0	105	24	0.08	0.997	1.08	1%
2-Butanol	78-92-2	496	24	3.05	0.745	3.80	<1%
Bromodichloromethane	75-27-4	350	24	0.34	0.463	0.80	<1%
Octane	111-65-9	61800	10-minute	0.47	2.782	3.25	<1%
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.714	0.75	n/a
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.375	0.40	n/a
Dichlorobenzene	106-46-7	95	24	0.34	0.125	0.46	<1%
Dichlorofluoromethane	75-43-4	500	24	4.20	0.073	4.27	<1%
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.881	4.83	37%
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.625	4.12	32%
		7	24	3.50	0.159	3.66	52%
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.570	8.07	27%
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	1.138	4.99	9%
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	3.288	8.29	64%
		7	24	5.00	0.746	5.75	82%

**Table 24: Maximum Residential Receptor VOC and Sulphur Concentrations - Stage 1: 2023 - 2027 - Mitigated**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.004	0.754	<1%	ZOR-6
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.057	0.547	<1%	ZOR-6
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.185	0.675	<1%	ZOR-6
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.023	0.513	<1%	ZOR-6
2-Methyl Hexane	591-76-4	1228	24	4.10	0.105	4.205	<1%	ZOR-6
2-Methyl Pentane	107-83-5	1750	24	0.35	0.054	0.404	<1%	ZOR-6
2-Methyl Butane	78-78-4	7080	24	2.00	0.221	2.221	<1%	ZOR-6
3-Methyl Pentane	96-14-0	1400	24	0.35	0.024	0.374	<1%	ZOR-6
3-Methyl Hexane	589-34-4	1535	24	0.41	0.149	0.559	<1%	ZOR-6
Acetone	67-64-1	11880	24	19.20	0.392	19.592	<1%	ZOR-6
Benzene	71-43-2	2.3	24	0.59	0.154	0.739	32%	ZOR-6
		0.45	Annual	0.38	0.012	0.390	87%	ZOR-6
Butyl Acetate	123-86-4	1000	10-minute	4.75	1.927	6.677	<1%	ZOR-11
		15000	1	4.75	1.168	5.918	<1%	ZOR-11
Decane	124-18-5	60000	1	1.45	5.641	7.091	<1%	ZOR-11
Dichlorodifluoromethane	75-71-8	500000	24	2.42	0.489	2.909	<1%	ZOR-6
Dichloromethane	75-09-2	220	24	0.35	0.313	0.658	<1%	ZOR-6
		44	Annual	0.52	0.022	0.539	1%	ZOR-6
Ethyl Benzene	100-41-4	1900	10-minute	0.44	6.089	6.524	<1%	ZOR-11
		1000	24	0.44	0.373	0.808	<1%	ZOR-6
Heptane	142-82-5	11000	24	0.41	0.202	0.612	<1%	ZOR-6
Hexane	110-54-3	2500	24	0.76	0.151	0.911	<1%	ZOR-6
Isopropyl Alcohol	67-63-0	7300	24	7.50	0.773	8.273	<1%	ZOR-6
Vinyl Chloride	75-01-4	1	24	0.03	0.120	0.146	15%	ZOR-6
		0.2	Annual	0.03	0.009	0.035	17%	ZOR-6
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.033	0.533	22%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.023	0.260	26%	ZOR-6
		0.2	Annual	0.24	0.002	0.242	121%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.042	0.081	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.010	0.097	5%	ZOR-6
		0.4	Annual	0.06	0.001	0.060	15%	ZOR-6
Chloroethane	75-00-3	5600	24	0.27	0.068	0.333	<1%	ZOR-6
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.086	0.126	<1%	ZOR-5
1,2-Dichloroethane	75-34-3	165	24	0.04	0.062	0.102	<1%	ZOR-6
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.042	0.082	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.141	0.601	<1%	ZOR-11
		4500	10-minute	0.46	0.233	0.693	<1%	ZOR-11
Chloromethane	74-87-3	320	24	1.26	0.016	1.276	<1%	ZOR-6
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.197	1.197	2%	ZOR-6
m/p-Xylene	108-38-3	100	24	0.85	0.902	1.752	2%	ZOR-6
		3000	10-minute	0.85	14.692	15.542	<1%	ZOR-11
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	0.630	2.020	<1%	ZOR-6
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.135	0.535	<1%	ZOR-6
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.079	0.489	<1%	ZOR-6
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.029	1.049	<1%	ZOR-6
n-Butanal	123-72-8	5.6	24	-	0.031	0.031	<1%	ZOR-6
Naphthalene	91-20-3	22.5	24	0.65	0.020	0.670	3%	ZOR-6
		50	10-minute	0.65	0.331	0.981	2%	ZOR-11
Nonane	111-84-2	4200	24	0.50	0.078	0.578	<1%	ZOR-6
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.109	0.599	n/a	ZOR-6
o-Xylene	95-47-6	100	24	0.44	0.346	0.781	<1%	ZOR-6
Pentane	109-66-0	4200	24	1.09	0.135	1.225	<1%	ZOR-6
Ethanol	64-17-5	19000	1	7.70	4.607	12.307	<1%	ZOR-11
Propyl Benzene	103-65-1	20	24	0.49	0.081	0.571	3%	ZOR-6
Styrene	100-42-5	400	24	0.43	0.011	0.436	<1%	ZOR-6
Tetrachloroethylene	127-18-4	360	24	0.07	0.162	0.232	<1%	ZOR-6
Toluene	108-88-3	2000	24	1.61	0.931	2.541	<1%	ZOR-6
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.010	1.310	<1%	ZOR-6
Trichloroethylene	79-01-6	12	24	0.06	0.105	0.160	1%	ZOR-6
		2.3	Annual	0.06	0.008	0.069	3%	ZOR-6
Ethyl Acetate	141-78-6	19000	1	0.36	1.194	1.554	<1%	ZOR-11
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.033	0.583	<1%	ZOR-6
Vinylidene Chloride	75-35-4	10	24	0.04	0.054	0.093	<1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.283	0.362	<1%	ZOR-6
2-Butanol	78-92-2	496	24	3.05	0.215	3.265	<1%	ZOR-6
Bromodichloromethane	75-27-4	350	24	0.34	0.135	0.470	<1%	ZOR-6
Octane	111-65-9	61800	10-minute	0.47	1.384	1.849	<1%	ZOR-11
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.084	0.119	n/a	ZOR-6
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.036	0.064	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.036	0.376	<1%	ZOR-6
Dichlorofluoromethane	75-43-4	500	24	4.20	0.021	4.221	<1%	ZOR-6
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.265	4.215	32%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.188	3.688	28%	ZOR-11
		7	24	3.50	0.012	3.512	50%	ZOR-6
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.342	7.842	26%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.171	4.021	7%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	0.473	5.473	42%	ZOR-11
		7	24	5.00	0.029	5.029	72%	ZOR-6



**Table 25: Maximum Residential Receptor VOC and Sulphur Concentrations - Stage 3: 2033 - 2037 - Mitigated**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.008	0.8	<1%	SWO-1
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.132	0.6	<1%	SWO-1
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.419	0.9	<1%	SWO-1
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.048	0.5	<1%	SWO-1
2-Methyl Hexane	591-76-4	1228	24	4.10	0.244	4.3	<1%	SWO-1
2-Methyl Pentane	107-83-5	1750	24	0.35	0.125	0.5	<1%	SWO-1
2-Methyl Butane	78-78-4	7080	24	2.00	0.511	2.5	<1%	SWO-1
3-Methyl Pentane	96-14-0	1400	24	0.35	0.055	0.4	<1%	SWO-1
3-Methyl Hexane	589-34-4	1535	24	0.41	0.345	0.8	<1%	SWO-1
Acetone	67-64-1	11880	24	19.20	0.894	20.1	<1%	SWO-1
Benzene	71-43-2	2.3	24	0.59	0.359	0.9	41%	SWO-1
		0.45	Annual	0.38	0.026	0.4	90%	ZOR-11
Butyl Acetate	123-86-4	1000	10-minute	4.75	2.990	7.7	<1%	ZOR-11
		15000	1	4.75	1.812	6.6	<1%	ZOR-11
Decane	124-18-5	60000	1	1.45	8.753	10.2	<1%	ZOR-11
Dichlorodifluoromethane	75-71-8	500000	24	2.42	1.124	3.5	<1%	SWO-1
Dichloromethane	75-09-2	220	24	0.35	0.725	1.1	<1%	SWO-1
		44	Annual	0.35	0.053	0.4	<1%	ZOR-11
Ethyl Benzene	100-41-4	1900	10-minute	0.44	9.446	9.9	<1%	ZOR-11
		1000	24	0.44	0.860	1.3	<1%	SWO-1
Heptane	142-82-5	11000	24	0.41	0.453	0.9	<1%	SWO-1
Hexane	110-54-3	2500	24	0.76	0.341	1.1	<1%	SWO-1
Isopropyl Alcohol	67-63-0	7300	24	7.50	1.790	9.3	<1%	SWO-1
Vinyl Chloride	75-01-4	1	24	0.03	0.279	0.3	30%	SWO-1
		0.2	Annual	0.03	0.020	0.0	23%	ZOR-11
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.033	0.5	22%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.023	0.3	26%	ZOR-6
		0.2	Annual	0.24	0.002	0.2	119%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.042	0.1	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.024	0.1	6%	SWO-1
		0.4	Annual	0.09	0.002	0.1	22%	ZOR-11
Chloroethane	75-00-3	5600	24	0.27	0.159	0.4	<1%	SWO-1
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.180	0.2	<1%	SWO-1
1,2-Dichloroethane	75-34-3	165	24	0.04	0.144	0.2	<1%	SWO-1
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.043	0.1	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.217	0.7	<1%	ZOR-11
		4500	10-minute	0.46	0.359	0.8	<1%	ZOR-11
Chloromethane	74-87-3	320	24	1.26	0.036	1.3	<1%	SWO-1
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.457	1.5	2%	SWO-1
m/p-Xylene	108-38-3	100	24	0.85	2.062	2.9	3%	SWO-1
		3000	10-minute	0.85	22.627	23.5	<1%	ZOR-11
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	1.457	2.8	<1%	SWO-1
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.313	0.7	<1%	SWO-1
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.182	0.6	<1%	SWO-1
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.067	1.1	<1%	SWO-1
n-Butanal	123-72-8	5.6	24	0.00	0.072	0.1	1%	SWO-1
Naphthalene	91-20-3	22.5	24	0.65	0.047	0.7	3%	SWO-1
		50	10-minute	0.65	0.513	1.2	2%	ZOR-11
Nonane	111-84-2	4200	24	0.50	0.180	0.7	<1%	SWO-1
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.251	0.7	n/a	SWO-1
o-Xylene	95-47-6	100	24	0.44	0.797	1.2	1%	SWO-1
Pentane	109-66-0	4200	24	1.09	0.312	1.4	<1%	SWO-1
Ethanol	64-17-5	19000	1	7.70	7.149	14.8	<1%	ZOR-11
Propyl Benzene	103-65-1	20	24	0.49	0.187	0.7	3%	SWO-1
Styrene	100-42-5	400	24	0.43	0.026	0.5	<1%	SWO-1
Tetrachloroethylene	127-18-4	360	24	0.07	0.377	0.4	<1%	SWO-1
Toluene	108-88-3	2000	24	1.61	2.149	3.8	<1%	SWO-1
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.022	1.3	<1%	SWO-1
Trichloroethylene	79-01-6	12	24	0.06	0.235	0.3	2%	SWO-1
		2.3	Annual	0.06	0.017	0.1	3%	ZOR-11
Ethyl Acetate	141-78-6	19000	1	0.36	1.853	2.2	<1%	ZOR-11
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.047	0.6	<1%	SWO-1
Vinylidene Chloride	75-35-4	10	24	0.04	0.055	0.1	<1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.655	0.7	<1%	SWO-1
2-Butanol	78-92-2	496	24	3.05	0.500	3.6	<1%	SWO-1
Bromodichloromethane	75-27-4	350	24	0.34	0.314	0.6	<1%	SWO-1
Octane	111-65-9	61800	10-minute	0.47	2.147	2.6	<1%	ZOR-11
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.131	0.2	n/a	SWO-1
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.037	0.1	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.082	0.4	<1%	SWO-1
Dichlorofluoromethane	75-43-4	500	24	4.20	0.048	4.2	<1%	SWO-1
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.577	4.5	35%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.409	3.9	30%	ZOR-11
		7	24	3.50	0.038	3.5	51%	SWO-1
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.605	8.1	27%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.528	4.4	8%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	1.495	6.5	50%	ZOR-11
		7	24	5.00	0.130	5.1	73%	SWO-1



**Table 26: Maximum Residential Receptor VOC and Sulphur Concentrations - Stage 4: 2038 - 2042 - Mitigated**

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.009	0.8	<1%	SWO-3
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.146	0.6	<1%	SWO-3
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.462	1.0	<1%	SWO-3
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.053	0.5	<1%	SWO-3
2-Methyl Hexane	591-76-4	1228	24	4.10	0.269	4.4	<1%	SWO-3
2-Methyl Pentane	107-83-5	1750	24	0.35	0.137	0.5	<1%	SWO-3
2-Methyl Butane	78-78-4	7080	24	2.00	0.564	2.6	<1%	SWO-3
3-Methyl Pentane	96-14-0	1400	24	0.35	0.061	0.4	<1%	SWO-3
3-Methyl Hexane	589-34-4	1535	24	0.41	0.380	0.8	<1%	SWO-3
Acetone	67-64-1	11880	24	19.20	0.986	20.2	<1%	SWO-3
Benzene	71-43-2	2.3	24	0.59	0.386	1.0	42%	SWO-3
		0.45	Annual	0.38	0.030	0.4	91%	SWO-2
Butyl Acetate	123-86-4	1000	10-minute	4.75	3.089	7.8	<1%	SWO-1
		15000	1	4.75	1.872	6.6	<1%	SWO-1
Decane	124-18-5	60000	1	1.45	9.042	10.5	<1%	SWO-1
Dichlorodifluoromethane	75-71-8	500000	24	2.42	1.241	3.7	<1%	SWO-3
Dichloromethane	75-09-2	220	24	0.35	0.793	1.1	<1%	SWO-3
		44	Annual	0.35	0.062	0.4	<1%	SWO-2
Ethyl Benzene	100-41-4	1900	10-minute	0.44	9.716	10.2	<1%	SWO-1
		1000	24	0.44	0.949	1.4	<1%	SWO-3
Heptane	142-82-5	11000	24	0.41	0.501	0.9	<1%	SWO-3
Hexane	110-54-3	2500	24	0.76	0.376	1.1	<1%	SWO-3
Isopropyl Alcohol	67-63-0	7300	24	7.50	1.967	9.5	<1%	SWO-3
Vinyl Chloride	75-01-4	1	24	0.03	0.301	0.3	33%	SWO-3
		0.2	Annual	0.03	0.024	0.0	25%	SWO-2
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.033	0.5	22%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.023	0.3	26%	ZOR-6
		0.2	Annual	0.24	0.002	0.2	119%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.042	0.1	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.027	0.1	6%	SWO-3
		0.4	Annual	0.09	0.002	0.1	22%	SWO-2
Chloroethane	75-00-3	5600	24	0.27	0.168	0.4	<1%	SWO-3
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.183	0.2	<1%	SWO-3
1,2-Dichloroethane	75-34-3	165	24	0.04	0.153	0.2	<1%	SWO-3
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.043	0.1	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.222	0.7	<1%	SWO-1
		4500	10-minute	0.46	0.366	0.8	<1%	SWO-1
Chloromethane	74-87-3	320	24	1.26	0.040	1.3	<1%	SWO-3
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.504	1.5	2%	SWO-3
m/p-Xylene	108-38-3	100	24	0.85	2.276	3.1	3%	SWO-3
		3000	10-minute	0.85	23.209	24.1	<1%	SWO-1
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	1.601	3.0	<1%	SWO-3
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.345	0.7	<1%	SWO-3
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.201	0.6	<1%	SWO-3
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.074	1.1	<1%	SWO-3
n-Butanal	123-72-8	5.6	24	0.00	0.079	0.1	1%	SWO-3
Naphthalene	91-20-3	22.5	24	0.65	0.052	0.7	3%	SWO-3
		50	10-minute	0.65	0.530	1.2	2%	SWO-1
Nonane	111-84-2	4200	24	0.50	0.199	0.7	<1%	SWO-3
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.277	0.8	n/a	SWO-3
o-Xylene	95-47-6	100	24	0.44	0.878	1.3	1%	SWO-3
Pentane	109-66-0	4200	24	1.09	0.343	1.4	<1%	SWO-3
Ethanol	64-17-5	19000	1	7.70	7.386	15.1	<1%	SWO-1
Propyl Benzene	103-65-1	20	24	0.49	0.206	0.7	3%	SWO-3
Styrene	100-42-5	400	24	0.43	0.028	0.5	<1%	SWO-3
Tetrachloroethylene	127-18-4	360	24	0.07	0.406	0.5	<1%	SWO-3
Toluene	108-88-3	2000	24	1.61	2.367	4.0	<1%	SWO-3
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.024	1.3	<1%	SWO-3
Trichloroethylene	79-01-6	12	24	0.06	0.253	0.3	3%	SWO-3
		2.3	Annual	0.06	0.020	0.1	3%	SWO-2
Ethyl Acetate	141-78-6	19000	1	0.36	1.907	2.3	<1%	SWO-1
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.045	0.6	<1%	SWO-1
Vinylidene Chloride	75-35-4	10	24	0.04	0.054	0.1	<1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.723	0.8	<1%	SWO-3
2-Butanol	78-92-2	496	24	3.05	0.543	3.6	<1%	SWO-3
Bromodichloromethane	75-27-4	350	24	0.34	0.337	0.7	<1%	SWO-3
Octane	111-65-9	61800	10-minute	0.47	2.251	2.7	<1%	SWO-2
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.127	0.2	n/a	SWO-1
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.037	0.1	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.091	0.4	<1%	SWO-3
Dichlorofluoromethane	75-43-4	500	24	4.20	0.053	4.3	<1%	SWO-3
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.587	4.5	35%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.417	3.9	30%	ZOR-11
		7	24	3.50	0.048	3.5	51%	SWO-1
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.452	8.0	27%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.752	4.6	8%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	2.171	7.2	55%	ZOR-11
		7	24	5.00	0.225	5.2	75%	SWO-1

**Table 27: Maximum Residential Receptor VOC and Sulphur Concentrations - Post Closure: 2043 - Mitigated**

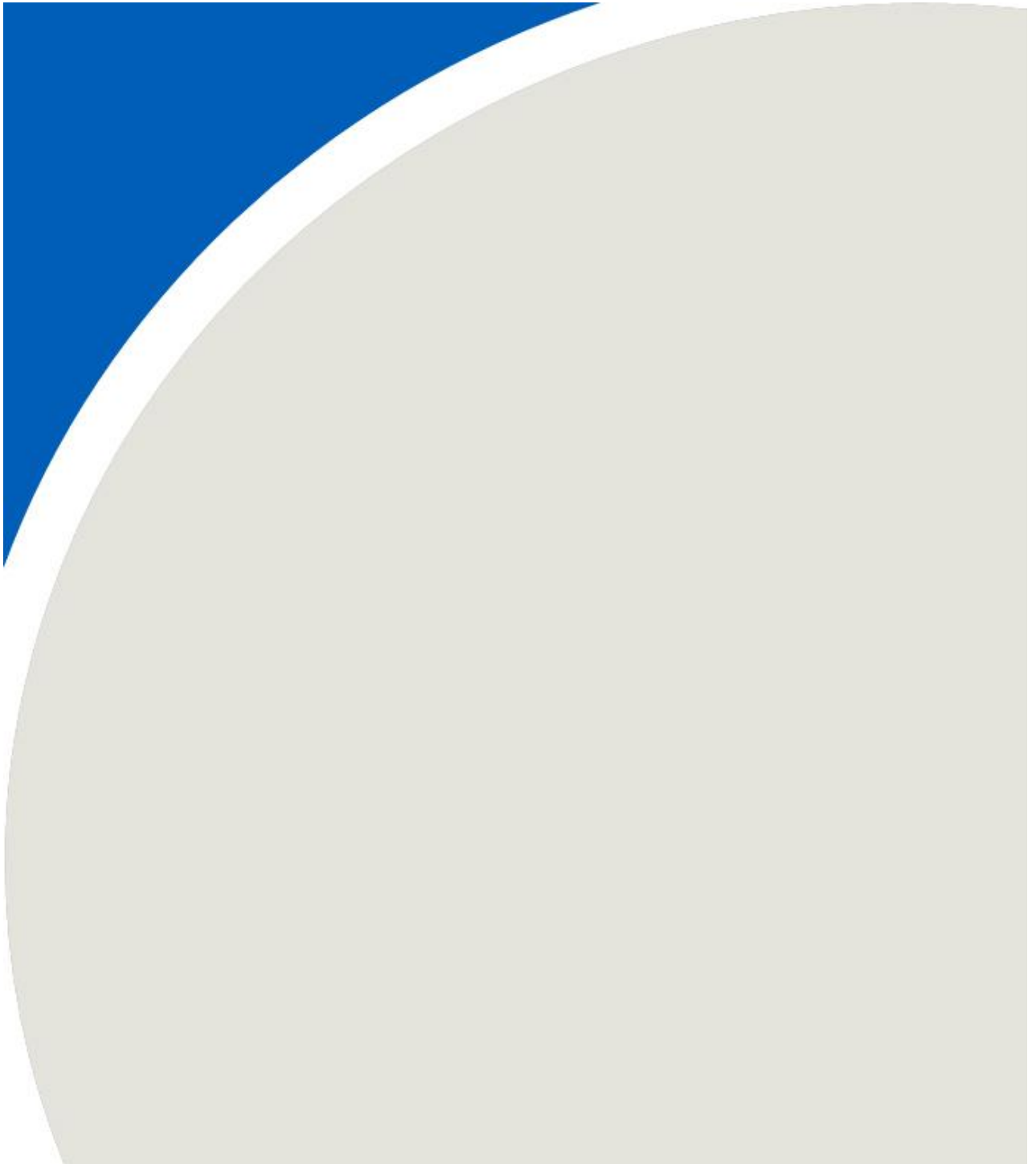
Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period (hours)	Ambient Background Concentration (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration without Background (ug m <sup>-3</sup> )	Discrete Receptor Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	800000	24	0.75	0.004	0.8	<1%	SWO-1
1,2,3-Trimethyl Benzene	526-73-8	220	24	0.49	0.077	0.6	<1%	SWO-1
1,2,4-Trimethyl Benzene	95-63-6	220	24	0.49	0.241	0.7	<1%	SWO-1
1,3,5-Trimethyl Benzene	108-67-8	200	24	0.49	0.026	0.5	<1%	SWO-1
2-Methyl Hexane	591-76-4	1228	24	4.10	0.143	4.2	<1%	SWO-1
2-Methyl Pentane	107-83-5	1750	24	0.35	0.073	0.4	<1%	SWO-1
2-Methyl Butane	78-78-4	7080	24	2.00	0.299	2.3	<1%	SWO-1
3-Methyl Pentane	96-14-0	1400	24	0.35	0.032	0.4	<1%	SWO-1
3-Methyl Hexane	589-34-4	1535	24	0.41	0.201	0.6	<1%	SWO-1
Acetone	67-64-1	11880	24	19.20	0.515	19.7	<1%	SWO-1
Benzene	71-43-2	2.3	24	0.59	0.214	0.8	35%	SWO-1
		0.45	Annual	0.38	0.017	0.4	88%	SWO-2
Butyl Acetate	123-86-4	1000	10-minute	4.75	1.450	6.2	<1%	SWO-1
		15000	1	4.75	0.879	5.6	<1%	SWO-1
Decane	124-18-5	60000	1	1.45	4.246	5.7	<1%	SWO-1
Dichlorodifluoromethane	75-71-8	500000	24	2.42	0.658	3.1	<1%	SWO-1
Dichloromethane	75-09-2	220	24	0.35	0.426	0.8	<1%	SWO-1
		44	Annual	0.35	0.034	0.4	<1%	SWO-2
Ethyl Benzene	100-41-4	1900	10-minute	0.44	4.577	5.0	<1%	SWO-1
		1000	24	0.44	0.503	0.9	<1%	SWO-1
Heptane	142-82-5	11000	24	0.41	0.259	0.7	<1%	SWO-1
Hexane	110-54-3	2500	24	0.76	0.196	1.0	<1%	SWO-1
Isopropyl Alcohol	67-63-0	7300	24	7.50	1.045	8.5	<1%	SWO-1
Vinyl Chloride	75-01-4	1	24	0.03	0.166	0.2	19%	SWO-1
		0.2	Annual	0.03	0.013	0.0	19%	SWO-2
Carbon Tetrachloride	56-23-5	2.4	24	0.50	0.033	0.5	22%	ZOR-6
Chloroform	67-66-3	1	24	0.24	0.022	0.3	26%	ZOR-6
		0.2	Annual	0.24	0.002	0.2	119%	ZOR-6
Ethylene Dibromide	106-93-4	3	24	0.04	0.042	0.1	3%	ZOR-6
Ethylene Dichloride	107-06-2	2	24	0.09	0.014	0.1	5%	SWO-1
		0.4	Annual	0.09	0.001	0.1	22%	SWO-2
Chloroethane	75-00-3	5600	24	0.27	0.096	0.4	<1%	SWO-1
1,2-Dichloroethylene (cis)	156-59-2	105	24	0.04	0.111	0.2	<1%	SWO-1
1,2-Dichloroethane	75-34-3	165	24	0.04	0.086	0.1	<1%	SWO-1
1,2-Dichloroethylene (trans)	156-60-5	105	24	0.04	0.042	0.1	<1%	ZOR-6
Chlorobenzene	108-90-7	3500	1	0.46	0.104	0.6	<1%	SWO-1
		4500	10-minute	0.46	0.172	0.6	<1%	SWO-1
Chloromethane	74-87-3	320	24	1.26	0.021	1.3	<1%	SWO-1
m/p-Ethyl Toluene	620-14-4	62.5	24	1.00	0.267	1.3	2%	SWO-1
m/p-Xylene	108-38-3	100	24	0.85	1.196	2.0	2%	SWO-1
		3000	10-minute	0.85	10.885	11.7	<1%	SWO-1
Methyl Ethyl Ketone	78-93-3	1000	24	1.39	0.849	2.2	<1%	SWO-1
Methyl Cyclohexane	108-87-2	6440	24	0.40	0.183	0.6	<1%	SWO-1
Methyl Isobutyl Ketone	108-10-1	1200	24	0.41	0.106	0.5	<1%	SWO-1
Chlorodifluoromethane	75-45-6	350000	24	1.02	0.039	1.1	<1%	SWO-1
n-Butanal	123-72-8	5.6	24	0.00	0.042	0.0	<1%	SWO-1
Naphthalene	91-20-3	22.5	24	0.65	0.027	0.7	3%	SWO-1
		50	10-minute	0.65	0.249	0.9	2%	SWO-1
Nonane	111-84-2	4200	24	0.50	0.105	0.6	<1%	SWO-1
o-Ethyl Toluene	611-14-3	n/a	24	0.49	0.147	0.6	n/a	SWO-1
o-Xylene	95-47-6	100	24	0.44	0.464	0.9	<1%	SWO-1
Pentane	109-66-0	4200	24	1.09	0.182	1.3	<1%	SWO-1
Ethanol	64-17-5	19000	1	7.70	3.468	11.2	<1%	SWO-1
Propyl Benzene	103-65-1	20	24	0.49	0.109	0.6	3%	SWO-1
Styrene	100-42-5	400	24	0.43	0.015	0.4	<1%	SWO-1
Tetrachloroethylene	127-18-4	360	24	0.07	0.224	0.3	<1%	SWO-1
Toluene	108-88-3	2000	24	1.61	1.254	2.9	<1%	SWO-1
Trichlorofluoromethane	75-69-4	6000	24	1.30	0.013	1.3	<1%	SWO-1
Trichloroethylene	79-01-6	12	24	0.06	0.136	0.2	2%	SWO-1
		2.3	Annual	0.06	0.011	0.1	3%	SWO-2
Ethyl Acetate	141-78-6	19000	1	0.36	0.896	1.3	<1%	SWO-1
1,1,1-Trichloroethane	71-55-6	115000	24	0.55	0.032	0.6	<1%	ZOR-6
Vinylidene Chloride	75-35-4	10	24	0.04	0.054	0.1	<1%	ZOR-6
1,2-Dichloroethene	540-59-0	105	24	0.08	0.383	0.5	<1%	SWO-1
2-Butanol	78-92-2	496	24	3.05	0.297	3.3	<1%	SWO-1
Bromodichloromethane	75-27-4	350	24	0.34	0.187	0.5	<1%	SWO-1
Octane	111-65-9	61800	10-minute	0.47	1.142	1.6	<1%	SWO-2
1,1,2,2-Tetrachloroethane	79-34-5	n/a	24	0.03	0.085	0.1	n/a	SWO-1
1,1,2-Trichloroethane	79-00-5	n/a	24	0.03	0.036	0.1	n/a	ZOR-6
Dichlorobenzene	106-46-7	95	24	0.34	0.048	0.4	<1%	SWO-1
Dichlorofluoromethane	75-43-4	500	24	4.20	0.028	4.2	<1%	SWO-1
Total Mercaptans (as Methyl Mercaptan)	74-93-1	13	10-minute	3.95	0.587	4.5	35%	ZOR-11
Hydrogen Sulphide	7783-06-4	13	10-minute	3.50	0.417	3.9	30%	ZOR-11
		7	24	3.50	0.053	3.6	51%	ZOR-6
Dimethyl Sulphide	75-18-3	30	10-minute	7.50	0.380	7.9	26%	ZOR-11
Dimethyl Disulphide	624-92-0	56	10-minute	3.85	0.759	4.6	8%	ZOR-11
Total Reduced Sulphurs (TRS)	N/A-2	13	10-minute	5.00	2.191	7.2	55%	ZOR-11
		7	24	5.00	0.246	5.2	75%	SWO-1

**Table 28 - Maximum Predicted Annual Concentrations of Ethylene Dibromide at Receptors Based on 60% Control of the Leachate Plant Sources - Stage 1**

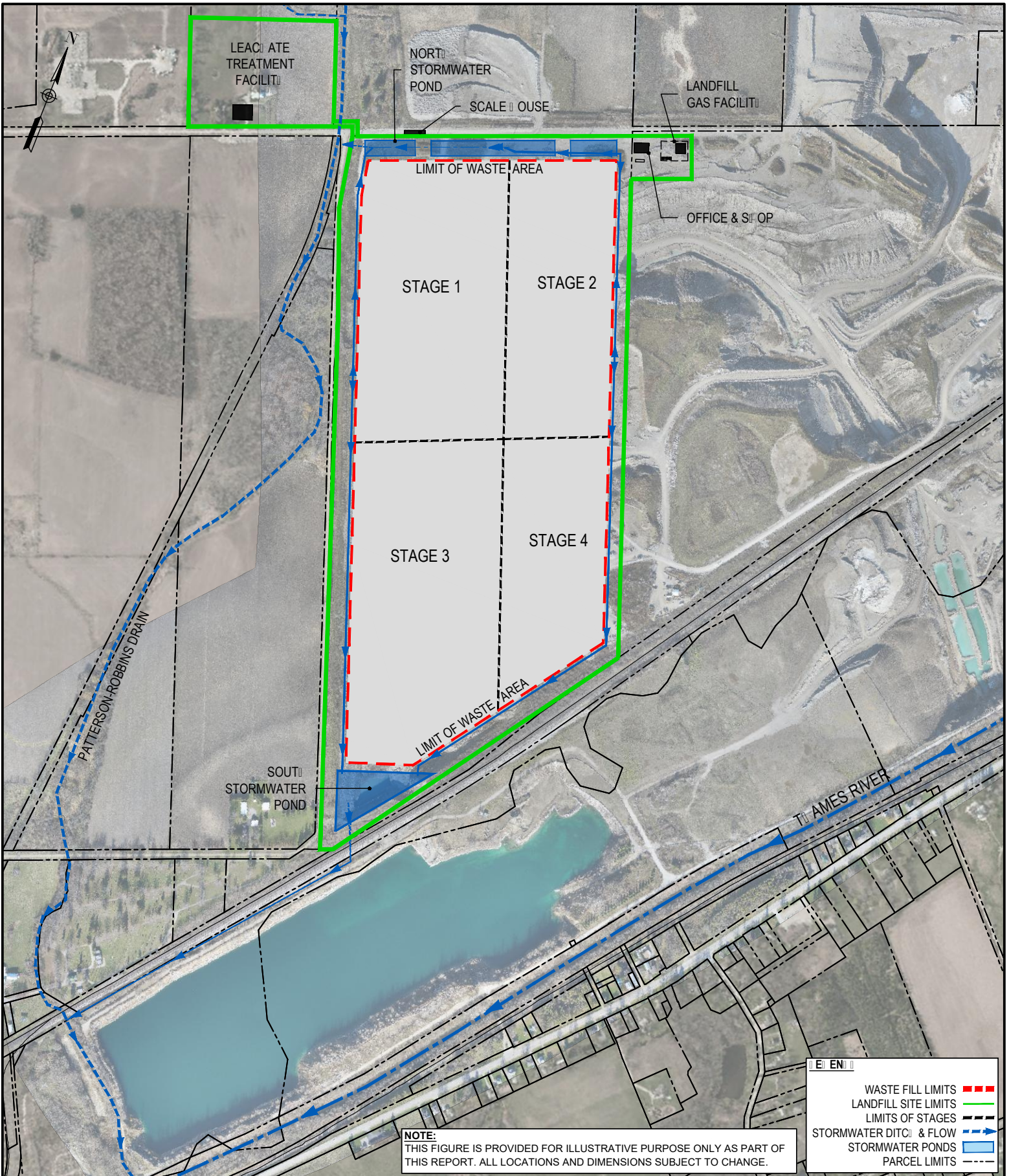
Receptor ID	Description	X	Y	Maximum POI Concentration (ug m <sup>-3</sup> )
ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.00023
ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.00031
ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.00023
ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.00016
ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.00092
ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.00166
ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.00014
ZOR-8	Residence at 643743 Road 64	508940	4767980	0.00066
ZOR-9	Residence at 334647, 334652 and 334655 33rd Line (place dot in middle of the 3 residences)	509437	4767450	0.00037
ZOR-10	Residence at 334578 33rd Line (mark in road as also receptor for groundwater well across road)	509739	4766780	0.00021
ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.00039
ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.00025
ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.00009
ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.0002
ING-2	Laurie Hawkins Public School	509019	4765860	0.00011
ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.00017
ING-4	On the river north of 209 County Road 9	509480	4765180	0.00007
ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.00006
ING-6	Royal Road Public School	510337	4765360	0.00012
ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.00004
ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.00007
ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.0001
ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.00007
SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.00022
SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.00036
SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.00037
SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.00026
SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.00021
SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.0001
SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.00007
SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.00003
SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.00002
SWO-10	Residence at 563977 Karn Road	510980	4765990	0.00016
SWO-11	Residence at 564028 Karn Road	511396	4766310	0.00016
SWO-12	Residences at 564047, 564058, 564062 Karn Road (place one dot in the middle of these)	511616	4766520	0.00017
SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.00022
SWO-14	Residences at 564120 and 564128 Karn Road (Place one don't in the middle of these two)	512109	4766980	0.00024
SWO-15	Residences at 564146 Karn Road	512251	4767100	0.00024
SWO-16	Residences at 564162, 564164 and 564168 Karn Road (place one dot in the middle of these)	512389	4767250	0.00021
SWO-17	Residence at 564226 Karn Road	512958	4767760	0.00015
SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.00018
SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.00009
SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.00003

To mitigate the potential impact identified in the human health risk assessment, the maximum predicted annual concentration of ethylene dibromide from the landfill operations needed to be reduced to below 0.0017 µg/m<sup>3</sup> at all residential receptors.

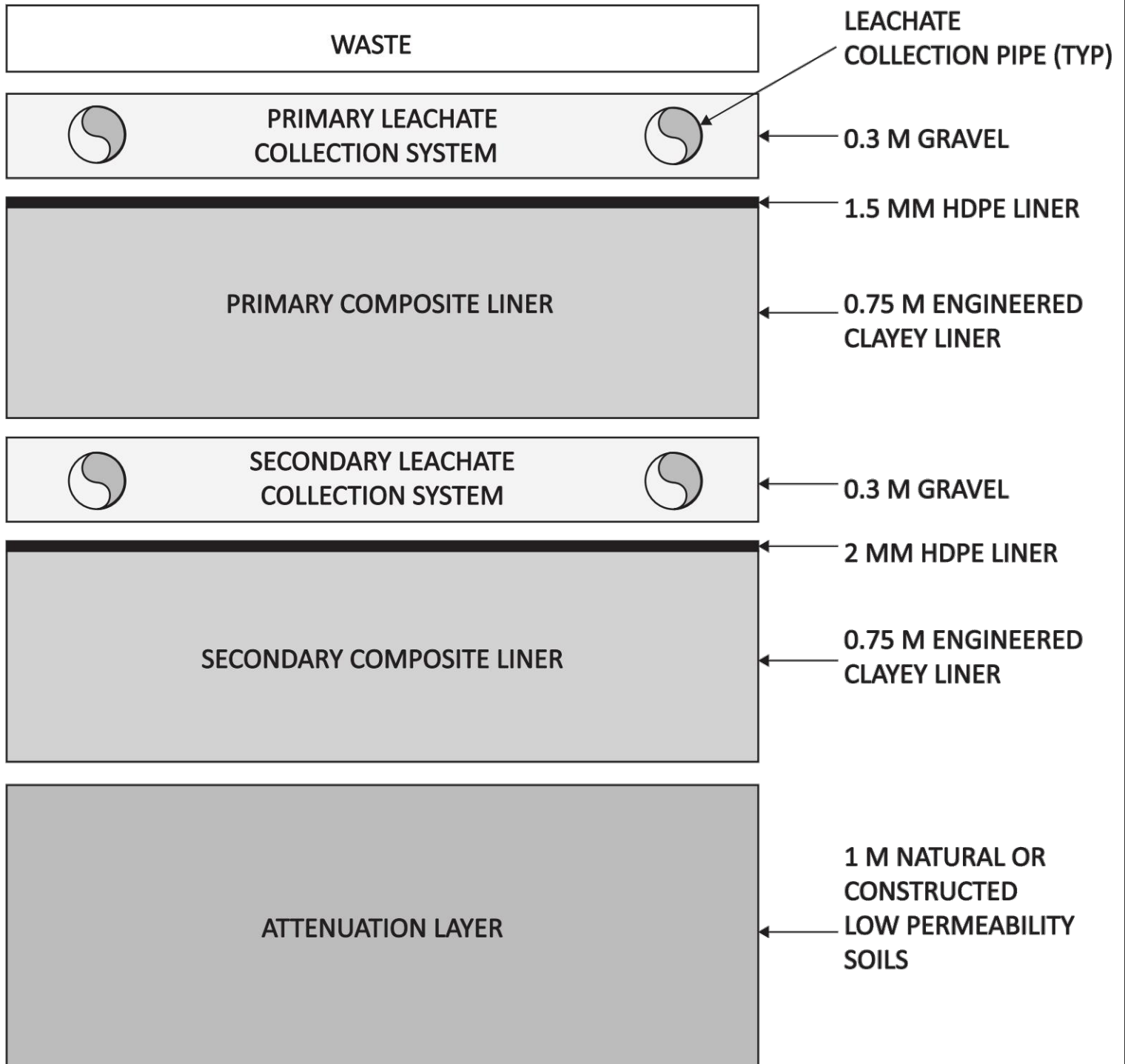
# FIGURES








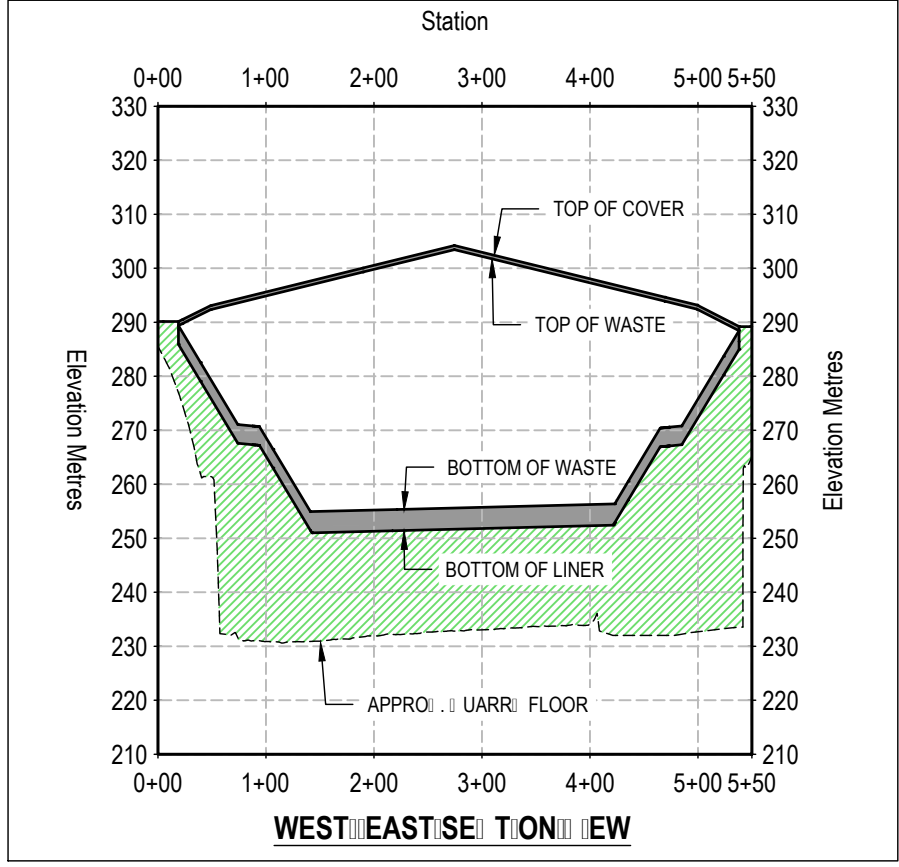
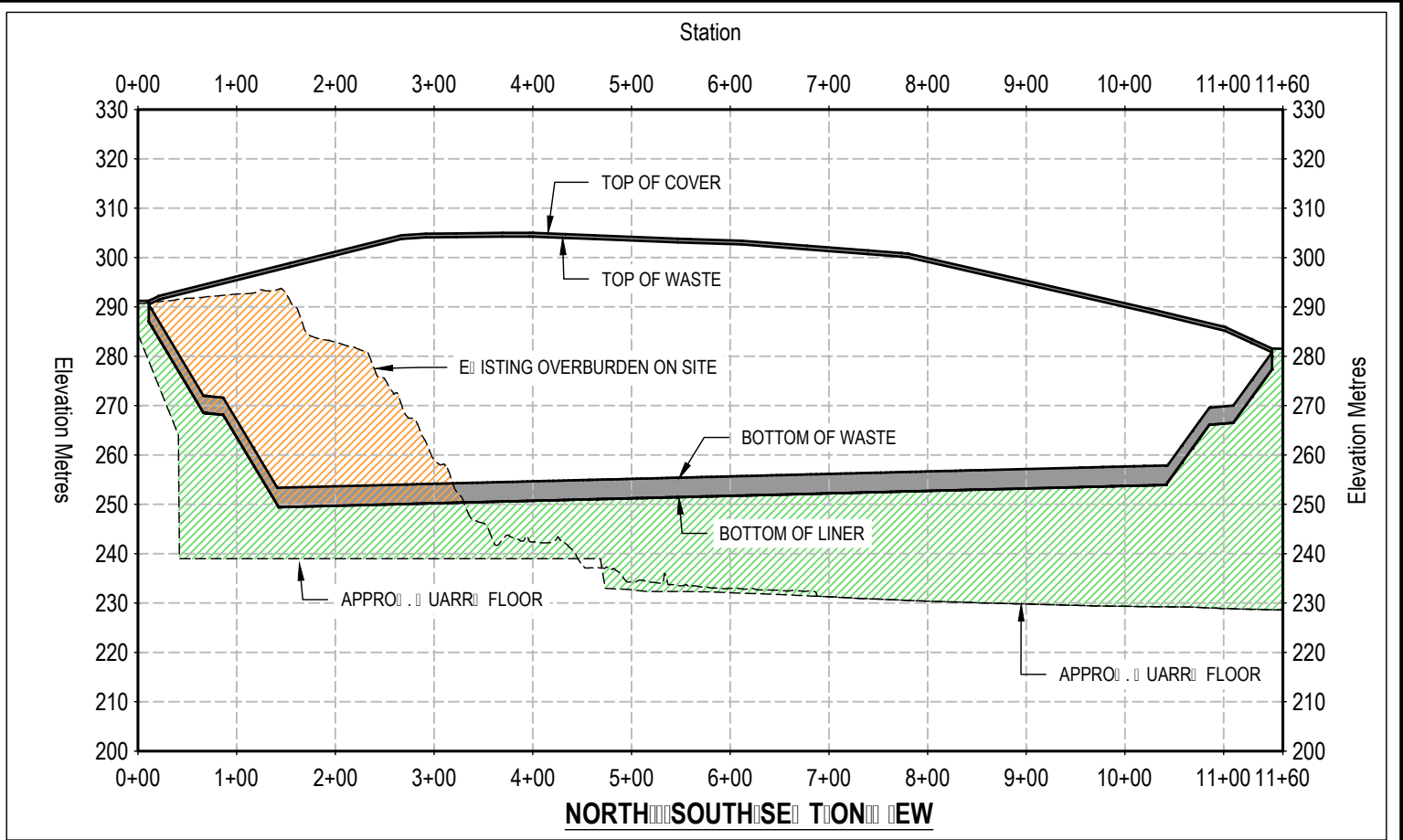
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	Drawing	SITE PLAN		Drawn	JThompson	Scale	1"=1000'
				Approved	DFry	Date (DD/MM/YY)	01 JAN 20
						Drawing No.	Figure <input type="checkbox"/> G



**NOTE:**  
THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar
	Drawing	<b>LANDFILL LINER SYSTEM</b>		Drawn	TT	Scale	NTS
				Approved	DFry	Drawing No.	7JAN19
						Revision No.	<b>Figure</b> <input type="checkbox"/> <b>C</b>

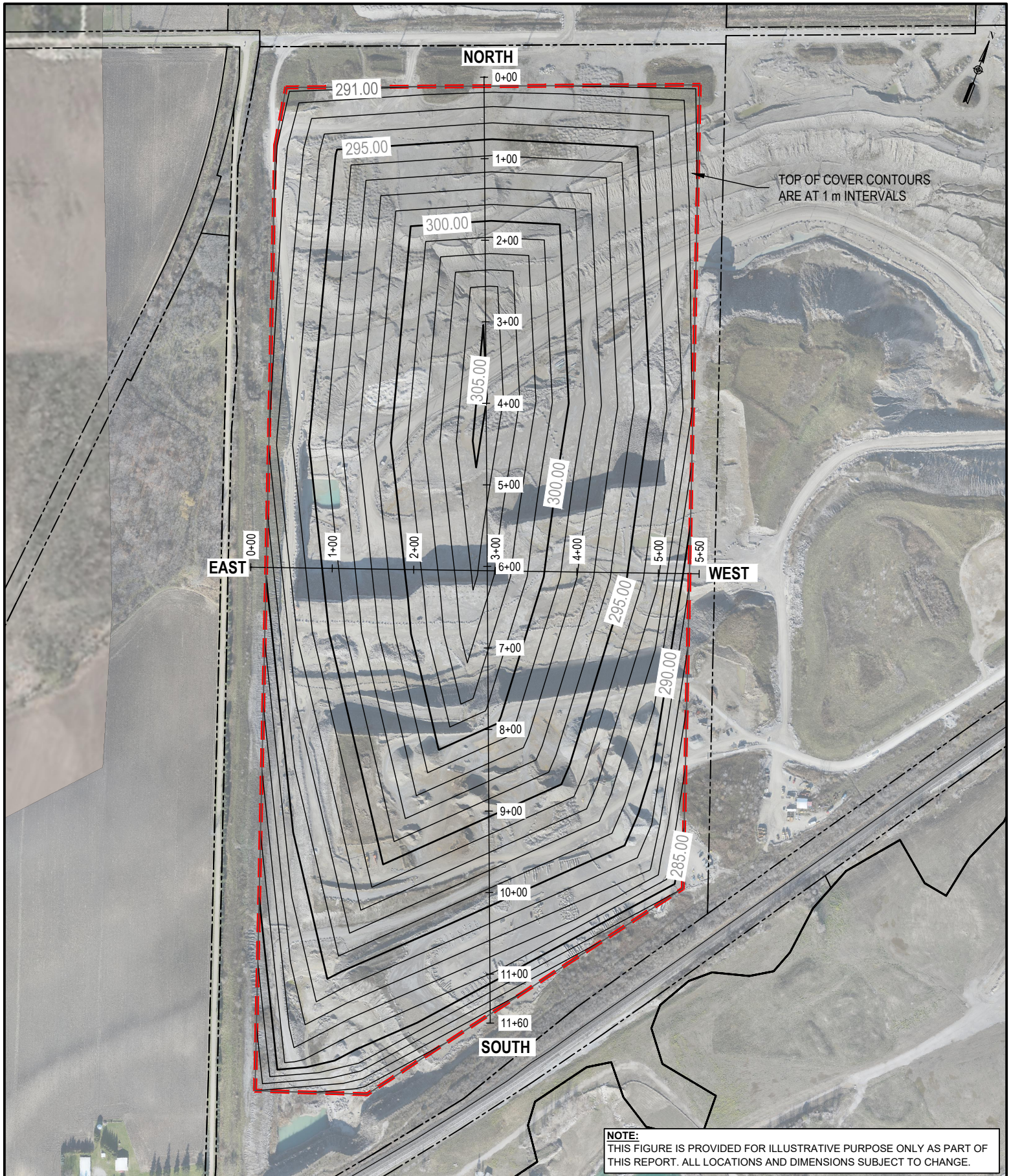




**NOTE:**  
THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar
	Drawing	<b>SECTION VIEWS</b>		Drawn	JThompson	Scale	NTS
				Approved	DFry	Date (P.M.Y)	07JAN20
						Drawing No.	Figure <input type="checkbox"/> <b>E</b>

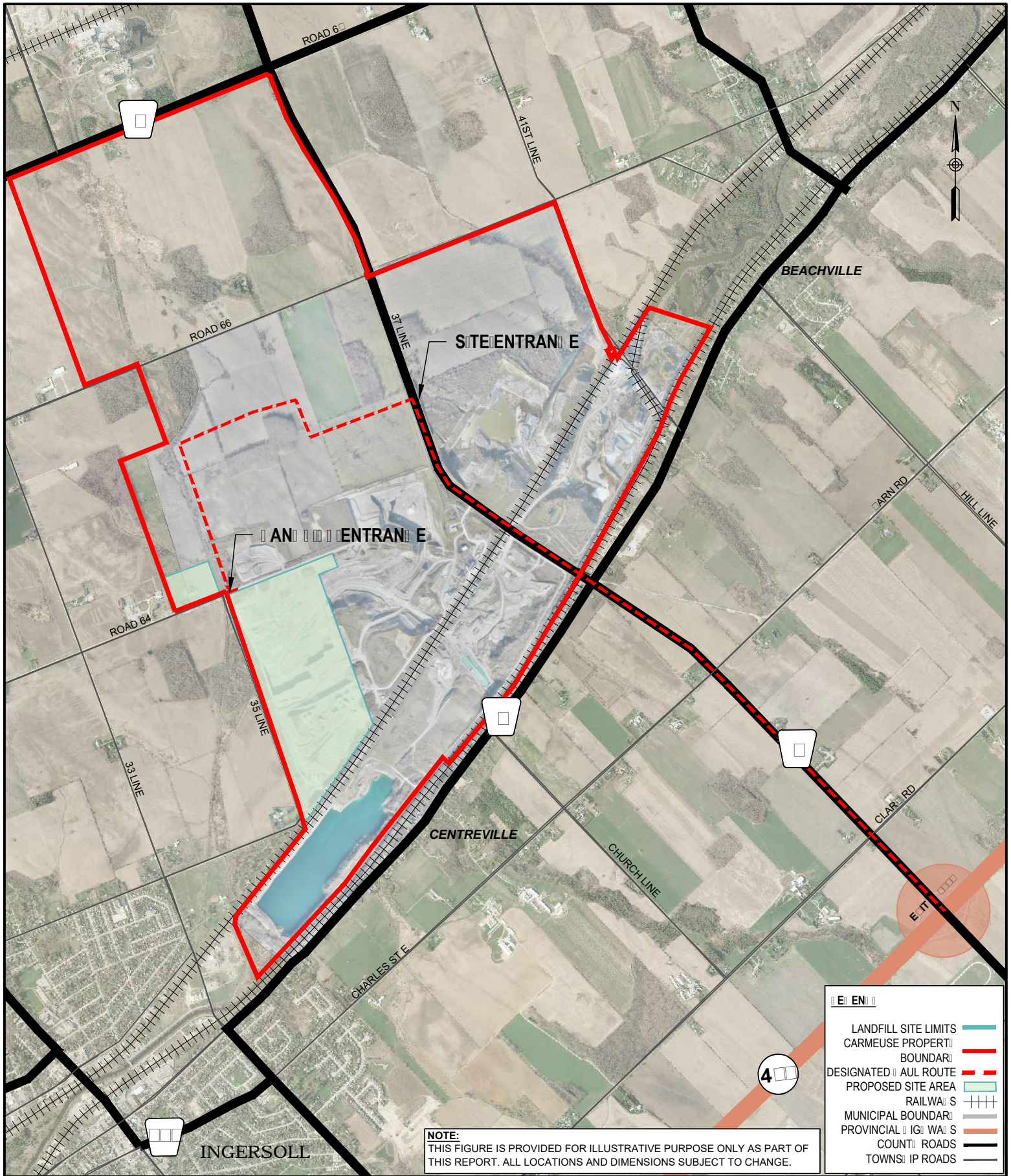




**NOTE:**  
 THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF  
 THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243	Scale Bar			
	Drawing	<b>PLAN VIEW TOP OF COVER</b>		Drawn	JThompson	Scale	NTS	Date (p.m/y)	07JAN20
				Approved	DFry	Drawing No.	<b>Figure 4</b>	Revision No.	<b>E</b>





Owner

Project

**SOUTHWESTERN LANDFILL**

Drawing

**SITE LOCATION & HAUL ROUTE**

Project No.

967243

Drawn

JThompson

Approved

DFry

Scale Bar

0 500 1000 Meters

Scale

1:30000

Date

01 JAN 20

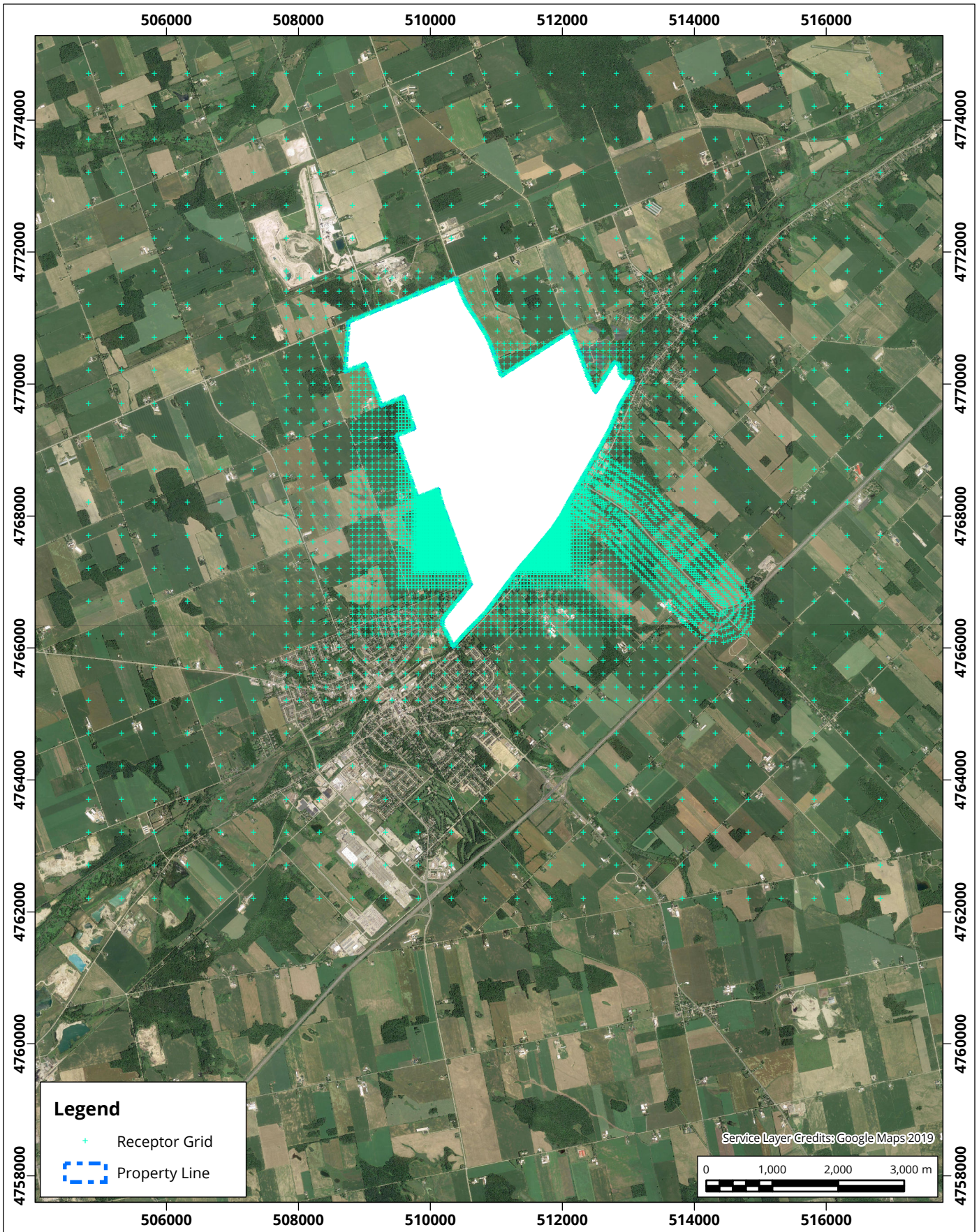
Drawing No.

Figure

Revision No.

E





## Modelled Receptor Grid

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario



Project #: 1800160

Drawn by: DJH	Figure: 6
Exact Scale: 1:80,000	
Date Revised: Dec 19, 2019	







Map Document: C:\GIS\05 Walkers\_SWMLP02\_Work\Walkers\_SWMLP02.aprx

## Discrete Receptor Locations

Map Projection: NAD 1983 UTM Zone 17N  
WEG Southwestern Landfill- Beachville, Ontario



Project #: 1800160

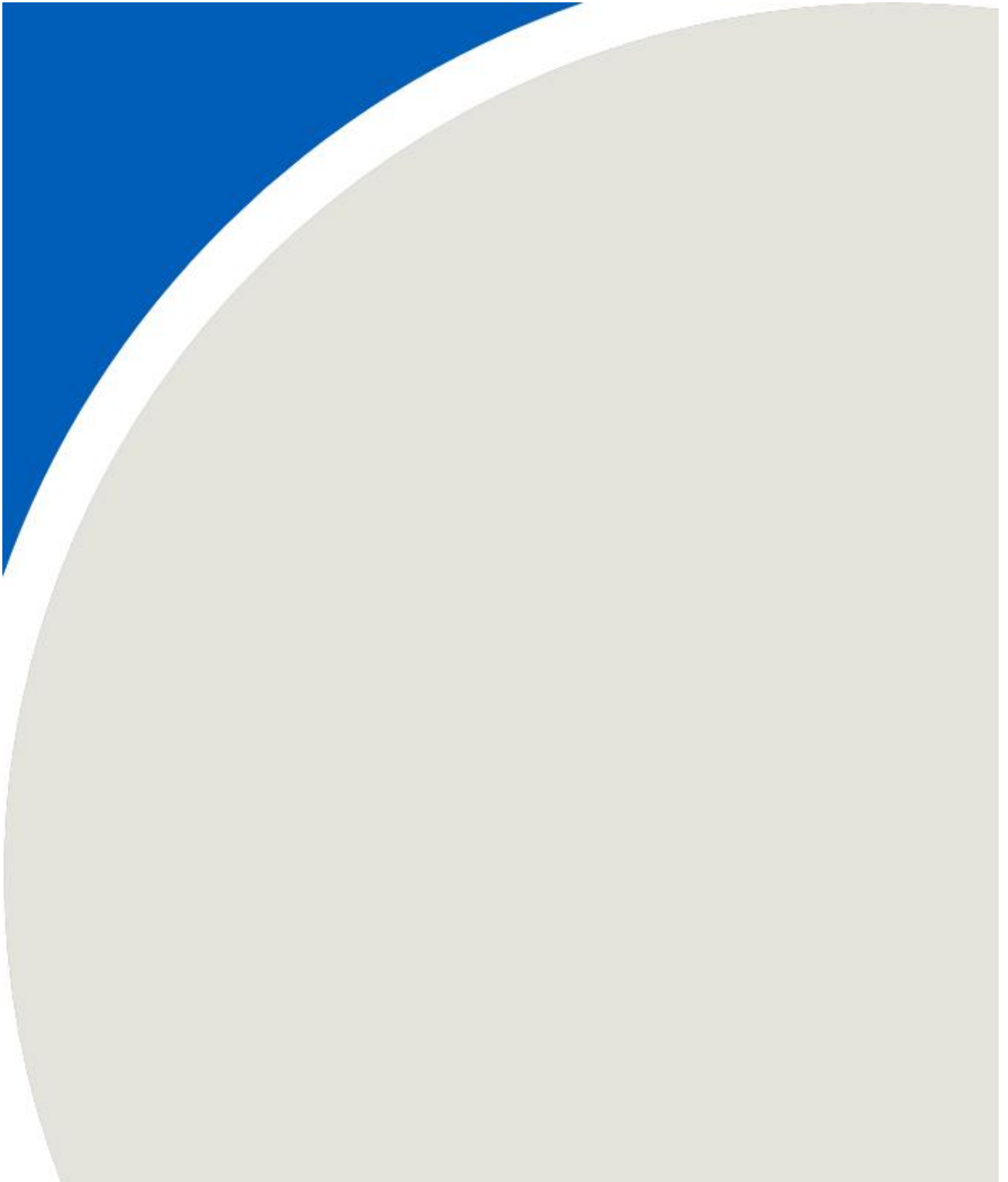
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Exact Scale: 1:70,000	
Date Revised: Dec 16, 2019	





# APPENDIX A:

## Glossary of Terms



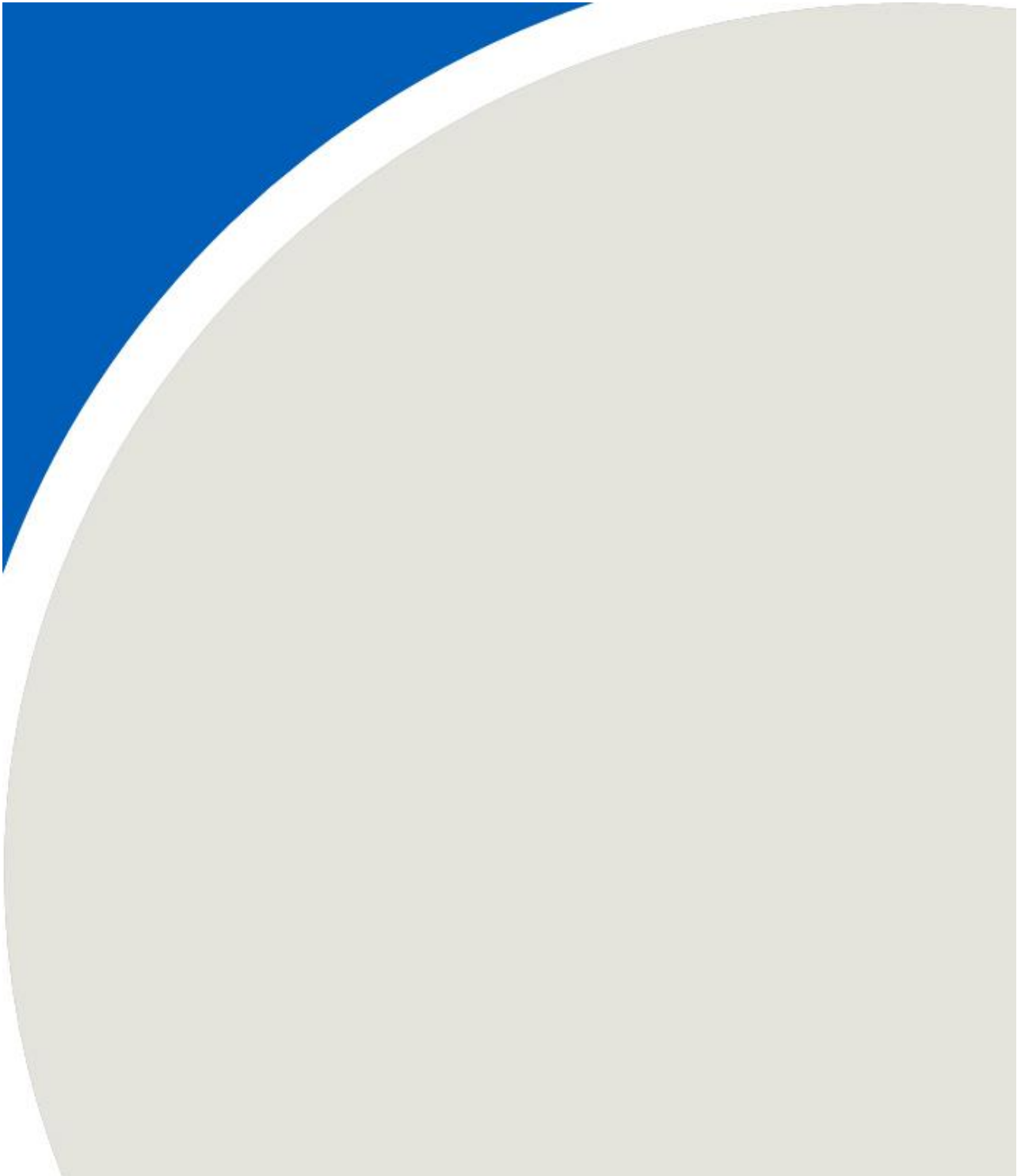
# GLOSSARY OF TERMS USED IN AIR IMPACT ASSESSMENTS

ADT	Average daily traffic
AADT	Annual average daily traffic
AAQC	Ambient Air Quality Criteria as defined by the Ontario Ministry of the Environment, Conservation and Parks
AERMOD	An air dispersion model developed by AERMIC to support the US EPA's regulatory modelling programs. AERMOD is the next-generation air dispersion model that incorporates concepts such as planetary boundary layer theory and advanced methods for handling complex terrain.
Baseline	Refers to the existing air quality surrounding the landfill. The baseline is used to determine if there will be a change in the existing environment before the proposed landfill.
CO	Carbon monoxide; a regulated air pollutant and product of incomplete combustion
Conservative	Implementing a number of assumptions in an analysis that are intended to lead to a deliberate over-estimation of impacts
Clod Samples	Refer to the large clumps of native or typical soil at the landfill typically used for cover.
Deposition Routine	Refers to dust particles that travel downwind in a plume, larger particles fall out of the air through gravitational settling and other factors and are not replaced. Using this deposition routine provides a simulation of this process. By doing so, a more realistic prediction of dust impacts is produced.
Dustfall	Refers to larger particles that settle at a sufficient rate to produce a dust film on surfaces. Dustfall is a nuisance due to its soiling nature.
Flux Chamber	Is a stainless steel vessel of volume 0.5 m <sup>2</sup> . It is used to measure minute emissions from near passive sources that do not have any mechanical fans to discharge the contaminants of interest.
g/veh/mi	Grams of emissions per vehicle per mile traveled
HC	Hydrocarbons; generally defined in terms of volatile organic compounds (VOC's) and semi-volatile compounds (SVOC's)
MECP	Ontario Ministry of the Environment, Conservation and Parks
NO	Nitric oxide; an air pollutant and constituent of NO <sub>x</sub> generated by combustion

NO <sub>2</sub>	Nitrogen dioxide; an air pollutant and regulated constituent of NO <sub>x</sub> generated by chemical or photochemical reactions generally involving NO
NO <sub>x</sub>	Total oxides of nitrogen; a generic air pollutant category that includes the sum of all NO and NO <sub>2</sub> concentrations
O <sub>3</sub>	Ozone; a photochemical oxidant generally formed in the presence of sunlight, oxides of nitrogen and reactive hydrocarbons
Odour	Odour can generally be described as a person's perception to a particular smell. This may be considered a "good" or "bad" smell as a subjective observation from a particular person. An odour is deemed as a nuisance, if it is detected and considered to be unpleasant. When odour levels are elevated and occur frequently, they can be construed as an adverse effect.
Odour Unit	One odour unit is the concentration at which 50% of a population will detect an odour.
PAHs	Polycyclic aromatic hydrocarbons; a class of airborne contaminants that exist with both solids and gaseous fractions; individual species include fluoranthene and benzo(a)pyrene
ppm, ppmv	Parts per million by volume; unit of concentration; mixing ratio
PM <sub>10</sub>	Inhalable particulate matter; airborne particles of aerodynamic diameter less than 10 microns
PM <sub>2.5</sub>	Respirable particulate matter; airborne particles of aerodynamic diameter less than 2.5 microns
SO <sub>2</sub>	Sulphur dioxide; an air pollutant usually associated with the combustion of sulphur-laden fuel
Tedlar Bags	A bag used to collect air samples that is comprised of a skin is made from inert materials like Teflon to minimize any chemical reactions that may compromise the sample
TSP	Total suspended particulates; airborne particulate matter that is generally small (less than about 44 microns in diameter) enough so as not to be greatly affected by gravitational forces
µg/m <sup>3</sup>	Micrograms per cubic metre; a unit of concentration
U.S. EPA	The United States Environmental Protection Agency
VMT	Vehicle miles traveled
VOCs	Volatile organic compounds; a class of airborne gaseous contaminants that includes individual chemical species such as vinyl chloride, benzene, xylenes, etc.

# APPENDIX B:

Environmental Assessment Criteria and Studies  
(From the Approved Amended Terms of Reference)



**Table B-1 – EA Criteria Table**

Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																			
1	Explosive hazard due to combustible gas accumulation in confined spaces.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Effects due to exposure to air emissions.		<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Effects due to fine particulate exposure.		<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
4	Effects due to contact with contaminated groundwater or surface water.						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Flood hazard.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Disease transmission <i>via</i> insects or vermin.					<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Public Health &amp; Safety (continued)</b>																			
7	Potential for traffic collisions.												<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	



	Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
8	Aviation impacts due to bird interference.	Birds may be attracted to waste disposal facilities. This can pose a risk of bird strikes on aircraft in the vicinity of the site, especially during take-off and landing altitudes.					<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>		
<b>Social and Cultural</b>																				
9	Displacement of residents from houses.	Any residents living on a future waste disposal site will have to relocate, which can cause inconvenience and stress to the residents.												<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
10	Disruption to use and enjoyment of residential properties.	Potential nuisance effects associated with the waste disposal facility operation, or traffic moving to and from the waste disposal facility along the haul route, may disturb the daily activities and uses of residential properties. Disturbances could result from noise, dust, litter, odour, visibility, birds and traffic congestion.												<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	Disruption to use and enjoyment of public facilities and institutions.	Potential nuisance effects associated with waste disposal facility operations, or traffic moving to and from the waste disposal facility, may disturb the daily activities at community facilities. Disturbances could result from noise, dust, litter, odour, visibility, birds and traffic congestion.												<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	Disruption to local traffic networks.	Increased traffic volume resulting from a waste disposal facility could disturb the overall traffic flow along the haul routes, and effectively reduce the available road capacity.																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	Visual impact of the waste disposal facility.	Development and operation of a waste disposal facility can affect the visual appeal of a landscape.																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	Nuisance associated with vermin.	Waste disposal facilities can attract vermin and birds, which can be a nuisance and lead to a decrease in property enjoyment by area residents. Vermin and birds can also be a nuisance to												<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Social and Cultural (continued)</b>																			
15	Displacement/disturbance of cultural/heritage resources.				<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	Effects on land resources, traditional activities or other interests of											<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	Displacement/destruction of archaeological			<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	Level of public service provided by the waste disposal facility.																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	Effects on other public services.																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Social and Cultural (continued)</b>																			
20	Changes to community character/cohesion.													<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

	Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration					
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period		
21	Compatibility with municipal land use designations and official plans.	A waste disposal facility has the potential to affect the viability of present and future land uses, which may have an effect on planning decisions made in the surrounding community.								<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Economics</b>																						
22	Displacement/disruption of businesses or farms.	Any on-site businesses or farms would be displaced by a waste disposal facility, and there could be financial losses as a result of relocation. Some types of businesses located in the site vicinity or along the haul routes may suffer financial losses due to the potential nuisance effects or perceived effects associated with the operation of a waste disposal facility such as noise, litter, dust, odour, visibility, birds, vermin and traffic congestion.									<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
23	Property value impacts.	The establishment and operation of a waste disposal facility may adversely affect property values in the site vicinity or along the haul routes.									<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	Direct employment in waste disposal facility construction and operation.	A waste disposal facility may create new employment opportunities both in the construction and day-to-day operation.									<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
25	Indirect employment in related industries and services.	A waste disposal facility has the potential to have impacts on employment opportunities in local firms supplying products or services directly, or as secondary suppliers.									<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Economics (continued)</b>																						
26	New business opportunities related directly to waste disposal facility construction and operation.	A large capital project, such as the construction and operation of a waste disposal facility, can create new opportunities for local businesses supplying products or services.									<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
27	New business opportunities in related industries and services.	New opportunities may be created for local businesses, or as secondary suppliers to industries working for the waste disposal facility (e.g., restaurants, gas stations, machine shops, repair shops, welding shops, equipment rentals, etc.).									<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

	Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
28	Public costs for indirect liabilities.	Some public services may have to be upgraded to accommodate the establishment and operation of a waste disposal facility (e.g., snow removal, sewer and water connections, etc.).						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	Effects on the municipal tax base.	A waste disposal facility has the potential to affect municipal tax revenues from the site it occupies.						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	Effect on the cost of service to customers.	The costs of constructing a waste disposal facility will effect the price of tipping fees to the site. This affects the cost of service to customers in Oxford county and the province.						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
31	Effects on the provincial/ federal tax base.	A waste disposal facility has the potential to affect provincial/federal tax revenues.						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Natural Environment &amp; Resources</b>																				
32	Loss/displacement of surface water resources.	Construction of a waste disposal facility may cause the removal of all or part of a natural stream or pond.								<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
33	Impact on the availability of groundwater supply to wells.	A waste disposal facility can impact the availability of groundwater supply if groundwater is pumped from aquifers or if recharge to aquifers is reduced.								<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	Effects on stream baseflow quantity/quality.	The presence of a waste disposal facility has the potential to affect the quality or quantity of baseflow to surface water.								<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Natural Environment &amp; Resources (Continued)</b>																				
35	Loss/disturbance of terrestrial ecosystems.	Terrestrial ecosystems refer to the land-based habitats connected through the vegetation cover; their protection and integration maintains and regulates ecological health. Waste disposal facility operations and/or traffic may remove or disturb the functioning of these systems.						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
36	Loss/disturbance of aquatic ecosystems.	Aquatic ecosystems refer to the water-based habitats connected through the surface water; their protection and integration maintains and regulates ecological health. Waste disposal facility operations may remove or disturb the functioning of these systems.						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

	Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
37	Displacement of agricultural land.	The establishment of a waste disposal facility has the potential to displace existing or potential agricultural resources, including the loss of prime agricultural land.	<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	Disruption of farm operations.	The establishment and operation of the waste disposal facility may affect agricultural crop or livestock production and related agriculture activities	<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	Sterilization of industrial mineral resources.	The establishment of a waste disposal facility may limit the opportunity to extract industrial mineral resources located beneath the site.								<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
40	Displacement of forestry resources.	The establishment of a waste disposal facility may limit the opportunity to utilize forestry resources on or near the site.								<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
41	Loss/disruption of recreational resources.	Waste disposal facility operations and traffic may displace/disrupt existing recreational resources in the area, which could adversely affect the community at large. Disturbances could result from noise, dust, odour, visibility, birds and traffic congestion. Recreational resources include naturalist and interpretive opportunities.											<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

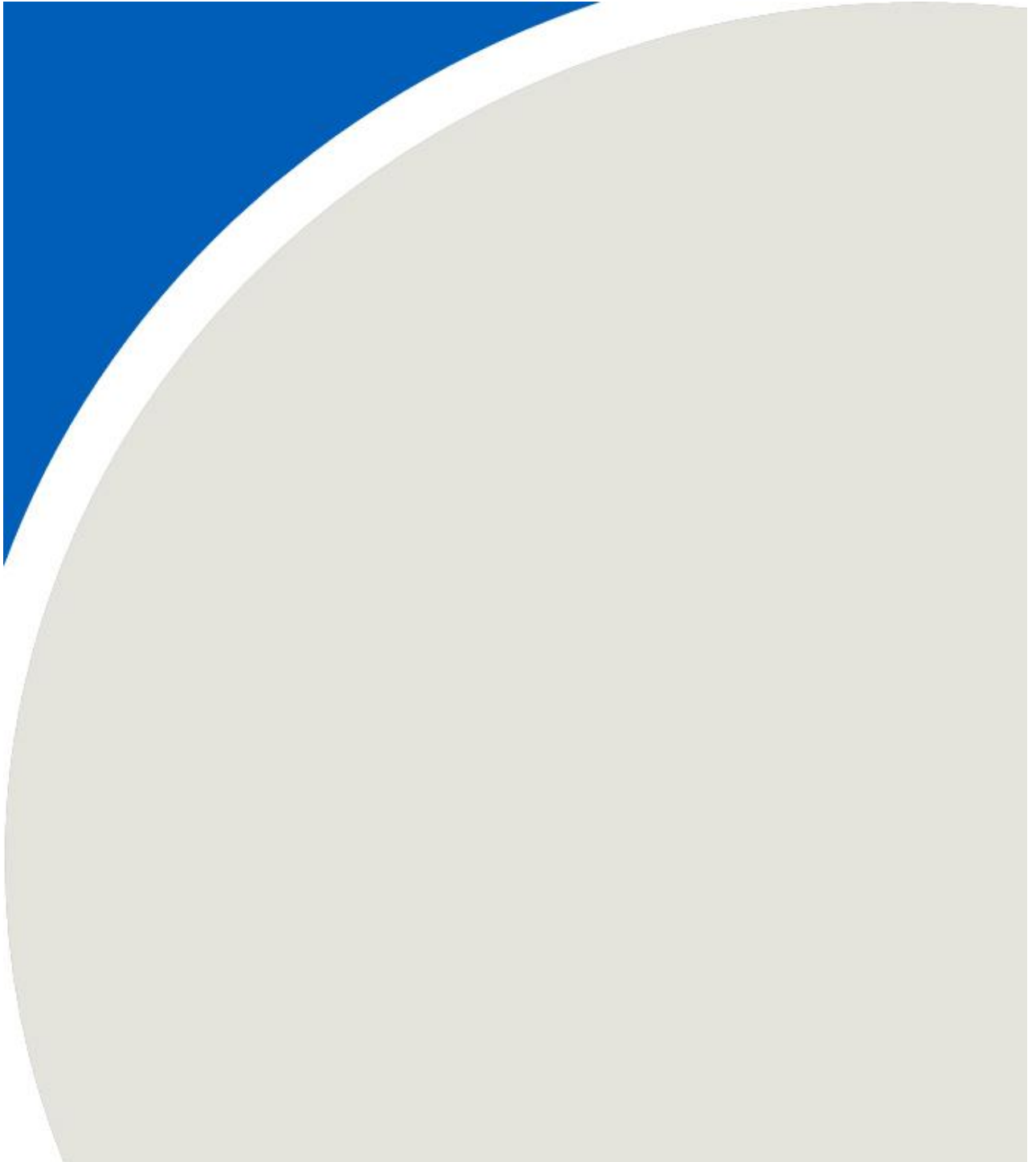


*Table B-2 – EA Technical Studies Interconnectivity Matrix*

Because effectively evaluating the EA criteria provided in Table B-1 may require input from experts in many disciplines, WEG adopted a methodology that facilitates a cross-functional approach among the experts. Each EA criterion has been assigned a ‘lead’ expert for reporting purposes (see Table B-1). The lead expert is responsible for coordinating efforts with any other expert they determine necessary to effectively report on that criterion as well as providing information to other experts who need input from them to report on any other criteria. Table B-2 provides possible relationships required between experts to effectively report on their respective EA criteria. The actual relationships will be developed during the EA process in consultation with interested parties.

		Reference Studies												
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic / Financial	Groundwater / Surface Water	Human Health	Land Use	Noise / Vibration	Social	Traffic	Visual/ Landscape
Technical Studies	Agriculture		✓							✓	✓		✓	
	Air Quality												✓	
	Archaeology													
	Cultural Heritage									✓		✓		✓
	Ecology		✓					✓			✓		✓	
	Economic / Financial	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	Groundwater / Surface Water	✓										✓		
	Human Health		✓					✓			✓			
	Land Use													
	Noise / Vibration													
	Social	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	Traffic	✓								✓		✓		
	Visual Landscape											✓		

## APPENDIX C



Appendix C: Southwest Landfill - Landfill Stages Emission Rate Calculation Summary

Table 1: Landfill Stages Emission Rate Calculation

Source ID	Approximate Landfill Area (m <sup>2</sup> )	Stage 1 2023-2027				Stage 2 2028-2032				Stage 3 2033-2037				Stage 4 2038-2042				Post-Closure 2043			
		Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted Landfill Gas for Biodegradable Fraction (m <sup>3</sup> yr <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> yr <sup>-1</sup> )	Generation Flux Rate (m <sup>3</sup> m <sup>-2</sup> s <sup>-1</sup> )	Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted Landfill Gas for Biodegradable Fraction (m <sup>3</sup> yr <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> yr <sup>-1</sup> )	Generation Flux Rate (m <sup>3</sup> m <sup>-2</sup> s <sup>-1</sup> )	Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted Landfill Gas for Biodegradable Fraction (m <sup>3</sup> yr <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> yr <sup>-1</sup> )	Generation Flux Rate (m <sup>3</sup> m <sup>-2</sup> s <sup>-1</sup> )	Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted Landfill Gas for Biodegradable Fraction (m <sup>3</sup> yr <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> yr <sup>-1</sup> )	Generation Flux Rate (m <sup>3</sup> m <sup>-2</sup> s <sup>-1</sup> )	Volume of Gas Produced (m <sup>3</sup> yr <sup>-1</sup> )	Adjusted Landfill Gas for Biodegradable Fraction (m <sup>3</sup> yr <sup>-1</sup> )	Volume of Gas Released (m <sup>3</sup> yr <sup>-1</sup> )	Generation Flux Rate (m <sup>3</sup> m <sup>-2</sup> s <sup>-1</sup> )
S1_COVER	170937.5	3.03E+07	2.12E+07	1.06E+07	1.97E-06	3.16E+07	2.21E+07	3.32E+06	6.16E-07	2.59E+07	1.81E+07	2.72E+06	5.04E-07	2.12E+07	1.48E+07	2.23E+06	4.13E-07	2.04E+07	1.43E+07	2.14E+06	3.97E-07
S2_COVER	122403.4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E+07	2.12E+07	1.06E+07	2.74E-06	3.16E+07	2.21E+07	3.32E+06	8.60E-07	2.59E+07	1.81E+07	2.72E+06	7.04E-07	2.49E+07	1.74E+07	2.61E+06	6.77E-07
S3_COVER	192773.6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E+07	2.12E+07	1.06E+07	1.74E-06	3.16E+07	2.21E+07	3.32E+06	5.46E-07	3.04E+07	2.13E+07	3.19E+06	5.25E-07
S4_COVER	107396.5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E+07	2.12E+07	1.06E+07	3.13E-06	3.71E+07	2.60E+07	3.90E+06	1.15E-06
Gas Collected				1.06E+07				2.94E+07				4.48E+07				5.74E+07				6.71E+07	

Notes:  
 Final cover gas collections efficiency is: 85%  
 Active Stage Collection Efficiency: 50%  
 Biodegradable Fraction: 70%

Table 2: Summary of LFG Generation Flux Rate (m<sup>3</sup> m<sup>-2</sup> s<sup>-1</sup>)

Stage	Years	S1_COVER	S2_COVER	S3_COVER	S4_COVER
1	2023-2027	1.97E-06	0.00E+00	0.00E+00	0.00E+00
2	2028-2032	6.16E-07	2.74E-06	0.00E+00	0.00E+00
3	2033-2037	5.04E-07	8.60E-07	1.74E-06	0.00E+00
4	2038-2042	4.13E-07	7.04E-07	5.46E-07	3.13E-06
PC	2043	3.97E-07	6.77E-07	5.25E-07	1.15E-06

Table 3: Summary of Landfill Gas Emission Rates (g m<sup>-2</sup> s<sup>-1</sup>)

Contaminant	CAS	2023-2027				2028-2032				2033-2037				2038-2042				2043			
		S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER
1,1,1-Trichloroethane	71-55-6	5.14E-09	0.00E+00	0.00E+00	0.00E+00	1.61E-09	7.18E-09	0.00E+00	0.00E+00	1.32E-09	2.25E-09	4.56E-09	0.00E+00	1.08E-09	1.84E-09	1.43E-09	8.19E-09	1.04E-09	1.77E-09	1.37E-09	3.01E-09
1,1,2,2-Tetrachloroethane	79-34-5	1.50E-08	0.00E+00	0.00E+00	0.00E+00	4.69E-09	2.09E-08	0.00E+00	0.00E+00	3.84E-09	6.55E-09	1.33E-08	0.00E+00	3.14E-09	5.36E-09	4.16E-09	2.38E-08	3.02E-09	5.15E-09	4.00E-09	8.76E-09
1,1,2-Trichloro-1,2,2-Trifluoromethane	76-13-1	1.01E-09	0.00E+00	0.00E+00	0.00E+00	3.17E-10	1.41E-09	0.00E+00	0.00E+00	2.60E-10	4.43E-10	8.97E-10	0.00E+00	2.13E-10	3.62E-10	2.81E-10	1.61E-09	2.04E-10	3.48E-10	2.70E-10	5.92E-10
1,1,2-Trichloroethane	79-00-5	1.69E-09	0.00E+00	0.00E+00	0.00E+00	5.31E-10	2.36E-09	0.00E+00	0.00E+00	4.35E-10	7.41E-10	1.50E-09	0.00E+00	3.56E-10	6.07E-10	4.71E-10	2.70E-09	3.42E-10	5.83E-10	4.52E-10	9.91E-10
1,2,3-Trimethyl Benzene	526-73-8	1.79E-08	0.00E+00	0.00E+00	0.00E+00	5.62E-09	2.51E-08	0.00E+00	0.00E+00	4.60E-09	7.85E-09	1.59E-08	0.00E+00	3.77E-09	6.43E-09	4.99E-09	2.86E-08	3.62E-09	6.18E-09	4.79E-09	1.05E-08
1,2,4-Trimethyl Benzene	95-63-6	5.59E-08	0.00E+00	0.00E+00	0.00E+00	1.75E-08	7.80E-08	0.00E+00	0.00E+00	1.43E-08	2.45E-08	4.96E-08	0.00E+00	1.17E-08	2.00E-08	1.55E-08	8.89E-08	1.13E-08	2.00E-08	1.49E-08	3.27E-08
1,1-Dichloroethane	75-34-3	1.87E-08	0.00E+00	0.00E+00	0.00E+00	5.86E-09	2.61E-08	0.00E+00	0.00E+00	4.79E-09	8.18E-09	1.66E-08	0.00E+00	3.93E-09	6.70E-09	5.19E-09	2.97E-08	3.77E-09	6.43E-09	4.99E-09	1.09E-08
1,2-Dichloroethane	540-59-0	8.88E-08	0.00E+00	0.00E+00	0.00E+00	2.78E-08	1.24E-07	0.00E+00	0.00E+00	2.28E-08	3.89E-08	7.87E-08	0.00E+00	1.87E-08	3.18E-08	2.47E-08	1.41E-07	1.79E-08	3.06E-08	2.37E-08	5.20E-08
1,2-Dichloroethylene (cis)	156-59-2	2.21E-08	0.00E+00	0.00E+00	0.00E+00	6.93E-09	3.09E-08	0.00E+00	0.00E+00	5.68E-09	9.68E-09	1.96E-08	0.00E+00	4.65E-09	7.93E-09	6.15E-09	3.52E-08	4.46E-09	7.62E-09	5.91E-09	1.29E-08
1,2-Dichloroethylene (trans)	156-60-5	1.26E-09	0.00E+00	0.00E+00	0.00E+00	3.94E-10	1.76E-09	0.00E+00	0.00E+00	3.23E-10	5.50E-10	1.11E-09	0.00E+00	2.64E-10	4.50E-10	3.49E-10	2.00E-09	2.54E-10	4.33E-10	3.36E-10	7.36E-10
1,3,5-Trimethyl Benzene	108-67-8	6.02E-09	0.00E+00	0.00E+00	0.00E+00	1.89E-09	8.40E-09	0.00E+00	0.00E+00	1.54E-09	2.63E-09	5.33E-09	0.00E+00	1.26E-09	2.16E-09	1.67E-09	9.57E-09	1.21E-09	2.07E-09	1.61E-09	3.52E-09
2-Butanol	78-92-2	6.64E-08	0.00E+00	0.00E+00	0.00E+00	2.08E-08	9.28E-08	0.00E+00	0.00E+00	1.70E-08	2.91E-08	5.89E-08	0.00E+00	1.40E-08	2.38E-08	1.85E-08	1.06E-07	1.34E-08	2.29E-08	1.77E-08	3.89E-08
2-Methyl Butane	78-78-4	6.93E-08	0.00E+00	0.00E+00	0.00E+00	2.17E-08	9.68E-08	0.00E+00	0.00E+00	1.78E-08	3.03E-08	6.14E-08	0.00E+00	1.46E-08	2.48E-08	1.93E-08	1.10E-07	1.40E-08	2.39E-08	1.85E-08	4.06E-08
2-Methyl Hexane	591-76-4	3.31E-08	0.00E+00	0.00E+00	0.00E+00	1.04E-08	4.62E-08	0.00E+00	0.00E+00	8.48E-09	1.45E-08	2.93E-08	0.00E+00	6.94E-09	1.18E-08	9.19E-09	5.26E-08	6.67E-09	1.14E-08	8.83E-09	1.94E-08
2-Methyl Pentane	107-83-5	1.69E-08	0.00E+00	0.00E+00	0.00E+00	5.29E-09	2.36E-08	0.00E+00	0.00E+00	4.33E-09	7.39E-09	1.50E-08	0.00E+00	3.55E-09	6.05E-09	4.69E-09	2.69E-08	3.41E-09	5.81E-09	4.51E-09	9.88E-09
3-Methyl Hexane	589-34-4	4.67E-08	0.00E+00	0.00E+00	0.00E+00	1.46E-08	6.52E-08	0.00E+00	0.00E+00	1.20E-08	2.04E-08	4.14E-08	0.00E+00	9.81E-09	1.67E-08	1.30E-08	7.43E-08	9.43E-09	1.61E-08	1.25E-08	2.73E-08
3-Methyl Pentane	96-14-0	7.45E-09	0.00E+00	0.00E+00	0.00E+00	2.34E-09	1.04E-08	0.00E+00	0.00E+00	1.91E-09	3.26E-09	6.61E-09	0.00E+00	1.57E-09	2.67E-09	2.07E-09	1.19E-08	1.50E-09	2.57E-09	1.99E-09	4.36E-09
Acetone	67-64-1	1.19E-07	0.00E+00	0.00E+00	0.00E+00	3.74E-08	1.67E-07	0.00E+00	0.00E+00	3.07E-08	5.23E-08	1.06E-07	0.00E+00	2.51E-08	4.28E-08	3.32E-08	1.90E-07	2.41E-08	4.11E-08	3.19E-08	6.99E-08
Benzene	71-43-2	4.72E-08	0.00E+00	0.00E+00	0.00E+00	1.48E-08	6.60E-08	0.00E+00	0.00E+00	1.21E-08	2.07E-08	4.19E-08	0.00E+00	9.93E-09	1.69E-08	1.31E-08	7.52E-08	9.54E-09	1.63E-08	1.26E-08	2.77E-08
Bromodichloromethane	75-27-4	4.12E-08	0.00E+00	0.00E+00	0.00E+00	1.29E-08	5.75E-08	0.00E+00	0.00E+00	1.06E-08	1.80E-08	3.65E-08	0.00E+00	8.66E-09	1.48E-08	1.14E-08	6.56E-08	8.32E-09	1.42E-08	1.10E-08	2.41E-08
Butyl Acetate	123-86-4	3.69E-08	0.00E+00	0.00E+00	0.00E+00	1.16E-08	5.15E-08	0.00E+00	0.00E+00	9.47E-09	1.62E-08	3.27E-08	0.00E+00	7.75E-09	1.32E-08	5.87E-08	7.45E-09	1.27E-08	9.85E-09	2.16E-08	
Carbon Tetrachloride	56-23-5	9.86E-11	0.00E+00	0.00E+00	0.00E+00	3.09E-11	1.38E-10	0.00E+00	0.00E+00	2.53E-11	4.32E-11	8.74E-11	0.00E+00	2.07E-11	3.53E-11	2.74E-11	1.57E-10	1.99E-11	3.40E-11	2.63E-11	5.77E-11
Chlorobenzene	108-90-7	4.38E-09	0.00E+00	0.00E+00	0.00E+00	1.37E-09	6.11E-09	0.00E+00	0.00E+00	1.12E-09	1.92E-09	3.88E-09	0.00E+00	9.20E-10	1.57E-09	1.22E-09	6.97E-09	8.83E-10	1.51E-09	1.17E-09	2.56E-09
Chlorodifluoromethane	75-45-6	9.03E-09	0.00E+00	0.00E+00	0.00E+00	2.83E-09	1.26E-08	0.00E+00	0.00E+00	2.32E-09	3.95E-09	8.01E-09	0.00E+00	1.90E-09	3.24E-09	2.51E-09	1.44E-08	1.82E-09	3.11E-09	2.41E-09	5.29E-09
Chloroethane	75-00-3	2.05E-08	0.00E+00	0.00E+00	0.00E+00	6.42E-09	2.86E-08	0.00E+00	0.00E+00	5.25E-09	8.96E-09	1.82E-08	0.00E+00	4.30E-09	7.34E-09	5.69E-09	3.26E-08	4.13E-09	7.05E-09	5.47E-09	1.20E-08
Chloroform	67-66-3	7.29E-10	0.00E+00	0.00E+00	0.00E+00	2.29E-10	1.02E-09	0.00E+00	0.00E+00	1.87E-10	3.19E-10	6.47E-10	0.00E+00	1.53E-10	2.61E-10	2.03E-10	1.16E-09	1.47E-10	2.51E-10	1.95E-10	4.27E-10
Chloromethane	74-87-3	4.91E-09	0.00E+00	0.00E+00	0.00E+00	1.54E-09	6.85E-09	0.00E+00	0.00E+00	1.26E-09	2.15E-09	4.35E-09	0.00E+00	1.03E-09	1.76E-09	1.36E-09	7.81E-09	9.91E-10	1.69E-09	1.31E-09	2.87E-09
Dichlorodifluoromethane	75-71-8	1.53E-07	0.00E+00	0.00E+00	0.00E+00	4.78E-08	2.13E-07	0.00E+00	0.00E+00	3.91E-08	6.68E-08	1.35E-07	0.00E+00	3.20E-08	5.47E-08	4.24E-08	2.43E-07	3.08E-08	5.25E-08	4.07E-08	8.93E-08
Dichlorofluoromethane	75-43-4	6.63E-09	0.00E+00	0.00E+00	0.00E+00	2.08E-09	9.25E-09	0.00E+00	0.00E+00	1.70E-09	2.90E-09	5.88E-09	0.00E+0								

Contaminant	CAS	2023-2027				2028-2032				2033-2037				2038-2042				2043			
		S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER
Toluene	108-88-3	2.91E-07	0.00E+00	0.00E+00	0.00E+00	9.12E-08	4.06E-07	0.00E+00	0.00E+00	7.46E-08	1.27E-07	2.58E-07	0.00E+00	6.11E-08	1.04E-07	8.08E-08	4.63E-07	5.87E-08	1.00E-07	7.77E-08	1.70E-07
Trichloroethylene	79-01-6	2.98E-08	0.00E+00	0.00E+00	0.00E+00	9.33E-09	4.16E-08	0.00E+00	0.00E+00	7.64E-09	1.30E-08	2.64E-08	0.00E+00	6.25E-09	1.07E-08	8.27E-09	4.74E-08	6.01E-09	1.02E-08	7.95E-09	1.74E-08
Trichlorofluoromethane	75-69-4	2.92E-09	0.00E+00	0.00E+00	0.00E+00	9.15E-10	4.08E-09	0.00E+00	0.00E+00	7.49E-10	1.28E-09	2.59E-09	0.00E+00	6.13E-10	1.05E-09	8.11E-10	4.65E-09	5.89E-10	1.01E-09	7.80E-10	1.71E-09
Vinyl Chloride	75-01-4	3.69E-08	0.00E+00	0.00E+00	0.00E+00	1.16E-08	5.15E-08	0.00E+00	0.00E+00	9.46E-09	1.61E-08	3.27E-08	0.00E+00	7.74E-09	1.32E-08	1.02E-08	5.87E-08	7.44E-09	1.27E-08	9.84E-09	2.16E-08
Vinylidene Chloride	75-35-4	1.56E-09	0.00E+00	0.00E+00	0.00E+00	4.88E-10	2.18E-09	0.00E+00	0.00E+00	4.00E-10	6.82E-10	1.38E-09	0.00E+00	3.27E-10	5.58E-10	4.33E-10	2.48E-09	3.14E-10	5.36E-10	4.16E-10	9.12E-10
Decane	124-18-5	1.78E-07	0.00E+00	0.00E+00	0.00E+00	5.59E-08	2.49E-07	0.00E+00	0.00E+00	4.57E-08	7.80E-08	1.58E-07	0.00E+00	3.74E-08	6.39E-08	4.95E-08	2.84E-07	3.60E-08	6.14E-08	4.76E-08	1.04E-07
Dichlorobenzene	106-46-7	1.11E-08	0.00E+00	0.00E+00	0.00E+00	3.48E-09	1.55E-08	0.00E+00	0.00E+00	2.85E-09	4.86E-09	9.84E-09	0.00E+00	2.33E-09	3.98E-09	3.09E-09	1.77E-08	2.24E-09	3.82E-09	2.96E-09	6.50E-09

Table 4: Summary of Landfill Gas Emission Rates (g s<sup>-1</sup>)

Contaminant	CAS	2023-2027				2028-2032				2033-2037				2038-2042				2043			
		S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER	S1_COVER	S2_COVER	S3_COVER	S4_COVER
1,1,1-Trichloroethane	71-55-6	8.79E-04	0.00E+00	0.00E+00	0.00E+00	2.76E-04	8.79E-04	0.00E+00	0.00E+00	2.26E-04	2.76E-04	8.79E-04	0.00E+00	1.85E-04	2.26E-04	2.76E-04	8.79E-04	1.78E-04	2.17E-04	2.65E-04	3.23E-04
1,1,2,2-Tetrachloroethane	79-34-5	2.56E-03	0.00E+00	0.00E+00	0.00E+00	8.02E-04	2.56E-03	0.00E+00	0.00E+00	6.57E-04	8.02E-04	2.56E-03	0.00E+00	5.38E-04	6.57E-04	8.02E-04	2.56E-03	5.16E-04	6.31E-04	7.70E-04	9.41E-04
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1.73E-04	0.00E+00	0.00E+00	0.00E+00	5.42E-05	1.73E-04	0.00E+00	0.00E+00	4.44E-05	5.42E-05	1.73E-04	0.00E+00	3.63E-05	4.44E-05	5.42E-05	1.73E-04	3.49E-05	4.26E-05	5.21E-05	6.36E-05
1,1,2-Trichloroethane	79-00-5	2.89E-04	0.00E+00	0.00E+00	0.00E+00	9.07E-05	2.89E-04	0.00E+00	0.00E+00	7.43E-05	9.07E-05	2.89E-04	0.00E+00	6.08E-05	7.43E-05	9.07E-05	2.89E-04	5.84E-05	7.14E-05	8.72E-05	1.06E-04
1,2,3-Trimethyl Benzene	526-73-8	3.07E-03	0.00E+00	0.00E+00	0.00E+00	9.61E-04	3.07E-03	0.00E+00	0.00E+00	7.87E-04	9.61E-04	3.07E-03	0.00E+00	6.44E-04	7.87E-04	9.61E-04	3.07E-03	6.19E-04	7.56E-04	9.23E-04	1.13E-03
1,2,4-Trimethyl Benzene	95-63-6	9.55E-03	0.00E+00	0.00E+00	0.00E+00	2.99E-03	9.55E-03	0.00E+00	0.00E+00	2.45E-03	2.99E-03	9.55E-03	0.00E+00	2.01E-03	2.45E-03	2.99E-03	9.55E-03	1.93E-03	2.35E-03	2.88E-03	3.51E-03
1,1-Dichloroethane	75-34-3	3.19E-03	0.00E+00	0.00E+00	0.00E+00	1.00E-03	3.19E-03	0.00E+00	0.00E+00	8.20E-04	1.00E-03	3.19E-03	0.00E+00	6.71E-04	8.20E-04	1.00E-03	3.19E-03	6.45E-04	7.87E-04	9.62E-04	1.17E-03
1,2-Dichloroethane	540-59-0	1.52E-02	0.00E+00	0.00E+00	0.00E+00	4.76E-03	1.52E-02	0.00E+00	0.00E+00	3.89E-03	4.76E-03	1.52E-02	0.00E+00	3.19E-03	3.89E-03	4.76E-03	1.52E-02	3.06E-03	3.74E-03	4.57E-03	5.58E-03
1,2-Dichloroethylene (cis)	156-59-2	3.78E-03	0.00E+00	0.00E+00	0.00E+00	1.18E-03	3.78E-03	0.00E+00	0.00E+00	9.70E-04	1.18E-03	3.78E-03	0.00E+00	7.94E-04	9.70E-04	1.18E-03	3.78E-03	7.63E-04	9.32E-04	1.14E-03	1.39E-03
1,2-Dichloroethylene (trans)	156-60-5	2.15E-04	0.00E+00	0.00E+00	0.00E+00	6.74E-05	2.15E-04	0.00E+00	0.00E+00	5.51E-05	6.74E-05	2.15E-04	0.00E+00	4.51E-05	5.51E-05	6.74E-05	2.15E-04	4.34E-05	5.30E-05	6.47E-05	7.90E-05
1,3,5-Trimethyl Benzene	108-67-8	1.03E-03	0.00E+00	0.00E+00	0.00E+00	3.22E-04	1.03E-03	0.00E+00	0.00E+00	2.64E-04	3.22E-04	1.03E-03	0.00E+00	2.16E-04	2.64E-04	3.22E-04	1.03E-03	2.08E-04	2.54E-04	3.10E-04	3.78E-04
2-Butanol	78-92-2	1.14E-02	0.00E+00	0.00E+00	0.00E+00	3.56E-03	1.14E-02	0.00E+00	0.00E+00	2.91E-03	3.56E-03	1.14E-02	0.00E+00	2.39E-03	2.91E-03	3.56E-03	1.14E-02	2.29E-03	2.80E-03	3.42E-03	4.18E-03
2-Methyl Butane	78-78-4	1.18E-02	0.00E+00	0.00E+00	0.00E+00	3.71E-03	1.18E-02	0.00E+00	0.00E+00	3.04E-03	3.71E-03	1.18E-02	0.00E+00	2.49E-03	3.04E-03	3.71E-03	1.18E-02	2.39E-03	2.92E-03	3.57E-03	4.36E-03
2-Methyl Hexane	591-76-4	5.65E-03	0.00E+00	0.00E+00	0.00E+00	1.77E-03	5.65E-03	0.00E+00	0.00E+00	1.45E-03	1.77E-03	5.65E-03	0.00E+00	1.19E-03	1.45E-03	1.77E-03	5.65E-03	1.14E-03	1.39E-03	1.70E-03	2.08E-03
2-Methyl Pentane	107-83-5	2.89E-03	0.00E+00	0.00E+00	0.00E+00	9.04E-04	2.89E-03	0.00E+00	0.00E+00	7.41E-04	9.04E-04	2.89E-03	0.00E+00	6.06E-04	7.41E-04	9.04E-04	2.89E-03	5.83E-04	7.12E-04	8.69E-04	1.06E-03
3-Methyl Hexane	589-34-4	7.98E-03	0.00E+00	0.00E+00	0.00E+00	2.50E-03	7.98E-03	0.00E+00	0.00E+00	2.05E-03	2.50E-03	7.98E-03	0.00E+00	1.68E-03	2.05E-03	2.50E-03	7.98E-03	1.61E-03	1.97E-03	2.40E-03	2.94E-03
3-Methyl Pentane	96-14-0	1.27E-03	0.00E+00	0.00E+00	0.00E+00	3.99E-04	1.27E-03	0.00E+00	0.00E+00	3.27E-04	3.99E-04	1.27E-03	0.00E+00	2.68E-04	3.27E-04	3.99E-04	1.27E-03	2.57E-04	3.14E-04	3.84E-04	4.69E-04
Acetone	67-64-1	2.04E-02	0.00E+00	0.00E+00	0.00E+00	6.40E-03	2.04E-02	0.00E+00	0.00E+00	5.24E-03	6.40E-03	2.04E-02	0.00E+00	4.29E-03	5.24E-03	6.40E-03	2.04E-02	4.12E-03	5.03E-03	6.15E-03	7.51E-03
Benzene	71-43-2	8.08E-03	0.00E+00	0.00E+00	0.00E+00	2.53E-03	8.08E-03	0.00E+00	0.00E+00	2.07E-03	2.53E-03	8.08E-03	0.00E+00	1.70E-03	2.07E-03	2.53E-03	8.08E-03	1.63E-03	1.99E-03	2.43E-03	2.97E-03
Bromodichloromethane	75-27-4	7.04E-03	0.00E+00	0.00E+00	0.00E+00	2.21E-03	7.04E-03	0.00E+00	0.00E+00	1.81E-03	2.21E-03	7.04E-03	0.00E+00	1.48E-03	1.81E-03	2.21E-03	7.04E-03	1.42E-03	1.74E-03	2.12E-03	2.59E-03
Butyl Acetate	123-86-4	6.31E-03	0.00E+00	0.00E+00	0.00E+00	1.98E-03	6.31E-03	0.00E+00	0.00E+00	1.62E-03	1.98E-03	6.31E-03	0.00E+00	1.33E-03	1.62E-03	1.98E-03	6.31E-03	1.27E-03	1.56E-03	1.90E-03	2.32E-03
Carbon Tetrachloride	56-23-5	1.69E-05	0.00E+00	0.00E+00	0.00E+00	5.28E-06	1.69E-05	0.00E+00	0.00E+00	4.38E-06	5.28E-06	1.69E-05	0.00E+00	3.54E-06	4.38E-06	5.28E-06	1.69E-05	3.40E-06	4.16E-06	5.08E-06	6.20E-06
Chlorobenzene	108-90-7	7.48E-04	0.00E+00	0.00E+00	0.00E+00	2.34E-04	7.48E-04	0.00E+00	0.00E+00	1.92E-04	2.34E-04	7.48E-04	0.00E+00	1.57E-04	1.92E-04	2.34E-04	7.48E-04	1.51E-04	1.84E-04	2.25E-04	2.75E-04
Chlorodifluoromethane	75-45-6	1.54E-03	0.00E+00	0.00E+00	0.00E+00	4.84E-04	1.54E-03	0.00E+00	0.00E+00	3.96E-04	4.84E-04	1.54E-03	0.00E+00	3.24E-04	3.96E-04	4.84E-04	1.54E-03	3.12E-04	3.81E-04	4.65E-04	5.68E-04
Chloroethane	75-00-3	3.50E-03	0.00E+00	0.00E+00	0.00E+00	1.10E-03	3.50E-03	0.00E+00	0.00E+00	8.98E-04	1.10E-03	3.50E-03	0.00E+00	7.35E-04	8.98E-04	1.10E-03	3.50E-03	7.06E-04	8.63E-04	1.05E-03	1.29E-03
Chloroform	67-66-3	1.25E-04	0.00E+00	0.00E+00	0.00E+00	3.91E-05	1.25E-04	0.00E+00	0.00E+00	3.20E-05	3.91E-05	1.25E-04	0.00E+00	2.62E-05	3.20E-05	3.91E-05	1.25E-04	2.52E-05	3.07E-05	3.75E-05	4.58E-05
Chloromethane	74-87-3	8.39E-04	0.00E+00	0.00E+00	0.00E+00	2.63E-04	8.39E-04	0.00E+00	0.00E+00	2.15E-04	2.63E-04	8.39E-04	0.00E+00	1.76E-04	2.15E-04	2.63E-04	8.39E-04	1.69E-04	2.07E-04	2.53E-04	3.09E-04
Dichlorodifluoromethane	75-71-8	2.61E-02	0.00E+00	0.00E+00	0.00E+00	8.17E-03	2.61E-02	0.00E+00	0.00E+00	6.69E-03	8.17E-03	2.61E-02	0.00E+00	5.48E-03	6.69E-03	8.17E-03	2.61E-02	5.26E-03	6.43E-03	7.85E-03	9.59E-03
Dichlorofluoromethane	75-43-4	1.13E-03	0.00E+00	0.00E+00	0.00E+00	3.55E-04	1.13E-03	0.00E+00	0.00E+00	2.91E-04	3.55E-04	1.13E-03	0.00E+00	2.38E-04	2.91E-04	3.55E-04	1.13E-03	2.29E-04	2.79E-04	3.41E-04	4.17E-04
Dichloromethane	75-09-2	1.67E-02	0.00E+00	0.00E+00	0.00E+00	5.23E-03	1.67E-02	0.00E+00	0.00E+00	4.28E-03	5.23E-03	1.67E-02	0.00E+00	3.50E-03	4.28E-03	5.23E-03	1.67E-02	3.37E-03	4.11E-03	5.02E-03	6.14E-03
Ethanol	64-17-5	2.49																			

## Appendix C: Summary of LGF Constituents Emission Factors

Contaminant Name	CAS	AP-42 Value (mg m <sup>-3</sup> )	East Landfill (mg m <sup>-3</sup> )	South Landfill (mg m <sup>-3</sup> )	East and South Landfill (mg m <sup>-3</sup> )	Maximum Constituent Concentration (mg m <sup>-3</sup> )
1,1,2-Trichloro-1,2,2- Trifluoromethane	76-13-1	0.51	0.03	0.31	-	0.51
1,2,3-Trimethyl Benzene	526-73-8	1.76	9.13	8.81	-	9.13
1,2,4-Trimethyl Benzene	95-63-6	6.73	28.43	28.27	-	28.43
1,3,5-Trimethyl Benzene	108-67-8	3.06	-	-	-	3.06
2-Methyl Hexane	591-76-4	3.34	6.59	16.82	-	16.82
2-Methyl Pentane	107-83-5	2.42	4.03	8.59	-	8.59
2-Methyl Butane	78-78-4	6.67	9.63	35.26	-	35.26
3-Methyl Pentane	96-14-0	2.61	2.65	3.79	-	3.79
3-Methyl Hexane	589-34-4	4.63	9.50	23.76	-	23.76
Acetone	67-64-1	16.64	5.25	60.79	-	60.79
Benzene	71-43-2	7.66	10.35	24.04	-	24.04
Butyl Acetate	123-86-4	-	-	18.78	-	18.78
Decane	124-18-5	22.10	90.69	77.35	-	90.69
Dichlorodifluoromethane	75-71-8	77.59	3.03	5.71	-	77.59
Dichloromethane	75-09-2	49.65	0.36	3.84	-	49.65
Ethyl Benzene	100-41-4	21.09	40.64	59.24	-	59.24
Heptane	142-82-5	5.49	11.79	30.51	-	30.51
Hexane	110-54-3	23.14	7.50	10.22	-	23.14
Isopropyl Alcohol	67-63-0	123.10	4.57	50.55	-	123.10
Limonene	5989-27-5	-	-	-	-	-
Vinyl Chloride	75-01-4	18.75	1.98	1.42	-	18.75
Carbon Tetrachloride	56-23-5	0.05	-	-	-	0.05
Chloroform	67-66-3	-	0.27	0.37	-	0.37
Ethylene Dibromide	106-93-4	0.04	-	-	-	0.04
Ethylene Dichloride	107-06-2	1.66	-	-	-	1.66
Chloroethane	75-00-3	10.42	0.29	0.39	-	10.42
1,2-Dichloroethylene (cis)	156-59-2	11.25	8.21	6.30	-	11.25
1,1-Dichloroethane	75-34-3	9.51	0.11	0.38	-	9.51
1,2-Dichloroethylene (trans)	156-60-5	0.11	0.25	0.64	-	0.64
Chlorobenzene	108-90-7	2.23	0.28	0.43	-	2.23
Chloromethane	74-87-3	2.50	-	-	-	2.50
m/p-Ethyl Toluene	620-14-4	3.83	31.15	31.50	-	31.50
m/p-Ethyl Toluene2	622-96-8	4.86	-	-	-	4.86
m/p-Xylene	108-38-3	-	90.85	141.21	-	141.21
m/p-Xylene2	106-42-3	-	-	-	-	-
m-Cymene	535-77-3	-	-	-	-	-
Methyl Ethyl Ketone	78-93-3	20.90	17.82	100.22	-	100.22
Methyl Cyclohexane	108-87-2	5.18	13.62	21.56	-	21.56
Methyl Isobutyl Ketone	108-10-1	7.66	2.93	12.54	-	12.54
Chlorodifluoromethane	75-45-6	4.59	3.85	3.63	-	4.59
n-Butanal	123-72-8	-	-	-	-	4.94
Naphthalene	91-20-3	0.56	3.20	3.23	-	3.23
Nonane	111-84-2	12.43	-	-	-	12.43
o-Ethyl Toluene	611-14-3	1.59	17.32	16.09	-	17.32
o-Xylene	95-47-6	-	37.25	54.64	-	54.64
Pentane	109-66-0	13.15	7.50	21.47	-	21.47
Ethanol	64-17-5	51.23	13.88	74.07	-	74.07
Propyl Benzene	103-65-1	2.03	10.16	12.90	-	12.90
Styrene	100-42-5	1.75	-	-	-	1.75
Tetrachloroethylene	127-18-4	25.28	5.17	5.20	-	25.28
Toluene	108-88-3	148.00	36.36	89.77	-	148.00
Trichlorofluoromethane	75-69-4	-	0.32	1.49	-	1.49



Contaminant Name	CAS	AP-42 Value (mg m <sup>-3</sup> )	East Landfill (mg m <sup>-3</sup> )	South Landfill (mg m <sup>-3</sup> )	East and South Landfill (mg m <sup>-3</sup> )	Maximum Constituent Concentration (mg m <sup>-3</sup> )
Trichloroethylene	79-01-6	15.15	0.99	2.60	-	15.15
Ethyl Acetate	141-78-6	6.77	4.70	19.15	-	19.15
1,1,1-Trichloroethane	71-55-6	2.62	0.01	0.12	-	2.62
Vinylidene Chloride	75-35-4	0.79	0.05	0.12	-	0.79
1,2-Dichloroethene	540-59-0	45.17	-	-	-	45.17
2-Butanol	78-92-2	-	-	33.80	-	33.80
Bromodichloromethane	75-27-4	20.96	-	-	-	20.96
Octane	111-65-9	5.04	8.49	13.49	-	13.49
1,1,2,2-Tetrachloroethane	79-34-5	7.62	-	-	-	7.62
1,1,2-Trichloroethane	79-00-5	0.86	-	-	-	0.86
Dichlorobenzene	106-46-7	5.65	1.12	1.54	-	5.65
Dichlorofluoromethane	75-43-4	-	1.52	3.37	-	3.37
Total Mercaptans (as Methyl Mercaptan)	74-93-1	4.90	-	-	-	4.90
Hydrogen Sulphide	7783-06-4	49.45	-	-	1,128.38	1,128.38
Dimethyl Sulphide	75-18-3	19.86	-	-	-	19.86
Dimethyl Disulphide	624-92-0	0.53	-	-	-	0.53
Total Reduced Sulphurs (TRS)	N/A-2	-	-	-	1,153.08	1,153.08

Methane Concentration (%)	South Landfill	East Landfill	GGUI	Flare 1	Flare 2	AP-42 [1]	South Landfill Source Testing [2]
Maximum	50.00	55.20	67.30	48.50	49.00	--	-
Minimum	36.10	36.10	36.60	18.40	36.30	--	-
Average	44.73	44.63	48.01	43.76	44.31	50.00	52.00

Notes:

[1] The AP-42 Methane concentration is based on the LandGem model default value designed to comply with CAA.

[2] Methane content obtained from source testing done for the Walker's Niagara Falls Operation EA document titled "Walker Environmental Assessment Landfill Gas Air Quality Impact Assessment", dated February 6, 2006.

## Appendix C: Landfill Gas Flare Emission Rate Calculations

The Facility Characteristic Assumptions (FCA) report states that the initial landfill operation will only require a single landfill gas flare, with a potential for up to three flares as landfilling progresses. For the purpose of this assessment, it is conservatively assumed that all landfill gas will be combusted in a single flare.

### Landfill Gas Production

Study Period	Landfill Gas Collected (m <sup>3</sup> s <sup>-1</sup> )	Landfill Gas Collected (m <sup>3</sup> yr <sup>-1</sup> )
2023-2027	3.36E-01	1.06E+07
2028-2032	9.33E-01	2.94E+07
2033-2037	1.42E+00	4.48E+07
2038-2042	1.82E+00	5.74E+07
2043	2.13E+00	6.71E+07

Destruction Efficiency of VOCs	98%
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[1] The destruction efficiency is based on the typical value recommended in AP-42 Chapter 2.4, Table 2.4-3 for Flares for NMOC and VOC compounds.

### Flare 1 Emission Rate Summary

Contaminant Name	CAS	AP-42 Emission Factor [1] (kg 10 <sup>-6</sup> dscm methane)	LFG Source Testing Concentration (mg m <sup>-3</sup> )	Flare Emission Rate (g s <sup>-1</sup> )				
				2023-2027	2028-2032	2033-2037	2038-2042	2043
Nitrogen Oxides (NOx)	10102-44-0	631	--	2.12E-01	5.88E-01	8.97E-01	1.15E+00	1.34E+00
Carbon Monoxide (CO)	630-08-0	737	--	2.48E-01	6.87E-01	1.05E+00	1.34E+00	1.57E+00
Particulate Matter (PM)	TSP	238	--	8.00E-02	2.22E-01	3.38E-01	4.33E-01	5.06E-01
1,1,1-Trichloroethane	71-55-6	--	2.62	2.02E-05	5.61E-05	8.56E-05	1.10E-04	1.28E-04
1,1,2,2-Tetrachloroethane	79-34-5	--	7.62	5.88E-05	1.63E-04	2.49E-04	3.19E-04	3.73E-04
1,1,2-Trichloro-1,2,2-Trifluoromethane	76-13-1	--	0.51	3.98E-06	1.10E-05	1.68E-05	2.16E-05	2.52E-05
1,1,2-Trichloroethane	79-00-5	--	0.86	6.66E-06	1.85E-05	2.82E-05	3.61E-05	4.22E-05
1,2,3-Trimethyl Benzene	526-73-8	--	9.13	7.05E-05	1.96E-04	2.98E-04	3.82E-04	4.47E-04
1,2,4-Trimethyl Benzene	95-63-6	--	28.43	2.20E-04	6.10E-04	9.29E-04	1.19E-03	1.39E-03
1,2-Dichloroethane	75-34-3	--	9.51	7.35E-05	2.04E-04	3.11E-04	3.98E-04	4.65E-04
1,2-Dichloroethene	540-59-0	--	45.17	3.49E-04	9.69E-04	1.48E-03	1.89E-03	2.21E-03
1,2-Dichloroethylene (cis)	156-59-2	--	11.25	8.70E-05	2.41E-04	3.68E-04	4.71E-04	5.51E-04
1,2-Dichloroethylene (trans)	156-60-5	--	0.64	4.94E-06	1.37E-05	2.09E-05	2.68E-05	3.13E-05
1,3,5-Trimethyl Benzene	108-67-8	--	3.06	2.37E-05	6.57E-05	1.00E-04	1.28E-04	1.50E-04
2-Butanol	78-92-2	--	33.80	2.61E-04	7.25E-04	1.10E-03	1.42E-03	1.65E-03
2-Methyl Butane	78-78-4	--	35.26	2.72E-04	7.56E-04	1.15E-03	1.48E-03	1.72E-03
2-Methyl Hexane	591-76-4	--	16.82	1.30E-04	3.61E-04	5.50E-04	7.04E-04	8.23E-04
2-Methyl Pentane	107-83-5	--	8.59	6.64E-05	1.84E-04	2.81E-04	3.60E-04	4.20E-04
3-Methyl Hexane	589-34-4	--	23.76	1.84E-04	5.10E-04	7.77E-04	9.95E-04	1.16E-03
3-Methyl Pentane	96-14-0	--	3.79	2.93E-05	8.14E-05	1.24E-04	1.59E-04	1.86E-04
Acetone	67-64-1	--	60.79	4.70E-04	1.30E-03	1.99E-03	2.55E-03	2.97E-03
Benzene	71-43-2	--	24.04	1.86E-04	5.16E-04	7.86E-04	1.01E-03	1.18E-03
Bromodichloromethane	75-27-4	--	20.96	1.62E-04	4.50E-04	6.85E-04	8.78E-04	1.03E-03
Butyl Acetate	123-86-4	--	18.78	1.45E-04	4.03E-04	6.14E-04	7.86E-04	9.19E-04
Carbon Tetrachloride	56-23-5	--	0.05	3.88E-07	1.08E-06	1.64E-06	2.10E-06	2.45E-06
Chlorobenzene	108-90-7	--	2.23	1.72E-05	4.78E-05	7.28E-05	9.33E-05	1.09E-04
Chlorodifluoromethane	75-45-6	--	4.59	3.55E-05	9.86E-05	1.50E-04	1.92E-04	2.25E-04

Contaminant Name	CAS	AP-42 Emission Factor [1] (kg 10 <sup>-6</sup> dscm methane)	LFG Source Testing Concentration (mg m <sup>-3</sup> )	Flare Emission Rate (g s <sup>-1</sup> )				
				2023-2027	2028-2032	2033-2037	2038-2042	2043
Chloroethane	75-00-3	--	10.42	8.05E-05	2.23E-04	3.40E-04	4.36E-04	5.10E-04
Chloroform	67-66-3	--	0.37	2.87E-06	7.96E-06	1.21E-05	1.55E-05	1.81E-05
Chloromethane	74-87-3	--	2.50	1.93E-05	5.36E-05	8.16E-05	1.05E-04	1.22E-04
Dichlorodifluoromethane	75-71-8	--	77.59	6.00E-04	1.66E-03	2.54E-03	3.25E-03	3.80E-03
Dichlorofluoromethane	75-43-4	--	3.37	2.60E-05	7.23E-05	1.10E-04	1.41E-04	1.65E-04
Dichloromethane	75-09-2	--	49.65	3.84E-04	1.07E-03	1.62E-03	2.08E-03	2.43E-03
Dimethyl Disulphide	624-92-0	--	0.53	4.08E-06	1.13E-05	1.72E-05	2.21E-05	2.58E-05
Dimethyl Sulphide	75-18-3	--	19.86	1.53E-04	4.26E-04	6.49E-04	8.32E-04	9.72E-04
Ethanol	64-17-5	--	74.07	5.72E-04	1.59E-03	2.42E-03	3.10E-03	3.62E-03
Ethyl Acetate	141-78-6	--	19.15	1.48E-04	4.11E-04	6.26E-04	8.02E-04	9.37E-04
Ethyl Benzene	100-41-4	--	59.24	4.58E-04	1.27E-03	1.94E-03	2.48E-03	2.90E-03
Ethylene Dibromide	106-93-4	--	0.04	2.85E-07	7.91E-07	1.20E-06	1.54E-06	1.80E-06
Ethylene Dichloride	107-06-2	--	1.66	1.28E-05	3.56E-05	5.42E-05	6.95E-05	8.11E-05
Heptane	142-82-5	--	30.51	2.36E-04	6.54E-04	9.97E-04	1.28E-03	1.49E-03
Hexane	110-54-3	--	23.14	1.79E-04	4.96E-04	7.57E-04	9.69E-04	1.13E-03
Hydrogen Sulphide	7783-06-4	--	1,128.38	8.72E-03	2.42E-02	3.69E-02	4.73E-02	5.52E-02
Isopropyl Alcohol	67-63-0	--	123.10	9.51E-04	2.64E-03	4.02E-03	5.16E-03	6.02E-03
Limonene	5989-27-5	--	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
m/p-Ethyl Toluene	620-14-4	--	31.50	2.43E-04	6.76E-04	1.03E-03	1.32E-03	1.54E-03
m/p-Xylene	108-38-3	--	141.21	1.09E-03	3.03E-03	4.62E-03	5.91E-03	6.91E-03
m-Cymene	535-77-3	--	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Cyclohexane	108-87-2	--	21.56	1.67E-04	4.62E-04	7.05E-04	9.03E-04	1.05E-03
Methyl Ethyl Ketone	78-93-3	--	100.22	7.74E-04	2.15E-03	3.28E-03	4.20E-03	4.90E-03
Methyl Isobutyl Ketone	108-10-1	--	12.54	9.69E-05	2.69E-04	4.10E-04	5.25E-04	6.13E-04
Naphthalene	91-20-3	--	3.23	2.49E-05	6.92E-05	1.05E-04	1.35E-04	1.58E-04
n-Butanal	123-72-8	--	4.94	3.82E-05	1.06E-04	1.61E-04	2.07E-04	2.42E-04
Nonane	111-84-2	--	12.43	9.60E-05	2.67E-04	4.06E-04	5.20E-04	6.08E-04
Octane	111-65-9	--	13.49	1.04E-04	2.89E-04	4.41E-04	5.65E-04	6.60E-04
o-Ethyl Toluene	611-14-3	--	17.32	1.34E-04	3.71E-04	5.66E-04	7.25E-04	8.47E-04
o-Xylene	95-47-6	--	54.64	4.22E-04	1.17E-03	1.79E-03	2.29E-03	2.67E-03
Pentane	109-66-0	--	21.47	1.66E-04	4.61E-04	7.02E-04	8.99E-04	1.05E-03
Propyl Benzene	103-65-1	--	12.90	9.97E-05	2.77E-04	4.22E-04	5.40E-04	6.31E-04
Styrene	100-42-5	--	1.75	1.35E-05	3.75E-05	5.72E-05	7.33E-05	8.56E-05
Tetrachloroethylene	127-18-4	--	25.28	1.95E-04	5.42E-04	8.26E-04	1.06E-03	1.24E-03
Toluene	108-88-3	--	148.00	1.14E-03	3.17E-03	4.84E-03	6.20E-03	7.24E-03
Total Mercaptans (as Methyl mercaptan)	74-93-1	--	4.90	3.78E-05	1.05E-04	1.60E-04	2.05E-04	2.40E-04
Trichloroethylene	79-01-6	--	15.15	1.17E-04	3.25E-04	4.95E-04	6.34E-04	7.41E-04
Trichlorofluoromethane	75-69-4	--	1.49	1.15E-05	3.19E-05	4.86E-05	6.22E-05	7.27E-05
Vinyl Chloride	75-01-4	--	18.75	1.45E-04	4.02E-04	6.13E-04	7.85E-04	9.17E-04
Vinylidene Chloride	75-35-4	--	0.79	6.12E-06	1.70E-05	2.59E-05	3.32E-05	3.88E-05
Decane	124-18-5	--	90.69	7.01E-04	1.95E-03	2.96E-03	3.80E-03	4.44E-03
Dichlorobenzene	106-46-7	--	5.65	4.36E-05	1.21E-04	1.85E-04	2.37E-04	2.76E-04

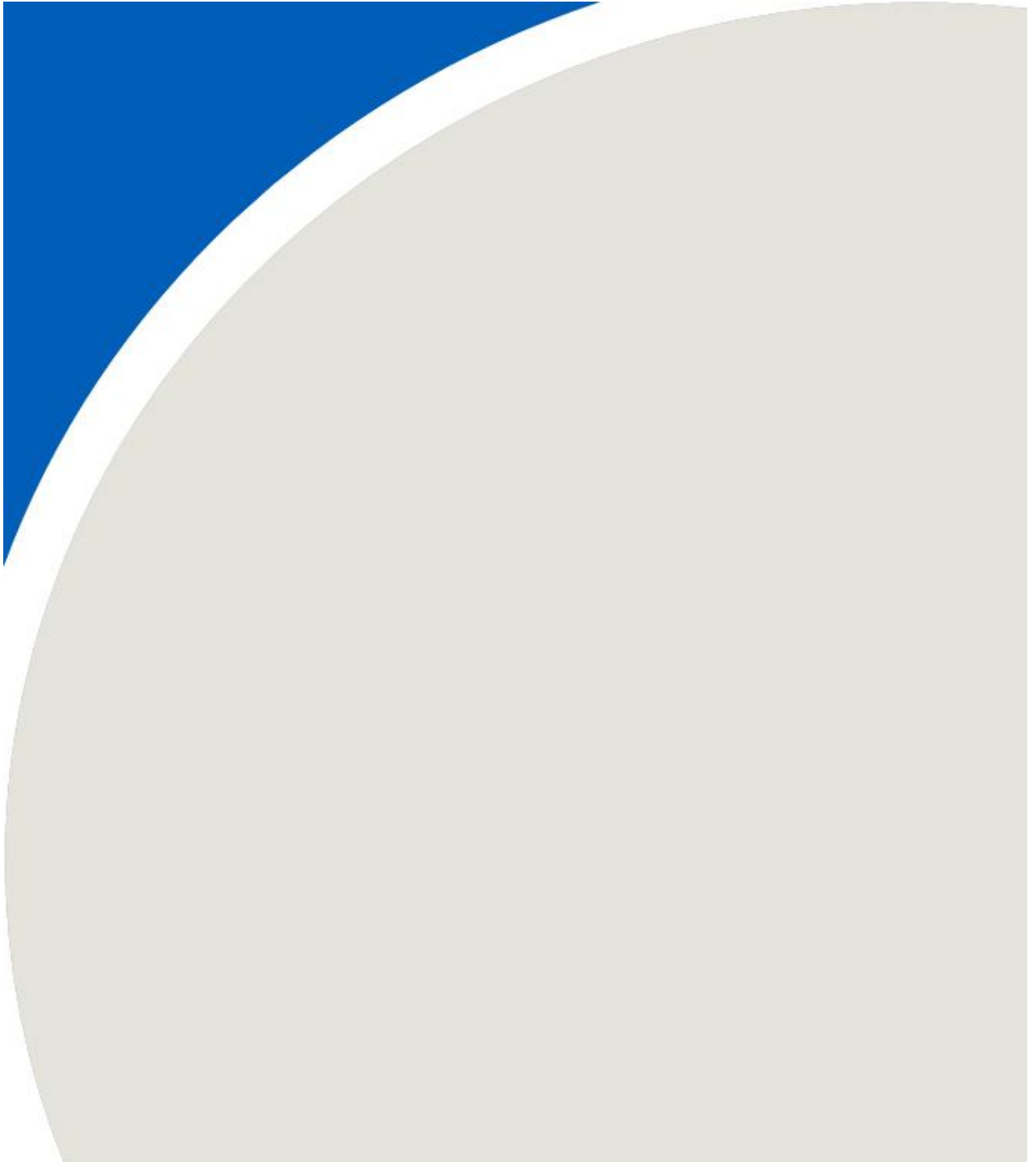
Contaminant Name	CAS	AP-42 Emission Factor [1] (kg 10 <sup>-6</sup> dscm methane)	LFG Source Testing Concentration (mg m <sup>-3</sup> )	Flare Emission Rate (g s <sup>-1</sup> )				
				2023-2027	2028-2032	2033-2037	2038-2042	2043
Hydrogen Sulphide	7783-06-4	--	1,128.38	8.72E-03	2.42E-02	3.69E-02	4.73E-02	5.52E-02
Dimethyl Sulphide	75-18-3	--	19.86	1.53E-04	4.26E-04	6.49E-04	8.32E-04	9.72E-04
Dimethyl Disulphide	624-92-0	--	0.53	4.08E-06	1.13E-05	1.72E-05	2.21E-05	2.58E-05
Total Reduced Sulphurs (TRS)	N/A-2	--	1,153.08	8.91E-03	2.47E-02	3.77E-02	4.83E-02	5.64E-02
Sulphur Dioxides [2]	7446-09-5	--	2,306.15	1.78E-02	4.95E-02	7.54E-02	9.66E-02	1.13E-01

Notes:

[1] Emission based on AP-42 emission factors were conservatively based on total landfill gas produced, not Methane produced.

[2] Concentrations of sulphur dioxide were estimated using AP-42 Chapter 2.4, section 2.4.4.2 equation 6.

# APPENDIX D





## Appendix D: Flux Chamber Sampling for VOCs

Compound	CAS #	Waste Soil Pile Average Flux [1]	
		kg/m <sup>2</sup> /day	g/m <sup>2</sup> /s
1,1,1-Trichloroethane	71-55-6	6.04E-08	6.99E-10
1,1,2,2-Tetrachloroethane	79-34-5	7.86E-08	9.09E-10
1,1,2-Trichloroethane	79-00-5	6.04E-08	6.99E-10
Vinylidene Chloride	75-35-4	4.39E-08	5.08E-10
1,2,4-Trimethyl benzene	95-63-6	8.93E-07	1.03E-08
Ethylene Dibromide	106-93-4	8.51E-08	9.85E-10
1,2-Dichloroethane	#N/A	4.48E-08	5.19E-10
1,3,5-Trimethyl benzene	108-67-8	4.55E-07	5.26E-09
Dichlorobenzene	106-46-7	6.66E-08	7.71E-10
Acetone	67-64-1	1.63E-06	1.88E-08
Benzene	71-43-2	8.70E-08	1.01E-09
Bromodichloromethane	75-27-4	7.42E-08	8.59E-10
Carbon Tetrachloride	56-23-5	6.97E-08	8.06E-10
Chlorobenzene	108-90-7	5.10E-08	5.90E-10
Chloroethane	75-00-3	2.92E-08	3.38E-10
Chloroform	67-66-3	5.41E-08	6.26E-10
Chloromethane	74-87-3	2.67E-08	3.09E-10
1,2-Dichloroethylene (cis)	156-59-2	8.20E-08	9.49E-10
Dichlorodifluoromethane	75-71-8	9.95E-08	1.15E-09
Ethyl acetate	141-78-6	6.75E-08	7.81E-10
Ethyl benzene	100-41-4	3.65E-07	4.22E-09
1,1,2-Trichloro-1,2,2-Trifluoromethane	76-13-1	8.49E-08	9.82E-10
Isopropyl alcohol	67-63-0	1.81E-07	2.10E-09
m/p-Xylene	108-38-3	2.04E-06	2.36E-08
Methyl ethyl ketone	78-93-3	2.13E-07	2.47E-09
Methyl isobutyl ketone	108-10-1	4.54E-08	5.25E-10
Dichloromethane	75-09-2	8.11E-08	9.39E-10
Heptane	142-82-5	1.39E-06	1.60E-08
Hexane	110-54-3	7.21E-07	8.34E-09
o-Xylene	95-47-6	5.61E-07	6.50E-09
Styrene	100-42-5	4.83E-08	5.60E-10
Tetrachloroethylene	127-18-4	7.51E-08	8.69E-10
Toluene	108-88-3	3.72E-07	4.31E-09
1,2-Dichloroethylene (trans)	156-60-5	4.39E-08	5.08E-10
Trichloroethylene	79-01-6	9.93E-07	1.15E-08
Trichlorofluoromethane	75-69-4	6.43E-08	7.44E-10
Vinyl chloride	75-01-4	2.83E-08	3.28E-10

Notes:

[1] Waste Soil Pile Average Flux obtained from "Landfill Gas and Waste Soil Emissions Study, Walker Environmental Group" report dated November 28, 2019

## Appendix D: Flux Chamber Sampling for TRS

Compound	Average Flux (kg/m <sup>2</sup> /day) - TRS [1]					Average Flux (g/m <sup>2</sup> /s) - TRS [1]					Average Flux (g/m <sup>2</sup> /s) - TRS [1]		
	South Daily	South Interim	South Final	South Working	East Final	South Daily	South Interim	South Final	South Working	East Final	Maximum Active Face	Maximum Interim	Maximum Final
Dimethyl Sulfide	5.94E-07	5.63E-07	5.63E-07	5.63E-07	5.63E-07	6.87E-09	6.51E-09	6.51E-09	6.51E-09	6.51E-09	6.87E-09	6.51E-09	6.51E-09
Dimethyl Disulfide	2.81E-07	2.81E-07	2.81E-07	2.81E-07	2.81E-07	3.26E-09	3.26E-09	3.26E-09	3.26E-09	3.26E-09	3.26E-09	3.26E-09	3.26E-09
Hydrogen Sulfide	3.09E-07	3.09E-07	3.09E-07	3.09E-07	3.09E-07	3.57E-09	3.57E-09	3.57E-09	3.57E-09	3.57E-09	3.57E-09	3.57E-09	3.57E-09
Methyl Mercaptan	4.36E-07	4.36E-07	4.36E-07	4.36E-07	4.36E-07	5.04E-09	5.04E-09	5.04E-09	5.04E-09	5.04E-09	5.04E-09	5.04E-09	5.04E-09
Total Reduced Sulfur	1.84E-06	7.72E-07	7.89E-07	1.52E-06	1.62E-06	2.13E-08	8.93E-09	9.13E-09	1.76E-08	1.88E-08	2.13E-08	8.93E-09	1.88E-08

Notes:

[1] Average Flux obtained from "[1] Waste Soil Pile Average Flux obtained from "Landfill Gas and Waste Soil Emissions Study, Walker Environmental Group" report dated November 28, 2019

## WALKER ENVIRONMENTAL GROUP

THOROLD, ONTARIO

### LANDFILL GAS AND WASTE SOIL EMISSION STUDY

RWDI #2000702P

November 28, 2019

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# 1 INTRODUCTION

RWDI AIR Inc. (RWDI) was retained on a Walker Environmental Group (WEG) to conduct flux chamber measurements for reduced sulphurs (Sulphur) and volatile organic compounds (VOC) at the WEG East and South landfill site located in Thorold, Ontario. This sampling was conducted to determine the mitigative properties of the cover and landfill gas collection system at the Final Cover Area, Interim Cover Area, Daily Cover Area and Working Face Area for Sulphur in order to provide information necessary to Walker Environmental Group (WEG).

The samples collected from the Waste Soil Pile were also completed to update the Volatile Organic Compounds (VOC) speciation data from typical piles.

The sampling took place on October 9<sup>th</sup> and 10<sup>th</sup>, 2019, and consisted of: ten (10) samples from South Landfill (Interim Cover Area), five (5) samples from East Landfill (Final Cover Area), five (5) samples from South Landfill (Final Cover Area), five (5) samples from the South Landfill (Daily Cover Area (not exposed)); five (5) samples from South Landfill (Working Face Area), and six (6) samples from Waste Soil Piles, for a total of thirty-six (36) samples taken.

## 2 SOURCE DESCRIPTION

### 2.1 Process Operation/Description

The landfill includes a Daily, Interim, Working Face and Final Cover areas which receives waste on a daily basis.

#### 2.1.1 Sample Locations

Thirty (30) area samples were taken from the different cover areas of South and East Landfill on October 9<sup>th</sup> and 10<sup>th</sup>. In addition, six (6) samples were taken from the Waste Soil Pile. Table 1 provides a summary of the sampling program. Sample locations were selected by RWDI based on current site conditions at the WEG site.



**TABLE 1: SUMMARY OF 2019 SAMPLING PROGRAM**

Location	Specific Cover	Parameter	Number of Locations Available to Sample	Total Number of Samples Collected
South Landfill	Interim Cover Area	Reduced Sulphurs	10	10
	Daily Cover Area		5	5
	Working Cover Area		5	5
	Final Cover Area		5	5
East Landfill	Final Cover Area		5	5
Waste Soil Pile	--	VOC	6	6

## 3 TEST PROGRAM

The following sections discuss the methodologies in detail.

### 3.1 Flux Chamber Sampling

Sulphur and VOC emissions from the areas were measured using three identical flux chambers. The flux chambers used are 40.6 cm in diameter and approximately 35 cm in height, and constructed of 14-gauge stainless steel, as per the designer’s specifications outlined in Ontario Stack Testing Code Method ON-6. All interior and exterior fittings are constructed from inert material being stainless steel and all lines were made from Teflon tubing. The flux chambers are equipped with four quick connect ports: one for sweep gas line, one for sample line, one for temperature instrument and one for pressure instrument.

Before taking measurements, each flux chamber was placed on the surface of the landfill and the inlet of the chamber was embedded slightly into the area in an attempt to create a seal. Sand was also used to surround the chamber and the surface in areas that the chambers could not be inserted into the area.

Ultra-high purity nitrogen gas was used as the sweep gas, which was metered into the chamber at a constant rate of 5 litres per minute. The sweep gas was allowed to run through the chambers for 30 minutes prior to sample collection.

Both the Sulphur and VOC samples were collected through a sample port on the flux chamber into an evacuated canister. The evacuated canister was filled over a 10-minute time frame to collect thirty-six (36) samples.



## 3.2 Sample Analysis

Once collected, the samples were submitted for analysis to ALS Global (within 48-hours of testing) for subsequent analysis. The reduced Sulphur samples consists of the following compounds analyzed by ALS Global, in Burlington, Ontario:

- Hydrogen Sulphide;
- Carbon Disulphide;
- Carbonyl Sulphide;
- Dimethyl Disulphide;
- Dimethyl Sulphide;
- Methyl Mercaptan; and
- Total Reduced Sulphurs.

The VOCs includes a scan for compounds from EPA TO-15.

The laboratory reports are provided in **Appendix A**. These reports also discuss the Sulphur and VOC analysis methodology in greater detail.

## 3.3 Flux Rate Calculations

Emissions from the landfill cover areas were measured using a flux chamber as described above, with total area of 0.13 m<sup>2</sup>.

Ultra-high purity nitrogen was used as the sweep gas. The sweep gas flow rate (0.000083 cubic metres per second (5 litres per minute) based on one square meter of coverage) was allowed to run through the chamber for approximately 30 minutes prior to the collection of the sample. The sweep gas rate is used to calculate the odour flux rate based on the total air movement into the chamber. The formula that was used to calculate the average flux rate is as follows:

$$\text{Flux Rate} \left( \frac{\text{kg}}{\text{day} \cdot \text{m}^2} \right) = \frac{\text{Concentration (ppbv)} \cdot \text{Sweep Rate} \left( \frac{\text{m}^3}{\text{s}} \right)}{\text{Area of flux chamber (m}^2\text{)}}$$

# 4 PROCESS & METEOROLOGICAL INFORMATION

The landfill was operating under normal conditions and the landfill gas utilization system at the WEG site was operating. Waste soil samples were collected from newly deposited waste soils for the testing purposes.

Meteorological data was collected from a local weather station and includes temperature, wind speed, wind direction and barometric pressure. This data is included with the field notes attached under **Appendix B** for each of the test dates and locations (October 9<sup>th</sup> and 10<sup>th</sup>, 2019).



## 5 QUALITY ASSURANCE

A number of common quality assurance measures were developed and implemented to ensure the integrity of the sampling program. In general, these measures include detailed documentation of field activities, calibration of samplers, and numerous laboratory related measures, including sample handling procedures and collection of blank samples. Chain of custody forms were completed and submitted along with the samples to the laboratory.

## 6 SAMPLING RESULTS

The sample results are summarized in **Appendix C**. A summary of the average flux rate from the sampled locations is presented in **Tables 2** and **3** below.

**TABLE 2: SUMMARY OF 2019 SAMPLING RESULTS (SULPHURS)**

	Average Flux (g/m <sup>2</sup> /s)- TRS				
	South Daily Cover Area	South Interim Cover Area	South Final Cover Area	South Working Face	East Final Cover Area
Carbon Disulfide	7.06E-09	4.51E-09	5.99E-09	5.31E-09	3.99E-09
Carbonyl Sulfide	2.78E-08	1.91E-08	1.11E-08	2.43E-08	2.71E-08
Dimethyl Sulfide	6.87E-09	6.51E-09	6.51E-09	6.51E-09	6.51E-09
Dimethyl Disulfide	3.26E-09	3.26E-09	3.26E-09	3.26E-09	3.26E-09
Hydrogen Sulfide	3.57E-09	3.57E-09	3.57E-09	3.57E-09	3.57E-09
Methyl Mercaptan	5.04E-09	5.04E-09	5.04E-09	5.04E-09	5.04E-09
Total Reduced Sulfur	2.13E-08	1.37E-08	9.13E-09	1.76E-08	1.88E-08



TABLE 3: SUMMARY OF 2019 SAMPLING RESULTS (VOLATILE ORGANIC COMPOUNDS)

Compound	Waste Soil Pile- Average Flux (g/m <sup>2</sup> /s)- VOC	Compound	Waste Soil Pile- Average Flux (g/m <sup>2</sup> /s)- VOC
1,1,1-Trichloroethane	6.99E-10	cis-1,3-Dichloropropene	5.82E-10
1,1,2,2-Tetrachloroethane	9.09E-10	Cyclohexane	2.29E-09
1,1,2-Trichloroethane	6.99E-10	Dibromochloromethane	1.09E-09
1,1-Dichloroethane	5.19E-10	Dichlorodifluoromethane	1.15E-09
1,1-Dichloroethene	5.08E-10	Ethyl acetate	7.81E-10
1,2,4-Trichlorobenzene	9.51E-10	Ethylbenzene	4.22E-09
1,2,4-Trimethylbenzene	1.03E-08	Freon 113	9.82E-10
1,2-Dibromoethane	9.85E-10	Freon 114	8.96E-10
1,2-Dichlorobenzene	7.71E-10	Hexachlorobutadiene	1.49E-09
1,2-Dichloroethane	5.19E-10	Isooctane	1.39E-09
1,2-Dichloropropane	5.92E-10	Isopropyl alcohol	2.10E-09
1,3,5-Trimethylbenzene	5.26E-09	Isopropylbenzene	1.04E-09
1,3-Butadiene	2.84E-10	m&p-Xylene	2.36E-08
1,3-Dichlorobenzene	7.71E-10	Methyl ethyl ketone	2.47E-09
1,4-Dichlorobenzene	7.71E-10	Methyl isobutyl ketone	5.25E-10
1,4-Dioxane	4.62E-10	Methylene chloride	9.39E-10
2-Hexanone	6.34E-09	MTBE	4.62E-10
4-Ethyltoluene	3.07E-09	n-Heptane	1.60E-08
Acetone	1.88E-08	n-Hexane	8.34E-09
Allyl chloride	4.01E-10	o-Xylene	6.50E-09
Benzene	1.01E-09	Propylene	1.41E-09
Benzyl chloride	6.64E-10	Styrene	5.60E-10
Bromodichloromethane	8.59E-10	Tetrachloroethylene	8.69E-10
Bromoform	1.32E-09	Tetrahydrofuran	3.78E-10
Bromomethane	4.98E-10	Toluene	4.31E-09
Carbon Disulfide	7.17E-09	trans-1,2-Dichloroethene	5.08E-10
Carbon Tetrachloride	8.06E-10	trans-1,3-Dichloropropene	5.82E-10
Chlorobenzene	5.90E-10	Trichloroethylene	1.15E-08
Chloroethane	3.38E-10	Trichlorofluoromethane	7.44E-10
Chloroform	6.26E-10	Vinyl acetate	1.62E-09
Chloromethane	3.09E-10	Vinyl bromide	5.61E-10
cis-1,2-Dichloroethene	9.49E-10	Vinyl chloride	3.28E-10
		Surrogate: 4-Bromofluorobenzene	4.61E-07

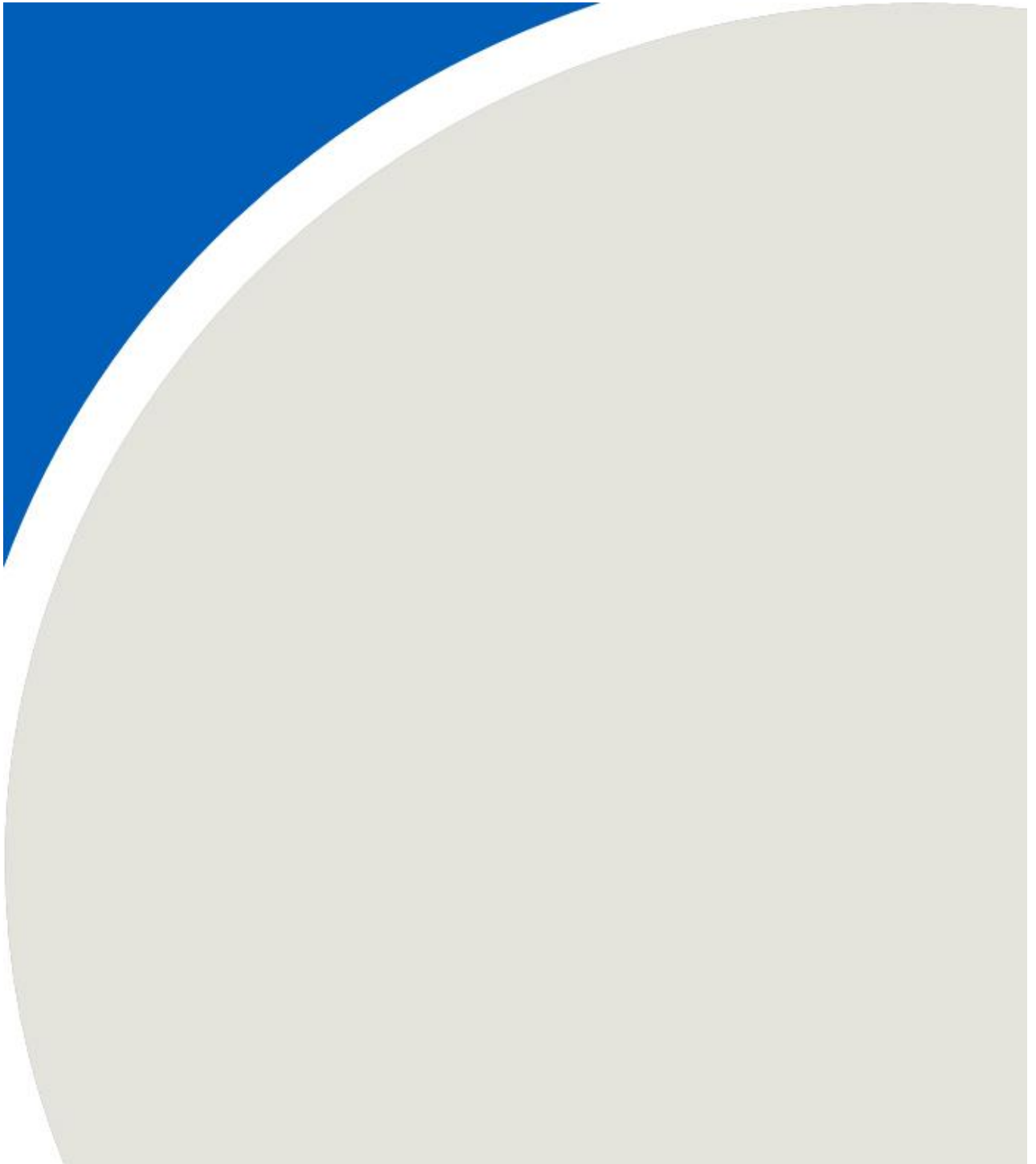




## 7 CONCLUSIONS

All sources were tested in accordance with referenced methodologies following the test proposed.

# APPENDIX A





RWDI AIR INC. (Guelph)  
ATTN: Brad Bergeron  
600 Southgate Drive  
Guelph Ont N1G 4P6

Date Received: 11-OCT-19  
Report Date: 29-OCT-19 09:43 (MT)  
Version: FINAL

Client Phone: --

## Certificate of Analysis

Lab Work Order #: L2364217  
Project P.O. #: 2000702  
Job Reference: 2000702  
C of C Numbers:  
Legal Site Desc:

Claire Kocharakkal, B.Sc.  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1435 Norjohn Court, Unit 1, Burlington, ON, L7L 0E6 Canada | Phone: +1 905 331 3111 | Fax: +1 905 331 4567  
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-1 SOUTH FINAL COVER 1 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 09:30 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	21.9		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	7.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	13.6		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	5.5		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-4.3		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0100				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G316				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.151				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	13.6		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	19		12	ug/m3		15-OCT-19	
L2364217-2 SOUTH FINAL COVER 2 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 10:28 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	11.5		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	4.7		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-6.5		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0096				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G94				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.123				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		15-OCT-19	
L2364217-3 SOUTH FINAL COVER 3 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 10:30 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-3 SOUTH FINAL COVER 3 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 10:30 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	19.6		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	8.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-5.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0165				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G311				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.134				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	9.2		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	13		12	ug/m3		15-OCT-19	
L2364217-4 SOUTH FINAL COVER 4 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 10:37 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	20.1		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	8.2		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-5.3		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0188				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G79				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.135				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	9.4		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	13		12	ug/m3		15-OCT-19	
L2364217-5 SOUTH FINAL COVER 5 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:19 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-5 SOUTH FINAL COVER 5 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:19 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	22.1		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	9.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-7.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0226				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G242				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.102				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	10.4		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	14		12	ug/m3		15-OCT-19	
L2364217-6 EAST FINAL COVER 1 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 13:49 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	13.8		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	5.6		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-6.7		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0309				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G171				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.148				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		15-OCT-19	
L2364217-7 EAST FINAL COVER 2 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 14:39 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-7 EAST FINAL COVER 2 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 14:39 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	<9.8		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-5.9		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0231				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G279				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.131				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		15-OCT-19	
L2364217-8 EAST FINAL COVER 3 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 14:30 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	22.6		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	9.2		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-5.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0057				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G173				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.144				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	10.6		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	15		12	ug/m3		15-OCT-19	
L2364217-9 EAST FINAL COVER 4 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 14:22 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-9 EAST FINAL COVER 4 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 14:22 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	69.9		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	28.4		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-5.5		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0145				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G103				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.155				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	32.8		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	46		12	ug/m3		15-OCT-19	
L2364217-10 EAST FINAL COVER 5 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 15:09 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	95.1		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	38.7		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-3.7		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0321				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G177				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.104				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	44.6		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	62		12	ug/m3		15-OCT-19	
L2364217-11 SOUTH INTERIM COVER 1 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 15:50 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-11 SOUTH INTERIM COVER 1 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 15:50 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	28.7		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	9.2		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	38.4		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	15.6		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-3.3		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0283				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G288				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.101				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	27.5		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	38		12	ug/m3		15-OCT-19	
L2364217-12 SOUTH INTERIM COVER 2 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 16:18 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	15.6		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	6.4		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-4.9		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0276				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G280				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.118				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		15-OCT-19	
L2364217-13 SOUTH INTERIM COVER 3 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 16:27 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-13 SOUTH INTERIM COVER 3 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 16:27 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	8.0		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	2.6		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	43.3		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	17.6		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-1.2		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0169				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G227				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.136				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	23.0		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	32		12	ug/m3		15-OCT-19	
L2364217-14 SOUTH INTERIM COVER 4 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 17:00 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		12-OCT-19	R4868954
Carbon Disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Carbonyl sulfide	<9.8		9.8	ug/m3		12-OCT-19	R4868954
Carbonyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl sulfide	<10		10	ug/m3		12-OCT-19	R4868954
Dimethyl sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Dimethyl disulfide	<7.7		7.7	ug/m3		12-OCT-19	R4868954
Dimethyl disulfide	<2.0		2.0	ppb(V)		12-OCT-19	R4868954
Hydrogen Sulfide	<5.6		5.6	ug/m3		12-OCT-19	R4868954
Hydrogen Sulfide	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
Methyl mercaptan	<7.9		7.9	ug/m3		12-OCT-19	R4868954
Methyl mercaptan	<4.0		4.0	ppb(V)		12-OCT-19	R4868954
<b>Canister Information</b>							
Pressure on Receipt	-4.7		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0152				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G220				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.112				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		15-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		15-OCT-19	
L2364217-15 SOUTH INTERIM COVER 5 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 17:08 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-15 SOUTH INTERIM COVER 5 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 17:08 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	30.6		6.2	ug/m3		14-OCT-19	R4872426
Carbon Disulfide	9.8		2.0	ppb(V)		14-OCT-19	R4872426
Carbonyl sulfide	125		9.8	ug/m3		14-OCT-19	R4872426
Carbonyl sulfide	51.0		4.0	ppb(V)		14-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		14-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		14-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		14-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		14-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		14-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-7.8		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0304				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G289				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.103				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	67.8		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	95		12	ug/m3		17-OCT-19	
L2364217-16 SOUTH INTERIM COVER 6 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 08:32 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		14-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		14-OCT-19	R4872426
Carbonyl sulfide	12.3		9.8	ug/m3		14-OCT-19	R4872426
Carbonyl sulfide	5.0		4.0	ppb(V)		14-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		14-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		14-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		14-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		14-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		14-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-3.5		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0035				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G323				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.11				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		17-OCT-19	
L2364217-17 SOUTH INTERIM COVER 7 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 08:56 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-17 SOUTH INTERIM COVER 7 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 08:56 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		14-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		14-OCT-19	R4872426
Carbonyl sulfide	34.7		9.8	ug/m3		14-OCT-19	R4872426
Carbonyl sulfide	14.1		4.0	ppb(V)		14-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		14-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		14-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		14-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		14-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		14-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		14-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-2.4		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0172				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G255				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.121				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	16.0		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	22		12	ug/m3		17-OCT-19	
L2364217-18 SOUTH INTERIM COVER 8 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 09:00 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	16.6		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	6.8		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-3.7		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0269				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G145				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.137				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		17-OCT-19	
L2364217-19 SOUTH INTERIM COVER 9 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 09:36 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-19 SOUTH INTERIM COVER 9 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 09:36 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	10.3		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	3.3		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	68.9		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	28.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-1.0		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0099				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G225				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.149				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	35.2		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	49		12	ug/m3		17-OCT-19	
L2364217-20 SOUTH INTERIM COVER 10 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 09:43 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	16.5		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	6.7		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-7.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867672
Canister ID	00946-0125				11-OCT-19	11-OCT-19	R4867672
Regulator ID	G317				11-OCT-19	11-OCT-19	R4867672
Batch Proof ID	190927.139				11-OCT-19	11-OCT-19	R4867672
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		17-OCT-19	
L2364217-21 SOUTH DAILY COVER 1 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 10:59 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-21 SOUTH DAILY COVER 1 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 10:59 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	83.3		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	33.9		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-5.3		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0138				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G80				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.146				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	38.4		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	54		12	ug/m3		17-OCT-19	
L2364217-22 SOUTH DAILY COVER 2 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 10:37 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	16.4		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	5.3		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	19.3		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	7.9		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-3.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0128				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G162				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.145				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	14.3		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	20		12	ug/m3		17-OCT-19	
L2364217-23 SOUTH DAILY COVER 3 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 11:10 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-23 SOUTH DAILY COVER 3 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 11:10 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	12.8		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	4.1		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	23.1		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	9.4		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	13		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	5.1		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-5.7		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0109				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G81				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.12				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	20.0		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	28		12	ug/m3		17-OCT-19	
L2364217-24 SOUTH DAILY COVER 4 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 11:43 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	13.4		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	4.3		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	70.3		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	28.6		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-5.7		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0088				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G321				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.113				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	36.8		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	51		12	ug/m3		17-OCT-19	
L2364217-25 SOUTH DAILY COVER 5 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 11:50 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-25 SOUTH DAILY COVER 5 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 11:50 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	20.6		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	8.4		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-4.3		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0112				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G169				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.119				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	9.5		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	13		12	ug/m3		17-OCT-19	
L2364217-26 SOUTH WORKING FACE 1 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 11:27 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	14.4		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	5.9		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-3.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0181				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G36				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.13200000 1				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		17-OCT-19	
L2364217-27 SOUTH WORKING FACE 2 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 12:10 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-27 SOUTH WORKING FACE 2 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 12:10 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	15.0		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	6.1		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-4.9		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0317				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G102				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.107				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	<8.5		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	<12		12	ug/m3		17-OCT-19	
L2364217-28 SOUTH WORKING FACE 3 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 12:42 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	10.4		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	3.3		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	18.7		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	7.6		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-6.7		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0242				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G312				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.13300000 1				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	12.0		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	17		12	ug/m3		17-OCT-19	
L2364217-29 SOUTH WORKING FACE 4 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 12:30 Matrix: AIR							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-29 SOUTH WORKING FACE 4 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 12:30 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	12.5		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	4.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	66.6		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	27.1		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-3.5		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0192				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G18				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.15200000 1				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	34.8		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	48		12	ug/m3		17-OCT-19	
L2364217-30 SOUTH WORKING FACE 5 Sampled By: JQS, MUV, TFL on 10-OCT-19 @ 13:11 Matrix: AIR							
<b>NPRI Total Reduced Sulfur+Compounds</b>							
<b>22 Reduced Sulfur Compounds by GC-SCD</b>							
Carbon Disulfide	<6.2		6.2	ug/m3		15-OCT-19	R4872426
Carbon Disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Carbonyl sulfide	74.7		9.8	ug/m3		15-OCT-19	R4872426
Carbonyl sulfide	30.4		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl sulfide	<10		10	ug/m3		15-OCT-19	R4872426
Dimethyl sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Dimethyl disulfide	<7.7		7.7	ug/m3		15-OCT-19	R4872426
Dimethyl disulfide	<2.0		2.0	ppb(V)		15-OCT-19	R4872426
Hydrogen Sulfide	<5.6		5.6	ug/m3		15-OCT-19	R4872426
Hydrogen Sulfide	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
Methyl mercaptan	<7.9		7.9	ug/m3		15-OCT-19	R4872426
Methyl mercaptan	<4.0		4.0	ppb(V)		15-OCT-19	R4872426
<b>Canister Information</b>							
Pressure on Receipt	-3.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0243				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G164				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190927.15300000 1				11-OCT-19	11-OCT-19	R4867884
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>							
Total Reduced Sulfur (NPRI-6) as H2S	34.5		8.5	ppb(V)		17-OCT-19	
Total Reduced Sulfur (NPRI-6) as H2S	48		12	ug/m3		17-OCT-19	

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-31 WASTE SOIL PILE 1							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:57							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,1,1-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,1-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<1.4		1.4	ug/m3		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,2-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethane	<0.79		0.79	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	1.24		0.98	ug/m3		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	0.25		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dibromoethane	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2-Dibromoethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,2-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,2-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloropropane	<0.92		0.92	ug/m3		25-OCT-19	R4887309
1,2-Dichloropropane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	1.13		0.98	ug/m3		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	0.23		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Butadiene	<0.44		0.44	ug/m3		25-OCT-19	R4887309
1,3-Butadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,3-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,4-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dioxane	<0.72		0.72	ug/m3		25-OCT-19	R4887309
1,4-Dioxane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
2-Hexanone	<4.1		4.1	ug/m3		25-OCT-19	R4887309
2-Hexanone	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
4-Ethyltoluene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
4-Ethyltoluene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Acetone	9.6		1.2	ug/m3		25-OCT-19	R4887309
Acetone	4.04		0.50	ppb(V)		25-OCT-19	R4887309
Allyl chloride	<0.63		0.63	ug/m3		25-OCT-19	R4887309
Allyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzene	<0.64		0.64	ug/m3		25-OCT-19	R4887309
Benzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzyl chloride	<1.0		1.0	ug/m3		25-OCT-19	R4887309
Benzyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromodichloromethane	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Bromodichloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromoform	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Bromoform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromomethane	<0.78		0.78	ug/m3		25-OCT-19	R4887309
Bromomethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-31 WASTE SOIL PILE 1							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:57							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
Carbon Disulfide	0.81		0.62	ug/m3		25-OCT-19	R4887309
Carbon Disulfide	0.26		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Tetrachloride	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Carbon Tetrachloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chlorobenzene	<0.92		0.92	ug/m3		25-OCT-19	R4887309
Chlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroethane	<0.53		0.53	ug/m3		25-OCT-19	R4887309
Chloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroform	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Chloroform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloromethane	0.83		0.41	ug/m3		25-OCT-19	R4887309
Chloromethane	0.40		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Cyclohexane	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Cyclohexane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dibromochloromethane	<1.7		1.7	ug/m3		25-OCT-19	R4887309
Dibromochloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dichlorodifluoromethane	2.02		0.99	ug/m3		25-OCT-19	R4887309
Dichlorodifluoromethane	0.41		0.20	ppb(V)		25-OCT-19	R4887309
Ethyl acetate	<0.72		0.72	ug/m3		25-OCT-19	R4887309
Ethyl acetate	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Ethylbenzene	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Ethylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 113	<1.5		1.5	ug/m3		25-OCT-19	R4887309
Freon 113	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 114	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Freon 114	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Hexachlorobutadiene	3.3		2.1	ug/m3		25-OCT-19	R4887309
Hexachlorobutadiene	0.31		0.20	ppb(V)		25-OCT-19	R4887309
Isooctane	<0.93		0.93	ug/m3		25-OCT-19	R4887309
Isooctane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isopropyl alcohol	<2.5		2.5	ug/m3		25-OCT-19	R4887309
Isopropyl alcohol	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
Isopropylbenzene	1.01		0.98	ug/m3		25-OCT-19	R4887309
Isopropylbenzene	0.21		0.20	ppb(V)		25-OCT-19	R4887309
m&p-Xylene	1.7		1.7	ug/m3		25-OCT-19	R4887309
m&p-Xylene	0.40		0.40	ppb(V)		25-OCT-19	R4887309
Methyl ethyl ketone	1.46		0.59	ug/m3		25-OCT-19	R4887309
Methyl ethyl ketone	0.50		0.20	ppb(V)		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.82		0.82	ug/m3		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Methylene chloride	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Methylene chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
MTBE	<0.72		0.72	ug/m3		25-OCT-19	R4887309
MTBE	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Heptane	<0.82		0.82	ug/m3		25-OCT-19	R4887309
n-Heptane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Hexane	0.74		0.70	ug/m3		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-31 WASTE SOIL PILE 1 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:57 Matrix: AIR							
<b>Canister EPA TO-15</b>							
n-Hexane	0.21		0.20	ppb(V)		25-OCT-19	R4887309
o-Xylene	0.93		0.87	ug/m3		25-OCT-19	R4887309
o-Xylene	0.21		0.20	ppb(V)		25-OCT-19	R4887309
Propylene	0.60	AI	0.34	ug/m3		25-OCT-19	R4887309
Propylene	0.35	AI	0.20	ppb(V)		25-OCT-19	R4887309
Styrene	<0.85		0.85	ug/m3		25-OCT-19	R4887309
Styrene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrachloroethylene	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Tetrachloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrahydrofuran	<0.59		0.59	ug/m3		25-OCT-19	R4887309
Tetrahydrofuran	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Toluene	2.60		0.75	ug/m3		25-OCT-19	R4887309
Toluene	0.69		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichloroethylene	<1.1		1.1	ug/m3		25-OCT-19	R4887309
Trichloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichlorofluoromethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
Trichlorofluoromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl acetate	<1.8		1.8	ug/m3		25-OCT-19	R4887309
Vinyl acetate	<0.50		0.50	ppb(V)		25-OCT-19	R4887309
Vinyl bromide	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Vinyl bromide	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl chloride	<0.51		0.51	ug/m3		25-OCT-19	R4887309
Vinyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Surrogate: 4-Bromofluorobenzene	102.0		50-150	%		25-OCT-19	R4887309
<b>Canister Information</b>							
Pressure on Receipt	-4.9		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0216				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G136				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190905.115				11-OCT-19	11-OCT-19	R4867884
L2364217-32 WASTE SOIL PILE 2 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:58 Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,1,1-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,1-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<1.4		1.4	ug/m3		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,2-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	2.58		0.98	ug/m3		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-32 WASTE SOIL PILE 2							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:58							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,2,4-Trimethylbenzene	0.52		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dibromoethane	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2-Dibromoethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,2-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,2-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloropropane	<0.92		0.92	ug/m3		25-OCT-19	R4887309
1,2-Dichloropropane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	1.04		0.98	ug/m3		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	0.21		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Butadiene	<0.44		0.44	ug/m3		25-OCT-19	R4887309
1,3-Butadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,3-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,4-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dioxane	<0.72		0.72	ug/m3		25-OCT-19	R4887309
1,4-Dioxane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
2-Hexanone	<4.1		4.1	ug/m3		25-OCT-19	R4887309
2-Hexanone	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
4-Ethyltoluene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
4-Ethyltoluene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Acetone	28.8	DLA	5.9	ug/m3		28-OCT-19	R4887309
Acetone	12.1	DLA	2.5	ppb(V)		28-OCT-19	R4887309
Allyl chloride	<0.63		0.63	ug/m3		25-OCT-19	R4887309
Allyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzene	<0.64		0.64	ug/m3		25-OCT-19	R4887309
Benzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzyl chloride	<1.0		1.0	ug/m3		25-OCT-19	R4887309
Benzyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromodichloromethane	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Bromodichloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromoform	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Bromoform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromomethane	<0.78		0.78	ug/m3		25-OCT-19	R4887309
Bromomethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Disulfide	0.73		0.62	ug/m3		25-OCT-19	R4887309
Carbon Disulfide	0.23		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Tetrachloride	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Carbon Tetrachloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chlorobenzene	<0.92		0.92	ug/m3		25-OCT-19	R4887309
Chlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroethane	<0.53		0.53	ug/m3		25-OCT-19	R4887309
Chloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroform	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Chloroform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloromethane	1.24		0.41	ug/m3		25-OCT-19	R4887309
Chloromethane	0.60		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-32 WASTE SOIL PILE 2							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:58							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
cis-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Cyclohexane	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Cyclohexane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dibromochloromethane	<1.7		1.7	ug/m3		25-OCT-19	R4887309
Dibromochloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dichlorodifluoromethane	2.56		0.99	ug/m3		25-OCT-19	R4887309
Dichlorodifluoromethane	0.52		0.20	ppb(V)		25-OCT-19	R4887309
Ethyl acetate	<0.72		0.72	ug/m3		25-OCT-19	R4887309
Ethyl acetate	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Ethylbenzene	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Ethylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 113	<1.5		1.5	ug/m3		25-OCT-19	R4887309
Freon 113	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 114	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Freon 114	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Hexachlorobutadiene	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Hexachlorobutadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isooctane	<0.93		0.93	ug/m3		25-OCT-19	R4887309
Isooctane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isopropyl alcohol	<2.5		2.5	ug/m3		25-OCT-19	R4887309
Isopropyl alcohol	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
Isopropylbenzene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Isopropylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
m&p-Xylene	2.3		1.7	ug/m3		25-OCT-19	R4887309
m&p-Xylene	0.52		0.40	ppb(V)		25-OCT-19	R4887309
Methyl ethyl ketone	3.31		0.59	ug/m3		25-OCT-19	R4887309
Methyl ethyl ketone	1.12		0.20	ppb(V)		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.82		0.82	ug/m3		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Methylene chloride	5.30		0.69	ug/m3		25-OCT-19	R4887309
Methylene chloride	1.53		0.20	ppb(V)		25-OCT-19	R4887309
MTBE	<0.72		0.72	ug/m3		25-OCT-19	R4887309
MTBE	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Heptane	1.09		0.82	ug/m3		25-OCT-19	R4887309
n-Heptane	0.27		0.20	ppb(V)		25-OCT-19	R4887309
n-Hexane	3.19		0.70	ug/m3		25-OCT-19	R4887309
n-Hexane	0.90		0.20	ppb(V)		25-OCT-19	R4887309
o-Xylene	<0.87		0.87	ug/m3		25-OCT-19	R4887309
o-Xylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Propylene	0.94	AI	0.34	ug/m3		25-OCT-19	R4887309
Propylene	0.54	AI	0.20	ppb(V)		25-OCT-19	R4887309
Styrene	<0.85		0.85	ug/m3		25-OCT-19	R4887309
Styrene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrachloroethylene	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Tetrachloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrahydrofuran	<0.59		0.59	ug/m3		25-OCT-19	R4887309
Tetrahydrofuran	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Toluene	1.29		0.75	ug/m3		25-OCT-19	R4887309
Toluene	0.34		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-32 WASTE SOIL PILE 2 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:58 Matrix: AIR							
<b>Canister EPA TO-15</b>							
trans-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichloroethylene	4.3		1.1	ug/m3		25-OCT-19	R4887309
Trichloroethylene	0.80		0.20	ppb(V)		25-OCT-19	R4887309
Trichlorofluoromethane	1.3		1.1	ug/m3		25-OCT-19	R4887309
Trichlorofluoromethane	0.23		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl acetate	<1.8		1.8	ug/m3		25-OCT-19	R4887309
Vinyl acetate	<0.50		0.50	ppb(V)		25-OCT-19	R4887309
Vinyl bromide	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Vinyl bromide	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl chloride	<0.51		0.51	ug/m3		25-OCT-19	R4887309
Vinyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Surrogate: 4-Bromofluorobenzene	101.4		50-150	%		25-OCT-19	R4887309
<b>Canister Information</b>							
Pressure on Receipt	-6.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0141				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G35				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190905.217				11-OCT-19	11-OCT-19	R4867884
L2364217-33 WASTE SOIL PILE 3 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:57 Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,1,1-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,1-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<7.5	DLQ	7.5	ug/m3		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<1.1	DLQ	1.1	ppb(V)		25-OCT-19	R4887309
1,1,2-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,2-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	49.0	DLA	4.9	ug/m3		28-OCT-19	R4887309
1,2,4-Trimethylbenzene	10.0	DLA	1.0	ppb(V)		28-OCT-19	R4887309
1,2-Dibromoethane	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2-Dibromoethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,2-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,2-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloropropane	<0.92		0.92	ug/m3		25-OCT-19	R4887309
1,2-Dichloropropane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	24.5	DLA	4.9	ug/m3		28-OCT-19	R4887309
1,3,5-Trimethylbenzene	5.0	DLA	1.0	ppb(V)		28-OCT-19	R4887309
1,3-Butadiene	<0.44		0.44	ug/m3		25-OCT-19	R4887309
1,3-Butadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-33 WASTE SOIL PILE 3							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:57							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,3-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,4-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dioxane	<0.72		0.72	ug/m3		25-OCT-19	R4887309
1,4-Dioxane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
2-Hexanone	<30	DLQ	30	ug/m3		28-OCT-19	R4887309
2-Hexanone	<7.2	DLQ	7.2	ppb(V)		28-OCT-19	R4887309
4-Ethyltoluene	12.9		0.98	ug/m3		25-OCT-19	R4887309
4-Ethyltoluene	2.62		0.20	ppb(V)		25-OCT-19	R4887309
Acetone	36.5	DLA	5.9	ug/m3		28-OCT-19	R4887309
Acetone	15.4	DLA	2.5	ppb(V)		28-OCT-19	R4887309
Allyl chloride	<0.63		0.63	ug/m3		25-OCT-19	R4887309
Allyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzene	3.27		0.64	ug/m3		25-OCT-19	R4887309
Benzene	1.02		0.20	ppb(V)		25-OCT-19	R4887309
Benzyl chloride	<1.0		1.0	ug/m3		25-OCT-19	R4887309
Benzyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromodichloromethane	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Bromodichloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromoform	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Bromoform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromomethane	<0.78		0.78	ug/m3		25-OCT-19	R4887309
Bromomethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Disulfide	13.5		0.62	ug/m3		25-OCT-19	R4887309
Carbon Disulfide	4.35		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Tetrachloride	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Carbon Tetrachloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chlorobenzene	<0.92		0.92	ug/m3		25-OCT-19	R4887309
Chlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroethane	<0.53		0.53	ug/m3		25-OCT-19	R4887309
Chloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroform	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Chloroform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloromethane	0.43		0.41	ug/m3		25-OCT-19	R4887309
Chloromethane	0.21		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,2-Dichloroethene	0.89	R	0.79	ug/m3		25-OCT-19	R4887309
cis-1,2-Dichloroethene	0.22	R	0.20	ppb(V)		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Cyclohexane	10.5	AI	0.69	ug/m3		25-OCT-19	R4887309
Cyclohexane	3.04	AI	0.20	ppb(V)		25-OCT-19	R4887309
Dibromochloromethane	<1.7		1.7	ug/m3		25-OCT-19	R4887309
Dibromochloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dichlorodifluoromethane	<0.99		0.99	ug/m3		25-OCT-19	R4887309
Dichlorodifluoromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Ethyl acetate	<3.0	DLQ	3.0	ug/m3		25-OCT-19	R4887309
Ethyl acetate	<0.83	DLQ	0.83	ppb(V)		25-OCT-19	R4887309
Ethylbenzene	16.1		0.87	ug/m3		25-OCT-19	R4887309
Ethylbenzene	3.71		0.20	ppb(V)		25-OCT-19	R4887309
Freon 113	<1.5		1.5	ug/m3		25-OCT-19	R4887309
Freon 113	<0.20		0.20	ppb(V)		25-OCT-19	R4887309

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-33 WASTE SOIL PILE 3							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:57							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
Freon 114	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Freon 114	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Hexachlorobutadiene	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Hexachlorobutadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isooctane	<5.5	DLQ	5.5	ug/m3		25-OCT-19	R4887309
Isooctane	<1.2	DLQ	1.2	ppb(V)		25-OCT-19	R4887309
Isopropyl alcohol	3.5		2.5	ug/m3		25-OCT-19	R4887309
Isopropyl alcohol	1.4		1.0	ppb(V)		25-OCT-19	R4887309
Isopropylbenzene	2.84		0.98	ug/m3		25-OCT-19	R4887309
Isopropylbenzene	0.58		0.20	ppb(V)		25-OCT-19	R4887309
m&p-Xylene	110	DLA	8.7	ug/m3		28-OCT-19	R4887309
m&p-Xylene	25.4	DLA	2.0	ppb(V)		28-OCT-19	R4887309
Methyl ethyl ketone	5.08		0.59	ug/m3		25-OCT-19	R4887309
Methyl ethyl ketone	1.72		0.20	ppb(V)		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.82		0.82	ug/m3		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Methylene chloride	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Methylene chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
MTBE	<0.72		0.72	ug/m3		25-OCT-19	R4887309
MTBE	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Heptane	98.8	DLA	4.1	ug/m3		28-OCT-19	R4887309
n-Heptane	24.1	DLA	1.0	ppb(V)		28-OCT-19	R4887309
n-Hexane	48.3	DLA	3.5	ug/m3		28-OCT-19	R4887309
n-Hexane	13.7	DLA	1.0	ppb(V)		28-OCT-19	R4887309
o-Xylene	30.2	DLA	4.3	ug/m3		28-OCT-19	R4887309
o-Xylene	7.0	DLA	1.0	ppb(V)		28-OCT-19	R4887309
Propylene	1.32	AI	0.34	ug/m3		25-OCT-19	R4887309
Propylene	0.77	AI	0.20	ppb(V)		25-OCT-19	R4887309
Styrene	0.99		0.85	ug/m3		25-OCT-19	R4887309
Styrene	0.23		0.20	ppb(V)		25-OCT-19	R4887309
Tetrachloroethylene	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Tetrachloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrahydrofuran	<0.59		0.59	ug/m3		25-OCT-19	R4887309
Tetrahydrofuran	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Toluene	13.6		0.75	ug/m3		25-OCT-19	R4887309
Toluene	3.62		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichloroethylene	16.8		1.1	ug/m3		25-OCT-19	R4887309
Trichloroethylene	3.13		0.20	ppb(V)		25-OCT-19	R4887309
Trichlorofluoromethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
Trichlorofluoromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl acetate	<1.8		1.8	ug/m3		25-OCT-19	R4887309
Vinyl acetate	<0.50		0.50	ppb(V)		25-OCT-19	R4887309
Vinyl bromide	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Vinyl bromide	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl chloride	<0.51		0.51	ug/m3		25-OCT-19	R4887309
Vinyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Surrogate: 4-Bromofluorobenzene	96.4		50-150	%		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-33 WASTE SOIL PILE 3 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 11:57 Matrix: AIR							
<b>Canister Information</b>							
Pressure on Receipt	-11.2		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0211				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G320				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190813.12900000 1				11-OCT-19	11-OCT-19	R4867884
L2364217-34 WASTE SOIL PILE 4 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:38 Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,1,1-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,1-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<1.4		1.4	ug/m3		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,2-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dibromoethane	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2-Dibromoethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,2-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,2-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloropropane	<0.92		0.92	ug/m3		25-OCT-19	R4887309
1,2-Dichloropropane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Butadiene	<0.44		0.44	ug/m3		25-OCT-19	R4887309
1,3-Butadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,3-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,4-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dioxane	<0.72		0.72	ug/m3		25-OCT-19	R4887309
1,4-Dioxane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
2-Hexanone	<4.1		4.1	ug/m3		25-OCT-19	R4887309
2-Hexanone	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
4-Ethyltoluene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
4-Ethyltoluene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Acetone	8.5		1.2	ug/m3		25-OCT-19	R4887309
Acetone	3.60		0.50	ppb(V)		25-OCT-19	R4887309
Allyl chloride	<0.63		0.63	ug/m3		25-OCT-19	R4887309
Allyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzene	<0.64		0.64	ug/m3		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-34 WASTE SOIL PILE 4							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:38							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
Benzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzyl chloride	<1.0		1.0	ug/m3		25-OCT-19	R4887309
Benzyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromodichloromethane	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Bromodichloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromoform	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Bromoform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromomethane	<0.78		0.78	ug/m3		25-OCT-19	R4887309
Bromomethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Disulfide	1.27		0.62	ug/m3		25-OCT-19	R4887309
Carbon Disulfide	0.41		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Tetrachloride	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Carbon Tetrachloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chlorobenzene	<0.92		0.92	ug/m3		25-OCT-19	R4887309
Chlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroethane	<0.53		0.53	ug/m3		25-OCT-19	R4887309
Chloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroform	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Chloroform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloromethane	1.12		0.41	ug/m3		25-OCT-19	R4887309
Chloromethane	0.54		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Cyclohexane	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Cyclohexane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dibromochloromethane	<1.7		1.7	ug/m3		25-OCT-19	R4887309
Dibromochloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dichlorodifluoromethane	2.44		0.99	ug/m3		25-OCT-19	R4887309
Dichlorodifluoromethane	0.49		0.20	ppb(V)		25-OCT-19	R4887309
Ethyl acetate	<0.72		0.72	ug/m3		25-OCT-19	R4887309
Ethyl acetate	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Ethylbenzene	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Ethylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 113	<1.5		1.5	ug/m3		25-OCT-19	R4887309
Freon 113	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 114	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Freon 114	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Hexachlorobutadiene	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Hexachlorobutadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isooctane	<0.93		0.93	ug/m3		25-OCT-19	R4887309
Isooctane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isopropyl alcohol	<2.5		2.5	ug/m3		25-OCT-19	R4887309
Isopropyl alcohol	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
Isopropylbenzene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Isopropylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
m&p-Xylene	<1.7		1.7	ug/m3		25-OCT-19	R4887309
m&p-Xylene	<0.40		0.40	ppb(V)		25-OCT-19	R4887309
Methyl ethyl ketone	1.07		0.59	ug/m3		25-OCT-19	R4887309
Methyl ethyl ketone	0.36		0.20	ppb(V)		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-34 WASTE SOIL PILE 4 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:38 Matrix: AIR							
<b>Canister EPA TO-15</b>							
Methyl isobutyl ketone	<0.82		0.82	ug/m3		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Methylene chloride	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Methylene chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
MTBE	<0.72		0.72	ug/m3		25-OCT-19	R4887309
MTBE	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Heptane	<0.82		0.82	ug/m3		25-OCT-19	R4887309
n-Heptane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Hexane	<0.70		0.70	ug/m3		25-OCT-19	R4887309
n-Hexane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
o-Xylene	<0.87		0.87	ug/m3		25-OCT-19	R4887309
o-Xylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Propylene	0.73	AI	0.34	ug/m3		25-OCT-19	R4887309
Propylene	0.42	AI	0.20	ppb(V)		25-OCT-19	R4887309
Styrene	<0.85		0.85	ug/m3		25-OCT-19	R4887309
Styrene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrachloroethylene	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Tetrachloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrahydrofuran	<0.59		0.59	ug/m3		25-OCT-19	R4887309
Tetrahydrofuran	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Toluene	2.85		0.75	ug/m3		25-OCT-19	R4887309
Toluene	0.76		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichloroethylene	<1.1		1.1	ug/m3		25-OCT-19	R4887309
Trichloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichlorofluoromethane	1.2		1.1	ug/m3		25-OCT-19	R4887309
Trichlorofluoromethane	0.21		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl acetate	<1.8		1.8	ug/m3		25-OCT-19	R4887309
Vinyl acetate	<0.50		0.50	ppb(V)		25-OCT-19	R4887309
Vinyl bromide	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Vinyl bromide	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl chloride	<0.51		0.51	ug/m3		25-OCT-19	R4887309
Vinyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Surrogate: 4-Bromofluorobenzene	99.6		50-150	%		25-OCT-19	R4887309
<b>Canister Information</b>							
Pressure on Receipt	-4.9		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0155				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G133				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190905.107				11-OCT-19	11-OCT-19	R4867884
L2364217-35 WASTE SOIL PILE 5 Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:48 Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,1,1-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,1-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<1.4		1.4	ug/m3		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-35 WASTE SOIL PILE 5							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:48							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,1,2-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,2-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	5.53		0.98	ug/m3		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	1.12		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dibromoethane	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2-Dibromoethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,2-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,2-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloropropane	<0.92		0.92	ug/m3		25-OCT-19	R4887309
1,2-Dichloropropane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	5.79		0.98	ug/m3		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	1.18		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Butadiene	<0.44		0.44	ug/m3		25-OCT-19	R4887309
1,3-Butadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,3-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,4-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dioxane	<0.72		0.72	ug/m3		25-OCT-19	R4887309
1,4-Dioxane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
2-Hexanone	<4.1		4.1	ug/m3		25-OCT-19	R4887309
2-Hexanone	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
4-Ethyltoluene	1.80		0.98	ug/m3		25-OCT-19	R4887309
4-Ethyltoluene	0.37		0.20	ppb(V)		25-OCT-19	R4887309
Acetone	42.7	DLA	5.9	ug/m3		28-OCT-19	R4887309
Acetone	18.0	DLA	2.5	ppb(V)		28-OCT-19	R4887309
Allyl chloride	<0.63		0.63	ug/m3		25-OCT-19	R4887309
Allyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzene	0.99		0.64	ug/m3		25-OCT-19	R4887309
Benzene	0.31		0.20	ppb(V)		25-OCT-19	R4887309
Benzyl chloride	<1.0		1.0	ug/m3		25-OCT-19	R4887309
Benzyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromodichloromethane	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Bromodichloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromoform	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Bromoform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromomethane	<0.78		0.78	ug/m3		25-OCT-19	R4887309
Bromomethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Disulfide	22.7		0.62	ug/m3		25-OCT-19	R4887309
Carbon Disulfide	7.29		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Tetrachloride	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Carbon Tetrachloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chlorobenzene	<0.92		0.92	ug/m3		25-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-35 WASTE SOIL PILE 5							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:48							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
Chlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroethane	<0.53		0.53	ug/m3		25-OCT-19	R4887309
Chloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroform	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Chloroform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloromethane	0.66		0.41	ug/m3		25-OCT-19	R4887309
Chloromethane	0.32		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,2-Dichloroethene	3.31		0.79	ug/m3		25-OCT-19	R4887309
cis-1,2-Dichloroethene	0.84		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Cyclohexane	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Cyclohexane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dibromochloromethane	<1.7		1.7	ug/m3		25-OCT-19	R4887309
Dibromochloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dichlorodifluoromethane	1.32		0.99	ug/m3		25-OCT-19	R4887309
Dichlorodifluoromethane	0.27		0.20	ppb(V)		25-OCT-19	R4887309
Ethyl acetate	<0.72		0.72	ug/m3		25-OCT-19	R4887309
Ethyl acetate	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Ethylbenzene	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Ethylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 113	<1.5		1.5	ug/m3		25-OCT-19	R4887309
Freon 113	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 114	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Freon 114	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Hexachlorobutadiene	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Hexachlorobutadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isooctane	<1.7	DLQ	1.7	ug/m3		25-OCT-19	R4887309
Isooctane	<0.4	DLQ	0.40	ppb(V)		25-OCT-19	R4887309
Isopropyl alcohol	6.5		2.5	ug/m3		25-OCT-19	R4887309
Isopropyl alcohol	2.6		1.0	ppb(V)		25-OCT-19	R4887309
Isopropylbenzene	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Isopropylbenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
m&p-Xylene	<1.7		1.7	ug/m3		25-OCT-19	R4887309
m&p-Xylene	<0.40		0.40	ppb(V)		25-OCT-19	R4887309
Methyl ethyl ketone	5.24		0.59	ug/m3		25-OCT-19	R4887309
Methyl ethyl ketone	1.78		0.20	ppb(V)		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.82		0.82	ug/m3		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Methylene chloride	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Methylene chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
MTBE	<0.72		0.72	ug/m3		25-OCT-19	R4887309
MTBE	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Heptane	2.28		0.82	ug/m3		25-OCT-19	R4887309
n-Heptane	0.56		0.20	ppb(V)		25-OCT-19	R4887309
n-Hexane	3.72		0.70	ug/m3		25-OCT-19	R4887309
n-Hexane	1.05		0.20	ppb(V)		25-OCT-19	R4887309
o-Xylene	<0.87		0.87	ug/m3		25-OCT-19	R4887309
o-Xylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Propylene	8.8	DLA	1.7	ug/m3		28-OCT-19	R4887309
Propylene	5.1	DLA	1.0	ppb(V)		28-OCT-19	R4887309

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-35 WASTE SOIL PILE 5							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:48							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
Styrene	<0.85		0.85	ug/m3		25-OCT-19	R4887309
Styrene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrachloroethylene	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Tetrachloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrahydrofuran	<0.59		0.59	ug/m3		25-OCT-19	R4887309
Tetrahydrofuran	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Toluene	1.12		0.75	ug/m3		25-OCT-19	R4887309
Toluene	0.30		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichloroethylene	33.8		1.1	ug/m3		25-OCT-19	R4887309
Trichloroethylene	6.29		0.20	ppb(V)		25-OCT-19	R4887309
Trichlorofluoromethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
Trichlorofluoromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl acetate	6.3	ABL	1.8	ug/m3		25-OCT-19	R4887309
Vinyl acetate	1.80	ABL	0.50	ppb(V)		25-OCT-19	R4887309
Vinyl bromide	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Vinyl bromide	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl chloride	<0.51		0.51	ug/m3		25-OCT-19	R4887309
Vinyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Surrogate: 4-Bromofluorobenzene	106.1		50-150	%		25-OCT-19	R4887309
<b>Canister Information</b>							
Pressure on Receipt	-4.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0076				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G41				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190905.111				11-OCT-19	11-OCT-19	R4867884
L2364217-36 WASTE SOIL PILE 6							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:37							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,1,1-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,1-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	1.6		1.4	ug/m3		25-OCT-19	R4887309
1,1,2,2-Tetrachloroethane	0.24		0.20	ppb(V)		25-OCT-19	R4887309
1,1,2-Trichloroethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
1,1,2-Trichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,1-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
1,1-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2,4-Trichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2,4-Trimethylbenzene	37.5	DLA	4.9	ug/m3		28-OCT-19	R4887309
1,2,4-Trimethylbenzene	7.6	DLA	1.0	ppb(V)		28-OCT-19	R4887309
1,2-Dibromoethane	<1.5		1.5	ug/m3		25-OCT-19	R4887309
1,2-Dibromoethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,2-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-36 WASTE SOIL PILE 6							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:37							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
1,2-Dichloroethane	<0.81		0.81	ug/m3		25-OCT-19	R4887309
1,2-Dichloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,2-Dichloropropane	<0.92		0.92	ug/m3		25-OCT-19	R4887309
1,2-Dichloropropane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	15.8		0.98	ug/m3		25-OCT-19	R4887309
1,3,5-Trimethylbenzene	3.21		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Butadiene	<0.44		0.44	ug/m3		25-OCT-19	R4887309
1,3-Butadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,3-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,3-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dichlorobenzene	<1.2		1.2	ug/m3		25-OCT-19	R4887309
1,4-Dichlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
1,4-Dioxane	<0.72		0.72	ug/m3		25-OCT-19	R4887309
1,4-Dioxane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
2-Hexanone	<14	DLQ	14	ug/m3		25-OCT-19	R4887309
2-Hexanone	<3.3	DLQ	3.3	ppb(V)		25-OCT-19	R4887309
4-Ethyltoluene	11.1		0.98	ug/m3		25-OCT-19	R4887309
4-Ethyltoluene	2.25		0.20	ppb(V)		25-OCT-19	R4887309
Acetone	49.9	DLA	5.9	ug/m3		28-OCT-19	R4887309
Acetone	21.0	DLA	2.5	ppb(V)		28-OCT-19	R4887309
Allyl chloride	<0.63		0.63	ug/m3		25-OCT-19	R4887309
Allyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Benzene	3.27		0.64	ug/m3		25-OCT-19	R4887309
Benzene	1.02		0.20	ppb(V)		25-OCT-19	R4887309
Benzyl chloride	<1.0		1.0	ug/m3		25-OCT-19	R4887309
Benzyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromodichloromethane	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Bromodichloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromoform	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Bromoform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Bromomethane	<0.78		0.78	ug/m3		25-OCT-19	R4887309
Bromomethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Carbon Disulfide	28.7	DLA	3.1	ug/m3		28-OCT-19	R4887309
Carbon Disulfide	9.2	DLA	1.0	ppb(V)		28-OCT-19	R4887309
Carbon Tetrachloride	<1.3		1.3	ug/m3		25-OCT-19	R4887309
Carbon Tetrachloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chlorobenzene	<0.92		0.92	ug/m3		25-OCT-19	R4887309
Chlorobenzene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroethane	<0.53		0.53	ug/m3		25-OCT-19	R4887309
Chloroethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloroform	<0.98		0.98	ug/m3		25-OCT-19	R4887309
Chloroform	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Chloromethane	0.71		0.41	ug/m3		25-OCT-19	R4887309
Chloromethane	0.34		0.20	ppb(V)		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<2.4		2.4	ug/m3		25-OCT-19	R4887309
cis-1,2-Dichloroethene	<0.60		0.60	ppb(V)		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
cis-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Cyclohexane	8.19	AI	0.69	ug/m3		25-OCT-19	R4887309
Cyclohexane	2.38	AI	0.20	ppb(V)		25-OCT-19	R4887309
Dibromochloromethane	<1.7		1.7	ug/m3		25-OCT-19	R4887309

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-36 WASTE SOIL PILE 6							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:37							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
Dibromochloromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Dichlorodifluoromethane	1.41		0.99	ug/m3		25-OCT-19	R4887309
Dichlorodifluoromethane	0.29		0.20	ppb(V)		25-OCT-19	R4887309
Ethyl acetate	<1.5	DLQ	1.5	ug/m3		25-OCT-19	R4887309
Ethyl acetate	<0.40	DLQ	0.40	ppb(V)		25-OCT-19	R4887309
Ethylbenzene	20.2	DLA	4.3	ug/m3		28-OCT-19	R4887309
Ethylbenzene	4.6	DLA	1.0	ppb(V)		28-OCT-19	R4887309
Freon 113	<1.5		1.5	ug/m3		25-OCT-19	R4887309
Freon 113	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Freon 114	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Freon 114	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Hexachlorobutadiene	<2.1		2.1	ug/m3		25-OCT-19	R4887309
Hexachlorobutadiene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Isooctane	<3.6	DLQ	3.6	ug/m3		25-OCT-19	R4887309
Isooctane	<0.78	DLQ	0.78	ppb(V)		25-OCT-19	R4887309
Isopropyl alcohol	<2.5		2.5	ug/m3		25-OCT-19	R4887309
Isopropyl alcohol	<1.0		1.0	ppb(V)		25-OCT-19	R4887309
Isopropylbenzene	2.89		0.98	ug/m3		25-OCT-19	R4887309
Isopropylbenzene	0.59		0.20	ppb(V)		25-OCT-19	R4887309
m&p-Xylene	103	DLA	8.7	ug/m3		28-OCT-19	R4887309
m&p-Xylene	23.8	DLA	2.0	ppb(V)		28-OCT-19	R4887309
Methyl ethyl ketone	6.94		0.59	ug/m3		25-OCT-19	R4887309
Methyl ethyl ketone	2.35		0.20	ppb(V)		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.82		0.82	ug/m3		25-OCT-19	R4887309
Methyl isobutyl ketone	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Methylene chloride	<0.69		0.69	ug/m3		25-OCT-19	R4887309
Methylene chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
MTBE	<0.72		0.72	ug/m3		25-OCT-19	R4887309
MTBE	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
n-Heptane	46.1	DLA	4.1	ug/m3		28-OCT-19	R4887309
n-Heptane	11.3	DLA	1.0	ppb(V)		28-OCT-19	R4887309
n-Hexane	24.0	DLA	3.5	ug/m3		28-OCT-19	R4887309
n-Hexane	6.8	DLA	1.0	ppb(V)		28-OCT-19	R4887309
o-Xylene	26.8	DLA	4.3	ug/m3		28-OCT-19	R4887309
o-Xylene	6.2	DLA	1.0	ppb(V)		28-OCT-19	R4887309
Propylene	1.80		0.34	ug/m3		25-OCT-19	R4887309
Propylene	1.05		0.20	ppb(V)		25-OCT-19	R4887309
Styrene	<0.85		0.85	ug/m3		25-OCT-19	R4887309
Styrene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrachloroethylene	<1.4		1.4	ug/m3		25-OCT-19	R4887309
Tetrachloroethylene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Tetrahydrofuran	<0.59		0.59	ug/m3		25-OCT-19	R4887309
Tetrahydrofuran	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Toluene	18.8	DLA	3.8	ug/m3		28-OCT-19	R4887309
Toluene	5.0	DLA	1.0	ppb(V)		28-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.79		0.79	ug/m3		25-OCT-19	R4887309
trans-1,2-Dichloroethene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.91		0.91	ug/m3		25-OCT-19	R4887309
trans-1,3-Dichloropropene	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Trichloroethylene	50.6	DLA	5.4	ug/m3		28-OCT-19	R4887309
Trichloroethylene	9.4	DLA	1.0	ppb(V)		28-OCT-19	R4887309

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2364217-36 WASTE SOIL PILE 6							
Sampled By: JQS, MUV, TFL on 09-OCT-19 @ 12:37							
Matrix: AIR							
<b>Canister EPA TO-15</b>							
Trichlorofluoromethane	<1.1		1.1	ug/m3		25-OCT-19	R4887309
Trichlorofluoromethane	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl acetate	<1.8		1.8	ug/m3		25-OCT-19	R4887309
Vinyl acetate	<0.50		0.50	ppb(V)		25-OCT-19	R4887309
Vinyl bromide	<0.87		0.87	ug/m3		25-OCT-19	R4887309
Vinyl bromide	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Vinyl chloride	<0.51		0.51	ug/m3		25-OCT-19	R4887309
Vinyl chloride	<0.20		0.20	ppb(V)		25-OCT-19	R4887309
Surrogate: 4-Bromofluorobenzene	97.7		50-150	%		25-OCT-19	R4887309
<b>Canister Information</b>							
Pressure on Receipt	-3.1		-30	in Hg	11-OCT-19	11-OCT-19	R4867884
Canister ID	00946-0024				11-OCT-19	11-OCT-19	R4867884
Regulator ID	G117				11-OCT-19	11-OCT-19	R4867884
Batch Proof ID	190813.103				11-OCT-19	11-OCT-19	R4867884

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

**Sample Parameter Qualifier Key:**

Qualifier	Description
ABL	Approximate Result: May Be Biased Low
AI	Analytical interferences may be present. Result may be biased high.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLA	Detection Limit adjusted for required dilution
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

**Test Method References:**

ALS Test Code	Matrix	Test Description	Method Reference**
CAN-DATA-WT	Canister	Canister Information	EPA TO-15
Batch Proof ID, Canister ID, Pressure on Receipt, Regulator ID.			
REDUC-SULF-22-SCD-WT	Canister	22 Reduced Sulfur Compounds by GC-SCD	ASTM D5504

This analysis is performed using procedures adapted from ASTM D5504. Air samples are collected into cleaned evacuated silica-coated canisters. By means of a loop system, a volume of air is transferred from the canister and cryofocused before determining the sulfur compounds by GC-SCD. Silica coated passivated canisters may allow for reliable sample analysis after 24 hours. In such cases, analysis is recommended within 7 days of collection.

Canister samples will be retained for 7 calendar days after final report. If you require a longer canister storage time, please contact your account manager.

TO15-GCMS-WT	Canister	Canister EPA TO-15	EPA TO-15
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This analysis is performed using procedures adapted from EPA Method TO-15. Air samples are collected into cleaned evacuated canisters. A volume of air sample is transferred from the canister to a preconcentrator system where the analytes are trapped & focused. The analytes are then thermally desorbed into a GC-MSD for analysis. Test results are not blank corrected unless indicated by a qualifier.

Canister samples will be retained for 7 calendar days after final report. If you require a longer canister storage time, please contact your account manager.

TRS-22-SCD-WT	Canister	Total Reduced Sulfur as H <sub>2</sub> S	ASTM D5504
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This analysis is performed using procedures adapted from ASTM D5504. Air samples are collected into cleaned evacuated silica-coated canisters. By means of a loop system, a volume of air is transferred from the canister and cryofocused before determining the sulfur compounds by GC-SCD. Silica coated passivated canisters may allow for reliable sample analysis after 24 hours. In such cases, analysis is recommended within 7 days of collection.

Canister samples will be retained for 7 calendar days after final report. If you require a longer canister storage time, please contact your account manager.

TRS6-SUM-CALC-WT	Canister	Total Reduced Sulfur as H <sub>2</sub> S (NPRI-6)	ASTM D5504
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This analysis is performed using procedures adapted from ASTM D5504. Air samples are collected into cleaned evacuated silica-coated canisters. A volume of air sample is transferred from the canister to a preconcentrator system where the analytes are trapped & focused. The analytes are then thermally desorbed into a GC-SCD for analysis. Test results are not blank corrected unless indicated by a qualifier. Canister samples will be retained for 7 calendar days after final report. If you require a longer canister storage time, please contact your Account Manager.

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

**Chain of Custody Numbers:**

## Reference Information

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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#### GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



## Quality Control Report

Workorder: L2364217

Report Date: 29-OCT-19

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Client: RWDI AIR INC. (Guelph)  
 600 Southgate Drive  
 Guelph Ont N1G 4P6

Contact: Brad Bergeron

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>CAN-DATA-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4867672</b>							
<b>WG3189142-1</b>	<b>MB</b>							
Pressure on Receipt			-30.0		in Hg			11-OCT-19
<b>Batch</b>	<b>R4867884</b>							
<b>WG3189541-1</b>	<b>MB</b>							
Pressure on Receipt			-30.0		in Hg			11-OCT-19
<b>REDUC-SULF-22-SCD-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4868954</b>							
<b>WG3190914-2</b>	<b>LCS</b>							
Carbonyl sulfide			94.9		%		60-140	11-OCT-19
Hydrogen Sulfide			73.5		%		60-140	11-OCT-19
Methyl mercaptan			103.2		%		60-140	11-OCT-19
<b>WG3190914-3</b>	<b>LCSD</b>	<b>WG3190914-2</b>						
Carbonyl sulfide		94.9	100		%	4.9	25	11-OCT-19
Hydrogen Sulfide		73.5	76		%	3.0	25	11-OCT-19
Methyl mercaptan		103.2	109		%	5.2	25	11-OCT-19
<b>WG3190914-1</b>	<b>MB</b>							
Carbon Disulfide			<2.0		ppb(V)		2	12-OCT-19
Carbonyl sulfide			<4.0		ppb(V)		4	12-OCT-19
Dimethyl sulfide			<4.0		ppb(V)		4	12-OCT-19
Dimethyl disulfide			<2.0		ppb(V)		2	12-OCT-19
Hydrogen Sulfide			<4.0		ppb(V)		4	12-OCT-19
Methyl mercaptan			<4.0		ppb(V)		4	12-OCT-19
<b>Batch</b>	<b>R4872426</b>							
<b>WG3193245-4</b>	<b>DUP</b>	<b>L2364217-30</b>						
Carbon Disulfide		<2.0	<2.0	RPD-NA	ppb(V)	N/A	30	15-OCT-19
Carbonyl sulfide		30.4	28.8		ppb(V)	5.2	30	15-OCT-19
Dimethyl sulfide		<4.0	<4.0	RPD-NA	ppb(V)	N/A	30	15-OCT-19
Dimethyl disulfide		<2.0	<2.0	RPD-NA	ppb(V)	N/A	30	15-OCT-19
Hydrogen Sulfide		<4.0	<4.0	RPD-NA	ppb(V)	N/A	30	15-OCT-19
Methyl mercaptan		<4.0	<4.0	RPD-NA	ppb(V)	N/A	30	15-OCT-19
<b>WG3193245-2</b>	<b>LCS</b>							
Carbonyl sulfide			86.0		%		60-140	15-OCT-19
Hydrogen Sulfide			73.8		%		60-140	15-OCT-19
Methyl mercaptan			85.7		%		60-140	15-OCT-19
<b>WG3193245-3</b>	<b>LCSD</b>	<b>WG3193245-2</b>						



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>REDUC-SULF-22-SCD-WT Canister</b>								
<b>Batch</b>	<b>R4872426</b>							
<b>WG3193245-3 LCSD</b>		<b>WG3193245-2</b>						
Carbonyl sulfide		86.0	82		%	4.9	25	15-OCT-19
Hydrogen Sulfide		73.8	72		%	2.3	25	15-OCT-19
Methyl mercaptan		85.7	82		%	4.5	25	15-OCT-19
<b>WG3193245-1 MB</b>								
Carbon Disulfide			<2.0		ppb(V)		2	14-OCT-19
Carbonyl sulfide			<4.0		ppb(V)		4	14-OCT-19
Dimethyl sulfide			<4.0		ppb(V)		4	14-OCT-19
Dimethyl disulfide			<2.0		ppb(V)		2	14-OCT-19
Hydrogen Sulfide			<4.0		ppb(V)		4	14-OCT-19
Methyl mercaptan			<4.0		ppb(V)		4	14-OCT-19
<b>TO15-GCMS-WT Canister</b>								
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-4 DUP</b>		<b>L2364217-31</b>						
1,1,1-Trichloroethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,1,2,2-Tetrachloroethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,1,2-Trichloroethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,1-Dichloroethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,1-Dichloroethene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,2,4-Trichlorobenzene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,2,4-Trimethylbenzene		0.25	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,2-Dichlorobenzene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,2-Dichloroethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,2-Dichloropropane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,3,5-Trimethylbenzene		0.23	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,3-Butadiene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,3-Dichlorobenzene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,4-Dichlorobenzene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
1,4-Dioxane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
2-Hexanone		<1.0	<1.0	RPD-NA	ppb(V)	N/A	30	25-OCT-19
4-Ethyltoluene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Acetone		4.04	4.22		ppb(V)	4.5	30	25-OCT-19
Allyl chloride		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Benzene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TO15-GCMS-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-4</b>	<b>DUP</b>	<b>L2364217-31</b>						
Benzyl chloride		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Bromodichloromethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Bromoform		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Bromomethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Carbon Disulfide		0.26	0.25		ppb(V)	3.5	30	25-OCT-19
Carbon Tetrachloride		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Chlorobenzene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Chloroethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Chloroform		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Chloromethane		0.40	0.44		ppb(V)	9.9	30	25-OCT-19
cis-1,2-Dichloroethene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
cis-1,3-Dichloropropene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Cyclohexane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Dibromochloromethane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Dichlorodifluoromethane		0.41	0.44		ppb(V)	7.0	30	25-OCT-19
Ethyl acetate		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Ethylbenzene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Freon 113		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Freon 114		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Hexachlorobutadiene		0.31	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Isooctane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Isopropyl alcohol		<1.0	<1.0	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Isopropylbenzene		0.21	<0.20	RPD-NA	ppb(V)	N/A	50	25-OCT-19
m&p-Xylene		0.40	<0.40	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Methyl ethyl ketone		0.50	0.45		ppb(V)	8.9	30	25-OCT-19
Methyl isobutyl ketone		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Methylene chloride		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
MTBE		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
n-Heptane		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
n-Hexane		0.21	0.21		ppb(V)	0.6	30	25-OCT-19
o-Xylene		0.21	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Propylene		0.35	0.36		ppb(V)	3.8	30	25-OCT-19
Styrene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Tetrachloroethylene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TO15-GCMS-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-4</b>	<b>DUP</b>	<b>L2364217-31</b>						
Tetrahydrofuran		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Toluene		0.69	0.71		ppb(V)	3.3	30	25-OCT-19
trans-1,2-Dichloroethene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
trans-1,3-Dichloropropene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Trichloroethylene		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Trichlorofluoromethane		<0.20	0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Vinyl acetate		<0.50	<0.50	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Vinyl bromide		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
Vinyl chloride		<0.20	<0.20	RPD-NA	ppb(V)	N/A	30	25-OCT-19
<b>WG3200396-2</b>	<b>LCS</b>							
1,1,1-Trichloroethane			95.2		%		70-130	25-OCT-19
1,1,2,2-Tetrachloroethane			98.5		%		70-130	25-OCT-19
1,1,2-Trichloroethane			99.3		%		70-130	25-OCT-19
1,1-Dichloroethane			100.0		%		70-130	25-OCT-19
1,1-Dichloroethene			97.1		%		70-130	25-OCT-19
1,2,4-Trichlorobenzene			77.7		%		70-130	25-OCT-19
1,2,4-Trimethylbenzene			93.9		%		70-130	25-OCT-19
1,2-Dibromoethane			94.3		%		70-130	25-OCT-19
1,2-Dichlorobenzene			91.3		%		70-130	25-OCT-19
1,2-Dichloroethane			96.7		%		70-130	25-OCT-19
1,2-Dichloropropane			99.2		%		70-130	25-OCT-19
1,3,5-Trimethylbenzene			95.7		%		70-130	25-OCT-19
1,3-Butadiene			110.9		%		70-130	25-OCT-19
1,3-Dichlorobenzene			93.9		%		70-130	25-OCT-19
1,4-Dichlorobenzene			88.4		%		70-130	25-OCT-19
1,4-Dioxane			97.0		%		70-130	25-OCT-19
2-Hexanone			86.7		%		70-130	25-OCT-19
4-Ethyltoluene			90.7		%		70-130	25-OCT-19
Acetone			113.8		%		70-130	25-OCT-19
Allyl chloride			91.8		%		70-130	25-OCT-19
Benzene			97.5		%		70-130	25-OCT-19
Benzyl chloride			78.4		%		70-130	25-OCT-19
Bromodichloromethane			103.9		%		70-130	25-OCT-19
Bromoform			99.2		%		70-130	25-OCT-19

## Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TO15-GCMS-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-2</b>	<b>LCS</b>							
Bromomethane			96.9		%		70-130	25-OCT-19
Carbon Disulfide			104.8		%		70-130	25-OCT-19
Carbon Tetrachloride			95.8		%		70-130	25-OCT-19
Chlorobenzene			96.9		%		70-130	25-OCT-19
Chloroethane			102.6		%		70-130	25-OCT-19
Chloroform			93.1		%		70-130	25-OCT-19
Chloromethane			106.1		%		70-130	25-OCT-19
cis-1,2-Dichloroethene			99.3		%		70-130	25-OCT-19
cis-1,3-Dichloropropene			96.4		%		70-130	25-OCT-19
Cyclohexane			97.3		%		70-130	25-OCT-19
Dibromochloromethane			95.5		%		70-130	25-OCT-19
Dichlorodifluoromethane			105.8		%		70-130	25-OCT-19
Ethyl acetate			129.1		%		70-130	25-OCT-19
Ethylbenzene			99.6		%		70-130	25-OCT-19
Freon 113			94.7		%		70-130	25-OCT-19
Freon 114			105.2		%		70-130	25-OCT-19
Hexachlorobutadiene			82.9		%		70-130	25-OCT-19
Isooctane			95.3		%		70-130	25-OCT-19
Isopropyl alcohol			76.8		%		70-130	25-OCT-19
Isopropylbenzene			97.2		%		50-150	25-OCT-19
m&p-Xylene			98.8		%		70-130	25-OCT-19
Methyl ethyl ketone			98.5		%		70-130	25-OCT-19
Methyl isobutyl ketone			95.8		%		70-130	25-OCT-19
Methylene chloride			97.2		%		70-130	25-OCT-19
MTBE			96.3		%		70-130	25-OCT-19
n-Heptane			95.6		%		70-130	25-OCT-19
n-Hexane			101.4		%		70-130	25-OCT-19
o-Xylene			96.6		%		70-130	25-OCT-19
Propylene			93.6		%		70-130	25-OCT-19
Styrene			96.9		%		70-130	25-OCT-19
Tetrachloroethylene			102.8		%		70-130	25-OCT-19
Tetrahydrofuran			91.7		%		70-130	25-OCT-19
Toluene			97.9		%		70-130	25-OCT-19
trans-1,2-Dichloroethene			104.5		%		70-130	25-OCT-19

## Quality Control Report

Workorder: L2364217

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TO15-GCMS-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-2</b>	<b>LCS</b>							
trans-1,3-Dichloropropene			92.5		%		70-130	25-OCT-19
Trichloroethylene			103.7		%		70-130	25-OCT-19
Trichlorofluoromethane			107.3		%		70-130	25-OCT-19
Vinyl acetate			47.5	LCS-ND	%		70-130	25-OCT-19
Vinyl bromide			98.0		%		70-130	25-OCT-19
Vinyl chloride			99.6		%		70-130	25-OCT-19
<b>WG3200396-3</b>	<b>LCS</b>	<b>WG3200396-2</b>						
1,1,1-Trichloroethane		95.2	100		%	4.7	25	25-OCT-19
1,1,2,2-Tetrachloroethane		98.5	103		%	4.0	25	25-OCT-19
1,1,2-Trichloroethane		99.3	102		%	2.4	25	25-OCT-19
1,1-Dichloroethane		100.0	104		%	3.5	25	25-OCT-19
1,1-Dichloroethene		97.1	99		%	2.4	25	25-OCT-19
1,2,4-Trichlorobenzene		77.7	81		%	3.7	25	25-OCT-19
1,2,4-Trimethylbenzene		93.9	97		%	3.2	25	25-OCT-19
1,2-Dibromoethane		94.3	97		%	2.7	25	25-OCT-19
1,2-Dichlorobenzene		91.3	95		%	4.4	25	25-OCT-19
1,2-Dichloroethane		96.7	102		%	4.9	25	25-OCT-19
1,2-Dichloropropane		99.2	102		%	3.2	25	25-OCT-19
1,3,5-Trimethylbenzene		95.7	100		%	4.0	25	25-OCT-19
1,3-Butadiene		110.9	108		%	2.4	25	25-OCT-19
1,3-Dichlorobenzene		93.9	100		%	5.9	25	25-OCT-19
1,4-Dichlorobenzene		88.4	91		%	3.1	25	25-OCT-19
1,4-Dioxane		97.0	104		%	6.7	25	25-OCT-19
2-Hexanone		86.7	91		%	5.2	25	25-OCT-19
4-Ethyltoluene		90.7	94		%	3.4	25	25-OCT-19
Acetone		113.8	107		%	6.0	25	25-OCT-19
Allyl chloride		91.8	95		%	3.6	25	25-OCT-19
Benzene		97.5	102		%	4.1	25	25-OCT-19
Benzyl chloride		78.4	80		%	1.4	25	25-OCT-19
Bromodichloromethane		103.9	112		%	7.6	25	25-OCT-19
Bromoform		99.2	104		%	4.8	25	25-OCT-19
Bromomethane		96.9	101		%	4.4	25	25-OCT-19
Carbon Disulfide		104.8	107		%	1.7	25	25-OCT-19
Carbon Tetrachloride		95.8	98		%	2.8	25	25-OCT-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TO15-GCMS-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-3</b>	<b>LCSD</b>	<b>WG3200396-2</b>						
Chlorobenzene		96.9	99		%	2.2	25	25-OCT-19
Chloroethane		102.6	108		%	4.8	25	25-OCT-19
Chloroform		93.1	98		%	5.4	25	25-OCT-19
Chloromethane		106.1	111		%	4.9	25	25-OCT-19
cis-1,2-Dichloroethene		99.3	104		%	4.7	25	25-OCT-19
cis-1,3-Dichloropropene		96.4	105		%	8.2	25	25-OCT-19
Cyclohexane		97.3	109		%	12	25	25-OCT-19
Dibromochloromethane		95.5	99		%	3.7	25	25-OCT-19
Dichlorodifluoromethane		105.8	107		%	1.3	25	25-OCT-19
Ethyl acetate		129.1	131		%	1.6	25	25-OCT-19
Ethylbenzene		99.6	103		%	3.3	25	25-OCT-19
Freon 113		94.7	98		%	3.8	25	25-OCT-19
Freon 114		105.2	107		%	2.0	25	25-OCT-19
Hexachlorobutadiene		82.9	88		%	6.1	25	25-OCT-19
Isooctane		95.3	103		%	7.8	25	25-OCT-19
Isopropyl alcohol		76.8	78		%	2.2	25	25-OCT-19
Isopropylbenzene		97.2	99		%	1.9	50	25-OCT-19
m&p-Xylene		98.8	102		%	3.4	25	25-OCT-19
Methyl ethyl ketone		98.5	96		%	2.5	25	25-OCT-19
Methyl isobutyl ketone		95.8	105		%	9.6	25	25-OCT-19
Methylene chloride		97.2	100		%	2.5	25	25-OCT-19
MTBE		96.3	99		%	2.5	25	25-OCT-19
n-Heptane		95.6	106		%	11	25	25-OCT-19
n-Hexane		101.4	103		%	1.1	25	25-OCT-19
o-Xylene		96.6	101		%	4.6	25	25-OCT-19
Propylene		93.6	99		%	5.9	25	25-OCT-19
Styrene		96.9	96		%	0.7	25	25-OCT-19
Tetrachloroethylene		102.8	104		%	1.5	25	25-OCT-19
Tetrahydrofuran		91.7	98		%	7.0	25	25-OCT-19
Toluene		97.9	102		%	4.4	25	25-OCT-19
trans-1,2-Dichloroethene		104.5	102		%	2.1	25	25-OCT-19
trans-1,3-Dichloropropene		92.5	100		%	7.7	25	25-OCT-19
Trichloroethylene		103.7	113		%	8.7	25	25-OCT-19
Trichlorofluoromethane		107.3	109		%	1.3	25	25-OCT-19



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TO15-GCMS-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-3</b>	<b>LCSD</b>	<b>WG3200396-2</b>						
Vinyl acetate		47.5	47		%	1.4	25	25-OCT-19
Vinyl bromide		98.0	98		%	0.2	25	25-OCT-19
Vinyl chloride		99.6	98		%	1.1	25	25-OCT-19
<b>WG3200396-1</b>	<b>MB</b>							
1,1,1-Trichloroethane			<0.20		ppb(V)		0.2	25-OCT-19
1,1,2,2-Tetrachloroethane			<0.20		ppb(V)		0.2	25-OCT-19
1,1,2-Trichloroethane			<0.20		ppb(V)		0.2	25-OCT-19
1,1-Dichloroethane			<0.20		ppb(V)		0.2	25-OCT-19
1,1-Dichloroethene			<0.20		ppb(V)		0.2	25-OCT-19
1,2,4-Trichlorobenzene			<0.20		ppb(V)		0.2	25-OCT-19
1,2,4-Trimethylbenzene			<0.20		ppb(V)		0.2	25-OCT-19
1,2-Dibromoethane			<0.20		ppb(V)		0.2	25-OCT-19
1,2-Dichlorobenzene			<0.20		ppb(V)		0.2	25-OCT-19
1,2-Dichloroethane			<0.20		ppb(V)		0.2	25-OCT-19
1,2-Dichloropropane			<0.20		ppb(V)		0.2	25-OCT-19
1,3,5-Trimethylbenzene			<0.20		ppb(V)		0.2	25-OCT-19
1,3-Butadiene			<0.20		ppb(V)		0.2	25-OCT-19
1,3-Dichlorobenzene			<0.20		ppb(V)		0.2	25-OCT-19
1,4-Dichlorobenzene			<0.20		ppb(V)		0.2	25-OCT-19
1,4-Dioxane			<0.20		ppb(V)		0.2	25-OCT-19
2-Hexanone			<1.0		ppb(V)		1	25-OCT-19
4-Ethyltoluene			<0.20		ppb(V)		0.2	25-OCT-19
Acetone			<0.50		ppb(V)		0.5	25-OCT-19
Allyl chloride			<0.20		ppb(V)		0.2	25-OCT-19
Benzene			<0.20		ppb(V)		0.2	25-OCT-19
Benzyl chloride			<0.20		ppb(V)		0.2	25-OCT-19
Bromodichloromethane			<0.20		ppb(V)		0.2	25-OCT-19
Bromoform			<0.20		ppb(V)		0.2	25-OCT-19
Bromomethane			<0.20		ppb(V)		0.2	25-OCT-19
Carbon Disulfide			<0.20		ppb(V)		0.2	25-OCT-19
Carbon Tetrachloride			<0.20		ppb(V)		0.2	25-OCT-19
Chlorobenzene			<0.20		ppb(V)		0.2	25-OCT-19
Chloroethane			<0.20		ppb(V)		0.2	25-OCT-19
Chloroform			<0.20		ppb(V)		0.2	25-OCT-19



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TO15-GCMS-WT</b>		<b>Canister</b>						
<b>Batch</b>	<b>R4887309</b>							
<b>WG3200396-1</b>	<b>MB</b>							
Chloromethane			<0.20		ppb(V)		0.2	25-OCT-19
cis-1,2-Dichloroethene			<0.20		ppb(V)		0.2	25-OCT-19
cis-1,3-Dichloropropene			<0.20		ppb(V)		0.2	25-OCT-19
Cyclohexane			0.23	B	ppb(V)		0.2	25-OCT-19
Dibromochloromethane			<0.20		ppb(V)		0.2	25-OCT-19
Dichlorodifluoromethane			<0.20		ppb(V)		0.2	25-OCT-19
Ethyl acetate			<0.20		ppb(V)		0.2	25-OCT-19
Ethylbenzene			<0.20		ppb(V)		0.2	25-OCT-19
Freon 113			<0.20		ppb(V)		0.2	25-OCT-19
Freon 114			<0.20		ppb(V)		0.2	25-OCT-19
Hexachlorobutadiene			<0.20		ppb(V)		0.2	25-OCT-19
Isooctane			<0.20		ppb(V)		0.2	25-OCT-19
Isopropyl alcohol			<1.0		ppb(V)		1	25-OCT-19
Isopropylbenzene			<0.20		ppb(V)		0.2	25-OCT-19
m&p-Xylene			<0.40		ppb(V)		0.4	25-OCT-19
Methyl ethyl ketone			<0.20		ppb(V)		0.2	25-OCT-19
Methyl isobutyl ketone			<0.20		ppb(V)		0.2	25-OCT-19
Methylene chloride			<0.20		ppb(V)		0.2	25-OCT-19
MTBE			<0.20		ppb(V)		0.2	25-OCT-19
n-Heptane			<0.20		ppb(V)		0.2	25-OCT-19
n-Hexane			<0.20		ppb(V)		0.2	25-OCT-19
o-Xylene			<0.20		ppb(V)		0.2	25-OCT-19
Propylene			<0.20		ppb(V)		0.2	25-OCT-19
Styrene			<0.20		ppb(V)		0.2	25-OCT-19
Tetrachloroethylene			<0.20		ppb(V)		0.2	25-OCT-19
Tetrahydrofuran			<0.20		ppb(V)		0.2	25-OCT-19
Toluene			<0.20		ppb(V)		0.2	25-OCT-19
trans-1,2-Dichloroethene			<0.20		ppb(V)		0.2	25-OCT-19
trans-1,3-Dichloropropene			<0.20		ppb(V)		0.2	25-OCT-19
Trichloroethylene			<0.20		ppb(V)		0.2	25-OCT-19
Trichlorofluoromethane			<0.20		ppb(V)		0.2	25-OCT-19
Vinyl acetate			<0.50		ppb(V)		0.5	25-OCT-19
Vinyl bromide			<0.20		ppb(V)		0.2	25-OCT-19
Vinyl chloride			<0.20		ppb(V)		0.2	25-OCT-19





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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TO15-GCMS-WT	Canister							
Batch	R4887309							
WG3200396-1	MB							
Surrogate: 4-Bromofluorobenzene			102.6		%		50-150	25-OCT-19

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## Legend:

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Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

## Sample Parameter Qualifier Definitions:

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Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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## Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



## Batch Proof Report

Batch ID	Canister ID	Parameters	Value	Units	Date	Analyst
B190813.118	00946-0097	1,1,1-Trichloroethane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,1,1,2-Tetrachloroethane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,1,2,2-Tetrachloroethane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,1,2-Trichloroethane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,1-Dichloroethane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,1-Dichloroethane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,2,4-Trichlorobenzene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,2,4-Trimethylbenzene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,2-Dibromoethane	<0.01	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,2-Dichlorobenzene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,2-Dichloroethane	<0.01	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,2-Dichloropropane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,3,5-Trimethylbenzene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,3-Butadiene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,3-Dichlorobenzene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,4-Dichlorobenzene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	1,4-Dioxane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	2-Chlorophenol	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	2-Hexanone	<1.0	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	4-Ethyltoluene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Acetone	<0.50	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Allyl Chloride	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Benzene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Benzyl Chloride	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Bromodichloromethane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Bromobenzene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Bromoform	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Bromomethane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Carbon Disulfide	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Carbon Tetrachloride	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Chlorobenzene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Chloroethane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Chloroform	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Chloromethane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	cis-1,2-Dichloroethene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	cis-1,3-Dichloropropene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Cyclohexane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Dibromochloromethane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Dichlorodifluoromethane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Ethyl Acetate	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Ethyl Benzene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Freon 113	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Freon 114	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Hexachlorobutadiene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Isooctane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Isopropyl Alcohol	<1.0	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Isopropylbenzene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	m&p-Xylene	<0.04	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Methyl Ethyl Ketone	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Methylcyclohexane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Methyl Isobutyl Ketone	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Methylene Chloride	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	MTBE	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Naphthalene	<0.05	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	n-Decane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	n-Heptane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	n-Hexane	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	o-Xylene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Propylene	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Styrene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Tetrachloroethylene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Tetrahydrofuran	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Toluene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	trans-1,2-Dichloroethene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	trans-1,3-Dichloropropene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Trichloroethylene	<0.02	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Trichlorofluoromethane	<0.20	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Vinyl Acetate	<0.50	ppb(V)	23-Aug-19	DT1
B190813.118	00946-0097	Vinyl Bromide	<0.20	ppb(V)	23-Aug-19	DT1

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ALS CANADA LTD. Part of the ALS Group A Campbell Brothers Limited Company



B190813.118  
B190813.118

00946-0097  
00946-0097

Vinyl Chloride  
4-Bromofluorobenzene

<0.02 ppb(V)  
96.0 %

23-Aug-19  
23-Aug-19

DT1  
DT1



## Batch Proof Report

Batch ID	Canister ID	Parameters	Value	Units	Date	Analyst
B190905.101	00946-0035	1,1,1-Trichloroethane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,1,1,2-Tetrachloroethane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,1,2,2-Tetrachloroethane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,1,2-Trichloroethane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,1-Dichloroethane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,1-Dichloroethene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,2,4-Trichlorobenzene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,2,4-Trimethylbenzene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,2-Dibromoethane	<0.01	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,2-Dichlorobenzene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,2-Dichloroethane	<0.01	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,2-Dichloropropane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,3,5-Trimethylbenzene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,3-Butadiene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,3-Dichlorobenzene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,4-Dichlorobenzene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	1,4-Dioxane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	2-Chlorophenol	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	2-Hexanone	<1.0	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	4-Ethyltoluene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Acetone	<0.50	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Allyl Chloride	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Benzene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Benzyl Chloride	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Bromodichloromethane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Bromobenzene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Bromoform	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Bromomethane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Carbon Disulfide	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Carbon Tetrachloride	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Chlorobenzene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Chloroethane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Chloroform	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Chloromethane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	cis-1,2-Dichloroethene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	cis-1,3-Dichloropropene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Cyclohexane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Dibromochloromethane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Dichlorodifluoromethane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Ethyl Acetate	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Ethyl Benzene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Freon 113	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Freon 114	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Hexachlorobutadiene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Isooctane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Isopropyl Alcohol	<1.0	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Isopropylbenzene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	m&p-Xylene	<0.04	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Methyl Ethyl Ketone	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Methylcyclohexane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Methyl Isobutyl Ketone	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Methylene Chloride	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	MTBE	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Naphthalene	<0.05	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	n-Decane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	n-Heptane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	n-Hexane	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	o-Xylene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Propylene	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Styrene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Tetrachloroethylene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Tetrahydrofuran	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Toluene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	trans-1,2-Dichloroethene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	trans-1,3-Dichloropropene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Trichloroethylene	<0.02	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Trichlorofluoromethane	<0.20	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Vinyl Acetate	<0.50	ppb(V)	17-Sep-19	DT1
B190905.101	00946-0035	Vinyl Bromide	<0.20	ppb(V)	17-Sep-19	DT1

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ALS CANADA LTD. Part of the ALS Group A Campbell Brothers Limited Company



B190905.101  
B190905.101

00946-0035  
00946-0035

Vinyl Chloride  
4-Bromofluorobenzene

<0.02 ppb(V)  
96.3 %

17-Sep-19  
17-Sep-19

DT1  
DT1





## Batch Proof Report

Batch ID	Canister ID	Parameters	Value	Units	Date	Analyst
B190905.217	00946-0141	1,1,1-Trichloroethane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,1,1,2-Tetrachloroethane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,1,2,2-Tetrachloroethane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,1,2-Trichloroethane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,1-Dichloroethane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,1-Dichloroethene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,2,4-Trichlorobenzene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,2,4-Trimethylbenzene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,2-Dibromoethane	<0.01	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,2-Dichlorobenzene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,2-Dichloroethane	<0.01	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,2-Dichloropropane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,3,5-Trimethylbenzene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,3-Butadiene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,3-Dichlorobenzene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,4-Dichlorobenzene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	1,4-Dioxane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	2-Chlorophenol	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	2-Hexanone	<1.0	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	4-Ethyltoluene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Acetone	<0.50	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Allyl Chloride	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Benzene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Benzyl Chloride	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Bromodichloromethane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Bromobenzene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Bromoform	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Bromomethane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Carbon Disulfide	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Carbon Tetrachloride	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Chlorobenzene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Chloroethane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Chloroform	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Chloromethane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	cis-1,2-Dichloroethene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	cis-1,3-Dichloropropene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Cyclohexane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Dibromochloromethane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Dichlorodifluoromethane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Ethyl Acetate	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Ethyl Benzene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Freon 113	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Freon 114	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Hexachlorobutadiene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Isooctane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Isopropyl Alcohol	<1.0	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Isopropylbenzene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	m&p-Xylene	<0.04	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Methyl Ethyl Ketone	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Methylcyclohexane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Methyl Isobutyl Ketone	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Methylene Chloride	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	MTBE	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Naphthalene	<0.05	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	n-Decane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	n-Heptane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	n-Hexane	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	o-Xylene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Propylene	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Styrene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Tetrachloroethylene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Tetrahydrofuran	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Toluene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	trans-1,2-Dichloroethene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	trans-1,3-Dichloropropene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Trichloroethylene	<0.02	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Trichlorofluoromethane	<0.20	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Vinyl Acetate	<0.50	ppb(V)	3-Oct-19	DT1
B190905.217	00946-0141	Vinyl Bromide	<0.20	ppb(V)	3-Oct-19	DT1

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ALS CANADA LTD. Part of the ALS Group A Campbell Brothers Limited Company



B190905.217  
B190905.217

00946-0141  
00946-0141

Vinyl Chloride  
4-Bromofluorobenzene

<0.02 ppb(V)  
93.3 %

3-Oct-19  
3-Oct-19

DT1  
DT1

60 NORTHLAND ROAD, UNIT 1  
WATERLOO, ON N2V 2B8

Phone: (519) 886-6910

Fax: (519) 886-9047

Toll Free: 1-800-668-9878



AIR QUALITY CHAIN OF CUSTODY FORM - Canister/Tube/Gas Bag

**Note:** All TAT Quoted is in business days which exclude statutory holidays and weekends. TAT of samples received past 3:00 pm on Saturday / Sunday begin the next day.

DATE REQUIRED

SERVICE REQUESTED

Rush 3 day (100%)

10 day (regular)

Rush 2 day (200%)

Rush 5 day (50%)

Rush 1 day (300%) - Enquire

COMPANY NAME		RWD1	
OFFICE		600 SOUTHGATE DR., GUELPH	
PROJECT MANAGER		BRAD. BERGERON	
PROJECT #		2000702	
PHONE 519-823-1311 x 2428	FAX		
ACCOUNT #			
QUOTATION # Q76788	PO # 2000702		
SAMPLING INFORMATION			
Sample Date/Time	Canister or Tube ID# (e.g. 060000-XXXX or G0XXXXXXSVI)	Regulator Serial # CS1200-XXXX or GXX	Matrix Type
Date (dd-mmm-yy)	Time (24hr) (hh:mm)		
09/OCT/19	9:30	00946-0100	G316
09/OCT/19	10:28	00946-0046	G94
09/OCT/19	10:30	00946-0165	G311
09/OCT/19	10:37	00946-0188	G79
09/OCT/19	11:19	00946-0226	G242
09/OCT/19	13:49	00946-0309	G171
09/OCT/19	14:39	00946-0231	G279
09/OCT/19	14:30	00946-0057	G173
09/OCT/19	14:22	00946-0145	G103
09/OCT/19	15:09	00946-0321	G177

REGULATION	ANALYSIS REQUEST									
CRITERIA	All rush work requires lab approval before sample submission									
OTHER INFORMATION	SUBMISSION #: L2364217									
REPORT FORMAT/DISTRIBUTION	ENTERED BY: P									
EMAIL <input checked="" type="checkbox"/> FAX <input type="checkbox"/> BOTH <input type="checkbox"/>	DATE/TIME ENTERED: 11 OCT 19 12:28									
SELECT: PDF <input checked="" type="checkbox"/> DIGITAL <input type="checkbox"/> BOTH <input type="checkbox"/>	BIN #:									
EMAIL 1 BRAD.BERGERON@RWD1.COM	Field Conditions (Rain/Wind/Dust/Odour)									
EMAIL 2 JOHN.GREEN@RWD1.COM	Field PID Reading									
TUBE AIR VOLUME - L <input type="checkbox"/> or m <sup>3</sup> <input checked="" type="checkbox"/>	LAB ID									
NPR1-TRS+RS-P-WT	102.7 kPa									
	16°C									
	11km/h E wind									
	0% cloud cover									
	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									

SPECIAL INSTRUCTIONS/COMMENTS

SAMPLED BY: JQS, MUV, TFL

RELINQUISHED BY:

This Chain of Custody Form is only to be used for Air Quality Samples

Matrix Type: Soil Gas Vapour = SG, Indoor Air = IA, Ambient Air = AA, Industrial Hygiene = IH

DATE & TIME: 9:15 AM

RECEIVED BY: [Signature]

DATE & TIME: OCT 11 2019

SAMPLE CONDITION AS RECEIVED

FROZEN

COLD

COOLING-INITIATED

AMBIENT

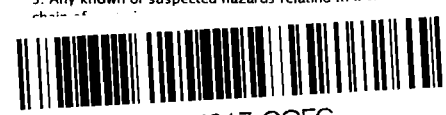
OBSERVATIONS: Yes  No  If yes add SIF

MEAN TEMP

INIT

Notes

1. Quote number must be provided to ensure proper pricing  
 2. TAT may vary dependent on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs.  
 3. Any known or suspected hazards relating to a sample must be noted on the chain of custody form.



L2364217-COFC

60 NORTHLAND ROAD, UNIT 1  
WATERLOO, ON N2V 2B8

Phone: (519) 886-6910

Fax: (519) 886-9047

Toll Free: 1-800-668-9878



AIR QUALITY CHAIN OF CUSTODY FORM - Canister/Tube/Gas Bag

DATE REQUIRED	SERVICE REQUESTED	Rush 3 day (100%)	<input type="checkbox"/>	
	10 day (regular)	<input checked="" type="checkbox"/>	Rush 2 day (200%)	<input type="checkbox"/>
	Rush 5 day (50%)	<input type="checkbox"/>	Rush 1 day (300%) - Enquire	<input type="checkbox"/>

COMPANY NAME <b>RWD1</b>		REGULATION		ANALYSIS REQUEST										All rush work requires lab approval before sample submission					
OFFICE <b>600 SOUTHGATE DRIVE, GUELPH</b>		CRITERIA		TUBE AIR VOLUME - L <input type="checkbox"/> or m <sup>3</sup> <input checked="" type="checkbox"/> NPRI-TRS+RS-P-WT STARTING PRESSURE - Pre-Sampling ("Hg) ENDING PRESSURE - Post Sampling ("Hg) COLLECTION TIME (HRS)										SUBMISSION #:					
PROJECT MANAGER <b>BRAD BERGERON</b>		OTHER INFORMATION												ENTERED BY:					
PROJECT # <b>2000702</b>		REPORT FORMAT/DISTRIBUTION												DATE/TIME ENTERED:					
PHONE <b>519-823-1311 x2428</b>		EMAIL <input checked="" type="checkbox"/> FAX <input type="checkbox"/> BOTH <input type="checkbox"/> SELECT: PDF <input checked="" type="checkbox"/> DIGITAL <input type="checkbox"/> BOTH <input type="checkbox"/> EMAIL 1 <b>BRAD.BERGERON@RWD1.COM</b> EMAIL 2 <b>JOHN.GREEN@RWD1.COM</b>												BIN #:					
ACCOUNT #		EMAIL <input checked="" type="checkbox"/> FAX <input type="checkbox"/> BOTH <input type="checkbox"/> SELECT: PDF <input checked="" type="checkbox"/> DIGITAL <input type="checkbox"/> BOTH <input type="checkbox"/> EMAIL 1 <b>BRAD.BERGERON@RWD1.COM</b> EMAIL 2 <b>JOHN.GREEN@RWD1.COM</b>		FIELD CONDITIONS (Rain/Wind/Dust/Odour)		LAB ID													
QUOTATION # <b>Q76788</b>		PO # <b>2000702</b>		SAMPLE DESCRIPTION TO APPEAR ON REPORT										Field PID Reading					
SAMPLING INFORMATION																			
Sample Date/Time		Canister or Tube ID# (e.g. 060000-XXXX or G0XXXXXXSVI)		Regulator Serial # (CST200-XXXX or GXX)		Matrix Type													
Date (dd-mmm-yy)	Time (24hr) (hh:mm)																		
09/0CT/19	15:50	00946-0283		G288				SOUTH INTERIM COVER 1										102.7 kPa 11	
09/0CT/19	16:18	00946-0276		G280				SOUTH INTERIM COVER 2										16°C 12	
09/0CT/19	16:27	00946-0169		G227				SOUTH INTERIM COVER 3										11 km/h E wind 13	
09/0CT/19	17:00	00946-0152		G220				SOUTH INTERIM COVER 4										0% cloud cover 14	
09/0CT/19	17:08	00946-0304		G289				SOUTH INTERIM COVER 5										15	
10/0CT/19	8:32	00946-0035		G323				SOUTH INTERIM COVER 6										16	
10/0CT/19	8:56	00946-0172		G255				SOUTH INTERIM COVER 7										102.7 kPa 17	
10/0CT/19	9:00	00946-0269		G145				SOUTH INTERIM COVER 8										13°C 18	
10/0CT/19	9:36	00946-0099		G225				SOUTH INTERIM COVER 9										6 km/h E wind 19	
10/0CT/19	9:43	00946-0125		G317				SOUTH INTERIM COVER 10										0% cloud cover 20	
SPECIAL INSTRUCTIONS/COMMENTS				This Chain of Custody Form is only to be used for Air Quality Samples										SAMPLE CONDITION AS RECEIVED					
				Matrix Type		Soil Gas Vapour = SG		Indoor Air = IA		FROZEN		<input type="checkbox"/>		MEAN TEMP					
						Ambient Air = AA		Industrial Hygiene = IH		COLD		<input type="checkbox"/>							
										COOLING INITIATED		<input type="checkbox"/>							
										AMBIENT		<input type="checkbox"/>							
SAMPLED BY: <b>JRS, MUV, TFL</b>		DATE & TIME		RECEIVED BY:				DATE & TIME <b>9:15</b>				OBSERVATIONS		INIT					
RELINQUISHED BY:		DATE & TIME		RECEIVED AT LAB BY:				DATE & TIME <b>09/11/2019</b>				Yes <input type="checkbox"/> No <input type="checkbox"/>							
												If yes add SIF							

Notes

1. Quote number must be provided to ensure proper pricing

2. TAT may vary dependent on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs.

3. Any known or suspected hazards relating to a sample must be noted on the chain of custody in comments section.

REV6-2015



L2364217-COFC

60 NORTHLAND ROAD, UNIT 1  
WATERLOO, ON N2V 2B8

Phone: (519) 886-6910

Fax: (519) 886-9047

Toll Free: 1-800-668-9878



AIR QUALITY CHAIN OF CUSTODY FORM - Canister/Tube/Gas Bag

Note: All TAT Quoted is in business days which exclude statutory holidays and weekends. TAT of samples received past 3:00 pm on Saturday / Sunday begin the next day.

DATE REQUIRED	SERVICE REQUESTED	Rush 3 day (100%)	<input type="checkbox"/>	
	10 day (regular)	<input checked="" type="checkbox"/>	Rush 2 day (200%)	<input type="checkbox"/>
	Rush 5 day (50%)	<input type="checkbox"/>	Rush 1 day (300%) - Enquire	<input type="checkbox"/>

COMPANY NAME: **RWD1**

OFFICE: **600 SOUTHGATE DR., GUELPH**

PROJECT MANAGER: **BRAD BERGERON**

PROJECT #: **2000702**

PHONE: **519-823-1711 x2428** FAX: \_\_\_\_\_

ACCOUNT #: \_\_\_\_\_

QUOTATION #: **Q76788** PO #: **2000702**

REGULATION: \_\_\_\_\_

CRITERIA: \_\_\_\_\_

OTHER INFORMATION: \_\_\_\_\_

REPORT FORMAT/DISTRIBUTION: \_\_\_\_\_

EMAIL  FAX \_\_\_\_\_ BOTH \_\_\_\_\_

SELECT: PDF  DIGITAL \_\_\_\_\_ BOTH \_\_\_\_\_

EMAIL 1: **BRAD.BERGERON@RWD1.COM**

EMAIL 2: **JOHN.GREEN@RWD1.COM**

SAMPLING INFORMATION					SAMPLE DESCRIPTION TO APPEAR ON REPORT	TUBE AIR VOLUME - L <input checked="" type="checkbox"/> or m <sup>3</sup> <input type="checkbox"/>	NPR1-TRS+RS-P-WT	STARTING PRESSURE - Pre-Sampling ("Hg)	ENDING PRESSURE - Post Sampling ("Hg)	COLLECTION TIME (HRS)	Field Conditions (Rain/Wind/Dust/Odour) Field PID Reading	LAB ID
Date (dd-mmm-yy)	Time (24hr) (hh:mm)	Canister or Tube ID# (e.g. 060000-XXXX or G0XXXXXXSVI)	Regulator Serial # CST200-XXXX or GXX	Matrix Type								
10/OCT/19	10:59	00946-0138	G80		SOUTH DAILY COVER 1	1	✓			-28 -5 .15	102.7 kPa	21
10/OCT/19	10:37	00946-0128	G162		SOUTH DAILY COVER 2	1	✓			-28 -5 .16	13°C	22
10/OCT/19	11:10	00946-0109	G81		SOUTH DAILY COVER 3	1	✓			-29 -6 .16	6 km/h E wind	23
10/OCT/19	11:43	00946-0088	G321		SOUTH DAILY COVER 4	1	✓			-26 -5 .16	0% cloud cover	24
10/OCT/19	11:50	00946-0112	G169		SOUTH DAILY COVER 5	1	✓			-29 -6 .16		25
10/OCT/19	11:27	00946-0181	G36		SOUTH WORKING FACE 1	1	✓			-29.5 -5 .16		26
10/OCT/19	12:10	00946-0317	G102		SOUTH WORKING FACE 2	1	✓			-29.5 -6 .16		27
10/OCT/19	12:42	00946-0242	G312		SOUTH WORKING FACE 3	1	✓			-28 -6 .16		28
10/OCT/19	12:30	00946-0192	G18		SOUTH WORKING FACE 4	1	✓			-30 -5 .15		29
10/OCT/19	13:11	00946-0243	G164		SOUTH WORKING FACE 5	1	✓			-29 -5 .15		30

ANALYSIS REQUEST

Field Conditions (Rain/Wind/Dust/Odour)  
Field PID Reading

LAB ID

SPECIAL INSTRUCTIONS/COMMENTS: \_\_\_\_\_

SAMPLED BY: **JRS, MAV, TFL**

RELINQUISHED BY: \_\_\_\_\_

This Chain of Custody Form is only to be used for Air Quality Samples

Matrix Type: Soil Gas Vapour = SG Indoor Air = IA Ambient Air = AA Industrial Hygiene = IH

DATE & TIME RECEIVED BY: **9:55 AM**

DATE & TIME RECEIVED AT LAB BY: **02/11/19**

SAMPLE CONDITION AS RECEIVED

FROZEN  MEAN TEMP \_\_\_\_\_

COLD

COOLING INITIATED

AMBIENT

OBSERVATIONS: Yes  No  If yes add SIF

INIT \_\_\_\_\_

Notes

1. Quote number must be provided to ensure proper pricing  
 2. TAT may vary dependent on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs.  
 3. Any known or suspected hazards relating to a sample must be noted on the



L2364217-COFC

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WATERLOO, ON N2V 2B8

Phone: (519) 886-6910

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AIR QUALITY CHAIN OF CUSTODY FORM - Canister/Tube/Gas Bag

**Note:** All TAT Quoted is in business days which exclude statutory holidays and weekends. TAT of samples received past 3:00 pm or Saturday / Sunday begin the next day.

DATE REQUIRED	SERVICE REQUESTED	Rush 3 day (100%)	<input type="checkbox"/>
	10 day (regular)	Rush 2 day (200%)	<input type="checkbox"/>
	Rush 5 day (50%)	Rush 1 day (300%) - Enquire	<input type="checkbox"/>

COMPANY NAME: **RWD1**  
OFFICE: **600 Southgate Drive, Guelph**  
PROJECT MANAGER: **Brad Bergeron**  
PROJECT #: **2000702**

REGULATION: \_\_\_\_\_  
CRITERIA: \_\_\_\_\_  
OTHER INFORMATION: \_\_\_\_\_

PHONE: **519-823-1311** FAX: **x2408**

REPORT FORMAT/DISTRIBUTION

ACCOUNT #: \_\_\_\_\_  
QUOTATION #: **Q76788** PO #: **2000702**

EMAIL  FAX \_\_\_\_\_ BOTH \_\_\_\_\_  
SELECT: PDF  DIGITAL \_\_\_\_\_ BOTH \_\_\_\_\_  
EMAIL 1: **BRAD.BERGERON@RWD1.COM**  
EMAIL 2: **JOHN.GREEN@RWD1.COM**

SAMPLING INFORMATION

Sample Date/Time	Time (24hr) (hh:mm)	Canister or Tube ID# (e.g. 060000-XXXX or G0XXXXXXSVI)	Regulator Serial # CS1200-XXXX or GXX	Matrix Type
------------------	---------------------	--	---------------------------------------	-------------

TUBE AIR VOLUME:  L or  m<sup>3</sup>  
TOIS - GCMS - WT

Date (dd-mmm-yy)	Time (24hr) (hh:mm)	Canister or Tube ID#	Regulator Serial #	Matrix Type	SAMPLE DESCRIPTION TO APPEAR ON REPORT
09/04/19	11:57	00946-0216	G136		WASTE SOIL PILE 1
09/04/19	11:58	00946-0141	G35		WASTE SOIL PILE 2
09/04/19	11:57	00946-0211	G320		WASTE SOIL PILE 3
09/04/19	12:38	00946-0155	G133		WASTE SOIL PILE 4
09/04/19	12:48	00946-0076	G41		WASTE SOIL PILE 5
01/04/19	12:37	00946-0024	G117		WASTE SOIL PILE 6

STARTING PRESSURE - Pre-Sampling ("Hg)	ENDING PRESSURE - Post Sampling ("Hg)	COLLECTION TIME (HRS)	Field Conditions (Rain/Wind/Dust/Odour)	Field PID Reading	LAB ID
-30	-6	.16	102.7 kPa 16°C 11 km/h E wind 0% cloud cover		31
-29	-7	.18			32
-20	-5	.12			33
-30	-6	.16			34
-25	-6	.16			35
-30	-5	.15			36

SPECIAL INSTRUCTIONS/COMMENTS

This Chain of Custody Form is only to be used for Air Quality Samples

SAMPLED BY: **JQS, MUV, TFL**

Matrix Type: Soil Gas Vapour = SG Indoor Air = IA Ambient Air = AA Industrial Hygiene = IH

SAMPLE CONDITION AS RECEIVED: FROZEN  MEAN TEMP COLD  COOLING INITIATED  AMBIENT

RELINQUISHED BY: \_\_\_\_\_ DATE & TIME: \_\_\_\_\_

RECEIVED BY: \_\_\_\_\_ DATE & TIME: **9:15**  
**Oct 10 2019**

OBSERVATIONS: Yes  No  If yes add SIF

Notes

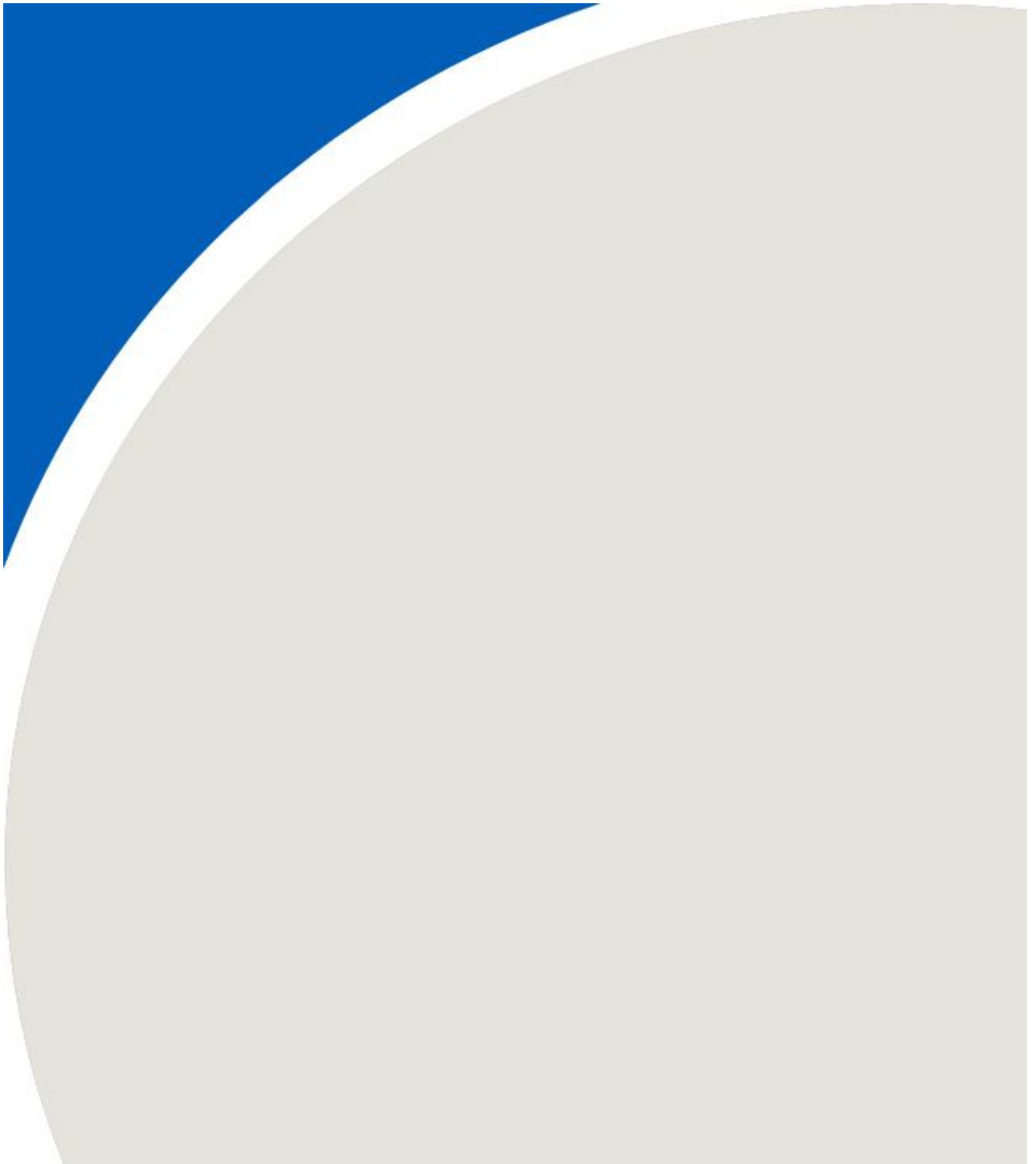
1. Quote number must be provided to ensure proper pricing  
2. TAT may vary dependent on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs.  
3. Any known or suspected hazards relating to a sample must be noted on the chain of custody in comments section



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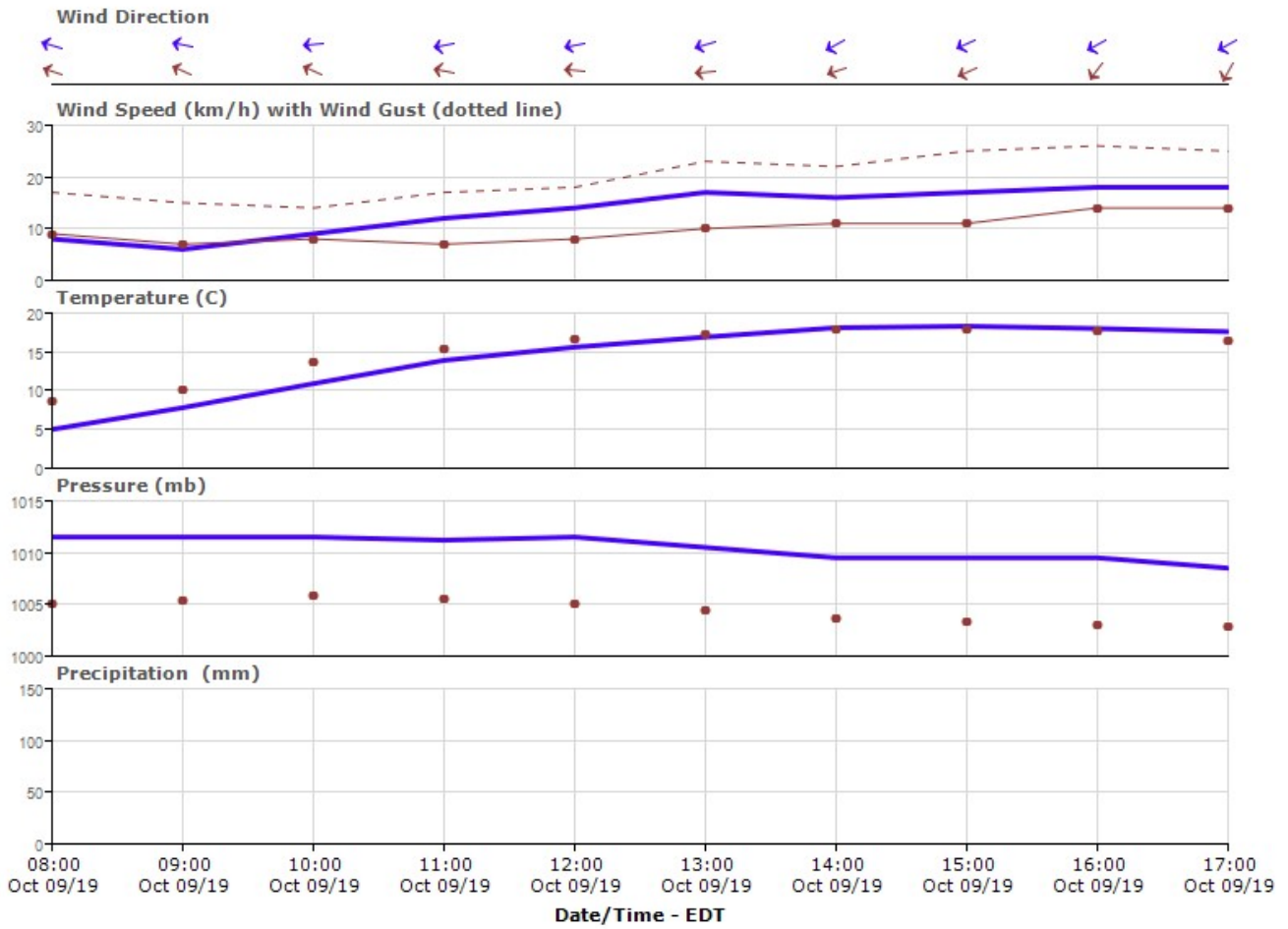


## APPENDIX B



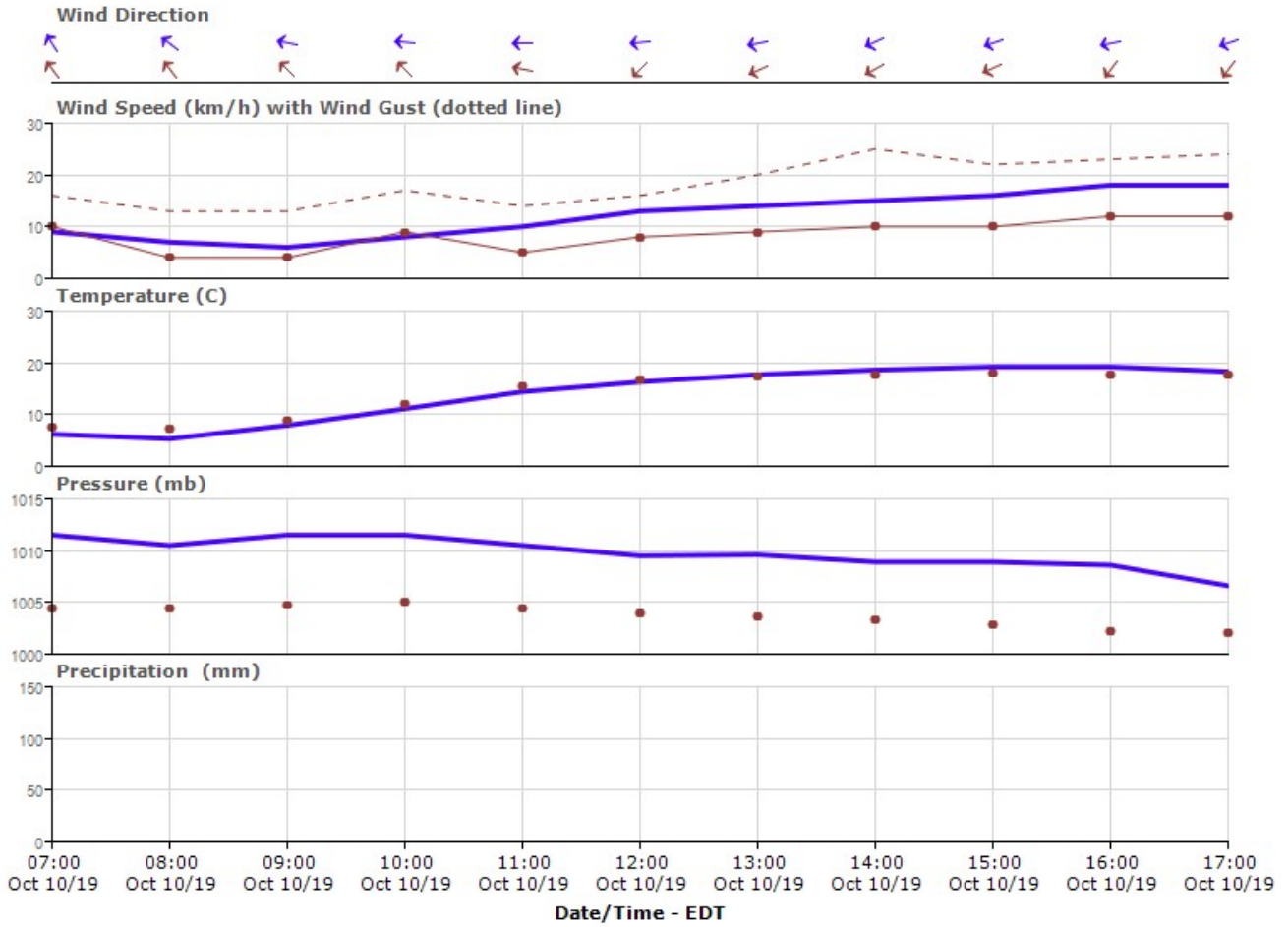
### Data Summary

◆ Walker Brothers - 60 minutes    
 — NOAA RAP 13km

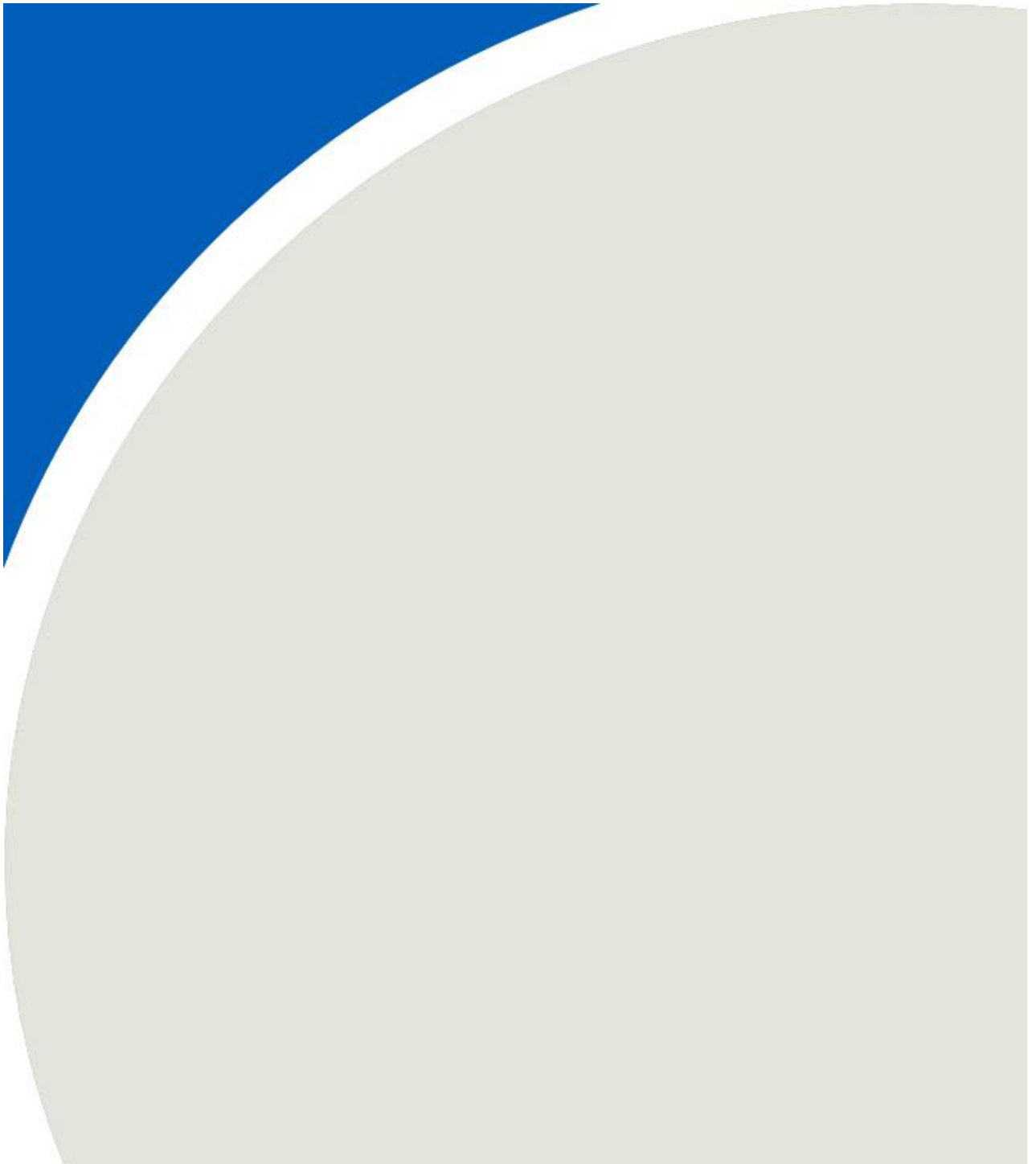


### Data Summary

◆ Walker Brothers - 60 minutes    
 — NOAA RAP 13km



## APPENDIX C



## C1: REDUCED SULPHUR RESULTS



# Flux Chamber Sampling for TRS

Client Walker Environmental Group  
 Location Walker Landfill Thorold  
 Project No. 2000702

Date	Sample ID	Sample Location	Sample Coordinates		Bottle-Vac ID	Controller ID	Time	Chamber	Chamber	Sweep Gas	Flux Chamber	Soil	Bottle Pressure ("Hg)	
			Pressure ("H2O)	Temperature (°F)				Flow Rate (L/min)	Area (m <sup>2</sup> )	Temperature (°F)	Initial	Final		
9-Oct-19	SFC1	South Final Cover	43.1193129	-79.1732458	00946-0100	G316	9:30 AM	0.030	82.5	5.0	0.13	54.5	-30	-6
9-Oct-19	SFC2	South Final Cover	43.1193318	-79.1727412	00946-0096	G94	10:28 AM	0.020	70.0	5.0	0.13	58.0	-30	-7
9-Oct-19	SFC3	South Final Cover	43.1193199	-79.1719918	00946-0165	G311	10:00 AM	0.015	67.0	5.0	0.13	54.5	-29	-5
9-Oct-19	SFC4	South Final Cover	43.1193046	-79.1715989	00946-0188	G79	10:37 AM	0.020	82.5	5.0	0.13	60.5	-29.5	-7
9-Oct-19	SFC5	South Final Cover	43.1192776	-79.1710342	00946-0226	G242	11:19 AM	0.020	72.0	5.0	0.13	61.0	-30	-6
9-Oct-19	EFC1	East Final Cover	43.1266092	-79.1728442	00946-0309	G171	1:49 PM	0.020	98.0	5.0	0.13	75.0	-27	-5.5
9-Oct-19	EFC2	East Final Cover	43.1260377	-79.1731440	00946-0231	G279	2:39 PM	0.030	88.5	5.0	0.13	63.0	-28	-5.5
9-Oct-19	EFC3	East Final Cover	43.1264652	-79.1722830	00946-0057	G173	2:00 PM	0.025	79.0	5.0	0.13	66.5	-30	-6
9-Oct-19	EFC4	East Final Cover	43.1259171	-79.1723608	00946-0145	G103	1:52 PM	0.016	87.5	5.0	0.13	61.0	-26	-5
9-Oct-19	EFC5	East Final Cover	43.1261998	-79.1720204	00946-0321	G177	2:39 PM	0.011	83.5	5.0	0.13	60.5	-30	-5
9-Oct-19	SIC1	East Final Cover	43.1210856	-79.1703535	00946-0283	G288	3:50 PM	0.030	74.5	5.0	0.13	61.5	-27	-5.5
9-Oct-19	SIC2	South Interim Cover	43.1213570	-79.1705530	00946-0276	G280	3:48 PM	0.030	69.0	5.0	0.13	67.0	-30	-6
9-Oct-19	SIC3	South Interim Cover	43.1216845	-79.1703615	00946-0169	G227	3:57 PM	0.020	78.0	5.0	0.13	58.5	-30	-5
9-Oct-19	SIC4	South Interim Cover	43.1212670	-79.1702980	00946-0152	G220	4:30 PM	0.030	66.0	5.0	0.13	65.5	-30	-6
9-Oct-19	SIC5	South Interim Cover	43.1215318	-79.1701442	00946-0304	G289	4:38 PM	0.015	78.0	5.0	0.13	59.5	-24	-5
10-Oct-19	SIC6	South Interim Cover	43.1217274	-79.1660073	00946-0035	G323	8:32 AM	0.030	72.0	5.0	0.13	56.5	-28	-5
10-Oct-19	SIC7	South Interim Cover	43.1219821	-79.1661718	00946-0172	G255	8:26 AM	0.020	72.5	5.0	0.13	56.0	-28	-5
10-Oct-19	SIC8	South Interim Cover	43.1221609	-79.1660927	00946-0269	G145	8:30 AM	0.030	60.0	5.0	0.13	57.0	-30	-6
10-Oct-19	SIC9	South Interim Cover	43.1218990	-79.1660391	00946-0099	G225	9:06 AM	0.030	75.0	5.0	0.13	56.5	-30	-5
10-Oct-19	SIC10	South Interim Cover	43.1220866	-79.1659474	00946-0125	G317	9:13 AM	0.030	67.5	5.0	0.13	59.0	-28.5	-6
10-Oct-19	SDC1	South Daily Cover	43.1205741	-79.1676521	00946-0138	G80	10:29 AM	0.020	76.0	5.0	0.13	58.5	-30	-7
10-Oct-19	SDC2	South Daily Cover	43.1204427	-79.1678773	00946-0128	G162	10:37 AM	0.040	87.0	5.0	0.13	67.5	-28	-5.5
10-Oct-19	SDC3	South Daily Cover	43.1204951	-79.1677774	00946-0109	G81	10:40 AM	0.030	70.0	5.0	0.13	68.0	-29	-6
10-Oct-19	SDC4	South Daily Cover	43.1205943	-79.1677867	00946-0088	G321	11:13 AM	0.020	78.0	5.0	0.13	61.0	-26	-5
10-Oct-19	SDC5	South Daily Cover	43.1204841	-79.1676548	00946-0112	G169	11:20 AM	0.030	76.5	5.0	0.13	67.5	-29	-6
10-Oct-19	SWF1	South Working Face	43.1208040	-79.1673871	00946-0181	G36	11:27 AM	0.030	92.0	5.0	0.13	65.5	-29.5	-5
10-Oct-19	SWF2	South Working Face	43.1207156	-79.1674881	00946-0317	G102	12:10 PM	0.020	86.0	5.0	0.13	64.0	-29.5	-6
10-Oct-19	SWF3	South Working Face	43.1206673	-79.1678460	00946-0242	G312	12:12 PM	0.030	77.5	5.0	0.13	67.0	-28	-6
10-Oct-19	SWF4	South Working Face	43.1207203	-79.1677830	00946-0192	G18	12:00 PM	0.023	79.5	5.0	0.13	61.0	-30	-5
10-Oct-19	SWF5	South Working Face	43.1206729	-79.1676369	00946-0243	G164	12:41 PM	0.020	82.0	5.0	0.13	61.0	-29	-5



		South Final Cover 1		South Final Cover 2		South Final Cover 3		South Final Cover 4		South Final Cover 5		Result Units
Compound	D.L.	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
Carbon Disulfide	6.2	21.9	1.39671E-08	<6.2	3.9906E-09	<6.2	3.9906E-09	<6.2	3.9906E-09	<6.2	3.9906E-09	µg/m <sup>3</sup>
Carbon Disulfide	2.0	7		<2.0		<2.0		<2.0		<2.0		ppb (V)
Carbonyl Sulfide	9.8	13.6	8.65982E-09	11.5	7.40021E-09	19.6	1.25961E-08	20.1	1.2911E-08	22.1	1.41706E-08	µg/m <sup>3</sup>
Carbonyl Sulfide	4.0	5.5		4.7		8		8.2		9		ppb (V)
Dimethyl Sulfide	10.0	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	µg/m <sup>3</sup>
Dimethyl Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Dimethyl Disulfide	7.7	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	µg/m <sup>3</sup>
Dimethyl Disulfide	2.0	<2.0		<2.0		<2.0		<2.0		<2.0		ppb (V)
Hydrogen Sulfide	5.6	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	µg/m <sup>3</sup>
Hydrogen Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Methyl Mercaptan	7.9	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	µg/m <sup>3</sup>
Methyl Mercaptan	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>												
Total Reduced Sulfur	8.5	13.6	1.21476E-08	<8.5	7.59225E-09	9.2	8.2175E-09	9.4	8.39614E-09	10.4	9.28934E-09	ppb (V)
Total Reduced Sulfur	12.0	19		<12		13		13		14		µg/m <sup>3</sup>

		East Final Cover 1		East Final Cover 2		East Final Cover 3		East Final Cover 4		East Final Cover 5		Result Units
Compound	D.L.	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
Carbon Disulfide	6.2	<6.2	3.9906E-09	<6.2	3.9906E-09	<6.2	3.9906E-09	<6.2	3.9906E-09	<6.2	3.9906E-09	µg/m <sup>3</sup>
Carbon Disulfide	2.0	<2.0		<2.0		<2.0		<2.0		<2.0		ppb (V)
Carbonyl Sulfide	9.8	13.8	8.81727E-09	<9.8	6.29805E-09	22.6	1.44855E-08	69.9	4.47161E-08	95.1	6.09336E-08	µg/m <sup>3</sup>
Carbonyl Sulfide	4.0	5.6		<4.0		9.2		28.4		38.7		ppb (V)
Dimethyl Sulfide	10.0	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	µg/m <sup>3</sup>
Dimethyl Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Dimethyl Disulfide	7.7	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	µg/m <sup>3</sup>
Dimethyl Disulfide	2.0	<2.0		<2.0		<2.0		<2.0		<2.0		ppb (V)
Hydrogen Sulfide	5.6	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	µg/m <sup>3</sup>
Hydrogen Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Methyl Mercaptan	7.9	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	µg/m <sup>3</sup>
Methyl Mercaptan	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>												
Total Reduced Sulfur	8.5	<8.5	7.59225E-09	<8.5	7.59225E-09	10.6	9.46799E-09	32.8	2.92972E-08	44.6	3.9837E-08	ppb (V)
Total Reduced Sulfur	12.0	<12		<12		15		46		62		µg/m <sup>3</sup>

		South Interim Cover 1		South Interim Cover 2		South Interim Cover 3		South Interim Cover 4		South Interim Cover 5		Result Units
Compound	D.L.	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
Carbon Disulfide	6.2	28.7	1.83568E-08	<6.2	3.9906E-09	8.0	5.18778E-09	<6.2	3.9906E-09	30.6	1.95539E-08	µg/m <sup>3</sup>
Carbon Disulfide	2.0	9.2		<2.0		2.6		<2.0		9.8		ppb (V)
Carbonyl Sulfide	9.8	38.4	2.45624E-08	15.6	1.00769E-08	43.3	2.77114E-08	<9.8	6.29805E-09	125.0	8.03001E-08	µg/m <sup>3</sup>
Carbonyl Sulfide	4.0	15.6		6.4		17.6		<4.0		51.0		ppb (V)
Dimethyl Sulfide	10.0	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	<10	6.51349E-09	<10.0	6.51349E-09	µg/m <sup>3</sup>
Dimethyl Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Dimethyl Disulfide	7.7	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	µg/m <sup>3</sup>
Dimethyl Disulfide	2.0	<2.0		<2.0		<2.0		<2.0		<2.0		ppb (V)
Hydrogen Sulfide	5.6	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	µg/m <sup>3</sup>
Hydrogen Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Methyl Mercaptan	7.9	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	µg/m <sup>3</sup>
Methyl Mercaptan	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>												
Total Reduced Sulfur	8.5	27.5	2.45632E-08	<8.5	7.59225E-09	23.0	2.05437E-08	<8.5	7.59225E-09	67.8	6.05594E-08	ppb (V)
Total Reduced Sulfur	12.0	38		<12		32		<12		95		µg/m <sup>3</sup>

		South Interim Cover 6		South Interim Cover 7		South Interim Cover 8		South Interim Cover 9		South Interim Cover 10		Result Units
Compound	D.L.	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
Carbon Disulfide	6.2	<6.2	3.9906E-09	<6.2	3.9906E-09	<6.2	3.9906E-09	10.3	6.58449E-09	<6.2	3.44788E-07	µg/m <sup>3</sup>
Carbon Disulfide	2.0	<2.0		<2.0		<2.0		3.3		<2.0		ppb (V)
Carbonyl Sulfide	9.8	12.3	7.87256E-09	34.7	2.22006E-08	16.6	1.07067E-08	68.9	4.40863E-08	16.5	9.11453E-07	µg/m <sup>3</sup>
Carbonyl Sulfide	4.0	5.0		14.1		6.8		28.0		6.7		ppb (V)
Dimethyl Sulfide	10.0	<10.0	6.51349E-09	<10.0	6.51349E-09	<10.0	6.51349E-09	<10.0	6.51349E-09	<10.0	5.62765E-07	µg/m <sup>3</sup>
Dimethyl Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Dimethyl Disulfide	7.7	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	2.81383E-07	µg/m <sup>3</sup>
Dimethyl Disulfide	2.0	<2.0		<2.0		<2.0		<2.0		<2.0		ppb (V)
Hydrogen Sulfide	5.6	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.08692E-07	µg/m <sup>3</sup>
Hydrogen Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Methyl Mercaptan	7.9	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	4.35751E-07	µg/m <sup>3</sup>
Methyl Mercaptan	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>												
Total Reduced Sulfur	8.5	<8.5	7.59225E-09	16.0	1.42913E-08	<8.5	7.59225E-09	35.2	3.14409E-08	<8.5	7.59225E-09	ppb (V)
Total Reduced Sulfur	12.0	<12		22		<12		49		<12		µg/m <sup>3</sup>

		South Daily Cover 1		South Daily Cover 2		South Daily Cover 3		South Daily Cover 4		South Daily Cover 5		Result Units
Compound	D.L.	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
Carbon Disulfide	6.2	<6.2	3.9906E-09	16.4	1.05751E-08	12.8	8.18073E-09	13.4	8.57979E-09	<6.2	3.9906E-09	µg/m <sup>3</sup>
Carbon Disulfide	2.0	<2.0		5.3		4.1		4.3		<2.0		ppb (V)
Carbonyl Sulfide	9.8	83.3	5.3376E-08	19.3	1.24386E-08	23.1	1.48004E-08	70.3	4.5031E-08	20.6	1.32259E-08	µg/m <sup>3</sup>
Carbonyl Sulfide	4.0	33.9		7.9		9.4		28.6		8.4		ppb (V)
Dimethyl Sulfide	10.0	<10.0	6.51349E-09	<10.0	6.51349E-09	13.0	8.30469E-09	<10.0	6.51349E-09	<10.0	6.51349E-09	µg/m <sup>3</sup>
Dimethyl Sulfide	4.0	<4.0		<4.0		5.1		<4.0		<4.0		ppb (V)
Dimethyl Disulfide	7.7	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	<7.7	3.25674E-09	µg/m <sup>3</sup>
Dimethyl Disulfide	2.0	<2.0		<2.0		<2.0		<2.0		<2.0		ppb (V)
Hydrogen Sulfide	5.6	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	<5.6	3.57282E-09	µg/m <sup>3</sup>
Hydrogen Sulfide	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
Methyl Mercaptan	7.9	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	<7.9	5.04341E-09	µg/m <sup>3</sup>
Methyl Mercaptan	4.0	<4.0		<4.0		<4.0		<4.0		<4.0		ppb (V)
<b>Total Reduced Sulfur as H2S (NPRI-6)</b>												
Total Reduced Sulfur	8.5	38.4	3.42991E-08	14.3	1.27728E-08	20.0	1.78641E-08	36.8	3.287E-08	9.5	8.48546E-09	ppb (V)
Total Reduced Sulfur	12.0	54		20		28.0		51		13		µg/m <sup>3</sup>

		South Working Face 1		South Working Face 2		South Working Face 3		South Working Face 4		South Working Face 5		Result Units
Compound	D.L.	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
Carbon Disulfide	6.2	<6.2	3.9906E-09	<6.2	3.9906E-09	10.4	6.58449E-09	12.5	7.9812E-09			

## C2: VOLATILE ORGANIC COMPOUND RESULTS



# Flux Chamber Sampling for VOCs

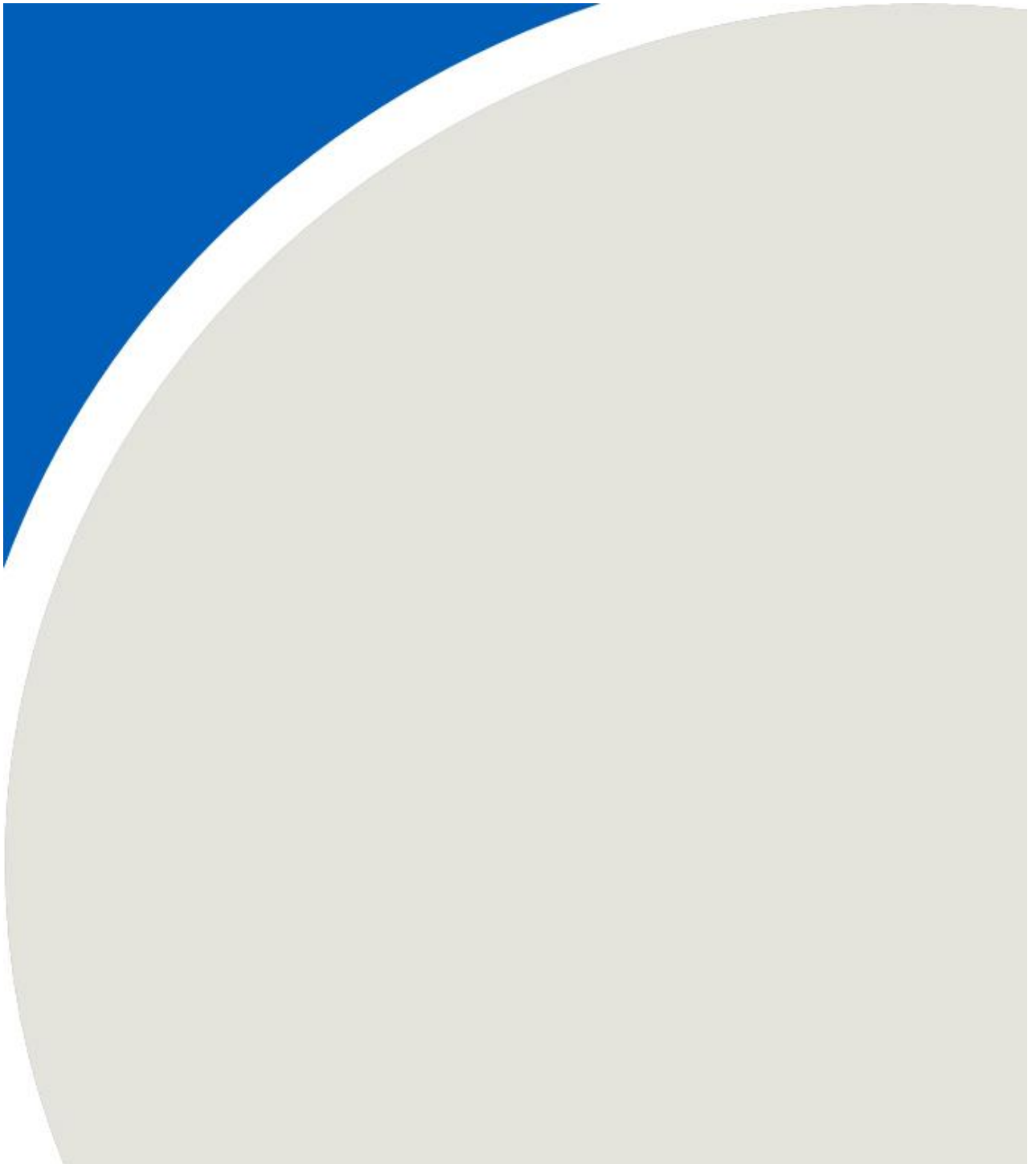
Client Walker Environmental Group  
 Location Walker Landfill Thorold  
 Project No. 2000702

Date	Sample ID	Sample Location	Sample Coordinates		Bottle-Vac ID	Controller ID	Time	Chamber Pressure	Chamber Temperature	Sweep Gas Flow Rate	Soil Temperature	Bottle Pressure ("Hg)	
			Latitude	Longitude				("H2O)	(°F)	(L/min)	(°F)	Initial	Final
9-Oct-19	WSP1	Waste Soil Pile	43.1299653	-79.1698674	00946-0216	G136	11:57 AM	0.040	79.0	5.0	58.5	-30	-6
9-Oct-19	WSP2	Waste Soil Pile	43.1299141	-79.1700411	00946-0141	G35	11:58 AM	0.040	79.0	5.0	70.0	-29	-7
9-Oct-19	WSP3	Waste Soil Pile	43.1299971	-79.1701615	00946-0211	G320	11:57 AM	0.020	77.0	5.0	60.0	-20	-5
9-Oct-19	WSP4	Waste Soil Pile	43.1298931	-79.1698573	00946-0155	G133	12:38 PM	0.040	71.0	5.0	63.5	-30	-6
9-Oct-19	WSP5	Waste Soil Pile	43.1298585	-79.1699444	00946-0076	G41	12:48 PM	0.030	92.5	5.0	63.0	-29.5	-6
9-Oct-19	WSP6	Waste Soil Pile	43.1299335	-79.1701265	00946-0024	G117	12:37 PM	0.020	72.5	5.0	63.5	-30	-5

Compound	Molar Weight (g/mol)	D.L.	Waste Soil Pile 1		Waste Soil Pile 2		Waste Soil Pile 3		Waste Soil Pile 4		Waste Soil Pile 5		Waste Soil Pile 6		Result Units
			Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
1,1,1-Trichloroethane	133	1.1	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	µg/m <sup>3</sup>
1,1,1-Trichloroethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,1,2,2-Tetrachloroethane	168	1.4	<1.4	8.79829E-10	<1.4	8.79829E-10	<1.4	8.79829E-10	<1.4	8.79829E-10	<1.4	8.79829E-10	<1.4	8.79829E-10	µg/m <sup>3</sup>
1,1,2,2-Tetrachloroethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,1,2-Trichloroethane	133	1.1	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	<1.1	6.99259E-10	µg/m <sup>3</sup>
1,1,2-Trichloroethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,1-Dichloroethane	99	0.81	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	µg/m <sup>3</sup>
1,1-Dichloroethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,1-Dichloroethane	97	0.79	<0.79	5.08142E-10	<0.79	5.08142E-10	<0.79	5.08142E-10	<0.79	5.08142E-10	<0.79	5.08142E-10	<0.79	5.08142E-10	µg/m <sup>3</sup>
1,1-Dichloroethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,2,4-Trichlorobenzene	181	1.5	<1.5	9.51128E-10	<1.5	9.51128E-10	<1.5	9.51128E-10	<1.5	9.51128E-10	<1.5	9.51128E-10	<1.5	9.51128E-10	µg/m <sup>3</sup>
1,2,4-Trichlorobenzene		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,2,4-Trimethylbenzene	120	0.98	1.24	7.87518E-10	2.58	1.63804E-09	49	3.15007E-08	<0.98	6.30014E-10	5.53	3.52808E-09	37.5	2.39405E-08	µg/m <sup>3</sup>
1,2,4-Trimethylbenzene		0.20	<0.20		0.52		10		<0.20		1.12		7.6		ppb (V)
1,2-Dibromoethane	188	1.5	<1.5	9.84728E-10	<1.5	9.84728E-10	<1.5	9.84728E-10	<1.5	9.84728E-10	<1.5	9.84728E-10	<1.5	9.84728E-10	µg/m <sup>3</sup>
1,2-Dibromoethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,2-Dichlorobenzene	147	1.2	<1.2	7.706E-10	<1.2	7.706E-10	<1.2	7.706E-10	<1.2	7.706E-10	<1.2	7.706E-10	<1.2	7.706E-10	µg/m <sup>3</sup>
1,2-Dichlorobenzene		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,2-Dichloroethane	99	0.81	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	<0.81	5.18731E-10	µg/m <sup>3</sup>
1,2-Dichloroethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,2-Dichloropropane	113	0.92	<0.92	5.92221E-10	<0.92	5.92221E-10	<0.92	5.92221E-10	<0.92	5.92221E-10	<0.92	5.92221E-10	<0.92	5.92221E-10	µg/m <sup>3</sup>
1,2-Dichloropropane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,3,5-Trimethylbenzene	120	0.98	1.13	7.24517E-10	1.04	6.61515E-10	24.5	1.57504E-08	<0.98	6.30014E-10	5.79	3.71709E-09	15.8	1.01117E-08	µg/m <sup>3</sup>
1,3,5-Trimethylbenzene		0.20	<0.20		0.21		5.0		<0.20		1.18		3.21		ppb (V)
1,3-Butadiene	54	0.44	<0.44	2.83538E-10	<0.44	2.83538E-10	<0.44	2.83538E-10	<0.44	2.83538E-10	<0.44	2.83538E-10	<0.44	2.83538E-10	µg/m <sup>3</sup>
1,3-Butadiene		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,3-Dichlorobenzene	147	1.2	<1.2	7.70558E-10	<1.2	7.70558E-10	<1.2	7.70558E-10	<1.2	7.70558E-10	<1.2	7.70558E-10	<1.2	7.70558E-10	µg/m <sup>3</sup>
1,3-Dichlorobenzene		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,4-Dichlorobenzene	147	1.2	<1.2	7.70548E-10	<1.2	7.70548E-10	<1.2	7.70548E-10	<1.2	7.70548E-10	<1.2	7.70548E-10	<1.2	7.70548E-10	µg/m <sup>3</sup>
1,4-Dichlorobenzene		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
1,4-Dioxane	88	0.72	<0.72	4.61838E-10	<0.72	4.61838E-10	<0.72	4.61838E-10	<0.72	4.61838E-10	<0.72	4.61838E-10	<0.72	4.61838E-10	µg/m <sup>3</sup>
1,4-Dioxane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
2-Hexanone	100	4.1	<4.1	2.62507E-09	<4.1	2.62507E-09	30	1.89005E-08	<4.1	2.62507E-09	<1.0	2.62507E-09	14	8.66275E-09	µg/m <sup>3</sup>
2-Hexanone		1.0	<1.0		<1.0		7.2		<1.0		<1.0		3.3		ppb (V)
4-Ethyltoluene	120	0.98	<0.98	6.30023E-10	<0.98	6.30023E-10	12.9	8.2533E-09	<0.98	6.30023E-10	1.8	1.16554E-09	11.1	7.08776E-09	µg/m <sup>3</sup>
4-Ethyltoluene		0.20	<0.20		<0.20		2.62		<0.20		0.37		2.25		ppb (V)
Acetone	58	1.2	9.6	6.14979E-09	28.8	1.84189E-08	36.5	2.34423E-08	8.5	5.48001E-09	42.7	2.74E-08	49.9	3.19667E-08	µg/m <sup>3</sup>
Acetone		0.50	4.04		12.1		15.4		3.6		18		21		ppb (V)
Allyl chloride	77	0.63	<0.63	4.01104E-10	<0.63	4.01104E-10	<0.63	4.01104E-10	<0.63	4.01104E-10	<0.63	4.01104E-10	<0.63	4.01104E-10	µg/m <sup>3</sup>
Allyl chloride		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Benzene	78	0.64	<0.64	4.09439E-10	<0.64	4.09439E-10	3.3	2.08814E-09	<0.64	4.09439E-10	0.99	6.3463E-10	3.27	2.08814E-09	µg/m <sup>3</sup>
Benzene		0.20	<0.20		<0.20		1.0		<0.20		0.31		1.02		ppb (V)
Benzyl chloride	127	1.0	<1.0	6.6351E-10	<1.0	6.6351E-10	<1.0	6.6351E-10	<1.0	6.6351E-10	<1.0	6.6351E-10	<1.0	6.6351E-10	µg/m <sup>3</sup>
Benzyl chloride		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Bromodichloromethane	164	1.3	<1.3	8.5861E-10	<1.3	8.5861E-10	<1.3	8.5861E-10	<1.3	8.5861E-10	<1.3	8.5861E-10	<1.3	8.5861E-10	µg/m <sup>3</sup>
Bromodichloromethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Bromoform	253	2.1	<2.1	1.32477E-09	<2.1	1.32477E-09	<2.1	1.32477E-09	<2.1	1.32477E-09	<2.1	1.32477E-09	<2.1	1.32477E-09	µg/m <sup>3</sup>
Bromoform		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Bromomethane	95	0.78	<0.78	4.97658E-10	<0.78	4.97658E-10	<0.78	4.97658E-10	<0.78	4.97658E-10	<0.78	4.97658E-10	<0.78	4.97658E-10	µg/m <sup>3</sup>
Bromomethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Carbon Disulfide	76	0.62	0.8	5.18778E-10	0.73	4.58919E-10	13.50	8.67955E-09	1.27	3.9906E-10	22.70	1.45457E-08	28.70	1.83568E-08	µg/m <sup>3</sup>
Carbon Disulfide		0.20	0.3		0.23		4.35		0.41		7.29		9.20		ppb (V)
Carbon Tetrachloride	154	1.3	<1.3	8.06244E-10	<1.3	8.06244E-10	<1.3	8.06244E-10	<1.3	8.06244E-10	<1.3	8.06244E-10	<1.3	8.06244E-10	µg/m <sup>3</sup>
Carbon Tetrachloride		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Chlorobenzene	113	0.92	<0.92	5.90019E-10	<0.92	5.90019E-10	<0.92	5.90019E-10	<0.92	5.90019E-10	<0.92	5.90019E-10	<0.92	5.90019E-10	µg/m <sup>3</sup>

Compound	Molar Weight (g/mol)	D.L.	Waste Soil Pile 1		Waste Soil Pile 2		Waste Soil Pile 3		Waste Soil Pile 4		Waste Soil Pile 5		Waste Soil Pile 6		Result Units
			Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	Result	Average Flux (g/m <sup>2</sup> /s)	
Chlorobenzene	113	0.20	<0.20	5.90019E-10	<0.20	5.90019E-10	<0.20	5.90019E-10	<0.20	5.90019E-10	<0.20	5.90019E-10	<0.20	5.90019E-10	ppb (V)
Chloroethane	65	0.53	<0.53	3.3815E-10	<0.53	3.3815E-10	<0.53	3.3815E-10	<0.53	3.3815E-10	<0.53	3.3815E-10	<0.53	3.3815E-10	µg/m <sup>3</sup>
Chloroethane		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Chloroform	119	0.98	<0.98	6.25716E-10	<0.98	6.25716E-10	<0.98	6.25716E-10	<0.98	6.25716E-10	<0.98	6.25716E-10	<0.98	6.25716E-10	µg/m <sup>3</sup>
Chloroform		0.20	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		ppb (V)
Chloromethane	50	0.41	0.8	5.29319E-10	1.24	2.6466E-10	0.43	2.6466E-10	1.12	2.6466E-10	0.66	2.6466E-10	0.71	2.6466E-10	µg/m <sup>3</sup>
Chloromethane		0.20	0.4		0.60		0.21		0.54		0.32		0.34		ppb (V)
cis-1,2-Dichloroethane	97	0.79	<0.79	5.08194E-10	<0.79	5.08194E-10	0.89	5.08194E-10	<0.79	5.08194E-10	3.31	2.13442E-09	2.40	1.52458E-09	µg/m <sup>3</sup>
cis-1,2-Dichloroethane		0.20	<0.20												

# APPENDIX E



## Appendix E: Leachate Pond VOC Emissions

The FCA provides leachate quality values for the landfill raw leachate. The concentrations provided were assumed to represent the leachate quality in the holding and aeration ponds. Emission rates were determined based on flux chamber analysis source testing conducted on the Walker's South Landfill aeration pond. Landfilling activities and waste composition at the proposed Southwestern landfill will be very similar to the current South landfill; therefore, the aeration source testing provides an accurate estimate of VOC emissions from the proposed aeration pond. Source testing from the Walker's South Landfill include additional contaminants not mentioned in the Facility Characteristics Report, these contaminants have been included in the assessment.

Leachate Treatment Facility Characteristics	
Aeration Pond Area (m <sup>2</sup> )	3,200
Holding Pond Area (m <sup>2</sup> )	15,000
Control Efficiency	30%

Notes:

[1] Pond areas were obtained from the facility characteristics assumption report, Section 1.7.4.

[2] Emissions from the leachate ponds are being controlled using a cover.

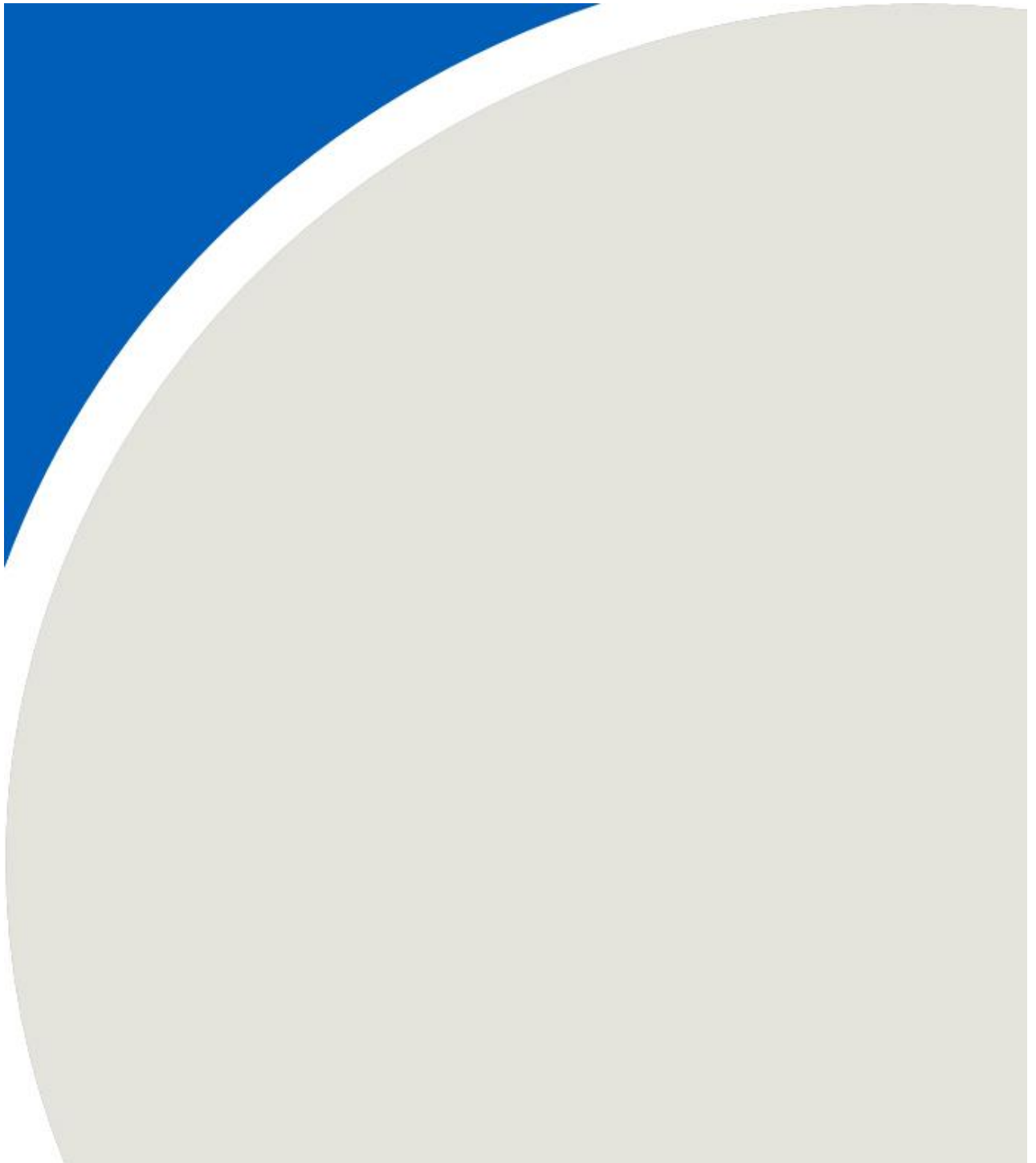
Contaminant	CAS	Uncontrolled Flux Rate (g m <sup>-2</sup> s <sup>-1</sup> )	Controlled Flux Rate (g m <sup>-2</sup> s <sup>-1</sup> )	Aeration Pond Emission Rate (g s <sup>-1</sup> )	Holding Pond Emission Rate (g s <sup>-1</sup> )
Vinyl Chloride	75-01-4	3.67E-08	2.57E-08	8.22E-05	3.85E-04
Chloroethane	75-00-3	3.79E-08	2.65E-08	8.48E-05	3.97E-04
Vinylidene Chloride	75-35-4	8.44E-08	5.91E-08	1.89E-04	8.86E-04
Methylene Chloride	75-09-2	2.49E-08	1.74E-08	5.58E-05	2.62E-04
1,2-Dichloroethylene cis	156-59-2	8.18E-08	5.73E-08	1.83E-04	8.59E-04
1,1-Dichloroethane	75-34-3	2.90E-08	2.03E-08	6.50E-05	3.05E-04
1,2-Dichloroethylene trans	156-60-5	6.63E-08	4.64E-08	1.48E-04	6.96E-04
2-Butanol	78-92-2	5.25E-08	3.68E-08	1.18E-04	5.51E-04
Chloroform	67-66-3	3.50E-08	2.45E-08	7.85E-05	3.68E-04
1,1,1-Trichloroethane	71-55-6	4.13E-08	2.89E-08	9.26E-05	4.34E-04
Carbon Tetrachloride	56-23-5	5.32E-08	3.72E-08	1.19E-04	5.59E-04
1,2-Dichloroethane	107-06-2	2.90E-08	2.03E-08	6.50E-05	3.05E-04
Benzene	71-43-2	4.89E-08	3.43E-08	1.10E-04	5.14E-04
Trichloroethylene	79-01-6	3.86E-08	2.70E-08	8.64E-05	4.05E-04
Bromodichloromethane	75-27-4	4.81E-08	3.37E-08	1.08E-04	5.05E-04
Octane	111-65-9	6.63E-08	4.64E-08	1.48E-04	6.96E-04
1,1,2-Trichloroethane	79-00-5	5.48E-08	3.83E-08	1.23E-04	5.75E-04
Tetrachloroethylene	127-18-4	4.87E-08	3.41E-08	1.09E-04	5.11E-04
Ethylene Dibromide	106-93-4	6.87E-08	4.81E-08	1.54E-04	7.22E-04
1,1,2,2-Tetrachloroethane	79-34-5	7.22E-08	7.22E-08	2.31E-04	1.08E-03

Notes:

[1] Contaminant list obtained from South Landfill flux chamber analysis summary.



# APPENDIX F



**Source Summary Table**  
**Carmeuse Lime - Beachville Operations**  
**Emission Summary and Dispersion Modelling**  
**Project Number: 160930291**

Table X: Source Summary Table (by contaminant)

Contaminant	CAS #	Source Data							Emissions Data				
		Source ID	Source Description	Stack Volumetric Flowrate (Am <sup>3</sup> /s)	Stack Exit Gas Temperature (degC)	Stack Inner Diameter (m)	Stack Height Above Grade (m)	Stack Height Above Roof (m)	Maximum Emission Rate (g/s)	Averaging Period (hours)	Emission Estimating Technique	Emissions Data Quality	% of Overall Emissions
NOx	10102-44-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	8.46E+00	1	ST	Above Average	41.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.13E+01	1	ST	Above Average	55.5
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.06	4	NA	5.86E-01	1	EF	Uncertain	2.9
SO2	7446-09-5	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	9.32E-01	1	ST	Above Average	76.5
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	2.47E-01	1	ST	Above Average	20.3
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.058	4	NA	3.87E-02	1	EF	Uncertain	3.2
CO	630-08-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	9.21E+00	1	ST	Above Average	49.2
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	9.39E+00	1	ST	Above Average	50.1
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.058	4	NA	1.26E-01	1	EF	Uncertain	0.7
PM	NA-1	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	9.60E-01	1	ST	Above Average	12.8
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	3.78E+00	1	ST	Above Average	50.4
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.058	4	NA	4.16E-02	1	EF	Uncertain	0.6
		HDC-3	Wet scrubber	4.6	71	0.56	27.4	<Bld Ht	3.63E-02	1	ST	Uncertain	0.5
		QDC-1	Centre Plant - Primary Crusher	4.7	Amb	0.64 x 2.44	9.8	0.6	4.70E-02	1	EF	Average	0.6
		CDC-1	Centre Plant - Secondary Crusher	10.8	Amb	0.64 x 2.44	20.4	=Bld Ht	1.08E-01	1	EF	Average	1.4
		CDC-2	Centre Plant - Bin Building D/C	11.8	Amb	0.64 x 2.44	19.8	=Bld Ht	1.18E-01	1	EF	Average	1.6
		PDC-5	Centre Plant - Pulveriser	25.9	Amb	1.10	5.7	NA	5.18E-01	1	EF	Average	6.9
		LDC-13	Centre Plant - Kiln #3 Nuisance DC	3.3	Amb	0.25 x 0.36	21.3	<Bld Ht	3.25E-02	1	EF	Average	0.4
		LDC-4	Centre Plant - Lime Bins DC	3.4	Amb	0.38 x 0.46	22.3	11.1	3.40E-02	1	EF	Average	0.5
		LDC-10	Centre Plant - #1 Kiln Nuisance DC	4.3	Amb	0.49 x 0.63	8.6	<Bld Ht	4.30E-02	1	EF	Average	0.6
		LDC-17	Centre Plant - Lime Loadout	9.9	Amb	0.36	11.1	N/A	9.90E-02	1	EF	Average	1.3
		HDC-2	East Plant - Hydrator DC	7.0	Amb	0.46 x 0.61	22.9	<Bld Ht	7.00E-02	1	EF	Average	0.9
		LDC-21	Center Plant - Lime Bins DC (RDC-302 from East Plant relocated to LDC-1)	13.3	Amb	0.66 x 0.76	23.8	9.8	1.33E-01	1	EF	Average	1.8
		LDC-22	Center Plant - Lime Bins DC (RDC-202 from East Plant relocated to LDC-2)	13.3	Amb	0.66	33.8	1	1.33E-01	1	EF	Average	1.8
		LDC-9	Centre Plant Lime Bins DC	3.35	Amb	0.30	26.5	3	3.35E-02	1	EF	Average	0.4
		PDC-1	Centre Plant - Pulverizer plant dryer baghouse	26.00	Amb	1.22	23.3	3	2.60E-01	1	EF	Average	3.5
		LDC-35	Centre plant Cal 85	3.35	Amb	0.46	13.7	NA	3.35E-02	1	EF	Average	0.4
		FDC-1	Flyash dust collector	5.90	amb	0.84	7.3	NA	5.90E-02	1	EF	Average	0.8
		CF3	Crushed limestone transfer (loading) to surge pile	NA	ambient	NA	NA	N/A	5.16E-02	1	EF	Uncertain	0.7
		CF4	Crushed limestone transfer to trucks from surge pile	NA	ambient	NA	NA	N/A	1.17E-01	1	EF	Above Average	1.6
		CF7	Conveying and transferring limestone - Secondary crusher to Screening bld, and material transfer inside the Screening building	NA	ambient	NA	NA	N/A	4.59E-02	1	EF	Uncertain	0.6
		CF10	Truck loading from limestone bins in Screening building	NA	ambient	NA	NA	N/A	8.24E-02	1	EF	Above Average	1.1
CF11	Screened limestone transferring and loading in Storage building (Nordburg)	NA	ambient	NA	NA	N/A	3.26E-02	1	EF	Above Average	0.4		
CF13	Limestone handling and transferring - Store House to pulverizing stock pile	NA	ambient	NA	NA	N/A	1.03E-01	1	EF	Above Average	1.4		
CF20	Truck loading pulverized limestone - B Product	NA	ambient	NA	NA	N/A	3.48E-02	1	EF	Above Average	0.5		
CF21	Truck loading pulverized limestone - F Product	NA	ambient	NA	NA	N/A	3.00E-02	1	EF	Above Average	0.4		
CF24	Stone handling (loading to piles) for offsite transfer	NA	ambient	NA	NA	N/A	2.20E-01	1	EF	Above Average	2.9		
QF4	Truck loading / material handling of large pieces of wet limestone	NA	ambient	NA	NA	N/A	2.42E-01	1	EF	Above Average	3.2		
CaO	1305-78-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	1.42E-01	1	ST	Above Average	8.4
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	9.44E-01	1	ST	Above Average	55.7
		HDC-3	Wet scrubber	4.6	71	0.56	27.4	<Bld Ht	3.09E-02	1	ST	Uncertain	1.8
		LDC-13	Centre Plant - Kiln #3 Nuisance DC	3.25	Amb	0.25 x 0.36	21.3	<Bld Ht	3.15E-02	1	EF	Average	1.9
		LDC-4	Centre Plant - Lime Bins DC	3.4	Amb	0.38 x 0.46	22.3	11.1	3.30E-02	1	EF	Average	1.9

**Source Summary Table**  
**Carmeuse Lime - Beachville Operations**  
**Emission Summary and Dispersion Modelling**  
**Project Number: 160930291**

Table X: Source Summary Table (by contaminant)

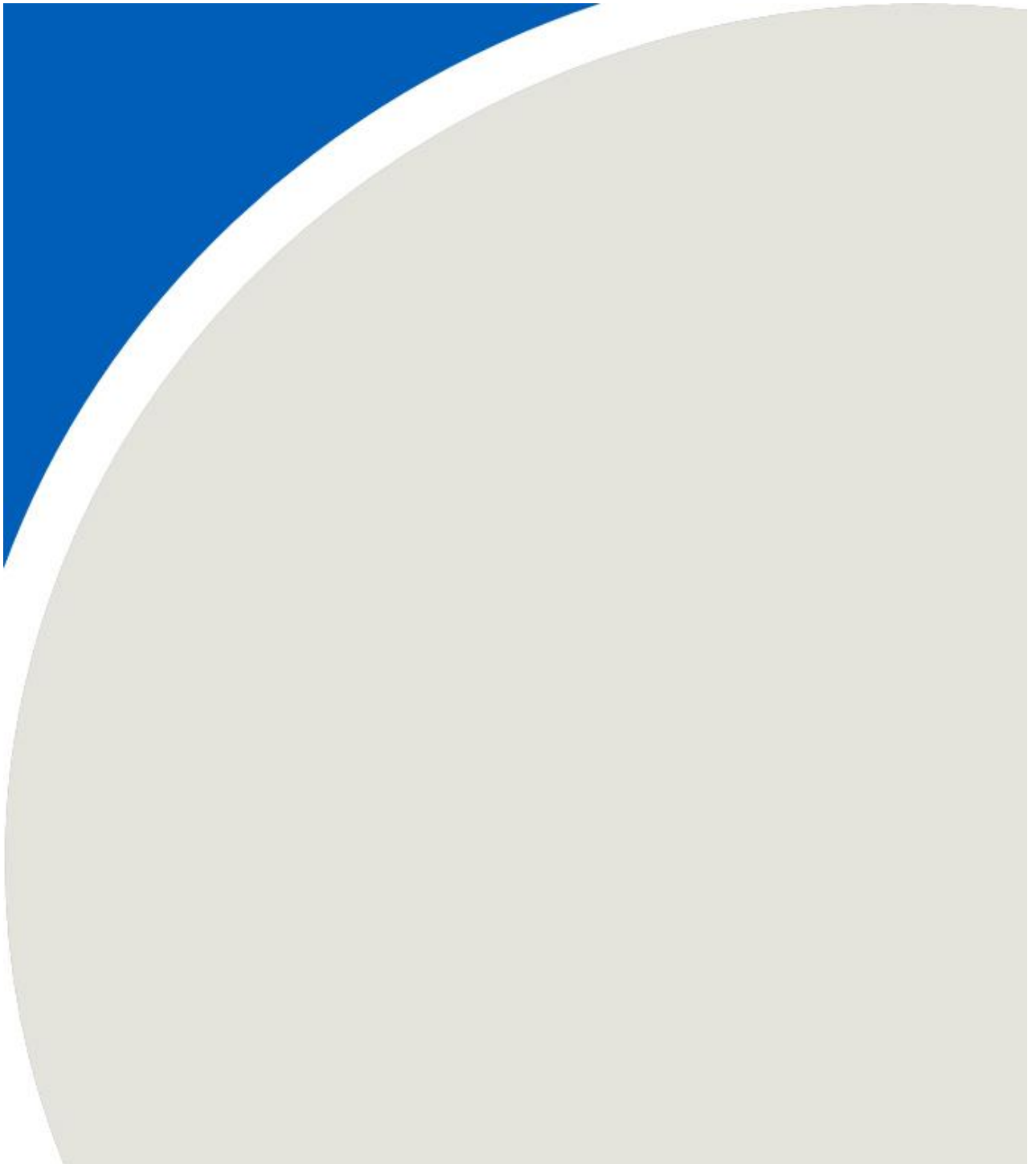
		LDC-10	Centre Plant - #1 Kiln Nuisance DC	4.3	Amb	0.49 x 0.63	8.6	<Bld Ht	4.17E-02	1	EF	Average	2.5
		LDC-17	Centre Plant - Lime Loadout	9.9	Amb	0.36	11.1	N/A	9.60E-02	1	EF	Average	5.7
		HDC-2	East Plant - Hydrator DC	7	Amb	0.46 x 0.61	22.9	<Bld Ht	5.95E-02	1	EF	Average	3.5
		LDC-21	Center Plant - Lime Bins DC (RDC-302 from East Plant relocated to LDC-1)	13.25	Amb	0.66 x 0.76	23.8	9.8	1.29E-01	1	EF	Average	7.6
		LDC-22	Center Plant - Lime Bins DC (RDC-202 from East Plant relocated to LDC-2)	13.25	Amb	0.66	33.8	1	1.29E-01	1	EF	Average	7.6
		LDC-9	Centre Plant Lime Bins DC	3.35	Amb	0.3	26.5	3	3.25E-02	1	EF	Average	1.9
		LDC-35	Centre plant Cal 85	3.35	Amb	0.46	13.72	NA	2.56E-02	1	EF	Average	1.5
Arsenic	7440-38-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	2.18E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	8.09E-07	1	EF	Uncertain	97.4
Beryllium	7440-41-7	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	2.54E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	9.43E-07	1	EF	Uncertain	97.4
Cadmium	7440-43-9	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	6.16E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	2.29E-06	1	EF	Uncertain	97.4
Copper	7440-50-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	4.60E-09	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.71E-07	1	EF	Uncertain	97.4
Chromium	7440-47-3	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	3.14E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.17E-05	1	EF	Uncertain	97.4
Lead	7439-92-1	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	5.08E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.89E-05	1	EF	Uncertain	97.4
Manganese	7439-96-5	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	5.92E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	2.20E-05	1	EF	Uncertain	97.4
Mercury	7439-97-6	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	3.34E-05	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	3.73E-05	1	EF	Uncertain	52.7
Nickel	7440-02-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	3.38E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.26E-05	1	EF	Uncertain	97.4
Selenium	7782-49-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	1.57E-06	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	5.84E-05	1	EF	Uncertain	97.4
Zinc	7440-66-6	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	1.23E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	4.58E-07	1	EF	Uncertain	97.4
HCl	7647-01-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	4.83E-01	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	5.39E-01	1	EF	Uncertain	52.7
Acenaphthylene	208-96-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	8.90E-07	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	9.93E-07	1	EF	Uncertain	52.7
Anthracene	120-12-7	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	8.46E-08	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	9.43E-08	1	EF	Uncertain	52.7
Benzene	71-43-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	5.24E-04	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	5.84E-04	1	EF	Uncertain	52.7
Benzo(a)pyrene	50-32-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	1.53E-08	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.71E-08	1	EF	Uncertain	52.7
Benzo(g,h,i)perylene	191-24-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	1.09E-08	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.21E-08	1	EF	Uncertain	52.7
Fluoranthene	206-44-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	2.86E-07	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	3.19E-07	1	EF	Uncertain	52.7
Formaldehyde	50-00-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	9.67E-05	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.08E-04	1	EF	Uncertain	52.7
Naphthalene	91-20-3	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	1.31E-05	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.46E-05	1	EF	Uncertain	52.7
Pyrene	129-00-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	1.33E-07	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.48E-07	1	EF	Uncertain	52.7
Chlorinated dibenzo-p-dioxins	NA-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	9.76E-11	1	EF	Uncertain	47.3

**Source Summary Table**  
**Carause Lime - Beachville Operations**  
**Emission Summary and Dispersion Modelling**  
**Project Number: 160930291**

Table X: Source Summary Table (by contaminant)

	Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	1.09E-10	1	EF	Uncertain	52.7
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## APPENDIX G



Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	TRS																								
	Dimethyl Disulphide	Dimethyl Sulphide	Hydrogen Sulphide	Total Mercaptans (as Methyl Mercaptan)	Total Reduced Sulphurs (TRS)	Acetone	Benzene	Bromodichloro methane	2-Butanol	Butyl Acetate	n-Butanol	Carbon Tetrachloride	Chlorobenzene	Chlorodifluoro methane	Chloroethane	Chloroform	Chloromethane	m-Cymene	Decane	1,2-Dibromoethane	1,4-Dichlorobenzene	Dichlorodifluoro methane	1,1-Dichloroethane	1,2-Dichloroethane	
CAS	624-92-0	75-18-3	7783-06-4	74-93-1	N/A-2	67-64-1	71-43-2	75-27-4	78-92-2	123-86-4	78-92-2	56-23-5	108-90-7	75-45-6	75-00-3	67-66-3	74-87-3	535-77-3	124-18-5	106-93-4	106-46-7	75-71-8	75-34-3	107-06-2	
Air Quality Standard or POI Limit <sup>(1)</sup>	N/A	N/A	7	N/A	7	11880	2.3	N/A	496	N/A	920	2.4	N/A	350000	5600	1	320	N/A	N/A	3	95	500000	165	2	
Rd 66 VOC D																									
April 2, 2018	Invalid Sample																								
April 8, 2018	3.9	7.5	2.8	4.0	5.0	3.9	2.8	0.306	0.34	3.1	4.8	0.8	0.42	0.46	0.86	0.27	0.133	1.23	5.5	1.5	0.039	0.06	1.95	0.041	0.052
April 14, 2018	Invalid Sample																								
April 20, 2018	3.9	7.5	2.8	4.0	5.0	5.2	0.201	0.34	3.1	4.8	0.8	0.42	0.46	1.02	0.27	0.863	1.10	5.5	1.5	0.039	0.06	1.90	0.041	0.054	
April 26, 2018	3.9	7.5	2.8	4.0	5.0	3.4	0.276	0.34	3.1	4.8	0.8	0.43	0.46	1.01	0.27	0.218	1.32	5.5	1.5	0.039	0.06	1.95	0.041	0.068	
May 2, 2018	Invalid Sample																								
May 8, 2018	3.9	7.5	2.8	4.0	5.0	21.7	0.207	0.34	3.1	4.8	0.8	0.44	0.46	1.28	0.27	3.790	1.03	5.5	1.5	0.039	0.06	1.59	0.041	0.085	
May 14, 2018	2.0	2.6	1.4	2.0	2.8	6.2	0.332	0.34	3.1	4.8	0.8	0.47	0.46	1.02	0.27	0.184	1.30	5.5	1.5	0.039	0.06	2.07	0.041	0.072	
May 20, 2018	2.0	2.6	1.4	2.0	2.8	7.5	0.356	0.34	3.1	4.8	0.8	0.47	0.46	0.36	0.27	0.156	1.21	5.5	1.5	0.039	0.53	1.80	0.041	0.057	
May 26, 2018	2.0	2.6	3.1	2.0	2.8	18.4	0.355	0.34	3.1	4.8	0.8	0.43	0.46	1.47	0.27	0.100	1.25	5.5	1.5	0.039	0.54	2.00	0.041	0.059	
June 1, 2018	2.0	2.6	6.0	2.0	6.0	27.8	0.149	0.34	3.1	4.8	0.8	0.41	0.46	0.36	0.27	0.107	1.25	5.5	1.5	0.039	0.52	1.79	0.041	0.075	
June 7, 2018	2.0	2.6	3.3	2.0	2.8	20.3	0.190	0.34	3.1	4.8	0.8	0.44	0.46	0.83	0.27	0.103	1.06	5.5	1.5	0.039	0.13	1.78	0.041	0.065	
June 13, 2018	2.0	2.6	12.1	2.0	12.1	19.1	0.211	0.34	3.1	4.8	0.8	0.41	0.46	0.84	0.27	0.049	1.81	5.5	1.5	0.039	0.29	1.89	0.041	0.050	
June 19, 2018	2.0	2.6	1.4	2.0	2.8	13.1	0.098	0.34	3.1	4.8	0.8	0.37	0.46	0.36	0.27	0.161	1.21	5.5	1.5	0.039	0.32	1.88	0.041	0.042	
June 25, 2018	2.0	2.6	1.4	2.0	2.8	8.4	0.091	0.34	3.1	4.8	0.8	0.46	0.46	0.80	0.27	0.180	1.19	5.5	1.5	0.039	0.27	1.84	0.041	0.065	
January 3, 2019	1.95	2.55	1.4	1.95	2.8	7	0.351	0.335	3.05	4.75	0.75	0.46	0.46	0.79	0.265	0.049	1.04	5.5	1.45	0.0385	0.06	2.35	0.0405	0.083	
January 9, 2019	1.95	2.55	1.4	1.95	2.8	9.3	0.374	0.335	3.05	4.75	2.1	0.47	0.46	0.355	0.265	0.049	1.05	5.5	1.45	0.0385	0.06	2.25	0.0405	0.089	
January 15, 2019	1.95	2.55	1.4	1.95	2.8	7.8	0.501	0.335	3.05	4.75	0.75	0.49	0.46	0.94	0.265	0.049	1.24	5.5	1.45	0.0385	0.06	2.33	0.0405	0.095	
January 21, 2019	Invalid Sample																								
January 27, 2019	Invalid Sample																								
February 2, 2019	1.95	2.55	1.4	1.95	2.8	6	0.774	0.335	3.05	4.75	0.75	0.48	0.46	1.1	0.265	0.049	1.17	5.5	1.45	0.0385	0.06	2.3	0.0405	0.099	
February 8, 2019	1.95	2.55	1.4	1.95	2.8	6.8	0.439	0.335	3.05	4.75	0.75	0.51	0.46	0.77	0.265	0.049	1.13	5.5	1.45	0.0385	0.06	2.24	0.0405	0.085	
February 14, 2019	1.95	2.55	1.4	1.95	2.8	8.9	0.495	0.335	3.05	4.75	0.75	0.49	0.46	0.89	0.265	0.049	1.31	5.5	1.45	0.0385	0.06	2.22	0.0405	0.087	
February 20, 2019	Invalid Sample																								
February 26, 2019	2.85	3.75	1.55	2.9	1.55	9.5	0.346	0.335	3.05	4.75	0.75	0.45	0.46	0.355	0.265	0.049	1.28	5.5	1.45	0.0385	0.06	2.52	0.0405	0.087	
March 4, 2019	2.65	3.5	1.45	2.7	1.45	7.6	0.427	0.335	3.05	4.75	0.75	0.41	0.46	0.355	0.265	0.049	1.09	5.5	1.45	0.0385	0.06	2.3	0.0405	0.084	
March 10, 2019	2.65	3.5	1.45	2.7	1.45	6.5	0.845	0.335	3.05	4.75	0.75	0.47	0.46	0.355	0.265	0.049	1.08	5.5	1.45	0.0385	0.06	2.54	0.0405	0.086	
March 16, 2019	1.95	2.55	1.4	1.95	2.8	8	0.327	0.335	3.05	4.75	0.75	0.48	0.46	1.25	0.265	0.049	1.25	5.5	1.45	0.0385	0.06	2.48	0.0405	0.084	
March 22, 2019	1.95	2.55	1.4	1.95	2.8	9.4	0.36	0.335	3.05	4.75	0.75	0.49	0.46	1.01	0.265	0.049	1.21	5.5	1.45	0.0385	0.06	2.52	0.0405	0.094	
March 28, 2019	1.95	2.55	1.4	1.95	2.8	16	0.566	0.335	3.05	4.75	0.75	0.4	0.46	1.02	0.265	0.049	1.23	5.5	1.45	0.0385	0.06	2.55	0.0405	0.079	
April 3, 2019	1.95	2.55	1.4	1.95	2.8	Invalid Sample																			
April 9, 2019	1.95	2.55	1.4	1.95	2.8	Invalid Sample																			
July 1, 2018	1.95	2.55	1.4	1.95	2.8	22.9	0.239	0.335	3.05	4.75	2.5	0.43	0.46	0.82	0.265	0.364	1.29	5.5	1.45	0.0385	0.63	1.93	0.0405	0.067	
July 7, 2018	Invalid Sample																								
July 13, 2018	1.950	2.550	3.300	1.950	2.800	8.600	0.369	0.335	3.050	4.750	0.750	0.460	0.460	0.355	0.265	0.299	1.220	5.500	1.450	0.039	0.420	1.920	0.041	0.068	
July 19, 2018	2.0	2.6	1.4	2.0	2.8	9.4	0.2	0.3	3.1	4.8	0.8	0.5	0.5	0.4	0.3	0.2	1.0	5.5	1.5	0.0	0.2	2.0	0.0	0.1	
July 25, 2018	2.0	2.6	1.4	2.0	2.8	15.1	0.3	0.3	3.1	4.8	0.8	0.5	0.5	0.7	0.3	0.2	1.1	5.5	1.5	0.0	0.2	1.9	0.0	0.0	
July 31, 2018	2.0	2.6	1.4	2.0	2.8	12.7	0.3	0.3	3.1	4.8	0.8	0.5	0.5	0.4	0.3	0.2	0.9	5.5	1.5	0.0	0.1	2.1	0.0	0.1	
August 6, 2018	1.95	2.55	1.4	1.95	2.8	18.1	0.635	0.335	3.05	4.75	0.75	0.42	0.46	0.355	0.265	0.102	1.04	5.5	1.45	0.0385	0.14	1.82	0.0405	0.045	
August 12, 2018	1.95	2.55	1.4	1.95	2.8	8.6	0.548	0.335	3.05	4.75	0.75	0.43	0.46	0.355	0.265	0.12	0.91	5.5	1.45	0.0385	0.06	1.91	0.0405	0.02	
August 18, 2018	1.95	2.55	1.4	1.95	2.8	9.4	0.233	0.335	3.05	4.75	0.75	0.49	0.46	0.8	0.265	0.098	0.97	5.5	1.45	0.0385	0.16	2.01	0.0405	0.054	
August 24, 2018	1.95	2.55	1.4	1.95	2.8	8.6	0.416	0.335	3.05	4.75	0.75	0.43	0.46	0.8	0.265	0.111	0.87	5.5	1.45	0.0385	0.06	2.01	0.0405	0.046	
August 30, 2018	1.95	2.55	1.4	1.95	2.8	7.6	0.27	0.335	3.05	4.75	7.9	0.43	0.46	0.9	0.265	0.1	0.87	5.5	1.45	0.0385	0.06	1.96	0.0405	0.042	
September 5, 2018	2	3	14	2	14	26	0	0	3	5	2	0	0	1	0	0	1	6	1	0	0	2	0	0	
September 11, 2018	1.95	2.55	3.5	1.95	2.8	14.6	0.563	0.335	3.05	4.75	2.8	0.4	0.46	1.08	0.265	0.161	0.98	5.5	1.45	0.0385	0.33	2.03	0.0405	0.02	
September 17, 2018	1.95	2.55	1.4	1.95	2.8	11.7	0.24	0.335	3.05	4.75	1.8	0.45	0.46	0.82	0.265	0.049	1.12	5.5	1.45	0.0385	0.06	2.05	0.0405	0.02	
September 23, 2018	1.95	2.55	1.4	1.95	2.8	5	0.339	0.335	3.05	4.75	0.75	0.52	0.46	0.94	0.265	0.049	0.96	5.5	1.45	0.0385	0.06	2.13	0.0405	0.02	
September 29, 2018																									



Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	TRS					Acetone	Benzene	Bromodichloro methane	2-Butanol	Butyl Acetate	n-Butanol	Carbon Tetrachloride	Chlorobenzene	Chlorodifluoro methane	Chloroethane	Chloroform	Chloromethane	m-Cymene	Decane	1,2-Dibromoethane	1,4-Dichlorobenzene	Dichlorodifluoro methane	1,1-Dichloroethane	1,2-Dichloroethane
	Dimethyl Sulphide	Dimethyl Sulphide	Hydrogen Sulphide	Total Mercaptans (as Methyl Mercaptan)	Total Reduced Sulphurs (TRS)																			
CAS	624-92-0	75-18-3	7783-06-4	74-93-1	N/A-2	67-64-1	71-43-2	75-27-4	78-92-2	123-86-4	78-92-2	56-23-5	108-90-7	75-45-6	75-00-3	67-66-3	74-87-3	535-77-3	124-18-5	106-93-4	106-46-7	75-71-8	75-34-3	107-06-2
Air Quality Standard or POI Limit <sup>(1)</sup>	N/A	N/A	7	N/A	7	11880	2.3	N/A	496	N/A	920	2.4	N/A	350000	5600	1	320	N/A	N/A	3	95	500000	165	2
<b>33rd Line VOC D</b>																								
April 2, 2018	Invalid Sample																							
April 8, 2018	3.9	7.5	2.8	4.0	5.0	1.5	0.294	0.34	3.1	4.8	0.8	0.41	0.46	0.75	0.27	0.049	1.09	5.5	1.5	0.039	0.06	2.06	0.041	0.043
April 14, 2018	3.9	7.5	2.8	4.0	5.0	2.4	0.301	0.34	3.1	4.8	0.8	0.41	0.46	0.83	0.27	0.049	1.02	5.5	1.5	0.039	0.06	2.06	0.041	0.054
April 20, 2018	3.9	7.5	2.8	4.0	5.0	2.5	0.226	0.34	3.1	4.8	0.8	0.40	0.46	0.36	0.27	0.049	1.14	5.5	1.5	0.039	0.06	1.88	0.041	0.045
April 26, 2018	3.9	7.5	2.8	4.0	5.0	2.9	0.292	0.34	3.1	4.8	0.8	0.40	0.46	0.36	0.27	0.049	0.85	5.5	1.5	0.039	0.06	1.81	0.041	0.049
May 2, 2018	3.9	7.5	2.8	4.0	5.0	6.1	0.235	0.34	3.1	4.8	0.8	0.44	0.46	1.21	0.27	0.049	1.22	5.5	1.5	0.039	0.13	1.67	0.041	0.073
May 8, 2018	3.9	7.5	2.8	4.0	5.0	4.2	0.250	0.34	3.1	4.8	0.8	0.42	0.46	1.01	0.27	0.100	1.05	5.5	1.5	0.039	0.06	1.71	0.041	0.070
May 14, 2018	2.0	2.6	1.4	2.0	2.8	5.1	0.386	0.34	3.1	4.8	0.8	0.47	0.46	0.36	0.27	0.142	1.18	5.5	1.5	0.039	0.12	2.26	0.041	0.065
May 20, 2018	2.0	2.6	1.4	2.0	2.8	6.7	0.262	0.34	3.1	4.8	0.8	0.48	0.46	0.81	0.27	0.049	1.17	5.5	1.5	0.039	0.34	2.10	0.041	0.075
May 26, 2018	2.0	2.6	2.8	2.0	2.8	19.2	1.000	0.34	3.1	4.8	2.7	0.40	0.46	0.91	0.27	0.117	1.29	5.5	1.5	0.039	0.17	2.03	0.041	0.062
June 1, 2018	2.0	2.6	4.7	2.0	2.8	35.6	0.958	0.34	3.1	4.8	1.5	0.42	0.46	0.36	0.27	0.237	1.16	5.5	1.5	0.039	0.36	1.93	0.041	0.074
June 7, 2018	2.0	2.6	3.4	2.0	2.8	14.7	0.276	0.34	3.1	4.8	1.9	0.41	0.46	0.36	0.27	0.273	0.81	5.5	1.5	0.039	0.27	1.85	0.041	0.070
June 13, 2018	2.0	2.6	1.4	2.0	2.8	26.0	0.435	0.34	3.1	4.8	3.5	0.32	0.46	0.90	0.27	0.195	1.18	5.5	1.5	0.039	0.21	1.58	0.041	0.020
June 19, 2018	2.0	2.6	1.4	2.0	2.8	58.2	0.370	0.34	3.1	4.8	13.4	0.37	0.46	0.88	0.27	2.010	1.24	5.5	1.5	0.039	2.88	1.80	0.041	0.047
June 25, 2018	2.0	2.6	1.4	2.0	2.8	68.1	0.417	0.34	3.1	4.8	17.5	0.41	0.46	0.72	0.27	2.510	0.92	5.5	1.5	0.039	2.23	1.74	0.041	0.068
January 3, 2019	Invalid Sample																							
January 9, 2019	1.95	2.55	1.4	1.95	2.8	7.5	0.343	0.335	3.05	4.75	0.75	0.45	0.46	0.81	0.265	0.049	1.05	5.5	1.45	0.0385	0.06	2.25	0.0405	0.086
January 15, 2019	Invalid Sample																							
January 21, 2019	Invalid Sample																							
January 27, 2019	Invalid Sample																							
February 2, 2019	1.95	2.55	1.4	1.95	2.8	6.6	0.81	0.335	3.05	4.75	0.75	0.47	0.46	0.97	0.265	0.115	1.11	5.5	1.45	0.0385	0.06	2.19	0.0405	0.126
February 8, 2019	1.95	2.55	1.4	1.95	2.8	9.3	0.608	0.335	3.05	4.75	0.75	0.49	0.46	0.87	0.265	0.049	1.1	5.5	1.45	0.0385	0.06	2.3	0.0405	0.082
February 14, 2019	1.95	2.55	1.4	1.95	2.8	8.8	0.498	0.335	3.05	4.75	0.75	0.5	0.46	0.81	0.265	0.049	1.17	5.5	1.45	0.0385	0.06	2.16	0.0405	0.083
February 20, 2019	3.8	5	16	3.9	22	16.7	0.589	0.335	3.05	4.75	0.75	0.44	0.46	0.87	0.265	0.049	1.2	5.5	1.45	0.0385	0.06	2.34	0.0405	0.082
February 26, 2019	2.85	3.75	1.55	2.9	1.55	9.4	0.364	0.335	3.05	4.75	0.75	0.48	0.46	0.355	0.265	0.049	1.2	5.5	1.45	0.0385	0.06	2.6	0.0405	0.09
March 4, 2019	Invalid Sample																							
March 10, 2019	2.65	9.1	1.45	2.7	4.8	6.7	1.07	0.335	3.05	4.75	0.75	0.48	0.46	0.355	0.265	0.049	1.3	5.5	1.45	0.0385	0.06	2.5	0.0405	0.088
March 16, 2019	1.95	2.55	1.4	1.95	2.8	9.8	0.39	0.335	3.05	4.75	4	0.46	0.46	0.355	0.265	0.119	1.05	5.5	1.45	0.0385	0.06	2.48	0.0405	0.082
March 22, 2019	1.95	2.55	1.4	1.95	2.8	16.2	0.413	0.335	3.05	4.75	0.75	0.5	0.46	0.86	0.265	0.151	1.16	5.5	1.45	0.0385	0.06	2.45	0.0405	0.098
March 28, 2019	1.95	2.55	1.4	1.95	2.8	18.5	0.744	0.335	3.05	4.75	0.75	0.43	0.46	0.91	0.265	0.049	1.33	5.5	1.45	0.0385	0.06	2.61	0.0405	0.071
April 3, 2019	1.95	2.55	1.4	1.95	2.8	Invalid																		
April 9, 2019	1.95	2.55	1.4	1.95	2.8	Invalid																		
July 1, 2018	1.95	2.55	1.4	1.95	2.8	25.2	0.376	0.335	3.05	4.75	0.75	0.44	0.46	1	0.265	0.359	1.26	5.5	1.45	0.0385	0.35	2.1	0.0405	0.061
July 7, 2018	1.95	2.55	1.4	1.95	2.8	7	0.219	0.335	3.05	4.75	0.75	0.46	0.46	0.355	0.265	0.223	1.31	5.5	1.45	0.0385	0.17	1.77	0.0405	0.071
July 13, 2018	1.95	2.55	3	1.95	2.8	23.4	0.336	0.335	3.05	4.75	0.75	0.5	0.46	0.355	0.265	0.15	1.42	5.5	1.45	0.0385	0.16	2.15	0.0405	0.138
July 19, 2018	1.950	2.550	1.400	1.950	2.800	9.300	0.313	0.335	3.050	4.750	0.750	0.510	0.460	0.355	0.265	0.196	1.140	5.500	7.600	0.098	0.190	1.920	0.097	0.156
July 25, 2018	2.0	2.6	1.4	2.0	2.8	25.6	0.5	0.3	3.1	4.8	0.8	0.5	0.5	0.9	0.3	0.2	1.1	5.5	1.5	0.0	0.1	2.0	0.0	0.0
July 31, 2018	2.0	2.6	1.4	2.0	2.8	13.7	0.5	0.3	3.1	4.8	0.8	0.4	0.5	0.9	0.3	0.1	0.8	5.5	0.0	0.0	0.1	1.8	0.0	0.1
August 6, 2018	2.0	2.6	1.4	2.0	2.8	13.7	0.2	0.3	3.1	4.8	0.8	0.4	0.5	0.4	0.3	0.0	1.1	5.5	1.5	0.0	0.1	2.1	0.0	0.1
August 12, 2018	Invalid Sample																							
August 18, 2018	1.95	2.55	1.4	1.95	2.8	9.9	0.222	0.335	3.05	4.75	0.75	0.52	0.46	0.355	0.265	0.049	1.15	5.5	1.45	0.0385	0.06	2.16	0.0405	0.045
August 24, 2018	1.95	2.55	1.4	1.95	2.8	8.5	0.422	0.335	3.05	4.75	3.9	0.41	0.46	0.91	0.265	0.101	0.81	5.5	1.45	0.0385	0.06	2.03	0.0405	0.046
August 30, 2018	1.95	2.55	1.4	1.95	2.8	7.8	0.257	0.335	3.05	4.75	0.75	0.41	0.46	0.355	0.265	0.049	0.82	5.5	1.45	0.0385	0.06	1.92	0.0405	0.044
September 5, 2018	Invalid Sample																							
September 11, 2018	2	3	1	2	3	14	1	0	3	5	4	0	0	1	0	0	1	6	1	0	0	2	0	0
September 17, 2018	1.95	2.55	1.4	1.95	2.8	13	0.436	0.335	3.05	4.75	1.6	0.46	0.46	0.74	0.265	0.049	1.25	5.5	1.45	0.0385	0.37	2.07	0.0405	0.02
September 23, 2018	1.95	2.55	1.4	1.95	2.8	7.2	0.425	0.335	3.05	4.75	0.75	0.52	0.46	0.82	0.265	0.101	0.88	5.5	1.45	0.0385	0.06	2.09	0.0405	0.02
September 29, 2018	1.95	2.55	1.4	1.95	2.8	6.9	0.234	0.335	3.05	4.75	0.75	0.52	0.46	0.81	0.265	0.049	0.84	5.5	1.45	0.0385	0.06	2.		

Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	TRS					Acetone	Benzene	Bromodichloro methane	2-Butanol	Butyl Acetate	n-Butanol	Carbon Tetrachloride	Chlorobenzene	Chlorodifluoro methane	Chloroethane	Chloroform	Chloromethane	m-Cymene	Decane	1,2-Dibromoethane	1,4-Dichlorobenzene	Dichlorodifluoro methane	1,1-Dichloroethane	1,2-Dichloroethane
	Dimethyl Sulphide	Dimethyl Sulphide	Hydrogen Sulphide	Total Mercaptans (as Methyl Mercaptan)	Total Reduced Sulphurs (TRS)																			
CAS	624-92-0	75-18-3	7783-06-4	74-93-1	N/A-2	67-64-1	71-43-2	75-27-4	78-92-2	123-86-4	78-92-2	56-23-5	108-90-7	75-45-6	75-00-3	67-66-3	74-87-3	535-77-3	124-18-5	106-93-4	106-46-7	75-71-8	75-34-3	107-06-2
Air Quality Standard or POI Limit <sup>(1)</sup>	N/A	N/A	7	N/A	7	11880	2.3	N/A	496	N/A	920	2.4	N/A	350000	5600	1	320	N/A	N/A	3	95	500000	165	2
<b>Bell VOC D</b>																								
April 2, 2018																								
April 8, 2018	Invalid Sample																							
April 14, 2018	3.9	7.5	2.8	4.0	5.0	4.1	0.362	0.34	3.1	4.8	0.8	0.39	0.46	0.81	0.27	0.191	1.05	5.5	1.5	0.039	0.06	1.94	0.041	0.047
April 20, 2018	3.9	7.5	2.8	4.0	5.0	9.0	0.4	0.3	3.1	4.8	0.8	0.4	0.5	0.9	0.3	3.3	1.2	5.5	1.5	0.0	0.2	1.8	0.0	0.1
April 26, 2018	Invalid Sample																							
May 2, 2018	3.9	7.5	2.8	4.0	5.0	5.2	0.380	0.34	3.1	4.8	0.8	0.43	0.46	1.28	0.27	0.177	0.77	5.5	1.5	0.039	0.06	1.88	0.041	0.066
May 8, 2018	3.9	7.5	2.8	4.0	5.0	9.4	0.251	0.34	3.1	4.8	3.4	0.42	0.46	1.06	0.27	1.860	1.20	5.5	1.5	0.039	0.34	1.66	0.041	0.084
May 14, 2018	3.9	7.5	2.8	4.0	5.0	7.4	0.346	0.34	3.1	4.8	0.8	0.46	0.46	1.02	0.27	3.420	1.09	5.5	1.5	0.039	0.26	1.69	0.041	0.086
May 20, 2018	2.0	2.6	1.4	2.0	2.8	9.8	0.376	0.34	3.1	4.8	0.8	0.42	0.46	0.36	0.27	2.850	1.46	5.5	1.5	0.039	0.23	2.00	0.041	0.020
May 26, 2018	2.0	2.6	2.9	2.0	2.8	16.0	0.209	0.34	3.1	4.8	0.8	0.44	0.46	1.20	0.27	1.970	1.34	5.5	1.5	0.039	0.06	1.83	0.041	0.061
June 1, 2018	2.0	2.6	8.8	2.0	8.8	15.8	0.749	0.34	3.1	4.8	1.8	0.41	0.46	0.75	0.27	0.049	1.15	5.5	1.5	0.039	0.06	2.07	0.041	0.053
June 7, 2018	2.0	2.6	12.3	2.0	12.3	28.0	0.321	0.34	3.1	4.8	0.8	0.41	0.46	0.87	0.27	0.049	1.24	5.5	1.5	0.039	0.41	1.85	0.041	0.073
June 13, 2018	2.0	2.6	4.3	2.0	2.8	7.5	0.2	0.3	3.1	4.8	0.8	0.4	0.5	0.7	0.3	0.0	0.9	5.5	1.5	0.0	0.1	1.7	0.0	0.1
June 19, 2018	Invalid Sample																							
June 25, 2018	2.0	2.6	3.3	2.0	2.8	13.6	0.4	0.3	3.1	4.8	1.7	0.4	0.5	0.8	0.3	0.0	1.1	5.5	1.5	0.0	0.1	1.9	0.0	0.0
January 3, 2019	Invalid Sample																							
January 9, 2019	1.95	2.55	1.4	1.95	2.8	6.5	0.345	0.335	3.05	4.75	0.75	0.46	0.46	0.95	0.265	0.049	1.21	5.5	1.45	0.0385	0.06	2.23	0.0405	0.083
January 15, 2019	1.95	2.55	1.4	1.95	2.8	4.4	0.627	0.335	3.05	4.75	0.75	0.46	0.46	1.13	0.265	0.049	1.23	5.5	1.45	0.0385	0.13	2.47	0.0405	0.089
January 21, 2019	Invalid Sample																							
January 27, 2019	Invalid Sample																							
February 2, 2019	Invalid Sample																							
February 8, 2019	1.95	2.55	1.4	1.95	2.8	9.2	0.391	0.335	3.05	4.75	0.75	0.48	0.46	0.97	0.265	0.049	1.21	5.5	1.45	0.0385	0.06	2.33	0.0405	0.086
February 14, 2019	1.95	2.55	1.4	1.95	2.8	13.9	0.495	0.335	3.05	4.75	0.75	0.47	0.46	0.79	0.265	0.049	1.21	5.5	1.45	0.0385	0.06	2.14	0.0405	0.085
February 20, 2019	3.8	5	31	3.9	31	5	0.681	0.335	3.05	4.75	0.75	0.45	0.46	0.355	0.265	0.049	1	5.5	1.45	0.0385	0.06	2.57	0.0405	0.086
February 26, 2019	2.85	3.75	1.55	2.9	1.55	3.3	0.373	0.335	3.05	4.75	0.75	0.45	0.46	0.355	0.265	0.049	1.13	5.5	1.45	0.0385	0.06	2.44	0.0405	0.087
March 4, 2019	2.65	3.5	1.45	2.7	1.45	4.7	0.441	0.335	3.05	4.75	0.75	0.4	0.46	0.87	0.265	0.049	1.24	5.5	1.45	0.0385	0.06	2.24	0.0405	0.088
March 10, 2019	2.65	17	1.45	2.7	8.9	4.4	0.414	0.335	3.05	4.75	0.75	0.46	0.46	0.355	0.265	0.049	1.17	5.5	1.45	0.0385	0.06	2.5	0.0405	0.086
March 16, 2019	1.95	2.55	1.4	1.95	2.8	5	0.248	0.335	3.05	4.75	0.75	0.44	0.46	0.86	0.265	0.049	1.24	5.5	1.45	0.0385	0.06	2.4	0.0405	0.081
March 22, 2019	1.95	2.55	1.4	1.95	2.8	4.1	0.385	0.335	3.05	4.75	0.75	0.48	0.46	0.355	0.265	0.049	1.2	5.5	1.45	0.0385	0.06	2.82	0.0405	0.095
March 28, 2019	1.95	2.55	1.4	1.95	2.8	4.8	0.466	0.335	3.05	4.75	0.75	0.41	0.46	0.92	0.265	0.049	1.15	5.5	1.45	0.0385	0.06	2.28	0.0405	0.065
April 3, 2019	1.95	2.55	1.4	1.95	2.8	Invalid																		
April 9, 2019	1.95	2.55	1.4	1.95	2.8	Invalid																		
July 1, 2018	1.95	2.55	2.9	1.95	2.8	26.2	0.315	0.335	3.05	4.75	3.3	0.44	0.46	0.86	0.265	0.472	1.21	5.5	1.45	0.0385	0.44	1.86	0.0405	0.068
July 7, 2018	1.95	2.55	1.4	1.95	2.8	4	0.18	0.335	3.05	4.75	1.6	0.22	0.46	0.355	0.265	0.049	0.78	5.5	1.45	0.0385	0.06	1.24	0.0405	0.046
July 13, 2018	1.95	2.55	4.5	1.95	2.8	7.6	0.272	0.335	3.05	4.75	0.75	0.44	0.46	0.355	0.265	0.122	1.15	5.5	1.45	0.0385	0.06	1.89	0.0405	0.071
July 19, 2018	1.950	2.550	1.400	1.950	2.800	9.700	0.323	0.335	3.050	4.750	0.750	0.390	0.460	0.355	0.265	0.102	0.990	5.500	1.450	0.039	0.060	1.940	0.041	0.053
July 25, 2018	2.0	2.6	3.5	2.0	2.8	15.6	0.2	0.3	3.1	4.8	0.8	0.4	0.5	0.4	0.3	0.0	1.0	5.5	1.5	0.0	0.2	1.8	0.0	0.0
July 31, 2018	2.0	2.6	3.4	2.0	2.8	14.2	0.4	0.3	3.1	4.8	0.8	0.5	0.5	0.7	0.3	0.2	1.0	5.5	1.5	0.0	0.2	2.0	0.0	0.1
August 6, 2018	2.0	2.6	4.0	2.0	2.8	17.7	0.4	0.3	3.1	4.8	1.5	0.4	0.5	0.4	0.3	0.2	1.2	5.5	1.5	0.0	0.3	1.9	0.0	0.1
August 12, 2018	1.95	2.55	1.4	1.95	2.8	7.9	0.521	0.335	3.05	4.75	0.75	0.43	0.46	0.355	0.265	0.228	0.86	5.5	1.45	0.0385	0.26	1.77	0.0405	0.044
August 18, 2018	1.95	2.55	1.4	1.95	2.8	9.4	0.377	0.335	3.05	4.75	0.75	0.52	0.46	0.72	0.265	0.207	1.1	5.5	1.45	0.0385	0.17	2.06	0.0405	0.049
August 24, 2018	1.95	2.55	1.4	1.95	2.8	12.2	0.533	0.335	3.05	4.75	0.75	0.43	0.46	0.9	0.265	0.117	0.88	5.5	1.45	0.0385	0.06	2.05	0.0405	0.048
August 30, 2018	1.95	2.55	1.4	1.95	2.8	6.3	0.412	0.335	3.05	4.75	0.75	0.43	0.46	0.355	0.265	0.135	0.76	5.5	1.45	0.0385	0.06	1.97	0.0405	0.047
September 5, 2018	1.95	2.55	16.8	1.95	16.8	28.8	0.508	0.335	3.05	4.75	2.1	0.41	0.46	0.75	0.265	0.195	0.9	5.5	1.45	0.0385	0.5	1.95	0.0405	0.02
September 11, 2018	2	3	3	2	3	9	0	0	3	5	1	0	0	0	0	0	1	6	1	0	0	2	0	0
September 17, 2018	1.95	2.55	1.4	1.95	2.8	13.3	0.506	0.335	3.05	4.75	2.1	0.44	0.46	1.08	0.265	0.248	1.03	5.5	1.45	0.0385	0.19	2.06	0.0405	0.02
September 23, 2018	1.95	2.55	1.4	1.95	2.8	7.3	0.695	0.335	3.05	4.75	0.75	0.56	0.46	0.74	0.265	0.17	1	5.5	1.45	0.0385	0.06	2.36	0.0405	0.045
September 29, 2018	1.95	2.55	1.4	1.95	2.8	8.4	0.362	0.335	3.05	4.75	1.7	0.51	0.46	1.21	0.265	0.121	0.98	5.5	3.8	0.0385	0.35	1.94	0.0405	0.047

Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	VOCs																								
	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloroethene	Methylene chloride	Dichlorofluoro methane	Ethanol	Ethyl acetate	Ethyl Benzene	2-Ethyltoluene	m/p-Ethyl Toluene	n-Heptane	n-Hexane	Isopropyl alcohol	Limonene	2-Methyl Butane	Methyl ethyl ketone	2-Methyl Hexane	3-Methyl Hexane	Methyl isobutyl ketone	2-Methyl Pentane	3-Methyl Pentane	Methyl Cyclohexane	Naphthalene	
CAS	75-35-4	156-59-2	156-60-5	540-59-0	75-09-2	75-43-4	64-17-5	141-78-6	100-41-4	611-14-3	620-14-4	142-82-5	110-54-3	67-63-0	5989-27-5	78-78-4	78-93-3	591-76-4	589-34-4	108-10-1	107-83-5	96-14-0	108-87-2	91-20-3	
Air Quality Standard or PDI Limit <sup>(1)</sup>	10	105	105	105	220	N/A	N/A	N/A	1000	500	500	11000	2500	7300	625	7080	1000	1228	2600	1200	4200	1400	6440	22.5	
<b>Rd 66 VOC D</b>																									
April 2, 2018																									
April 8, 2018	0.040	0.040	0.040	0.079	0.35	4.2	3.1	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.30	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
April 14, 2018																									
April 20, 2018	0.040	0.040	0.040	0.079	0.35	4.2	4.7	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.30	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
April 26, 2018	0.040	0.040	0.040	0.079	0.35	4.2	2.7	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.67	0.65	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
May 2, 2018																									
May 8, 2018	0.040	0.040	0.040	0.079	0.35	4.2	6.6	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	1.15	0.84	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
May 14, 2018	0.040	0.040	0.040	0.079	0.35	4.2	2.8	0.36	0.44	0.49	1.0	0.41	0.72	4.2	5.5	0.87	0.84	4.1	4.2	0.41	0.41	0.35	0.35	0.40	0.7
May 20, 2018	0.040	0.040	0.040	0.079	0.35	4.2	3.0	0.36	0.44	0.49	1.0	0.41	0.35	3.6	5.5	0.74	1.09	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
May 26, 2018	0.040	0.040	0.040	0.079	0.35	4.2	7.0	0.36	0.44	0.49	1.0	0.41	0.35	5.6	5.5	1.58	1.39	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
June 1, 2018	0.040	0.040	0.040	0.079	0.35	4.2	4.5	0.36	0.44	0.49	1.0	0.41	0.35	7.0	5.5	0.30	0.84	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
June 7, 2018	0.040	0.040	0.040	0.079	0.35	4.2	4.0	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	1.35	0.92	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
June 13, 2018	0.040	0.040	0.040	0.079	0.35	4.2	5.3	0.36	0.44	0.49	1.0	0.41	0.35	11.9	5.5	1.18	1.46	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
June 19, 2018	0.040	0.040	0.040	0.079	0.35	4.2	3.6	0.36	0.44	0.49	1.0	0.41	0.35	3.6	5.5	0.30	0.59	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
June 25, 2018	0.040	0.040	0.040	0.079	0.35	4.2	4.3	0.36	0.44	0.49	1.0	0.41	0.35	4.1	5.5	0.30	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
January 3, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.5	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.98	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
January 9, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.99	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
January 15, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.84	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
January 21, 2019																									
January 27, 2019																									
February 2, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.7	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.36	0.74	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
February 8, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.76	1.25	5.5	0.94	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
February 14, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.7	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.19	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
February 20, 2019																									
February 26, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.79	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 4, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.71	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 10, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.6	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.03	0.78	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 16, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.1	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 22, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.68	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 28, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.3	0.36	0.435	0.49	1	0.41	0.35	3.6	5.5	1.08	0.78	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
April 3, 2019																									
April 9, 2019																									
July 1, 2018	0.0395	0.0395	0.0395	0.77	4.2	18.7	0.36	0.435	0.49	1	0.41	0.35	5.9	5.5	1.51	2.34	4.1	0.41	0.41	0.35	0.35	0.4	0.65		
July 7, 2018																									
July 13, 2018	0.040	0.040	0.040	0.079	0.345	4.200	6.300	0.360	0.435	0.490	1.000	0.410	0.350	3.100	5.500	0.900	1.450	4.100	0.410	0.410	0.350	0.350	0.400	0.650	
July 19, 2018	0.0	0.0	0.0	0.1	0.3	4.2	3.8	0.4	0.4	0.5	1.0	0.4	0.4	2.6	5.5	0.9	0.7	4.1	0.4	0.4	0.4	0.4	0.4	0.7	
July 25, 2018	0.0	0.0	0.0	0.1	0.3	4.2	3.6	0.4	0.4	0.5	1.0	0.4	2.0	5.4	5.5	0.7	0.8	4.1	0.4	0.4	0.4	0.4	0.4	0.7	
July 31, 2018	0.0	0.0	0.0	0.1	0.3	4.2	2.6	0.4	0.4	0.5	1.0	0.4	0.4	4.9	5.5	1.1	0.8	4.1	0.4	0.4	0.4	0.4	0.4	0.7	
August 6, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.8	0.36	0.435	0.49	1	0.41	0.35	9.4	5.5	1.17	1.39	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
August 12, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.4	0.36	0.435	0.49	1	0.41	0.35	3.7	5.5	0.295	0.69	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
August 18, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.6	0.36	0.435	0.49	1	0.41	0.35	4.1	5.5	0.295	0.78	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
August 24, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.7	0.36	0.435	0.49	1	0.41	0.35	2.5	5.5	0.93	0.71	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
August 30, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	1.9	0.36	0.435	0.49	1	0.41	1.03	1.25	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
September 5, 2018	0	0	0	1	4	5	0	0	0	0	1	0	0	19	6	1	2	4	19	0	0	0	0	1	
September 11, 2018	0.0395	0.286	0.085	0.371	0.345	4.2	14.5	1.21	0.435	0.49	1	1.41	0.91	1.25	5.5	3.28	1.38	4.1	1.04	0.41	0.74	0.35	0.4	0.65	
September 17, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.4	0.36	0.435	0.49	1	0.41	0.35	8.7	5.5	0.295	0.66	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
September 23, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
September 29, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3	0.36	0.435	0.49	1	0.41	0.35	2.5	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
October 5, 2018	0.0395	0.0395	0.0395	0.07																					

Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	VOCs																							
	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloroethene	Methylene chloride	Dichlorofluoro methane	Ethanol	Ethyl acetate	Ethyl Benzene	2-Ethyltoluene	m/p-Ethyl Toluene	n-Heptane	n-Hexane	Isopropyl alcohol	Limonene	2-Methyl Butane	Methyl ethyl ketone	2-Methyl Hexane	3-Methyl Hexane	Methyl isobutyl ketone	2-Methyl Pentane	3-Methyl Pentane	Methyl Cyclohexane	Naphthalene
CAS	75-35-4	156-59-2	156-60-5	540-59-0	75-09-2	75-43-4	64-17-5	141-78-6	100-41-4	611-14-3	620-14-4	142-82-5	110-54-3	67-63-0	5989-27-5	78-78-4	78-93-3	591-76-4	589-34-4	108-10-1	107-83-5	96-14-0	108-87-2	91-20-3
Air Quality Standard or POI Limit <sup>(1)</sup>	10	105	105	105	220	N/A	N/A	N/A	1000	500	500	11000	2500	7300	625	7080	1000	1228	2600	1200	4200	1400	6440	22.5
<b>33rd Line VOC D</b>																								
April 2, 2018																								
April 8, 2018	0.040	0.040	0.040	0.079	0.35	4.2	4.5	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.64	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7
April 14, 2018	0.040	0.040	0.040	0.079	0.35	4.2	1.0	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.71	0.68	4.1	0.41	0.41	0.35	0.35	0.40	0.7
April 20, 2018	0.040	0.040	0.040	0.079	0.35	4.2	2.0	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.30	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7
April 26, 2018	0.040	0.040	0.040	0.079	0.35	4.2	1.0	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	1.06	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7
May 2, 2018	0.040	0.040	0.040	0.079	0.35	4.2	2.7	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	1.12	0.88	4.1	1.31	0.41	0.35	0.35	0.40	0.7
May 8, 2018	0.040	0.040	0.040	0.079	0.35	4.2	48.8	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.78	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7
May 14, 2018	0.040	0.040	0.040	0.079	0.35	4.2	13.8	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	2.32	0.91	4.1	0.41	0.41	0.35	0.35	0.40	0.7
May 20, 2018	0.040	0.040	0.040	0.079	0.35	4.2	2.5	0.36	0.44	0.49	1.0	0.41	0.35	4.6	5.5	0.74	0.82	4.1	4.61	0.41	0.35	0.35	0.40	0.7
May 26, 2018	0.040	0.040	0.040	0.079	0.35	4.2	5.6	0.36	0.44	0.49	1.0	0.41	0.35	12.0	5.5	4.22	1.61	4.1	0.41	0.41	0.35	0.35	0.40	0.7
June 1, 2018	0.040	0.040	0.040	0.079	0.87	4.2	31.5	0.36	0.44	0.49	1.0	0.41	0.35	6.6	5.5	2.07	8.65	4.1	0.41	0.41	0.35	0.35	0.40	0.7
June 7, 2018	0.040	0.040	0.040	0.079	1.28	4.2	21.6	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	3.10	0.91	4.1	1.31	0.41	0.86	0.35	0.40	0.7
June 13, 2018	0.040	0.040	0.040	0.079	0.84	4.2	17.6	0.36	0.44	0.49	1.0	0.41	0.35	12.1	5.5	0.78	1.60	4.1	0.41	0.41	0.35	0.35	0.40	0.7
June 19, 2018	0.040	0.040	0.040	0.079	7.76	4.2	251.0	0.36	0.44	0.49	1.0	0.41	0.35	8.1	5.5	0.91	1.00	4.1	0.41	0.41	0.35	0.35	0.40	2.6
June 25, 2018	0.040	0.040	0.040	0.079	10.60	4.2	560.0	0.36	0.44	0.49	1.0	0.41	0.35	4.1	5.5	1.40	0.84	4.1	0.41	0.41	0.35	0.35	0.40	1.8
January 3, 2019																								
January 9, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.91	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
January 15, 2019																								
January 21, 2019																								
January 27, 2019																								
February 2, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.3	0.36	0.435	0.49	1	0.41	0.35	2.6	5.5	1.46	0.63	4.1	0.41	0.41	0.35	0.35	0.4	0.65
February 8, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	2.8	5.5	0.9	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
February 14, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.1	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.15	0.65	4.1	0.41	0.41	0.35	0.35	0.4	0.65
February 20, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.33	0.87	4.1	1.31	0.41	0.35	0.35	0.4	0.65
February 26, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.93	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
March 4, 2019																								
March 10, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.1	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.98	1.07	4.1	0.41	0.41	0.35	0.35	0.4	0.65
March 16, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.1	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.67	2.75	4.1	0.41	0.41	0.35	0.35	0.4	0.65
March 22, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.3	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.73	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
March 28, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.4	0.36	0.435	0.49	1	0.41	0.35	3.4	5.5	1.59	0.82	4.1	0.41	0.41	0.35	0.35	0.4	3.6
April 3, 2019																								
April 9, 2019																								
July 1, 2018	0.0395	0.0395	0.0395	0.079	0.79	4.2	7.1	0.36	0.435	0.49	1	0.41	0.35	2.6	5.5	1.04	1.63	4.1	0.41	0.41	0.35	0.35	0.4	0.65
July 7, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
July 13, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	6.6	0.36	0.435	0.49	1	0.41	0.35	7.6	5.5	0.295	1.18	4.1	0.41	0.41	0.35	0.35	0.4	0.65
July 19, 2018	0.040	0.081	0.094	0.175	0.345	4.200	4.100	0.360	0.435	0.490	1.000	4.100	0.410	1.680	5.000	5.500	0.710	0.710	4.100	0.410	0.350	0.350	0.400	0.650
July 25, 2018	0.0	0.0	0.0	0.1	0.3	4.2	2.7	0.4	0.4	0.5	1.0	0.4	1.1	2.7	5.5	1.0	1.2	4.1	0.4	0.4	0.4	0.4	0.4	0.7
July 31, 2018	0.0	0.0	0.0	0.1	0.3	4.2	2.8	0.9	0.4	0.5	1.0	0.4	0.0	8.2	5.5	1.1	1.1	4.1	0.4	0.4	0.4	0.4	0.4	0.7
August 6, 2018	0.0	0.0	0.0	0.1	0.3	4.2	3.5	0.4	0.4	0.5	1.0	0.4	0.4	3.7	5.5	1.2	1.4	4.1	0.4	0.4	0.4	0.4	0.4	0.7
August 12, 2018																								
August 18, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.1	0.36	0.435	0.49	1	0.41	0.35	3.2	5.5	0.82	0.72	4.1	0.41	0.41	0.35	0.35	0.4	0.65
August 24, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.7	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.39	0.66	4.1	1.21	0.41	0.35	0.35	0.4	0.65
August 30, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.2	0.36	0.435	0.49	1	1.11	0.35	1.25	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
September 5, 2018																								
September 11, 2018	0	1	0	1	0	4	14	1	0	0	1	1	1	1	6	3	2	4	1	0	1	1	0	1
September 17, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4	0.36	0.435	0.49	1	0.41	0.35	3.9	5.5	2.08	1.12	4.1	0.41	0.41	0.35	0.35	0.4	0.65
September 23, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.5	0.36	0.435	0.49	1	0.41	0.35	2.8	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
September 29, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.9	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.82	0.295	4.1	1.21	0.41	0.35	0.35	0.4	0.65
October 5, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	5.5	0.36	0.435	0.49	1	0.41	0.35	2.7	5.5	0.92	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65
October 11, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.9	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.79	0.295	4.1	1.21	0.41	0.35	0.35	0.4	0.65
October 17, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.7	0.295	4.1	1.21	0.41	0.35	0.35	0.4	0.65
October 23, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.5	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.12	0.295	4.1	1.21	0.41	0.35	0.35	0.4	0.65
October 29, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.1	0.36	0.435	0.49	1													

Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	VOCs																								
	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloroethene	Methylene chloride	Dichlorofluoro methane	Ethanol	Ethyl acetate	Ethyl Benzene	2-Ethyltoluene	m/p-Ethyl Toluene	n-Heptane	n-Hexane	Isopropyl alcohol	Limonene	2-Methyl Butane	Methyl ethyl ketone	2-Methyl Hexane	3-Methyl Hexane	Methyl isobutyl ketone	2-Methyl Pentane	3-Methyl Pentane	Methyl Cyclohexane	Naphthalene	
CAS	75-35-4	156-59-2	156-60-5	540-59-0	75-09-2	75-43-4	64-17-5	141-78-6	100-41-4	611-14-3	620-14-4	142-82-5	110-54-3	67-63-0	5989-27-5	78-78-4	78-93-3	591-76-4	589-34-4	108-10-1	107-83-5	96-14-0	108-87-2	91-20-3	
Air Quality Standard or POI Limit <sup>(1)</sup>	10	105	105	105	220	N/A	N/A	N/A	1000	500	500	11000	2500	7300	625	7080	1000	1228	2600	1200	4200	1400	6440	22.5	
<b>Bell VOC D</b>																									
April 2, 2018																									
April 8, 2018																									
April 14, 2018	0.040	0.040	0.040	0.079	0.79	4.2	3.4	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.66	0.30	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
April 20, 2018	0.0	0.0	0.0	0.3	4.2	7.7	0.4	0.4	0.4	0.5	1.0	0.4	0.4	1.3	5.5	3.2	0.7	4.1	0.4	0.4	0.4	0.4	0.4	0.7	
April 26, 2018																									
May 2, 2018	0.040	0.040	0.040	0.079	0.35	4.2	1.0	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.30	0.62	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
May 8, 2018	0.040	0.040	0.040	0.079	0.35	4.2	7.7	0.36	0.44	0.49	1.0	0.41	0.35	1.3	5.5	0.78	1.25	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
May 14, 2018	0.040	0.040	0.040	0.079	0.35	4.2	42.5	0.36	0.44	0.49	1.0	0.41	0.35	2.9	5.5	1.59	0.66	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
May 20, 2018	0.040	0.040	0.040	0.079	1.02	4.2	16.0	0.36	0.44	0.49	1.0	0.41	0.35	9.4	5.5	0.30	2.04	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
May 26, 2018	0.040	0.040	0.040	0.079	0.35	4.2	3.9	0.36	0.44	0.49	1.0	0.41	0.35	8.2	5.5	0.30	1.14	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
June 1, 2018	0.040	0.040	0.040	0.079	0.35	4.2	12.1	0.36	0.44	0.49	1.0	0.41	1.74	4.2	5.5	4.06	1.86	4.1	0.41	0.41	1.43	1.17	0.40	0.7	
June 7, 2018	0.040	0.040	0.040	0.079	0.35	4.2	11.0	0.36	0.44	0.49	1.0	0.41	0.96	3.6	5.5	3.01	1.39	4.1	0.41	0.41	0.35	0.35	0.40	0.7	
June 13, 2018	0.0	0.0	0.0	0.3	4.2	3.5	0.4	0.4	0.4	0.5	1.0	0.4	0.4	3.1	5.5	1.0	0.3	4.1	0.4	0.4	0.4	0.4	0.4	0.7	
June 19, 2018																									
June 25, 2018	0.0	0.0	0.0	0.3	4.2	5.3	0.4	0.4	0.4	0.5	1.0	0.4	0.4	2.5	5.5	0.9	0.9	4.1	0.4	0.4	0.4	0.4	0.4	7.2	
January 3, 2019																									
January 9, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.99	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
January 15, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	5.1	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.22	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
January 21, 2019																									
January 27, 2019																									
February 2, 2019																									
February 8, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.96	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
February 14, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.17	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
February 20, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.9	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.42	0.91	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
February 26, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	0.95	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 4, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2	0.36	0.435	0.49	1	0.41	0.35	4	5.5	0.69	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 10, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.2	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.04	1.01	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 16, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	2	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.79	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 22, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.1	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.295	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
March 28, 2019	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.7	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.17	1.03	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
April 3, 2019																									
April 9, 2019																									
July 1, 2018	0.0395	0.0395	0.0395	0.079	2.01	4.2	60.9	0.36	0.435	0.49	1	0.41	0.35	7.5	5.5	1.76	2.05	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
July 7, 2018	0.0395	0.0395	0.0395	0.079	1.39	4.2	2.4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.99	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
July 13, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	5.2	0.36	0.435	0.49	1	0.41	0.35	2.7	5.5	0.82	1	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
July 19, 2018	0.040	0.040	0.040	0.079	0.345	4.200	3.500	0.360	0.435	0.490	1.000	0.410	0.350	1.250	5.500	2.000	0.660	4.100	0.410	0.410	0.350	0.350	0.400	0.650	
July 25, 2018	0.0	0.0	0.0	0.1	0.3	4.2	2.4	0.4	0.4	0.5	1.0	0.4	0.4	2.1	1.3	1.0	0.9	4.1	1.3	0.4	0.4	0.4	0.4	0.7	
July 31, 2018	0.0	0.0	0.0	0.1	0.3	4.2	3.2	0.4	0.4	0.5	1.0	0.4	0.4	4.7	5.5	1.8	1.1	4.1	0.4	0.4	0.4	0.4	0.4	0.7	
August 6, 2018	0.0	0.0	0.0	0.1	0.3	4.2	5.2	0.4	0.4	0.5	1.0	0.4	0.9	2.6	5.5	2.4	1.3	4.1	0.4	0.4	0.8	0.4	0.4	1.8	
August 12, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	5.3	0.36	0.435	0.49	1	0.41	0.77	3.5	5.5	1.98	0.77	4.1	3.5	0.41	0.41	0.35	0.35	0.4	0.65
August 18, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.1	0.36	0.435	0.49	1	0.41	0.74	1.25	5.5	1.45	1.11	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
August 24, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.2	0.36	0.435	0.49	1	0.41	1.96	2.6	5.5	3.08	0.95	4.1	0.41	0.41	0.79	0.92	0.4	0.65	
August 30, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.5	0.36	0.435	0.49	1	0.41	1.07	1.25	5.5	0.91	0.6	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
September 5, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.7	0.36	0.435	0.49	1	0.41	0.71	16	5.5	3.14	2.01	4.1	16	0.41	0.41	0.71	0.35	0.4	0.65
September 11, 2018	0	0	0	0	0	4	3	0	0	0	1	0	0	4	6	1	1	4	0	0	0	0	0	1	
September 17, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	5.4	0.36	0.435	0.49	1	0.41	0.72	4.2	5.5	2.96	1.02	4.1	4.2	0.41	0.41	0.9	0.35	0.4	0.65
September 23, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3.2	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	1.32	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
September 29, 2018	0.0395	0.0395	0.0395	0.079	0.9	4.2	5	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	6.79	0.7	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
October 5, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	5.4	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.9	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
October 11, 2018																									
October 17, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	4.6	0.36	0.435	0.49	1	0.41	0.35	1.25	5.5	0.68	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
October 23, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	2.9	0.36	0.435	0.49	1	0.41	0.97	1.25	5.5	1.65	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
October 29, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	3	0.36	0.435	0.49	1	0.41	0.35	13	5.5	1.23	0.295	4.1	0.41	0.41	0.35	0.35	0.4	0.65	
November 4, 2018	0.0395	0.0395	0.0395	0.079	0.345	4.2	5.8	0.36	0.435	0.49	1	0.41	0.35</												

Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	Nonane	Octane	n-Pentane	Propyl Benzene	Styrene	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	Freon 113	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	o-Xylene	m/p-Xylene	Total Volatile Organic Compounds
CAS	111-84-2	111-65-9	109-66-0	103-65-1	100-42-5	79-34-5	127-18-4	108-88-3	76-13-1	71-55-6	79-00-5	79-01-6	75-69-4	526-73-8	95-63-6	108-67-8	75-01-4	95-47-6	108-38-3	N/A
Air Quality Standard or PDI Limit <sup>(1)</sup>	4200	N/A	4200	20	400	N/A	360	2000	800000	115000	0.31	12	6000	220	220	220	1	100	100	N/A
<b>Rd 66 VOC D</b>																				
April 2, 2018																				
April 8, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	98.9
April 14, 2018																				
April 20, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	1.20	0.49	0.49	0.49	0.026	0.44	0.9	98.2
April 26, 2018	0.5	0.47	0.78	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	98.4
May 2, 2018																				
May 8, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	99.8
May 14, 2018	0.5	0.47	1.05	0.49	0.43	0.035	0.07	1.05	0.96	0.6	0.028	0.055	1.30	0.49	0.49	0.49	0.026	0.44	0.9	96.2
May 20, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	1.20	0.49	0.49	0.49	0.026	0.44	0.9	98.4
May 26, 2018	0.5	0.47	0.64	0.49	0.43	0.035	0.07	0.91	0.8	0.6	0.028	0.310	1.20	0.49	0.49	0.49	0.026	0.44	0.9	104.5
June 1, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.30	0.94	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	88.1
June 7, 2018	0.5	0.47	0.77	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	98.9
June 13, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	100.2
June 19, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	99.9
June 25, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	1.20	0.49	0.49	0.49	0.026	0.44	0.9	104.9
January 3, 2019	0.5	0.465	0.71	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
January 9, 2019	0.5	0.465	0.87	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
January 15, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.32	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
January 21, 2019																				
January 27, 2019																				
February 2, 2019	0.5	0.465	0.95	0.49	0.425	0.0345	0.07	0.78	0.75	0.55	0.068	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 8, 2019	0.5	0.465	0.8	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.068	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 14, 2019	0.5	0.465	0.7	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.066	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 20, 2019																				
February 26, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.4	0.49	0.49	0.49	0.0255	0.435	0.85	130
March 4, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	130
March 10, 2019	0.5	0.465	0.63	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.5	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 16, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.4	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 22, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.6	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 28, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	130
April 3, 2019																				
April 9, 2019																				
July 1, 2018	0.5	0.465	0.87	0.49	0.425	0.0345	0.07	11.5	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	220
July 7, 2018																				
July 13, 2018	0.500	0.465	0.295	0.490	0.425	0.035	0.070	1.030	0.750	0.550	0.028	0.055	1.200	0.490	0.490	0.490	0.026	0.435	0.850	130.000
July 19, 2018	0.5	0.5	0.3	0.5	0.4	0.0	0.1	0.4	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.0	0.4	0.85	160.0
July 25, 2018	0.5	0.5	0.3	0.5	0.4	0.0	0.1	0.4	0.8	0.6	0.0	0.1	1.2	0.5	0.5	0.5	0.0	0.4	0.85	120.0
July 31, 2018	0.5	0.5	0.3	0.5	0.4	0.0	0.1	0.4	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.0	0.4	0.85	140.0
August 6, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	120
August 12, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
August 18, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	110
August 24, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	140
August 30, 2018	0.5	0.465	0.61	0.49	0.425	0.0345	0.23	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
September 5, 2018	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	150
September 11, 2018	0.5	0.465	1.54	0.49	0.425	0.0345	0.69	1.92	0.75	0.55	0.0275	0.11	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	140
September 17, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	100
September 23, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	100
September 29, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 5, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 11, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 17, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 23, 2018	0.5	0.465	0.61	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 29, 2018	0.5	0.465	0.6	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 4, 2018																				
November 10, 2018																				
November 16, 2018	0.5	0.465	0.86	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50



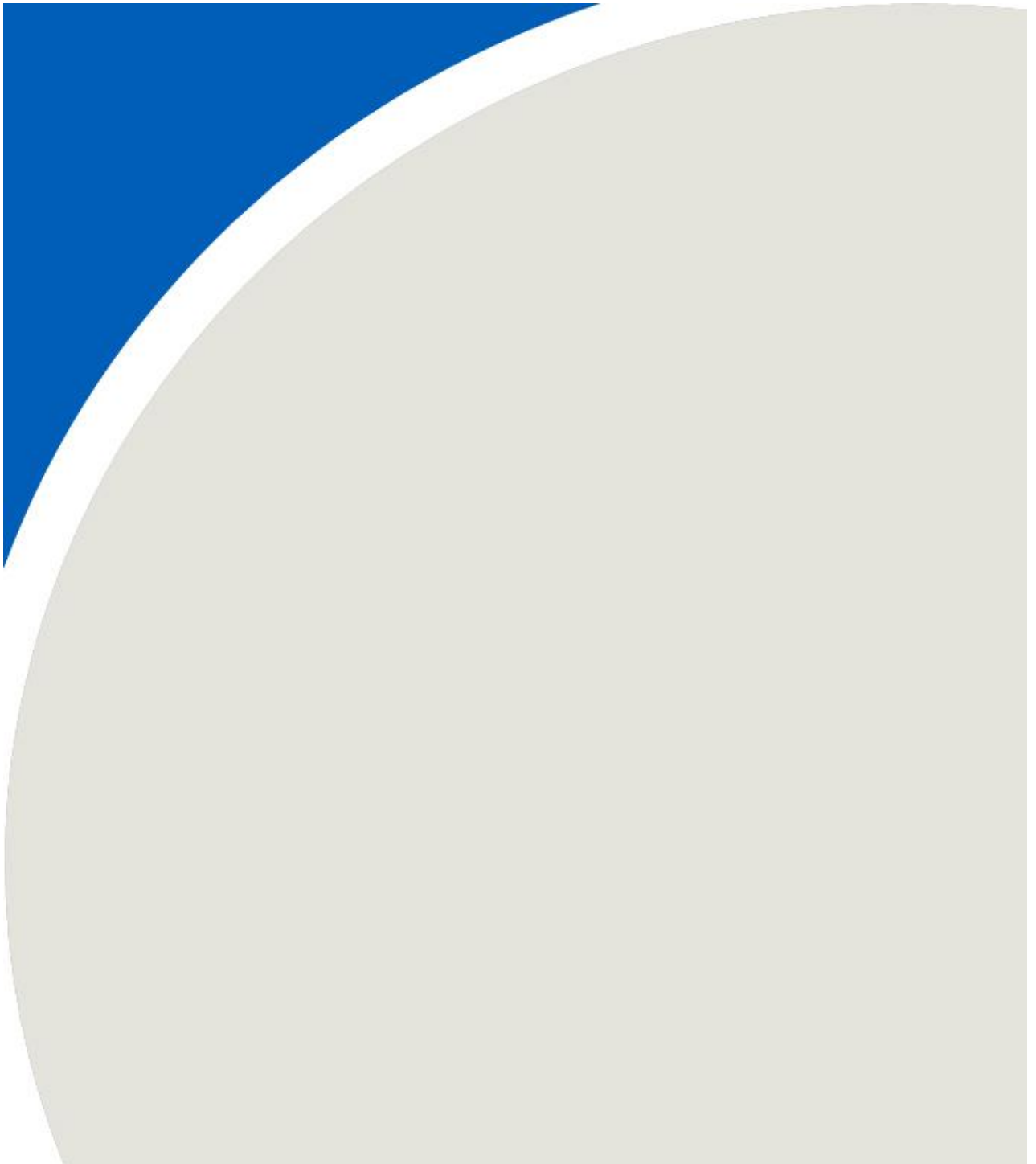
Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	Nonane	Octane	n-Pentane	Propyl Benzene	Styrene	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	Freon 113	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	o-Xylene	m/p-Xylene	Total Volatile Organic Compounds
CAS	111-84-2	111-65-9	109-66-0	103-65-1	100-42-5	79-34-5	127-18-4	108-88-3	76-13-1	71-55-6	79-00-5	79-01-6	75-69-4	526-73-8	95-63-6	108-67-8	75-01-4	95-47-6	108-38-3	N/A
Air Quality Standard or POI Limit <sup>(1)</sup>	4200	N/A	4200	20	400	N/A	360	2000	800000	115000	0.31	12	6000	220	220	220	1	100	100	N/A
<b>33rd Line VOC D</b>																				
April 2, 2018																				
April 8, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	96.0
April 14, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	98.7
April 20, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	94.4
April 26, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	96.1
May 2, 2018	0.5	0.47	0.78	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	98.2
May 8, 2018	0.5	0.47	0.97	0.49	0.43	0.035	0.07	0.86	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	99.4
May 14, 2018	0.5	0.47	0.86	0.49	0.43	0.035	0.07	0.92	0.8	0.6	0.028	0.055	1.20	0.49	0.49	0.49	0.026	0.44	0.9	99.9
May 20, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	1.20	0.49	0.49	0.49	0.026	0.44	0.9	97.8
May 26, 2018	0.5	0.47	1.92	0.49	0.43	0.035	0.07	1.28	0.8	0.6	0.028	0.055	1.10	0.49	0.49	0.49	0.026	0.44	0.9	100.3
June 1, 2018	0.5	0.47	2.73	0.49	0.43	0.035	0.07	13.60	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	97.1
June 7, 2018	0.5	0.47	1.81	0.49	0.43	0.035	0.07	0.95	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	93.5
June 13, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	102.1
June 19, 2018	0.5	0.47	0.30	0.49	1.34	0.035	0.07	2.26	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	98.7
June 25, 2018	0.5	0.47	0.30	0.49	1.17	0.035	0.07	1.51	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	106.1
January 3, 2019																				
January 9, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
January 15, 2019																				
January 21, 2019																				
January 27, 2019																				
February 2, 2019	0.5	0.465	0.93	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.138	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 8, 2019	0.5	0.465	0.78	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.068	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 14, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.069	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 20, 2019	0.5	0.465	0.73	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	120
February 26, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.5	0.49	0.49	0.49	0.0255	0.435	0.85	120
March 4, 2019																				
March 10, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.5	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 16, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.5	0.49	0.49	0.49	0.0255	0.435	0.85	130
March 22, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.5	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 28, 2019	0.5	0.465	0.83	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	140
April 3, 2019																				
April 9, 2019																				
July 1, 2018	0.5	0.465	0.86	0.49	0.425	0.0345	0.07	1.77	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	210
July 7, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	120
July 13, 2018	0.5	0.465	0.71	0.49	0.425	0.0345	0.07	0.93	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	150
July 19, 2018	0.500	1.520	0.295	0.490	0.425	0.102	0.070	2.100	0.750	0.550	0.093	0.055	0.550	0.490	1.270	0.490	0.026	0.435	0.850	180.000
July 25, 2018	0.5	0.5	0.3	0.5	0.4	0.0	0.1	0.4	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.0	0.4	0.85	130.0
July 31, 2018	0.5	0.0	0.3	0.5	0.4	0.0	0.2	0.0	0.8	0.6	0.0	0.1	0.6	0.5	0.0	0.5	0.0	0.4	0.85	0.0
August 6, 2018	0.5	0.5	0.3	0.5	0.4	0.0	0.1	0.4	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.0	0.4	0.85	170.0
August 12, 2018																				
August 18, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	130
August 24, 2018	0.5	0.465	0.82	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	110
August 30, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
September 5, 2018																				
September 11, 2018	1	0	2	0	0	0	1	2	1	1	0	0	1	0	0	0	0	0	1	120
September 17, 2018	0.5	0.465	0.96	0.49	0.425	0.0345	0.07	1.34	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	130
September 23, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
September 29, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 5, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 11, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 17, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 23, 2018	0.5	0.465	0.67	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 29, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 4, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 10, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 16, 2018	0.5	0.465	0.84																	

Appendix G: Summary of Ambient Monitoring Data

(results expressed in µg/m <sup>3</sup> )	Nonane	Octane	n-Pentane	Propyl Benzene	Styrene	1,1,2-Tetrachloroethane	Tetrachloroethylene	Toluene	Freon 113	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	o-Xylene	m/p-Xylene	Total Volatile Organic Compounds
CAS	111-84-2	111-65-9	109-66-0	103-65-1	100-42-5	79-34-5	127-18-4	108-88-3	76-13-1	71-55-6	79-00-5	79-01-6	75-69-4	526-73-8	95-63-6	108-67-8	75-01-4	95-47-6	108-38-3	N/A
Air Quality Standard or POI Limit <sup>(1)</sup>	4200	N/A	4200	20	400	N/A	360	2000	800000	115000	0.31	12	6000	220	220	220	1	100	100	N/A
<b>Bell VOC D</b>																				
April 2, 2018																				
April 8, 2018																				
April 14, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	96.4
April 20, 2018	0.5	0.5	2.3	0.5	0.4	0.0	0.1	0.4	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.0	0.4	0.9	98.8
April 26, 2018																				
May 2, 2018	0.5	0.47	0.98	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	99.2
May 8, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	0.38	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	98.5
May 14, 2018	0.5	0.47	0.87	0.49	0.43	0.035	0.07	0.86	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	100.0
May 20, 2018	0.5	0.47	0.30	0.49	0.43	0.035	0.07	4.30	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	101.0
May 26, 2018	0.5	0.47	0.75	0.49	0.43	0.035	0.07	4.23	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	100.6
June 1, 2018	0.5	0.47	2.45	0.49	0.43	0.035	0.07	3.98	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	2.0	105.7
June 7, 2018	0.5	0.47	2.72	0.49	0.43	0.035	0.07	5.44	0.8	0.6	0.028	0.055	0.55	0.49	0.49	0.49	0.026	0.44	0.9	105.9
June 13, 2018	0.5	0.5	0.6	0.5	0.4	0.0	0.1	1.0	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.0	0.4	0.9	96.6
June 19, 2018																				
June 25, 2018	0.5	0.5	0.9	0.5	0.4	0.0	0.1	1.6	0.8	0.6	0.0	0.1	0.6	1.4	3.2	0.5	0.0	0.4	0.9	99.6
January 3, 2019																				
January 9, 2019	0.5	0.465	0.66	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	100
January 15, 2019	0.5	0.465	0.69	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	50
January 21, 2019																				
January 27, 2019																				
February 2, 2019																				
February 8, 2019	0.5	0.465	0.73	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.07	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 14, 2019	0.5	0.465	0.6	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.07	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
February 20, 2019	0.5	0.465	0.9	0.49	0.425	0.0345	0.07	1.03	0.75	0.55	0.0275	0.055	1.4	0.49	0.49	0.49	0.0255	0.435	0.85	110
February 26, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.4	0.49	0.49	0.49	0.0255	0.435	0.85	100
March 4, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 10, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.5	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 16, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.5	0.49	0.49	0.49	0.0255	0.435	0.85	110
March 22, 2019	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.6	0.49	0.49	0.49	0.0255	0.435	0.85	50
March 28, 2019	0.5	0.465	0.73	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.12	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	100
April 3, 2019																				
April 9, 2019																				
July 1, 2018	0.5	0.465	0.87	0.49	0.425	0.0345	0.07	1.58	0.75	0.55	0.0275	0.055	1.3	0.49	0.49	0.49	0.0255	0.435	0.85	230
July 7, 2018	0.5	0.465	0.64	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	110
July 13, 2018	0.5	0.465	0.83	0.49	0.425	0.0345	0.07	0.92	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	130
July 19, 2018	0.500	0.465	1.220	0.490	0.425	0.035	0.070	1.340	0.750	0.550	0.028	0.055	0.550	0.490	0.490	0.490	0.026	0.435	0.850	170.000
July 25, 2018	0.5	0.5	0.3	0.5	0.4	0.0	0.1	0.4	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.026	0.4	0.85	110.0
July 31, 2018	0.5	0.5	1.1	0.5	0.4	0.0	0.1	1.1	0.8	0.6	0.0	0.1	1.1	0.5	0.5	0.5	0.0	0.4	0.85	120.0
August 6, 2018	0.5	0.5	1.3	0.5	0.4	0.0	0.1	1.6	0.8	0.6	0.0	0.1	0.6	0.5	0.5	0.5	0.0	0.4	0.85	160.0
August 12, 2018	0.5	0.465	1.27	0.49	0.425	0.0345	0.07	1.46	0.75	0.55	0.0275	0.055	1.46	0.49	0.49	0.49	0.0255	0.435	0.85	120
August 18, 2018	0.5	0.465	0.69	0.49	0.425	0.0345	0.07	0.97	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	130
August 24, 2018	0.5	0.465	1.32	0.49	0.425	0.0345	0.07	1.63	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	130
August 30, 2018	0.5	0.465	0.76	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
September 5, 2018	0.5	0.465	1.39	0.49	0.425	0.0345	0.07	1.97	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	140
September 11, 2018	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	100
September 17, 2018	0.5	0.465	1.59	0.49	0.425	0.0345	0.07	2.25	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	110
September 23, 2018	0.5	0.465	0.87	0.49	0.425	0.0345	0.07	1.03	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
September 29, 2018	0.5	0.465	1.95	0.49	0.425	0.0345	0.07	1.81	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	150
October 5, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 11, 2018																				
October 17, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 23, 2018	0.5	0.465	0.87	0.49	0.425	0.0345	0.14	1.28	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
October 29, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 4, 2018	0.5	0.465	0.61	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	0.55	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 10, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 16, 2018	0.5	0.465	0.96	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
November 22, 2018																				
November 28, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
December 4, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
December 10, 2018	0.5	0.465	0.8	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
December 16, 2018	0.5	0.465	0.72	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.1	0.49	0.49	0.49	0.0255	0.435	0.85	50
December 22, 2018	0.5	0.465	0.295	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
December 28, 2018	0.5	0.465	0.8	0.49	0.425	0.0345	0.07	0.375	0.75	0.55	0.0275	0.055	1.2	0.49	0.49	0.49	0.0255	0.435	0.85	50
<b>90th Percentile</b>																				

## APPENDIX H



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,1,1-Trichloroethane (CAS 71-55-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
115,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.550	0.013	0.563	0.0005%	0.016	0.566	0.0005%	0.016	0.566	0.0005%	0.014	0.564	0.0005%
115,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.550	0.014	0.564	0.0005%	0.012	0.562	0.0005%	0.015	0.565	0.0005%	0.012	0.562	0.0005%
115,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.550	0.007	0.557	0.0005%	0.010	0.560	0.0005%	0.010	0.560	0.0005%	0.009	0.559	0.0005%
115,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.550	0.006	0.556	0.0005%	0.007	0.557	0.0005%	0.008	0.558	0.0005%	0.007	0.557	0.0005%
115,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.550	0.039	0.589	0.0005%	0.035	0.585	0.0005%	0.036	0.586	0.0005%	0.034	0.584	0.0005%
115,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.550	0.044	0.594	0.0005%	0.047	0.597	0.0005%	0.045	0.595	0.0005%	0.043	0.593	0.0005%
115,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.550	0.006	0.556	0.0005%	0.008	0.558	0.0005%	0.008	0.558	0.0005%	0.006	0.556	0.0005%
115,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.550	0.030	0.580	0.0005%	0.029	0.579	0.0005%	0.028	0.578	0.0005%	0.027	0.577	0.0005%
115,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.550	0.015	0.565	0.0005%	0.016	0.566	0.0005%	0.017	0.567	0.0005%	0.014	0.564	0.0005%
115,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.550	0.010	0.560	0.0005%	0.014	0.564	0.0005%	0.014	0.564	0.0005%	0.012	0.562	0.0005%
115,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.550	0.019	0.569	0.0005%	0.037	0.587	0.0005%	0.033	0.583	0.0005%	0.023	0.573	0.0005%
115,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.550	0.012	0.562	0.0005%	0.018	0.568	0.0005%	0.017	0.567	0.0005%	0.013	0.563	0.0005%
115,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.550	0.005	0.555	0.0005%	0.005	0.555	0.0005%	0.005	0.555	0.0005%	0.005	0.555	0.0005%
115,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.550	0.010	0.560	0.0005%	0.012	0.562	0.0005%	0.015	0.565	0.0005%	0.009	0.559	0.0005%
115,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.550	0.006	0.556	0.0005%	0.007	0.557	0.0005%	0.007	0.557	0.0005%	0.006	0.556	0.0005%
115,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.550	0.011	0.561	0.0005%	0.013	0.563	0.0005%	0.014	0.564	0.0005%	0.010	0.560	0.0005%
115,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.550	0.004	0.554	0.0005%	0.005	0.555	0.0005%	0.006	0.556	0.0005%	0.004	0.554	0.0005%
115,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.550	0.003	0.553	0.0005%	0.005	0.555	0.0005%	0.006	0.556	0.0005%	0.004	0.554	0.0005%
115,000	ING-6	Royal Road Public School	510337	4765360	0.550	0.005	0.555	0.0005%	0.010	0.560	0.0005%	0.009	0.559	0.0005%	0.007	0.557	0.0005%
115,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.550	0.003	0.553	0.0005%	0.004	0.554	0.0005%	0.004	0.554	0.0005%	0.003	0.553	0.0005%
115,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.550	0.003	0.553	0.0005%	0.006	0.556	0.0005%	0.005	0.555	0.0005%	0.004	0.554	0.0005%
115,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.550	0.008	0.558	0.0005%	0.013	0.563	0.0005%	0.014	0.564	0.0005%	0.008	0.558	0.0005%
115,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.550	0.005	0.555	0.0005%	0.008	0.558	0.0005%	0.009	0.559	0.0005%	0.006	0.556	0.0005%
115,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.550	0.022	0.572	0.0005%	0.050	0.600	0.0005%	0.049	0.599	0.0005%	0.034	0.584	0.0005%
115,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.550	0.024	0.574	0.0005%	0.028	0.578	0.0005%	0.043	0.593	0.0005%	0.025	0.575	0.0005%
115,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.550	0.023	0.573	0.0005%	0.031	0.581	0.0005%	0.044	0.594	0.0005%	0.025	0.575	0.0005%
115,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.550	0.013	0.563	0.0005%	0.015	0.565	0.0005%	0.016	0.566	0.0005%	0.014	0.564	0.0005%
115,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.550	0.010	0.560	0.0005%	0.009	0.559	0.0005%	0.009	0.559	0.0005%	0.009	0.559	0.0005%
115,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.550	0.005	0.555	0.0005%	0.005	0.555	0.0005%	0.007	0.557	0.0005%	0.005	0.555	0.0005%
115,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.550	0.003	0.553	0.0005%	0.004	0.554	0.0005%	0.005	0.555	0.0005%	0.003	0.553	0.0005%
115,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.550	0.002	0.552	0.0005%	0.002	0.552	0.0005%	0.002	0.552	0.0005%	0.001	0.551	0.0005%
115,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.550	0.001	0.551	0.0005%	0.001	0.551	0.0005%	0.002	0.552	0.0005%	0.001	0.551	0.0005%
115,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.550	0.011	0.561	0.0005%	0.022	0.572	0.0005%	0.016	0.566	0.0005%	0.011	0.561	0.0005%
115,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.550	0.017	0.567	0.0005%	0.031	0.581	0.0005%	0.020	0.570	0.0005%	0.018	0.568	0.0005%
115,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.550	0.016	0.566	0.0005%	0.023	0.573	0.0005%	0.036	0.586	0.0005%	0.021	0.571	0.0005%
115,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.550	0.016	0.566	0.0005%	0.022	0.572	0.0005%	0.036	0.586	0.0005%	0.021	0.571	0.0005%
115,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.550	0.022	0.572	0.0005%	0.018	0.568	0.0005%	0.028	0.578	0.0005%	0.020	0.570	0.0005%
115,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.550	0.014	0.564	0.0005%	0.017	0.567	0.0005%	0.021	0.571	0.0005%	0.015	0.565	0.0005%
115,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.550	0.015	0.565	0.0005%	0.018	0.568	0.0005%	0.022	0.572	0.0005%	0.013	0.563	0.0005%
115,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.550	0.011	0.561	0.0005%	0.013	0.563	0.0005%	0.016	0.566	0.0005%	0.011	0.561	0.0005%
115,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.550	0.013	0.563	0.0005%	0.013	0.563	0.0005%	0.015	0.565	0.0005%	0.013	0.563	0.0005%
115,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.550	0.006	0.556	0.0005%	0.006	0.556	0.0005%	0.008	0.558	0.0005%	0.006	0.556	0.0005%
115,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.550	0.003	0.553	0.0005%	0.002	0.552	0.0005%	0.002	0.552	0.0005%	0.002	0.552	0.0005%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,1,2,2-Tetrachloroethane (CAS 79-34-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
n/a	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.035	0.027	0.062	n/a	0.036	0.070	n/a	0.036	0.071	n/a	0.029	0.064	n/a
n/a	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.035	0.032	0.066	n/a	0.030	0.065	n/a	0.034	0.068	n/a	0.025	0.060	n/a
n/a	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.035	0.019	0.053	n/a	0.022	0.057	n/a	0.023	0.057	n/a	0.018	0.052	n/a
n/a	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.035	0.015	0.049	n/a	0.021	0.055	n/a	0.018	0.052	n/a	0.013	0.048	n/a
n/a	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.035	0.078	0.113	n/a	0.068	0.102	n/a	0.078	0.112	n/a	0.066	0.100	n/a
n/a	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.035	0.084	0.119	n/a	0.094	0.128	n/a	0.090	0.124	n/a	0.082	0.117	n/a
n/a	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.035	0.013	0.048	n/a	0.020	0.055	n/a	0.020	0.055	n/a	0.015	0.050	n/a
n/a	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.035	0.058	0.092	n/a	0.056	0.090	n/a	0.053	0.088	n/a	0.051	0.086	n/a
n/a	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.035	0.037	0.071	n/a	0.048	0.082	n/a	0.049	0.084	n/a	0.030	0.065	n/a
n/a	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.035	0.026	0.060	n/a	0.035	0.070	n/a	0.037	0.072	n/a	0.024	0.058	n/a
n/a	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.035	0.046	0.080	n/a	0.099	0.133	n/a	0.086	0.120	n/a	0.058	0.093	n/a
n/a	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.035	0.031	0.066	n/a	0.049	0.084	n/a	0.045	0.080	n/a	0.030	0.064	n/a
n/a	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.035	0.011	0.045	n/a	0.010	0.045	n/a	0.010	0.048	n/a	0.009	0.044	n/a
n/a	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.035	0.026	0.061	n/a	0.033	0.067	n/a	0.041	0.075	n/a	0.023	0.058	n/a
n/a	ING-2	Laurie Hawkins Public School	509019	4765860	0.035	0.014	0.048	n/a	0.017	0.052	n/a	0.020	0.054	n/a	0.012	0.047	n/a
n/a	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.035	0.023	0.058	n/a	0.036	0.070	n/a	0.037	0.071	n/a	0.023	0.058	n/a
n/a	ING-4	On the river north of 209 County Road 9	509480	4765180	0.035	0.012	0.046	n/a	0.014	0.049	n/a	0.016	0.051	n/a	0.010	0.045	n/a
n/a	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.035	0.008	0.043	n/a	0.014	0.049	n/a	0.015	0.050	n/a	0.009	0.044	n/a
n/a	ING-6	Royal Road Public School	510337	4765360	0.035	0.014	0.049	n/a	0.026	0.061	n/a	0.024	0.059	n/a	0.017	0.051	n/a
n/a	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.035	0.007	0.042	n/a	0.011	0.045	n/a	0.012	0.046	n/a	0.007	0.041	n/a
n/a	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.035	0.007	0.041	n/a	0.016	0.051	n/a	0.014	0.048	n/a	0.010	0.044	n/a
n/a	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.035	0.022	0.056	n/a	0.035	0.070	n/a	0.040	0.074	n/a	0.022	0.056	n/a
n/a	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.035	0.013	0.047	n/a	0.024	0.059	n/a	0.027	0.061	n/a	0.016	0.051	n/a
n/a	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.035	0.051	0.085	n/a	0.131	0.166	n/a	0.127	0.162	n/a	0.085	0.119	n/a
n/a	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.035	0.057	0.091	n/a	0.081	0.115	n/a	0.113	0.148	n/a	0.062	0.096	n/a
n/a	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.035	0.057	0.092	n/a	0.082	0.116	n/a	0.126	0.160	n/a	0.064	0.099	n/a
n/a	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.035	0.033	0.068	n/a	0.034	0.068	n/a	0.036	0.070	n/a	0.029	0.064	n/a
n/a	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.035	0.020	0.054	n/a	0.020	0.055	n/a	0.025	0.059	n/a	0.017	0.052	n/a
n/a	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.035	0.013	0.047	n/a	0.013	0.047	n/a	0.016	0.051	n/a	0.011	0.045	n/a
n/a	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.035	0.008	0.042	n/a	0.011	0.045	n/a	0.014	0.048	n/a	0.008	0.042	n/a
n/a	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.035	0.004	0.038	n/a	0.004	0.039	n/a	0.005	0.039	n/a	0.003	0.038	n/a
n/a	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.035	0.003	0.038	n/a	0.003	0.038	n/a	0.004	0.039	n/a	0.003	0.037	n/a
n/a	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.035	0.028	0.062	n/a	0.063	0.097	n/a	0.045	0.080	n/a	0.033	0.067	n/a
n/a	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.035	0.038	0.073	n/a	0.080	0.115	n/a	0.049	0.083	n/a	0.042	0.076	n/a
n/a	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.035	0.043	0.078	n/a	0.062	0.096	n/a	0.101	0.135	n/a	0.057	0.091	n/a
n/a	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.035	0.039	0.074	n/a	0.058	0.092	n/a	0.098	0.132	n/a	0.056	0.091	n/a
n/a	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.035	0.050	0.084	n/a	0.041	0.075	n/a	0.068	0.103	n/a	0.044	0.079	n/a
n/a	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.035	0.032	0.067	n/a	0.042	0.077	n/a	0.055	0.090	n/a	0.034	0.068	n/a
n/a	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.035	0.035	0.070	n/a	0.047	0.081	n/a	0.060	0.094	n/a	0.035	0.069	n/a
n/a	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.035	0.027	0.062	n/a	0.032	0.066	n/a	0.044	0.078	n/a	0.027	0.061	n/a
n/a	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.035	0.030	0.064	n/a	0.029	0.064	n/a	0.034	0.068	n/a	0.027	0.061	n/a
n/a	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.035	0.015	0.049	n/a	0.018	0.052	n/a	0.024	0.058	n/a	0.013	0.047	n/a
n/a	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.035	0.007	0.041	n/a	0.005	0.039	n/a	0.006	0.040	n/a	0.004	0.038	n/a

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,1,2-Trichloro-1,2,2-Trifluoromethane (CAS 76-13-1)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
800,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.750	0.003	0.753	0.0001%	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.750	0.004	0.754	0.0001%	0.004	0.754	0.0001%	0.005	0.755	0.0001%	0.003	0.753	0.0001%
800,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.750	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.750	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.004	0.754	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.750	0.003	0.753	0.0001%	0.007	0.757	0.0001%	0.006	0.756	0.0001%	0.004	0.754	0.0001%
800,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.001	0.751	0.0001%
800,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-6	Royal Road Public School	510337	4765360	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.001	0.751	0.0001%
800,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.750	0.002	0.752	0.0001%	0.008	0.758	0.0001%	0.008	0.758	0.0001%	0.004	0.754	0.0001%
800,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.750	0.003	0.753	0.0001%	0.006	0.756	0.0001%	0.007	0.757	0.0001%	0.004	0.754	0.0001%
800,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.750	0.003	0.753	0.0001%	0.006	0.756	0.0001%	0.009	0.759	0.0001%	0.004	0.754	0.0001%
800,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.750	0.000	0.750	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.750	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%
800,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.750	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%
800,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.750	0.002	0.752	0.0001%	0.005	0.755	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.750	0.002	0.752	0.0001%	0.005	0.755	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.750	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.007	0.757	0.0001%	0.003	0.753	0.0001%
800,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.750	0.002	0.752	0.0001%	0.004	0.754	0.0001%	0.006	0.756	0.0001%	0.003	0.753	0.0001%
800,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.750	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.002	0.752	0.0001%
800,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.002	0.752	0.0001%
800,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.001	0.751	0.0001%
800,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.750	0.001	0.751	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,1,2-Trichloroethane (CAS 79-00-5)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
n/a	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.028	0.013	0.041	n/a	0.014	0.042	n/a	0.014	0.042	n/a	0.013	0.041	n/a
n/a	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.028	0.013	0.041	n/a	0.012	0.040	n/a	0.013	0.041	n/a	0.012	0.040	n/a
n/a	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.028	0.009	0.036	n/a	0.009	0.037	n/a	0.010	0.038	n/a	0.009	0.037	n/a
n/a	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.028	0.009	0.036	n/a	0.009	0.036	n/a	0.009	0.036	n/a	0.009	0.036	n/a
n/a	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.028	0.042	0.070	n/a	0.041	0.068	n/a	0.041	0.069	n/a	0.041	0.068	n/a
n/a	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.028	0.050	0.078	n/a	0.051	0.079	n/a	0.051	0.078	n/a	0.050	0.077	n/a
n/a	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.028	0.008	0.035	n/a	0.008	0.035	n/a	0.008	0.036	n/a	0.008	0.035	n/a
n/a	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.028	0.034	0.062	n/a	0.034	0.061	n/a	0.034	0.061	n/a	0.033	0.061	n/a
n/a	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.028	0.015	0.043	n/a	0.015	0.043	n/a	0.015	0.043	n/a	0.015	0.042	n/a
n/a	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.028	0.012	0.039	n/a	0.013	0.041	n/a	0.013	0.041	n/a	0.013	0.040	n/a
n/a	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.028	0.019	0.046	n/a	0.021	0.049	n/a	0.020	0.047	n/a	0.019	0.047	n/a
n/a	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.028	0.013	0.041	n/a	0.015	0.042	n/a	0.015	0.042	n/a	0.014	0.041	n/a
n/a	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.028	0.006	0.034	n/a	0.006	0.034	n/a	0.006	0.034	n/a	0.006	0.034	n/a
n/a	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.028	0.009	0.036	n/a	0.010	0.038	n/a	0.010	0.038	n/a	0.010	0.037	n/a
n/a	ING-2	Laurie Hawkins Public School	509019	4765860	0.028	0.007	0.034	n/a	0.007	0.034	n/a	0.007	0.034	n/a	0.007	0.034	n/a
n/a	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.028	0.011	0.038	n/a	0.010	0.038	n/a	0.010	0.038	n/a	0.010	0.038	n/a
n/a	ING-4	On the river north of 209 County Road 9	509480	4765180	0.028	0.005	0.033	n/a	0.005	0.033	n/a	0.005	0.033	n/a	0.005	0.033	n/a
n/a	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.028	0.004	0.031	n/a	0.004	0.032	n/a	0.005	0.032	n/a	0.004	0.032	n/a
n/a	ING-6	Royal Road Public School	510337	4765360	0.028	0.006	0.033	n/a	0.006	0.033	n/a	0.006	0.033	n/a	0.006	0.033	n/a
n/a	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.028	0.003	0.030	n/a	0.003	0.030	n/a	0.003	0.030	n/a	0.002	0.030	n/a
n/a	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.028	0.004	0.031	n/a	0.004	0.031	n/a	0.004	0.031	n/a	0.004	0.031	n/a
n/a	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.028	0.005	0.032	n/a	0.005	0.033	n/a	0.007	0.034	n/a	0.006	0.033	n/a
n/a	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.028	0.005	0.032	n/a	0.005	0.033	n/a	0.005	0.032	n/a	0.005	0.032	n/a
n/a	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.028	0.019	0.047	n/a	0.028	0.056	n/a	0.028	0.055	n/a	0.023	0.050	n/a
n/a	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.028	0.020	0.047	n/a	0.018	0.045	n/a	0.023	0.051	n/a	0.018	0.046	n/a
n/a	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.028	0.015	0.043	n/a	0.017	0.044	n/a	0.019	0.047	n/a	0.015	0.043	n/a
n/a	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.028	0.014	0.041	n/a	0.014	0.042	n/a	0.014	0.042	n/a	0.014	0.041	n/a
n/a	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.028	0.011	0.039	n/a	0.011	0.039	n/a	0.011	0.039	n/a	0.011	0.039	n/a
n/a	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.028	0.004	0.032	n/a	0.004	0.032	n/a	0.005	0.032	n/a	0.004	0.032	n/a
n/a	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.028	0.004	0.031	n/a	0.004	0.031	n/a	0.004	0.031	n/a	0.004	0.031	n/a
n/a	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.028	0.001	0.029	n/a	0.001	0.029	n/a	0.001	0.029	n/a	0.001	0.029	n/a
n/a	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.028	0.001	0.028	n/a	0.001	0.028	n/a	0.001	0.028	n/a	0.001	0.028	n/a
n/a	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.028	0.007	0.034	n/a	0.009	0.036	n/a	0.008	0.035	n/a	0.007	0.035	n/a
n/a	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.028	0.014	0.042	n/a	0.019	0.047	n/a	0.016	0.043	n/a	0.014	0.042	n/a
n/a	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.028	0.010	0.037	n/a	0.012	0.040	n/a	0.016	0.043	n/a	0.011	0.038	n/a
n/a	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.028	0.012	0.040	n/a	0.013	0.041	n/a	0.017	0.045	n/a	0.013	0.040	n/a
n/a	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.028	0.018	0.046	n/a	0.017	0.044	n/a	0.020	0.048	n/a	0.017	0.045	n/a
n/a	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.028	0.012	0.039	n/a	0.013	0.041	n/a	0.014	0.041	n/a	0.012	0.040	n/a
n/a	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.028	0.011	0.039	n/a	0.011	0.038	n/a	0.013	0.040	n/a	0.011	0.038	n/a
n/a	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.028	0.009	0.037	n/a	0.009	0.037	n/a	0.010	0.037	n/a	0.009	0.036	n/a
n/a	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.028	0.012	0.040	n/a	0.013	0.040	n/a	0.013	0.041	n/a	0.013	0.040	n/a
n/a	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.028	0.006	0.034	n/a	0.006	0.034	n/a	0.006	0.034	n/a	0.006	0.034	n/a
n/a	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.028	0.002	0.029	n/a	0.002	0.029	n/a	0.002	0.029	n/a	0.002	0.029	n/a

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,2,4-Trimethyl Benzene (CAS 95-63-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
220	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.068	0.558	0.3%	0.077	0.567	0.3%	0.079	0.569	0.3%	0.051	0.541	0.2%
220	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.064	0.554	0.3%	0.087	0.577	0.3%	0.071	0.561	0.3%	0.041	0.531	0.2%
220	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.063	0.553	0.3%	0.066	0.556	0.3%	0.077	0.567	0.3%	0.043	0.533	0.2%
220	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.050	0.540	0.2%	0.073	0.563	0.3%	0.064	0.554	0.3%	0.042	0.532	0.2%
220	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.139	0.629	0.3%	0.094	0.584	0.3%	0.136	0.626	0.3%	0.088	0.578	0.3%
220	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.185	0.675	0.3%	0.189	0.679	0.3%	0.225	0.715	0.3%	0.139	0.629	0.3%
220	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.037	0.527	0.2%	0.060	0.550	0.3%	0.061	0.551	0.3%	0.039	0.529	0.2%
220	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.140	0.630	0.3%	0.143	0.633	0.3%	0.152	0.642	0.3%	0.085	0.575	0.3%
220	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.137	0.627	0.3%	0.180	0.670	0.3%	0.186	0.676	0.3%	0.112	0.602	0.3%
220	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.079	0.569	0.3%	0.116	0.606	0.3%	0.124	0.614	0.3%	0.069	0.559	0.3%
220	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.166	0.656	0.3%	0.370	0.860	0.4%	0.321	0.811	0.4%	0.197	0.687	0.3%
220	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.095	0.585	0.3%	0.172	0.662	0.3%	0.158	0.648	0.3%	0.098	0.588	0.3%
220	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.030	0.520	0.2%	0.037	0.529	0.2%	0.049	0.539	0.2%	0.026	0.516	0.2%
220	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.084	0.574	0.3%	0.109	0.599	0.3%	0.138	0.628	0.3%	0.072	0.562	0.3%
220	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.030	0.520	0.2%	0.065	0.555	0.3%	0.074	0.564	0.3%	0.041	0.531	0.2%
220	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.086	0.576	0.3%	0.127	0.617	0.3%	0.131	0.621	0.3%	0.079	0.569	0.3%
220	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.040	0.530	0.2%	0.050	0.540	0.2%	0.056	0.546	0.2%	0.035	0.525	0.2%
220	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.028	0.518	0.2%	0.055	0.545	0.2%	0.058	0.548	0.2%	0.034	0.524	0.2%
220	ING-6	Royal Road Public School	510337	4765360	0.490	0.053	0.543	0.2%	0.088	0.578	0.3%	0.078	0.568	0.3%	0.050	0.540	0.2%
220	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.025	0.515	0.2%	0.041	0.531	0.2%	0.042	0.532	0.2%	0.025	0.515	0.2%
220	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.025	0.515	0.2%	0.056	0.546	0.2%	0.047	0.537	0.2%	0.032	0.522	0.2%
220	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.076	0.566	0.3%	0.125	0.615	0.3%	0.145	0.635	0.3%	0.076	0.566	0.3%
220	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.047	0.537	0.2%	0.090	0.580	0.3%	0.100	0.590	0.3%	0.060	0.550	0.2%
220	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.117	0.607	0.3%	0.419	0.909	0.4%	0.403	0.893	0.4%	0.241	0.731	0.3%
220	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.145	0.635	0.3%	0.301	0.791	0.4%	0.376	0.866	0.4%	0.201	0.691	0.3%
220	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.168	0.658	0.3%	0.279	0.769	0.3%	0.225	0.952	0.4%	0.225	0.715	0.3%
220	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.103	0.593	0.3%	0.085	0.575	0.3%	0.115	0.605	0.3%	0.065	0.555	0.3%
220	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.063	0.553	0.3%	0.065	0.555	0.3%	0.093	0.583	0.3%	0.049	0.539	0.2%
220	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.040	0.530	0.2%	0.034	0.524	0.2%	0.044	0.534	0.2%	0.024	0.514	0.2%
220	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.023	0.513	0.2%	0.038	0.528	0.2%	0.050	0.540	0.2%	0.027	0.517	0.2%
220	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.010	0.500	0.2%	0.014	0.504	0.2%	0.017	0.507	0.2%	0.010	0.500	0.2%
220	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.010	0.500	0.2%	0.011	0.501	0.2%	0.014	0.504	0.2%	0.008	0.498	0.2%
220	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.102	0.592	0.3%	0.235	0.725	0.3%	0.169	0.659	0.3%	0.119	0.609	0.3%
220	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.088	0.578	0.3%	0.246	0.736	0.3%	0.180	0.670	0.3%	0.098	0.588	0.3%
220	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.141	0.631	0.3%	0.209	0.699	0.3%	0.356	0.846	0.4%	0.188	0.678	0.3%
220	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.110	0.600	0.3%	0.205	0.695	0.3%	0.334	0.824	0.4%	0.177	0.667	0.3%
220	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.119	0.609	0.3%	0.136	0.626	0.3%	0.186	0.676	0.3%	0.096	0.586	0.3%
220	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.079	0.569	0.3%	0.142	0.632	0.3%	0.182	0.672	0.3%	0.093	0.583	0.3%
220	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.092	0.582	0.3%	0.155	0.645	0.3%	0.203	0.693	0.3%	0.107	0.597	0.3%
220	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.082	0.572	0.3%	0.086	0.576	0.3%	0.147	0.637	0.3%	0.074	0.564	0.3%
220	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.098	0.588	0.3%	0.094	0.584	0.3%	0.102	0.592	0.3%	0.063	0.553	0.3%
220	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.038	0.528	0.2%	0.066	0.556	0.3%	0.090	0.580	0.3%	0.048	0.538	0.2%
220	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.024	0.514	0.2%	0.017	0.507	0.2%	0.020	0.510	0.2%	0.013	0.503	0.2%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,1-Dichloroethane (CAS 75-34-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
165	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.041	0.024	0.064	0.04%	0.032	0.072	0.04%	0.032	0.073	0.04%	0.023	0.064	0.04%
165	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.041	0.027	0.067	0.04%	0.032	0.072	0.04%	0.029	0.070	0.04%	0.019	0.059	0.04%
165	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.041	0.022	0.062	0.04%	0.022	0.063	0.04%	0.026	0.066	0.04%	0.016	0.057	0.03%
165	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.041	0.017	0.057	0.03%	0.025	0.065	0.04%	0.021	0.062	0.04%	0.015	0.055	0.03%
165	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.041	0.062	0.102	0.06%	0.048	0.088	0.05%	0.062	0.102	0.06%	0.046	0.087	0.05%
165	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.041	0.062	0.103	0.06%	0.064	0.104	0.06%	0.076	0.117	0.07%	0.049	0.090	0.05%
165	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.041	0.013	0.053	0.03%	0.021	0.062	0.04%	0.021	0.062	0.04%	0.015	0.055	0.03%
165	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.041	0.047	0.088	0.05%	0.047	0.088	0.05%	0.050	0.090	0.05%	0.028	0.069	0.04%
165	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.041	0.046	0.086	0.05%	0.059	0.100	0.06%	0.061	0.102	0.06%	0.037	0.078	0.05%
165	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.041	0.028	0.068	0.04%	0.040	0.080	0.05%	0.042	0.083	0.05%	0.025	0.065	0.04%
165	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.041	0.055	0.096	0.06%	0.123	0.163	0.10%	0.106	0.147	0.09%	0.066	0.106	0.06%
165	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.041	0.034	0.074	0.05%	0.058	0.099	0.06%	0.054	0.094	0.06%	0.034	0.074	0.05%
165	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.041	0.011	0.052	0.03%	0.012	0.053	0.03%	0.016	0.057	0.03%	0.009	0.049	0.03%
165	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.041	0.029	0.069	0.04%	0.038	0.078	0.05%	0.048	0.088	0.05%	0.026	0.066	0.04%
165	ING-2	Laurie Hawkins Public School	509019	4765860	0.041	0.011	0.052	0.03%	0.021	0.062	0.04%	0.024	0.065	0.04%	0.014	0.054	0.03%
165	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.041	0.029	0.069	0.04%	0.043	0.083	0.05%	0.044	0.085	0.05%	0.027	0.068	0.04%
165	ING-4	On the river north of 209 County Road 9	509480	4765180	0.041	0.013	0.054	0.03%	0.017	0.057	0.03%	0.019	0.060	0.04%	0.012	0.053	0.03%
165	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.041	0.010	0.050	0.03%	0.018	0.058	0.04%	0.019	0.059	0.04%	0.011	0.052	0.03%
165	ING-6	Royal Road Public School	510337	4765360	0.041	0.017	0.058	0.03%	0.030	0.070	0.04%	0.027	0.068	0.04%	0.018	0.059	0.04%
165	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.041	0.008	0.049	0.03%	0.014	0.054	0.03%	0.014	0.054	0.03%	0.008	0.049	0.03%
165	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.041	0.008	0.049	0.03%	0.019	0.060	0.04%	0.016	0.056	0.03%	0.011	0.052	0.03%
165	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.041	0.025	0.066	0.04%	0.042	0.082	0.05%	0.049	0.089	0.05%	0.026	0.066	0.04%
165	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.041	0.016	0.056	0.03%	0.030	0.070	0.04%	0.033	0.073	0.04%	0.020	0.061	0.04%
165	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.041	0.046	0.086	0.05%	0.147	0.187	0.11%	0.141	0.182	0.11%	0.089	0.129	0.08%
165	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.041	0.054	0.094	0.06%	0.100	0.141	0.09%	0.128	0.168	0.10%	0.069	0.109	0.07%
165	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.041	0.060	0.100	0.06%	0.093	0.133	0.08%	0.154	0.194	0.12%	0.077	0.117	0.07%
165	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.041	0.036	0.077	0.05%	0.029	0.070	0.04%	0.037	0.078	0.05%	0.023	0.064	0.04%
165	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.041	0.022	0.062	0.04%	0.021	0.062	0.04%	0.031	0.071	0.04%	0.017	0.057	0.03%
165	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.041	0.014	0.055	0.03%	0.012	0.053	0.03%	0.016	0.057	0.03%	0.010	0.050	0.03%
165	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.041	0.008	0.049	0.03%	0.013	0.053	0.03%	0.017	0.057	0.03%	0.009	0.050	0.03%
165	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.041	0.004	0.044	0.03%	0.005	0.045	0.03%	0.006	0.046	0.03%	0.004	0.044	0.03%
165	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.041	0.003	0.044	0.03%	0.004	0.044	0.03%	0.005	0.045	0.03%	0.003	0.043	0.03%
165	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.041	0.034	0.074	0.05%	0.077	0.118	0.07%	0.055	0.096	0.06%	0.040	0.081	0.05%
165	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.041	0.035	0.075	0.05%	0.087	0.128	0.08%	0.060	0.101	0.06%	0.039	0.079	0.05%
165	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.041	0.048	0.089	0.05%	0.071	0.112	0.07%	0.120	0.161	0.10%	0.066	0.106	0.06%
165	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.041	0.039	0.080	0.05%	0.069	0.109	0.07%	0.114	0.155	0.09%	0.063	0.103	0.06%
165	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.041	0.046	0.086	0.05%	0.046	0.086	0.05%	0.069	0.110	0.07%	0.040	0.080	0.05%
165	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.041	0.030	0.071	0.04%	0.047	0.088	0.05%	0.063	0.103	0.06%	0.034	0.074	0.05%
165	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.041	0.034	0.075	0.05%	0.053	0.094	0.06%	0.069	0.110	0.07%	0.038	0.079	0.05%
165	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.041	0.029	0.069	0.04%	0.032	0.072	0.04%	0.049	0.090	0.05%	0.027	0.067	0.04%
165	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.041	0.033	0.073	0.04%	0.033	0.073	0.04%	0.035	0.076	0.05%	0.022	0.063	0.04%
165	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.041	0.014	0.055	0.03%	0.022	0.062	0.04%	0.030	0.070	0.04%	0.016	0.057	0.03%
165	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.041	0.008	0.049	0.03%	0.006	0.046	0.03%	0.007	0.047	0.03%	0.004	0.045	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,2-Dichloroethylene (cis) (CAS 156-59-2)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
105	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.040	0.035	0.074	0.07%	0.048	0.087	0.08%	0.048	0.088	0.08%	0.038	0.077	0.07%
105	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.040	0.041	0.081	0.08%	0.042	0.082	0.08%	0.044	0.084	0.08%	0.032	0.071	0.07%
105	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.040	0.027	0.067	0.06%	0.030	0.070	0.07%	0.033	0.072	0.07%	0.024	0.063	0.06%
105	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.040	0.021	0.061	0.06%	0.030	0.069	0.07%	0.025	0.065	0.06%	0.018	0.058	0.05%
105	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.040	0.101	0.140	0.13%	0.084	0.123	0.12%	0.100	0.140	0.13%	0.082	0.122	0.12%
105	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.040	0.103	0.142	0.14%	0.117	0.156	0.15%	0.111	0.150	0.14%	0.100	0.139	0.13%
105	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.040	0.018	0.057	0.05%	0.028	0.068	0.06%	0.029	0.068	0.06%	0.021	0.060	0.06%
105	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.040	0.070	0.110	0.10%	0.067	0.107	0.10%	0.064	0.103	0.10%	0.061	0.101	0.10%
105	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.040	0.054	0.094	0.09%	0.070	0.110	0.10%	0.073	0.112	0.11%	0.044	0.084	0.08%
105	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.040	0.036	0.076	0.07%	0.050	0.090	0.09%	0.053	0.093	0.09%	0.033	0.072	0.07%
105	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.040	0.065	0.105	0.10%	0.145	0.185	0.18%	0.126	0.166	0.16%	0.081	0.120	0.11%
105	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.040	0.044	0.083	0.08%	0.071	0.111	0.11%	0.066	0.105	0.10%	0.042	0.082	0.08%
105	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.040	0.055	0.095	0.05%	0.054	0.094	0.05%	0.020	0.059	0.06%	0.012	0.051	0.05%
105	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.040	0.037	0.077	0.07%	0.047	0.087	0.08%	0.059	0.098	0.09%	0.033	0.072	0.07%
105	ING-2	Laurie Hawkins Public School	509019	4765860	0.040	0.018	0.057	0.05%	0.025	0.065	0.06%	0.029	0.068	0.07%	0.016	0.056	0.05%
105	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.040	0.034	0.073	0.07%	0.052	0.092	0.09%	0.054	0.093	0.09%	0.034	0.073	0.07%
105	ING-4	On the river north of 209 County Road 9	509480	4765180	0.040	0.017	0.056	0.05%	0.021	0.060	0.06%	0.023	0.063	0.06%	0.015	0.055	0.05%
105	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.040	0.012	0.052	0.05%	0.021	0.061	0.06%	0.022	0.062	0.06%	0.014	0.053	0.05%
105	ING-6	Royal Road Public School	510337	4765360	0.040	0.021	0.060	0.06%	0.038	0.077	0.07%	0.035	0.074	0.07%	0.024	0.063	0.06%
105	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.040	0.010	0.050	0.05%	0.016	0.056	0.05%	0.017	0.056	0.05%	0.010	0.049	0.05%
105	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.040	0.010	0.049	0.05%	0.024	0.063	0.06%	0.020	0.059	0.06%	0.014	0.054	0.05%
105	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.040	0.031	0.071	0.07%	0.051	0.090	0.09%	0.059	0.098	0.09%	0.031	0.071	0.07%
105	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.040	0.019	0.058	0.06%	0.035	0.075	0.07%	0.039	0.079	0.08%	0.024	0.064	0.06%
105	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.040	0.068	0.107	0.10%	0.187	0.226	0.22%	0.181	0.220	0.21%	0.118	0.158	0.15%
105	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.040	0.076	0.116	0.11%	0.119	0.158	0.15%	0.162	0.201	0.19%	0.086	0.125	0.12%
105	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.040	0.079	0.119	0.11%	0.117	0.156	0.15%	0.224	0.263	0.21%	0.132	0.171	0.17%
105	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.040	0.047	0.086	0.08%	0.045	0.084	0.08%	0.048	0.087	0.08%	0.038	0.077	0.07%
105	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.040	0.028	0.067	0.06%	0.028	0.067	0.06%	0.036	0.076	0.07%	0.022	0.062	0.06%
105	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.040	0.018	0.057	0.05%	0.017	0.057	0.05%	0.022	0.062	0.06%	0.014	0.054	0.05%
105	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.040	0.011	0.050	0.05%	0.015	0.055	0.05%	0.020	0.060	0.06%	0.011	0.051	0.05%
105	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.040	0.005	0.045	0.04%	0.006	0.046	0.04%	0.007	0.046	0.04%	0.005	0.044	0.04%
105	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.040	0.005	0.044	0.04%	0.005	0.044	0.04%	0.006	0.045	0.04%	0.004	0.043	0.04%
105	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.040	0.041	0.080	0.08%	0.092	0.132	0.13%	0.066	0.106	0.10%	0.048	0.088	0.08%
105	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.040	0.051	0.090	0.09%	0.113	0.153	0.15%	0.071	0.111	0.11%	0.056	0.096	0.09%
105	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.040	0.062	0.101	0.10%	0.089	0.128	0.12%	0.147	0.186	0.18%	0.082	0.121	0.12%
105	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.040	0.054	0.093	0.09%	0.082	0.122	0.12%	0.141	0.181	0.17%	0.080	0.120	0.11%
105	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.040	0.067	0.106	0.10%	0.096	0.136	0.13%	0.094	0.134	0.13%	0.059	0.099	0.09%
105	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.040	0.043	0.083	0.08%	0.058	0.098	0.09%	0.079	0.119	0.11%	0.046	0.085	0.08%
105	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.040	0.048	0.088	0.08%	0.067	0.106	0.10%	0.086	0.126	0.12%	0.049	0.089	0.08%
105	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.040	0.038	0.078	0.07%	0.044	0.083	0.08%	0.062	0.102	0.10%	0.036	0.076	0.07%
105	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.040	0.039	0.079	0.08%	0.041	0.080	0.08%	0.045	0.084	0.08%	0.034	0.074	0.07%
105	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.040	0.020	0.060	0.06%	0.026	0.065	0.06%	0.035	0.075	0.07%	0.019	0.059	0.06%
105	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.040	0.010	0.049	0.05%	0.007	0.046	0.04%	0.008	0.048	0.05%	0.005	0.045	0.04%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,2-Dichloroethylene (trans) (CAS 156-60-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
105	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.040	0.015	0.055	0.05%	0.016	0.056	0.05%	0.016	0.056	0.05%	0.015	0.055	0.05%
105	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.040	0.015	0.055	0.05%	0.014	0.054	0.05%	0.015	0.055	0.05%	0.014	0.054	0.05%
105	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.040	0.011	0.050	0.05%	0.011	0.051	0.05%	0.012	0.051	0.05%	0.011	0.051	0.05%
105	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.040	0.010	0.050	0.05%	0.010	0.050	0.05%	0.010	0.050	0.05%	0.010	0.050	0.05%
105	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.040	0.050	0.089	0.08%	0.049	0.088	0.08%	0.049	0.088	0.08%	0.048	0.088	0.08%
105	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.040	0.060	0.099	0.09%	0.060	0.100	0.10%	0.060	0.100	0.09%	0.059	0.099	0.09%
105	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.040	0.009	0.049	0.05%	0.009	0.049	0.05%	0.009	0.049	0.05%	0.009	0.049	0.05%
105	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.040	0.041	0.080	0.08%	0.040	0.080	0.08%	0.040	0.080	0.08%	0.040	0.079	0.08%
105	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.040	0.018	0.058	0.05%	0.018	0.057	0.05%	0.018	0.057	0.05%	0.017	0.057	0.05%
105	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.040	0.014	0.054	0.05%	0.015	0.055	0.05%	0.015	0.055	0.05%	0.015	0.054	0.05%
105	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.040	0.023	0.062	0.06%	0.024	0.064	0.06%	0.023	0.063	0.06%	0.023	0.062	0.06%
105	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.040	0.016	0.055	0.05%	0.017	0.057	0.05%	0.017	0.056	0.05%	0.016	0.056	0.05%
105	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.040	0.007	0.047	0.04%	0.007	0.047	0.04%	0.007	0.047	0.04%	0.007	0.047	0.04%
105	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.040	0.011	0.050	0.05%	0.012	0.051	0.05%	0.012	0.051	0.05%	0.011	0.051	0.05%
105	ING-2	Laurie Hawkins Public School	509019	4765860	0.040	0.008	0.048	0.05%	0.008	0.048	0.05%	0.008	0.048	0.05%	0.008	0.048	0.05%
105	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.040	0.012	0.052	0.05%	0.012	0.052	0.05%	0.012	0.052	0.05%	0.012	0.051	0.05%
105	ING-4	On the river north of 209 County Road 9	509480	4765180	0.040	0.006	0.046	0.04%	0.006	0.046	0.04%	0.006	0.046	0.04%	0.006	0.046	0.04%
105	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.040	0.005	0.044	0.04%	0.005	0.045	0.04%	0.005	0.045	0.04%	0.005	0.044	0.04%
105	ING-6	Royal Road Public School	510337	4765360	0.040	0.007	0.047	0.04%	0.007	0.047	0.04%	0.007	0.046	0.04%	0.007	0.046	0.04%
105	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.040	0.003	0.042	0.04%	0.003	0.043	0.04%	0.003	0.042	0.04%	0.003	0.042	0.04%
105	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.040	0.005	0.044	0.04%	0.004	0.044	0.04%	0.004	0.044	0.04%	0.004	0.044	0.04%
105	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.040	0.006	0.045	0.04%	0.006	0.045	0.04%	0.007	0.047	0.04%	0.006	0.046	0.04%
105	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.040	0.006	0.045	0.04%	0.006	0.045	0.04%	0.005	0.045	0.04%	0.005	0.045	0.04%
105	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.040	0.021	0.061	0.06%	0.028	0.068	0.06%	0.028	0.067	0.06%	0.024	0.064	0.06%
105	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.040	0.022	0.061	0.06%	0.019	0.059	0.06%	0.023	0.063	0.06%	0.021	0.060	0.06%
105	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.040	0.017	0.056	0.05%	0.017	0.056	0.05%	0.019	0.058	0.06%	0.017	0.056	0.05%
105	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.040	0.016	0.056	0.05%	0.017	0.056	0.05%	0.017	0.056	0.05%	0.017	0.056	0.05%
105	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.040	0.014	0.053	0.05%	0.013	0.053	0.05%	0.013	0.053	0.05%	0.013	0.053	0.05%
105	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.040	0.005	0.044	0.04%	0.005	0.044	0.04%	0.005	0.045	0.04%	0.005	0.044	0.04%
105	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.040	0.004	0.044	0.04%	0.004	0.044	0.04%	0.004	0.044	0.04%	0.004	0.044	0.04%
105	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.040	0.002	0.041	0.04%	0.002	0.041	0.04%	0.002	0.041	0.04%	0.002	0.041	0.04%
105	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.040	0.001	0.041	0.04%	0.001	0.041	0.04%	0.001	0.041	0.04%	0.001	0.041	0.04%
105	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.040	0.008	0.047	0.04%	0.009	0.048	0.05%	0.008	0.048	0.05%	0.008	0.047	0.04%
105	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.040	0.016	0.056	0.05%	0.020	0.059	0.06%	0.017	0.056	0.05%	0.016	0.056	0.05%
105	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.040	0.011	0.050	0.05%	0.012	0.052	0.05%	0.014	0.053	0.05%	0.011	0.050	0.05%
105	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.040	0.013	0.053	0.05%	0.014	0.053	0.05%	0.016	0.056	0.05%	0.014	0.053	0.05%
105	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.040	0.020	0.060	0.06%	0.019	0.059	0.06%	0.022	0.061	0.06%	0.019	0.059	0.06%
105	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.040	0.013	0.053	0.05%	0.014	0.054	0.05%	0.015	0.054	0.05%	0.013	0.053	0.05%
105	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.040	0.012	0.052	0.05%	0.012	0.051	0.05%	0.013	0.053	0.05%	0.012	0.051	0.05%
105	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.040	0.010	0.049	0.05%	0.010	0.050	0.05%	0.010	0.050	0.05%	0.010	0.049	0.05%
105	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.040	0.014	0.054	0.05%	0.015	0.054	0.05%	0.015	0.055	0.05%	0.015	0.054	0.05%
105	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.040	0.007	0.047	0.04%	0.007	0.047	0.04%	0.007	0.047	0.04%	0.007	0.047	0.04%
105	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.040	0.002	0.042	0.04%	0.002	0.042	0.04%	0.002	0.042	0.04%	0.002	0.042	0.04%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,3,5-Trimethyl Benzene (CAS 108-67-8)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.008	0.498	0.25%	0.009	0.499	0.25%	0.009	0.499	0.25%	0.005	0.495	0.25%
200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.008	0.498	0.25%	0.010	0.500	0.25%	0.008	0.498	0.25%	0.004	0.494	0.25%
200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.007	0.497	0.25%	0.008	0.498	0.25%	0.008	0.498	0.25%	0.005	0.495	0.25%
200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.006	0.496	0.25%	0.008	0.498	0.25%	0.007	0.497	0.25%	0.005	0.495	0.25%
200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.017	0.507	0.25%	0.011	0.501	0.25%	0.016	0.506	0.25%	0.009	0.499	0.25%
200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.023	0.513	0.26%	0.023	0.513	0.26%	0.027	0.517	0.26%	0.015	0.505	0.25%
200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.004	0.494	0.25%	0.007	0.497	0.25%	0.007	0.497	0.25%	0.004	0.494	0.25%
200	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.017	0.507	0.25%	0.017	0.507	0.25%	0.018	0.508	0.25%	0.009	0.499	0.25%
200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.015	0.505	0.25%	0.023	0.513	0.26%	0.023	0.513	0.26%	0.012	0.502	0.25%
200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.010	0.500	0.25%	0.014	0.504	0.25%	0.014	0.504	0.25%	0.007	0.497	0.25%
200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.019	0.509	0.25%	0.041	0.531	0.27%	0.036	0.526	0.26%	0.021	0.511	0.26%
200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.011	0.501	0.25%	0.019	0.509	0.25%	0.018	0.508	0.25%	0.011	0.501	0.25%
200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.004	0.494	0.25%	0.004	0.494	0.25%	0.005	0.495	0.25%	0.003	0.493	0.25%
200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.011	0.501	0.25%	0.012	0.502	0.25%	0.015	0.505	0.25%	0.008	0.498	0.25%
200	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.004	0.494	0.25%	0.008	0.498	0.25%	0.009	0.499	0.25%	0.004	0.494	0.25%
200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.010	0.500	0.25%	0.015	0.505	0.25%	0.015	0.505	0.25%	0.009	0.499	0.25%
200	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.005	0.495	0.25%	0.006	0.496	0.25%	0.006	0.496	0.25%	0.004	0.494	0.25%
200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.003	0.493	0.25%	0.007	0.497	0.25%	0.007	0.497	0.25%	0.004	0.494	0.25%
200	ING-6	Royal Road Public School	510337	4765360	0.490	0.007	0.497	0.25%	0.010	0.500	0.25%	0.009	0.499	0.25%	0.005	0.495	0.25%
200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.003	0.493	0.25%	0.005	0.495	0.25%	0.005	0.495	0.25%	0.003	0.493	0.25%
200	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.003	0.493	0.25%	0.007	0.497	0.25%	0.006	0.496	0.25%	0.003	0.493	0.25%
200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.009	0.499	0.25%	0.015	0.505	0.25%	0.016	0.506	0.25%	0.008	0.498	0.25%
200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.006	0.496	0.25%	0.011	0.501	0.25%	0.012	0.502	0.25%	0.006	0.496	0.25%
200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.015	0.505	0.25%	0.048	0.538	0.27%	0.046	0.536	0.27%	0.026	0.516	0.26%
200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.018	0.508	0.25%	0.033	0.523	0.26%	0.043	0.533	0.27%	0.022	0.512	0.26%
200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.020	0.510	0.26%	0.034	0.524	0.26%	0.053	0.543	0.27%	0.024	0.514	0.26%
200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.012	0.502	0.25%	0.010	0.500	0.25%	0.014	0.504	0.25%	0.007	0.497	0.25%
200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.008	0.498	0.25%	0.007	0.497	0.25%	0.011	0.501	0.25%	0.005	0.495	0.25%
200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.005	0.495	0.25%	0.004	0.494	0.25%	0.005	0.495	0.25%	0.003	0.493	0.25%
200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.003	0.493	0.25%	0.004	0.494	0.25%	0.006	0.496	0.25%	0.003	0.493	0.25%
200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.001	0.491	0.25%	0.002	0.492	0.25%	0.002	0.492	0.25%	0.001	0.491	0.25%
200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.001	0.491	0.25%	0.001	0.491	0.25%	0.002	0.492	0.25%	0.001	0.491	0.25%
200	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.012	0.502	0.25%	0.027	0.517	0.26%	0.020	0.510	0.26%	0.013	0.503	0.25%
200	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.011	0.501	0.25%	0.028	0.518	0.26%	0.019	0.509	0.25%	0.011	0.501	0.25%
200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.017	0.507	0.25%	0.024	0.514	0.26%	0.040	0.530	0.27%	0.020	0.510	0.26%
200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.013	0.503	0.25%	0.023	0.513	0.26%	0.038	0.528	0.26%	0.019	0.509	0.25%
200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.015	0.505	0.25%	0.016	0.506	0.25%	0.021	0.511	0.26%	0.010	0.500	0.25%
200	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.010	0.500	0.25%	0.016	0.506	0.25%	0.021	0.511	0.26%	0.010	0.500	0.25%
200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.011	0.501	0.25%	0.018	0.508	0.25%	0.023	0.513	0.26%	0.012	0.502	0.25%
200	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.010	0.500	0.25%	0.011	0.501	0.25%	0.018	0.508	0.25%	0.008	0.498	0.25%
200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.012	0.502	0.25%	0.011	0.501	0.25%	0.012	0.502	0.25%	0.007	0.497	0.25%
200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.005	0.495	0.25%	0.008	0.498	0.25%	0.010	0.500	0.25%	0.005	0.495	0.25%
200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.003	0.493	0.25%	0.002	0.492	0.25%	0.002	0.492	0.25%	0.001	0.491	0.25%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**2-Butanol (CAS 78-92-2)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
496	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.050	0.081	3.131	0.63%	0.101	3.151	0.64%	0.103	3.153	0.64%	0.071	3.121	0.63%
496	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.050	0.083	3.133	0.63%	0.107	3.157	0.64%	0.094	3.144	0.63%	0.056	3.106	0.63%
496	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.050	0.075	3.125	0.63%	0.077	3.127	0.63%	0.091	3.141	0.63%	0.054	3.104	0.63%
496	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.050	0.058	3.108	0.63%	0.086	3.136	0.63%	0.076	3.126	0.63%	0.051	3.101	0.63%
496	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.050	0.188	3.238	0.65%	0.140	3.190	0.64%	0.189	3.239	0.65%	0.135	3.185	0.64%
496	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.050	0.216	3.266	0.66%	0.221	3.271	0.66%	0.266	3.316	0.67%	0.170	3.220	0.65%
496	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.050	0.043	3.093	0.62%	0.072	3.122	0.63%	0.073	3.123	0.63%	0.050	3.100	0.62%
496	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.050	0.165	3.215	0.65%	0.166	3.216	0.65%	0.177	3.227	0.65%	0.101	3.151	0.64%
496	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.050	0.162	3.212	0.65%	0.210	3.260	0.66%	0.218	3.268	0.66%	0.133	3.183	0.64%
496	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.050	0.094	3.144	0.63%	0.137	3.187	0.64%	0.146	3.196	0.64%	0.085	3.135	0.63%
496	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.050	0.195	3.245	0.65%	0.435	3.485	0.70%	0.378	3.428	0.69%	0.234	3.284	0.66%
496	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.050	0.116	3.166	0.64%	0.204	3.254	0.66%	0.188	3.238	0.65%	0.118	3.168	0.64%
496	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.050	0.037	3.087	0.62%	0.043	3.093	0.62%	0.059	3.109	0.63%	0.031	3.081	0.62%
496	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.050	0.098	3.148	0.63%	0.131	3.181	0.64%	0.167	3.217	0.65%	0.088	3.138	0.63%
496	ING-2	Laurie Hawkins Public School	509019	4765860	3.050	0.036	3.086	0.62%	0.076	3.126	0.63%	0.086	3.136	0.63%	0.049	3.099	0.62%
496	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.050	0.101	3.151	0.64%	0.151	3.201	0.65%	0.156	3.206	0.65%	0.095	3.145	0.63%
496	ING-4	On the river north of 209 County Road 9	509480	4765180	3.050	0.047	3.097	0.62%	0.059	3.109	0.63%	0.067	3.117	0.63%	0.042	3.092	0.62%
496	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.050	0.033	3.083	0.62%	0.063	3.113	0.63%	0.067	3.117	0.63%	0.041	3.091	0.62%
496	ING-6	Royal Road Public School	510337	4765360	3.050	0.059	3.109	0.63%	0.103	3.153	0.64%	0.094	3.144	0.63%	0.062	3.112	0.63%
496	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.050	0.029	3.079	0.62%	0.048	3.098	0.62%	0.049	3.099	0.62%	0.030	3.080	0.62%
496	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.050	0.029	3.079	0.62%	0.066	3.116	0.63%	0.056	3.106	0.63%	0.039	3.089	0.62%
496	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.050	0.088	3.138	0.63%	0.146	3.196	0.64%	0.173	3.223	0.65%	0.091	3.141	0.63%
496	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.050	0.055	3.105	0.63%	0.105	3.155	0.64%	0.117	3.167	0.64%	0.071	3.121	0.63%
496	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.050	0.148	3.198	0.64%	0.505	3.555	0.72%	0.488	3.538	0.71%	0.301	3.351	0.68%
496	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.050	0.179	3.229	0.65%	0.356	3.406	0.69%	0.444	3.494	0.70%	0.242	3.292	0.66%
496	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.050	0.203	3.253	0.66%	0.324	3.374	0.68%	0.544	3.594	0.72%	0.270	3.320	0.67%
496	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.050	0.124	3.174	0.64%	0.100	3.150	0.64%	0.132	3.182	0.64%	0.077	3.127	0.63%
496	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.050	0.074	3.124	0.63%	0.076	3.126	0.63%	0.109	3.159	0.64%	0.059	3.109	0.63%
496	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.050	0.048	3.098	0.62%	0.041	3.091	0.62%	0.055	3.105	0.63%	0.031	3.081	0.62%
496	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.050	0.028	3.078	0.62%	0.044	3.094	0.62%	0.059	3.109	0.63%	0.033	3.083	0.62%
496	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.050	0.012	3.062	0.62%	0.017	3.067	0.62%	0.020	3.070	0.62%	0.012	3.062	0.62%
496	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.050	0.011	3.061	0.62%	0.013	3.063	0.62%	0.017	3.067	0.62%	0.009	3.059	0.62%
496	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.050	0.119	3.169	0.64%	0.273	3.323	0.67%	0.196	3.246	0.65%	0.142	3.192	0.64%
496	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.050	0.112	3.162	0.64%	0.298	3.348	0.67%	0.215	3.265	0.66%	0.128	3.178	0.64%
496	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.050	0.167	3.217	0.65%	0.248	3.298	0.66%	0.424	3.474	0.70%	0.229	3.279	0.66%
496	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.050	0.133	3.183	0.64%	0.243	3.293	0.66%	0.399	3.449	0.70%	0.217	3.267	0.66%
496	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.050	0.149	3.199	0.64%	0.160	3.210	0.65%	0.234	3.284	0.66%	0.127	3.177	0.64%
496	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.050	0.098	3.148	0.63%	0.168	3.218	0.65%	0.218	3.268	0.66%	0.116	3.166	0.64%
496	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.050	0.114	3.164	0.64%	0.184	3.234	0.65%	0.242	3.292	0.66%	0.132	3.182	0.64%
496	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.050	0.098	3.148	0.63%	0.107	3.157	0.64%	0.171	3.221	0.65%	0.092	3.142	0.63%
496	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.050	0.115	3.165	0.64%	0.113	3.163	0.64%	0.123	3.173	0.64%	0.077	3.127	0.63%
496	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.050	0.046	3.096	0.62%	0.076	3.126	0.63%	0.105	3.155	0.64%	0.057	3.107	0.63%
496	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.050	0.028	3.078	0.62%	0.020	3.070	0.62%	0.024	3.074	0.62%	0.016	3.066	0.62%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Acetone (CAS 67-64-1)**

**24-hour**

Criteria (µg/m3)	Receptor Information				Ambient Background Concentration (µg/m3)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
11,880	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	19.200	0.143	19.343	0.16%	0.164	19.364	0.16%	0.168	19.368	0.16%	0.108	19.308	0.16%
11,880	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	19.200	0.136	19.336	0.16%	0.186	19.386	0.16%	0.151	19.351	0.16%	0.088	19.288	0.16%
11,880	ZOR-3	Residence at 663951 Rd 66	510216	4770270	19.200	0.134	19.334	0.16%	0.140	19.340	0.16%	0.164	19.364	0.16%	0.093	19.293	0.16%
11,880	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	19.200	0.106	19.306	0.16%	0.156	19.356	0.16%	0.137	19.337	0.16%	0.091	19.291	0.16%
11,880	ZOR-5	Residence at 334789 33rd Line	508931	4768760	19.200	0.294	19.494	0.16%	0.201	19.401	0.16%	0.289	19.489	0.16%	0.188	19.388	0.16%
11,880	ZOR-6	Residence at 334742 33rd Line	509185	4768350	19.200	0.392	19.592	0.16%	0.401	19.601	0.16%	0.480	19.680	0.17%	0.297	19.497	0.16%
11,880	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	19.200	0.078	19.278	0.16%	0.128	19.328	0.16%	0.129	19.329	0.16%	0.084	19.284	0.16%
11,880	ZOR-8	Residence at 643743 Road 64	508940	4767980	19.200	0.297	19.497	0.16%	0.305	19.505	0.16%	0.323	19.523	0.16%	0.181	19.381	0.16%
11,880	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	19.200	0.292	19.492	0.16%	0.384	19.584	0.16%	0.397	19.597	0.16%	0.240	19.440	0.16%
11,880	ZOR-10	Residence at 334578 33rd Line	509739	4766780	19.200	0.168	19.368	0.16%	0.246	19.446	0.16%	0.264	19.464	0.16%	0.147	19.347	0.16%
11,880	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	19.200	0.353	19.553	0.16%	0.789	19.989	0.17%	0.685	19.885	0.17%	0.422	19.622	0.17%
11,880	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	19.200	0.202	19.402	0.16%	0.367	19.567	0.16%	0.337	19.537	0.16%	0.209	19.409	0.16%
11,880	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	19.200	0.065	19.265	0.16%	0.079	19.279	0.16%	0.106	19.306	0.16%	0.056	19.256	0.16%
11,880	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	19.200	0.177	19.377	0.16%	0.232	19.432	0.16%	0.295	19.495	0.16%	0.153	19.353	0.16%
11,880	ING-2	Laurie Hawkins Public School	509019	4765860	19.200	0.064	19.264	0.16%	0.139	19.339	0.16%	0.157	19.357	0.16%	0.088	19.288	0.16%
11,880	ING-3	Ingersoll District Collegiate Institute	510512	4766230	19.200	0.183	19.383	0.16%	0.271	19.471	0.16%	0.279	19.479	0.16%	0.169	19.369	0.16%
11,880	ING-4	On the river north of 209 County Road 9	509480	4765180	19.200	0.085	19.285	0.16%	0.106	19.306	0.16%	0.120	19.320	0.16%	0.074	19.274	0.16%
11,880	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	19.200	0.060	19.260	0.16%	0.116	19.316	0.16%	0.123	19.323	0.16%	0.073	19.273	0.16%
11,880	ING-6	Royal Road Public School	510337	4765360	19.200	0.111	19.311	0.16%	0.188	19.388	0.16%	0.166	19.366	0.16%	0.106	19.306	0.16%
11,880	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	19.200	0.053	19.253	0.16%	0.088	19.288	0.16%	0.089	19.289	0.16%	0.054	19.254	0.16%
11,880	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	19.200	0.052	19.252	0.16%	0.120	19.320	0.16%	0.101	19.301	0.16%	0.068	19.268	0.16%
11,880	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	19.200	0.160	19.360	0.16%	0.267	19.467	0.16%	0.311	19.511	0.16%	0.162	19.362	0.16%
11,880	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	19.200	0.101	19.301	0.16%	0.192	19.392	0.16%	0.213	19.413	0.16%	0.128	19.328	0.16%
11,880	SWO-1	Residence at 584052 Beachville Road	511124	4766750	19.200	0.248	19.448	0.16%	0.894	20.094	0.17%	0.861	20.061	0.17%	0.515	19.715	0.17%
11,880	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	19.200	0.307	19.507	0.16%	0.643	19.843	0.17%	0.801	20.001	0.17%	0.430	19.630	0.17%
11,880	SWO-3	Residence at 584142 Beachville Road	511722	4767480	19.200	0.356	19.556	0.16%	0.595	19.795	0.17%	0.986	20.186	0.17%	0.481	19.681	0.17%
11,880	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	19.200	0.218	19.418	0.16%	0.181	19.381	0.16%	0.244	19.444	0.16%	0.138	19.338	0.16%
11,880	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	19.200	0.133	19.333	0.16%	0.138	19.338	0.16%	0.197	19.397	0.16%	0.106	19.306	0.16%
11,880	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	19.200	0.086	19.286	0.16%	0.072	19.272	0.16%	0.093	19.293	0.16%	0.051	19.251	0.16%
11,880	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	19.200	0.050	19.250	0.16%	0.080	19.280	0.16%	0.106	19.306	0.16%	0.058	19.258	0.16%
11,880	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	19.200	0.021	19.221	0.16%	0.030	19.230	0.16%	0.037	19.237	0.16%	0.021	19.221	0.16%
11,880	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	19.200	0.020	19.220	0.16%	0.023	19.223	0.16%	0.030	19.230	0.16%	0.016	19.216	0.16%
11,880	SWO-10	Residence at 563977 Karn Road	510980	4765990	19.200	0.217	19.417	0.16%	0.500	19.700	0.17%	0.361	19.561	0.16%	0.255	19.455	0.16%
11,880	SWO-11	Residence at 564028 Karn Road	511396	4766310	19.200	0.187	19.387	0.16%	0.525	19.725	0.17%	0.385	19.585	0.16%	0.211	19.411	0.16%
11,880	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	19.200	0.298	19.498	0.16%	0.446	19.646	0.17%	0.759	19.959	0.17%	0.403	19.603	0.17%
11,880	SWO-13	Centreville Pond and Conservation Area	511570	4766920	19.200	0.233	19.433	0.16%	0.438	19.638	0.17%	0.713	19.913	0.17%	0.378	19.578	0.16%
11,880	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	19.200	0.252	19.452	0.16%	0.290	19.490	0.16%	0.397	19.597	0.16%	0.204	19.404	0.16%
11,880	SWO-15	Residences at 564146 Karn Road	512251	4767100	19.200	0.167	19.367	0.16%	0.304	19.504	0.16%	0.388	19.588	0.16%	0.199	19.399	0.16%
11,880	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	19.200	0.195	19.395	0.16%	0.331	19.531	0.16%	0.434	19.634	0.17%	0.229	19.429	0.16%
11,880	SWO-17	Residence at 564226 Karn Road	512958	4767760	19.200	0.174	19.374	0.16%	0.183	19.383	0.16%	0.312	19.512	0.16%	0.159	19.359	0.16%
11,880	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	19.200	0.209	19.409	0.16%	0.201	19.401	0.16%	0.219	19.419	0.16%	0.134	19.334	0.16%
11,880	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	19.200	0.080	19.280	0.16%	0.140	19.340	0.16%	0.192	19.392	0.16%	0.102	19.302	0.16%
11,880	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	19.200	0.050	19.250	0.16%	0.037	19.237	0.16%	0.044	19.244	0.16%	0.029	19.229	0.16%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Benzene (CAS 71-43-2)**

**Annual**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
0.5	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.378	0.003	0.380	85%	0.0034	0.381	85%	0.0038	0.382	85%	0.0025	0.380	85%
0.5	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.378	0.003	0.381	85%	0.0038	0.382	85%	0.0041	0.382	85%	0.0029	0.381	85%
0.5	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.378	0.003	0.381	85%	0.0039	0.382	85%	0.0045	0.382	85%	0.0031	0.381	85%
0.5	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.378	0.003	0.380	85%	0.0032	0.381	85%	0.0035	0.381	85%	0.0024	0.380	84%
0.5	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.378	0.008	0.386	86%	0.0074	0.385	86%	0.0083	0.386	86%	0.0061	0.384	85%
0.5	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.378	0.013	0.390	87%	0.0128	0.391	87%	0.0139	0.392	87%	0.0101	0.388	86%
0.5	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.378	0.002	0.380	84%	0.0026	0.380	85%	0.0031	0.381	85%	0.0020	0.380	84%
0.5	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.378	0.009	0.387	86%	0.0103	0.388	86%	0.0107	0.388	86%	0.0074	0.385	86%
0.5	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.378	0.008	0.385	86%	0.0149	0.393	87%	0.0148	0.393	87%	0.0095	0.387	86%
0.5	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.378	0.004	0.381	85%	0.0081	0.386	86%	0.0079	0.386	86%	0.0050	0.383	85%
0.5	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.378	0.009	0.386	86%	0.0261	0.404	90%	0.0203	0.398	88%	0.0138	0.392	87%
0.5	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.378	0.004	0.382	85%	0.0090	0.387	86%	0.0080	0.386	86%	0.0054	0.383	85%
0.5	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.378	0.001	0.379	84%	0.0020	0.380	84%	0.0023	0.380	84%	0.0015	0.379	84%
0.5	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.378	0.003	0.381	85%	0.0071	0.385	86%	0.0071	0.385	86%	0.0045	0.382	85%
0.5	ING-2	Laurie Hawkins Public School	509019	4765860	0.378	0.001	0.379	84%	0.0028	0.381	85%	0.0029	0.381	85%	0.0019	0.380	84%
0.5	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.378	0.004	0.381	85%	0.0070	0.385	85%	0.0070	0.385	85%	0.0043	0.382	85%
0.5	ING-4	On the river north of 209 County Road 9	509480	4765180	0.378	0.002	0.379	84%	0.0020	0.380	84%	0.0020	0.380	84%	0.0014	0.379	84%
0.5	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.378	0.001	0.379	84%	0.0021	0.380	84%	0.0022	0.380	84%	0.0014	0.379	84%
0.5	ING-6	Royal Road Public School	510337	4765360	0.378	0.002	0.380	84%	0.0030	0.381	85%	0.0034	0.381	85%	0.0021	0.380	84%
0.5	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.378	0.001	0.378	84%	0.0015	0.379	84%	0.0016	0.379	84%	0.0010	0.379	84%
0.5	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.378	0.001	0.379	84%	0.0017	0.379	84%	0.0019	0.380	84%	0.0012	0.379	84%
0.5	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.378	0.002	0.380	84%	0.0041	0.382	85%	0.0046	0.382	85%	0.0029	0.381	85%
0.5	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.378	0.001	0.379	84%	0.0023	0.380	84%	0.0027	0.380	85%	0.0017	0.379	84%
0.5	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.378	0.006	0.384	85%	0.0161	0.394	88%	0.0181	0.396	88%	0.0107	0.388	86%
0.5	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.378	0.009	0.387	86%	0.0224	0.400	89%	0.0305	0.408	91%	0.0170	0.395	88%
0.5	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.378	0.010	0.387	86%	0.0193	0.397	88%	0.0280	0.406	90%	0.0158	0.394	87%
0.5	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.378	0.005	0.383	85%	0.0080	0.386	86%	0.0102	0.388	86%	0.0063	0.384	85%
0.5	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.378	0.004	0.381	85%	0.0049	0.383	85%	0.0058	0.384	85%	0.0039	0.382	85%
0.5	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.378	0.002	0.379	84%	0.0021	0.380	84%	0.0024	0.380	84%	0.0016	0.379	84%
0.5	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.378	0.001	0.379	84%	0.0013	0.379	84%	0.0016	0.379	84%	0.0010	0.379	84%
0.5	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.378	0.000	0.378	84%	0.0006	0.378	84%	0.0007	0.378	84%	0.0005	0.378	84%
0.5	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.378	0.000	0.378	84%	0.0004	0.378	84%	0.0005	0.378	84%	0.0003	0.378	84%
0.5	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.378	0.003	0.381	85%	0.0070	0.385	85%	0.0073	0.385	86%	0.0046	0.382	85%
0.5	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.378	0.004	0.381	85%	0.0082	0.386	86%	0.0096	0.387	86%	0.0058	0.384	85%
0.5	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.378	0.004	0.382	85%	0.0092	0.387	86%	0.0100	0.388	86%	0.0061	0.384	85%
0.5	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.378	0.006	0.383	85%	0.0162	0.394	88%	0.0177	0.395	88%	0.0106	0.388	86%
0.5	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.378	0.005	0.383	85%	0.0101	0.388	86%	0.0129	0.391	87%	0.0076	0.385	86%
0.5	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.378	0.005	0.383	85%	0.0094	0.387	86%	0.0120	0.390	87%	0.0071	0.385	86%
0.5	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.378	0.005	0.383	85%	0.0088	0.387	86%	0.0112	0.389	86%	0.0067	0.384	85%
0.5	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.378	0.003	0.381	85%	0.0055	0.383	85%	0.0071	0.385	86%	0.0043	0.382	85%
0.5	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.378	0.003	0.381	85%	0.0049	0.383	85%	0.0062	0.384	85%	0.0038	0.382	85%
0.5	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.378	0.002	0.380	84%	0.0029	0.381	85%	0.0034	0.381	85%	0.0022	0.380	84%
0.5	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.378	0.001	0.379	84%	0.0011	0.379	84%	0.0013	0.379	84%	0.0009	0.379	84%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Benzene (CAS 71-43-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2.3	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.585	0.059	0.644	28%	0.074	0.659	29%	0.076	0.661	29%	0.053	0.638	28%
2.3	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.585	0.062	0.647	28%	0.077	0.662	29%	0.069	0.654	28%	0.042	0.627	27%
2.3	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.585	0.054	0.639	28%	0.056	0.641	28%	0.065	0.650	28%	0.039	0.624	27%
2.3	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.585	0.042	0.627	27%	0.062	0.647	28%	0.054	0.639	28%	0.037	0.622	27%
2.3	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.585	0.141	0.726	32%	0.106	0.691	30%	0.141	0.726	32%	0.103	0.688	30%
2.3	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.585	0.155	0.740	32%	0.159	0.744	32%	0.190	0.775	34%	0.122	0.707	31%
2.3	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.585	0.030	0.615	27%	0.052	0.637	28%	0.053	0.638	28%	0.036	0.621	27%
2.3	ZOR-8	Residence at 643743 Road 64	508940	4770980	0.585	0.118	0.703	31%	0.119	0.704	31%	0.126	0.711	31%	0.072	0.657	29%
2.3	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.585	0.115	0.700	30%	0.150	0.735	32%	0.155	0.740	32%	0.095	0.680	30%
2.3	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.585	0.068	0.653	28%	0.099	0.684	30%	0.105	0.690	30%	0.061	0.646	28%
2.3	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.585	0.139	0.724	31%	0.310	0.895	39%	0.269	0.854	37%	0.167	0.752	33%
2.3	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.585	0.083	0.668	29%	0.146	0.731	32%	0.134	0.719	31%	0.085	0.670	29%
2.3	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.585	0.027	0.612	27%	0.031	0.616	27%	0.042	0.627	27%	0.022	0.607	26%
2.3	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.585	0.071	0.656	29%	0.094	0.679	30%	0.119	0.704	31%	0.063	0.648	28%
2.3	ING-2	Laurie Hawkins Public School	509019	4765860	0.585	0.026	0.611	27%	0.054	0.639	28%	0.061	0.646	28%	0.035	0.620	27%
2.3	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.585	0.072	0.657	29%	0.108	0.693	30%	0.111	0.696	30%	0.068	0.653	28%
2.3	ING-4	On the river north of 209 County Road 9	509480	4765180	0.585	0.033	0.618	27%	0.042	0.627	27%	0.048	0.633	28%	0.030	0.615	27%
2.3	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.585	0.024	0.609	26%	0.045	0.630	27%	0.048	0.633	28%	0.029	0.614	27%
2.3	ING-6	Royal Road Public School	510337	4765360	0.585	0.043	0.628	27%	0.074	0.659	29%	0.067	0.652	28%	0.044	0.629	27%
2.3	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.585	0.021	0.606	26%	0.034	0.619	27%	0.035	0.620	27%	0.021	0.606	26%
2.3	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.585	0.020	0.605	26%	0.048	0.633	28%	0.040	0.625	27%	0.028	0.613	27%
2.3	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.585	0.063	0.648	28%	0.105	0.690	30%	0.123	0.708	31%	0.065	0.650	28%
2.3	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.585	0.039	0.624	27%	0.075	0.660	29%	0.083	0.668	29%	0.051	0.636	28%
2.3	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.585	0.109	0.694	30%	0.363	0.948	41%	0.350	0.935	41%	0.218	0.803	35%
2.3	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.585	0.130	0.715	31%	0.253	0.838	36%	0.318	0.903	39%	0.173	0.758	33%
2.3	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.585	0.147	0.732	32%	0.232	0.817	36%	0.387	0.972	42%	0.193	0.778	34%
2.3	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.585	0.089	0.674	29%	0.071	0.656	29%	0.094	0.679	30%	0.056	0.641	28%
2.3	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.585	0.053	0.638	28%	0.054	0.639	28%	0.077	0.662	29%	0.042	0.627	27%
2.3	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.585	0.035	0.620	27%	0.030	0.615	27%	0.040	0.625	27%	0.023	0.608	26%
2.3	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.585	0.020	0.605	26%	0.032	0.617	27%	0.042	0.627	27%	0.023	0.608	26%
2.3	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.585	0.009	0.594	26%	0.012	0.597	26%	0.014	0.599	26%	0.009	0.594	26%
2.3	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.585	0.008	0.593	26%	0.009	0.594	26%	0.012	0.597	26%	0.007	0.592	26%
2.3	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.585	0.085	0.670	29%	0.195	0.780	34%	0.140	0.725	32%	0.101	0.686	30%
2.3	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.585	0.082	0.667	29%	0.215	0.800	35%	0.152	0.737	32%	0.093	0.678	29%
2.3	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.585	0.120	0.705	31%	0.178	0.763	33%	0.302	0.887	39%	0.164	0.749	33%
2.3	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.585	0.096	0.681	30%	0.173	0.758	33%	0.285	0.870	38%	0.156	0.741	32%
2.3	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.585	0.109	0.694	30%	0.115	0.700	30%	0.169	0.754	33%	0.094	0.679	30%
2.3	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.585	0.072	0.657	29%	0.120	0.705	31%	0.156	0.741	32%	0.084	0.669	29%
2.3	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.585	0.083	0.668	29%	0.132	0.717	31%	0.173	0.758	33%	0.095	0.680	30%
2.3	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.585	0.071	0.656	29%	0.078	0.663	29%	0.123	0.708	31%	0.066	0.651	28%
2.3	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.585	0.082	0.667	29%	0.081	0.666	29%	0.088	0.673	29%	0.055	0.640	28%
2.3	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.585	0.034	0.619	27%	0.054	0.639	28%	0.075	0.660	29%	0.041	0.626	27%
2.3	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.585	0.020	0.605	26%	0.014	0.599	26%	0.017	0.602	26%	0.011	0.596	26%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Bromodichloromethane (CAS 75-27-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
350	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.335	0.052	0.387	0.1%	0.066	0.401	0.1%	0.067	0.402	0.1%	0.048	0.383	0.1%
350	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.335	0.055	0.390	0.1%	0.068	0.403	0.1%	0.061	0.396	0.1%	0.038	0.373	0.1%
350	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.335	0.047	0.382	0.1%	0.049	0.384	0.1%	0.057	0.392	0.1%	0.035	0.370	0.1%
350	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.335	0.037	0.372	0.1%	0.054	0.389	0.1%	0.047	0.382	0.1%	0.032	0.367	0.1%
350	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.335	0.126	0.461	0.1%	0.096	0.431	0.1%	0.126	0.461	0.1%	0.093	0.428	0.1%
350	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.335	0.136	0.471	0.1%	0.139	0.474	0.1%	0.166	0.501	0.1%	0.107	0.442	0.1%
350	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.335	0.027	0.362	0.1%	0.046	0.381	0.1%	0.046	0.381	0.1%	0.032	0.367	0.1%
350	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.335	0.103	0.438	0.1%	0.103	0.438	0.1%	0.110	0.445	0.1%	0.062	0.397	0.1%
350	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.335	0.101	0.436	0.1%	0.130	0.465	0.1%	0.135	0.470	0.1%	0.083	0.418	0.1%
350	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.335	0.060	0.395	0.1%	0.086	0.421	0.1%	0.092	0.427	0.1%	0.054	0.389	0.1%
350	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.335	0.121	0.456	0.1%	0.270	0.605	0.2%	0.234	0.569	0.2%	0.146	0.481	0.1%
350	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.335	0.073	0.408	0.1%	0.127	0.462	0.1%	0.117	0.452	0.1%	0.074	0.409	0.1%
350	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.335	0.024	0.359	0.1%	0.027	0.371	0.1%	0.036	0.371	0.1%	0.019	0.354	0.1%
350	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.335	0.062	0.397	0.1%	0.082	0.417	0.1%	0.104	0.439	0.1%	0.056	0.391	0.1%
350	ING-2	Laurie Hawkins Public School	509019	4765860	0.335	0.024	0.359	0.1%	0.047	0.382	0.1%	0.054	0.389	0.1%	0.030	0.365	0.1%
350	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.335	0.063	0.398	0.1%	0.094	0.429	0.1%	0.097	0.432	0.1%	0.060	0.395	0.1%
350	ING-4	On the river north of 209 County Road 9	509480	4765180	0.335	0.029	0.364	0.1%	0.037	0.372	0.1%	0.042	0.377	0.1%	0.026	0.361	0.1%
350	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.335	0.021	0.356	0.1%	0.039	0.374	0.1%	0.042	0.377	0.1%	0.025	0.360	0.1%
350	ING-6	Royal Road Public School	510337	4765360	0.335	0.037	0.372	0.1%	0.065	0.400	0.1%	0.059	0.394	0.1%	0.039	0.374	0.1%
350	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.335	0.018	0.353	0.1%	0.030	0.365	0.1%	0.030	0.365	0.1%	0.019	0.354	0.1%
350	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.335	0.018	0.353	0.1%	0.042	0.377	0.1%	0.035	0.370	0.1%	0.024	0.359	0.1%
350	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.335	0.056	0.391	0.1%	0.092	0.427	0.1%	0.108	0.443	0.1%	0.057	0.392	0.1%
350	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.335	0.034	0.369	0.1%	0.065	0.400	0.1%	0.072	0.407	0.1%	0.044	0.379	0.1%
350	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.335	0.097	0.432	0.1%	0.318	0.653	0.2%	0.307	0.642	0.2%	0.191	0.526	0.2%
350	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.335	0.114	0.449	0.1%	0.221	0.556	0.2%	0.279	0.614	0.2%	0.151	0.486	0.1%
350	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.335	0.129	0.464	0.1%	0.202	0.537	0.2%	0.338	0.673	0.2%	0.168	0.503	0.1%
350	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.335	0.078	0.413	0.1%	0.062	0.397	0.1%	0.082	0.417	0.1%	0.049	0.384	0.1%
350	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.335	0.047	0.382	0.1%	0.047	0.382	0.1%	0.067	0.402	0.1%	0.037	0.372	0.1%
350	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.335	0.031	0.366	0.1%	0.026	0.361	0.1%	0.035	0.370	0.1%	0.020	0.355	0.1%
350	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.335	0.018	0.353	0.1%	0.028	0.363	0.1%	0.037	0.372	0.1%	0.020	0.355	0.1%
350	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.335	0.008	0.343	0.1%	0.011	0.346	0.1%	0.013	0.348	0.1%	0.008	0.343	0.1%
350	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.335	0.007	0.342	0.1%	0.008	0.343	0.1%	0.010	0.345	0.1%	0.006	0.341	0.1%
350	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.335	0.074	0.409	0.1%	0.170	0.505	0.1%	0.122	0.457	0.1%	0.089	0.424	0.1%
350	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.335	0.073	0.408	0.1%	0.188	0.523	0.1%	0.133	0.468	0.1%	0.083	0.418	0.1%
350	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.335	0.105	0.440	0.1%	0.155	0.490	0.1%	0.264	0.599	0.2%	0.143	0.478	0.1%
350	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.335	0.085	0.420	0.1%	0.151	0.486	0.1%	0.250	0.585	0.2%	0.136	0.471	0.1%
350	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.335	0.097	0.432	0.1%	0.100	0.435	0.1%	0.149	0.484	0.1%	0.083	0.418	0.1%
350	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.335	0.064	0.399	0.1%	0.104	0.439	0.1%	0.137	0.472	0.1%	0.073	0.408	0.1%
350	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.335	0.073	0.408	0.1%	0.116	0.451	0.1%	0.152	0.487	0.1%	0.083	0.418	0.1%
350	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.335	0.062	0.397	0.1%	0.068	0.403	0.1%	0.108	0.443	0.1%	0.058	0.393	0.1%
350	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.335	0.072	0.407	0.1%	0.071	0.406	0.1%	0.077	0.412	0.1%	0.048	0.383	0.1%
350	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.335	0.030	0.365	0.1%	0.047	0.382	0.1%	0.065	0.400	0.1%	0.035	0.370	0.1%
350	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.335	0.017	0.352	0.1%	0.013	0.348	0.1%	0.015	0.350	0.1%	0.010	0.345	0.1%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Carbon Tetrachloride (CAS 56-23-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information				Ambient Background Concentration (µg/m3)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
2.4	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.500	0.012	0.512	21%	0.012	0.512	21%	0.012	0.512	21%	0.012	0.512	21%
2.4	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.500	0.011	0.511	21%	0.011	0.511	21%	0.011	0.511	21%	0.011	0.511	21%
2.4	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.500	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%
2.4	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.500	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%
2.4	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.500	0.038	0.538	22%	0.038	0.538	22%	0.038	0.538	22%	0.038	0.538	22%
2.4	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.500	0.047	0.547	23%	0.047	0.547	23%	0.047	0.547	23%	0.047	0.547	23%
2.4	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.500	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%
2.4	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.500	0.032	0.532	22%	0.032	0.532	22%	0.032	0.532	22%	0.032	0.532	22%
2.4	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.500	0.014	0.514	21%	0.014	0.514	21%	0.014	0.514	21%	0.014	0.514	21%
2.4	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.500	0.011	0.511	21%	0.011	0.511	21%	0.011	0.511	21%	0.011	0.511	21%
2.4	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.500	0.018	0.518	22%	0.018	0.518	22%	0.018	0.518	22%	0.018	0.518	22%
2.4	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.500	0.012	0.512	21%	0.013	0.513	21%	0.013	0.513	21%	0.012	0.512	21%
2.4	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.500	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%
2.4	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.500	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%
2.4	ING-2	Laurie Hawkins Public School	509019	4765860	0.500	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%
2.4	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.500	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%
2.4	ING-4	On the river north of 209 County Road 9	509480	4765180	0.500	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%
2.4	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	ING-6	Royal Road Public School	510337	4765360	0.500	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%	0.005	0.505	21%
2.4	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.500	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%
2.4	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.500	0.004	0.504	21%	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%
2.4	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.500	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%
2.4	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.500	0.015	0.515	21%	0.016	0.516	22%	0.016	0.516	22%	0.015	0.515	21%
2.4	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.500	0.015	0.515	21%	0.015	0.515	21%	0.015	0.515	21%	0.015	0.515	21%
2.4	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.500	0.012	0.512	21%	0.012	0.512	21%	0.012	0.512	21%	0.012	0.512	21%
2.4	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.500	0.013	0.513	21%	0.013	0.513	21%	0.013	0.513	21%	0.013	0.513	21%
2.4	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.500	0.011	0.511	21%	0.011	0.511	21%	0.011	0.511	21%	0.010	0.510	21%
2.4	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.500	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%
2.4	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.500	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%
2.4	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.500	0.005	0.505	21%	0.006	0.506	21%	0.005	0.505	21%	0.005	0.505	21%
2.4	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.500	0.012	0.512	21%	0.013	0.513	21%	0.012	0.512	21%	0.012	0.512	21%
2.4	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.500	0.007	0.507	21%	0.008	0.508	21%	0.008	0.508	21%	0.007	0.507	21%
2.4	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.500	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%
2.4	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.500	0.015	0.515	21%	0.014	0.514	21%	0.014	0.514	21%	0.014	0.514	21%
2.4	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.500	0.010	0.510	21%	0.010	0.510	21%	0.010	0.510	21%	0.009	0.509	21%
2.4	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.500	0.008	0.508	21%	0.009	0.509	21%	0.009	0.509	21%	0.008	0.508	21%
2.4	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.500	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%
2.4	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.500	0.011	0.511	21%	0.011	0.511	21%	0.011	0.511	21%	0.011	0.511	21%
2.4	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.500	0.006	0.506	21%	0.006	0.506	21%	0.005	0.505	21%	0.005	0.505	21%
2.4	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.500	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation  
Chlorobenzene (CAS 108-90-7)**

1-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
3,500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.460	0.041	0.501	0.01%	0.037	0.497	0.01%	0.053	0.513	0.01%	0.025	0.485	0.01%
3,500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.460	0.058	0.518	0.01%	0.054	0.514	0.01%	0.073	0.533	0.02%	0.037	0.497	0.01%
3,500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.460	0.061	0.521	0.01%	0.073	0.533	0.02%	0.085	0.545	0.02%	0.045	0.505	0.01%
3,500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.460	0.050	0.510	0.01%	0.059	0.519	0.01%	0.065	0.525	0.01%	0.033	0.493	0.01%
3,500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.460	0.069	0.529	0.02%	0.058	0.518	0.01%	0.080	0.540	0.02%	0.038	0.498	0.01%
3,500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.460	0.070	0.530	0.02%	0.062	0.522	0.01%	0.091	0.551	0.02%	0.043	0.503	0.01%
3,500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.460	0.032	0.492	0.01%	0.033	0.493	0.01%	0.047	0.507	0.01%	0.023	0.483	0.01%
3,500	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.460	0.055	0.515	0.01%	0.052	0.512	0.01%	0.076	0.536	0.02%	0.036	0.496	0.01%
3,500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.460	0.053	0.513	0.01%	0.056	0.516	0.01%	0.065	0.525	0.01%	0.032	0.492	0.01%
3,500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.460	0.077	0.537	0.02%	0.058	0.529	0.01%	0.069	0.529	0.02%	0.034	0.494	0.01%
3,500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.460	0.141	0.601	0.02%	0.217	0.677	0.02%	0.193	0.653	0.02%	0.103	0.563	0.02%
3,500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.460	0.091	0.551	0.02%	0.115	0.575	0.02%	0.118	0.578	0.02%	0.061	0.521	0.01%
3,500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.460	0.032	0.492	0.01%	0.036	0.496	0.01%	0.047	0.507	0.01%	0.023	0.483	0.01%
3,500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.460	0.079	0.539	0.02%	0.059	0.519	0.01%	0.070	0.530	0.02%	0.035	0.495	0.01%
3,500	ING-2	Laurie Hawkins Public School	509019	4765860	0.460	0.035	0.495	0.01%	0.035	0.495	0.01%	0.047	0.507	0.01%	0.023	0.483	0.01%
3,500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.460	0.082	0.542	0.02%	0.129	0.589	0.02%	0.118	0.578	0.02%	0.060	0.520	0.01%
3,500	ING-4	On the river north of 209 County Road 9	509480	4765180	0.460	0.049	0.509	0.01%	0.057	0.517	0.01%	0.051	0.511	0.01%	0.032	0.492	0.01%
3,500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.460	0.029	0.489	0.01%	0.030	0.490	0.01%	0.040	0.500	0.01%	0.020	0.480	0.01%
3,500	ING-6	Royal Road Public School	510337	4765360	0.460	0.061	0.521	0.01%	0.093	0.553	0.02%	0.093	0.553	0.02%	0.047	0.507	0.01%
3,500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.460	0.036	0.496	0.01%	0.050	0.510	0.01%	0.051	0.511	0.01%	0.029	0.489	0.01%
3,500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.460	0.044	0.504	0.01%	0.065	0.525	0.01%	0.066	0.526	0.02%	0.036	0.496	0.01%
3,500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.460	0.062	0.522	0.01%	0.095	0.555	0.02%	0.108	0.568	0.02%	0.053	0.513	0.01%
3,500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.460	0.045	0.505	0.01%	0.068	0.528	0.02%	0.076	0.536	0.02%	0.041	0.501	0.01%
3,500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.460	0.110	0.570	0.02%	0.165	0.625	0.02%	0.222	0.682	0.02%	0.104	0.564	0.02%
3,500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.460	0.111	0.571	0.02%	0.101	0.561	0.02%	0.205	0.665	0.02%	0.092	0.552	0.02%
3,500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.460	0.094	0.554	0.02%	0.083	0.543	0.02%	0.156	0.616	0.02%	0.070	0.530	0.02%
3,500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.460	0.053	0.513	0.01%	0.047	0.507	0.01%	0.081	0.541	0.02%	0.038	0.498	0.01%
3,500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.460	0.046	0.506	0.01%	0.040	0.500	0.01%	0.066	0.526	0.02%	0.031	0.491	0.01%
3,500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.460	0.033	0.493	0.01%	0.024	0.484	0.01%	0.038	0.498	0.01%	0.018	0.478	0.01%
3,500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.460	0.022	0.482	0.01%	0.023	0.483	0.01%	0.032	0.492	0.01%	0.016	0.476	0.01%
3,500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.460	0.013	0.473	0.01%	0.014	0.474	0.01%	0.017	0.477	0.01%	0.010	0.470	0.01%
3,500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.460	0.016	0.476	0.01%	0.011	0.471	0.01%	0.014	0.474	0.01%	0.008	0.468	0.01%
3,500	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.460	0.082	0.542	0.02%	0.132	0.592	0.02%	0.142	0.602	0.02%	0.070	0.530	0.02%
3,500	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.460	0.089	0.549	0.02%	0.125	0.585	0.02%	0.167	0.627	0.02%	0.080	0.540	0.02%
3,500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.460	0.088	0.548	0.02%	0.106	0.566	0.02%	0.163	0.623	0.02%	0.076	0.536	0.02%
3,500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.460	0.097	0.557	0.02%	0.121	0.581	0.02%	0.183	0.643	0.02%	0.084	0.544	0.02%
3,500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.460	0.077	0.537	0.02%	0.066	0.526	0.02%	0.118	0.578	0.02%	0.054	0.514	0.01%
3,500	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.460	0.068	0.528	0.02%	0.057	0.517	0.01%	0.101	0.561	0.02%	0.046	0.506	0.01%
3,500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.460	0.063	0.523	0.01%	0.055	0.515	0.01%	0.094	0.554	0.02%	0.043	0.503	0.01%
3,500	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.460	0.044	0.504	0.01%	0.035	0.495	0.01%	0.059	0.519	0.01%	0.028	0.488	0.01%
3,500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.460	0.041	0.501	0.01%	0.033	0.493	0.01%	0.056	0.516	0.01%	0.026	0.486	0.01%
3,500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.460	0.036	0.496	0.01%	0.032	0.492	0.01%	0.052	0.512	0.01%	0.024	0.484	0.01%
3,500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.460	0.016	0.476	0.01%	0.014	0.474	0.01%	0.022	0.482	0.01%	0.011	0.471	0.01%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Chlorobenzene (CAS 108-90-7)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
4,500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.460	0.068	0.528	0.01%	0.061	0.521	0.01%	0.087	0.547	0.01%	0.041	0.501	0.01%
4,500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.460	0.096	0.556	0.01%	0.088	0.548	0.01%	0.121	0.581	0.01%	0.062	0.522	0.01%
4,500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.460	0.100	0.560	0.01%	0.121	0.581	0.01%	0.140	0.600	0.01%	0.074	0.534	0.01%
4,500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.460	0.082	0.542	0.01%	0.098	0.558	0.01%	0.107	0.567	0.01%	0.054	0.514	0.01%
4,500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.460	0.114	0.574	0.01%	0.132	0.596	0.01%	0.132	0.592	0.01%	0.062	0.522	0.01%
4,500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.460	0.116	0.576	0.01%	0.103	0.563	0.01%	0.151	0.611	0.01%	0.071	0.531	0.01%
4,500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.460	0.053	0.513	0.01%	0.054	0.514	0.01%	0.078	0.538	0.01%	0.038	0.498	0.01%
4,500	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.460	0.090	0.550	0.01%	0.087	0.547	0.01%	0.126	0.586	0.01%	0.060	0.520	0.01%
4,500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.460	0.088	0.548	0.01%	0.092	0.552	0.01%	0.107	0.567	0.01%	0.053	0.513	0.01%
4,500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.460	0.128	0.588	0.01%	0.096	0.556	0.01%	0.114	0.574	0.01%	0.057	0.517	0.01%
4,500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.460	0.233	0.693	0.02%	0.359	0.819	0.02%	0.318	0.778	0.02%	0.170	0.630	0.01%
4,500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.460	0.151	0.611	0.01%	0.190	0.650	0.01%	0.194	0.654	0.01%	0.101	0.561	0.01%
4,500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.460	0.053	0.513	0.01%	0.059	0.519	0.01%	0.077	0.537	0.01%	0.038	0.498	0.01%
4,500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.460	0.130	0.590	0.01%	0.098	0.558	0.01%	0.115	0.575	0.01%	0.057	0.517	0.01%
4,500	ING-2	Laurie Hawkins Public School	509019	4765860	0.460	0.057	0.517	0.01%	0.058	0.518	0.01%	0.077	0.537	0.01%	0.039	0.499	0.01%
4,500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.460	0.135	0.595	0.01%	0.213	0.673	0.01%	0.195	0.655	0.01%	0.098	0.558	0.01%
4,500	ING-4	On the river north of 209 County Road 9	509480	4765180	0.460	0.080	0.540	0.01%	0.094	0.554	0.01%	0.084	0.544	0.01%	0.052	0.512	0.01%
4,500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.460	0.048	0.508	0.01%	0.049	0.509	0.01%	0.065	0.525	0.01%	0.033	0.493	0.01%
4,500	ING-6	Royal Road Public School	510337	4765360	0.460	0.100	0.560	0.01%	0.153	0.613	0.01%	0.154	0.614	0.01%	0.078	0.538	0.01%
4,500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.460	0.059	0.519	0.01%	0.083	0.543	0.01%	0.084	0.544	0.01%	0.047	0.507	0.01%
4,500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.460	0.073	0.533	0.01%	0.107	0.567	0.01%	0.109	0.569	0.01%	0.059	0.519	0.01%
4,500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.460	0.102	0.562	0.01%	0.157	0.617	0.01%	0.179	0.639	0.01%	0.088	0.548	0.01%
4,500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.460	0.074	0.534	0.01%	0.113	0.573	0.01%	0.125	0.585	0.01%	0.068	0.528	0.01%
4,500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.460	0.182	0.642	0.01%	0.273	0.733	0.02%	0.366	0.826	0.02%	0.172	0.632	0.01%
4,500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.460	0.182	0.642	0.01%	0.167	0.627	0.01%	0.338	0.798	0.02%	0.151	0.611	0.01%
4,500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.460	0.155	0.615	0.01%	0.136	0.596	0.01%	0.258	0.718	0.02%	0.115	0.575	0.01%
4,500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.460	0.088	0.548	0.01%	0.078	0.538	0.01%	0.133	0.593	0.01%	0.063	0.523	0.01%
4,500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.460	0.076	0.536	0.01%	0.066	0.526	0.01%	0.108	0.568	0.01%	0.052	0.512	0.01%
4,500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.460	0.054	0.514	0.01%	0.040	0.500	0.01%	0.523	0.903	0.01%	0.030	0.490	0.01%
4,500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.460	0.036	0.496	0.01%	0.038	0.498	0.01%	0.052	0.512	0.01%	0.027	0.487	0.01%
4,500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.460	0.022	0.482	0.01%	0.023	0.483	0.01%	0.027	0.487	0.01%	0.016	0.476	0.01%
4,500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.460	0.026	0.486	0.01%	0.018	0.478	0.01%	0.023	0.483	0.01%	0.013	0.473	0.01%
4,500	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.460	0.136	0.596	0.01%	0.217	0.677	0.02%	0.235	0.695	0.02%	0.115	0.575	0.01%
4,500	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.460	0.146	0.606	0.01%	0.206	0.666	0.01%	0.276	0.736	0.02%	0.132	0.592	0.01%
4,500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.460	0.146	0.606	0.01%	0.175	0.635	0.01%	0.268	0.728	0.02%	0.126	0.586	0.01%
4,500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.460	0.161	0.621	0.01%	0.200	0.660	0.01%	0.302	0.762	0.02%	0.138	0.598	0.01%
4,500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.460	0.127	0.587	0.01%	0.109	0.569	0.01%	0.194	0.654	0.01%	0.088	0.548	0.01%
4,500	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.460	0.112	0.572	0.01%	0.094	0.554	0.01%	0.167	0.627	0.01%	0.075	0.535	0.01%
4,500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.460	0.104	0.564	0.01%	0.090	0.550	0.01%	0.155	0.615	0.01%	0.070	0.530	0.01%
4,500	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.460	0.073	0.533	0.01%	0.058	0.518	0.01%	0.098	0.558	0.01%	0.046	0.506	0.01%
4,500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.460	0.067	0.527	0.01%	0.055	0.515	0.01%	0.092	0.552	0.01%	0.043	0.503	0.01%
4,500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.460	0.060	0.520	0.01%	0.053	0.513	0.01%	0.085	0.545	0.01%	0.039	0.499	0.01%
4,500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.460	0.026	0.486	0.01%	0.023	0.483	0.01%	0.036	0.496	0.01%	0.018	0.478	0.01%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Chloroethane (CAS 75-00-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
5,600	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.265	0.027	0.292	0.005%	0.036	0.301	0.005%	0.037	0.302	0.005%	0.027	0.292	0.005%
5,600	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.265	0.030	0.295	0.005%	0.035	0.300	0.005%	0.033	0.298	0.005%	0.022	0.287	0.005%
5,600	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.265	0.024	0.289	0.005%	0.025	0.290	0.005%	0.028	0.293	0.005%	0.018	0.283	0.005%
5,600	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.265	0.019	0.284	0.005%	0.027	0.292	0.005%	0.023	0.288	0.005%	0.016	0.281	0.005%
5,600	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.265	0.071	0.336	0.006%	0.056	0.321	0.006%	0.071	0.336	0.006%	0.054	0.319	0.006%
5,600	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.265	0.069	0.334	0.006%	0.075	0.340	0.006%	0.084	0.349	0.006%	0.059	0.324	0.006%
5,600	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.265	0.014	0.279	0.005%	0.024	0.289	0.005%	0.024	0.289	0.005%	0.017	0.282	0.005%
5,600	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.265	0.052	0.317	0.006%	0.051	0.316	0.006%	0.055	0.320	0.006%	0.034	0.299	0.005%
5,600	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.265	0.050	0.315	0.006%	0.065	0.330	0.006%	0.067	0.332	0.006%	0.041	0.306	0.005%
5,600	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.265	0.031	0.296	0.005%	0.044	0.309	0.006%	0.047	0.312	0.006%	0.028	0.293	0.005%
5,600	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.265	0.060	0.325	0.006%	0.134	0.399	0.007%	0.116	0.381	0.007%	0.072	0.337	0.006%
5,600	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.265	0.038	0.303	0.005%	0.064	0.329	0.006%	0.059	0.324	0.006%	0.038	0.303	0.005%
5,600	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.265	0.012	0.277	0.005%	0.013	0.278	0.005%	0.018	0.283	0.005%	0.010	0.275	0.005%
5,600	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.265	0.032	0.297	0.005%	0.042	0.307	0.005%	0.052	0.317	0.006%	0.028	0.293	0.005%
5,600	ING-2	Laurie Hawkins Public School	509019	4765860	0.265	0.013	0.278	0.005%	0.023	0.288	0.005%	0.027	0.292	0.005%	0.015	0.280	0.005%
5,600	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.265	0.031	0.296	0.005%	0.047	0.312	0.006%	0.049	0.314	0.006%	0.030	0.295	0.005%
5,600	ING-4	On the river north of 209 County Road 9	509480	4765180	0.265	0.015	0.280	0.005%	0.019	0.284	0.005%	0.021	0.286	0.005%	0.013	0.278	0.005%
5,600	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.265	0.011	0.276	0.005%	0.020	0.285	0.005%	0.021	0.286	0.005%	0.013	0.278	0.005%
5,600	ING-6	Royal Road Public School	510337	4765360	0.265	0.019	0.284	0.005%	0.033	0.298	0.005%	0.030	0.295	0.005%	0.020	0.285	0.005%
5,600	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.265	0.009	0.274	0.005%	0.015	0.280	0.005%	0.015	0.280	0.005%	0.009	0.274	0.005%
5,600	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.265	0.009	0.274	0.005%	0.021	0.286	0.005%	0.017	0.282	0.005%	0.012	0.277	0.005%
5,600	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.265	0.028	0.293	0.005%	0.046	0.311	0.006%	0.054	0.319	0.006%	0.028	0.293	0.005%
5,600	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.265	0.017	0.282	0.005%	0.032	0.297	0.005%	0.036	0.301	0.005%	0.022	0.287	0.005%
5,600	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.265	0.052	0.317	0.006%	0.162	0.427	0.008%	0.156	0.421	0.008%	0.099	0.364	0.007%
5,600	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.265	0.060	0.325	0.006%	0.110	0.375	0.007%	0.141	0.406	0.007%	0.076	0.341	0.006%
5,600	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.265	0.067	0.332	0.006%	0.102	0.367	0.007%	0.141	0.406	0.007%	0.084	0.349	0.006%
5,600	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.265	0.040	0.305	0.005%	0.033	0.298	0.005%	0.041	0.306	0.005%	0.027	0.292	0.005%
5,600	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.265	0.024	0.289	0.005%	0.023	0.288	0.005%	0.034	0.299	0.005%	0.018	0.283	0.005%
5,600	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.265	0.016	0.281	0.005%	0.014	0.279	0.005%	0.018	0.283	0.005%	0.011	0.276	0.005%
5,600	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.265	0.009	0.274	0.005%	0.014	0.279	0.005%	0.018	0.283	0.005%	0.010	0.275	0.005%
5,600	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.265	0.004	0.269	0.005%	0.005	0.270	0.005%	0.006	0.271	0.005%	0.004	0.269	0.005%
5,600	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.265	0.004	0.269	0.005%	0.004	0.269	0.005%	0.005	0.270	0.005%	0.003	0.268	0.005%
5,600	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.265	0.037	0.302	0.005%	0.085	0.350	0.006%	0.061	0.326	0.006%	0.044	0.309	0.006%
5,600	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.265	0.039	0.304	0.005%	0.097	0.362	0.006%	0.066	0.331	0.006%	0.044	0.309	0.006%
5,600	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.265	0.053	0.318	0.006%	0.079	0.344	0.006%	0.132	0.397	0.007%	0.072	0.337	0.006%
5,600	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.265	0.044	0.309	0.006%	0.075	0.340	0.006%	0.126	0.391	0.007%	0.070	0.335	0.006%
5,600	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.265	0.052	0.317	0.006%	0.051	0.316	0.006%	0.078	0.343	0.006%	0.045	0.310	0.006%
5,600	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.265	0.034	0.299	0.005%	0.052	0.317	0.006%	0.069	0.334	0.006%	0.038	0.303	0.005%
5,600	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.265	0.039	0.304	0.005%	0.059	0.324	0.006%	0.076	0.341	0.006%	0.042	0.307	0.005%
5,600	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.265	0.032	0.297	0.005%	0.036	0.301	0.005%	0.055	0.320	0.006%	0.030	0.295	0.005%
5,600	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.265	0.036	0.301	0.005%	0.036	0.301	0.005%	0.039	0.304	0.005%	0.025	0.290	0.005%
5,600	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.265	0.016	0.281	0.005%	0.024	0.289	0.005%	0.032	0.297	0.005%	0.018	0.283	0.005%
5,600	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.265	0.009	0.274	0.005%	0.006	0.271	0.005%	0.007	0.272	0.005%	0.005	0.270	0.005%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation Chloroform (CAS 67-66-3)**

**Annual**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
0.2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%
0.2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.241	0.000	0.241	121%	0.0002	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.241	0.001	0.242	121%	0.0012	0.242	121%	0.0012	0.242	121%	0.0012	0.242	121%
0.2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.241	0.002	0.243	122%	0.0022	0.243	122%	0.0022	0.243	122%	0.0021	0.243	122%
0.2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.241	0.000	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.241	0.001	0.242	121%	0.0009	0.242	121%	0.0009	0.242	121%	0.0009	0.242	121%
0.2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.241	0.001	0.241	121%	0.0007	0.242	121%	0.0007	0.242	121%	0.0006	0.241	121%
0.2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%
0.2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.241	0.001	0.241	121%	0.0009	0.242	121%	0.0008	0.242	121%	0.0007	0.242	121%
0.2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%
0.2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.241	0.000	0.241	120%	0.0001	0.241	121%	0.0002	0.241	121%	0.0001	0.241	120%
0.2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	ING-2	Laurie Hawkins Public School	509019	4765860	0.241	0.000	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.241	0.000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.241	0.000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-6	Royal Road Public School	510337	4765360	0.241	0.000	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.241	0.000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.241	0.000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.241	0.000	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.241	0.000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.241	0.000	0.241	121%	0.0005	0.241	121%	0.0005	0.241	121%	0.0004	0.241	121%
0.2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.241	0.001	0.241	121%	0.0008	0.242	121%	0.0009	0.242	121%	0.0007	0.242	121%
0.2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.241	0.001	0.241	121%	0.0007	0.242	121%	0.0008	0.242	121%	0.0006	0.242	121%
0.2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0005	0.241	121%	0.0004	0.241	121%
0.2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.241	0.000	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0001	0.241	121%
0.2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.241	0.000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.241	0.000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%
0.2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.241	0.000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%
0.2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%
0.2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.241	0.000	0.241	121%	0.0005	0.241	121%	0.0005	0.241	121%	0.0004	0.241	121%
0.2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0005	0.241	121%	0.0004	0.241	121%
0.2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0005	0.241	121%	0.0004	0.241	121%
0.2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.241	0.000	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%
0.2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.241	0.000	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.241	0.000	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0001	0.241	121%
0.2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.241	0.000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Chloroform (CAS 67-66-3)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
1	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.237	0.008	0.245	25%	0.009	0.246	25%	0.009	0.246	25%	0.008	0.245	25%
1	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.237	0.008	0.245	25%	0.008	0.245	24%	0.008	0.245	25%	0.008	0.245	24%
1	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.237	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.237	0.005	0.242	24%	0.005	0.242	24%	0.005	0.242	24%	0.005	0.242	24%
1	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.237	0.027	0.264	26%	0.026	0.263	26%	0.026	0.263	26%	0.026	0.263	26%
1	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.237	0.032	0.269	27%	0.032	0.269	27%	0.032	0.269	27%	0.031	0.268	27%
1	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.237	0.005	0.242	24%	0.005	0.242	24%	0.005	0.242	24%	0.005	0.242	24%
1	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.237	0.021	0.258	26%	0.021	0.258	26%	0.021	0.258	26%	0.021	0.258	26%
1	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.237	0.010	0.247	25%	0.010	0.247	25%	0.009	0.246	25%	0.009	0.246	25%
1	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.237	0.007	0.244	24%	0.008	0.245	25%	0.008	0.245	25%	0.008	0.245	24%
1	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.237	0.012	0.249	25%	0.013	0.250	25%	0.012	0.249	25%	0.012	0.249	25%
1	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.237	0.008	0.245	25%	0.009	0.246	25%	0.009	0.246	25%	0.009	0.246	25%
1	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.237	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%
1	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.237	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	ING-2	Laurie Hawkins Public School	509019	4765860	0.237	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%
1	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.237	0.007	0.244	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	ING-4	On the river north of 209 County Road 9	509480	4765180	0.237	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.237	0.002	0.239	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	ING-6	Royal Road Public School	510337	4765360	0.237	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%
1	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.001	0.238	24%
1	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.237	0.003	0.240	24%	0.003	0.240	24%	0.004	0.241	24%	0.003	0.240	24%
1	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.237	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.237	0.012	0.249	25%	0.016	0.253	25%	0.015	0.252	25%	0.013	0.250	25%
1	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.237	0.012	0.249	25%	0.010	0.247	25%	0.013	0.250	25%	0.011	0.248	25%
1	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.237	0.009	0.246	25%	0.009	0.246	25%	0.010	0.247	25%	0.009	0.246	25%
1	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.237	0.009	0.246	25%	0.009	0.246	25%	0.009	0.246	25%	0.009	0.246	25%
1	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.237	0.007	0.244	24%	0.007	0.244	24%	0.007	0.244	24%	0.007	0.244	24%
1	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.237	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.237	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%
1	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.237	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%
1	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.237	0.004	0.241	24%	0.005	0.242	24%	0.005	0.242	24%	0.004	0.241	24%
1	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.237	0.009	0.246	25%	0.011	0.248	25%	0.009	0.246	25%	0.009	0.246	25%
1	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.237	0.006	0.243	24%	0.007	0.244	24%	0.008	0.245	24%	0.006	0.243	24%
1	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.237	0.007	0.244	24%	0.008	0.245	24%	0.009	0.246	25%	0.007	0.244	24%
1	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.237	0.011	0.248	25%	0.010	0.247	25%	0.012	0.249	25%	0.010	0.247	25%
1	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.237	0.007	0.244	24%	0.008	0.245	24%	0.008	0.245	24%	0.007	0.244	24%
1	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.237	0.007	0.244	24%	0.006	0.243	24%	0.007	0.244	24%	0.006	0.243	24%
1	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.237	0.005	0.242	24%	0.006	0.243	24%	0.006	0.243	24%	0.005	0.242	24%
1	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.237	0.008	0.245	24%	0.008	0.245	24%	0.008	0.245	25%	0.008	0.245	24%
1	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.237	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%
1	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.237	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Chloromethane (CAS 74-87-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
320	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.260	0.006	1.266	0.40%	0.007	1.267	0.40%	0.007	1.267	0.40%	0.004	1.264	0.40%
320	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.260	0.005	1.265	0.40%	0.008	1.268	0.40%	0.006	1.266	0.40%	0.004	1.264	0.39%
320	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.260	0.005	1.265	0.40%	0.006	1.266	0.40%	0.007	1.267	0.40%	0.004	1.264	0.39%
320	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.260	0.004	1.264	0.40%	0.006	1.266	0.40%	0.006	1.266	0.40%	0.004	1.264	0.39%
320	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.260	0.012	1.272	0.40%	0.008	1.268	0.40%	0.012	1.272	0.40%	0.008	1.268	0.40%
320	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.260	0.016	1.276	0.40%	0.016	1.276	0.40%	0.019	1.279	0.40%	0.012	1.272	0.40%
320	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.260	0.003	1.263	0.39%	0.005	1.265	0.40%	0.005	1.265	0.40%	0.003	1.263	0.39%
320	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.260	0.012	1.272	0.40%	0.012	1.272	0.40%	0.013	1.273	0.40%	0.007	1.267	0.40%
320	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.260	0.012	1.272	0.40%	0.016	1.276	0.40%	0.016	1.276	0.40%	0.010	1.270	0.40%
320	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.260	0.007	1.267	0.40%	0.010	1.270	0.40%	0.011	1.271	0.40%	0.006	1.266	0.40%
320	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.260	0.014	1.274	0.40%	0.032	1.292	0.40%	0.028	1.288	0.40%	0.017	1.277	0.40%
320	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.260	0.008	1.268	0.40%	0.015	1.275	0.40%	0.014	1.274	0.40%	0.009	1.269	0.40%
320	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.260	0.003	1.263	0.39%	0.003	1.263	0.39%	0.004	1.264	0.40%	0.002	1.262	0.39%
320	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.260	0.007	1.267	0.40%	0.009	1.269	0.40%	0.012	1.272	0.40%	0.006	1.266	0.40%
320	ING-2	Laurie Hawkins Public School	509019	4765860	1.260	0.003	1.263	0.39%	0.006	1.266	0.40%	0.006	1.266	0.40%	0.004	1.264	0.39%
320	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.260	0.008	1.268	0.40%	0.011	1.271	0.40%	0.011	1.271	0.40%	0.007	1.267	0.40%
320	ING-4	On the river north of 209 County Road 9	509480	4765180	1.260	0.003	1.263	0.39%	0.004	1.264	0.40%	0.005	1.265	0.40%	0.003	1.263	0.39%
320	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.260	0.002	1.262	0.39%	0.005	1.265	0.40%	0.005	1.265	0.40%	0.003	1.263	0.39%
320	ING-6	Royal Road Public School	510337	4765360	1.260	0.004	1.264	0.40%	0.008	1.268	0.40%	0.007	1.267	0.40%	0.004	1.264	0.40%
320	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.260	0.002	1.262	0.39%	0.004	1.264	0.39%	0.004	1.264	0.39%	0.002	1.262	0.39%
320	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	1.260	0.002	1.262	0.39%	0.005	1.265	0.40%	0.004	1.264	0.40%	0.003	1.263	0.39%
320	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.260	0.007	1.267	0.40%	0.011	1.271	0.40%	0.013	1.273	0.40%	0.007	1.267	0.40%
320	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.260	0.004	1.264	0.40%	0.008	1.268	0.40%	0.009	1.269	0.40%	0.005	1.265	0.40%
320	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.260	0.010	1.270	0.40%	0.036	1.296	0.41%	0.035	1.295	0.40%	0.021	1.281	0.40%
320	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.260	0.013	1.273	0.40%	0.026	1.286	0.40%	0.033	1.293	0.40%	0.018	1.278	0.40%
320	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.260	0.014	1.274	0.40%	0.024	1.284	0.40%	0.040	1.300	0.41%	0.020	1.280	0.40%
320	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.260	0.009	1.269	0.40%	0.007	1.267	0.40%	0.010	1.270	0.40%	0.006	1.266	0.40%
320	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.260	0.005	1.265	0.40%	0.006	1.266	0.40%	0.008	1.268	0.40%	0.004	1.264	0.40%
320	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.260	0.004	1.264	0.39%	0.003	1.263	0.39%	0.004	1.264	0.40%	0.002	1.262	0.39%
320	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.260	0.002	1.262	0.39%	0.003	1.263	0.39%	0.004	1.264	0.40%	0.002	1.262	0.39%
320	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.260	0.001	1.261	0.39%	0.001	1.261	0.39%	0.002	1.262	0.39%	0.001	1.261	0.39%
320	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.260	0.001	1.261	0.39%	0.001	1.261	0.39%	0.001	1.261	0.39%	0.001	1.261	0.39%
320	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.260	0.009	1.269	0.40%	0.020	1.280	0.40%	0.015	1.275	0.40%	0.010	1.270	0.40%
320	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.260	0.008	1.268	0.40%	0.021	1.281	0.40%	0.016	1.276	0.40%	0.009	1.269	0.40%
320	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.260	0.012	1.272	0.40%	0.018	1.278	0.40%	0.031	1.291	0.40%	0.017	1.277	0.40%
320	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.260	0.009	1.269	0.40%	0.018	1.278	0.40%	0.029	1.289	0.40%	0.016	1.276	0.40%
320	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.260	0.010	1.270	0.40%	0.012	1.272	0.40%	0.016	1.276	0.40%	0.008	1.268	0.40%
320	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.260	0.007	1.267	0.40%	0.012	1.272	0.40%	0.016	1.276	0.40%	0.008	1.268	0.40%
320	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.260	0.008	1.268	0.40%	0.013	1.273	0.40%	0.018	1.278	0.40%	0.009	1.269	0.40%
320	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.260	0.007	1.267	0.40%	0.007	1.267	0.40%	0.013	1.273	0.40%	0.007	1.267	0.40%
320	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.260	0.008	1.268	0.40%	0.008	1.268	0.40%	0.009	1.269	0.40%	0.005	1.265	0.40%
320	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.260	0.003	1.263	0.39%	0.006	1.266	0.40%	0.008	1.268	0.40%	0.004	1.264	0.40%
320	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.260	0.002	1.262	0.39%	0.002	1.262	0.39%	0.002	1.262	0.39%	0.001	1.261	0.39%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Dichlorodifluoromethane (CAS 75-71-8)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
500,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	2.420	0.177	2.597	0.0005%	0.205	2.625	0.0005%	0.211	2.631	0.0005%	0.138	2.558	0.0005%
500,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	2.420	0.168	2.588	0.0005%	0.233	2.653	0.0005%	0.190	2.610	0.0005%	0.113	2.533	0.0005%
500,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	2.420	0.169	2.589	0.0005%	0.174	2.594	0.0005%	0.209	2.629	0.0005%	0.118	2.538	0.0005%
500,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	2.420	0.131	2.551	0.0005%	0.196	2.616	0.0005%	0.175	2.595	0.0005%	0.116	2.536	0.0005%
500,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	2.420	0.365	2.785	0.0006%	0.251	2.671	0.0006%	0.364	2.784	0.0006%	0.241	2.661	0.0005%
500,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	2.420	0.489	2.909	0.0006%	0.499	2.919	0.0006%	0.600	3.020	0.0006%	0.380	2.800	0.0006%
500,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	2.420	0.098	2.518	0.0005%	0.158	2.578	0.0005%	0.160	2.580	0.0005%	0.107	2.527	0.0005%
500,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	2.420	0.372	2.792	0.0006%	0.381	2.801	0.0006%	0.406	2.826	0.0006%	0.231	2.651	0.0005%
500,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	2.420	0.374	2.794	0.0006%	0.481	2.901	0.0006%	0.499	2.919	0.0006%	0.306	2.726	0.0005%
500,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	2.420	0.209	2.629	0.0005%	0.307	2.727	0.0005%	0.335	2.755	0.0006%	0.187	2.607	0.0005%
500,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	2.420	0.450	2.870	0.0006%	0.997	3.417	0.0007%	0.867	3.287	0.0007%	0.539	2.959	0.0006%
500,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	2.420	0.256	2.676	0.0005%	0.462	2.882	0.0006%	0.426	2.846	0.0006%	0.266	2.686	0.0005%
500,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	2.420	0.081	2.501	0.0005%	0.100	2.550	0.0005%	0.135	2.555	0.0005%	0.072	2.492	0.0005%
500,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	2.420	0.220	2.640	0.0005%	0.293	2.713	0.0005%	0.375	2.795	0.0006%	0.196	2.616	0.0005%
500,000	ING-2	Laurie Hawkins Public School	509019	4765860	2.420	0.080	2.500	0.0005%	0.174	2.594	0.0005%	0.198	2.618	0.0005%	0.112	2.532	0.0005%
500,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	2.420	0.233	2.653	0.0005%	0.342	2.762	0.0006%	0.354	2.774	0.0006%	0.215	2.635	0.0005%
500,000	ING-4	On the river north of 209 County Road 9	509480	4765180	2.420	0.108	2.528	0.0005%	0.133	2.553	0.0005%	0.152	2.572	0.0005%	0.094	2.514	0.0005%
500,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	2.420	0.076	2.496	0.0005%	0.145	2.565	0.0005%	0.154	2.574	0.0005%	0.093	2.513	0.0005%
500,000	ING-6	Royal Road Public School	510337	4765360	2.420	0.136	2.556	0.0005%	0.236	2.656	0.0005%	0.210	2.630	0.0005%	0.136	2.556	0.0005%
500,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	2.420	0.066	2.486	0.0005%	0.111	2.531	0.0005%	0.113	2.533	0.0005%	0.069	2.489	0.0005%
500,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	2.420	0.066	2.486	0.0005%	0.150	2.570	0.0005%	0.128	2.548	0.0005%	0.086	2.506	0.0005%
500,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	2.420	0.201	2.621	0.0005%	0.333	2.753	0.0006%	0.395	2.815	0.0006%	0.207	2.627	0.0005%
500,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	2.420	0.127	2.547	0.0005%	0.240	2.660	0.0005%	0.267	2.687	0.0005%	0.164	2.584	0.0005%
500,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	2.420	0.308	2.728	0.0005%	1.124	3.544	0.0007%	1.085	3.505	0.0007%	0.658	3.078	0.0006%
500,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	2.420	0.386	2.806	0.0006%	0.816	3.236	0.0006%	1.007	3.427	0.0007%	0.549	2.969	0.0006%
500,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	2.420	0.446	2.866	0.0006%	0.738	3.158	0.0006%	1.241	3.661	0.0007%	0.614	3.034	0.0006%
500,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	2.420	0.275	2.695	0.0005%	0.229	2.649	0.0005%	0.304	2.724	0.0005%	0.177	2.597	0.0005%
500,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	2.420	0.165	2.585	0.0005%	0.174	2.594	0.0005%	0.249	2.669	0.0005%	0.135	2.555	0.0005%
500,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	2.420	0.109	2.529	0.0005%	0.089	2.509	0.0005%	0.119	2.539	0.0005%	0.066	2.486	0.0005%
500,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	2.420	0.062	2.482	0.0005%	0.100	2.520	0.0005%	0.134	2.554	0.0005%	0.074	2.494	0.0005%
500,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	2.420	0.027	2.447	0.0005%	0.038	2.458	0.0005%	0.047	2.467	0.0005%	0.027	2.447	0.0005%
500,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	2.420	0.026	2.446	0.0005%	0.029	2.449	0.0005%	0.037	2.457	0.0005%	0.021	2.441	0.0005%
500,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	2.420	0.274	2.694	0.0005%	0.625	3.045	0.0006%	0.449	2.869	0.0006%	0.326	2.746	0.0005%
500,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	2.420	0.232	2.652	0.0005%	0.659	3.079	0.0006%	0.492	2.912	0.0006%	0.269	2.689	0.0005%
500,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	2.420	0.374	2.794	0.0006%	0.559	2.979	0.0006%	0.961	3.381	0.0007%	0.515	2.935	0.0006%
500,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	2.420	0.292	2.712	0.0005%	0.556	2.976	0.0006%	0.901	3.321	0.0007%	0.483	2.903	0.0006%
500,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	2.420	0.311	2.731	0.0005%	0.360	2.780	0.0005%	0.504	2.924	0.0006%	0.261	2.681	0.0005%
500,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	2.420	0.209	2.629	0.0005%	0.384	2.804	0.0006%	0.489	2.909	0.0006%	0.254	2.674	0.0005%
500,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	2.420	0.245	2.665	0.0005%	0.413	2.833	0.0006%	0.546	2.966	0.0006%	0.293	2.713	0.0005%
500,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	2.420	0.216	2.636	0.0005%	0.231	2.651	0.0005%	0.385	2.805	0.0006%	0.203	2.623	0.0005%
500,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	2.420	0.263	2.683	0.0005%	0.253	2.673	0.0005%	0.276	2.696	0.0005%	0.171	2.591	0.0005%
500,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	2.420	0.100	2.520	0.0005%	0.175	2.595	0.0005%	0.241	2.661	0.0005%	0.131	2.551	0.0005%
500,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	2.420	0.063	2.483	0.0005%	0.046	2.466	0.0005%	0.055	2.475	0.0005%	0.036	2.456	0.0005%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Dichloromethane (CAS 75-09-2)

Annual

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
44	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.517	0.005	0.522	1%	0.0064	0.524	1%	0.0073	0.524	1%	0.0047	0.522	1%
44	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.517	0.006	0.523	1%	0.0071	0.524	1%	0.0076	0.525	1%	0.0051	0.522	1%
44	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.517	0.005	0.523	1%	0.0074	0.525	1%	0.0086	0.526	1%	0.0057	0.523	1%
44	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.517	0.005	0.522	1%	0.0061	0.523	1%	0.0067	0.524	1%	0.0045	0.522	1%
44	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.517	0.014	0.531	1%	0.0128	0.530	1%	0.0147	0.532	1%	0.0102	0.527	1%
44	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.517	0.022	0.539	1%	0.0226	0.540	1%	0.0249	0.542	1%	0.0171	0.534	1%
44	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.517	0.004	0.521	1%	0.0050	0.522	1%	0.0060	0.523	1%	0.0038	0.521	1%
44	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.517	0.017	0.534	1%	0.0197	0.537	1%	0.0204	0.538	1%	0.0136	0.531	1%
44	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.517	0.015	0.532	1%	0.0298	0.547	1%	0.0296	0.547	1%	0.0187	0.536	1%
44	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.517	0.007	0.524	1%	0.0163	0.533	1%	0.0158	0.533	1%	0.0099	0.527	1%
44	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.517	0.017	0.534	1%	0.0529	0.570	1%	0.0409	0.558	1%	0.0275	0.545	1%
44	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.517	0.008	0.525	1%	0.0179	0.535	1%	0.0159	0.533	1%	0.0105	0.528	1%
44	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.517	0.003	0.520	1%	0.0038	0.521	1%	0.0045	0.522	1%	0.0029	0.520	1%
44	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.517	0.007	0.524	1%	0.0141	0.531	1%	0.0142	0.531	1%	0.0088	0.526	1%
44	ING-2	Laurie Hawkins Public School	509019	4765860	0.517	0.003	0.520	1%	0.0055	0.523	1%	0.0058	0.523	1%	0.0036	0.521	1%
44	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.517	0.007	0.524	1%	0.0139	0.531	1%	0.0139	0.531	1%	0.0085	0.526	1%
44	ING-4	On the river north of 209 County Road 9	509480	4765180	0.517	0.003	0.520	1%	0.0040	0.521	1%	0.0040	0.521	1%	0.0027	0.520	1%
44	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.517	0.002	0.519	1%	0.0041	0.521	1%	0.0044	0.522	1%	0.0028	0.520	1%
44	ING-6	Royal Road Public School	510337	4765360	0.517	0.004	0.521	1%	0.0060	0.523	1%	0.0067	0.524	1%	0.0041	0.521	1%
44	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.517	0.001	0.518	1%	0.0029	0.520	1%	0.0033	0.520	1%	0.0020	0.519	1%
44	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.517	0.002	0.519	1%	0.0033	0.520	1%	0.0037	0.521	1%	0.0023	0.519	1%
44	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.517	0.004	0.521	1%	0.0083	0.525	1%	0.0091	0.526	1%	0.0056	0.523	1%
44	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.517	0.002	0.520	1%	0.0046	0.522	1%	0.0053	0.522	1%	0.0033	0.520	1%
44	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.517	0.011	0.529	1%	0.0326	0.550	1%	0.0367	0.554	1%	0.0216	0.539	1%
44	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.517	0.018	0.535	1%	0.0454	0.563	1%	0.0621	0.579	1%	0.0343	0.551	1%
44	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.517	0.019	0.536	1%	0.0390	0.556	1%	0.0569	0.574	1%	0.0318	0.549	1%
44	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.517	0.010	0.527	1%	0.0159	0.533	1%	0.0204	0.538	1%	0.0125	0.530	1%
44	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.517	0.007	0.524	1%	0.0095	0.527	1%	0.0114	0.529	1%	0.0073	0.524	1%
44	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.517	0.003	0.520	1%	0.0040	0.521	1%	0.0046	0.522	1%	0.0030	0.520	1%
44	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.517	0.002	0.519	1%	0.0025	0.520	1%	0.0031	0.520	1%	0.0019	0.519	1%
44	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.517	0.001	0.518	1%	0.0012	0.518	1%	0.0014	0.519	1%	0.0009	0.518	1%
44	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.517	0.000	0.518	1%	0.0007	0.518	1%	0.0009	0.518	1%	0.0006	0.518	1%
44	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.517	0.006	0.523	1%	0.0140	0.531	1%	0.0146	0.532	1%	0.0091	0.526	1%
44	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.517	0.007	0.524	1%	0.0164	0.534	1%	0.0195	0.537	1%	0.0115	0.529	1%
44	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.517	0.008	0.525	1%	0.0185	0.536	1%	0.0202	0.537	1%	0.0122	0.529	1%
44	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.517	0.011	0.528	1%	0.0329	0.550	1%	0.0360	0.553	1%	0.0213	0.538	1%
44	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.517	0.011	0.528	1%	0.0202	0.537	1%	0.0259	0.543	1%	0.0150	0.532	1%
44	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.517	0.010	0.527	1%	0.0188	0.536	1%	0.0241	0.541	1%	0.0142	0.531	1%
44	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.517	0.009	0.527	1%	0.0175	0.535	1%	0.0224	0.540	1%	0.0133	0.530	1%
44	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.517	0.007	0.524	1%	0.0109	0.528	1%	0.0142	0.531	1%	0.0085	0.526	1%
44	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.517	0.006	0.523	1%	0.0097	0.527	1%	0.0122	0.529	1%	0.0075	0.525	1%
44	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.517	0.003	0.521	1%	0.0058	0.523	1%	0.0067	0.524	1%	0.0042	0.521	1%
44	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.517	0.002	0.519	1%	0.0022	0.519	1%	0.0026	0.520	1%	0.0017	0.519	1%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Dichloromethane (CAS 75-09-2)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
220	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.345	0.115	0.460	0.2%	0.137	0.482	0.2%	0.140	0.485	0.2%	0.094	0.439	0.2%
220	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.345	0.112	0.457	0.2%	0.152	0.497	0.2%	0.127	0.472	0.2%	0.075	0.420	0.2%
220	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.345	0.108	0.453	0.2%	0.112	0.457	0.2%	0.134	0.479	0.2%	0.077	0.422	0.2%
220	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.345	0.085	0.430	0.2%	0.126	0.471	0.2%	0.112	0.457	0.2%	0.075	0.420	0.2%
220	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.345	0.247	0.592	0.3%	0.175	0.520	0.2%	0.247	0.592	0.3%	0.168	0.513	0.2%
220	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.345	0.314	0.659	0.3%	0.321	0.666	0.3%	0.386	0.731	0.3%	0.245	0.590	0.3%
220	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.345	0.063	0.408	0.2%	0.103	0.448	0.2%	0.104	0.449	0.2%	0.070	0.415	0.2%
220	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.345	0.239	0.584	0.3%	0.244	0.589	0.3%	0.259	0.604	0.3%	0.148	0.493	0.2%
220	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.345	0.239	0.584	0.3%	0.308	0.653	0.3%	0.319	0.664	0.3%	0.196	0.541	0.2%
220	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.345	0.135	0.480	0.2%	0.198	0.543	0.2%	0.214	0.559	0.3%	0.122	0.467	0.2%
220	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.345	0.287	0.632	0.3%	0.639	0.984	0.4%	0.554	0.899	0.4%	0.345	0.690	0.3%
220	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.345	0.166	0.511	0.2%	0.297	0.642	0.3%	0.273	0.618	0.3%	0.172	0.517	0.2%
220	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.345	0.053	0.398	0.2%	0.064	0.409	0.2%	0.086	0.431	0.2%	0.046	0.391	0.2%
220	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.345	0.142	0.487	0.2%	0.189	0.534	0.2%	0.241	0.586	0.3%	0.127	0.472	0.2%
220	ING-2	Laurie Hawkins Public School	509019	4765860	0.345	0.051	0.396	0.2%	0.112	0.457	0.2%	0.126	0.471	0.2%	0.072	0.417	0.2%
220	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.345	0.149	0.494	0.2%	0.220	0.565	0.3%	0.227	0.572	0.3%	0.139	0.484	0.2%
220	ING-4	On the river north of 209 County Road 9	509480	4765180	0.345	0.069	0.414	0.2%	0.086	0.431	0.2%	0.098	0.443	0.2%	0.061	0.406	0.2%
220	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.345	0.048	0.393	0.2%	0.093	0.438	0.2%	0.098	0.443	0.2%	0.060	0.405	0.2%
220	ING-6	Royal Road Public School	510337	4765360	0.345	0.087	0.432	0.2%	0.151	0.496	0.2%	0.135	0.480	0.2%	0.088	0.433	0.2%
220	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.345	0.042	0.387	0.2%	0.071	0.416	0.2%	0.072	0.417	0.2%	0.044	0.389	0.2%
220	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.345	0.042	0.387	0.2%	0.097	0.442	0.2%	0.082	0.427	0.2%	0.056	0.401	0.2%
220	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.345	0.129	0.474	0.2%	0.214	0.559	0.3%	0.253	0.598	0.3%	0.133	0.478	0.2%
220	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.345	0.081	0.426	0.2%	0.154	0.499	0.2%	0.171	0.516	0.2%	0.105	0.450	0.2%
220	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.345	0.204	0.549	0.2%	0.727	1.072	0.5%	0.700	1.045	0.5%	0.428	0.773	0.4%
220	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.345	0.252	0.597	0.3%	0.523	0.868	0.4%	0.645	0.990	0.4%	0.353	0.698	0.3%
220	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.345	0.289	0.634	0.3%	0.474	0.819	0.4%	0.794	1.139	0.5%	0.395	0.740	0.3%
220	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.345	0.178	0.523	0.2%	0.146	0.491	0.2%	0.194	0.539	0.2%	0.113	0.458	0.2%
220	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.345	0.107	0.452	0.2%	0.111	0.456	0.2%	0.159	0.504	0.2%	0.086	0.431	0.2%
220	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.345	0.070	0.415	0.2%	0.058	0.403	0.2%	0.077	0.422	0.2%	0.043	0.388	0.2%
220	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.345	0.040	0.385	0.2%	0.064	0.409	0.2%	0.086	0.431	0.2%	0.047	0.392	0.2%
220	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.345	0.017	0.362	0.2%	0.024	0.369	0.2%	0.030	0.375	0.2%	0.017	0.362	0.2%
220	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.345	0.016	0.361	0.2%	0.019	0.364	0.2%	0.024	0.369	0.2%	0.014	0.359	0.2%
220	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.345	0.175	0.520	0.2%	0.401	0.746	0.3%	0.287	0.632	0.3%	0.209	0.554	0.3%
220	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.345	0.154	0.499	0.2%	0.427	0.772	0.4%	0.314	0.659	0.3%	0.177	0.522	0.2%
220	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.345	0.241	0.586	0.3%	0.360	0.705	0.3%	0.616	0.961	0.4%	0.332	0.677	0.3%
220	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.345	0.190	0.535	0.2%	0.356	0.701	0.3%	0.579	0.924	0.4%	0.312	0.657	0.3%
220	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.345	0.205	0.550	0.3%	0.232	0.577	0.3%	0.328	0.673	0.3%	0.174	0.519	0.2%
220	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.345	0.136	0.481	0.2%	0.246	0.591	0.3%	0.315	0.660	0.3%	0.165	0.510	0.2%
220	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.345	0.160	0.505	0.2%	0.266	0.611	0.3%	0.351	0.696	0.3%	0.189	0.534	0.2%
220	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.345	0.140	0.485	0.2%	0.151	0.496	0.2%	0.248	0.593	0.3%	0.132	0.477	0.2%
220	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.345	0.168	0.513	0.2%	0.163	0.508	0.2%	0.178	0.523	0.2%	0.110	0.455	0.2%
220	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.345	0.065	0.410	0.2%	0.112	0.457	0.2%	0.154	0.499	0.2%	0.084	0.429	0.2%
220	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.345	0.040	0.385	0.2%	0.030	0.375	0.2%	0.035	0.380	0.2%	0.023	0.368	0.2%



Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation

Ethyl Acetate (CAS 141-78-6)

1-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
19,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.360	0.340	0.700	0.004%	0.316	0.676	0.004%	0.443	0.803	0.004%	0.216	0.576	0.003%
19,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.360	0.485	0.845	0.004%	0.454	0.814	0.004%	0.620	0.980	0.005%	0.321	0.681	0.004%
19,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.360	0.511	0.871	0.005%	0.621	0.981	0.005%	0.729	1.089	0.006%	0.387	0.747	0.004%
19,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.360	0.422	0.782	0.004%	0.499	0.859	0.005%	0.558	0.918	0.005%	0.283	0.643	0.003%
19,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.360	0.568	0.928	0.005%	0.499	0.859	0.005%	0.670	1.030	0.005%	0.325	0.685	0.004%
19,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.360	0.584	0.944	0.005%	0.537	0.897	0.005%	0.760	1.120	0.006%	0.368	0.728	0.004%
19,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.360	0.272	0.632	0.003%	0.278	0.638	0.003%	0.406	0.766	0.004%	0.201	0.561	0.003%
19,000	ZOR-8	Residence at 643743 Rd 64	508940	4767980	0.360	0.468	0.828	0.004%	0.452	0.812	0.004%	0.638	0.998	0.005%	0.311	0.671	0.004%
19,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.360	0.438	0.798	0.004%	0.479	0.839	0.004%	0.547	0.907	0.005%	0.278	0.638	0.003%
19,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.360	0.654	1.014	0.005%	0.484	0.844	0.004%	0.593	0.953	0.005%	0.296	0.656	0.003%
19,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.360	1.194	1.554	0.008%	1.853	2.213	0.012%	1.659	2.019	0.011%	0.887	1.247	0.007%
19,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.360	0.781	1.141	0.006%	0.976	1.336	0.007%	1.010	1.370	0.007%	0.525	0.885	0.005%
19,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.360	0.270	0.630	0.003%	0.303	0.663	0.003%	0.403	0.763	0.004%	0.198	0.558	0.003%
19,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.360	0.673	1.033	0.005%	0.495	0.855	0.004%	0.598	0.958	0.005%	0.299	0.659	0.003%
19,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.360	0.294	0.654	0.003%	0.297	0.657	0.003%	0.400	0.760	0.004%	0.202	0.562	0.003%
19,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.360	0.691	1.051	0.006%	1.102	1.462	0.008%	1.018	1.378	0.007%	0.513	0.873	0.005%
19,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.360	0.412	0.772	0.004%	0.481	0.841	0.004%	0.432	0.792	0.004%	0.272	0.632	0.003%
19,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.360	0.249	0.609	0.003%	0.254	0.614	0.003%	0.339	0.699	0.004%	0.173	0.533	0.003%
19,000	ING-6	Royal Road Public School	510337	4765360	0.360	0.517	0.877	0.005%	0.792	1.152	0.006%	0.801	1.161	0.006%	0.407	0.767	0.004%
19,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.360	0.301	0.661	0.003%	0.425	0.785	0.004%	0.435	0.795	0.004%	0.246	0.606	0.003%
19,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.360	0.375	0.735	0.004%	0.551	0.911	0.005%	0.565	0.925	0.005%	0.307	0.667	0.004%
19,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.360	0.519	0.879	0.005%	0.805	1.165	0.006%	0.932	1.292	0.007%	0.460	0.820	0.004%
19,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.360	0.378	0.738	0.004%	0.577	0.937	0.005%	0.651	1.011	0.005%	0.357	0.717	0.004%
19,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.360	0.923	1.283	0.007%	1.386	1.746	0.009%	1.907	2.267	0.012%	0.896	1.256	0.007%
19,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.360	0.920	1.280	0.007%	0.868	1.228	0.006%	1.746	2.106	0.011%	0.789	1.149	0.006%
19,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.360	0.783	1.143	0.006%	0.698	1.058	0.006%	1.317	1.677	0.009%	0.601	0.961	0.005%
19,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.360	0.458	0.818	0.004%	0.402	0.762	0.004%	0.690	1.050	0.006%	0.328	0.688	0.004%
19,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.360	0.386	0.746	0.004%	0.336	0.696	0.004%	0.561	0.921	0.005%	0.269	0.629	0.003%
19,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.360	0.277	0.637	0.003%	0.205	0.565	0.003%	0.325	0.685	0.004%	0.158	0.518	0.003%
19,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.360	0.185	0.545	0.003%	0.195	0.555	0.003%	0.269	0.629	0.003%	0.139	0.499	0.003%
19,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.360	0.111	0.471	0.002%	0.120	0.480	0.003%	0.142	0.502	0.003%	0.084	0.444	0.002%
19,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.360	0.132	0.492	0.003%	0.094	0.454	0.002%	0.120	0.480	0.003%	0.067	0.427	0.002%
19,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.360	0.691	1.051	0.006%	1.110	1.470	0.008%	1.223	1.583	0.008%	0.598	0.958	0.005%
19,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.360	0.746	1.106	0.006%	1.051	1.411	0.007%	1.439	1.799	0.009%	0.686	1.046	0.006%
19,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.360	0.737	1.097	0.006%	0.899	1.259	0.007%	1.397	1.757	0.009%	0.655	1.015	0.005%
19,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.360	0.811	1.171	0.006%	1.036	1.396	0.007%	1.565	1.925	0.010%	0.721	1.081	0.006%
19,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.360	0.639	0.999	0.005%	0.569	0.929	0.005%	0.998	1.358	0.007%	0.461	0.821	0.004%
19,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.360	0.564	0.924	0.005%	0.487	0.847	0.004%	0.847	1.207	0.006%	0.392	0.752	0.004%
19,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.360	0.528	0.888	0.005%	0.471	0.831	0.004%	0.787	1.147	0.006%	0.367	0.727	0.004%
19,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.360	0.365	0.725	0.004%	0.299	0.659	0.003%	0.500	0.860	0.005%	0.239	0.599	0.003%
19,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.360	0.340	0.700	0.004%	0.286	0.646	0.003%	0.472	0.832	0.004%	0.226	0.586	0.003%
19,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.360	0.302	0.662	0.003%	0.277	0.637	0.003%	0.432	0.792	0.004%	0.205	0.565	0.003%
19,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.360	0.132	0.492	0.003%	0.120	0.480	0.003%	0.186	0.546	0.003%	0.091	0.451	0.002%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Ethyl Benzene (CAS 100-41-4)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,900	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.435	1.740	2.175	0.11%	1.610	2.045	0.11%	2.267	2.702	0.14%	1.104	1.539	0.08%
1,900	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.435	2.480	2.915	0.15%	2.314	2.749	0.14%	3.170	3.605	0.19%	1.638	2.073	0.11%
1,900	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.435	2.606	3.041	0.16%	3.168	3.603	0.19%	3.717	4.152	0.22%	1.976	2.411	0.13%
1,900	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.435	2.151	2.586	0.14%	2.550	2.985	0.16%	2.846	3.281	0.17%	1.443	1.878	0.10%
1,900	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.435	2.905	3.340	0.18%	2.540	2.975	0.16%	3.428	3.863	0.20%	1.659	2.094	0.11%
1,900	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.435	2.975	3.410	0.18%	2.732	3.167	0.17%	3.890	4.325	0.23%	1.880	2.315	0.12%
1,900	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.435	1.389	1.824	0.10%	1.419	1.854	0.10%	2.070	2.505	0.13%	1.023	1.458	0.08%
1,900	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.435	2.384	2.819	0.15%	2.298	2.733	0.15%	3.264	3.699	0.19%	1.588	2.023	0.11%
1,900	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.435	2.242	2.677	0.14%	2.438	2.873	0.15%	2.790	3.225	0.17%	1.415	1.850	0.10%
1,900	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.435	3.338	3.773	0.20%	2.476	2.911	0.15%	3.021	3.456	0.18%	1.508	1.943	0.10%
1,900	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.435	6.089	6.524	0.34%	9.446	9.881	0.52%	8.450	8.885	0.47%	4.523	4.958	0.26%
1,900	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.435	3.977	4.412	0.23%	4.977	5.412	0.28%	5.146	5.581	0.29%	2.677	3.112	0.16%
1,900	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.435	1.379	1.814	0.10%	1.549	1.984	0.10%	2.052	2.487	0.13%	1.012	1.447	0.08%
1,900	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.435	3.432	3.867	0.20%	2.529	2.964	0.16%	3.045	3.480	0.18%	1.523	1.958	0.10%
1,900	ING-2	Laurie Hawkins Public School	509019	4765860	0.435	1.501	1.936	0.10%	1.519	1.954	0.10%	2.040	2.475	0.13%	1.029	1.464	0.08%
1,900	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.435	3.524	3.959	0.21%	5.616	6.051	0.32%	5.189	5.624	0.30%	2.616	3.051	0.16%
1,900	ING-4	On the river north of 209 County Road 9	509480	4765180	0.435	2.100	2.535	0.13%	2.458	2.893	0.15%	2.204	2.639	0.14%	1.384	1.819	0.10%
1,900	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.435	1.272	1.707	0.09%	1.294	1.729	0.09%	1.728	2.163	0.11%	0.880	1.315	0.07%
1,900	ING-6	Royal Road Public School	510337	4765360	0.435	2.635	3.070	0.16%	4.037	4.472	0.24%	4.083	4.518	0.24%	2.074	2.509	0.13%
1,900	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.435	1.536	1.971	0.10%	2.167	2.602	0.14%	2.219	2.654	0.14%	1.254	1.689	0.09%
1,900	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.435	1.912	2.347	0.12%	2.811	3.246	0.17%	2.880	3.315	0.17%	1.566	2.001	0.11%
1,900	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.435	2.649	3.084	0.16%	4.110	4.545	0.24%	4.748	5.183	0.27%	2.348	2.783	0.15%
1,900	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.435	1.928	2.363	0.12%	2.946	3.381	0.18%	3.319	3.754	0.20%	1.820	2.255	0.12%
1,900	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.435	4.715	5.150	0.27%	7.082	7.517	0.40%	9.716	10.151	0.53%	4.577	5.012	0.26%
1,900	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.435	4.703	5.138	0.27%	4.417	4.852	0.26%	8.910	9.345	0.49%	4.032	4.467	0.24%
1,900	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.435	4.003	4.438	0.23%	3.561	3.996	0.21%	6.731	7.166	0.38%	3.069	3.504	0.18%
1,900	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.435	2.332	2.767	0.15%	2.045	2.480	0.13%	3.517	3.952	0.21%	1.675	2.110	0.11%
1,900	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.435	1.973	2.408	0.13%	1.713	2.148	0.11%	2.859	3.294	0.17%	1.374	1.809	0.10%
1,900	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.435	1.412	1.847	0.10%	1.046	1.481	0.08%	1.657	2.092	0.11%	0.808	1.243	0.07%
1,900	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.435	0.946	1.381	0.07%	0.998	1.433	0.08%	1.372	1.807	0.10%	0.710	1.145	0.06%
1,900	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.435	0.566	1.001	0.05%	0.611	1.046	0.06%	0.721	1.156	0.06%	0.428	0.863	0.05%
1,900	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.435	0.676	1.111	0.06%	0.478	0.913	0.05%	0.613	1.048	0.06%	0.340	0.775	0.04%
1,900	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.435	3.525	3.960	0.21%	5.668	6.103	0.32%	6.232	6.667	0.35%	3.051	3.486	0.18%
1,900	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.435	3.807	4.242	0.22%	5.364	5.799	0.31%	7.332	7.767	0.41%	3.502	3.937	0.21%
1,900	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.435	3.766	4.201	0.22%	4.587	5.022	0.26%	7.122	7.557	0.40%	3.345	3.780	0.20%
1,900	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.435	4.147	4.582	0.24%	5.279	5.714	0.30%	7.983	8.418	0.44%	3.685	4.120	0.22%
1,900	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.435	3.269	3.704	0.19%	2.897	3.332	0.18%	5.096	5.531	0.29%	2.355	2.790	0.15%
1,900	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.435	2.883	3.318	0.17%	2.477	2.912	0.15%	4.331	4.766	0.25%	2.003	2.438	0.13%
1,900	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.435	2.698	3.133	0.16%	2.395	2.830	0.15%	4.620	5.055	0.23%	1.873	2.308	0.12%
1,900	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.435	1.866	2.301	0.12%	1.521	1.956	0.10%	2.552	2.987	0.16%	1.217	1.652	0.09%
1,900	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.435	1.736	2.171	0.11%	1.454	1.889	0.10%	2.410	2.845	0.15%	1.152	1.587	0.08%
1,900	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.435	1.547	1.982	0.10%	1.411	1.846	0.10%	2.207	2.642	0.14%	1.047	1.482	0.08%
1,900	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.435	0.676	1.111	0.06%	0.610	1.045	0.06%	0.947	1.382	0.07%	0.466	0.901	0.05%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Ethyl Benzene (CAS 100-41-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.435	0.135	0.570	0.06%	0.157	0.592	0.06%	0.162	0.597	0.06%	0.105	0.540	0.05%
1,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.435	0.128	0.563	0.06%	0.178	0.613	0.06%	0.145	0.580	0.06%	0.086	0.521	0.05%
1,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.435	0.128	0.563	0.06%	0.133	0.568	0.06%	0.159	0.594	0.06%	0.090	0.525	0.05%
1,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.435	0.100	0.535	0.05%	0.150	0.585	0.06%	0.133	0.568	0.06%	0.088	0.523	0.05%
1,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.435	0.279	0.714	0.07%	0.192	0.627	0.06%	0.279	0.714	0.07%	0.184	0.619	0.06%
1,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.435	0.373	0.808	0.08%	0.383	0.818	0.08%	0.460	0.895	0.09%	0.290	0.725	0.07%
1,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.435	0.075	0.510	0.05%	0.121	0.556	0.06%	0.123	0.558	0.06%	0.082	0.517	0.05%
1,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.435	0.284	0.719	0.07%	0.292	0.747	0.07%	0.310	0.727	0.07%	0.177	0.612	0.06%
1,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.435	0.284	0.719	0.07%	0.368	0.803	0.08%	0.382	0.817	0.08%	0.234	0.669	0.07%
1,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.435	0.159	0.594	0.06%	0.235	0.670	0.07%	0.256	0.691	0.07%	0.143	0.578	0.06%
1,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.435	0.342	0.777	0.08%	0.762	1.197	0.12%	0.663	1.098	0.11%	0.411	0.846	0.08%
1,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.435	0.195	0.630	0.06%	0.353	0.788	0.08%	0.325	0.760	0.08%	0.203	0.638	0.06%
1,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.435	0.062	0.497	0.05%	0.076	0.511	0.05%	0.103	0.538	0.05%	0.055	0.490	0.05%
1,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.435	0.168	0.603	0.06%	0.224	0.659	0.07%	0.286	0.721	0.07%	0.150	0.585	0.06%
1,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.435	0.061	0.496	0.05%	0.133	0.568	0.06%	0.151	0.586	0.06%	0.085	0.520	0.05%
1,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.435	0.177	0.612	0.06%	0.262	0.697	0.07%	0.271	0.706	0.07%	0.165	0.600	0.06%
1,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.435	0.082	0.517	0.05%	0.102	0.537	0.05%	0.116	0.551	0.06%	0.072	0.507	0.05%
1,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.435	0.057	0.492	0.05%	0.111	0.546	0.05%	0.118	0.553	0.06%	0.071	0.506	0.05%
1,000	ING-6	Royal Road Public School	510337	4765360	0.435	0.104	0.539	0.05%	0.181	0.616	0.06%	0.160	0.595	0.06%	0.104	0.539	0.05%
1,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.435	0.050	0.485	0.05%	0.085	0.520	0.05%	0.086	0.521	0.05%	0.052	0.487	0.05%
1,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.435	0.050	0.485	0.05%	0.115	0.550	0.05%	0.098	0.533	0.05%	0.066	0.501	0.05%
1,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.435	0.153	0.588	0.06%	0.255	0.690	0.07%	0.301	0.736	0.07%	0.158	0.593	0.06%
1,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.435	0.097	0.532	0.05%	0.184	0.619	0.06%	0.204	0.639	0.06%	0.125	0.560	0.06%
1,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.435	0.235	0.670	0.07%	0.860	1.295	0.13%	0.830	1.265	0.13%	0.503	0.938	0.09%
1,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.435	0.294	0.729	0.07%	0.623	1.058	0.11%	0.770	1.205	0.12%	0.419	0.854	0.09%
1,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.435	0.340	0.775	0.08%	0.566	1.001	0.10%	0.949	1.384	0.14%	0.469	0.904	0.09%
1,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.435	0.209	0.644	0.06%	0.175	0.610	0.06%	0.233	0.668	0.07%	0.135	0.570	0.06%
1,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.435	0.126	0.561	0.06%	0.133	0.568	0.06%	0.191	0.626	0.06%	0.103	0.538	0.05%
1,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.435	0.082	0.517	0.05%	0.069	0.504	0.05%	0.090	0.525	0.05%	0.050	0.485	0.05%
1,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.435	0.047	0.482	0.05%	0.077	0.512	0.05%	0.102	0.537	0.05%	0.056	0.491	0.05%
1,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.435	0.020	0.455	0.05%	0.029	0.464	0.05%	0.036	0.471	0.05%	0.021	0.456	0.05%
1,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.435	0.019	0.454	0.05%	0.022	0.457	0.05%	0.029	0.464	0.05%	0.016	0.451	0.05%
1,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.435	0.208	0.643	0.06%	0.479	0.914	0.09%	0.344	0.779	0.08%	0.249	0.684	0.07%
1,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.435	0.177	0.612	0.06%	0.504	0.939	0.09%	0.375	0.810	0.08%	0.205	0.640	0.06%
1,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.435	0.285	0.720	0.07%	0.428	0.863	0.09%	0.734	1.169	0.12%	0.393	0.828	0.08%
1,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.435	0.223	0.658	0.07%	0.424	0.859	0.09%	0.688	1.123	0.11%	0.369	0.804	0.08%
1,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.435	0.238	0.673	0.07%	0.276	0.711	0.07%	0.384	0.819	0.08%	0.199	0.634	0.06%
1,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.435	0.159	0.594	0.06%	0.293	0.728	0.07%	0.374	0.809	0.08%	0.194	0.629	0.06%
1,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.435	0.186	0.621	0.06%	0.316	0.751	0.08%	0.418	0.853	0.09%	0.224	0.659	0.07%
1,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.435	0.165	0.600	0.06%	0.177	0.612	0.06%	0.295	0.730	0.07%	0.155	0.590	0.06%
1,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.435	0.200	0.635	0.06%	0.194	0.629	0.06%	0.211	0.646	0.06%	0.130	0.565	0.06%
1,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.435	0.076	0.511	0.05%	0.134	0.569	0.06%	0.184	0.619	0.06%	0.100	0.535	0.05%
1,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.435	0.048	0.483	0.05%	0.035	0.470	0.05%	0.042	0.477	0.05%	0.028	0.463	0.05%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Ethylene Dibromide (CAS 106-93-4)

24-hour

Criteria (µg/m3)	Receptor Information				Ambient Background Concentration (µg/m3)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
3	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.039	0.015	0.054	2%	0.015	0.054	2%	0.015	0.054	2%	0.015	0.053	2%
3	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.039	0.014	0.053	2%	0.014	0.053	2%	0.014	0.053	2%	0.014	0.053	2%
3	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.039	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%
3	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.039	0.011	0.049	2%	0.011	0.049	2%	0.011	0.049	2%	0.011	0.049	2%
3	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.039	0.050	0.088	3%	0.049	0.088	3%	0.049	0.088	3%	0.049	0.087	3%
3	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.039	0.060	0.099	3%	0.060	0.099	3%	0.060	0.099	3%	0.060	0.099	3%
3	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.039	0.009	0.048	2%	0.009	0.048	2%	0.009	0.048	2%	0.009	0.048	2%
3	ZOR-8	Residence at 643743 Road 64	508940	4770980	0.039	0.041	0.079	3%	0.041	0.079	3%	0.041	0.079	3%	0.041	0.079	3%
3	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.039	0.018	0.056	2%	0.018	0.056	2%	0.018	0.056	2%	0.018	0.056	2%
3	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.039	0.015	0.053	2%	0.015	0.053	2%	0.015	0.053	2%	0.015	0.053	2%
3	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.039	0.023	0.061	2%	0.023	0.062	2%	0.023	0.062	2%	0.023	0.061	2%
3	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.039	0.016	0.055	2%	0.016	0.055	2%	0.016	0.055	2%	0.016	0.054	2%
3	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.039	0.008	0.046	2%	0.008	0.046	2%	0.008	0.046	2%	0.008	0.046	2%
3	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.039	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%
3	ING-2	Laurie Hawkins Public School	509019	4765860	0.039	0.008	0.047	2%	0.008	0.047	2%	0.008	0.047	2%	0.008	0.047	2%
3	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.039	0.012	0.051	2%	0.012	0.050	2%	0.012	0.050	2%	0.012	0.050	2%
3	ING-4	On the river north of 209 County Road 9	509480	4765180	0.039	0.007	0.045	2%	0.007	0.045	2%	0.007	0.045	2%	0.007	0.045	2%
3	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.039	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%
3	ING-6	Royal Road Public School	510337	4765360	0.039	0.007	0.046	2%	0.007	0.046	2%	0.007	0.046	2%	0.007	0.046	2%
3	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.039	0.003	0.041	1%	0.003	0.041	1%	0.003	0.041	1%	0.003	0.041	1%
3	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.039	0.005	0.043	1%	0.004	0.043	1%	0.004	0.043	1%	0.004	0.043	1%
3	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.039	0.006	0.044	1%	0.006	0.044	1%	0.006	0.044	1%	0.006	0.044	1%
3	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.039	0.005	0.044	1%	0.005	0.044	1%	0.005	0.044	1%	0.005	0.044	1%
3	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.039	0.020	0.058	2%	0.020	0.059	2%	0.020	0.059	2%	0.020	0.058	2%
3	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.039	0.020	0.058	2%	0.019	0.058	2%	0.019	0.058	2%	0.019	0.057	2%
3	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.039	0.015	0.054	2%	0.015	0.053	2%	0.015	0.054	2%	0.015	0.053	2%
3	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.039	0.017	0.055	2%	0.017	0.055	2%	0.017	0.055	2%	0.017	0.055	2%
3	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.039	0.014	0.052	2%	0.014	0.052	2%	0.014	0.052	2%	0.014	0.052	2%
3	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.039	0.005	0.044	1%	0.005	0.044	1%	0.005	0.044	1%	0.005	0.044	1%
3	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.039	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%
3	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.039	0.002	0.040	1%	0.002	0.040	1%	0.002	0.040	1%	0.002	0.040	1%
3	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.039	0.001	0.040	1%	0.001	0.040	1%	0.001	0.040	1%	0.001	0.040	1%
3	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.039	0.007	0.045	2%	0.007	0.046	2%	0.007	0.045	2%	0.007	0.045	2%
3	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.039	0.016	0.054	2%	0.016	0.055	2%	0.016	0.055	2%	0.016	0.054	2%
3	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.039	0.009	0.048	2%	0.010	0.048	2%	0.010	0.048	2%	0.009	0.048	2%
3	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.039	0.012	0.050	2%	0.012	0.050	2%	0.012	0.050	2%	0.011	0.050	2%
3	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.039	0.019	0.057	2%	0.018	0.057	2%	0.018	0.057	2%	0.018	0.057	2%
3	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.039	0.012	0.051	2%	0.012	0.051	2%	0.012	0.051	2%	0.012	0.051	2%
3	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.039	0.011	0.049	2%	0.011	0.049	2%	0.011	0.050	2%	0.011	0.049	2%
3	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.039	0.009	0.047	2%	0.009	0.047	2%	0.009	0.047	2%	0.009	0.047	2%
3	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.039	0.014	0.053	2%	0.014	0.053	2%	0.014	0.053	2%	0.014	0.053	2%
3	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.039	0.007	0.046	2%	0.007	0.046	2%	0.007	0.046	2%	0.007	0.046	2%
3	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.039	0.002	0.041	1%	0.002	0.041	1%	0.002	0.041	1%	0.002	0.041	1%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Heptane (CAS 142-82-5)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
11,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.410	0.074	0.484	0.004%	0.083	0.493	0.004%	0.086	0.496	0.005%	0.054	0.464	0.004%
11,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.410	0.071	0.481	0.004%	0.094	0.504	0.005%	0.076	0.486	0.004%	0.044	0.454	0.004%
11,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.410	0.069	0.479	0.004%	0.072	0.482	0.004%	0.082	0.492	0.004%	0.046	0.456	0.004%
11,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.410	0.055	0.465	0.004%	0.079	0.489	0.004%	0.069	0.479	0.004%	0.045	0.455	0.004%
11,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.410	0.152	0.562	0.005%	0.102	0.512	0.005%	0.147	0.557	0.005%	0.095	0.505	0.005%
11,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.410	0.202	0.612	0.006%	0.205	0.615	0.006%	0.245	0.655	0.006%	0.149	0.559	0.005%
11,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.410	0.040	0.450	0.004%	0.066	0.476	0.004%	0.066	0.476	0.004%	0.042	0.452	0.004%
11,000	ZOR-8	Residence at 643743 Rd 64	508940	4767980	0.410	0.153	0.563	0.005%	0.155	0.565	0.005%	0.164	0.574	0.005%	0.091	0.501	0.005%
11,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.410	0.147	0.557	0.005%	0.195	0.605	0.005%	0.201	0.611	0.006%	0.120	0.530	0.005%
11,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.410	0.087	0.478	0.005%	0.125	0.535	0.005%	0.134	0.544	0.005%	0.074	0.484	0.004%
11,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.410	0.179	0.589	0.005%	0.398	0.808	0.007%	0.347	0.757	0.007%	0.212	0.622	0.006%
11,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.410	0.103	0.513	0.005%	0.186	0.596	0.005%	0.171	0.581	0.005%	0.105	0.515	0.005%
11,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.410	0.033	0.443	0.004%	0.040	0.450	0.004%	0.053	0.463	0.004%	0.028	0.438	0.004%
11,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.410	0.092	0.502	0.005%	0.117	0.527	0.005%	0.149	0.559	0.005%	0.077	0.487	0.004%
11,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.410	0.032	0.442	0.004%	0.071	0.481	0.004%	0.080	0.490	0.004%	0.044	0.454	0.004%
11,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.410	0.093	0.503	0.005%	0.137	0.547	0.005%	0.141	0.551	0.005%	0.085	0.495	0.004%
11,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.410	0.043	0.453	0.004%	0.054	0.464	0.004%	0.061	0.471	0.004%	0.037	0.447	0.004%
11,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.410	0.031	0.441	0.004%	0.059	0.469	0.004%	0.063	0.473	0.004%	0.037	0.447	0.004%
11,000	ING-6	Royal Road Public School	510337	4765360	0.410	0.058	0.468	0.004%	0.095	0.505	0.005%	0.084	0.494	0.004%	0.053	0.463	0.004%
11,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.410	0.027	0.437	0.004%	0.045	0.455	0.004%	0.045	0.455	0.004%	0.027	0.437	0.004%
11,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.410	0.027	0.437	0.004%	0.061	0.471	0.004%	0.051	0.461	0.004%	0.034	0.444	0.004%
11,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.410	0.082	0.492	0.004%	0.136	0.546	0.005%	0.157	0.567	0.005%	0.081	0.491	0.004%
11,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.410	0.052	0.462	0.004%	0.097	0.507	0.005%	0.108	0.518	0.005%	0.064	0.474	0.004%
11,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.410	0.128	0.538	0.005%	0.453	0.863	0.008%	0.437	0.847	0.008%	0.259	0.669	0.006%
11,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.410	0.157	0.567	0.005%	0.324	0.734	0.007%	0.407	0.817	0.007%	0.216	0.626	0.006%
11,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.410	0.183	0.593	0.005%	0.304	0.714	0.006%	0.501	0.911	0.008%	0.242	0.652	0.006%
11,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.410	0.111	0.521	0.005%	0.091	0.501	0.005%	0.125	0.535	0.005%	0.069	0.479	0.004%
11,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.410	0.069	0.479	0.004%	0.070	0.480	0.004%	0.100	0.510	0.005%	0.053	0.463	0.004%
11,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.410	0.044	0.454	0.004%	0.037	0.447	0.004%	0.047	0.457	0.004%	0.026	0.436	0.004%
11,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.410	0.025	0.435	0.004%	0.041	0.451	0.004%	0.054	0.464	0.004%	0.029	0.439	0.004%
11,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.410	0.011	0.421	0.004%	0.015	0.425	0.004%	0.019	0.429	0.004%	0.011	0.421	0.004%
11,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.410	0.010	0.420	0.004%	0.012	0.422	0.004%	0.015	0.425	0.004%	0.008	0.418	0.004%
11,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.410	0.111	0.521	0.005%	0.254	0.664	0.006%	0.185	0.595	0.005%	0.128	0.538	0.005%
11,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.410	0.097	0.507	0.005%	0.267	0.677	0.006%	0.193	0.603	0.005%	0.106	0.516	0.005%
11,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.410	0.153	0.563	0.005%	0.226	0.636	0.006%	0.384	0.794	0.007%	0.202	0.612	0.006%
11,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.410	0.119	0.529	0.005%	0.221	0.631	0.006%	0.361	0.771	0.007%	0.190	0.600	0.005%
11,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.410	0.131	0.541	0.005%	0.148	0.558	0.005%	0.200	0.610	0.006%	0.103	0.513	0.005%
11,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.410	0.086	0.496	0.005%	0.153	0.563	0.005%	0.197	0.607	0.006%	0.100	0.510	0.005%
11,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.410	0.100	0.510	0.005%	0.168	0.578	0.005%	0.220	0.630	0.006%	0.115	0.525	0.005%
11,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.410	0.090	0.500	0.005%	0.092	0.502	0.005%	0.160	0.570	0.005%	0.080	0.490	0.004%
11,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.410	0.107	0.517	0.005%	0.102	0.512	0.005%	0.111	0.521	0.005%	0.067	0.477	0.004%
11,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.410	0.041	0.451	0.004%	0.072	0.482	0.004%	0.097	0.507	0.005%	0.051	0.461	0.004%
11,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.410	0.026	0.436	0.004%	0.019	0.429	0.004%	0.022	0.432	0.004%	0.014	0.424	0.004%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Hexane (CAS 110-54-3)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2,500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.760	0.055	0.815	0.033%	0.063	0.823	0.033%	0.064	0.824	0.033%	0.041	0.801	0.032%
2,500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.760	0.052	0.812	0.032%	0.071	0.831	0.033%	0.058	0.818	0.033%	0.034	0.794	0.032%
2,500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.760	0.051	0.811	0.032%	0.054	0.814	0.033%	0.062	0.822	0.033%	0.035	0.795	0.032%
2,500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.760	0.041	0.801	0.032%	0.059	0.819	0.033%	0.052	0.812	0.032%	0.034	0.794	0.032%
2,500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.760	0.113	0.873	0.035%	0.077	0.873	0.033%	0.111	0.871	0.035%	0.072	0.832	0.033%
2,500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.760	0.151	0.911	0.036%	0.153	0.913	0.037%	0.183	0.943	0.038%	0.113	0.873	0.035%
2,500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.760	0.030	0.790	0.032%	0.049	0.809	0.032%	0.049	0.809	0.032%	0.032	0.792	0.032%
2,500	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.760	0.114	0.874	0.035%	0.116	0.876	0.035%	0.123	0.883	0.035%	0.069	0.829	0.033%
2,500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.760	0.112	0.872	0.035%	0.146	0.906	0.036%	0.151	0.911	0.036%	0.091	0.851	0.034%
2,500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.760	0.065	0.825	0.033%	0.094	0.854	0.034%	0.101	0.861	0.034%	0.056	0.816	0.033%
2,500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.760	0.135	0.895	0.036%	0.300	1.060	0.042%	0.261	1.021	0.041%	0.160	0.920	0.037%
2,500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.760	0.077	0.837	0.033%	0.140	0.900	0.036%	0.129	0.889	0.036%	0.079	0.839	0.034%
2,500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.760	0.025	0.785	0.031%	0.030	0.790	0.032%	0.040	0.800	0.032%	0.021	0.781	0.031%
2,500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.760	0.068	0.828	0.033%	0.088	0.848	0.034%	0.112	0.872	0.035%	0.058	0.818	0.033%
2,500	ING-2	Laurie Hawkins Public School	509019	4765860	0.760	0.024	0.784	0.031%	0.053	0.813	0.033%	0.060	0.820	0.033%	0.033	0.793	0.032%
2,500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.760	0.070	0.830	0.033%	0.103	0.863	0.035%	0.106	0.866	0.035%	0.064	0.824	0.033%
2,500	ING-4	On the river north of 209 County Road 9	509480	4765180	0.760	0.032	0.792	0.032%	0.040	0.800	0.032%	0.046	0.806	0.032%	0.028	0.788	0.032%
2,500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.760	0.023	0.783	0.031%	0.044	0.804	0.032%	0.047	0.807	0.032%	0.028	0.788	0.032%
2,500	ING-6	Royal Road Public School	510337	4765360	0.760	0.043	0.803	0.032%	0.072	0.832	0.033%	0.063	0.823	0.033%	0.040	0.800	0.032%
2,500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.760	0.020	0.780	0.031%	0.034	0.794	0.032%	0.034	0.794	0.032%	0.020	0.780	0.031%
2,500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.760	0.020	0.780	0.031%	0.046	0.806	0.032%	0.038	0.798	0.032%	0.026	0.786	0.031%
2,500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.760	0.062	0.822	0.033%	0.102	0.862	0.034%	0.118	0.878	0.035%	0.062	0.822	0.033%
2,500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.760	0.039	0.799	0.032%	0.073	0.833	0.033%	0.081	0.841	0.034%	0.049	0.809	0.032%
2,500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.760	0.095	0.855	0.034%	0.341	1.101	0.044%	0.328	1.088	0.044%	0.196	0.956	0.038%
2,500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.760	0.118	0.878	0.035%	0.245	1.005	0.040%	0.306	1.066	0.043%	0.164	0.924	0.037%
2,500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.760	0.137	0.897	0.036%	0.227	0.987	0.039%	0.376	1.136	0.045%	0.183	0.943	0.038%
2,500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.760	0.084	0.844	0.034%	0.069	0.829	0.033%	0.093	0.853	0.034%	0.053	0.813	0.033%
2,500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.760	0.051	0.811	0.032%	0.053	0.813	0.033%	0.075	0.835	0.033%	0.040	0.800	0.032%
2,500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.760	0.033	0.793	0.032%	0.028	0.788	0.032%	0.036	0.796	0.032%	0.020	0.780	0.031%
2,500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.760	0.019	0.779	0.031%	0.031	0.791	0.032%	0.041	0.801	0.032%	0.022	0.782	0.031%
2,500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.760	0.008	0.768	0.031%	0.012	0.772	0.031%	0.014	0.774	0.031%	0.008	0.768	0.031%
2,500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.760	0.008	0.768	0.031%	0.009	0.769	0.031%	0.011	0.771	0.031%	0.006	0.766	0.031%
2,500	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.760	0.083	0.843	0.034%	0.191	0.951	0.038%	0.138	0.898	0.036%	0.097	0.857	0.034%
2,500	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.760	0.072	0.832	0.033%	0.200	0.960	0.038%	0.147	0.907	0.036%	0.080	0.840	0.034%
2,500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.760	0.114	0.874	0.035%	0.170	0.930	0.037%	0.290	1.050	0.042%	0.153	0.913	0.037%
2,500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.760	0.089	0.849	0.034%	0.167	0.927	0.037%	0.272	1.032	0.041%	0.144	0.904	0.036%
2,500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.760	0.097	0.857	0.034%	0.111	0.871	0.035%	0.151	0.911	0.036%	0.078	0.838	0.034%
2,500	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.760	0.064	0.824	0.033%	0.116	0.876	0.035%	0.148	0.908	0.036%	0.076	0.836	0.033%
2,500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.760	0.075	0.835	0.033%	0.126	0.886	0.035%	0.166	0.926	0.037%	0.087	0.847	0.034%
2,500	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.760	0.067	0.827	0.033%	0.070	0.830	0.033%	0.119	0.879	0.035%	0.060	0.820	0.033%
2,500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.760	0.080	0.840	0.034%	0.077	0.837	0.033%	0.083	0.843	0.034%	0.051	0.811	0.032%
2,500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.760	0.031	0.791	0.032%	0.054	0.814	0.033%	0.073	0.833	0.033%	0.039	0.799	0.032%
2,500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.760	0.019	0.779	0.031%	0.014	0.774	0.031%	0.017	0.777	0.031%	0.011	0.771	0.031%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Isopropyl Alcohol (CAS 67-63-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7,300	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	7,500	0.281	7.781	0.11%	0.326	7.826	0.11%	0.335	7.835	0.11%	0.219	7.719	0.11%
7,300	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	7,500	0.265	7.765	0.11%	0.371	7.871	0.11%	0.301	7.801	0.11%	0.179	7.679	0.11%
7,300	ZOR-3	Residence at 663951 Rd 66	510216	4770270	7,500	0.267	7.767	0.11%	0.276	7.776	0.11%	0.332	7.832	0.11%	0.188	7.688	0.11%
7,300	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	7,500	0.208	7.708	0.11%	0.312	7.812	0.11%	0.277	7.777	0.11%	0.184	7.684	0.11%
7,300	ZOR-5	Residence at 334789 33rd Line	508931	4768760	7,500	0.577	8.077	0.11%	0.399	8.099	0.11%	0.578	8.078	0.11%	0.382	7.882	0.11%
7,300	ZOR-6	Residence at 334742 33rd Line	509185	4768350	7,500	0.773	8.273	0.11%	0.793	8.293	0.11%	0.951	8.451	0.12%	0.603	8.103	0.11%
7,300	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	7,500	0.155	7.655	0.10%	0.251	7.751	0.11%	0.253	7.753	0.11%	0.170	7.670	0.11%
7,300	ZOR-8	Residence at 643743 Road 64	508940	4767980	7,500	0.589	8.089	0.11%	0.607	8.107	0.11%	0.643	8.143	0.11%	0.367	7.867	0.11%
7,300	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	7,500	0.591	8.091	0.11%	0.766	8.266	0.11%	0.791	8.291	0.11%	0.486	7.986	0.11%
7,300	ZOR-10	Residence at 334578 33rd Line	509739	4766780	7,500	0.331	7.831	0.11%	0.488	7.988	0.11%	0.531	8.031	0.11%	0.297	7.797	0.11%
7,300	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	7,500	0.712	8.212	0.11%	1.588	9.088	0.12%	1.375	8.875	0.12%	0.855	8.355	0.11%
7,300	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	7,500	0.405	7.905	0.11%	0.735	8.235	0.11%	0.675	8.175	0.11%	0.423	7.923	0.11%
7,300	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	7,500	0.128	7.628	0.10%	0.159	7.719	0.10%	0.214	7.714	0.11%	0.114	7.614	0.10%
7,300	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	7,500	0.347	7.847	0.11%	0.467	7.967	0.11%	0.594	8.094	0.11%	0.311	7.811	0.11%
7,300	ING-2	Laurie Hawkins Public School	509019	4765860	7,500	0.127	7.627	0.10%	0.277	7.777	0.11%	0.314	7.814	0.11%	0.177	7.677	0.11%
7,300	ING-3	Ingersoll District Collegiate Institute	510512	4766230	7,500	0.369	7.869	0.11%	0.545	8.045	0.11%	0.562	8.062	0.11%	0.342	7.842	0.11%
7,300	ING-4	On the river north of 209 County Road 9	509480	4765180	7,500	0.171	7.671	0.11%	0.212	7.712	0.11%	0.241	7.741	0.11%	0.150	7.650	0.10%
7,300	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	7,500	0.119	7.619	0.10%	0.230	7.730	0.11%	0.244	7.744	0.11%	0.148	7.648	0.10%
7,300	ING-6	Royal Road Public School	510337	4765360	7,500	0.215	7.715	0.11%	0.375	7.875	0.11%	0.332	7.832	0.11%	0.215	7.715	0.11%
7,300	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	7,500	0.104	7.604	0.10%	0.176	7.676	0.11%	0.178	7.678	0.11%	0.109	7.609	0.10%
7,300	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	7,500	0.105	7.605	0.10%	0.239	7.739	0.11%	0.203	7.703	0.11%	0.137	7.637	0.10%
7,300	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	7,500	0.318	7.818	0.11%	0.530	8.030	0.11%	0.626	8.126	0.11%	0.328	7.828	0.11%
7,300	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	7,500	0.201	7.701	0.11%	0.381	7.881	0.11%	0.423	7.923	0.11%	0.260	7.760	0.11%
7,300	SWO-1	Residence at 584052 Beachville Road	511124	4766750	7,500	0.488	7.988	0.11%	1.790	9.290	0.13%	1.720	9.220	0.13%	1.045	8.545	0.12%
7,300	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	7,500	0.611	8.111	0.11%	1.299	8.799	0.12%	1.596	9.096	0.12%	0.872	8.372	0.11%
7,300	SWO-3	Residence at 584142 Beachville Road	511722	4767480	7,500	0.705	8.205	0.11%	1.176	8.676	0.12%	1.967	9.467	0.13%	0.976	8.476	0.12%
7,300	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	7,500	0.435	7.935	0.11%	0.363	7.863	0.11%	0.482	7.982	0.11%	0.280	7.780	0.11%
7,300	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	7,500	0.261	7.761	0.11%	0.276	7.776	0.11%	0.395	7.895	0.11%	0.215	7.715	0.11%
7,300	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	7,500	0.172	7.672	0.11%	0.142	7.642	0.10%	0.188	7.688	0.11%	0.104	7.604	0.10%
7,300	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	7,500	0.098	7.598	0.10%	0.160	7.660	0.10%	0.213	7.713	0.11%	0.117	7.617	0.10%
7,300	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	7,500	0.042	7.542	0.10%	0.060	7.560	0.10%	0.074	7.574	0.10%	0.043	7.543	0.10%
7,300	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	7,500	0.040	7.540	0.10%	0.046	7.546	0.10%	0.059	7.559	0.10%	0.033	7.533	0.10%
7,300	SWO-10	Residence at 563977 Karn Road	510980	4765990	7,500	0.433	7.933	0.11%	0.995	8.495	0.12%	0.712	8.212	0.11%	0.517	8.017	0.11%
7,300	SWO-11	Residence at 564028 Karn Road	511396	4766310	7,500	0.368	7.868	0.11%	1.049	8.549	0.12%	0.780	8.280	0.11%	0.427	7.927	0.11%
7,300	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	7,500	0.591	8.091	0.11%	0.889	8.389	0.11%	1.523	9.023	0.12%	0.817	8.317	0.11%
7,300	SWO-13	Centreville Pond and Conservation Area	511570	4766920	7,500	0.462	7.962	0.11%	0.885	8.385	0.11%	1.429	8.929	0.12%	0.767	8.267	0.11%
7,300	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	7,500	0.492	7.992	0.11%	0.574	8.074	0.11%	0.799	8.299	0.11%	0.415	7.915	0.11%
7,300	SWO-15	Residences at 564146 Karn Road	512251	4767100	7,500	0.331	7.831	0.11%	0.611	8.111	0.11%	0.775	8.275	0.11%	0.403	7.903	0.11%
7,300	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	7,500	0.387	7.887	0.11%	0.657	8.157	0.11%	0.866	8.366	0.11%	0.465	7.965	0.11%
7,300	SWO-17	Residence at 564226 Karn Road	512958	4767760	7,500	0.342	7.842	0.11%	0.367	7.867	0.11%	0.610	8.110	0.11%	0.322	7.822	0.11%
7,300	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	7,500	0.416	7.916	0.11%	0.403	7.903	0.11%	0.438	7.938	0.11%	0.271	7.771	0.11%
7,300	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	7,500	0.158	7.658	0.10%	0.278	7.778	0.11%	0.382	7.882	0.11%	0.207	7.707	0.11%
7,300	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	7,500	0.100	7.600	0.10%	0.074	7.574	0.10%	0.088	7.588	0.10%	0.058	7.558	0.10%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**m/p-Xylene (CAS 108-38-3)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
3,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.850	4.230	5.080	0.17%	3.857	4.707	0.16%	5.475	6.325	0.21%	2.626	3.476	0.12%
3,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.850	6.021	6.871	0.23%	5.565	6.415	0.21%	7.622	8.472	0.28%	3.897	4.747	0.16%
3,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.850	6.297	7.147	0.24%	7.600	8.450	0.28%	8.877	9.727	0.32%	4.702	5.552	0.19%
3,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.850	5.182	6.032	0.20%	6.134	6.984	0.23%	6.796	7.646	0.25%	3.436	4.286	0.14%
3,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.850	7.082	7.932	0.26%	6.079	6.929	0.23%	8.283	9.133	0.30%	3.947	4.797	0.16%
3,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.850	7.221	8.071	0.27%	6.529	7.379	0.25%	9.419	10.269	0.34%	4.470	5.320	0.18%
3,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.850	3.355	4.205	0.14%	3.409	4.259	0.14%	4.948	5.798	0.19%	2.433	3.283	0.11%
3,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.850	5.724	6.574	0.22%	5.488	6.338	0.21%	7.889	8.739	0.29%	3.776	4.626	0.15%
3,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.850	5.464	6.314	0.21%	5.822	6.672	0.22%	6.709	7.559	0.25%	3.366	4.216	0.14%
3,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.850	8.055	8.905	0.30%	5.994	6.844	0.23%	7.213	8.063	0.27%	3.586	4.436	0.15%
3,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.850	14.692	15.542	0.52%	22.627	23.477	0.78%	20.166	21.016	0.70%	10.762	11.612	0.39%
3,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.850	9.553	10.403	0.35%	11.940	12.790	0.43%	12.284	13.134	0.44%	6.369	7.219	0.24%
3,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.850	3.322	4.172	0.14%	3.726	4.576	0.15%	4.901	5.751	0.19%	3.257	4.107	0.11%
3,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.850	8.253	9.103	0.30%	6.113	6.963	0.23%	7.269	8.119	0.27%	3.621	4.471	0.15%
3,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.850	3.620	4.470	0.15%	3.661	4.511	0.15%	4.875	5.725	0.19%	2.448	3.298	0.11%
3,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.850	8.504	9.354	0.31%	13.444	14.294	0.48%	12.390	13.240	0.44%	6.226	7.076	0.24%
3,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.850	5.064	5.914	0.20%	5.908	6.758	0.23%	5.287	6.137	0.20%	3.296	4.146	0.14%
3,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.850	3.062	3.912	0.13%	3.111	3.961	0.13%	4.130	4.980	0.17%	2.093	2.943	0.10%
3,000	ING-6	Royal Road Public School	510337	4765360	0.850	6.336	7.186	0.24%	9.665	10.515	0.35%	9.749	10.599	0.35%	4.937	5.787	0.19%
3,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.850	3.709	4.559	0.15%	5.200	6.050	0.20%	5.305	6.155	0.21%	2.986	3.836	0.13%
3,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.850	4.613	5.463	0.18%	6.740	7.590	0.25%	6.879	7.729	0.26%	3.726	4.576	0.15%
3,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.850	6.403	7.253	0.24%	9.893	10.743	0.36%	11.343	12.193	0.41%	5.588	6.438	0.21%
3,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.850	4.655	5.505	0.18%	7.085	7.935	0.26%	7.936	8.786	0.29%	4.331	5.181	0.17%
3,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.850	11.427	12.277	0.41%	17.107	17.957	0.60%	23.209	24.059	0.80%	10.885	11.735	0.39%
3,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.850	11.418	12.268	0.41%	10.557	11.407	0.38%	21.356	22.206	0.74%	9.587	10.437	0.35%
3,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.850	9.708	10.558	0.35%	8.570	9.420	0.31%	16.214	17.064	0.57%	7.297	8.147	0.27%
3,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.850	5.592	6.442	0.21%	4.902	5.752	0.19%	8.414	9.264	0.31%	3.983	4.833	0.16%
3,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.850	4.784	5.634	0.19%	4.120	4.970	0.17%	6.840	7.690	0.26%	3.267	4.117	0.14%
3,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.850	3.410	4.260	0.14%	2.508	3.358	0.11%	3.958	4.808	0.16%	1.922	2.772	0.09%
3,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.850	2.287	3.137	0.10%	2.405	3.255	0.11%	3.287	4.137	0.14%	1.690	2.540	0.08%
3,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.850	1.371	2.221	0.07%	1.472	2.322	0.08%	1.725	2.575	0.09%	1.019	1.869	0.06%
3,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.850	1.634	2.484	0.08%	1.151	2.001	0.07%	1.470	2.320	0.08%	0.810	1.660	0.06%
3,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.850	8.523	9.373	0.31%	13.652	14.502	0.48%	14.885	15.735	0.52%	7.260	8.110	0.27%
3,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.850	9.201	10.051	0.34%	12.926	13.776	0.46%	17.515	18.365	0.61%	8.331	9.181	0.31%
3,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.850	9.133	9.983	0.33%	11.040	11.890	0.40%	17.017	17.867	0.60%	7.956	8.806	0.29%
3,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.850	10.062	10.912	0.36%	12.640	13.490	0.45%	19.090	19.940	0.66%	8.763	9.613	0.32%
3,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.850	7.943	8.793	0.29%	6.919	7.769	0.26%	12.241	13.091	0.44%	5.601	6.451	0.22%
3,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.850	6.998	7.848	0.26%	5.931	6.781	0.23%	10.443	11.293	0.38%	4.763	5.613	0.19%
3,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.850	6.524	7.374	0.25%	5.723	6.573	0.22%	9.724	10.574	0.35%	4.455	5.305	0.18%
3,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.850	4.550	5.400	0.18%	3.658	4.508	0.15%	6.150	7.000	0.23%	2.895	3.745	0.12%
3,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.850	4.201	5.051	0.17%	3.475	4.325	0.14%	5.798	6.648	0.22%	2.739	3.589	0.12%
3,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.850	3.761	4.611	0.15%	3.379	4.229	0.14%	5.329	6.179	0.21%	2.491	3.341	0.11%
3,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.850	1.635	2.485	0.08%	1.461	2.311	0.08%	2.263	3.113	0.10%	1.109	1.959	0.07%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**m/p-Xylene (CAS 108-38-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
100	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.850	0.328	1.178	1.18%	0.377	1.227	1.23%	0.388	1.238	1.24%	0.251	1.101	1.10%
100	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.850	0.311	1.161	1.16%	0.428	1.278	1.28%	0.348	1.198	1.20%	0.205	1.055	1.05%
100	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.850	0.310	1.160	1.16%	0.321	1.171	1.17%	0.381	1.231	1.23%	0.215	1.065	1.07%
100	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.850	0.244	1.094	1.09%	0.359	1.209	1.21%	0.318	1.168	1.17%	0.210	1.060	1.06%
100	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.850	0.675	1.525	1.53%	0.461	1.311	1.31%	0.668	1.518	1.52%	0.437	1.287	1.29%
100	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.850	0.902	1.752	1.75%	0.920	1.770	1.77%	1.104	1.954	1.95%	0.690	1.540	1.54%
100	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.850	0.180	1.030	1.03%	0.292	1.142	1.14%	0.295	1.145	1.15%	0.194	1.044	1.04%
100	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.850	0.686	1.536	1.54%	0.702	1.552	1.55%	0.745	1.595	1.60%	0.420	1.270	1.27%
100	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.850	0.680	1.530	1.53%	0.884	1.734	1.73%	0.915	1.765	1.77%	0.556	1.406	1.41%
100	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.850	0.386	1.236	1.24%	0.565	1.415	1.42%	0.612	1.462	1.46%	0.340	1.190	1.19%
100	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.850	0.821	1.671	1.67%	1.823	2.673	2.67%	1.586	2.436	2.44%	0.979	1.829	1.83%
100	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.850	0.469	1.319	1.32%	0.846	1.696	1.70%	0.780	1.630	1.63%	0.484	1.334	1.33%
100	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.850	0.149	1.099	1.03%	0.182	1.032	1.03%	0.245	1.095	1.10%	0.131	0.981	0.98%
100	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.850	0.407	1.257	1.26%	0.536	1.386	1.39%	0.684	1.534	1.53%	0.356	1.206	1.21%
100	ING-2	Laurie Hawkins Public School	509019	4765860	0.850	0.147	0.997	1.00%	0.320	1.170	1.17%	0.363	1.213	1.21%	0.203	1.053	1.05%
100	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.850	0.426	1.276	1.28%	0.626	1.476	1.48%	0.647	1.497	1.50%	0.392	1.242	1.24%
100	ING-4	On the river north of 209 County Road 9	509480	4765180	0.850	0.197	1.047	1.05%	0.244	1.094	1.09%	0.278	1.128	1.13%	0.171	1.021	1.02%
100	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.850	0.139	0.989	0.99%	0.267	1.117	1.12%	0.283	1.133	1.13%	0.170	1.020	1.02%
100	ING-6	Royal Road Public School	510337	4765360	0.850	0.253	1.103	1.10%	0.432	1.282	1.28%	0.384	1.234	1.23%	0.247	1.097	1.10%
100	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.850	0.121	0.971	0.97%	0.203	1.053	1.05%	0.206	1.056	1.06%	0.125	0.975	0.97%
100	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.850	0.121	0.971	0.97%	0.276	1.126	1.13%	0.234	1.084	1.08%	0.157	1.007	1.01%
100	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.850	0.370	1.220	1.22%	0.613	1.463	1.46%	0.721	1.571	1.57%	0.375	1.225	1.23%
100	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.850	0.233	1.083	1.08%	0.440	1.290	1.29%	0.490	1.340	1.34%	0.297	1.147	1.15%
100	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.850	0.570	1.420	1.42%	2.062	2.912	2.91%	1.988	2.838	2.84%	1.196	2.046	2.05%
100	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.850	0.710	1.560	1.56%	1.489	2.339	2.34%	1.848	2.698	2.70%	0.998	1.848	1.85%
100	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.850	0.821	1.671	1.67%	1.363	2.213	2.21%	2.276	3.126	3.13%	1.116	1.966	1.97%
100	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.850	0.505	1.355	1.35%	0.418	1.268	1.27%	0.561	1.411	1.41%	0.321	1.171	1.17%
100	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.850	0.306	1.156	1.16%	0.319	1.169	1.17%	0.456	1.306	1.31%	0.245	1.095	1.10%
100	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.850	0.199	1.049	1.05%	0.166	1.016	1.02%	0.216	1.066	1.07%	0.119	0.969	0.97%
100	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.850	0.114	0.964	0.96%	0.184	1.034	1.03%	0.245	1.095	1.10%	0.134	0.984	0.98%
100	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.850	0.049	0.899	0.90%	0.069	0.919	0.92%	0.086	0.936	0.94%	0.049	0.899	0.90%
100	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.850	0.047	0.897	0.90%	0.054	0.904	0.90%	0.068	0.918	0.92%	0.038	0.888	0.89%
100	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.850	0.502	1.352	1.35%	1.149	1.999	2.00%	0.828	1.678	1.68%	0.592	1.442	1.44%
100	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.850	0.430	1.280	1.28%	1.210	2.060	2.06%	0.896	1.746	1.75%	0.489	1.339	1.34%
100	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.850	0.688	1.538	1.54%	1.026	1.876	1.88%	1.757	2.607	2.61%	0.935	1.785	1.79%
100	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.850	0.538	1.388	1.39%	1.015	1.865	1.87%	1.649	2.499	2.50%	0.878	1.728	1.73%
100	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.850	0.665	1.427	1.43%	0.665	1.515	1.51%	0.920	1.770	1.77%	0.474	1.324	1.32%
100	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.850	0.385	1.235	1.24%	0.702	1.552	1.55%	0.896	1.746	1.75%	0.461	1.311	1.31%
100	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.850	0.450	1.300	1.30%	0.759	1.609	1.61%	1.002	1.852	1.85%	0.532	1.382	1.38%
100	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.850	0.400	1.250	1.25%	0.422	1.272	1.27%	0.713	1.563	1.56%	0.368	1.218	1.22%
100	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.850	0.482	1.332	1.33%	0.464	1.314	1.31%	0.506	1.356	1.36%	0.310	1.160	1.16%
100	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.850	0.184	1.034	1.03%	0.322	1.172	1.17%	0.442	1.292	1.29%	0.237	1.087	1.09%
100	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.850	0.116	0.966	0.97%	0.085	0.935	0.93%	0.101	0.951	0.95%	0.066	0.916	0.92%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Methyl Ethyl Ketone (CAS 78-93-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.390	0.229	1.619	0.2%	0.266	1.656	0.2%	0.273	1.663	0.2%	0.178	1.568	0.2%
1,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.390	0.216	1.606	0.2%	0.302	1.692	0.2%	0.245	1.635	0.2%	0.145	1.535	0.2%
1,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.390	0.217	1.607	0.2%	0.225	1.615	0.2%	0.270	1.660	0.2%	0.153	1.543	0.2%
1,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.390	0.169	1.559	0.2%	0.254	1.644	0.2%	0.225	1.615	0.2%	0.149	1.539	0.2%
1,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.390	0.470	1.860	0.2%	0.324	1.714	0.2%	0.470	1.860	0.2%	0.311	1.701	0.2%
1,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.390	0.630	2.020	0.2%	0.646	2.036	0.2%	0.775	2.165	0.2%	0.490	1.880	0.2%
1,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.390	0.127	1.517	0.2%	0.205	1.595	0.2%	0.206	1.596	0.2%	0.138	1.528	0.2%
1,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.390	0.480	1.870	0.2%	0.495	1.885	0.2%	0.524	1.914	0.2%	0.299	1.689	0.2%
1,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.390	0.481	1.871	0.2%	0.624	2.014	0.2%	0.644	2.034	0.2%	0.395	1.785	0.2%
1,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.390	0.269	1.659	0.2%	0.398	1.788	0.2%	0.432	1.822	0.2%	0.242	1.632	0.2%
1,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.390	0.579	1.969	0.2%	1.292	2.682	0.3%	1.119	2.509	0.3%	0.695	2.085	0.2%
1,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.390	0.330	1.720	0.2%	0.599	1.989	0.2%	0.549	1.939	0.2%	0.344	1.734	0.2%
1,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.390	0.104	1.494	0.1%	0.174	1.564	0.2%	0.174	1.564	0.2%	0.093	1.483	0.1%
1,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.390	0.283	1.673	0.2%	0.380	1.770	0.2%	0.484	1.874	0.2%	0.252	1.642	0.2%
1,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.390	0.103	1.493	0.1%	0.226	1.616	0.2%	0.255	1.645	0.2%	0.144	1.534	0.2%
1,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.390	0.300	1.690	0.2%	0.444	1.834	0.2%	0.457	1.847	0.2%	0.278	1.668	0.2%
1,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.390	0.139	1.529	0.2%	0.172	1.562	0.2%	0.196	1.586	0.2%	0.122	1.512	0.2%
1,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.390	0.097	1.487	0.1%	0.187	1.577	0.2%	0.198	1.588	0.2%	0.121	1.511	0.2%
1,000	ING-6	Royal Road Public School	510337	4765360	1.390	0.176	1.566	0.2%	0.306	1.696	0.2%	0.270	1.660	0.2%	0.175	1.565	0.2%
1,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.390	0.085	1.475	0.1%	0.144	1.534	0.2%	0.145	1.535	0.2%	0.088	1.478	0.1%
1,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.390	0.086	1.476	0.1%	0.194	1.584	0.2%	0.165	1.555	0.2%	0.112	1.502	0.2%
1,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.390	0.259	1.649	0.2%	0.431	1.821	0.2%	0.509	1.899	0.2%	0.266	1.656	0.2%
1,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.390	0.163	1.553	0.2%	0.310	1.700	0.2%	0.345	1.735	0.2%	0.211	1.601	0.2%
1,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.390	0.397	1.787	0.2%	1.457	2.847	0.3%	1.400	2.790	0.3%	0.849	2.239	0.2%
1,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.390	0.498	1.888	0.2%	1.057	2.447	0.2%	1.299	2.689	0.3%	0.709	2.099	0.2%
1,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.390	0.575	1.965	0.2%	0.958	2.348	0.2%	1.601	2.991	0.3%	0.792	2.182	0.2%
1,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.390	0.354	1.744	0.2%	0.296	1.686	0.2%	0.392	1.782	0.2%	0.228	1.618	0.2%
1,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.390	0.213	1.603	0.2%	0.225	1.615	0.2%	0.322	1.712	0.2%	0.174	1.564	0.2%
1,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.390	0.140	1.530	0.2%	0.116	1.506	0.2%	0.153	1.543	0.2%	0.085	1.475	0.1%
1,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.390	0.080	1.470	0.1%	0.130	1.520	0.2%	0.173	1.563	0.2%	0.095	1.485	0.1%
1,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.390	0.034	1.424	0.1%	0.049	1.439	0.1%	0.060	1.450	0.1%	0.035	1.425	0.1%
1,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.390	0.033	1.423	0.1%	0.038	1.428	0.1%	0.048	1.438	0.1%	0.027	1.417	0.1%
1,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.390	0.353	1.743	0.2%	0.810	2.200	0.2%	0.579	1.969	0.2%	0.420	1.810	0.2%
1,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.390	0.300	1.690	0.2%	0.854	2.244	0.2%	0.634	2.024	0.2%	0.347	1.737	0.2%
1,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.390	0.481	1.871	0.2%	0.723	2.113	0.2%	1.239	2.629	0.3%	0.664	2.054	0.2%
1,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.390	0.377	1.767	0.2%	0.721	2.111	0.2%	1.162	2.552	0.3%	0.623	2.013	0.2%
1,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.390	0.401	1.791	0.2%	0.467	1.857	0.2%	0.650	2.040	0.2%	0.337	1.727	0.2%
1,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.390	0.270	1.660	0.2%	0.497	1.887	0.2%	0.630	2.020	0.2%	0.327	1.717	0.2%
1,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.390	0.315	1.705	0.2%	0.535	1.925	0.2%	0.704	2.094	0.2%	0.378	1.768	0.2%
1,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.390	0.279	1.669	0.2%	0.299	1.689	0.2%	0.497	1.887	0.2%	0.261	1.651	0.2%
1,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.390	0.338	1.728	0.2%	0.328	1.718	0.2%	0.356	1.746	0.2%	0.220	1.610	0.2%
1,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.390	0.129	1.519	0.2%	0.226	1.616	0.2%	0.311	1.701	0.2%	0.169	1.559	0.2%
1,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.390	0.081	1.471	0.1%	0.060	1.450	0.1%	0.071	1.461	0.1%	0.047	1.437	0.1%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Methyl Isobutyl Ketone (CAS 108-10-1)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
1,200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.410	0.029	0.439	0.04%	0.033	0.443	0.04%	0.034	0.444	0.04%	0.022	0.432	0.04%
1,200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.410	0.027	0.437	0.04%	0.038	0.448	0.04%	0.031	0.441	0.04%	0.018	0.428	0.04%
1,200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.410	0.027	0.437	0.04%	0.028	0.438	0.04%	0.034	0.444	0.04%	0.019	0.429	0.04%
1,200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.410	0.021	0.431	0.04%	0.032	0.442	0.04%	0.028	0.438	0.04%	0.019	0.429	0.04%
1,200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.410	0.059	0.469	0.04%	0.041	0.461	0.04%	0.059	0.469	0.04%	0.039	0.449	0.04%
1,200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.410	0.079	0.489	0.04%	0.081	0.491	0.04%	0.097	0.507	0.04%	0.061	0.471	0.04%
1,200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.410	0.016	0.426	0.04%	0.026	0.436	0.04%	0.026	0.436	0.04%	0.017	0.427	0.04%
1,200	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.410	0.060	0.470	0.04%	0.062	0.472	0.04%	0.066	0.476	0.04%	0.037	0.447	0.04%
1,200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.410	0.060	0.470	0.04%	0.078	0.488	0.04%	0.081	0.491	0.04%	0.049	0.459	0.04%
1,200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.410	0.034	0.444	0.04%	0.050	0.460	0.04%	0.054	0.464	0.04%	0.030	0.440	0.04%
1,200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.410	0.072	0.482	0.04%	0.161	0.571	0.05%	0.140	0.550	0.05%	0.087	0.497	0.04%
1,200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.410	0.041	0.451	0.04%	0.075	0.485	0.04%	0.069	0.479	0.04%	0.043	0.453	0.04%
1,200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.410	0.013	0.423	0.04%	0.016	0.426	0.04%	0.022	0.432	0.04%	0.012	0.422	0.04%
1,200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.410	0.035	0.445	0.04%	0.047	0.457	0.04%	0.061	0.471	0.04%	0.032	0.442	0.04%
1,200	ING-2	Laurie Hawkins Public School	509019	4765860	0.410	0.013	0.423	0.04%	0.028	0.438	0.04%	0.032	0.442	0.04%	0.018	0.428	0.04%
1,200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.410	0.038	0.448	0.04%	0.055	0.465	0.04%	0.057	0.467	0.04%	0.035	0.445	0.04%
1,200	ING-4	On the river north of 209 County Road 9	509480	4765180	0.410	0.017	0.427	0.04%	0.022	0.432	0.04%	0.025	0.435	0.04%	0.015	0.425	0.04%
1,200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.410	0.012	0.422	0.04%	0.023	0.433	0.04%	0.023	0.435	0.04%	0.015	0.425	0.04%
1,200	ING-6	Royal Road Public School	510337	4765360	0.410	0.022	0.432	0.04%	0.038	0.448	0.04%	0.034	0.444	0.04%	0.022	0.432	0.04%
1,200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.410	0.011	0.421	0.04%	0.018	0.428	0.04%	0.018	0.428	0.04%	0.011	0.421	0.04%
1,200	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.410	0.011	0.421	0.04%	0.024	0.434	0.04%	0.021	0.431	0.04%	0.014	0.424	0.04%
1,200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.410	0.032	0.442	0.04%	0.054	0.464	0.04%	0.064	0.474	0.04%	0.033	0.443	0.04%
1,200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.410	0.020	0.430	0.04%	0.039	0.449	0.04%	0.043	0.453	0.04%	0.026	0.436	0.04%
1,200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.410	0.050	0.460	0.04%	0.182	0.592	0.05%	0.175	0.585	0.05%	0.106	0.516	0.04%
1,200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.410	0.062	0.472	0.04%	0.132	0.542	0.05%	0.163	0.573	0.05%	0.089	0.499	0.04%
1,200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.410	0.072	0.482	0.04%	0.201	0.530	0.04%	0.201	0.611	0.05%	0.099	0.509	0.04%
1,200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.410	0.044	0.454	0.04%	0.037	0.447	0.04%	0.049	0.459	0.04%	0.029	0.439	0.04%
1,200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.410	0.027	0.437	0.04%	0.028	0.438	0.04%	0.040	0.450	0.04%	0.022	0.432	0.04%
1,200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.410	0.017	0.427	0.04%	0.015	0.425	0.04%	0.019	0.429	0.04%	0.011	0.421	0.04%
1,200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.410	0.010	0.420	0.04%	0.016	0.426	0.04%	0.022	0.432	0.04%	0.012	0.422	0.04%
1,200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.410	0.004	0.414	0.03%	0.006	0.416	0.03%	0.008	0.418	0.03%	0.004	0.414	0.03%
1,200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.410	0.004	0.414	0.03%	0.005	0.415	0.03%	0.006	0.416	0.03%	0.003	0.413	0.03%
1,200	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.410	0.044	0.454	0.04%	0.101	0.511	0.04%	0.073	0.483	0.04%	0.053	0.463	0.04%
1,200	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.410	0.038	0.448	0.04%	0.107	0.517	0.04%	0.079	0.489	0.04%	0.043	0.453	0.04%
1,200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.410	0.060	0.470	0.04%	0.090	0.500	0.04%	0.155	0.565	0.05%	0.083	0.493	0.04%
1,200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.410	0.047	0.457	0.04%	0.090	0.500	0.04%	0.146	0.556	0.05%	0.078	0.488	0.04%
1,200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.410	0.050	0.460	0.04%	0.058	0.468	0.04%	0.081	0.491	0.04%	0.042	0.452	0.04%
1,200	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.410	0.034	0.444	0.04%	0.062	0.472	0.04%	0.079	0.489	0.04%	0.041	0.451	0.04%
1,200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.410	0.039	0.449	0.04%	0.067	0.477	0.04%	0.088	0.498	0.04%	0.047	0.457	0.04%
1,200	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.410	0.035	0.445	0.04%	0.037	0.447	0.04%	0.062	0.472	0.04%	0.033	0.443	0.04%
1,200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.410	0.042	0.452	0.04%	0.041	0.451	0.04%	0.045	0.455	0.04%	0.028	0.438	0.04%
1,200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.410	0.016	0.426	0.04%	0.028	0.438	0.04%	0.039	0.449	0.04%	0.021	0.431	0.04%
1,200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.410	0.010	0.420	0.04%	0.007	0.417	0.03%	0.009	0.419	0.03%	0.006	0.416	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Naphthalene (CAS 91-20-3)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
50	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.650	0.094	0.744	1.49%	0.088	0.738	1.48%	0.123	0.773	1.55%	0.060	0.710	1.42%
50	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.650	0.134	0.784	1.57%	0.126	0.776	1.55%	0.172	0.822	1.64%	0.089	0.739	1.48%
50	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.650	0.142	0.792	1.58%	0.172	0.822	1.64%	0.203	0.853	1.71%	0.107	0.757	1.51%
50	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.650	0.117	0.767	1.53%	0.138	0.788	1.58%	0.155	0.805	1.61%	0.078	0.728	1.46%
50	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.650	0.157	0.807	1.61%	0.138	0.788	1.58%	0.185	0.835	1.67%	0.090	0.740	1.48%
50	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.650	0.162	0.812	1.62%	0.149	0.799	1.60%	0.210	0.860	1.72%	0.102	0.752	1.50%
50	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.650	0.076	0.726	1.45%	0.077	0.727	1.45%	0.113	0.763	1.53%	0.056	0.706	1.41%
50	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.650	0.130	0.780	1.56%	0.125	0.775	1.55%	0.176	0.826	1.65%	0.086	0.736	1.47%
50	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.650	0.121	0.771	1.54%	0.133	0.783	1.57%	0.152	0.802	1.60%	0.077	0.727	1.45%
50	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.650	0.182	0.832	1.66%	0.133	0.783	1.57%	0.165	0.815	1.63%	0.082	0.732	1.46%
50	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.650	0.331	0.981	1.96%	0.513	1.163	2.33%	0.461	1.111	2.22%	0.246	0.896	1.79%
50	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.650	0.217	0.867	1.73%	0.270	0.920	1.84%	0.281	0.931	1.86%	0.146	0.796	1.59%
50	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.650	0.075	0.725	1.45%	0.084	0.734	1.47%	0.112	0.762	1.52%	0.055	0.705	1.41%
50	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.650	0.187	0.837	1.67%	0.137	0.787	1.57%	0.166	0.816	1.63%	0.083	0.733	1.47%
50	ING-2	Laurie Hawkins Public School	509019	4765860	0.650	0.082	0.732	1.46%	0.082	0.732	1.46%	0.111	0.761	1.52%	0.056	0.706	1.41%
50	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.650	0.192	0.842	1.68%	0.305	0.955	1.91%	0.283	0.933	1.87%	0.142	0.792	1.58%
50	ING-4	On the river north of 209 County Road 9	509480	4765180	0.650	0.114	0.764	1.53%	0.133	0.783	1.57%	0.120	0.770	1.54%	0.075	0.725	1.45%
50	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.650	0.069	0.719	1.44%	0.070	0.720	1.44%	0.094	0.744	1.49%	0.048	0.698	1.40%
50	ING-6	Royal Road Public School	510337	4765360	0.650	0.144	0.794	1.59%	0.219	0.869	1.74%	0.223	0.873	1.75%	0.113	0.763	1.53%
50	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.650	0.083	0.733	1.47%	0.118	0.768	1.54%	0.121	0.771	1.54%	0.068	0.718	1.44%
50	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.650	0.104	0.754	1.51%	0.153	0.803	1.61%	0.157	0.807	1.61%	0.085	0.735	1.47%
50	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.650	0.144	0.794	1.59%	0.223	0.873	1.75%	0.259	0.909	1.82%	0.128	0.778	1.56%
50	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.650	0.105	0.755	1.51%	0.160	0.810	1.62%	0.181	0.831	1.66%	0.099	0.749	1.50%
50	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.650	0.256	0.906	1.81%	0.383	1.033	2.07%	0.530	1.180	2.36%	0.249	0.899	1.80%
50	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.650	0.255	0.905	1.81%	0.241	0.891	1.78%	0.485	1.135	2.27%	0.219	0.869	1.74%
50	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.650	0.217	0.867	1.73%	0.193	0.843	1.69%	0.365	1.015	2.03%	0.167	0.817	1.63%
50	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.650	0.127	0.777	1.55%	0.111	0.761	1.52%	0.192	0.842	1.68%	0.091	0.741	1.48%
50	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.650	0.107	0.757	1.51%	0.093	0.743	1.49%	0.156	0.806	1.61%	0.075	0.725	1.45%
50	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.650	0.077	0.727	1.45%	0.057	0.707	1.41%	0.090	0.740	1.48%	0.044	0.694	1.39%
50	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.650	0.051	0.701	1.40%	0.054	0.704	1.41%	0.075	0.725	1.45%	0.039	0.689	1.38%
50	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.650	0.031	0.681	1.36%	0.033	0.683	1.37%	0.039	0.689	1.38%	0.023	0.673	1.35%
50	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.650	0.037	0.687	1.37%	0.026	0.676	1.35%	0.033	0.683	1.37%	0.019	0.669	1.34%
50	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.650	0.192	0.842	1.68%	0.307	0.957	1.91%	0.340	0.990	1.98%	0.166	0.816	1.63%
50	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.650	0.207	0.857	1.71%	0.291	0.941	1.88%	0.400	1.050	2.10%	0.190	0.840	1.68%
50	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.650	0.204	0.854	1.71%	0.249	0.899	1.80%	0.388	1.038	2.08%	0.182	0.832	1.66%
50	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.650	0.225	0.875	1.75%	0.287	0.937	1.87%	0.435	1.085	2.17%	0.201	0.851	1.70%
50	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.650	0.177	0.827	1.65%	0.158	0.808	1.62%	0.277	0.927	1.85%	0.128	0.778	1.56%
50	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.650	0.156	0.806	1.61%	0.135	0.785	1.57%	0.235	0.885	1.77%	0.109	0.759	1.52%
50	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.650	0.146	0.796	1.59%	0.131	0.781	1.56%	0.218	0.868	1.74%	0.102	0.752	1.50%
50	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.650	0.101	0.751	1.50%	0.083	0.733	1.47%	0.138	0.788	1.58%	0.066	0.716	1.43%
50	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.650	0.094	0.744	1.49%	0.079	0.729	1.46%	0.131	0.781	1.56%	0.063	0.713	1.43%
50	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.650	0.084	0.734	1.47%	0.077	0.727	1.45%	0.119	0.769	1.54%	0.057	0.707	1.41%
50	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.650	0.037	0.687	1.37%	0.033	0.683	1.37%	0.052	0.702	1.40%	0.025	0.675	1.35%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Naphthalene (CAS 91-20-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
23	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.650	0.007	0.657	3%	0.009	0.659	3%	0.009	0.659	3%	0.006	0.656	3%
23	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.650	0.007	0.657	3%	0.010	0.660	3%	0.008	0.658	3%	0.005	0.655	3%
23	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.650	0.007	0.657	3%	0.007	0.657	3%	0.009	0.659	3%	0.005	0.655	3%
23	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.650	0.005	0.655	3%	0.008	0.658	3%	0.007	0.657	3%	0.005	0.655	3%
23	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.650	0.015	0.665	3%	0.010	0.660	3%	0.015	0.665	3%	0.010	0.660	3%
23	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.650	0.020	0.670	3%	0.021	0.671	3%	0.025	0.675	3%	0.016	0.666	3%
23	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.650	0.004	0.654	3%	0.007	0.657	3%	0.007	0.657	3%	0.004	0.654	3%
23	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.650	0.015	0.665	3%	0.016	0.666	3%	0.017	0.667	3%	0.010	0.660	3%
23	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.650	0.015	0.665	3%	0.020	0.670	3%	0.021	0.671	3%	0.013	0.663	3%
23	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.650	0.009	0.659	3%	0.013	0.663	3%	0.014	0.664	3%	0.008	0.658	3%
23	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.650	0.019	0.669	3%	0.041	0.691	3%	0.036	0.686	3%	0.022	0.672	3%
23	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.650	0.011	0.661	3%	0.019	0.669	3%	0.018	0.668	3%	0.011	0.661	3%
23	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.650	0.003	0.653	3%	0.004	0.654	3%	0.006	0.656	3%	0.003	0.653	3%
23	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.650	0.009	0.659	3%	0.012	0.662	3%	0.016	0.666	3%	0.008	0.658	3%
23	ING-2	Laurie Hawkins Public School	509019	4765860	0.650	0.003	0.653	3%	0.007	0.657	3%	0.008	0.658	3%	0.005	0.655	3%
23	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.650	0.010	0.660	3%	0.014	0.664	3%	0.015	0.665	3%	0.009	0.659	3%
23	ING-4	On the river north of 209 County Road 9	509480	4765180	0.650	0.004	0.654	3%	0.006	0.656	3%	0.006	0.656	3%	0.004	0.654	3%
23	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.650	0.003	0.653	3%	0.006	0.656	3%	0.006	0.656	3%	0.004	0.654	3%
23	ING-6	Royal Road Public School	510337	4765360	0.650	0.006	0.656	3%	0.010	0.660	3%	0.009	0.659	3%	0.006	0.656	3%
23	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.650	0.003	0.653	3%	0.005	0.655	3%	0.005	0.655	3%	0.003	0.653	3%
23	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.650	0.003	0.653	3%	0.006	0.656	3%	0.005	0.655	3%	0.004	0.654	3%
23	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.650	0.008	0.658	3%	0.014	0.664	3%	0.016	0.666	3%	0.009	0.659	3%
23	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.650	0.005	0.655	3%	0.010	0.660	3%	0.011	0.661	3%	0.007	0.657	3%
23	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.650	0.013	0.663	3%	0.047	0.697	3%	0.045	0.695	3%	0.027	0.677	3%
23	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.650	0.016	0.666	3%	0.034	0.684	3%	0.042	0.692	3%	0.023	0.673	3%
23	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.650	0.018	0.668	3%	0.031	0.681	3%	0.052	0.702	3%	0.026	0.676	3%
23	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.650	0.011	0.661	3%	0.010	0.660	3%	0.013	0.663	3%	0.007	0.657	3%
23	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.650	0.007	0.657	3%	0.007	0.657	3%	0.010	0.660	3%	0.006	0.656	3%
23	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.650	0.004	0.654	3%	0.004	0.654	3%	0.005	0.655	3%	0.003	0.653	3%
23	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.650	0.003	0.653	3%	0.004	0.654	3%	0.006	0.656	3%	0.003	0.653	3%
23	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.650	0.001	0.651	3%	0.002	0.652	3%	0.002	0.652	3%	0.001	0.651	3%
23	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.650	0.001	0.651	3%	0.001	0.651	3%	0.002	0.652	3%	0.001	0.651	3%
23	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.650	0.011	0.661	3%	0.026	0.676	3%	0.019	0.669	3%	0.014	0.664	3%
23	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.650	0.010	0.660	3%	0.027	0.677	3%	0.020	0.670	3%	0.011	0.661	3%
23	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.650	0.015	0.665	3%	0.023	0.673	3%	0.040	0.690	3%	0.021	0.671	3%
23	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.650	0.012	0.662	3%	0.023	0.673	3%	0.037	0.687	3%	0.020	0.670	3%
23	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.650	0.013	0.663	3%	0.015	0.665	3%	0.021	0.671	3%	0.011	0.661	3%
23	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.650	0.009	0.659	3%	0.016	0.666	3%	0.020	0.670	3%	0.011	0.661	3%
23	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.650	0.010	0.660	3%	0.017	0.667	3%	0.023	0.673	3%	0.012	0.662	3%
23	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.650	0.009	0.659	3%	0.010	0.660	3%	0.016	0.666	3%	0.008	0.658	3%
23	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.650	0.011	0.661	3%	0.011	0.661	3%	0.011	0.661	3%	0.007	0.657	3%
23	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.650	0.004	0.654	3%	0.007	0.657	3%	0.010	0.660	3%	0.005	0.655	3%
23	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.650	0.003	0.653	3%	0.002	0.652	3%	0.002	0.652	3%	0.002	0.652	3%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Octane (CAS 111-65-9)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
61,800	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.465	0.519	0.984	0.002%	0.425	0.890	0.001%	0.513	0.978	0.002%	0.388	0.853	0.001%
61,800	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.465	0.890	1.355	0.002%	0.683	1.148	0.002%	1.048	1.513	0.002%	0.702	1.167	0.002%
61,800	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.465	0.592	1.057	0.002%	0.719	1.184	0.002%	0.847	1.312	0.002%	0.449	0.914	0.001%
61,800	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.465	0.489	0.954	0.002%	0.577	1.042	0.002%	0.649	1.114	0.002%	0.328	0.793	0.001%
61,800	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.465	1.097	1.562	0.003%	0.939	1.404	0.002%	0.885	1.350	0.002%	0.875	1.340	0.002%
61,800	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.465	0.716	1.181	0.002%	0.719	1.184	0.002%	0.877	1.342	0.002%	0.718	1.183	0.002%
61,800	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.465	0.316	0.781	0.001%	0.322	0.787	0.001%	0.471	0.936	0.002%	0.233	0.698	0.001%
61,800	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.465	0.544	1.009	0.002%	0.524	0.989	0.002%	0.737	1.202	0.002%	0.447	0.912	0.001%
61,800	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.465	0.598	1.063	0.002%	0.598	1.063	0.002%	0.635	1.100	0.002%	0.598	1.063	0.002%
61,800	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.465	0.759	1.224	0.002%	0.558	1.023	0.002%	0.689	1.154	0.002%	0.343	0.808	0.001%
61,800	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.465	1.384	1.849	0.003%	2.147	2.612	0.004%	1.926	2.391	0.004%	1.029	1.494	0.002%
61,800	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.465	0.907	1.372	0.002%	1.130	1.595	0.003%	1.173	1.638	0.003%	0.609	1.074	0.002%
61,800	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.465	0.314	0.779	0.001%	0.351	0.816	0.001%	0.468	0.933	0.002%	0.230	0.695	0.001%
61,800	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.465	0.782	1.247	0.002%	0.571	1.036	0.002%	0.694	1.159	0.002%	0.346	0.811	0.001%
61,800	ING-2	Laurie Hawkins Public School	509019	4765860	0.465	0.341	0.806	0.001%	0.344	0.809	0.001%	0.465	0.930	0.002%	0.234	0.699	0.001%
61,800	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.465	0.801	1.266	0.002%	1.277	1.742	0.003%	1.183	1.648	0.003%	0.595	1.060	0.002%
61,800	ING-4	On the river north of 209 County Road 9	509480	4765180	0.465	0.477	0.942	0.002%	0.557	1.022	0.002%	0.500	0.965	0.002%	0.315	0.780	0.001%
61,800	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.465	0.290	0.755	0.001%	0.394	0.759	0.001%	0.394	0.859	0.001%	0.200	0.665	0.001%
61,800	ING-6	Royal Road Public School	510337	4765360	0.465	0.600	1.065	0.002%	0.918	1.383	0.002%	0.931	1.396	0.002%	0.472	0.937	0.002%
61,800	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.465	0.349	0.814	0.001%	0.492	0.957	0.002%	0.505	0.970	0.002%	0.285	0.750	0.001%
61,800	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.465	0.435	0.900	0.001%	0.638	1.103	0.002%	0.656	1.121	0.002%	0.356	0.821	0.001%
61,800	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.465	0.606	1.071	0.002%	0.936	1.401	0.002%	1.082	1.547	0.003%	0.534	0.999	0.002%
61,800	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.465	0.442	0.907	0.001%	0.672	1.137	0.002%	0.756	1.221	0.002%	0.414	0.879	0.001%
61,800	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.465	1.081	1.546	0.003%	1.728	2.193	0.004%	2.216	2.681	0.004%	1.041	1.506	0.002%
61,800	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.465	1.387	1.852	0.003%	1.007	1.472	0.002%	2.348	2.813	0.005%	1.239	1.704	0.003%
61,800	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.465	1.188	1.653	0.003%	0.808	1.273	0.002%	1.526	1.991	0.003%	0.842	1.307	0.002%
61,800	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.465	0.532	0.997	0.002%	0.465	0.930	0.002%	0.801	1.266	0.002%	0.381	0.846	0.001%
61,800	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.465	0.447	0.912	0.001%	0.390	0.855	0.001%	0.651	1.116	0.002%	0.312	0.777	0.001%
61,800	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.465	0.321	0.786	0.001%	0.238	0.703	0.001%	0.377	0.842	0.001%	0.184	0.649	0.001%
61,800	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.465	0.215	0.680	0.001%	0.226	0.691	0.001%	0.312	0.777	0.001%	0.162	0.627	0.001%
61,800	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.465	0.132	0.597	0.001%	0.138	0.603	0.001%	0.164	0.629	0.001%	0.097	0.562	0.001%
61,800	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.465	0.154	0.619	0.001%	0.109	0.574	0.001%	0.139	0.604	0.001%	0.078	0.543	0.001%
61,800	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.465	0.802	1.267	0.002%	1.284	1.749	0.003%	1.421	1.886	0.003%	0.694	1.159	0.002%
61,800	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.465	1.338	1.838	0.002%	1.339	1.804	0.003%	1.672	2.137	0.003%	0.797	1.262	0.002%
61,800	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.465	0.917	1.382	0.002%	1.245	1.710	0.003%	1.625	2.090	0.003%	0.762	1.227	0.002%
61,800	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.465	1.089	1.554	0.003%	1.204	1.669	0.003%	1.875	2.340	0.004%	0.979	1.444	0.002%
61,800	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.465	1.005	1.470	0.002%	0.661	1.126	0.002%	1.327	1.792	0.003%	0.775	1.240	0.002%
61,800	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.465	0.883	1.348	0.002%	0.573	1.038	0.002%	1.005	1.470	0.002%	0.630	1.095	0.002%
61,800	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.465	0.843	1.308	0.002%	0.590	1.055	0.002%	0.910	1.375	0.002%	0.573	1.038	0.002%
61,800	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.465	0.557	1.022	0.002%	0.456	0.921	0.001%	0.579	1.044	0.002%	0.409	0.874	0.001%
61,800	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.465	0.459	0.924	0.001%	0.417	0.882	0.001%	0.546	1.011	0.002%	0.380	0.845	0.001%
61,800	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.465	0.474	0.939	0.002%	0.370	0.835	0.001%	0.499	0.964	0.002%	0.330	0.795	0.001%
61,800	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.465	0.153	0.618	0.001%	0.139	0.604	0.001%	0.216	0.681	0.001%	0.106	0.571	0.001%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**o-Xylene (CAS 95-47-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
100	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.435	0.126	0.561	0.56%	0.146	0.581	0.58%	0.150	0.585	0.58%	0.097	0.532	0.53%
100	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.435	0.119	0.554	0.55%	0.165	0.600	0.60%	0.135	0.570	0.57%	0.079	0.514	0.51%
100	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.435	0.119	0.554	0.55%	0.124	0.559	0.56%	0.147	0.582	0.58%	0.083	0.518	0.52%
100	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.435	0.093	0.528	0.53%	0.139	0.574	0.57%	0.123	0.558	0.56%	0.082	0.517	0.52%
100	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.435	0.258	0.693	0.69%	0.178	0.613	0.61%	0.258	0.693	0.69%	0.170	0.605	0.60%
100	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.435	0.346	0.781	0.78%	0.355	0.790	0.79%	0.426	0.861	0.86%	0.268	0.703	0.70%
100	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.435	0.069	0.504	0.50%	0.113	0.548	0.55%	0.114	0.549	0.55%	0.075	0.510	0.51%
100	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.435	0.263	0.698	0.70%	0.271	0.706	0.71%	0.287	0.722	0.72%	0.163	0.598	0.60%
100	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.435	0.262	0.697	0.70%	0.341	0.776	0.78%	0.353	0.788	0.79%	0.216	0.651	0.65%
100	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.435	0.148	0.583	0.58%	0.218	0.653	0.65%	0.236	0.671	0.67%	0.132	0.567	0.57%
100	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.435	0.316	0.751	0.75%	0.705	1.140	1.14%	0.612	1.047	1.05%	0.380	0.815	0.81%
100	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.435	0.180	0.615	0.62%	0.327	0.762	0.76%	0.301	0.736	0.74%	0.188	0.623	0.62%
100	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.435	0.057	0.492	0.49%	0.056	0.506	0.51%	0.095	0.530	0.53%	0.051	0.486	0.49%
100	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.435	0.156	0.591	0.59%	0.207	0.642	0.64%	0.264	0.699	0.70%	0.138	0.573	0.57%
100	ING-2	Laurie Hawkins Public School	509019	4765860	0.435	0.056	0.491	0.49%	0.123	0.558	0.56%	0.140	0.575	0.58%	0.079	0.514	0.51%
100	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.435	0.164	0.599	0.60%	0.242	0.677	0.68%	0.250	0.685	0.69%	0.152	0.587	0.59%
100	ING-4	On the river north of 209 County Road 9	509480	4765180	0.435	0.076	0.511	0.51%	0.094	0.529	0.53%	0.108	0.543	0.54%	0.066	0.501	0.50%
100	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.435	0.053	0.488	0.49%	0.103	0.538	0.54%	0.109	0.544	0.54%	0.066	0.501	0.50%
100	ING-6	Royal Road Public School	510337	4765360	0.435	0.097	0.532	0.53%	0.167	0.602	0.60%	0.148	0.583	0.58%	0.096	0.531	0.53%
100	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.435	0.046	0.481	0.48%	0.079	0.514	0.51%	0.080	0.515	0.51%	0.048	0.483	0.48%
100	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.435	0.046	0.481	0.48%	0.107	0.542	0.54%	0.090	0.525	0.53%	0.061	0.496	0.50%
100	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.435	0.142	0.577	0.58%	0.237	0.672	0.67%	0.279	0.714	0.71%	0.146	0.581	0.58%
100	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.435	0.089	0.524	0.52%	0.170	0.605	0.61%	0.189	0.624	0.62%	0.115	0.550	0.55%
100	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.435	0.218	0.653	0.65%	0.797	1.232	1.23%	0.767	1.202	1.20%	0.464	0.899	0.90%
100	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.435	0.272	0.707	0.71%	0.576	1.011	1.01%	0.713	1.148	1.15%	0.387	0.822	0.82%
100	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.435	0.315	0.750	0.75%	0.960	1.313	1.31%	0.878	1.313	1.31%	0.433	0.868	0.87%
100	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.435	0.194	0.629	0.63%	0.162	0.597	0.60%	0.216	0.651	0.65%	0.124	0.559	0.56%
100	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.435	0.117	0.552	0.55%	0.123	0.558	0.56%	0.176	0.611	0.61%	0.095	0.530	0.53%
100	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.435	0.076	0.511	0.51%	0.064	0.499	0.50%	0.084	0.519	0.52%	0.046	0.481	0.48%
100	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.435	0.044	0.479	0.48%	0.071	0.506	0.51%	0.095	0.530	0.53%	0.052	0.487	0.49%
100	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.435	0.019	0.454	0.45%	0.027	0.462	0.46%	0.033	0.468	0.47%	0.019	0.454	0.45%
100	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.435	0.018	0.453	0.45%	0.021	0.456	0.46%	0.026	0.461	0.46%	0.015	0.450	0.45%
100	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.435	0.193	0.628	0.63%	0.444	0.879	0.88%	0.319	0.754	0.75%	0.229	0.664	0.66%
100	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.435	0.165	0.600	0.60%	0.467	0.902	0.90%	0.347	0.782	0.78%	0.190	0.625	0.62%
100	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.435	0.264	0.699	0.70%	0.396	0.831	0.83%	0.679	1.114	1.11%	0.363	0.798	0.80%
100	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.435	0.206	0.641	0.64%	0.393	0.828	0.83%	0.637	1.072	1.07%	0.340	0.775	0.78%
100	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.435	0.221	0.656	0.66%	0.256	0.691	0.69%	0.355	0.790	0.79%	0.184	0.619	0.62%
100	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.435	0.148	0.583	0.58%	0.271	0.706	0.71%	0.346	0.781	0.78%	0.179	0.614	0.61%
100	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.435	0.173	0.608	0.61%	0.293	0.728	0.73%	0.386	0.821	0.82%	0.206	0.641	0.64%
100	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.435	0.153	0.588	0.59%	0.163	0.598	0.60%	0.274	0.709	0.71%	0.143	0.578	0.58%
100	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.435	0.185	0.620	0.62%	0.179	0.614	0.61%	0.195	0.630	0.63%	0.120	0.555	0.56%
100	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.435	0.071	0.506	0.51%	0.124	0.559	0.56%	0.170	0.605	0.61%	0.092	0.527	0.53%
100	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.435	0.044	0.479	0.48%	0.033	0.468	0.47%	0.039	0.474	0.47%	0.026	0.461	0.46%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Styrene (CAS 100-42-5)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
400	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.425	0.004	0.429	0.11%	0.005	0.430	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.425	0.004	0.429	0.11%	0.005	0.430	0.11%	0.004	0.429	0.11%	0.003	0.428	0.11%
400	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.425	0.004	0.429	0.11%	0.004	0.429	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.425	0.003	0.428	0.11%	0.004	0.429	0.11%	0.004	0.429	0.11%	0.003	0.428	0.11%
400	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.425	0.009	0.434	0.11%	0.006	0.431	0.11%	0.008	0.433	0.11%	0.005	0.430	0.11%
400	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.425	0.011	0.436	0.11%	0.012	0.437	0.11%	0.014	0.439	0.11%	0.009	0.434	0.11%
400	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.425	0.002	0.427	0.11%	0.004	0.429	0.11%	0.004	0.429	0.11%	0.002	0.427	0.11%
400	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.425	0.009	0.434	0.11%	0.009	0.434	0.11%	0.009	0.430	0.11%	0.005	0.430	0.11%
400	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.425	0.008	0.433	0.11%	0.011	0.436	0.11%	0.011	0.436	0.11%	0.007	0.432	0.11%
400	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.425	0.005	0.430	0.11%	0.007	0.432	0.11%	0.008	0.433	0.11%	0.004	0.429	0.11%
400	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.425	0.010	0.435	0.11%	0.023	0.448	0.11%	0.020	0.445	0.11%	0.012	0.437	0.11%
400	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.425	0.006	0.431	0.11%	0.011	0.436	0.11%	0.010	0.435	0.11%	0.006	0.431	0.11%
400	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.425	0.002	0.427	0.11%	0.002	0.427	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.425	0.005	0.430	0.11%	0.007	0.432	0.11%	0.008	0.433	0.11%	0.004	0.429	0.11%
400	ING-2	Laurie Hawkins Public School	509019	4765860	0.425	0.002	0.427	0.11%	0.004	0.429	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.425	0.005	0.430	0.11%	0.008	0.433	0.11%	0.008	0.433	0.11%	0.005	0.430	0.11%
400	ING-4	On the river north of 209 County Road 9	509480	4765180	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.004	0.429	0.11%	0.002	0.427	0.11%
400	ING-6	Royal Road Public School	510337	4765360	0.425	0.003	0.428	0.11%	0.005	0.430	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.425	0.005	0.430	0.11%	0.008	0.433	0.11%	0.009	0.434	0.11%	0.005	0.430	0.11%
400	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.425	0.003	0.428	0.11%	0.006	0.431	0.11%	0.006	0.431	0.11%	0.004	0.429	0.11%
400	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.425	0.007	0.432	0.11%	0.026	0.451	0.11%	0.025	0.450	0.11%	0.015	0.440	0.11%
400	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.425	0.009	0.434	0.11%	0.019	0.444	0.11%	0.023	0.448	0.11%	0.012	0.437	0.11%
400	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.425	0.010	0.435	0.11%	0.017	0.442	0.11%	0.028	0.453	0.11%	0.014	0.439	0.11%
400	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.425	0.006	0.431	0.11%	0.005	0.430	0.11%	0.007	0.432	0.11%	0.004	0.429	0.11%
400	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.425	0.004	0.429	0.11%	0.004	0.429	0.11%	0.006	0.431	0.11%	0.003	0.428	0.11%
400	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.425	0.002	0.427	0.11%	0.002	0.427	0.11%	0.003	0.428	0.11%	0.001	0.426	0.11%
400	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.425	0.001	0.426	0.11%	0.002	0.427	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.425	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%
400	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.425	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%	0.000	0.425	0.11%
400	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.425	0.006	0.431	0.11%	0.014	0.439	0.11%	0.010	0.435	0.11%	0.007	0.432	0.11%
400	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.425	0.005	0.430	0.11%	0.015	0.440	0.11%	0.011	0.436	0.11%	0.006	0.431	0.11%
400	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.425	0.009	0.434	0.11%	0.013	0.438	0.11%	0.022	0.447	0.11%	0.012	0.437	0.11%
400	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.425	0.007	0.432	0.11%	0.013	0.438	0.11%	0.021	0.446	0.11%	0.011	0.436	0.11%
400	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.425	0.007	0.432	0.11%	0.008	0.433	0.11%	0.011	0.436	0.11%	0.006	0.431	0.11%
400	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.425	0.005	0.430	0.11%	0.009	0.434	0.11%	0.011	0.436	0.11%	0.006	0.431	0.11%
400	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.425	0.006	0.431	0.11%	0.010	0.435	0.11%	0.013	0.438	0.11%	0.007	0.432	0.11%
400	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.425	0.005	0.430	0.11%	0.005	0.430	0.11%	0.009	0.434	0.11%	0.005	0.430	0.11%
400	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.425	0.006	0.431	0.11%	0.006	0.431	0.11%	0.006	0.431	0.11%	0.004	0.429	0.11%
400	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.425	0.002	0.427	0.11%	0.004	0.429	0.11%	0.006	0.431	0.11%	0.003	0.428	0.11%
400	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.425	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Tetrachloroethylene (CAS 127-18-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
360	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.070	0.061	0.131	0.04%	0.078	0.148	0.04%	0.079	0.149	0.04%	0.056	0.126	0.03%
360	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.070	0.065	0.135	0.04%	0.081	0.151	0.04%	0.072	0.142	0.04%	0.044	0.114	0.03%
360	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.070	0.056	0.126	0.04%	0.058	0.128	0.04%	0.068	0.138	0.04%	0.041	0.111	0.03%
360	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.070	0.044	0.114	0.03%	0.065	0.135	0.04%	0.057	0.127	0.04%	0.039	0.109	0.03%
360	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.070	0.147	0.217	0.06%	0.110	0.180	0.05%	0.147	0.217	0.06%	0.107	0.177	0.05%
360	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.070	0.163	0.233	0.06%	0.167	0.237	0.07%	0.200	0.270	0.07%	0.128	0.198	0.05%
360	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.070	0.032	0.102	0.03%	0.055	0.125	0.03%	0.055	0.125	0.03%	0.038	0.108	0.03%
360	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.070	0.124	0.194	0.05%	0.125	0.195	0.05%	0.132	0.202	0.06%	0.075	0.145	0.04%
360	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.070	0.121	0.191	0.05%	0.157	0.227	0.06%	0.163	0.233	0.06%	0.100	0.170	0.05%
360	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.070	0.071	0.141	0.04%	0.104	0.174	0.05%	0.110	0.180	0.05%	0.064	0.134	0.04%
360	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.070	0.146	0.216	0.06%	0.326	0.396	0.11%	0.282	0.352	0.10%	0.176	0.246	0.07%
360	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.070	0.087	0.157	0.04%	0.153	0.223	0.06%	0.141	0.211	0.06%	0.089	0.159	0.04%
360	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.070	0.028	0.098	0.03%	0.033	0.103	0.03%	0.044	0.114	0.03%	0.023	0.093	0.03%
360	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.070	0.075	0.145	0.04%	0.099	0.169	0.05%	0.125	0.195	0.05%	0.067	0.137	0.04%
360	ING-2	Laurie Hawkins Public School	509019	4765860	0.070	0.028	0.098	0.03%	0.057	0.127	0.04%	0.065	0.135	0.04%	0.036	0.106	0.03%
360	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.070	0.076	0.146	0.04%	0.113	0.183	0.05%	0.117	0.187	0.05%	0.072	0.142	0.04%
360	ING-4	On the river north of 209 County Road 9	509480	4765180	0.070	0.035	0.105	0.03%	0.044	0.114	0.03%	0.050	0.120	0.03%	0.032	0.102	0.03%
360	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.070	0.025	0.095	0.03%	0.047	0.117	0.03%	0.050	0.120	0.03%	0.030	0.100	0.03%
360	ING-6	Royal Road Public School	510337	4765360	0.070	0.045	0.115	0.03%	0.078	0.148	0.04%	0.071	0.141	0.04%	0.047	0.117	0.03%
360	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.070	0.022	0.092	0.03%	0.036	0.106	0.03%	0.037	0.107	0.03%	0.022	0.092	0.03%
360	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.070	0.022	0.092	0.03%	0.050	0.120	0.03%	0.042	0.112	0.03%	0.029	0.099	0.03%
360	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.070	0.067	0.137	0.04%	0.110	0.180	0.05%	0.129	0.199	0.06%	0.068	0.138	0.04%
360	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.070	0.041	0.111	0.03%	0.079	0.149	0.04%	0.087	0.157	0.04%	0.054	0.124	0.03%
360	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.070	0.114	0.184	0.05%	0.381	0.451	0.13%	0.367	0.437	0.12%	0.228	0.298	0.08%
360	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.070	0.136	0.206	0.06%	0.267	0.337	0.09%	0.334	0.404	0.11%	0.182	0.252	0.07%
360	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.070	0.154	0.224	0.06%	0.244	0.314	0.09%	0.407	0.477	0.13%	0.203	0.273	0.08%
360	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.070	0.094	0.164	0.05%	0.075	0.145	0.04%	0.099	0.169	0.05%	0.058	0.128	0.04%
360	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.070	0.056	0.126	0.03%	0.057	0.127	0.04%	0.081	0.151	0.04%	0.044	0.114	0.03%
360	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.070	0.037	0.107	0.03%	0.031	0.101	0.03%	0.042	0.112	0.03%	0.024	0.094	0.03%
360	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.070	0.021	0.091	0.03%	0.033	0.103	0.03%	0.044	0.114	0.03%	0.025	0.095	0.03%
360	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.070	0.009	0.079	0.02%	0.013	0.083	0.02%	0.015	0.085	0.02%	0.009	0.079	0.02%
360	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.070	0.008	0.078	0.02%	0.010	0.080	0.02%	0.013	0.083	0.02%	0.007	0.077	0.02%
360	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.070	0.090	0.160	0.04%	0.205	0.275	0.08%	0.147	0.217	0.06%	0.107	0.177	0.05%
360	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.070	0.086	0.156	0.04%	0.226	0.296	0.08%	0.160	0.230	0.06%	0.098	0.168	0.05%
360	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.070	0.126	0.196	0.05%	0.187	0.257	0.07%	0.317	0.387	0.11%	0.172	0.242	0.07%
360	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.070	0.101	0.171	0.05%	0.182	0.252	0.07%	0.300	0.370	0.10%	0.163	0.233	0.06%
360	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.070	0.114	0.184	0.05%	0.120	0.190	0.05%	0.177	0.247	0.07%	0.098	0.168	0.05%
360	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.070	0.075	0.145	0.04%	0.126	0.196	0.05%	0.164	0.234	0.07%	0.087	0.157	0.04%
360	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.070	0.087	0.157	0.04%	0.139	0.209	0.06%	0.182	0.252	0.07%	0.099	0.169	0.05%
360	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.070	0.074	0.144	0.04%	0.082	0.152	0.04%	0.129	0.199	0.06%	0.070	0.140	0.04%
360	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.070	0.086	0.156	0.04%	0.085	0.155	0.04%	0.092	0.162	0.05%	0.058	0.128	0.04%
360	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.070	0.035	0.105	0.03%	0.057	0.127	0.04%	0.079	0.149	0.04%	0.043	0.113	0.03%
360	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.070	0.021	0.091	0.03%	0.015	0.085	0.02%	0.018	0.088	0.02%	0.012	0.082	0.02%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Toluene (CAS 108-88-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.610	0.338	1.948	0.10%	0.392	2.002	0.10%	0.403	2.013	0.10%	0.263	1.873	0.09%
2,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.610	0.319	1.929	0.10%	0.445	2.055	0.10%	0.363	1.973	0.10%	0.215	1.825	0.09%
2,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.610	0.321	1.931	0.10%	0.332	1.942	0.10%	0.399	2.009	0.10%	0.225	1.835	0.09%
2,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.610	0.250	1.860	0.09%	0.374	1.984	0.10%	0.333	1.943	0.10%	0.221	1.831	0.09%
2,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.610	0.695	2.305	0.12%	0.479	2.089	0.10%	0.695	2.305	0.12%	0.458	2.068	0.10%
2,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.610	0.931	2.541	0.13%	0.953	2.563	0.13%	1.145	2.755	0.14%	0.724	2.334	0.12%
2,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.610	0.187	1.797	0.09%	0.302	1.912	0.10%	0.305	1.915	0.10%	0.204	1.814	0.09%
2,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.610	0.709	2.319	0.12%	0.774	2.384	0.12%	0.441	2.051	0.12%	0.441	2.051	0.10%
2,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.610	0.711	2.321	0.12%	0.920	2.530	0.13%	0.952	2.562	0.13%	0.583	2.193	0.11%
2,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.610	0.398	2.008	0.10%	0.587	2.197	0.11%	0.639	2.249	0.11%	0.357	1.967	0.10%
2,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.610	0.856	2.466	0.12%	1.906	3.516	0.18%	1.653	3.263	0.16%	1.027	2.637	0.13%
2,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.610	0.488	2.098	0.10%	0.883	2.493	0.12%	0.812	2.422	0.12%	0.508	2.118	0.11%
2,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.610	0.154	1.764	0.09%	0.191	1.801	0.09%	0.257	1.867	0.09%	0.137	1.747	0.09%
2,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.610	0.418	2.028	0.10%	0.561	2.171	0.11%	0.715	2.325	0.12%	0.373	1.983	0.10%
2,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.610	0.152	1.762	0.09%	0.333	1.943	0.10%	0.378	1.988	0.10%	0.213	1.823	0.09%
2,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.610	0.444	2.054	0.10%	0.654	2.264	0.11%	0.675	2.285	0.11%	0.411	2.021	0.10%
2,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.610	0.205	1.815	0.09%	0.254	1.864	0.09%	0.290	1.900	0.10%	0.180	1.790	0.09%
2,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.610	0.144	1.754	0.09%	0.276	1.886	0.09%	0.293	1.903	0.10%	0.178	1.788	0.09%
2,000	ING-6	Royal Road Public School	510337	4765360	1.610	0.259	1.869	0.09%	0.451	2.061	0.10%	0.400	2.010	0.10%	0.258	1.868	0.09%
2,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.610	0.125	1.735	0.09%	0.212	1.822	0.09%	0.215	1.825	0.09%	0.131	1.741	0.09%
2,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.610	0.126	1.736	0.09%	0.287	1.897	0.09%	0.244	1.854	0.09%	0.165	1.775	0.09%
2,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.610	0.382	1.992	0.10%	0.636	2.246	0.11%	0.753	2.363	0.12%	0.393	2.003	0.10%
2,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.610	0.241	1.851	0.09%	0.458	2.068	0.10%	0.509	2.119	0.11%	0.312	1.922	0.10%
2,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.610	0.587	2.197	0.11%	2.149	3.759	0.19%	2.069	3.679	0.18%	1.254	2.864	0.14%
2,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.610	0.735	2.345	0.12%	1.559	3.169	0.16%	1.921	3.531	0.18%	1.047	2.657	0.13%
2,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.610	0.849	2.459	0.12%	1.412	3.022	0.15%	2.367	3.977	0.20%	1.171	2.781	0.14%
2,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.610	0.523	2.133	0.11%	0.436	2.046	0.10%	0.580	2.190	0.11%	0.336	1.946	0.10%
2,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.610	0.315	1.925	0.10%	0.332	1.942	0.10%	0.475	2.085	0.10%	0.257	1.867	0.09%
2,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.610	0.207	1.817	0.09%	0.171	1.781	0.09%	0.226	1.836	0.09%	0.125	1.735	0.09%
2,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.610	0.118	1.728	0.09%	0.192	1.802	0.09%	0.256	1.866	0.09%	0.141	1.751	0.09%
2,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.610	0.051	1.661	0.08%	0.072	1.682	0.08%	0.089	1.699	0.08%	0.052	1.662	0.08%
2,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.610	0.049	1.659	0.08%	0.056	1.666	0.08%	0.071	1.681	0.08%	0.040	1.650	0.08%
2,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.610	0.521	2.131	0.11%	1.195	2.805	0.14%	0.856	2.466	0.12%	0.621	2.231	0.11%
2,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.610	0.443	2.053	0.10%	1.259	2.869	0.14%	0.938	2.548	0.13%	0.513	2.123	0.11%
2,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.610	0.711	2.321	0.12%	1.067	2.677	0.13%	1.832	3.442	0.17%	0.981	2.591	0.13%
2,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.610	0.557	2.167	0.11%	1.063	2.673	0.13%	1.718	3.328	0.17%	0.920	2.530	0.13%
2,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.610	0.593	2.203	0.11%	0.689	2.299	0.11%	0.961	2.571	0.13%	0.497	2.107	0.11%
2,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.610	0.399	2.009	0.10%	0.733	2.343	0.12%	0.932	2.542	0.13%	0.483	2.093	0.10%
2,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.610	0.466	2.076	0.10%	0.789	2.399	0.12%	1.042	2.652	0.13%	0.558	2.168	0.11%
2,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.610	0.412	2.022	0.10%	0.440	2.050	0.10%	0.735	2.345	0.12%	0.386	1.996	0.10%
2,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.610	0.500	2.110	0.11%	0.483	2.093	0.10%	0.527	2.137	0.11%	0.325	1.935	0.10%
2,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.610	0.191	1.801	0.09%	0.334	1.944	0.10%	0.459	2.069	0.10%	0.249	1.859	0.09%
2,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.610	0.120	1.730	0.09%	0.088	1.698	0.08%	0.105	1.715	0.09%	0.069	1.679	0.08%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Trichloroethylene (CAS 79-01-6)**

**Annual**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.061	0.002	0.063	2.7%	0.0023	0.063	2.7%	0.0025	0.063	2.8%	0.0016	0.062	2.7%
2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.061	0.002	0.063	2.7%	0.0026	0.063	2.8%	0.0027	0.064	2.8%	0.0019	0.063	2.7%
2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.061	0.002	0.063	2.7%	0.0026	0.063	2.8%	0.0030	0.064	2.8%	0.0020	0.063	2.7%
2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.061	0.002	0.063	2.7%	0.0021	0.063	2.7%	0.0023	0.063	2.7%	0.0015	0.062	2.7%
2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.061	0.006	0.066	2.9%	0.0051	0.066	2.9%	0.0056	0.066	2.9%	0.0041	0.065	2.8%
2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.061	0.009	0.070	3.0%	0.0088	0.070	3.0%	0.0095	0.070	3.1%	0.0067	0.068	2.9%
2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.061	0.001	0.062	2.7%	0.0017	0.063	2.7%	0.0020	0.063	2.7%	0.0013	0.062	2.7%
2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.061	0.006	0.062	2.9%	0.0070	0.068	2.9%	0.0072	0.068	3.0%	0.0048	0.066	2.9%
2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.061	0.005	0.066	2.9%	0.0099	0.071	3.1%	0.0098	0.071	3.1%	0.0061	0.067	2.9%
2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.061	0.002	0.063	2.8%	0.0053	0.066	2.9%	0.0052	0.066	2.9%	0.0032	0.064	2.8%
2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.061	0.006	0.067	2.9%	0.0170	0.078	3.4%	0.0134	0.074	3.2%	0.0088	0.070	3.0%
2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.061	0.003	0.064	2.8%	0.0060	0.067	2.9%	0.0054	0.066	2.9%	0.0035	0.064	2.8%
2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.061	0.001	0.062	2.7%	0.0013	0.062	2.7%	0.0015	0.062	2.7%	0.0010	0.062	2.7%
2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.061	0.002	0.063	2.7%	0.0047	0.065	2.8%	0.0047	0.066	2.8%	0.0029	0.064	2.8%
2	ING-2	Laurie Hawkins Public School	509019	4765860	0.061	0.001	0.062	2.7%	0.0018	0.063	2.7%	0.0019	0.063	2.7%	0.0012	0.062	2.7%
2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.061	0.002	0.063	2.7%	0.0046	0.065	2.8%	0.0046	0.065	2.8%	0.0028	0.064	2.8%
2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.061	0.001	0.062	2.7%	0.0013	0.062	2.7%	0.0014	0.062	2.7%	0.0009	0.062	2.7%
2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.061	0.001	0.062	2.7%	0.0014	0.062	2.7%	0.0015	0.062	2.7%	0.0009	0.062	2.7%
2	ING-6	Royal Road Public School	510337	4765360	0.061	0.001	0.062	2.7%	0.0020	0.063	2.7%	0.0023	0.063	2.7%	0.0014	0.062	2.7%
2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.061	0.000	0.061	2.7%	0.0010	0.062	2.7%	0.0011	0.062	2.7%	0.0007	0.061	2.7%
2	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.061	0.001	0.062	2.7%	0.0011	0.062	2.7%	0.0013	0.062	2.7%	0.0008	0.062	2.7%
2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.061	0.001	0.062	2.7%	0.0027	0.064	2.8%	0.0030	0.064	2.8%	0.0018	0.063	2.7%
2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.061	0.001	0.062	2.7%	0.0015	0.062	2.7%	0.0018	0.063	2.7%	0.0011	0.062	2.7%
2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.061	0.004	0.065	2.8%	0.0105	0.071	3.1%	0.0118	0.073	3.2%	0.0068	0.068	2.9%
2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.061	0.006	0.067	2.9%	0.0148	0.076	3.3%	0.0199	0.081	3.5%	0.0108	0.072	3.1%
2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.061	0.006	0.067	2.9%	0.0127	0.074	3.2%	0.0182	0.079	3.4%	0.0100	0.071	3.1%
2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.061	0.004	0.064	2.8%	0.0052	0.066	2.9%	0.0066	0.067	2.9%	0.0040	0.065	2.8%
2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.061	0.002	0.063	2.8%	0.0033	0.064	2.8%	0.0039	0.065	2.8%	0.0025	0.063	2.8%
2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.061	0.001	0.062	2.7%	0.0014	0.062	2.7%	0.0016	0.062	2.7%	0.0010	0.062	2.7%
2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.061	0.001	0.061	2.7%	0.0009	0.062	2.7%	0.0010	0.062	2.7%	0.0006	0.061	2.7%
2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.061	0.000	0.061	2.7%	0.0004	0.061	2.7%	0.0005	0.061	2.7%	0.0003	0.061	2.7%
2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.061	0.000	0.061	2.7%	0.0003	0.061	2.7%	0.0003	0.061	2.7%	0.0002	0.061	2.7%
2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.061	0.002	0.063	2.7%	0.0046	0.065	2.8%	0.0048	0.066	2.9%	0.0029	0.064	2.8%
2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.061	0.002	0.063	2.7%	0.0054	0.066	2.9%	0.0063	0.067	2.9%	0.0037	0.064	2.8%
2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.061	0.003	0.063	2.8%	0.0060	0.067	2.9%	0.0066	0.067	2.9%	0.0039	0.065	2.8%
2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.061	0.004	0.065	2.8%	0.0106	0.071	3.1%	0.0116	0.072	3.1%	0.0067	0.068	2.9%
2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.061	0.004	0.064	2.8%	0.0067	0.067	2.9%	0.0084	0.069	3.0%	0.0048	0.066	2.9%
2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.061	0.003	0.064	2.8%	0.0062	0.067	2.9%	0.0078	0.069	3.0%	0.0045	0.065	2.8%
2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.061	0.003	0.064	2.8%	0.0058	0.067	2.9%	0.0073	0.068	3.0%	0.0043	0.065	2.8%
2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.061	0.002	0.063	2.7%	0.0036	0.064	2.8%	0.0046	0.065	2.8%	0.0027	0.064	2.8%
2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.061	0.002	0.063	2.7%	0.0032	0.064	2.8%	0.0041	0.065	2.8%	0.0024	0.063	2.8%
2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.061	0.001	0.062	2.7%	0.0019	0.063	2.7%	0.0022	0.063	2.7%	0.0014	0.062	2.7%
2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.061	0.001	0.061	2.7%	0.0008	0.062	2.7%	0.0009	0.062	2.7%	0.0005	0.061	2.7%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Trichloroethylene (CAS 79-01-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
12	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.055	0.041	0.096	0.8%	0.050	0.105	0.9%	0.051	0.106	0.9%	0.035	0.090	0.8%
12	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.055	0.044	0.099	0.8%	0.051	0.106	0.9%	0.046	0.101	0.8%	0.028	0.083	0.7%
12	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.055	0.036	0.091	0.8%	0.038	0.093	0.8%	0.041	0.096	0.8%	0.025	0.080	0.7%
12	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.055	0.029	0.084	0.7%	0.040	0.095	0.8%	0.034	0.089	0.7%	0.023	0.078	0.7%
12	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.055	0.100	0.155	1.3%	0.074	0.129	1.1%	0.096	0.151	1.3%	0.069	0.124	1.0%
12	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.055	0.106	0.161	1.3%	0.107	0.162	1.4%	0.127	0.182	1.5%	0.077	0.132	1.1%
12	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.055	0.021	0.076	0.6%	0.036	0.091	0.8%	0.036	0.091	0.8%	0.023	0.078	0.7%
12	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.055	0.080	0.135	1.1%	0.078	0.133	1.1%	0.083	0.138	1.1%	0.045	0.100	0.8%
12	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.055	0.073	0.128	1.1%	0.098	0.153	1.3%	0.101	0.156	1.3%	0.060	0.115	1.0%
12	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.055	0.047	0.102	0.8%	0.066	0.121	1.0%	0.070	0.125	1.0%	0.039	0.094	0.8%
12	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.055	0.090	0.145	1.2%	0.199	0.254	2.1%	0.173	0.228	1.9%	0.105	0.160	1.3%
12	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.055	0.055	0.110	0.9%	0.095	0.150	1.2%	0.088	0.143	1.2%	0.054	0.109	0.9%
12	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.055	0.018	0.073	0.6%	0.020	0.075	0.6%	0.026	0.081	0.7%	0.014	0.069	0.6%
12	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.055	0.049	0.104	0.9%	0.060	0.115	1.0%	0.076	0.131	1.1%	0.040	0.095	0.8%
12	ING-2	Laurie Hawkins Public School	509019	4765860	0.055	0.019	0.074	0.6%	0.036	0.091	0.8%	0.040	0.095	0.8%	0.022	0.077	0.6%
12	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.055	0.046	0.101	0.8%	0.069	0.124	1.0%	0.072	0.127	1.1%	0.043	0.098	0.8%
12	ING-4	On the river north of 209 County Road 9	509480	4765180	0.055	0.022	0.077	0.6%	0.028	0.083	0.7%	0.031	0.086	0.7%	0.019	0.074	0.6%
12	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.055	0.016	0.071	0.6%	0.030	0.085	0.7%	0.032	0.087	0.7%	0.018	0.073	0.6%
12	ING-6	Royal Road Public School	510337	4765360	0.055	0.030	0.085	0.7%	0.048	0.103	0.9%	0.044	0.099	0.8%	0.028	0.083	0.7%
12	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.055	0.014	0.069	0.6%	0.022	0.077	0.6%	0.023	0.078	0.6%	0.013	0.068	0.6%
12	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.055	0.014	0.069	0.6%	0.031	0.086	0.7%	0.026	0.081	0.7%	0.018	0.073	0.6%
12	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.055	0.043	0.098	0.8%	0.070	0.125	1.0%	0.079	0.134	1.1%	0.041	0.096	0.8%
12	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.055	0.026	0.081	0.7%	0.049	0.104	0.9%	0.055	0.110	0.9%	0.032	0.087	0.7%
12	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.055	0.076	0.131	1.1%	0.238	0.293	2.4%	0.230	0.285	2.4%	0.139	0.194	1.6%
12	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.055	0.090	0.145	1.2%	0.161	0.216	1.8%	0.210	0.265	2.2%	0.109	0.164	1.4%
12	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.055	0.099	0.154	1.3%	0.156	0.211	1.8%	0.254	0.309	2.6%	0.122	0.177	1.5%
12	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.055	0.060	0.115	1.0%	0.046	0.101	0.8%	0.063	0.118	1.0%	0.036	0.091	0.8%
12	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.055	0.037	0.092	0.8%	0.035	0.090	0.8%	0.050	0.105	0.9%	0.026	0.081	0.7%
12	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.055	0.023	0.078	0.6%	0.020	0.075	0.6%	0.026	0.081	0.7%	0.015	0.070	0.6%
12	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.055	0.014	0.069	0.6%	0.021	0.076	0.6%	0.027	0.082	0.7%	0.015	0.070	0.6%
12	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.055	0.006	0.061	0.5%	0.008	0.063	0.5%	0.009	0.064	0.5%	0.006	0.061	0.5%
12	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.055	0.006	0.061	0.5%	0.006	0.061	0.5%	0.008	0.063	0.5%	0.004	0.059	0.5%
12	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.055	0.056	0.111	0.9%	0.129	0.184	1.5%	0.094	0.149	1.2%	0.064	0.119	1.0%
12	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.055	0.057	0.112	0.9%	0.142	0.197	1.6%	0.096	0.151	1.3%	0.061	0.116	1.0%
12	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.055	0.081	0.136	1.1%	0.117	0.172	1.4%	0.196	0.251	2.1%	0.104	0.159	1.3%
12	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.055	0.065	0.120	1.0%	0.110	0.165	1.4%	0.186	0.241	2.0%	0.099	0.154	1.3%
12	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.055	0.077	0.132	1.1%	0.077	0.132	1.1%	0.110	0.165	1.4%	0.061	0.116	1.0%
12	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.055	0.050	0.105	0.9%	0.077	0.132	1.1%	0.103	0.158	1.3%	0.053	0.108	0.9%
12	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.055	0.057	0.112	0.9%	0.088	0.143	1.2%	0.114	0.169	1.4%	0.060	0.115	1.0%
12	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.055	0.049	0.104	0.9%	0.051	0.106	0.9%	0.085	0.140	1.2%	0.042	0.097	0.8%
12	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.055	0.054	0.109	0.9%	0.053	0.108	0.9%	0.057	0.112	0.9%	0.035	0.090	0.8%
12	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.055	0.024	0.079	0.7%	0.036	0.091	0.8%	0.049	0.104	0.9%	0.026	0.081	0.7%
12	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.055	0.014	0.069	0.6%	0.009	0.064	0.5%	0.011	0.066	0.6%	0.007	0.062	0.5%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Trichlorofluoromethane (CAS 75-69-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
6,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.300	0.004	1.304	0.02%	0.004	1.304	0.02%	0.004	1.304	0.02%	0.003	1.303	0.02%
6,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.300	0.003	1.303	0.02%	0.005	1.305	0.02%	0.004	1.304	0.02%	0.002	1.302	0.02%
6,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.300	0.003	1.303	0.02%	0.003	1.303	0.02%	0.004	1.304	0.02%	0.002	1.302	0.02%
6,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.300	0.003	1.303	0.02%	0.004	1.304	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.300	0.007	1.307	0.02%	0.005	1.305	0.02%	0.007	1.307	0.02%	0.005	1.305	0.02%
6,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.300	0.010	1.310	0.02%	0.010	1.310	0.02%	0.012	1.312	0.02%	0.007	1.307	0.02%
6,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.300	0.007	1.307	0.02%	0.008	1.308	0.02%	0.008	1.308	0.02%	0.004	1.304	0.02%
6,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.300	0.007	1.307	0.02%	0.009	1.309	0.02%	0.010	1.310	0.02%	0.006	1.306	0.02%
6,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.300	0.004	1.304	0.02%	0.006	1.306	0.02%	0.007	1.307	0.02%	0.004	1.304	0.02%
6,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.300	0.009	1.309	0.02%	0.019	1.319	0.02%	0.017	1.317	0.02%	0.010	1.310	0.02%
6,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.300	0.005	1.305	0.02%	0.009	1.309	0.02%	0.008	1.308	0.02%	0.005	1.305	0.02%
6,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.300	0.002	1.302	0.02%	0.002	1.302	0.02%	0.003	1.303	0.02%	0.001	1.301	0.02%
6,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.300	0.004	1.304	0.02%	0.006	1.306	0.02%	0.007	1.307	0.02%	0.004	1.304	0.02%
6,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.004	1.304	0.02%	0.002	1.302	0.02%
6,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.300	0.005	1.305	0.02%	0.007	1.307	0.02%	0.007	1.307	0.02%	0.004	1.304	0.02%
6,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.300	0.001	1.301	0.02%	0.003	1.303	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ING-6	Royal Road Public School	510337	4765360	1.300	0.003	1.303	0.02%	0.005	1.305	0.02%	0.004	1.304	0.02%	0.003	1.303	0.02%
6,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.300	0.001	1.301	0.02%	0.002	1.302	0.02%	0.002	1.302	0.02%	0.001	1.301	0.02%
6,000	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	1.300	0.001	1.301	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%	0.002	1.302	0.02%
6,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.300	0.004	1.304	0.02%	0.007	1.307	0.02%	0.008	1.308	0.02%	0.004	1.304	0.02%
6,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.300	0.003	1.303	0.02%	0.005	1.305	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.300	0.006	1.306	0.02%	0.022	1.322	0.02%	0.021	1.321	0.02%	0.013	1.313	0.02%
6,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.300	0.008	1.308	0.02%	0.016	1.316	0.02%	0.020	1.320	0.02%	0.011	1.311	0.02%
6,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.300	0.009	1.309	0.02%	0.015	1.315	0.02%	0.024	1.324	0.02%	0.012	1.312	0.02%
6,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.300	0.005	1.305	0.02%	0.004	1.304	0.02%	0.006	1.306	0.02%	0.003	1.303	0.02%
6,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.300	0.003	1.303	0.02%	0.003	1.303	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.300	0.002	1.302	0.02%	0.002	1.302	0.02%	0.002	1.302	0.02%	0.001	1.301	0.02%
6,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.300	0.001	1.301	0.02%	0.002	1.302	0.02%	0.003	1.303	0.02%	0.001	1.301	0.02%
6,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.300	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%
6,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.300	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%	0.000	1.300	0.02%
6,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.300	0.005	1.305	0.02%	0.012	1.312	0.02%	0.009	1.309	0.02%	0.006	1.306	0.02%
6,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.300	0.005	1.305	0.02%	0.013	1.313	0.02%	0.009	1.309	0.02%	0.005	1.305	0.02%
6,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.300	0.007	1.307	0.02%	0.011	1.311	0.02%	0.019	1.319	0.02%	0.010	1.310	0.02%
6,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.300	0.006	1.306	0.02%	0.011	1.311	0.02%	0.018	1.318	0.02%	0.009	1.309	0.02%
6,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.300	0.006	1.306	0.02%	0.007	1.307	0.02%	0.010	1.310	0.02%	0.005	1.305	0.02%
6,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.300	0.004	1.304	0.02%	0.007	1.307	0.02%	0.010	1.310	0.02%	0.005	1.305	0.02%
6,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.300	0.005	1.305	0.02%	0.008	1.308	0.02%	0.011	1.311	0.02%	0.006	1.306	0.02%
6,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.300	0.004	1.304	0.02%	0.005	1.305	0.02%	0.008	1.308	0.02%	0.004	1.304	0.02%
6,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.300	0.005	1.305	0.02%	0.005	1.305	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.300	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Vinyl Chloride (CAS 75-01-4)

Annual

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
0.2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.026	0.002	0.028	14%	0.0026	0.028	14%	0.0029	0.028	14%	0.0020	0.027	14%
0.2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.026	0.003	0.028	14%	0.0030	0.028	14%	0.0032	0.029	14%	0.0022	0.028	14%
0.2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.026	0.002	0.028	14%	0.0030	0.029	14%	0.0035	0.029	14%	0.0024	0.028	14%
0.2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.026	0.002	0.027	14%	0.0025	0.028	14%	0.0027	0.028	14%	0.0019	0.027	14%
0.2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.026	0.006	0.032	16%	0.0057	0.031	16%	0.0064	0.032	16%	0.0047	0.030	15%
0.2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.026	0.010	0.035	18%	0.0099	0.035	18%	0.0108	0.036	18%	0.0078	0.033	17%
0.2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.026	0.001	0.027	13%	0.0020	0.028	14%	0.0024	0.028	14%	0.0015	0.027	14%
0.2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.026	0.007	0.032	16%	0.0080	0.034	17%	0.0083	0.034	17%	0.0057	0.031	16%
0.2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.026	0.006	0.031	16%	0.0116	0.037	19%	0.0115	0.037	19%	0.0074	0.033	16%
0.2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.026	0.003	0.028	14%	0.0063	0.032	16%	0.0061	0.032	16%	0.0039	0.029	15%
0.2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.026	0.007	0.032	16%	0.0203	0.046	23%	0.0158	0.041	21%	0.0107	0.036	18%
0.2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.026	0.003	0.029	14%	0.0070	0.032	16%	0.0062	0.032	16%	0.0042	0.030	15%
0.2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.026	0.001	0.027	13%	0.0015	0.027	14%	0.0018	0.027	14%	0.0012	0.027	13%
0.2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.026	0.003	0.028	14%	0.0055	0.031	15%	0.0055	0.031	16%	0.0035	0.029	15%
0.2	ING-2	Laurie Hawkins Public School	509019	4765860	0.026	0.001	0.027	13%	0.0021	0.028	14%	0.0023	0.028	14%	0.0014	0.027	13%
0.2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.026	0.003	0.028	14%	0.0054	0.031	15%	0.0054	0.031	15%	0.0034	0.029	14%
0.2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.026	0.001	0.027	13%	0.0016	0.027	14%	0.0016	0.027	14%	0.0011	0.027	13%
0.2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.026	0.001	0.026	13%	0.0016	0.027	14%	0.0017	0.027	14%	0.0011	0.027	13%
0.2	ING-6	Royal Road Public School	510337	4765360	0.026	0.002	0.027	14%	0.0023	0.028	14%	0.0027	0.028	14%	0.0017	0.027	14%
0.2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.026	0.001	0.026	13%	0.0011	0.027	13%	0.0013	0.027	13%	0.0008	0.026	13%
0.2	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.026	0.001	0.026	13%	0.0013	0.027	13%	0.0015	0.027	13%	0.0009	0.026	13%
0.2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.026	0.002	0.027	14%	0.0032	0.029	14%	0.0035	0.029	15%	0.0022	0.028	14%
0.2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.026	0.001	0.026	13%	0.0018	0.027	14%	0.0021	0.028	14%	0.0013	0.027	13%
0.2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.026	0.004	0.030	15%	0.0125	0.038	19%	0.0141	0.040	20%	0.0084	0.034	17%
0.2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.026	0.007	0.033	16%	0.0175	0.043	21%	0.0238	0.049	25%	0.0133	0.039	19%
0.2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.026	0.007	0.033	16%	0.0150	0.041	20%	0.0218	0.047	24%	0.0123	0.038	19%
0.2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.026	0.004	0.030	15%	0.0062	0.032	16%	0.0079	0.033	17%	0.0049	0.030	15%
0.2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.026	0.003	0.028	14%	0.0038	0.029	15%	0.0045	0.030	15%	0.0030	0.028	14%
0.2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.026	0.001	0.027	13%	0.0016	0.027	14%	0.0018	0.027	14%	0.0012	0.027	13%
0.2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.026	0.001	0.026	13%	0.0010	0.027	13%	0.0012	0.027	13%	0.0008	0.026	13%
0.2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.026	0.000	0.026	13%	0.0005	0.026	13%	0.0005	0.026	13%	0.0004	0.026	13%
0.2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.026	0.000	0.026	13%	0.0003	0.026	13%	0.0003	0.026	13%	0.0002	0.026	13%
0.2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.026	0.002	0.028	14%	0.0054	0.031	15%	0.0057	0.031	16%	0.0036	0.029	15%
0.2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.026	0.003	0.028	14%	0.0063	0.032	16%	0.0075	0.033	17%	0.0045	0.030	15%
0.2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.026	0.003	0.029	14%	0.0071	0.033	16%	0.0078	0.033	17%	0.0048	0.030	15%
0.2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.026	0.004	0.030	15%	0.0126	0.038	19%	0.0138	0.039	20%	0.0082	0.034	17%
0.2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.026	0.004	0.030	15%	0.0079	0.033	17%	0.0100	0.035	18%	0.0059	0.031	16%
0.2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.026	0.004	0.029	15%	0.0073	0.033	16%	0.0093	0.035	17%	0.0055	0.031	16%
0.2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.026	0.004	0.029	15%	0.0068	0.032	16%	0.0087	0.034	17%	0.0052	0.031	15%
0.2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.026	0.003	0.028	14%	0.0043	0.030	15%	0.0055	0.031	15%	0.0033	0.029	14%
0.2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.026	0.002	0.028	14%	0.0038	0.029	15%	0.0048	0.030	15%	0.0030	0.028	14%
0.2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.026	0.001	0.027	13%	0.0023	0.028	14%	0.0026	0.028	14%	0.0017	0.027	14%
0.2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.026	0.001	0.026	13%	0.0009	0.026	13%	0.0010	0.027	13%	0.0007	0.026	13%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Vinyl Chloride (CAS 75-01-4)

24-hour

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
1	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.026	0.046	0.071	7%	0.058	0.083	8%	0.059	0.084	8%	0.041	0.067	7%
1	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.026	0.048	0.073	7%	0.060	0.086	9%	0.053	0.079	8%	0.033	0.058	6%
1	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.026	0.042	0.067	7%	0.043	0.069	7%	0.051	0.076	8%	0.031	0.056	6%
1	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.026	0.033	0.058	6%	0.048	0.074	7%	0.042	0.068	7%	0.029	0.054	5%
1	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.026	0.109	0.135	13%	0.082	0.107	11%	0.109	0.135	13%	0.079	0.105	10%
1	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.026	0.121	0.146	15%	0.124	0.149	15%	0.148	0.174	17%	0.095	0.120	12%
1	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.026	0.024	0.049	5%	0.041	0.066	7%	0.041	0.066	7%	0.028	0.054	5%
1	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.026	0.092	0.117	12%	0.092	0.118	12%	0.098	0.123	12%	0.056	0.081	8%
1	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.026	0.090	0.116	12%	0.117	0.142	14%	0.120	0.146	15%	0.074	0.099	10%
1	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.026	0.053	0.078	8%	0.077	0.102	10%	0.082	0.107	11%	0.048	0.073	7%
1	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.026	0.109	0.134	13%	0.241	0.267	27%	0.209	0.235	23%	0.130	0.156	16%
1	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.026	0.065	0.090	9%	0.114	0.139	14%	0.104	0.130	13%	0.066	0.092	9%
1	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.026	0.021	0.047	5%	0.024	0.050	5%	0.033	0.058	6%	0.017	0.043	4%
1	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.026	0.055	0.081	8%	0.073	0.099	10%	0.093	0.118	12%	0.049	0.075	7%
1	ING-2	Laurie Hawkins Public School	509019	4765860	0.026	0.020	0.046	5%	0.042	0.068	7%	0.048	0.073	7%	0.027	0.053	5%
1	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.026	0.056	0.082	8%	0.084	0.109	11%	0.087	0.112	11%	0.053	0.079	8%
1	ING-4	On the river north of 209 County Road 9	509480	4765180	0.026	0.026	0.052	5%	0.033	0.058	6%	0.037	0.063	6%	0.023	0.049	5%
1	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.026	0.019	0.044	4%	0.035	0.061	6%	0.037	0.063	6%	0.023	0.048	5%
1	ING-6	Royal Road Public School	510337	4765360	0.026	0.033	0.059	6%	0.058	0.083	8%	0.052	0.078	8%	0.035	0.060	6%
1	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.026	0.016	0.042	4%	0.027	0.052	5%	0.027	0.053	5%	0.017	0.042	4%
1	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.026	0.016	0.042	4%	0.037	0.063	6%	0.031	0.057	6%	0.022	0.047	5%
1	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.026	0.049	0.075	7%	0.082	0.107	11%	0.096	0.122	12%	0.051	0.076	8%
1	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.026	0.031	0.056	6%	0.058	0.084	8%	0.065	0.090	9%	0.040	0.065	7%
1	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.026	0.085	0.110	11%	0.283	0.308	31%	0.272	0.298	30%	0.169	0.195	19%
1	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.026	0.101	0.126	13%	0.198	0.223	22%	0.248	0.273	27%	0.135	0.160	16%
1	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.026	0.114	0.140	14%	0.181	0.206	21%	0.302	0.327	33%	0.150	0.176	18%
1	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.026	0.069	0.095	9%	0.055	0.081	8%	0.073	0.099	10%	0.043	0.069	7%
1	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.026	0.041	0.067	7%	0.042	0.068	7%	0.060	0.086	9%	0.033	0.058	6%
1	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.026	0.027	0.053	5%	0.023	0.048	5%	0.031	0.056	6%	0.018	0.043	4%
1	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.026	0.016	0.041	4%	0.025	0.050	5%	0.033	0.058	6%	0.018	0.044	4%
1	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.026	0.007	0.032	3%	0.009	0.035	3%	0.011	0.037	4%	0.007	0.032	3%
1	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.026	0.006	0.032	3%	0.007	0.033	3%	0.009	0.035	3%	0.005	0.031	3%
1	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.026	0.066	0.092	9%	0.152	0.177	18%	0.109	0.134	13%	0.079	0.105	10%
1	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.026	0.064	0.089	9%	0.167	0.193	19%	0.119	0.144	14%	0.073	0.098	10%
1	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.026	0.093	0.119	12%	0.138	0.164	16%	0.235	0.261	26%	0.128	0.153	15%
1	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.026	0.075	0.101	10%	0.135	0.161	16%	0.222	0.248	25%	0.121	0.147	15%
1	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.026	0.085	0.110	11%	0.089	0.115	11%	0.131	0.157	16%	0.073	0.098	10%
1	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.026	0.056	0.081	8%	0.093	0.119	12%	0.122	0.147	15%	0.065	0.090	9%
1	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.026	0.065	0.090	9%	0.103	0.128	13%	0.135	0.160	16%	0.074	0.099	10%
1	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.026	0.055	0.081	8%	0.060	0.086	9%	0.096	0.121	12%	0.052	0.077	8%
1	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.026	0.064	0.089	9%	0.063	0.088	9%	0.068	0.094	9%	0.043	0.069	7%
1	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.026	0.026	0.052	5%	0.042	0.068	7%	0.058	0.084	8%	0.032	0.057	6%
1	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.026	0.016	0.041	4%	0.011	0.037	4%	0.013	0.039	4%	0.009	0.034	3%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Vinylidene Chloride (CAS 75-35-4)

24-hour

Criteria (µg/m3)	Receptor Information				Ambient Background Concentration (µg/m3)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
10	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.040	0.020	0.059	0.6%	0.020	0.060	0.6%	0.020	0.060	0.6%	0.020	0.059	0.6%
10	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.040	0.019	0.059	0.6%	0.018	0.058	0.6%	0.019	0.059	0.6%	0.018	0.058	0.6%
10	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.040	0.014	0.053	0.5%	0.014	0.054	0.5%	0.015	0.054	0.5%	0.014	0.054	0.5%
10	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.040	0.013	0.053	0.5%	0.013	0.053	0.5%	0.013	0.053	0.5%	0.013	0.053	0.5%
10	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.040	0.063	0.103	1.0%	0.062	0.101	1.0%	0.062	0.101	1.0%	0.062	0.101	1.0%
10	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.040	0.076	0.116	1.2%	0.077	0.116	1.2%	0.076	0.116	1.2%	0.076	0.115	1.2%
10	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.040	0.012	0.051	0.5%	0.012	0.051	0.5%	0.012	0.052	0.5%	0.012	0.051	0.5%
10	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.040	0.052	0.091	0.9%	0.051	0.091	0.9%	0.051	0.091	0.9%	0.051	0.090	0.9%
10	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.040	0.023	0.062	0.6%	0.023	0.062	0.6%	0.022	0.062	0.6%	0.022	0.062	0.6%
10	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.040	0.018	0.057	0.6%	0.019	0.059	0.6%	0.019	0.059	0.6%	0.019	0.058	0.6%
10	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.040	0.029	0.068	0.7%	0.031	0.070	0.7%	0.029	0.069	0.7%	0.029	0.068	0.7%
10	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.040	0.020	0.059	0.6%	0.022	0.061	0.6%	0.022	0.061	0.6%	0.021	0.060	0.6%
10	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.040	0.009	0.049	0.5%	0.009	0.049	0.5%	0.009	0.049	0.5%	0.009	0.049	0.5%
10	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.040	0.014	0.053	0.5%	0.015	0.054	0.5%	0.015	0.055	0.5%	0.014	0.054	0.5%
10	ING-2	Laurie Hawkins Public School	509019	4765860	0.040	0.010	0.050	0.5%	0.010	0.050	0.5%	0.010	0.050	0.5%	0.010	0.050	0.5%
10	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.040	0.016	0.055	0.6%	0.015	0.055	0.5%	0.015	0.055	0.5%	0.015	0.055	0.5%
10	ING-4	On the river north of 209 County Road 9	509480	4765180	0.040	0.008	0.048	0.5%	0.008	0.048	0.5%	0.008	0.048	0.5%	0.008	0.048	0.5%
10	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.040	0.006	0.045	0.5%	0.006	0.046	0.5%	0.007	0.046	0.5%	0.006	0.046	0.5%
10	ING-6	Royal Road Public School	510337	4765360	0.040	0.009	0.049	0.5%	0.009	0.048	0.5%	0.009	0.048	0.5%	0.009	0.048	0.5%
10	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.040	0.004	0.043	0.4%	0.004	0.043	0.4%	0.004	0.043	0.4%	0.004	0.043	0.4%
10	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.040	0.006	0.045	0.5%	0.006	0.045	0.5%	0.006	0.045	0.5%	0.006	0.045	0.5%
10	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.040	0.007	0.047	0.5%	0.007	0.047	0.5%	0.009	0.048	0.5%	0.008	0.047	0.5%
10	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.040	0.007	0.047	0.5%	0.007	0.047	0.5%	0.007	0.046	0.5%	0.007	0.046	0.5%
10	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.040	0.027	0.067	0.7%	0.035	0.075	0.7%	0.035	0.075	0.7%	0.030	0.070	0.7%
10	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.040	0.027	0.067	0.7%	0.025	0.064	0.6%	0.030	0.069	0.7%	0.026	0.066	0.7%
10	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.040	0.021	0.061	0.6%	0.021	0.061	0.6%	0.024	0.063	0.6%	0.021	0.061	0.6%
10	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.040	0.021	0.060	0.6%	0.021	0.061	0.6%	0.021	0.061	0.6%	0.021	0.061	0.6%
10	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.040	0.017	0.057	0.6%	0.017	0.057	0.6%	0.017	0.056	0.6%	0.017	0.056	0.6%
10	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.040	0.006	0.046	0.5%	0.006	0.046	0.5%	0.006	0.046	0.5%	0.006	0.046	0.5%
10	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.040	0.006	0.045	0.5%	0.006	0.045	0.5%	0.006	0.045	0.5%	0.006	0.045	0.5%
10	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.040	0.002	0.042	0.4%	0.002	0.041	0.4%	0.002	0.041	0.4%	0.002	0.041	0.4%
10	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.040	0.001	0.041	0.4%	0.001	0.041	0.4%	0.001	0.041	0.4%	0.001	0.041	0.4%
10	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.040	0.010	0.049	0.5%	0.011	0.051	0.5%	0.011	0.050	0.5%	0.010	0.049	0.5%
10	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.040	0.021	0.060	0.6%	0.025	0.064	0.6%	0.021	0.061	0.6%	0.021	0.060	0.6%
10	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.040	0.013	0.053	0.5%	0.016	0.055	0.6%	0.017	0.057	0.6%	0.014	0.053	0.5%
10	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.040	0.017	0.056	0.6%	0.018	0.057	0.6%	0.021	0.060	0.6%	0.017	0.057	0.6%
10	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.040	0.025	0.065	0.6%	0.024	0.064	0.6%	0.027	0.067	0.7%	0.025	0.064	0.6%
10	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.040	0.017	0.056	0.6%	0.018	0.057	0.6%	0.018	0.058	0.6%	0.017	0.056	0.6%
10	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.040	0.015	0.055	0.5%	0.015	0.054	0.5%	0.017	0.056	0.6%	0.015	0.054	0.5%
10	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.040	0.013	0.052	0.5%	0.013	0.052	0.5%	0.013	0.053	0.5%	0.012	0.052	0.5%
10	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.040	0.018	0.058	0.6%	0.019	0.058	0.6%	0.019	0.059	0.6%	0.018	0.058	0.6%
10	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.040	0.009	0.049	0.5%	0.009	0.049	0.5%	0.009	0.049	0.5%	0.009	0.049	0.5%
10	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.040	0.003	0.042	0.4%	0.003	0.042	0.4%	0.003	0.042	0.4%	0.003	0.042	0.4%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Dichlorobenzene (CAS 106-46-7)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
95	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.340	0.013	0.353	0.4%	0.015	0.355	0.4%	0.016	0.356	0.4%	0.010	0.350	0.4%
95	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.340	0.012	0.352	0.4%	0.017	0.357	0.4%	0.014	0.354	0.4%	0.008	0.348	0.4%
95	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.340	0.012	0.352	0.4%	0.013	0.353	0.4%	0.015	0.355	0.4%	0.009	0.349	0.4%
95	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.340	0.010	0.350	0.4%	0.014	0.354	0.4%	0.013	0.353	0.4%	0.008	0.348	0.4%
95	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.340	0.027	0.367	0.4%	0.018	0.358	0.4%	0.027	0.367	0.4%	0.018	0.358	0.4%
95	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.340	0.036	0.376	0.4%	0.037	0.377	0.4%	0.044	0.384	0.4%	0.028	0.368	0.4%
95	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.340	0.007	0.347	0.4%	0.012	0.352	0.4%	0.012	0.352	0.4%	0.008	0.348	0.4%
95	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.340	0.027	0.367	0.4%	0.028	0.368	0.4%	0.030	0.370	0.4%	0.017	0.357	0.4%
95	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.340	0.027	0.367	0.4%	0.035	0.375	0.4%	0.037	0.377	0.4%	0.022	0.362	0.4%
95	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.340	0.015	0.355	0.4%	0.023	0.363	0.4%	0.024	0.364	0.4%	0.014	0.354	0.4%
95	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.340	0.033	0.373	0.4%	0.073	0.413	0.4%	0.063	0.403	0.4%	0.039	0.379	0.4%
95	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.340	0.019	0.359	0.4%	0.034	0.374	0.4%	0.031	0.371	0.4%	0.019	0.359	0.4%
95	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.340	0.006	0.346	0.4%	0.007	0.347	0.4%	0.010	0.350	0.4%	0.005	0.345	0.4%
95	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.340	0.016	0.356	0.4%	0.021	0.361	0.4%	0.027	0.367	0.4%	0.014	0.354	0.4%
95	ING-2	Laurie Hawkins Public School	509019	4765860	0.340	0.006	0.346	0.4%	0.013	0.353	0.4%	0.015	0.355	0.4%	0.008	0.348	0.4%
95	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.340	0.017	0.357	0.4%	0.025	0.365	0.4%	0.026	0.366	0.4%	0.016	0.356	0.4%
95	ING-4	On the river north of 209 County Road 9	509480	4765180	0.340	0.008	0.348	0.4%	0.010	0.350	0.4%	0.011	0.351	0.4%	0.007	0.347	0.4%
95	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.340	0.006	0.346	0.4%	0.011	0.351	0.4%	0.011	0.351	0.4%	0.007	0.347	0.4%
95	ING-6	Royal Road Public School	510337	4765360	0.340	0.010	0.350	0.4%	0.017	0.357	0.4%	0.015	0.355	0.4%	0.010	0.350	0.4%
95	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.340	0.005	0.345	0.4%	0.008	0.348	0.4%	0.008	0.348	0.4%	0.005	0.345	0.4%
95	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.340	0.005	0.345	0.4%	0.011	0.351	0.4%	0.009	0.349	0.4%	0.006	0.346	0.4%
95	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.340	0.015	0.355	0.4%	0.024	0.364	0.4%	0.029	0.369	0.4%	0.015	0.355	0.4%
95	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.340	0.009	0.349	0.4%	0.018	0.358	0.4%	0.020	0.360	0.4%	0.012	0.352	0.4%
95	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.340	0.023	0.363	0.4%	0.082	0.422	0.4%	0.080	0.420	0.4%	0.048	0.388	0.4%
95	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.340	0.028	0.368	0.4%	0.060	0.400	0.4%	0.074	0.414	0.4%	0.040	0.380	0.4%
95	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.340	0.033	0.373	0.4%	0.054	0.394	0.4%	0.091	0.431	0.5%	0.045	0.385	0.4%
95	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.340	0.020	0.360	0.4%	0.017	0.357	0.4%	0.022	0.362	0.4%	0.013	0.353	0.4%
95	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.340	0.012	0.352	0.4%	0.013	0.353	0.4%	0.018	0.358	0.4%	0.010	0.350	0.4%
95	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.340	0.008	0.348	0.4%	0.007	0.347	0.4%	0.009	0.349	0.4%	0.005	0.345	0.4%
95	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.340	0.005	0.345	0.4%	0.007	0.347	0.4%	0.010	0.350	0.4%	0.005	0.345	0.4%
95	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.340	0.002	0.342	0.4%	0.003	0.343	0.4%	0.003	0.343	0.4%	0.002	0.342	0.4%
95	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.340	0.002	0.342	0.4%	0.002	0.342	0.4%	0.003	0.343	0.4%	0.002	0.342	0.4%
95	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.340	0.020	0.360	0.4%	0.046	0.386	0.4%	0.033	0.373	0.4%	0.024	0.364	0.4%
95	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.340	0.017	0.357	0.4%	0.048	0.388	0.4%	0.036	0.376	0.4%	0.020	0.360	0.4%
95	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.340	0.027	0.367	0.4%	0.041	0.381	0.4%	0.070	0.410	0.4%	0.037	0.377	0.4%
95	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.340	0.021	0.361	0.4%	0.041	0.381	0.4%	0.066	0.406	0.4%	0.035	0.375	0.4%
95	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.340	0.023	0.363	0.4%	0.027	0.367	0.4%	0.037	0.377	0.4%	0.019	0.359	0.4%
95	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.340	0.015	0.355	0.4%	0.028	0.368	0.4%	0.036	0.376	0.4%	0.018	0.358	0.4%
95	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.340	0.018	0.358	0.4%	0.030	0.370	0.4%	0.040	0.380	0.4%	0.021	0.361	0.4%
95	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.340	0.016	0.356	0.4%	0.017	0.357	0.4%	0.028	0.368	0.4%	0.015	0.355	0.4%
95	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.340	0.019	0.359	0.4%	0.019	0.359	0.4%	0.020	0.360	0.4%	0.012	0.352	0.4%
95	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.340	0.007	0.347	0.4%	0.013	0.353	0.4%	0.018	0.358	0.4%	0.010	0.350	0.4%
95	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.340	0.005	0.345	0.4%	0.003	0.343	0.4%	0.004	0.344	0.4%	0.003	0.343	0.4%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Chlorodifluoromethane (CAS 75-45-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
350,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.020	0.010	1.030	0.0003%	0.012	1.032	0.0003%	0.013	1.033	0.0003%	0.008	1.028	0.0003%
350,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.020	0.010	1.030	0.0003%	0.014	1.034	0.0003%	0.011	1.031	0.0003%	0.007	1.027	0.0003%
350,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.020	0.010	1.030	0.0003%	0.010	1.030	0.0003%	0.012	1.032	0.0003%	0.007	1.027	0.0003%
350,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.020	0.008	1.028	0.0003%	0.012	1.032	0.0003%	0.010	1.030	0.0003%	0.007	1.027	0.0003%
350,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.020	0.022	1.042	0.0003%	0.015	1.035	0.0003%	0.022	1.042	0.0003%	0.014	1.034	0.0003%
350,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.020	0.029	1.049	0.0003%	0.030	1.050	0.0003%	0.036	1.056	0.0003%	0.022	1.042	0.0003%
350,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.020	0.006	1.026	0.0003%	0.009	1.029	0.0003%	0.009	1.029	0.0003%	0.006	1.026	0.0003%
350,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.020	0.022	1.042	0.0003%	0.023	1.043	0.0003%	0.024	1.044	0.0003%	0.014	1.034	0.0003%
350,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.020	0.022	1.042	0.0003%	0.029	1.049	0.0003%	0.030	1.050	0.0003%	0.018	1.038	0.0003%
350,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.020	0.012	1.032	0.0003%	0.018	1.038	0.0003%	0.020	1.040	0.0003%	0.011	1.031	0.0003%
350,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.020	0.027	1.047	0.0003%	0.059	1.079	0.0003%	0.051	1.071	0.0003%	0.032	1.052	0.0003%
350,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.020	0.015	1.035	0.0003%	0.027	1.047	0.0003%	0.025	1.045	0.0003%	0.016	1.036	0.0003%
350,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.020	0.005	1.025	0.0003%	0.006	1.026	0.0003%	0.008	1.028	0.0003%	0.004	1.024	0.0003%
350,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.020	0.013	1.033	0.0003%	0.017	1.037	0.0003%	0.022	1.042	0.0003%	0.012	1.032	0.0003%
350,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.020	0.005	1.025	0.0003%	0.010	1.030	0.0003%	0.012	1.032	0.0003%	0.007	1.027	0.0003%
350,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.020	0.014	1.034	0.0003%	0.020	1.040	0.0003%	0.021	1.041	0.0003%	0.013	1.033	0.0003%
350,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.020	0.006	1.026	0.0003%	0.008	1.028	0.0003%	0.009	1.029	0.0003%	0.006	1.026	0.0003%
350,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.020	0.004	1.024	0.0003%	0.009	1.029	0.0003%	0.009	1.029	0.0003%	0.006	1.026	0.0003%
350,000	ING-6	Royal Road Public School	510337	4765360	1.020	0.008	1.028	0.0003%	0.014	1.034	0.0003%	0.012	1.032	0.0003%	0.008	1.028	0.0003%
350,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.020	0.004	1.024	0.0003%	0.007	1.027	0.0003%	0.007	1.027	0.0003%	0.004	1.024	0.0003%
350,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.020	0.004	1.024	0.0003%	0.009	1.029	0.0003%	0.008	1.028	0.0003%	0.005	1.025	0.0003%
350,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.020	0.012	1.032	0.0003%	0.020	1.040	0.0003%	0.023	1.043	0.0003%	0.012	1.032	0.0003%
350,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.020	0.007	1.027	0.0003%	0.014	1.034	0.0003%	0.016	1.036	0.0003%	0.010	1.030	0.0003%
350,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.020	0.018	1.038	0.0003%	0.067	1.087	0.0003%	0.064	1.084	0.0003%	0.039	1.059	0.0003%
350,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.020	0.023	1.043	0.0003%	0.048	1.068	0.0003%	0.060	1.080	0.0003%	0.033	1.053	0.0003%
350,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.020	0.026	1.046	0.0003%	0.044	1.064	0.0003%	0.074	1.094	0.0003%	0.036	1.056	0.0003%
350,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.020	0.016	1.036	0.0003%	0.014	1.034	0.0003%	0.018	1.038	0.0003%	0.010	1.030	0.0003%
350,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.020	0.010	1.030	0.0003%	0.010	1.030	0.0003%	0.015	1.035	0.0003%	0.008	1.028	0.0003%
350,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.020	0.006	1.026	0.0003%	0.005	1.025	0.0003%	0.007	1.027	0.0003%	0.004	1.024	0.0003%
350,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.020	0.004	1.024	0.0003%	0.006	1.026	0.0003%	0.008	1.028	0.0003%	0.004	1.024	0.0003%
350,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.020	0.002	1.022	0.0003%	0.002	1.022	0.0003%	0.003	1.023	0.0003%	0.002	1.022	0.0003%
350,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.020	0.002	1.022	0.0003%	0.002	1.022	0.0003%	0.002	1.022	0.0003%	0.001	1.021	0.0003%
350,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.020	0.016	1.036	0.0003%	0.037	1.057	0.0003%	0.027	1.047	0.0003%	0.019	1.039	0.0003%
350,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.020	0.014	1.034	0.0003%	0.039	1.059	0.0003%	0.029	1.049	0.0003%	0.016	1.036	0.0003%
350,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.020	0.022	1.042	0.0003%	0.033	1.053	0.0003%	0.057	1.077	0.0003%	0.030	1.050	0.0003%
350,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.020	0.017	1.037	0.0003%	0.033	1.053	0.0003%	0.053	1.073	0.0003%	0.029	1.049	0.0003%
350,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.020	0.018	1.038	0.0003%	0.021	1.041	0.0003%	0.030	1.050	0.0003%	0.015	1.035	0.0003%
350,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.020	0.012	1.032	0.0003%	0.023	1.043	0.0003%	0.029	1.049	0.0003%	0.015	1.035	0.0003%
350,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.020	0.014	1.034	0.0003%	0.024	1.044	0.0003%	0.032	1.052	0.0003%	0.017	1.037	0.0003%
350,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.020	0.013	1.033	0.0003%	0.014	1.034	0.0003%	0.023	1.043	0.0003%	0.012	1.032	0.0003%
350,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.020	0.015	1.035	0.0003%	0.015	1.035	0.0003%	0.016	1.036	0.0003%	0.010	1.030	0.0003%
350,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.020	0.006	1.026	0.0003%	0.010	1.030	0.0003%	0.014	1.034	0.0003%	0.008	1.028	0.0003%
350,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.020	0.004	1.024	0.0003%	0.003	1.023	0.0003%	0.003	1.023	0.0003%	0.002	1.022	0.0003%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,2-Dichloroethene (CAS 540-59-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
105	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.079	0.103	0.182	0.2%	0.119	0.198	0.2%	0.123	0.202	0.2%	0.080	0.159	0.2%
105	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.079	0.097	0.176	0.2%	0.136	0.215	0.2%	0.111	0.190	0.2%	0.066	0.145	0.1%
105	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.079	0.098	0.177	0.2%	0.101	0.180	0.2%	0.122	0.201	0.2%	0.069	0.148	0.1%
105	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.079	0.076	0.155	0.1%	0.114	0.193	0.2%	0.102	0.181	0.2%	0.067	0.146	0.1%
105	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.079	0.211	0.290	0.3%	0.146	0.225	0.2%	0.212	0.291	0.3%	0.140	0.219	0.2%
105	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.079	0.283	0.362	0.3%	0.290	0.369	0.4%	0.349	0.428	0.4%	0.221	0.300	0.3%
105	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.079	0.057	0.136	0.1%	0.092	0.171	0.2%	0.093	0.172	0.2%	0.062	0.141	0.1%
105	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.079	0.216	0.295	0.3%	0.222	0.301	0.3%	0.236	0.315	0.3%	0.135	0.214	0.2%
105	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.079	0.217	0.296	0.3%	0.280	0.359	0.3%	0.290	0.369	0.4%	0.178	0.257	0.2%
105	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.079	0.121	0.200	0.2%	0.179	0.258	0.2%	0.195	0.274	0.3%	0.109	0.188	0.2%
105	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.079	0.261	0.340	0.3%	0.581	0.660	0.6%	0.505	0.584	0.6%	0.314	0.393	0.4%
105	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.079	0.149	0.228	0.2%	0.269	0.348	0.3%	0.248	0.327	0.3%	0.155	0.234	0.2%
105	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.079	0.047	0.126	0.1%	0.058	0.137	0.1%	0.078	0.157	0.1%	0.042	0.117	0.1%
105	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.079	0.127	0.206	0.2%	0.171	0.250	0.2%	0.218	0.297	0.3%	0.114	0.193	0.2%
105	ING-2	Laurie Hawkins Public School	509019	4765860	0.079	0.046	0.125	0.1%	0.101	0.180	0.2%	0.115	0.194	0.2%	0.065	0.144	0.1%
105	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.079	0.135	0.214	0.2%	0.200	0.279	0.3%	0.206	0.285	0.3%	0.125	0.204	0.2%
105	ING-4	On the river north of 209 County Road 9	509480	4765180	0.079	0.063	0.142	0.1%	0.078	0.157	0.1%	0.089	0.168	0.2%	0.055	0.134	0.1%
105	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.079	0.044	0.123	0.1%	0.084	0.163	0.2%	0.089	0.168	0.2%	0.054	0.133	0.1%
105	ING-6	Royal Road Public School	510337	4765360	0.079	0.079	0.158	0.2%	0.137	0.216	0.2%	0.122	0.201	0.2%	0.079	0.158	0.2%
105	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.079	0.038	0.117	0.1%	0.065	0.144	0.1%	0.066	0.145	0.1%	0.040	0.119	0.1%
105	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.079	0.039	0.118	0.1%	0.087	0.166	0.2%	0.075	0.154	0.1%	0.050	0.129	0.1%
105	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.079	0.116	0.195	0.2%	0.194	0.273	0.3%	0.230	0.309	0.3%	0.120	0.199	0.2%
105	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.079	0.074	0.153	0.1%	0.140	0.219	0.2%	0.155	0.234	0.2%	0.095	0.174	0.2%
105	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.079	0.179	0.258	0.2%	0.655	0.734	0.7%	0.632	0.711	0.7%	0.383	0.462	0.4%
105	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.079	0.224	0.303	0.3%	0.476	0.555	0.5%	0.586	0.665	0.6%	0.320	0.399	0.4%
105	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.079	0.258	0.337	0.3%	0.430	0.509	0.5%	0.723	0.802	0.8%	0.358	0.437	0.4%
105	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.079	0.159	0.238	0.2%	0.133	0.212	0.2%	0.177	0.256	0.2%	0.103	0.182	0.2%
105	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.079	0.096	0.175	0.2%	0.101	0.180	0.2%	0.145	0.224	0.2%	0.079	0.158	0.2%
105	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.079	0.063	0.142	0.1%	0.052	0.131	0.1%	0.069	0.148	0.1%	0.038	0.117	0.1%
105	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.079	0.036	0.115	0.1%	0.058	0.137	0.1%	0.078	0.157	0.1%	0.043	0.122	0.1%
105	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.079	0.015	0.094	0.1%	0.022	0.101	0.1%	0.027	0.106	0.1%	0.016	0.095	0.1%
105	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.079	0.015	0.094	0.1%	0.017	0.096	0.1%	0.022	0.101	0.1%	0.012	0.091	0.1%
105	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.079	0.159	0.238	0.2%	0.364	0.443	0.4%	0.261	0.340	0.3%	0.189	0.268	0.3%
105	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.079	0.135	0.214	0.2%	0.384	0.463	0.4%	0.287	0.366	0.3%	0.156	0.235	0.2%
105	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.079	0.216	0.295	0.3%	0.325	0.404	0.4%	0.560	0.639	0.6%	0.300	0.379	0.4%
105	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.079	0.169	0.248	0.2%	0.324	0.403	0.4%	0.525	0.604	0.6%	0.281	0.360	0.3%
105	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.079	0.180	0.259	0.2%	0.210	0.289	0.3%	0.294	0.373	0.4%	0.152	0.231	0.2%
105	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.079	0.121	0.200	0.2%	0.224	0.303	0.3%	0.285	0.364	0.3%	0.148	0.227	0.2%
105	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.079	0.142	0.221	0.2%	0.240	0.319	0.3%	0.318	0.397	0.4%	0.170	0.249	0.2%
105	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.079	0.125	0.204	0.2%	0.134	0.213	0.2%	0.224	0.303	0.3%	0.118	0.197	0.2%
105	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.079	0.152	0.231	0.2%	0.147	0.226	0.2%	0.161	0.240	0.2%	0.099	0.178	0.2%
105	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.079	0.058	0.137	0.1%	0.102	0.181	0.2%	0.140	0.219	0.2%	0.076	0.155	0.1%
105	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.079	0.036	0.115	0.1%	0.027	0.106	0.1%	0.032	0.111	0.1%	0.021	0.100	0.1%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**1,2,3-Trimethyl Benzene (CAS 526-73-8)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
220	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.021	0.511	0.2%	0.024	0.514	0.2%	0.025	0.515	0.2%	0.016	0.506	0.2%
220	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.020	0.510	0.2%	0.027	0.517	0.2%	0.022	0.512	0.2%	0.013	0.503	0.2%
220	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.020	0.510	0.2%	0.020	0.510	0.2%	0.025	0.515	0.2%	0.014	0.504	0.2%
220	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.015	0.505	0.2%	0.023	0.513	0.2%	0.021	0.511	0.2%	0.014	0.504	0.2%
220	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.043	0.533	0.2%	0.029	0.519	0.2%	0.043	0.533	0.2%	0.028	0.518	0.2%
220	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.057	0.547	0.2%	0.059	0.549	0.2%	0.071	0.561	0.3%	0.045	0.535	0.2%
220	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.012	0.502	0.2%	0.019	0.509	0.2%	0.019	0.509	0.2%	0.013	0.503	0.2%
220	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.044	0.534	0.2%	0.045	0.535	0.2%	0.048	0.538	0.2%	0.027	0.517	0.2%
220	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.044	0.534	0.2%	0.057	0.547	0.2%	0.059	0.549	0.2%	0.036	0.526	0.2%
220	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.024	0.514	0.2%	0.036	0.526	0.2%	0.039	0.529	0.2%	0.022	0.512	0.2%
220	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.053	0.543	0.2%	0.117	0.607	0.3%	0.102	0.592	0.3%	0.063	0.553	0.3%
220	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.030	0.520	0.2%	0.054	0.544	0.2%	0.050	0.540	0.2%	0.031	0.521	0.2%
220	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.009	0.499	0.2%	0.012	0.502	0.2%	0.016	0.506	0.2%	0.008	0.498	0.2%
220	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.026	0.516	0.2%	0.035	0.525	0.2%	0.044	0.534	0.2%	0.023	0.513	0.2%
220	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.009	0.499	0.2%	0.020	0.510	0.2%	0.023	0.513	0.2%	0.013	0.503	0.2%
220	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.027	0.517	0.2%	0.040	0.530	0.2%	0.042	0.532	0.2%	0.025	0.515	0.2%
220	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.013	0.503	0.2%	0.016	0.506	0.2%	0.018	0.508	0.2%	0.011	0.501	0.2%
220	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.009	0.499	0.2%	0.017	0.507	0.2%	0.018	0.508	0.2%	0.011	0.501	0.2%
220	ING-6	Royal Road Public School	510337	4765360	0.490	0.016	0.506	0.2%	0.028	0.518	0.2%	0.025	0.515	0.2%	0.016	0.506	0.2%
220	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.008	0.498	0.2%	0.013	0.503	0.2%	0.013	0.503	0.2%	0.008	0.498	0.2%
220	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.008	0.498	0.2%	0.018	0.508	0.2%	0.015	0.505	0.2%	0.010	0.500	0.2%
220	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.024	0.514	0.2%	0.039	0.529	0.2%	0.047	0.537	0.2%	0.024	0.514	0.2%
220	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.015	0.505	0.2%	0.028	0.518	0.2%	0.031	0.521	0.2%	0.019	0.509	0.2%
220	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.036	0.526	0.2%	0.132	0.622	0.3%	0.128	0.618	0.3%	0.077	0.567	0.3%
220	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.045	0.535	0.2%	0.096	0.586	0.3%	0.118	0.608	0.3%	0.065	0.555	0.3%
220	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.052	0.542	0.2%	0.087	0.577	0.3%	0.146	0.636	0.3%	0.072	0.562	0.3%
220	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.032	0.522	0.2%	0.027	0.517	0.2%	0.036	0.526	0.2%	0.021	0.511	0.2%
220	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.019	0.509	0.2%	0.020	0.510	0.2%	0.029	0.519	0.2%	0.016	0.506	0.2%
220	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.013	0.503	0.2%	0.011	0.501	0.2%	0.014	0.504	0.2%	0.008	0.498	0.2%
220	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.007	0.497	0.2%	0.012	0.502	0.2%	0.016	0.506	0.2%	0.009	0.499	0.2%
220	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.003	0.493	0.2%	0.004	0.494	0.2%	0.005	0.495	0.2%	0.003	0.493	0.2%
220	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.003	0.493	0.2%	0.003	0.493	0.2%	0.004	0.494	0.2%	0.002	0.492	0.2%
220	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.032	0.522	0.2%	0.074	0.564	0.3%	0.053	0.543	0.2%	0.038	0.528	0.2%
220	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.027	0.517	0.2%	0.078	0.568	0.3%	0.058	0.548	0.2%	0.032	0.522	0.2%
220	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.044	0.534	0.2%	0.066	0.556	0.3%	0.113	0.603	0.3%	0.061	0.551	0.3%
220	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.034	0.524	0.2%	0.065	0.555	0.3%	0.106	0.596	0.3%	0.057	0.547	0.2%
220	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.036	0.526	0.2%	0.042	0.532	0.2%	0.059	0.549	0.2%	0.031	0.521	0.2%
220	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.025	0.515	0.2%	0.045	0.535	0.2%	0.058	0.548	0.2%	0.030	0.520	0.2%
220	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.029	0.519	0.2%	0.049	0.539	0.2%	0.064	0.554	0.3%	0.034	0.524	0.2%
220	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.025	0.515	0.2%	0.027	0.517	0.2%	0.045	0.535	0.2%	0.024	0.514	0.2%
220	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.031	0.521	0.2%	0.030	0.520	0.2%	0.033	0.523	0.2%	0.020	0.510	0.2%
220	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.012	0.502	0.2%	0.021	0.511	0.2%	0.028	0.518	0.2%	0.015	0.505	0.2%
220	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.007	0.497	0.2%	0.005	0.495	0.2%	0.006	0.496	0.2%	0.004	0.494	0.2%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**2-Methyl Butane (CAS 78-78-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7,080	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	2.000	0.080	2.080	0.03%	0.093	2.093	0.03%	0.096	2.096	0.03%	0.063	2.063	0.03%
7,080	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	2.000	0.076	2.076	0.03%	0.106	2.106	0.03%	0.086	2.086	0.03%	0.051	2.051	0.03%
7,080	ZOR-3	Residence at 663951 Rd 66	510216	4770270	2.000	0.076	2.076	0.03%	0.079	2.079	0.03%	0.095	2.095	0.03%	0.054	2.054	0.03%
7,080	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	2.000	0.059	2.059	0.03%	0.089	2.089	0.03%	0.080	2.080	0.03%	0.053	2.053	0.03%
7,080	ZOR-5	Residence at 334789 33rd Line	508931	4768760	2.000	0.165	2.165	0.03%	0.114	2.114	0.03%	0.166	2.166	0.03%	0.109	2.109	0.03%
7,080	ZOR-6	Residence at 334742 33rd Line	509185	4768350	2.000	0.221	2.221	0.03%	0.227	2.227	0.03%	0.273	2.273	0.03%	0.172	2.172	0.03%
7,080	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	2.000	0.045	2.045	0.03%	0.072	2.072	0.03%	0.073	2.073	0.03%	0.049	2.049	0.03%
7,080	ZOR-8	Residence at 643743 Road 64	508940	4767980	2.000	0.168	2.168	0.03%	0.173	2.173	0.03%	0.184	2.184	0.03%	0.105	2.105	0.03%
7,080	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	2.000	0.169	2.169	0.03%	0.219	2.219	0.03%	0.227	2.227	0.03%	0.139	2.139	0.03%
7,080	ZOR-10	Residence at 334578 33rd Line	509739	4766780	2.000	0.094	2.094	0.03%	0.139	2.139	0.03%	0.152	2.152	0.03%	0.085	2.085	0.03%
7,080	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	2.000	0.204	2.204	0.03%	0.454	2.454	0.03%	0.394	2.394	0.03%	0.245	2.245	0.03%
7,080	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	2.000	0.116	2.116	0.03%	0.210	2.210	0.03%	0.193	2.193	0.03%	0.121	2.121	0.03%
7,080	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	2.000	0.037	2.037	0.03%	0.045	2.045	0.03%	0.061	2.061	0.03%	0.033	2.033	0.03%
7,080	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	2.000	0.099	2.099	0.03%	0.134	2.134	0.03%	0.170	2.170	0.03%	0.089	2.089	0.03%
7,080	ING-2	Laurie Hawkins Public School	509019	4765860	2.000	0.036	2.036	0.03%	0.079	2.079	0.03%	0.090	2.090	0.03%	0.051	2.051	0.03%
7,080	ING-3	Ingersoll District Collegiate Institute	510512	4766230	2.000	0.106	2.106	0.03%	0.156	2.156	0.03%	0.161	2.161	0.03%	0.098	2.098	0.03%
7,080	ING-4	On the river north of 209 County Road 9	509480	4765180	2.000	0.049	2.049	0.03%	0.061	2.061	0.03%	0.069	2.069	0.03%	0.043	2.043	0.03%
7,080	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	2.000	0.034	2.034	0.03%	0.066	2.066	0.03%	0.070	2.070	0.03%	0.042	2.042	0.03%
7,080	ING-6	Royal Road Public School	510337	4765360	2.000	0.061	2.061	0.03%	0.107	2.107	0.03%	0.095	2.095	0.03%	0.062	2.062	0.03%
7,080	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	2.000	0.030	2.030	0.03%	0.050	2.050	0.03%	0.051	2.051	0.03%	0.031	2.031	0.03%
7,080	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	2.000	0.030	2.030	0.03%	0.068	2.068	0.03%	0.058	2.058	0.03%	0.039	2.039	0.03%
7,080	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	2.000	0.091	2.091	0.03%	0.151	2.151	0.03%	0.180	2.180	0.03%	0.094	2.094	0.03%
7,080	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	2.000	0.057	2.057	0.03%	0.109	2.109	0.03%	0.121	2.121	0.03%	0.074	2.074	0.03%
7,080	SWO-1	Residence at 584052 Beachville Road	511124	4766750	2.000	0.139	2.139	0.03%	0.511	2.511	0.04%	0.493	2.493	0.04%	0.299	2.299	0.03%
7,080	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	2.000	0.175	2.175	0.03%	0.371	2.371	0.03%	0.458	2.458	0.03%	0.250	2.250	0.03%
7,080	SWO-3	Residence at 584142 Beachville Road	511722	4767480	2.000	0.202	2.202	0.03%	0.336	2.336	0.03%	0.564	2.564	0.04%	0.279	2.279	0.03%
7,080	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	2.000	0.124	2.124	0.03%	0.104	2.104	0.03%	0.138	2.138	0.03%	0.080	2.080	0.03%
7,080	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	2.000	0.075	2.075	0.03%	0.079	2.079	0.03%	0.113	2.113	0.03%	0.061	2.061	0.03%
7,080	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	2.000	0.049	2.049	0.03%	0.041	2.041	0.03%	0.054	2.054	0.03%	0.030	2.030	0.03%
7,080	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	2.000	0.028	2.028	0.03%	0.046	2.046	0.03%	0.061	2.061	0.03%	0.034	2.034	0.03%
7,080	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	2.000	0.012	2.012	0.03%	0.017	2.017	0.03%	0.021	2.021	0.03%	0.012	2.012	0.03%
7,080	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	2.000	0.012	2.012	0.03%	0.013	2.013	0.03%	0.017	2.017	0.03%	0.010	2.010	0.03%
7,080	SWO-10	Residence at 563977 Karn Road	510980	4765990	2.000	0.124	2.124	0.03%	0.284	2.284	0.03%	0.204	2.204	0.03%	0.148	2.148	0.03%
7,080	SWO-11	Residence at 564028 Karn Road	511396	4766310	2.000	0.105	2.105	0.03%	0.300	2.300	0.03%	0.224	2.224	0.03%	0.122	2.122	0.03%
7,080	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	2.000	0.169	2.169	0.03%	0.254	2.254	0.03%	0.437	2.437	0.03%	0.234	2.234	0.03%
7,080	SWO-13	Centreville Pond and Conservation Area	511570	4766920	2.000	0.132	2.132	0.03%	0.253	2.253	0.03%	0.410	2.410	0.03%	0.220	2.220	0.03%
7,080	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	2.000	0.141	2.141	0.03%	0.164	2.164	0.03%	0.229	2.229	0.03%	0.119	2.119	0.03%
7,080	SWO-15	Residences at 564146 Karn Road	512251	4767100	2.000	0.095	2.095	0.03%	0.175	2.175	0.03%	0.222	2.222	0.03%	0.115	2.115	0.03%
7,080	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	2.000	0.111	2.111	0.03%	0.188	2.188	0.03%	0.248	2.248	0.03%	0.133	2.133	0.03%
7,080	SWO-17	Residence at 564226 Karn Road	512958	4767760	2.000	0.098	2.098	0.03%	0.105	2.105	0.03%	0.175	2.175	0.03%	0.092	2.092	0.03%
7,080	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	2.000	0.119	2.119	0.03%	0.115	2.115	0.03%	0.126	2.126	0.03%	0.078	2.078	0.03%
7,080	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	2.000	0.045	2.045	0.03%	0.079	2.079	0.03%	0.109	2.109	0.03%	0.059	2.059	0.03%
7,080	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	2.000	0.028	2.028	0.03%	0.021	2.021	0.03%	0.025	2.025	0.03%	0.016	2.016	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**2-Methyl Hexane (CAS 591-76-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,228	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.100	0.038	4.138	0.34%	0.044	4.144	0.34%	0.046	4.146	0.34%	0.030	4.130	0.34%
1,228	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.100	0.036	4.136	0.34%	0.051	4.151	0.34%	0.041	4.141	0.34%	0.024	4.124	0.34%
1,228	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.100	0.036	4.136	0.34%	0.038	4.138	0.34%	0.045	4.145	0.34%	0.026	4.126	0.34%
1,228	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.100	0.028	4.128	0.34%	0.042	4.142	0.34%	0.038	4.138	0.34%	0.025	4.125	0.34%
1,228	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.100	0.079	4.179	0.34%	0.054	4.154	0.34%	0.079	4.179	0.34%	0.052	4.152	0.34%
1,228	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.100	0.105	4.205	0.34%	0.108	4.208	0.34%	0.130	4.230	0.34%	0.082	4.182	0.34%
1,228	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.100	0.021	4.121	0.34%	0.034	4.134	0.34%	0.035	4.135	0.34%	0.023	4.123	0.34%
1,228	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.100	0.080	4.180	0.34%	0.083	4.183	0.34%	0.088	4.188	0.34%	0.050	4.150	0.34%
1,228	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.100	0.081	4.181	0.34%	0.104	4.204	0.34%	0.108	4.208	0.34%	0.066	4.166	0.34%
1,228	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.100	0.045	4.145	0.34%	0.067	4.167	0.34%	0.073	4.173	0.34%	0.041	4.141	0.34%
1,228	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.100	0.097	4.197	0.34%	0.216	4.316	0.35%	0.188	4.288	0.35%	0.117	4.217	0.34%
1,228	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.100	0.055	4.155	0.34%	0.100	4.200	0.34%	0.092	4.192	0.34%	0.058	4.158	0.34%
1,228	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.100	0.017	4.117	0.34%	0.022	4.122	0.34%	0.029	4.129	0.34%	0.016	4.116	0.34%
1,228	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.100	0.047	4.147	0.34%	0.064	4.164	0.34%	0.081	4.181	0.34%	0.042	4.142	0.34%
1,228	ING-2	Laurie Hawkins Public School	509019	4765860	4.100	0.017	4.117	0.34%	0.038	4.138	0.34%	0.043	4.143	0.34%	0.024	4.124	0.34%
1,228	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.100	0.050	4.150	0.34%	0.074	4.174	0.34%	0.077	4.177	0.34%	0.047	4.147	0.34%
1,228	ING-4	On the river north of 209 County Road 9	509480	4765180	4.100	0.023	4.123	0.34%	0.029	4.129	0.34%	0.033	4.133	0.34%	0.020	4.120	0.34%
1,228	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.100	0.016	4.116	0.34%	0.031	4.131	0.34%	0.033	4.133	0.34%	0.020	4.120	0.34%
1,228	ING-6	Royal Road Public School	510337	4765360	4.100	0.029	4.129	0.34%	0.051	4.151	0.34%	0.045	4.145	0.34%	0.029	4.129	0.34%
1,228	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.100	0.014	4.114	0.34%	0.024	4.124	0.34%	0.024	4.124	0.34%	0.015	4.115	0.34%
1,228	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.100	0.014	4.114	0.34%	0.033	4.133	0.34%	0.028	4.128	0.34%	0.019	4.119	0.34%
1,228	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.100	0.043	4.143	0.34%	0.072	4.172	0.34%	0.086	4.186	0.34%	0.045	4.145	0.34%
1,228	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.100	0.027	4.127	0.34%	0.052	4.152	0.34%	0.058	4.158	0.34%	0.035	4.135	0.34%
1,228	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.100	0.066	4.166	0.34%	0.244	4.344	0.35%	0.235	4.335	0.35%	0.143	4.243	0.35%
1,228	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.100	0.083	4.183	0.34%	0.177	4.277	0.35%	0.218	4.318	0.35%	0.119	4.219	0.34%
1,228	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.100	0.096	4.196	0.34%	0.160	4.260	0.35%	0.269	4.369	0.36%	0.133	4.233	0.34%
1,228	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.100	0.059	4.159	0.34%	0.050	4.150	0.34%	0.066	4.166	0.34%	0.038	4.138	0.34%
1,228	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.100	0.036	4.136	0.34%	0.038	4.138	0.34%	0.054	4.154	0.34%	0.029	4.129	0.34%
1,228	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.100	0.023	4.123	0.34%	0.019	4.119	0.34%	0.026	4.126	0.34%	0.014	4.114	0.34%
1,228	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.100	0.013	4.113	0.33%	0.022	4.122	0.34%	0.029	4.129	0.34%	0.016	4.116	0.34%
1,228	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.100	0.006	4.106	0.33%	0.008	4.108	0.33%	0.010	4.110	0.33%	0.006	4.106	0.33%
1,228	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.100	0.006	4.106	0.33%	0.006	4.106	0.33%	0.008	4.108	0.33%	0.005	4.105	0.33%
1,228	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.100	0.059	4.159	0.34%	0.136	4.236	0.34%	0.097	4.197	0.34%	0.071	4.171	0.34%
1,228	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.100	0.050	4.150	0.34%	0.143	4.243	0.35%	0.107	4.207	0.34%	0.058	4.158	0.34%
1,228	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.100	0.081	4.181	0.34%	0.121	4.221	0.34%	0.208	4.308	0.35%	0.112	4.212	0.34%
1,228	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.100	0.063	4.163	0.34%	0.121	4.221	0.34%	0.195	4.295	0.35%	0.105	4.205	0.34%
1,228	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.100	0.067	4.167	0.34%	0.078	4.178	0.34%	0.109	4.209	0.34%	0.057	4.157	0.34%
1,228	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.100	0.045	4.145	0.34%	0.083	4.183	0.34%	0.106	4.206	0.34%	0.055	4.155	0.34%
1,228	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.100	0.053	4.153	0.34%	0.089	4.189	0.34%	0.118	4.218	0.34%	0.063	4.163	0.34%
1,228	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.100	0.047	4.147	0.34%	0.050	4.150	0.34%	0.083	4.183	0.34%	0.044	4.144	0.34%
1,228	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.100	0.057	4.157	0.34%	0.055	4.155	0.34%	0.060	4.160	0.34%	0.037	4.137	0.34%
1,228	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.100	0.022	4.122	0.34%	0.038	4.138	0.34%	0.052	4.152	0.34%	0.028	4.128	0.34%
1,228	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.100	0.014	4.114	0.33%	0.010	4.110	0.33%	0.012	4.112	0.33%	0.008	4.108	0.33%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**2-Methyl Pentane (CAS 107-83-5)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,750	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.350	0.020	0.370	0.02%	0.023	0.373	0.02%	0.023	0.373	0.02%	0.015	0.365	0.02%
1,750	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.350	0.018	0.368	0.02%	0.026	0.376	0.02%	0.021	0.371	0.02%	0.012	0.362	0.02%
1,750	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.350	0.019	0.369	0.02%	0.019	0.369	0.02%	0.023	0.373	0.02%	0.013	0.363	0.02%
1,750	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.350	0.014	0.364	0.02%	0.022	0.372	0.02%	0.019	0.369	0.02%	0.013	0.363	0.02%
1,750	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.350	0.040	0.390	0.02%	0.028	0.378	0.02%	0.040	0.390	0.02%	0.027	0.377	0.02%
1,750	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.350	0.054	0.404	0.02%	0.055	0.405	0.02%	0.066	0.416	0.02%	0.042	0.392	0.02%
1,750	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.350	0.011	0.361	0.02%	0.017	0.367	0.02%	0.018	0.368	0.02%	0.012	0.362	0.02%
1,750	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.350	0.041	0.391	0.02%	0.042	0.392	0.02%	0.045	0.395	0.02%	0.026	0.376	0.02%
1,750	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.350	0.041	0.391	0.02%	0.053	0.403	0.02%	0.055	0.405	0.02%	0.034	0.384	0.02%
1,750	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.350	0.023	0.373	0.02%	0.034	0.384	0.02%	0.037	0.387	0.02%	0.021	0.371	0.02%
1,750	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.350	0.050	0.400	0.02%	0.111	0.461	0.03%	0.096	0.446	0.03%	0.060	0.410	0.02%
1,750	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.350	0.028	0.378	0.02%	0.051	0.401	0.02%	0.047	0.397	0.02%	0.029	0.379	0.02%
1,750	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.350	0.009	0.359	0.02%	0.011	0.361	0.02%	0.015	0.365	0.02%	0.008	0.358	0.02%
1,750	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.350	0.024	0.374	0.02%	0.033	0.383	0.02%	0.042	0.392	0.02%	0.022	0.372	0.02%
1,750	ING-2	Laurie Hawkins Public School	509019	4765860	0.350	0.009	0.359	0.02%	0.019	0.369	0.02%	0.022	0.372	0.02%	0.012	0.362	0.02%
1,750	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.350	0.026	0.376	0.02%	0.038	0.388	0.02%	0.039	0.389	0.02%	0.024	0.374	0.02%
1,750	ING-4	On the river north of 209 County Road 9	509480	4765180	0.350	0.012	0.362	0.02%	0.015	0.365	0.02%	0.017	0.367	0.02%	0.010	0.360	0.02%
1,750	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.350	0.008	0.358	0.02%	0.016	0.366	0.02%	0.017	0.367	0.02%	0.010	0.360	0.02%
1,750	ING-6	Royal Road Public School	510337	4765360	0.350	0.015	0.365	0.02%	0.026	0.376	0.02%	0.023	0.373	0.02%	0.015	0.365	0.02%
1,750	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.350	0.007	0.357	0.02%	0.012	0.362	0.02%	0.012	0.362	0.02%	0.008	0.358	0.02%
1,750	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.350	0.007	0.357	0.02%	0.017	0.367	0.02%	0.014	0.364	0.02%	0.010	0.360	0.02%
1,750	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.350	0.022	0.372	0.02%	0.037	0.387	0.02%	0.044	0.394	0.02%	0.023	0.373	0.02%
1,750	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.350	0.014	0.364	0.02%	0.027	0.377	0.02%	0.030	0.380	0.02%	0.018	0.368	0.02%
1,750	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.350	0.034	0.384	0.02%	0.125	0.475	0.03%	0.120	0.470	0.03%	0.073	0.423	0.02%
1,750	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.350	0.043	0.393	0.02%	0.090	0.440	0.03%	0.111	0.461	0.03%	0.061	0.411	0.02%
1,750	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.350	0.049	0.399	0.02%	0.082	0.432	0.03%	0.137	0.487	0.03%	0.068	0.418	0.02%
1,750	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.350	0.030	0.380	0.02%	0.025	0.375	0.02%	0.034	0.384	0.02%	0.020	0.370	0.02%
1,750	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.350	0.018	0.368	0.02%	0.019	0.369	0.02%	0.028	0.378	0.02%	0.015	0.365	0.02%
1,750	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.350	0.012	0.362	0.02%	0.010	0.360	0.02%	0.013	0.363	0.02%	0.007	0.357	0.02%
1,750	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.350	0.007	0.357	0.02%	0.011	0.361	0.02%	0.015	0.365	0.02%	0.008	0.358	0.02%
1,750	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.350	0.003	0.353	0.02%	0.004	0.354	0.02%	0.005	0.355	0.02%	0.003	0.353	0.02%
1,750	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.350	0.003	0.353	0.02%	0.003	0.353	0.02%	0.004	0.354	0.02%	0.002	0.352	0.02%
1,750	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.350	0.030	0.380	0.02%	0.069	0.419	0.02%	0.050	0.400	0.02%	0.036	0.386	0.02%
1,750	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.350	0.026	0.376	0.02%	0.073	0.423	0.02%	0.055	0.405	0.02%	0.030	0.380	0.02%
1,750	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.350	0.041	0.391	0.02%	0.062	0.412	0.02%	0.106	0.456	0.03%	0.057	0.407	0.02%
1,750	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.350	0.032	0.382	0.02%	0.062	0.412	0.02%	0.100	0.450	0.03%	0.053	0.403	0.02%
1,750	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.350	0.034	0.384	0.02%	0.040	0.390	0.02%	0.056	0.406	0.02%	0.029	0.379	0.02%
1,750	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.350	0.023	0.373	0.02%	0.043	0.393	0.02%	0.054	0.404	0.02%	0.028	0.378	0.02%
1,750	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.350	0.027	0.377	0.02%	0.046	0.396	0.02%	0.050	0.410	0.02%	0.032	0.382	0.02%
1,750	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.350	0.024	0.374	0.02%	0.026	0.376	0.02%	0.043	0.393	0.02%	0.022	0.372	0.02%
1,750	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.350	0.029	0.379	0.02%	0.028	0.378	0.02%	0.031	0.381	0.02%	0.019	0.369	0.02%
1,750	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.350	0.011	0.361	0.02%	0.019	0.369	0.02%	0.027	0.377	0.02%	0.014	0.364	0.02%
1,750	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.350	0.007	0.357	0.02%	0.005	0.355	0.02%	0.006	0.356	0.02%	0.004	0.354	0.02%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**3-Methyl Hexane (CAS 589-34-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,535	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.410	0.054	0.464	0.03%	0.063	0.473	0.03%	0.065	0.475	0.03%	0.042	0.452	0.03%
1,535	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.410	0.051	0.461	0.03%	0.071	0.481	0.03%	0.058	0.468	0.03%	0.034	0.444	0.03%
1,535	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.410	0.051	0.461	0.03%	0.053	0.463	0.03%	0.064	0.474	0.03%	0.036	0.446	0.03%
1,535	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.410	0.040	0.450	0.03%	0.060	0.470	0.03%	0.054	0.464	0.03%	0.035	0.445	0.03%
1,535	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.410	0.111	0.521	0.03%	0.077	0.487	0.03%	0.112	0.522	0.03%	0.074	0.484	0.03%
1,535	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.410	0.149	0.559	0.04%	0.153	0.563	0.04%	0.184	0.594	0.04%	0.116	0.526	0.03%
1,535	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.410	0.030	0.440	0.03%	0.048	0.458	0.03%	0.049	0.459	0.03%	0.033	0.443	0.03%
1,535	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.410	0.114	0.524	0.03%	0.117	0.527	0.03%	0.124	0.534	0.03%	0.071	0.481	0.03%
1,535	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.410	0.114	0.524	0.03%	0.147	0.557	0.04%	0.153	0.563	0.04%	0.094	0.504	0.03%
1,535	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.410	0.064	0.474	0.03%	0.094	0.504	0.03%	0.103	0.513	0.03%	0.057	0.467	0.03%
1,535	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.410	0.137	0.547	0.04%	0.306	0.716	0.05%	0.266	0.676	0.04%	0.165	0.575	0.04%
1,535	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.410	0.078	0.488	0.03%	0.142	0.552	0.04%	0.130	0.540	0.04%	0.082	0.492	0.03%
1,535	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.410	0.025	0.435	0.03%	0.031	0.441	0.03%	0.041	0.451	0.03%	0.022	0.432	0.03%
1,535	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.410	0.067	0.477	0.03%	0.090	0.500	0.03%	0.115	0.525	0.03%	0.060	0.470	0.03%
1,535	ING-2	Laurie Hawkins Public School	509019	4765860	0.410	0.024	0.434	0.03%	0.053	0.463	0.03%	0.061	0.471	0.03%	0.034	0.444	0.03%
1,535	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.410	0.071	0.481	0.03%	0.105	0.515	0.03%	0.109	0.519	0.03%	0.066	0.476	0.03%
1,535	ING-4	On the river north of 209 County Road 9	509480	4765180	0.410	0.033	0.443	0.03%	0.041	0.451	0.03%	0.047	0.457	0.03%	0.029	0.439	0.03%
1,535	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.410	0.023	0.433	0.03%	0.044	0.454	0.03%	0.047	0.457	0.03%	0.029	0.439	0.03%
1,535	ING-6	Royal Road Public School	510337	4765360	0.410	0.041	0.451	0.03%	0.072	0.482	0.03%	0.064	0.474	0.03%	0.042	0.452	0.03%
1,535	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.410	0.020	0.430	0.03%	0.034	0.444	0.03%	0.034	0.444	0.03%	0.021	0.431	0.03%
1,535	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.410	0.020	0.430	0.03%	0.046	0.456	0.03%	0.039	0.449	0.03%	0.026	0.436	0.03%
1,535	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.410	0.061	0.471	0.03%	0.102	0.512	0.03%	0.121	0.531	0.03%	0.063	0.473	0.03%
1,535	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.410	0.039	0.449	0.03%	0.073	0.483	0.03%	0.082	0.492	0.03%	0.050	0.460	0.03%
1,535	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.410	0.094	0.504	0.03%	0.345	0.755	0.05%	0.332	0.742	0.05%	0.201	0.611	0.04%
1,535	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.410	0.118	0.528	0.03%	0.250	0.660	0.04%	0.308	0.718	0.05%	0.168	0.578	0.04%
1,535	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.410	0.136	0.546	0.04%	0.226	0.636	0.04%	0.380	0.790	0.05%	0.188	0.598	0.04%
1,535	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.410	0.084	0.494	0.03%	0.070	0.480	0.03%	0.093	0.503	0.03%	0.054	0.464	0.03%
1,535	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.410	0.050	0.460	0.03%	0.053	0.463	0.03%	0.076	0.486	0.03%	0.041	0.451	0.03%
1,535	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.410	0.033	0.443	0.03%	0.027	0.437	0.03%	0.036	0.446	0.03%	0.020	0.430	0.03%
1,535	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.410	0.019	0.429	0.03%	0.031	0.441	0.03%	0.041	0.451	0.03%	0.023	0.433	0.03%
1,535	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.410	0.008	0.418	0.03%	0.012	0.422	0.03%	0.014	0.424	0.03%	0.008	0.418	0.03%
1,535	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.410	0.008	0.418	0.03%	0.009	0.419	0.03%	0.011	0.421	0.03%	0.006	0.416	0.03%
1,535	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.410	0.084	0.494	0.03%	0.191	0.601	0.04%	0.137	0.547	0.04%	0.100	0.510	0.03%
1,535	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.410	0.071	0.481	0.03%	0.202	0.612	0.04%	0.151	0.561	0.04%	0.082	0.492	0.03%
1,535	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.410	0.114	0.524	0.03%	0.171	0.581	0.04%	0.294	0.704	0.05%	0.158	0.568	0.04%
1,535	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.410	0.089	0.499	0.03%	0.170	0.580	0.04%	0.276	0.686	0.04%	0.148	0.558	0.04%
1,535	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.410	0.095	0.505	0.03%	0.110	0.520	0.03%	0.154	0.564	0.04%	0.080	0.490	0.03%
1,535	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.410	0.064	0.474	0.03%	0.118	0.528	0.03%	0.150	0.560	0.04%	0.078	0.488	0.03%
1,535	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.410	0.075	0.485	0.03%	0.126	0.536	0.03%	0.167	0.577	0.04%	0.090	0.500	0.03%
1,535	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.410	0.066	0.476	0.03%	0.071	0.481	0.03%	0.118	0.528	0.03%	0.062	0.472	0.03%
1,535	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.410	0.080	0.490	0.03%	0.078	0.488	0.03%	0.085	0.495	0.03%	0.052	0.462	0.03%
1,535	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.410	0.031	0.441	0.03%	0.054	0.464	0.03%	0.074	0.484	0.03%	0.040	0.450	0.03%
1,535	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.410	0.019	0.429	0.03%	0.014	0.424	0.03%	0.017	0.427	0.03%	0.011	0.421	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**3-Methyl Pentane (CAS 96-14-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,400	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.350	0.009	0.359	0.03%	0.010	0.360	0.03%	0.010	0.360	0.03%	0.007	0.357	0.03%
1,400	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.350	0.008	0.358	0.03%	0.011	0.361	0.03%	0.009	0.359	0.03%	0.006	0.356	0.03%
1,400	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.350	0.008	0.358	0.03%	0.008	0.358	0.03%	0.010	0.360	0.03%	0.006	0.356	0.03%
1,400	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.350	0.006	0.356	0.03%	0.010	0.360	0.03%	0.009	0.359	0.03%	0.006	0.356	0.03%
1,400	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.350	0.018	0.368	0.03%	0.012	0.362	0.03%	0.018	0.368	0.03%	0.012	0.362	0.03%
1,400	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.350	0.024	0.374	0.03%	0.024	0.374	0.03%	0.029	0.379	0.03%	0.019	0.369	0.03%
1,400	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.350	0.005	0.355	0.03%	0.008	0.358	0.03%	0.008	0.358	0.03%	0.005	0.355	0.03%
1,400	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.350	0.018	0.368	0.03%	0.019	0.369	0.03%	0.020	0.370	0.03%	0.011	0.361	0.03%
1,400	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.350	0.018	0.368	0.03%	0.024	0.374	0.03%	0.024	0.374	0.03%	0.015	0.365	0.03%
1,400	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.350	0.010	0.360	0.03%	0.015	0.365	0.03%	0.016	0.366	0.03%	0.009	0.359	0.03%
1,400	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.350	0.022	0.372	0.03%	0.049	0.399	0.03%	0.042	0.392	0.03%	0.026	0.376	0.03%
1,400	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.350	0.012	0.362	0.03%	0.023	0.373	0.03%	0.021	0.371	0.03%	0.013	0.363	0.03%
1,400	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.350	0.004	0.354	0.03%	0.005	0.355	0.03%	0.007	0.357	0.03%	0.004	0.354	0.03%
1,400	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.350	0.011	0.361	0.03%	0.014	0.364	0.03%	0.018	0.368	0.03%	0.010	0.360	0.03%
1,400	ING-2	Laurie Hawkins Public School	509019	4765860	0.350	0.004	0.354	0.03%	0.009	0.359	0.03%	0.010	0.360	0.03%	0.005	0.355	0.03%
1,400	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.350	0.011	0.361	0.03%	0.017	0.367	0.03%	0.017	0.367	0.03%	0.011	0.361	0.03%
1,400	ING-4	On the river north of 209 County Road 9	509480	4765180	0.350	0.005	0.355	0.03%	0.007	0.357	0.03%	0.007	0.357	0.03%	0.005	0.355	0.03%
1,400	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.350	0.004	0.354	0.03%	0.007	0.357	0.03%	0.008	0.358	0.03%	0.005	0.355	0.03%
1,400	ING-6	Royal Road Public School	510337	4765360	0.350	0.007	0.357	0.03%	0.012	0.362	0.03%	0.010	0.360	0.03%	0.007	0.357	0.03%
1,400	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.350	0.003	0.353	0.03%	0.005	0.355	0.03%	0.006	0.356	0.03%	0.003	0.353	0.03%
1,400	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.350	0.003	0.353	0.03%	0.007	0.357	0.03%	0.006	0.356	0.03%	0.004	0.354	0.03%
1,400	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.350	0.010	0.360	0.03%	0.016	0.366	0.03%	0.019	0.369	0.03%	0.010	0.360	0.03%
1,400	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.350	0.006	0.356	0.03%	0.012	0.362	0.03%	0.013	0.363	0.03%	0.008	0.358	0.03%
1,400	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.350	0.015	0.365	0.03%	0.055	0.405	0.03%	0.053	0.403	0.03%	0.032	0.382	0.03%
1,400	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.350	0.019	0.369	0.03%	0.040	0.390	0.03%	0.049	0.399	0.03%	0.027	0.377	0.03%
1,400	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.350	0.022	0.372	0.03%	0.036	0.386	0.03%	0.061	0.411	0.03%	0.030	0.380	0.03%
1,400	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.350	0.013	0.363	0.03%	0.011	0.361	0.03%	0.015	0.365	0.03%	0.009	0.359	0.03%
1,400	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.350	0.008	0.358	0.03%	0.009	0.359	0.03%	0.012	0.362	0.03%	0.007	0.357	0.03%
1,400	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.350	0.005	0.355	0.03%	0.004	0.354	0.03%	0.006	0.356	0.03%	0.003	0.353	0.03%
1,400	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.350	0.003	0.353	0.03%	0.005	0.355	0.03%	0.007	0.357	0.03%	0.004	0.354	0.03%
1,400	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.350	0.001	0.351	0.03%	0.002	0.352	0.03%	0.002	0.352	0.03%	0.001	0.351	0.03%
1,400	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.350	0.001	0.351	0.03%	0.001	0.351	0.03%	0.002	0.352	0.03%	0.001	0.351	0.03%
1,400	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.350	0.013	0.363	0.03%	0.031	0.381	0.03%	0.022	0.372	0.03%	0.016	0.366	0.03%
1,400	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.350	0.011	0.361	0.03%	0.032	0.382	0.03%	0.024	0.374	0.03%	0.013	0.363	0.03%
1,400	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.350	0.018	0.368	0.03%	0.027	0.377	0.03%	0.047	0.397	0.03%	0.025	0.375	0.03%
1,400	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.350	0.014	0.364	0.03%	0.027	0.377	0.03%	0.044	0.394	0.03%	0.024	0.374	0.03%
1,400	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.350	0.015	0.365	0.03%	0.018	0.368	0.03%	0.025	0.375	0.03%	0.013	0.363	0.03%
1,400	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.350	0.010	0.360	0.03%	0.019	0.369	0.03%	0.024	0.374	0.03%	0.012	0.362	0.03%
1,400	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.350	0.012	0.362	0.03%	0.020	0.370	0.03%	0.027	0.377	0.03%	0.014	0.364	0.03%
1,400	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.350	0.011	0.361	0.03%	0.011	0.361	0.03%	0.019	0.369	0.03%	0.010	0.360	0.03%
1,400	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.350	0.013	0.363	0.03%	0.012	0.362	0.03%	0.014	0.364	0.03%	0.008	0.358	0.03%
1,400	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.350	0.005	0.355	0.03%	0.009	0.359	0.03%	0.012	0.362	0.03%	0.006	0.356	0.03%
1,400	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.350	0.003	0.353	0.03%	0.002	0.352	0.03%	0.003	0.353	0.03%	0.002	0.352	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Butyl Acetate (CAS 123-86-4)**

**1-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
15,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.750	0.332	5.082	0.03%	0.309	5.059	0.03%	0.433	5.183	0.03%	0.212	4.962	0.03%
15,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.750	0.473	5.223	0.03%	0.443	5.193	0.03%	0.607	5.357	0.04%	0.314	5.064	0.03%
15,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.750	0.499	5.249	0.03%	0.606	5.356	0.04%	0.716	5.466	0.04%	0.379	5.129	0.03%
15,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.750	0.413	5.163	0.03%	0.487	5.237	0.03%	0.548	5.298	0.04%	0.277	5.027	0.03%
15,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.750	0.553	5.303	0.04%	0.488	5.238	0.03%	0.654	5.404	0.04%	0.319	5.069	0.03%
15,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.750	0.573	5.323	0.04%	0.526	5.276	0.04%	0.741	5.491	0.04%	0.361	5.111	0.03%
15,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.750	0.266	5.016	0.03%	0.272	5.022	0.03%	0.398	5.148	0.03%	0.196	4.946	0.03%
15,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.750	0.459	5.209	0.03%	0.443	5.193	0.03%	0.623	5.373	0.04%	0.305	5.055	0.03%
15,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.750	0.427	5.177	0.03%	0.469	5.177	0.03%	0.536	5.286	0.04%	0.272	5.022	0.03%
15,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.750	0.640	5.390	0.04%	0.471	5.221	0.03%	0.582	5.332	0.04%	0.289	5.039	0.03%
15,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.750	1.168	5.918	0.04%	1.812	6.562	0.04%	1.627	6.377	0.04%	0.868	5.618	0.04%
15,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.750	0.765	5.515	0.04%	0.954	5.704	0.04%	0.991	5.741	0.04%	0.514	5.264	0.04%
15,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.750	0.265	5.015	0.03%	0.296	5.046	0.03%	0.395	5.145	0.03%	0.194	4.944	0.03%
15,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.750	0.660	5.410	0.04%	0.482	5.232	0.03%	0.586	5.336	0.04%	0.292	5.042	0.03%
15,000	ING-2	Laurie Hawkins Public School	509019	4765860	4.750	0.288	5.038	0.03%	0.290	5.040	0.03%	0.393	5.143	0.03%	0.198	4.948	0.03%
15,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.750	0.676	5.426	0.04%	1.078	5.828	0.04%	0.999	5.749	0.04%	0.502	5.252	0.04%
15,000	ING-4	On the river north of 209 County Road 9	509480	4765180	4.750	0.403	5.153	0.03%	0.470	5.220	0.03%	0.422	5.172	0.03%	0.266	5.016	0.03%
15,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.750	0.244	4.994	0.03%	0.248	4.998	0.03%	0.333	5.083	0.03%	0.169	4.919	0.03%
15,000	ING-6	Royal Road Public School	510337	4765360	4.750	0.507	5.257	0.04%	0.775	5.525	0.04%	0.786	5.536	0.04%	0.398	5.148	0.03%
15,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.750	0.294	5.044	0.03%	0.415	5.165	0.03%	0.427	5.177	0.03%	0.241	4.991	0.03%
15,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.750	0.367	5.117	0.03%	0.539	5.289	0.04%	0.554	5.304	0.04%	0.301	5.051	0.03%
15,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.750	0.508	5.258	0.04%	0.786	5.536	0.04%	0.914	5.664	0.04%	0.451	5.201	0.03%
15,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.750	0.370	5.120	0.03%	0.564	5.314	0.04%	0.639	5.389	0.04%	0.349	5.099	0.03%
15,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.750	0.901	5.651	0.04%	1.351	6.101	0.04%	1.872	6.622	0.04%	0.879	5.629	0.04%
15,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.750	0.898	5.648	0.04%	0.850	5.600	0.04%	1.712	6.462	0.04%	0.774	5.524	0.04%
15,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.750	0.765	5.515	0.04%	0.682	5.432	0.04%	1.288	6.038	0.04%	0.589	5.339	0.04%
15,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.750	0.449	5.199	0.03%	0.393	5.143	0.03%	0.676	5.426	0.04%	0.322	5.072	0.03%
15,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.750	0.377	5.127	0.03%	0.329	5.079	0.03%	0.550	5.300	0.04%	0.264	5.014	0.03%
15,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.750	0.271	5.021	0.03%	0.201	4.951	0.03%	0.319	5.069	0.03%	0.155	4.905	0.03%
15,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.750	0.181	4.931	0.03%	0.190	4.940	0.03%	0.264	5.014	0.03%	0.136	4.886	0.03%
15,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.750	0.108	4.858	0.03%	0.117	4.867	0.03%	0.139	4.889	0.03%	0.082	4.832	0.03%
15,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.750	0.130	4.880	0.03%	0.091	4.841	0.03%	0.117	4.867	0.03%	0.065	4.815	0.03%
15,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.750	0.676	5.426	0.04%	1.083	5.833	0.04%	1.201	5.951	0.04%	0.586	5.336	0.04%
15,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.750	0.729	5.479	0.04%	1.026	5.776	0.04%	1.413	6.163	0.04%	0.673	5.423	0.04%
15,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.750	0.719	5.469	0.04%	0.878	5.628	0.04%	1.372	6.122	0.04%	0.642	5.392	0.04%
15,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.750	0.792	5.542	0.04%	1.015	5.765	0.04%	1.536	6.286	0.04%	0.708	5.458	0.04%
15,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.750	0.624	5.374	0.04%	0.558	5.308	0.04%	0.977	5.727	0.04%	0.452	5.202	0.03%
15,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.750	0.550	5.300	0.04%	0.477	5.227	0.03%	0.829	5.579	0.04%	0.385	5.135	0.03%
15,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.750	0.517	5.267	0.04%	0.461	5.211	0.03%	0.768	5.518	0.04%	0.360	5.110	0.03%
15,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.750	0.355	5.105	0.03%	0.292	5.042	0.03%	0.489	5.239	0.03%	0.234	4.984	0.03%
15,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.750	0.332	5.082	0.03%	0.280	5.030	0.03%	0.462	5.212	0.03%	0.221	4.971	0.03%
15,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.750	0.295	5.045	0.03%	0.271	5.021	0.03%	0.422	5.172	0.03%	0.201	4.951	0.03%
15,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.750	0.129	4.879	0.03%	0.117	4.867	0.03%	0.182	4.932	0.03%	0.089	4.839	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Butyl Acetate (CAS 123-86-4)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.750	0.548	5.298	0.53%	0.510	5.260	0.53%	0.714	5.464	0.55%	0.350	5.100	0.51%
1,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.750	0.781	5.531	0.55%	0.731	5.481	0.55%	1.002	5.752	0.58%	0.519	5.269	0.53%
1,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.750	0.824	5.574	0.56%	1.001	5.751	0.58%	1.181	5.931	0.59%	0.626	5.376	0.54%
1,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.750	0.682	5.432	0.54%	0.803	5.553	0.56%	0.904	5.654	0.57%	0.457	5.207	0.52%
1,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.750	0.912	5.662	0.57%	0.806	5.556	0.56%	1.080	5.830	0.58%	0.526	5.276	0.53%
1,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.750	0.945	5.695	0.57%	0.867	5.617	0.56%	1.223	5.973	0.60%	0.595	5.345	0.53%
1,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.750	0.439	5.189	0.52%	0.449	5.199	0.52%	0.657	5.407	0.54%	0.324	5.074	0.51%
1,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.750	0.758	5.508	0.55%	0.730	5.480	0.55%	1.027	5.777	0.58%	0.503	5.253	0.53%
1,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.750	0.705	5.455	0.55%	0.775	5.525	0.55%	0.884	5.634	0.56%	0.448	5.198	0.52%
1,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.750	1.056	5.806	0.58%	0.777	5.527	0.55%	0.960	5.710	0.57%	0.478	5.228	0.52%
1,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.750	1.927	6.677	0.67%	2.990	7.740	0.77%	2.684	7.434	0.74%	1.433	6.183	0.62%
1,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.750	1.263	6.013	0.60%	1.573	6.323	0.63%	1.635	6.385	0.64%	0.848	5.598	0.56%
1,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.750	0.437	5.187	0.52%	0.489	5.239	0.52%	0.652	5.402	0.54%	0.321	5.071	0.51%
1,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.750	1.089	5.839	0.58%	0.795	5.545	0.55%	0.967	5.717	0.57%	0.482	5.232	0.52%
1,000	ING-2	Laurie Hawkins Public School	509019	4765860	4.750	0.475	5.225	0.52%	0.479	5.229	0.52%	0.648	5.398	0.54%	0.326	5.076	0.51%
1,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.750	1.115	5.865	0.59%	1.778	6.528	0.65%	1.649	6.399	0.64%	0.829	5.579	0.56%
1,000	ING-4	On the river north of 209 County Road 9	509480	4765180	4.750	0.665	5.415	0.54%	0.776	5.526	0.55%	0.697	5.447	0.54%	0.439	5.189	0.52%
1,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.750	0.403	5.153	0.52%	0.409	5.159	0.52%	0.549	5.299	0.53%	0.279	5.029	0.50%
1,000	ING-6	Royal Road Public School	510337	4765360	4.750	0.836	5.586	0.56%	1.278	6.028	0.60%	1.297	6.047	0.60%	0.657	5.407	0.54%
1,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.750	0.486	5.236	0.52%	0.685	5.435	0.54%	0.704	5.454	0.55%	0.397	5.147	0.51%
1,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.750	0.605	5.355	0.54%	0.889	5.639	0.56%	0.915	5.665	0.57%	0.496	5.246	0.52%
1,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.750	0.837	5.587	0.56%	1.297	6.047	0.60%	1.509	6.259	0.63%	0.744	5.494	0.55%
1,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.750	0.610	5.360	0.54%	0.930	5.680	0.57%	1.054	5.804	0.58%	0.576	5.326	0.53%
1,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.750	1.487	6.237	0.62%	2.229	6.979	0.70%	3.089	7.839	0.78%	1.450	6.200	0.62%
1,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.750	1.482	6.232	0.62%	1.403	6.153	0.62%	2.824	7.574	0.76%	1.277	6.027	0.60%
1,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.750	1.262	6.012	0.60%	1.125	5.875	0.59%	2.125	6.875	0.69%	0.972	5.722	0.57%
1,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.750	0.741	5.491	0.55%	0.648	5.398	0.54%	1.116	5.866	0.59%	0.531	5.281	0.53%
1,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.750	0.622	5.372	0.54%	0.543	5.293	0.53%	0.907	5.657	0.57%	0.435	5.185	0.52%
1,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.750	0.447	5.197	0.52%	0.331	5.081	0.51%	0.526	5.276	0.53%	0.256	5.006	0.50%
1,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.750	0.299	5.049	0.50%	0.314	5.064	0.51%	0.435	5.185	0.52%	0.225	4.975	0.50%
1,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.750	0.179	4.929	0.49%	0.193	4.943	0.49%	0.229	4.979	0.50%	0.136	4.886	0.49%
1,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.750	0.214	4.964	0.50%	0.151	4.901	0.49%	0.194	4.944	0.49%	0.108	4.858	0.49%
1,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.750	1.116	5.866	0.59%	1.787	6.537	0.65%	1.981	6.731	0.67%	0.967	5.717	0.57%
1,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.750	1.203	5.953	0.60%	1.692	6.442	0.64%	2.331	7.081	0.71%	1.110	5.860	0.59%
1,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.750	1.187	5.937	0.59%	1.449	6.199	0.62%	2.264	7.014	0.70%	1.060	5.810	0.58%
1,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.750	1.307	6.057	0.61%	1.674	6.424	0.64%	2.535	7.285	0.73%	1.167	5.917	0.59%
1,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.750	1.029	5.779	0.58%	0.920	5.670	0.57%	1.612	6.362	0.64%	0.746	5.496	0.55%
1,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.750	0.908	5.658	0.57%	0.786	5.536	0.55%	1.368	6.118	0.61%	0.635	5.385	0.54%
1,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.750	0.852	5.602	0.56%	0.761	5.511	0.55%	1.268	6.018	0.60%	0.593	5.343	0.53%
1,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.750	0.586	5.336	0.53%	0.482	5.232	0.52%	0.807	5.557	0.56%	0.386	5.136	0.51%
1,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.750	0.548	5.298	0.53%	0.462	5.212	0.52%	0.762	5.512	0.55%	0.365	5.115	0.51%
1,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.750	0.487	5.237	0.52%	0.447	5.197	0.52%	0.696	5.446	0.54%	0.332	5.082	0.51%
1,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.750	0.214	4.964	0.50%	0.194	4.944	0.49%	0.301	5.051	0.51%	0.148	4.898	0.49%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Decane (CAS 124-18-5)**

**1-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
60,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.450	1.603	3.053	0.005%	1.493	2.943	0.005%	2.091	3.541	0.006%	1.024	2.474	0.004%
60,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.450	2.287	3.737	0.006%	2.141	3.591	0.006%	2.933	4.383	0.007%	1.519	2.969	0.005%
60,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.450	2.411	3.861	0.006%	2.929	4.379	0.007%	3.458	4.908	0.008%	1.832	3.282	0.005%
60,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.450	1.995	3.445	0.006%	2.352	3.802	0.006%	2.648	4.098	0.007%	1.339	2.789	0.005%
60,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.450	2.670	4.120	0.007%	2.359	3.809	0.006%	3.161	4.611	0.008%	1.539	2.989	0.005%
60,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.450	2.766	4.216	0.007%	2.539	3.989	0.007%	3.580	5.030	0.008%	1.743	3.193	0.005%
60,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.450	1.286	2.736	0.005%	1.313	2.763	0.005%	1.923	3.373	0.006%	0.949	2.399	0.004%
60,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.450	2.218	3.668	0.006%	2.137	3.587	0.006%	3.007	4.457	0.007%	1.472	2.922	0.005%
60,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.450	2.063	3.513	0.006%	2.267	3.717	0.006%	2.589	4.039	0.007%	1.312	2.762	0.005%
60,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.450	3.092	4.542	0.008%	2.275	3.725	0.006%	2.810	4.260	0.007%	1.398	2.848	0.005%
60,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.450	5.641	7.091	0.012%	8.753	10.203	0.017%	7.857	9.307	0.016%	4.195	5.645	0.009%
60,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.450	3.696	5.146	0.009%	4.606	6.056	0.010%	4.786	6.236	0.010%	2.483	3.933	0.007%
60,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.450	1.279	2.729	0.005%	1.430	2.880	0.005%	1.909	3.359	0.006%	0.938	2.388	0.004%
60,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.450	3.189	4.639	0.008%	2.327	3.777	0.006%	2.831	4.281	0.007%	1.412	2.862	0.005%
60,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.450	1.391	2.841	0.005%	1.402	2.852	0.005%	1.896	3.346	0.006%	0.955	2.405	0.004%
60,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.450	3.264	4.714	0.008%	5.206	6.656	0.011%	4.828	6.278	0.010%	2.426	3.876	0.006%
60,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.450	1.946	3.396	0.006%	2.270	3.720	0.006%	2.040	3.490	0.006%	1.284	2.734	0.005%
60,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.450	1.180	2.630	0.004%	1.198	2.648	0.004%	1.606	3.056	0.005%	0.816	2.266	0.004%
60,000	ING-6	Royal Road Public School	510337	4765360	1.450	2.447	3.897	0.006%	3.742	5.192	0.009%	3.798	5.248	0.009%	1.923	3.373	0.006%
60,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.450	1.422	2.872	0.005%	2.005	3.455	0.006%	2.061	3.511	0.006%	1.163	2.613	0.004%
60,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.450	1.771	3.221	0.005%	2.601	4.051	0.007%	2.678	4.128	0.007%	1.452	2.902	0.005%
60,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.450	2.451	3.901	0.007%	3.797	5.247	0.009%	4.417	5.867	0.010%	2.177	3.627	0.006%
60,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.450	1.785	3.235	0.005%	2.723	4.173	0.007%	3.085	4.535	0.008%	1.687	3.137	0.005%
60,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.450	4.354	5.804	0.010%	6.526	7.976	0.013%	9.042	10.492	0.017%	4.246	5.696	0.009%
60,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.450	4.338	5.788	0.010%	4.107	5.557	0.009%	8.268	9.718	0.016%	3.739	5.189	0.009%
60,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.450	3.694	5.144	0.009%	3.293	4.743	0.008%	6.221	7.671	0.013%	2.846	4.296	0.007%
60,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.450	2.170	3.620	0.006%	1.898	3.348	0.006%	3.266	4.716	0.008%	1.553	3.003	0.005%
60,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.450	1.822	3.272	0.005%	1.589	3.039	0.005%	2.655	4.105	0.007%	1.274	2.724	0.005%
60,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.450	1.308	2.758	0.005%	0.970	2.420	0.004%	1.540	2.990	0.005%	0.749	2.199	0.004%
60,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.450	0.875	2.325	0.004%	0.919	2.369	0.004%	1.273	2.723	0.005%	0.659	2.109	0.004%
60,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.450	0.523	1.973	0.003%	0.564	2.014	0.003%	0.670	2.120	0.004%	0.397	1.847	0.003%
60,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.450	0.626	2.076	0.003%	0.441	1.891	0.003%	0.567	2.017	0.003%	0.316	1.766	0.003%
60,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.450	3.266	4.716	0.008%	5.232	6.682	0.011%	5.800	7.250	0.012%	2.830	4.280	0.007%
60,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.450	3.522	4.972	0.008%	4.953	6.403	0.011%	6.823	8.273	0.014%	3.249	4.699	0.008%
60,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.450	3.475	4.925	0.008%	4.240	5.690	0.009%	6.626	8.076	0.013%	3.103	4.553	0.008%
60,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.450	3.825	5.275	0.009%	4.900	6.350	0.011%	7.420	8.870	0.015%	3.418	4.868	0.008%
60,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.450	3.012	4.462	0.007%	2.695	4.145	0.007%	4.719	6.169	0.010%	2.184	3.634	0.006%
60,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.450	2.658	4.108	0.007%	2.302	3.752	0.006%	4.003	5.453	0.009%	1.858	3.308	0.006%
60,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.450	2.495	3.945	0.007%	2.227	3.677	0.006%	3.712	5.162	0.009%	1.737	3.187	0.005%
60,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.450	1.715	3.165	0.005%	1.412	2.862	0.005%	2.361	3.811	0.006%	1.129	2.579	0.004%
60,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.450	1.605	3.055	0.005%	1.352	2.802	0.005%	2.230	3.680	0.006%	1.068	2.518	0.004%
60,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.450	1.425	2.875	0.005%	1.310	2.760	0.005%	2.036	3.486	0.006%	0.971	2.421	0.004%
60,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.450	0.625	2.075	0.003%	0.567	2.017	0.003%	0.880	2.330	0.004%	0.432	1.882	0.003%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Dichlorofluoromethane (CAS 75-43-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.200	0.007	4.207	0.84%	0.009	4.209	0.84%	0.009	4.209	0.84%	0.006	4.206	0.84%
500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.200	0.007	4.207	0.84%	0.010	4.210	0.84%	0.008	4.208	0.84%	0.005	4.205	0.84%
500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.200	0.007	4.207	0.84%	0.007	4.207	0.84%	0.009	4.209	0.84%	0.005	4.205	0.84%
500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.200	0.006	4.206	0.84%	0.008	4.208	0.84%	0.007	4.207	0.84%	0.005	4.205	0.84%
500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.200	0.015	4.215	0.84%	0.011	4.211	0.84%	0.015	4.215	0.84%	0.010	4.210	0.84%
500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.200	0.021	4.221	0.84%	0.021	4.221	0.84%	0.025	4.225	0.85%	0.016	4.216	0.84%
500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.200	0.004	4.204	0.84%	0.007	4.207	0.84%	0.007	4.207	0.84%	0.005	4.205	0.84%
500	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.200	0.016	4.216	0.84%	0.016	4.216	0.84%	0.017	4.217	0.84%	0.010	4.210	0.84%
500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.200	0.016	4.216	0.84%	0.020	4.220	0.84%	0.021	4.221	0.84%	0.013	4.213	0.84%
500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.200	0.009	4.209	0.84%	0.013	4.213	0.84%	0.014	4.214	0.84%	0.008	4.208	0.84%
500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.200	0.019	4.219	0.84%	0.042	4.242	0.85%	0.037	4.237	0.85%	0.023	4.223	0.84%
500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.200	0.011	4.211	0.84%	0.020	4.220	0.84%	0.018	4.218	0.84%	0.011	4.211	0.84%
500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.200	0.003	4.203	0.84%	0.004	4.204	0.84%	0.006	4.206	0.84%	0.006	4.206	0.84%
500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.200	0.009	4.209	0.84%	0.012	4.212	0.84%	0.016	4.216	0.84%	0.008	4.208	0.84%
500	ING-2	Laurie Hawkins Public School	509019	4765860	4.200	0.003	4.203	0.84%	0.007	4.207	0.84%	0.008	4.208	0.84%	0.005	4.205	0.84%
500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.200	0.010	4.210	0.84%	0.015	4.215	0.84%	0.015	4.215	0.84%	0.009	4.209	0.84%
500	ING-4	On the river north of 209 County Road 9	509480	4765180	4.200	0.005	4.205	0.84%	0.006	4.206	0.84%	0.006	4.206	0.84%	0.004	4.204	0.84%
500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.200	0.003	4.203	0.84%	0.006	4.206	0.84%	0.007	4.207	0.84%	0.004	4.204	0.84%
500	ING-6	Royal Road Public School	510337	4765360	4.200	0.006	4.206	0.84%	0.010	4.210	0.84%	0.009	4.209	0.84%	0.006	4.206	0.84%
500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.200	0.003	4.203	0.84%	0.005	4.205	0.84%	0.005	4.205	0.84%	0.003	4.203	0.84%
500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.200	0.003	4.203	0.84%	0.006	4.206	0.84%	0.005	4.205	0.84%	0.004	4.204	0.84%
500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.200	0.008	4.208	0.84%	0.014	4.214	0.84%	0.017	4.217	0.84%	0.009	4.209	0.84%
500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.200	0.005	4.205	0.84%	0.010	4.210	0.84%	0.011	4.211	0.84%	0.007	4.207	0.84%
500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.200	0.013	4.213	0.84%	0.048	4.248	0.85%	0.046	4.246	0.85%	0.028	4.228	0.85%
500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.200	0.016	4.216	0.84%	0.035	4.235	0.85%	0.043	4.243	0.85%	0.023	4.223	0.84%
500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.200	0.019	4.219	0.84%	0.031	4.231	0.85%	0.053	4.253	0.85%	0.026	4.226	0.85%
500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.200	0.012	4.212	0.84%	0.010	4.210	0.84%	0.013	4.213	0.84%	0.007	4.207	0.84%
500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.200	0.007	4.207	0.84%	0.007	4.207	0.84%	0.011	4.211	0.84%	0.006	4.206	0.84%
500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.200	0.005	4.205	0.84%	0.004	4.204	0.84%	0.005	4.205	0.84%	0.003	4.203	0.84%
500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.200	0.003	4.203	0.84%	0.004	4.204	0.84%	0.006	4.206	0.84%	0.003	4.203	0.84%
500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.200	0.001	4.201	0.84%	0.002	4.202	0.84%	0.002	4.202	0.84%	0.001	4.201	0.84%
500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.200	0.001	4.201	0.84%	0.001	4.201	0.84%	0.002	4.202	0.84%	0.001	4.201	0.84%
500	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.200	0.012	4.212	0.84%	0.027	4.227	0.85%	0.019	4.219	0.84%	0.014	4.214	0.84%
500	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.200	0.010	4.210	0.84%	0.028	4.228	0.85%	0.021	4.221	0.84%	0.011	4.211	0.84%
500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.200	0.016	4.216	0.84%	0.024	4.224	0.84%	0.041	4.241	0.85%	0.022	4.222	0.84%
500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.200	0.012	4.212	0.84%	0.024	4.224	0.84%	0.038	4.238	0.85%	0.021	4.221	0.84%
500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.200	0.013	4.213	0.84%	0.015	4.215	0.84%	0.021	4.221	0.84%	0.011	4.211	0.84%
500	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.200	0.009	4.209	0.84%	0.016	4.216	0.84%	0.021	4.221	0.84%	0.011	4.211	0.84%
500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.200	0.010	4.210	0.84%	0.018	4.218	0.84%	0.023	4.223	0.84%	0.012	4.212	0.84%
500	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.200	0.009	4.209	0.84%	0.010	4.210	0.84%	0.016	4.216	0.84%	0.009	4.209	0.84%
500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.200	0.011	4.211	0.84%	0.011	4.211	0.84%	0.012	4.212	0.84%	0.007	4.207	0.84%
500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.200	0.004	4.204	0.84%	0.007	4.207	0.84%	0.010	4.210	0.84%	0.006	4.206	0.84%
500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.200	0.003	4.203	0.84%	0.002	4.202	0.84%	0.002	4.202	0.84%	0.002	4.202	0.84%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation Ethanol (CAS 64-17-5)**

1-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
19,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	7.700	1.309	9.009	0.05%	1.220	8.920	0.05%	1.708	9.408	0.05%	0.836	8.536	0.04%
19,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	7.700	1.868	9.568	0.05%	1.748	9.448	0.05%	2.395	10.095	0.05%	1.240	8.940	0.05%
19,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	7.700	1.969	9.669	0.05%	2.392	10.092	0.05%	2.825	10.525	0.06%	1.497	9.197	0.05%
19,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	7.700	1.630	9.330	0.05%	1.921	9.621	0.05%	2.162	9.862	0.05%	1.093	8.793	0.05%
19,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	7.700	2.181	9.881	0.05%	1.927	9.627	0.05%	2.582	10.282	0.05%	1.257	8.957	0.05%
19,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	7.700	2.259	9.959	0.05%	2.074	9.774	0.05%	2.924	10.624	0.06%	1.424	9.124	0.05%
19,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	7.700	1.051	8.751	0.05%	1.072	8.772	0.05%	1.571	9.271	0.05%	0.775	8.475	0.04%
19,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	7.700	1.812	9.512	0.05%	1.746	9.446	0.05%	2.456	10.156	0.05%	1.203	8.903	0.05%
19,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	7.700	1.685	9.385	0.05%	1.852	9.552	0.05%	2.114	9.814	0.05%	1.071	8.771	0.05%
19,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	7.700	2.526	10.226	0.05%	1.858	9.558	0.05%	2.295	9.995	0.05%	1.142	8.842	0.05%
19,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	7.700	4.607	12.307	0.06%	7.149	14.849	0.08%	6.417	14.117	0.07%	3.426	11.126	0.06%
19,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	7.700	3.019	10.719	0.06%	3.762	11.462	0.06%	3.909	11.609	0.06%	2.028	9.728	0.05%
19,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	7.700	1.045	8.745	0.05%	1.168	8.868	0.05%	1.559	9.259	0.05%	0.766	8.466	0.04%
19,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	7.700	2.605	10.305	0.05%	1.901	9.601	0.05%	2.313	10.013	0.05%	1.153	8.853	0.05%
19,000	ING-2	Laurie Hawkins Public School	509019	4765860	7.700	1.136	8.836	0.05%	1.145	8.845	0.05%	1.549	9.249	0.05%	0.780	8.480	0.04%
19,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	7.700	2.666	10.366	0.05%	4.252	11.952	0.06%	3.943	11.643	0.06%	1.981	9.681	0.05%
19,000	ING-4	On the river north of 209 County Road 9	509480	4765180	7.700	1.590	9.290	0.05%	1.854	9.554	0.05%	1.666	9.366	0.05%	1.049	8.749	0.05%
19,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	7.700	0.964	8.664	0.05%	0.979	8.679	0.05%	1.312	9.012	0.05%	0.666	8.366	0.04%
19,000	ING-6	Royal Road Public School	510337	4765360	7.700	1.999	9.699	0.05%	3.056	10.756	0.06%	3.102	10.802	0.06%	1.571	9.271	0.05%
19,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	7.700	1.161	8.861	0.05%	1.638	9.338	0.05%	1.683	9.383	0.05%	0.950	8.650	0.05%
19,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	7.700	1.447	9.147	0.05%	2.125	9.825	0.05%	2.187	9.887	0.05%	1.186	8.886	0.05%
19,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	7.700	2.002	9.702	0.05%	3.102	10.802	0.06%	3.608	11.308	0.06%	1.778	9.478	0.05%
19,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	7.700	1.458	9.158	0.05%	2.224	9.924	0.05%	2.519	10.219	0.05%	1.378	9.078	0.05%
19,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	7.700	3.556	11.256	0.06%	5.330	13.030	0.07%	7.386	15.086	0.08%	3.468	11.168	0.06%
19,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	7.700	3.543	11.243	0.06%	3.355	11.055	0.06%	6.753	14.453	0.08%	3.054	10.754	0.06%
19,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	7.700	3.017	10.717	0.06%	2.690	10.390	0.05%	5.081	12.781	0.07%	2.324	10.024	0.05%
19,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	7.700	1.772	9.472	0.05%	1.550	9.250	0.05%	2.668	10.368	0.05%	1.269	8.969	0.05%
19,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	7.700	1.488	9.188	0.05%	1.298	8.998	0.05%	2.169	9.869	0.05%	1.041	8.741	0.05%
19,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	7.700	1.068	8.768	0.05%	0.792	8.492	0.04%	1.258	8.958	0.05%	0.612	8.312	0.04%
19,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	7.700	0.715	8.415	0.04%	0.751	8.451	0.04%	1.040	8.740	0.05%	0.538	8.238	0.04%
19,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	7.700	0.427	8.127	0.04%	0.461	8.161	0.04%	0.547	8.247	0.04%	0.324	8.024	0.04%
19,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	7.700	0.511	8.211	0.04%	0.361	8.061	0.04%	0.463	8.163	0.04%	0.258	7.958	0.04%
19,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	7.700	2.668	10.368	0.05%	4.273	11.973	0.06%	4.737	12.437	0.07%	2.311	10.011	0.05%
19,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	7.700	2.877	10.577	0.06%	4.046	11.746	0.06%	5.573	13.273	0.07%	2.654	10.354	0.05%
19,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	7.700	2.838	10.538	0.06%	3.463	11.163	0.06%	5.412	13.112	0.07%	2.534	10.234	0.05%
19,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	7.700	3.124	10.824	0.06%	4.003	11.703	0.06%	6.061	13.761	0.07%	2.791	10.491	0.06%
19,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	7.700	2.460	10.160	0.05%	2.201	9.901	0.05%	3.855	11.555	0.06%	1.784	9.484	0.05%
19,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	7.700	2.171	9.871	0.05%	1.880	9.580	0.05%	3.270	10.970	0.06%	1.517	9.217	0.05%
19,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	7.700	2.038	9.738	0.05%	1.819	9.519	0.05%	3.032	10.732	0.06%	1.419	9.119	0.05%
19,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	7.700	1.401	9.101	0.05%	1.153	8.853	0.05%	1.929	9.629	0.05%	0.922	8.622	0.05%
19,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	7.700	1.311	9.011	0.05%	1.104	8.804	0.05%	1.821	9.521	0.05%	0.873	8.573	0.05%
19,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	7.700	1.164	8.864	0.05%	1.070	8.770	0.05%	1.663	9.363	0.05%	0.793	8.493	0.04%
19,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	7.700	0.511	8.211	0.04%	0.463	8.163	0.04%	0.719	8.419	0.04%	0.353	8.053	0.04%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

Ethylene Dichloride (CAS 107-06-2)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.087	0.004	0.091	4.54%	0.004	0.091	4.57%	0.005	0.092	4.58%	0.003	0.090	4.50%
2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.087	0.004	0.091	4.53%	0.005	0.092	4.60%	0.004	0.091	4.55%	0.002	0.089	4.47%
2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.087	0.004	0.091	4.53%	0.004	0.091	4.54%	0.004	0.091	4.57%	0.003	0.090	4.48%
2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.087	0.003	0.090	4.49%	0.004	0.091	4.56%	0.004	0.091	4.54%	0.002	0.089	4.47%
2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.087	0.008	0.095	4.74%	0.005	0.092	4.62%	0.008	0.095	4.74%	0.005	0.092	4.61%
2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.087	0.010	0.097	4.87%	0.011	0.098	4.88%	0.013	0.100	4.99%	0.008	0.095	4.76%
2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.087	0.002	0.089	4.45%	0.003	0.090	4.52%	0.003	0.090	4.52%	0.002	0.089	4.46%
2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.087	0.008	0.095	4.75%	0.008	0.095	4.76%	0.009	0.096	4.78%	0.005	0.092	4.60%
2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.087	0.008	0.095	4.75%	0.010	0.097	4.86%	0.011	0.098	4.88%	0.007	0.094	4.68%
2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.087	0.004	0.091	4.57%	0.007	0.094	4.68%	0.007	0.094	4.71%	0.004	0.091	4.55%
2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.087	0.010	0.097	4.83%	0.021	0.108	5.42%	0.019	0.106	5.28%	0.012	0.099	4.93%
2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.087	0.005	0.092	4.62%	0.010	0.097	4.84%	0.009	0.096	4.80%	0.006	0.093	4.63%
2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.087	0.002	0.089	4.44%	0.002	0.089	4.46%	0.003	0.090	4.49%	0.002	0.089	4.43%
2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.087	0.005	0.092	4.58%	0.006	0.093	4.66%	0.008	0.095	4.75%	0.004	0.091	4.56%
2	ING-2	Laurie Hawkins Public School	509019	4765860	0.087	0.002	0.089	4.44%	0.004	0.091	4.54%	0.004	0.091	4.56%	0.002	0.089	4.47%
2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.087	0.005	0.092	4.60%	0.007	0.094	4.72%	0.008	0.095	4.73%	0.005	0.092	4.58%
2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.087	0.002	0.089	4.46%	0.003	0.090	4.49%	0.003	0.090	4.51%	0.002	0.089	4.45%
2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.087	0.002	0.089	4.43%	0.003	0.090	4.50%	0.003	0.090	4.51%	0.002	0.089	4.45%
2	ING-6	Royal Road Public School	510337	4765360	0.087	0.003	0.090	4.49%	0.005	0.092	4.60%	0.004	0.091	4.57%	0.003	0.090	4.49%
2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.087	0.001	0.088	4.42%	0.002	0.089	4.47%	0.002	0.089	4.47%	0.001	0.088	4.42%
2	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.087	0.001	0.088	4.42%	0.003	0.090	4.51%	0.003	0.090	4.49%	0.002	0.089	4.44%
2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.087	0.004	0.091	4.56%	0.007	0.094	4.71%	0.008	0.095	4.77%	0.004	0.091	4.57%
2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.087	0.003	0.090	4.48%	0.005	0.092	4.61%	0.006	0.093	4.64%	0.003	0.090	4.52%
2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.087	0.007	0.094	4.68%	0.024	0.111	5.55%	0.023	0.110	5.51%	0.014	0.101	5.05%
2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.087	0.008	0.095	4.76%	0.017	0.104	5.22%	0.022	0.109	5.43%	0.012	0.099	4.94%
2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.087	0.009	0.096	4.82%	0.016	0.103	5.14%	0.027	0.114	5.68%	0.013	0.100	5.01%
2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.087	0.006	0.093	4.64%	0.005	0.092	4.59%	0.006	0.093	4.67%	0.004	0.091	4.54%
2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.087	0.004	0.091	4.53%	0.004	0.091	4.54%	0.005	0.092	4.62%	0.003	0.090	4.49%
2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.087	0.002	0.089	4.47%	0.002	0.089	4.45%	0.003	0.090	4.48%	0.001	0.088	4.42%
2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.087	0.001	0.088	4.42%	0.002	0.089	4.46%	0.003	0.090	4.49%	0.002	0.089	4.43%
2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.087	0.001	0.088	4.38%	0.001	0.088	4.39%	0.001	0.088	4.40%	0.001	0.088	4.38%
2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.087	0.001	0.088	4.38%	0.001	0.088	4.38%	0.001	0.088	4.39%	0.000	0.087	4.37%
2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.087	0.006	0.093	4.64%	0.013	0.100	5.02%	0.010	0.097	4.83%	0.007	0.094	4.70%
2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.087	0.005	0.092	4.60%	0.014	0.101	5.05%	0.011	0.098	4.88%	0.006	0.093	4.64%
2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.087	0.008	0.095	4.75%	0.012	0.099	4.95%	0.021	0.108	5.38%	0.011	0.098	4.90%
2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.087	0.006	0.093	4.66%	0.012	0.099	4.95%	0.019	0.106	5.31%	0.010	0.097	4.87%
2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.087	0.007	0.094	4.68%	0.008	0.095	4.74%	0.011	0.098	4.89%	0.006	0.093	4.63%
2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.087	0.004	0.091	4.57%	0.008	0.095	4.76%	0.010	0.097	4.87%	0.005	0.092	4.62%
2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.087	0.005	0.092	4.61%	0.009	0.096	4.79%	0.012	0.099	4.93%	0.006	0.093	4.66%
2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.087	0.005	0.092	4.58%	0.005	0.092	4.60%	0.008	0.095	4.76%	0.004	0.091	4.57%
2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.087	0.006	0.093	4.63%	0.005	0.092	4.62%	0.006	0.093	4.65%	0.004	0.091	4.53%
2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.087	0.002	0.089	4.46%	0.004	0.091	4.54%	0.005	0.092	4.61%	0.003	0.090	4.49%
2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.087	0.001	0.088	4.42%	0.001	0.088	4.40%	0.001	0.088	4.41%	0.001	0.088	4.39%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**m/p-Ethyl Toluene (CAS 620-14-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
63	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.000	0.072	1.072	1.71%	0.083	1.083	1.73%	0.086	1.086	1.74%	0.056	1.056	1.69%
63	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.000	0.068	1.068	1.71%	0.095	1.095	1.75%	0.077	1.077	1.72%	0.046	1.046	1.67%
63	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.000	0.068	1.068	1.71%	0.071	1.071	1.71%	0.085	1.085	1.74%	0.048	1.048	1.68%
63	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.000	0.053	1.053	1.68%	0.080	1.080	1.73%	0.071	1.071	1.71%	0.047	1.047	1.68%
63	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.000	0.147	1.147	1.84%	0.102	1.102	1.76%	0.148	1.148	1.84%	0.098	1.098	1.76%
63	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.000	0.197	1.197	1.92%	0.202	1.202	1.92%	0.244	1.244	1.99%	0.154	1.154	1.85%
63	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.000	0.040	1.040	1.66%	0.064	1.064	1.70%	0.065	1.065	1.70%	0.043	1.043	1.67%
63	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.000	0.150	1.150	1.84%	0.155	1.155	1.85%	0.165	1.165	1.86%	0.094	1.094	1.75%
63	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.000	0.151	1.151	1.84%	0.196	1.196	1.91%	0.203	1.203	1.92%	0.124	1.124	1.80%
63	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.000	0.084	1.084	1.74%	0.125	1.125	1.80%	0.136	1.136	1.82%	0.076	1.076	1.72%
63	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.000	0.182	1.182	1.89%	0.405	1.405	2.25%	0.352	1.352	2.16%	0.219	1.219	1.95%
63	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.000	0.104	1.104	1.77%	0.188	1.188	1.90%	0.173	1.173	1.88%	0.108	1.108	1.77%
63	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.000	0.033	1.033	1.65%	0.041	1.041	1.66%	0.055	1.055	1.69%	0.029	1.029	1.65%
63	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.000	0.089	1.089	1.74%	0.119	1.119	1.79%	0.152	1.152	1.84%	0.079	1.079	1.73%
63	ING-2	Laurie Hawkins Public School	509019	4765860	1.000	0.032	1.032	1.65%	0.071	1.071	1.71%	0.080	1.080	1.73%	0.045	1.045	1.67%
63	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.000	0.094	1.094	1.75%	0.139	1.139	1.82%	0.144	1.144	1.83%	0.087	1.087	1.74%
63	ING-4	On the river north of 209 County Road 9	509480	4765180	1.000	0.044	1.044	1.67%	0.054	1.054	1.69%	0.062	1.062	1.70%	0.038	1.038	1.66%
63	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.000	0.031	1.031	1.65%	0.059	1.059	1.69%	0.062	1.062	1.70%	0.038	1.038	1.66%
63	ING-6	Royal Road Public School	510337	4765360	1.000	0.055	1.055	1.69%	0.096	1.096	1.75%	0.085	1.085	1.74%	0.055	1.055	1.69%
63	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.000	0.027	1.027	1.64%	0.045	1.045	1.67%	0.046	1.046	1.67%	0.028	1.028	1.64%
63	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.000	0.027	1.027	1.64%	0.061	1.061	1.70%	0.052	1.052	1.68%	0.035	1.035	1.66%
63	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.000	0.081	1.081	1.73%	0.135	1.135	1.82%	0.160	1.160	1.86%	0.084	1.084	1.73%
63	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.000	0.051	1.051	1.68%	0.097	1.097	1.76%	0.108	1.108	1.77%	0.066	1.066	1.71%
63	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.000	0.124	1.124	1.80%	0.457	1.457	2.33%	0.441	1.441	2.30%	0.267	1.267	2.03%
63	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.000	0.156	1.156	1.85%	0.332	1.332	2.13%	0.409	1.409	2.25%	0.223	1.223	1.96%
63	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.000	0.180	1.180	1.89%	0.300	1.300	2.08%	0.504	1.504	2.41%	0.249	1.249	2.00%
63	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.000	0.111	1.111	1.78%	0.093	1.093	1.75%	0.123	1.123	1.80%	0.072	1.072	1.71%
63	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.000	0.067	1.067	1.71%	0.071	1.071	1.71%	0.101	1.101	1.76%	0.055	1.055	1.69%
63	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.000	0.044	1.044	1.67%	0.036	1.036	1.66%	0.048	1.048	1.68%	0.027	1.027	1.64%
63	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.000	0.025	1.025	1.64%	0.041	1.041	1.67%	0.054	1.054	1.69%	0.030	1.030	1.65%
63	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.000	0.011	1.011	1.62%	0.015	1.015	1.62%	0.019	1.019	1.63%	0.011	1.011	1.62%
63	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.000	0.010	1.010	1.62%	0.012	1.012	1.62%	0.015	1.015	1.62%	0.009	1.009	1.61%
63	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.000	0.111	1.111	1.78%	0.254	1.254	2.01%	0.182	1.182	1.89%	0.132	1.132	1.81%
63	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.000	0.094	1.094	1.75%	0.268	1.268	2.03%	0.200	1.200	1.92%	0.109	1.109	1.77%
63	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.000	0.151	1.151	1.84%	0.227	1.227	1.96%	0.390	1.390	2.22%	0.209	1.209	1.93%
63	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.000	0.118	1.118	1.79%	0.226	1.226	1.96%	0.366	1.366	2.19%	0.196	1.196	1.91%
63	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.000	0.126	1.126	1.80%	0.146	1.146	1.83%	0.205	1.205	1.93%	0.106	1.106	1.77%
63	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.000	0.085	1.085	1.74%	0.156	1.156	1.85%	0.198	1.198	1.92%	0.103	1.103	1.76%
63	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.000	0.099	1.099	1.76%	0.168	1.168	1.87%	0.222	1.222	1.95%	0.119	1.119	1.79%
63	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.000	0.087	1.087	1.74%	0.094	1.094	1.75%	0.156	1.156	1.85%	0.082	1.082	1.73%
63	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.000	0.106	1.106	1.77%	0.103	1.103	1.76%	0.112	1.112	1.78%	0.069	1.069	1.71%
63	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.000	0.040	1.040	1.66%	0.071	1.071	1.71%	0.098	1.098	1.76%	0.053	1.053	1.68%
63	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.000	0.025	1.025	1.64%	0.019	1.019	1.63%	0.022	1.022	1.64%	0.015	1.015	1.62%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Methyl Cyclohexane (CAS 108-87-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
6,440	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.400	0.049	0.449	0.01%	0.057	0.457	0.01%	0.059	0.459	0.01%	0.038	0.438	0.01%
6,440	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.400	0.046	0.446	0.01%	0.065	0.465	0.01%	0.053	0.453	0.01%	0.031	0.431	0.01%
6,440	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.400	0.047	0.447	0.01%	0.048	0.448	0.01%	0.058	0.458	0.01%	0.033	0.433	0.01%
6,440	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.400	0.036	0.436	0.01%	0.054	0.454	0.01%	0.049	0.449	0.01%	0.032	0.432	0.01%
6,440	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.400	0.101	0.501	0.01%	0.070	0.470	0.01%	0.101	0.501	0.01%	0.067	0.467	0.01%
6,440	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.400	0.135	0.535	0.01%	0.139	0.539	0.01%	0.167	0.567	0.01%	0.105	0.505	0.01%
6,440	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.400	0.027	0.427	0.01%	0.044	0.444	0.01%	0.044	0.444	0.01%	0.030	0.430	0.01%
6,440	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.400	0.103	0.503	0.01%	0.106	0.506	0.01%	0.113	0.513	0.01%	0.064	0.464	0.01%
6,440	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.400	0.104	0.504	0.01%	0.134	0.534	0.01%	0.139	0.539	0.01%	0.085	0.485	0.01%
6,440	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.400	0.058	0.458	0.01%	0.085	0.485	0.01%	0.093	0.493	0.01%	0.052	0.452	0.01%
6,440	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.400	0.125	0.525	0.01%	0.277	0.677	0.01%	0.241	0.641	0.01%	0.150	0.550	0.01%
6,440	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.400	0.071	0.471	0.01%	0.128	0.528	0.01%	0.118	0.518	0.01%	0.074	0.474	0.01%
6,440	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.400	0.022	0.422	0.01%	0.028	0.428	0.01%	0.037	0.437	0.01%	0.020	0.420	0.01%
6,440	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.400	0.061	0.461	0.01%	0.082	0.482	0.01%	0.104	0.504	0.01%	0.054	0.454	0.01%
6,440	ING-2	Laurie Hawkins Public School	509019	4765860	0.400	0.022	0.422	0.01%	0.048	0.448	0.01%	0.055	0.455	0.01%	0.031	0.431	0.01%
6,440	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.400	0.065	0.465	0.01%	0.095	0.495	0.01%	0.098	0.498	0.01%	0.060	0.460	0.01%
6,440	ING-4	On the river north of 209 County Road 9	509480	4765180	0.400	0.030	0.430	0.01%	0.037	0.437	0.01%	0.042	0.442	0.01%	0.026	0.426	0.01%
6,440	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.400	0.021	0.421	0.01%	0.040	0.440	0.01%	0.043	0.443	0.01%	0.026	0.426	0.01%
6,440	ING-6	Royal Road Public School	510337	4765360	0.400	0.038	0.438	0.01%	0.066	0.466	0.01%	0.058	0.458	0.01%	0.038	0.438	0.01%
6,440	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.400	0.018	0.418	0.01%	0.031	0.431	0.01%	0.031	0.431	0.01%	0.019	0.419	0.01%
6,440	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.400	0.018	0.418	0.01%	0.042	0.442	0.01%	0.036	0.436	0.01%	0.024	0.424	0.01%
6,440	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.400	0.056	0.456	0.01%	0.093	0.493	0.01%	0.110	0.510	0.01%	0.057	0.457	0.01%
6,440	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.400	0.035	0.435	0.01%	0.067	0.467	0.01%	0.074	0.474	0.01%	0.045	0.445	0.01%
6,440	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.400	0.085	0.485	0.01%	0.313	0.713	0.01%	0.302	0.702	0.01%	0.183	0.583	0.01%
6,440	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.400	0.107	0.507	0.01%	0.227	0.627	0.01%	0.280	0.680	0.01%	0.153	0.553	0.01%
6,440	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.400	0.123	0.523	0.01%	0.205	0.605	0.01%	0.345	0.745	0.01%	0.171	0.571	0.01%
6,440	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.400	0.076	0.476	0.01%	0.064	0.464	0.01%	0.084	0.484	0.01%	0.049	0.449	0.01%
6,440	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.400	0.046	0.446	0.01%	0.048	0.448	0.01%	0.069	0.469	0.01%	0.038	0.438	0.01%
6,440	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.400	0.030	0.430	0.01%	0.025	0.425	0.01%	0.033	0.433	0.01%	0.018	0.418	0.01%
6,440	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.400	0.017	0.417	0.01%	0.028	0.428	0.01%	0.037	0.437	0.01%	0.021	0.421	0.01%
6,440	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.400	0.007	0.407	0.01%	0.010	0.410	0.01%	0.013	0.413	0.01%	0.008	0.408	0.01%
6,440	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.400	0.007	0.407	0.01%	0.008	0.408	0.01%	0.010	0.410	0.01%	0.006	0.406	0.01%
6,440	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.400	0.076	0.476	0.01%	0.174	0.574	0.01%	0.125	0.525	0.01%	0.090	0.490	0.01%
6,440	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.400	0.064	0.464	0.01%	0.183	0.583	0.01%	0.137	0.537	0.01%	0.075	0.475	0.01%
6,440	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.400	0.103	0.503	0.01%	0.155	0.555	0.01%	0.267	0.667	0.01%	0.143	0.543	0.01%
6,440	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.400	0.081	0.481	0.01%	0.155	0.555	0.01%	0.250	0.650	0.01%	0.134	0.534	0.01%
6,440	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.400	0.086	0.486	0.01%	0.100	0.500	0.01%	0.140	0.540	0.01%	0.073	0.473	0.01%
6,440	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.400	0.058	0.458	0.01%	0.107	0.507	0.01%	0.136	0.536	0.01%	0.070	0.470	0.01%
6,440	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.400	0.068	0.468	0.01%	0.115	0.515	0.01%	0.152	0.552	0.01%	0.081	0.481	0.01%
6,440	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.400	0.060	0.460	0.01%	0.064	0.464	0.01%	0.107	0.507	0.01%	0.056	0.456	0.01%
6,440	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.400	0.073	0.473	0.01%	0.070	0.470	0.01%	0.077	0.477	0.01%	0.047	0.447	0.01%
6,440	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.400	0.028	0.428	0.01%	0.049	0.449	0.01%	0.067	0.467	0.01%	0.036	0.436	0.01%
6,440	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.400	0.017	0.417	0.01%	0.013	0.413	0.01%	0.015	0.415	0.01%	0.010	0.410	0.01%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**n-Butanal (CAS 123-72-8)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
6	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.000	0.011	0.011	0.20%	0.013	0.013	0.23%	0.013	0.013	0.24%	0.009	0.009	0.16%
6	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.000	0.011	0.011	0.19%	0.015	0.015	0.27%	0.012	0.012	0.22%	0.007	0.007	0.13%
6	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.000	0.011	0.011	0.19%	0.015	0.011	0.20%	0.013	0.013	0.24%	0.008	0.008	0.13%
6	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.000	0.008	0.008	0.15%	0.012	0.012	0.22%	0.011	0.011	0.20%	0.007	0.007	0.13%
6	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.000	0.023	0.023	0.41%	0.016	0.016	0.29%	0.023	0.023	0.41%	0.015	0.015	0.27%
6	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.000	0.031	0.031	0.55%	0.032	0.032	0.57%	0.038	0.038	0.68%	0.024	0.024	0.43%
6	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.000	0.006	0.006	0.11%	0.010	0.010	0.18%	0.010	0.010	0.18%	0.007	0.007	0.12%
6	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.000	0.024	0.024	0.42%	0.024	0.024	0.43%	0.026	0.026	0.46%	0.015	0.015	0.26%
6	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.000	0.024	0.024	0.42%	0.031	0.031	0.55%	0.032	0.032	0.57%	0.019	0.019	0.35%
6	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.000	0.013	0.013	0.24%	0.020	0.020	0.35%	0.021	0.021	0.38%	0.012	0.012	0.21%
6	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.000	0.029	0.029	0.51%	0.064	0.064	1.14%	0.055	0.055	0.99%	0.034	0.034	0.61%
6	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.000	0.016	0.016	0.29%	0.029	0.029	0.53%	0.027	0.027	0.48%	0.017	0.017	0.30%
6	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.000	0.005	0.005	0.09%	0.006	0.006	0.11%	0.009	0.009	0.15%	0.005	0.005	0.08%
6	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.000	0.014	0.014	0.25%	0.019	0.019	0.33%	0.024	0.024	0.43%	0.012	0.012	0.22%
6	ING-2	Laurie Hawkins Public School	509019	4765860	0.000	0.005	0.005	0.09%	0.011	0.011	0.20%	0.013	0.013	0.23%	0.007	0.007	0.13%
6	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.000	0.015	0.015	0.26%	0.022	0.022	0.39%	0.023	0.023	0.40%	0.014	0.014	0.24%
6	ING-4	On the river north of 209 County Road 9	509480	4765180	0.000	0.007	0.007	0.12%	0.008	0.008	0.15%	0.010	0.010	0.17%	0.006	0.006	0.11%
6	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.000	0.005	0.005	0.09%	0.009	0.009	0.16%	0.010	0.010	0.17%	0.006	0.006	0.11%
6	ING-6	Royal Road Public School	510337	4765360	0.000	0.009	0.009	0.15%	0.015	0.015	0.27%	0.013	0.013	0.24%	0.009	0.009	0.15%
6	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.000	0.004	0.004	0.07%	0.007	0.007	0.13%	0.007	0.007	0.13%	0.004	0.004	0.08%
6	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.000	0.004	0.004	0.08%	0.010	0.010	0.17%	0.008	0.008	0.15%	0.005	0.005	0.10%
6	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.000	0.013	0.013	0.23%	0.021	0.021	0.38%	0.025	0.025	0.45%	0.013	0.013	0.23%
6	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.000	0.008	0.008	0.14%	0.015	0.015	0.27%	0.017	0.017	0.30%	0.010	0.010	0.19%
6	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.000	0.020	0.020	0.35%	0.072	0.072	1.28%	0.069	0.069	1.23%	0.042	0.042	0.75%
6	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.000	0.024	0.024	0.44%	0.052	0.052	0.93%	0.064	0.064	1.14%	0.035	0.035	0.62%
6	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.000	0.028	0.028	0.50%	0.047	0.047	0.84%	0.079	0.079	1.41%	0.039	0.039	0.70%
6	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.000	0.017	0.017	0.31%	0.015	0.015	0.26%	0.019	0.019	0.35%	0.011	0.011	0.20%
6	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.000	0.010	0.010	0.19%	0.011	0.011	0.20%	0.016	0.016	0.28%	0.009	0.009	0.15%
6	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.000	0.007	0.007	0.12%	0.006	0.006	0.10%	0.008	0.008	0.13%	0.004	0.004	0.07%
6	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.000	0.004	0.004	0.07%	0.006	0.006	0.11%	0.009	0.009	0.15%	0.005	0.005	0.08%
6	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.000	0.002	0.002	0.03%	0.002	0.002	0.04%	0.003	0.003	0.05%	0.002	0.002	0.03%
6	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.000	0.002	0.002	0.03%	0.002	0.002	0.03%	0.002	0.002	0.04%	0.001	0.001	0.02%
6	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.000	0.017	0.017	0.31%	0.040	0.040	0.71%	0.029	0.029	0.51%	0.021	0.021	0.37%
6	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.000	0.015	0.015	0.26%	0.042	0.042	0.75%	0.031	0.031	0.56%	0.017	0.017	0.31%
6	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.000	0.024	0.024	0.42%	0.036	0.036	0.64%	0.061	0.061	1.09%	0.033	0.033	0.58%
6	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.000	0.019	0.019	0.33%	0.035	0.035	0.63%	0.057	0.057	1.02%	0.031	0.031	0.55%
6	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.000	0.020	0.020	0.35%	0.023	0.023	0.41%	0.032	0.032	0.57%	0.017	0.017	0.30%
6	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.000	0.013	0.013	0.24%	0.024	0.024	0.44%	0.031	0.031	0.56%	0.016	0.016	0.29%
6	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.000	0.016	0.016	0.28%	0.026	0.026	0.47%	0.035	0.035	0.62%	0.019	0.019	0.33%
6	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.000	0.014	0.014	0.24%	0.015	0.015	0.26%	0.024	0.024	0.44%	0.013	0.013	0.23%
6	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.000	0.017	0.017	0.30%	0.016	0.016	0.29%	0.018	0.018	0.31%	0.011	0.011	0.19%
6	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.000	0.006	0.006	0.11%	0.011	0.011	0.20%	0.015	0.015	0.27%	0.008	0.008	0.15%
6	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.000	0.004	0.004	0.07%	0.003	0.003	0.05%	0.004	0.004	0.06%	0.002	0.002	0.04%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Nonane (CAS 111-84-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
4,200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.500	0.028	0.528	0.01%	0.033	0.533	0.01%	0.034	0.534	0.01%	0.022	0.522	0.01%
4,200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.500	0.027	0.527	0.01%	0.037	0.537	0.01%	0.053	0.553	0.01%	0.018	0.518	0.01%
4,200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.500	0.027	0.527	0.01%	0.028	0.528	0.01%	0.058	0.558	0.01%	0.019	0.519	0.01%
4,200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.500	0.021	0.521	0.01%	0.031	0.531	0.01%	0.049	0.549	0.01%	0.019	0.519	0.01%
4,200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.500	0.058	0.558	0.01%	0.040	0.540	0.01%	0.101	0.601	0.01%	0.039	0.539	0.01%
4,200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.500	0.078	0.578	0.01%	0.080	0.580	0.01%	0.167	0.667	0.02%	0.061	0.561	0.01%
4,200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.500	0.016	0.516	0.01%	0.025	0.525	0.01%	0.044	0.544	0.01%	0.017	0.517	0.01%
4,200	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.500	0.059	0.559	0.01%	0.061	0.561	0.01%	0.113	0.613	0.01%	0.037	0.537	0.01%
4,200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.500	0.060	0.560	0.01%	0.077	0.577	0.01%	0.139	0.639	0.02%	0.049	0.549	0.01%
4,200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.500	0.033	0.533	0.01%	0.049	0.549	0.01%	0.093	0.593	0.01%	0.030	0.530	0.01%
4,200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.500	0.072	0.572	0.01%	0.160	0.660	0.02%	0.241	0.741	0.02%	0.086	0.586	0.01%
4,200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.500	0.041	0.541	0.01%	0.074	0.574	0.01%	0.118	0.618	0.01%	0.043	0.543	0.01%
4,200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.500	0.013	0.513	0.01%	0.016	0.516	0.01%	0.037	0.537	0.01%	0.012	0.512	0.01%
4,200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.500	0.035	0.535	0.01%	0.047	0.547	0.01%	0.104	0.604	0.01%	0.031	0.531	0.01%
4,200	ING-2	Laurie Hawkins Public School	509019	4765860	0.500	0.013	0.513	0.01%	0.028	0.528	0.01%	0.055	0.555	0.01%	0.018	0.518	0.01%
4,200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.500	0.037	0.537	0.01%	0.055	0.555	0.01%	0.098	0.598	0.01%	0.035	0.535	0.01%
4,200	ING-4	On the river north of 209 County Road 9	509480	4765180	0.500	0.017	0.517	0.01%	0.021	0.521	0.01%	0.042	0.542	0.01%	0.015	0.515	0.01%
4,200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.500	0.012	0.512	0.01%	0.023	0.523	0.01%	0.043	0.543	0.01%	0.015	0.515	0.01%
4,200	ING-6	Royal Road Public School	510337	4765360	0.500	0.022	0.522	0.01%	0.038	0.538	0.01%	0.058	0.558	0.01%	0.022	0.522	0.01%
4,200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.500	0.010	0.510	0.01%	0.018	0.518	0.01%	0.031	0.531	0.01%	0.011	0.511	0.01%
4,200	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.500	0.011	0.511	0.01%	0.024	0.524	0.01%	0.036	0.536	0.01%	0.014	0.514	0.01%
4,200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.500	0.032	0.532	0.01%	0.053	0.553	0.01%	0.110	0.610	0.01%	0.033	0.533	0.01%
4,200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.500	0.020	0.520	0.01%	0.038	0.538	0.01%	0.074	0.574	0.01%	0.026	0.526	0.01%
4,200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.500	0.049	0.549	0.02%	0.180	0.680	0.02%	0.302	0.802	0.02%	0.105	0.605	0.01%
4,200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.500	0.062	0.562	0.01%	0.131	0.631	0.02%	0.280	0.780	0.02%	0.088	0.588	0.01%
4,200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.500	0.071	0.571	0.01%	0.118	0.618	0.01%	0.345	0.845	0.02%	0.098	0.598	0.01%
4,200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.500	0.044	0.544	0.01%	0.037	0.537	0.01%	0.084	0.584	0.01%	0.028	0.528	0.01%
4,200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.500	0.026	0.526	0.01%	0.028	0.528	0.01%	0.069	0.569	0.01%	0.022	0.522	0.01%
4,200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.500	0.017	0.517	0.01%	0.014	0.514	0.01%	0.033	0.533	0.01%	0.011	0.511	0.01%
4,200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.500	0.010	0.510	0.01%	0.016	0.516	0.01%	0.037	0.537	0.01%	0.012	0.512	0.01%
4,200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.500	0.004	0.504	0.01%	0.006	0.506	0.01%	0.013	0.513	0.01%	0.004	0.504	0.01%
4,200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.500	0.004	0.504	0.01%	0.005	0.505	0.01%	0.010	0.510	0.01%	0.003	0.503	0.01%
4,200	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.500	0.044	0.544	0.01%	0.100	0.600	0.01%	0.125	0.625	0.01%	0.052	0.552	0.01%
4,200	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.500	0.037	0.537	0.01%	0.106	0.606	0.01%	0.137	0.637	0.02%	0.043	0.543	0.01%
4,200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.500	0.060	0.560	0.01%	0.089	0.589	0.01%	0.267	0.767	0.02%	0.082	0.582	0.01%
4,200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.500	0.047	0.547	0.01%	0.089	0.589	0.01%	0.250	0.750	0.02%	0.077	0.577	0.01%
4,200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.500	0.050	0.550	0.01%	0.058	0.558	0.01%	0.140	0.640	0.02%	0.042	0.542	0.01%
4,200	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.500	0.033	0.533	0.01%	0.062	0.562	0.01%	0.136	0.636	0.02%	0.041	0.541	0.01%
4,200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.500	0.039	0.539	0.01%	0.066	0.566	0.01%	0.152	0.652	0.02%	0.047	0.547	0.01%
4,200	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.500	0.034	0.534	0.01%	0.037	0.537	0.01%	0.107	0.607	0.01%	0.032	0.532	0.01%
4,200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.500	0.042	0.542	0.01%	0.041	0.541	0.01%	0.077	0.577	0.01%	0.027	0.527	0.01%
4,200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.500	0.016	0.516	0.01%	0.028	0.528	0.01%	0.067	0.567	0.01%	0.021	0.521	0.01%
4,200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.500	0.010	0.510	0.01%	0.007	0.507	0.01%	0.015	0.515	0.01%	0.006	0.506	0.01%

Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation

o-Ethyl Toluene (CAS 611-14-3)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
n/a	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.039	0.529	n/a	0.046	0.536	n/a	0.047	0.537	n/a	0.031	0.521	n/a
n/a	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.037	0.527	n/a	0.052	0.542	n/a	0.042	0.532	n/a	0.025	0.515	n/a
n/a	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.037	0.527	n/a	0.039	0.529	n/a	0.047	0.537	n/a	0.026	0.516	n/a
n/a	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.029	0.519	n/a	0.044	0.534	n/a	0.039	0.529	n/a	0.026	0.516	n/a
n/a	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.081	0.571	n/a	0.056	0.546	n/a	0.081	0.571	n/a	0.054	0.544	n/a
n/a	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.109	0.599	n/a	0.111	0.601	n/a	0.134	0.624	n/a	0.085	0.575	n/a
n/a	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.022	0.512	n/a	0.035	0.525	n/a	0.036	0.526	n/a	0.024	0.514	n/a
n/a	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.083	0.573	n/a	0.085	0.575	n/a	0.091	0.581	n/a	0.052	0.542	n/a
n/a	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.083	0.573	n/a	0.107	0.597	n/a	0.111	0.601	n/a	0.068	0.558	n/a
n/a	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.046	0.536	n/a	0.068	0.558	n/a	0.075	0.565	n/a	0.042	0.532	n/a
n/a	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.100	0.590	n/a	0.223	0.713	n/a	0.194	0.684	n/a	0.120	0.610	n/a
n/a	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.057	0.547	n/a	0.103	0.593	n/a	0.095	0.585	n/a	0.059	0.549	n/a
n/a	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.018	0.508	n/a	0.022	0.512	n/a	0.030	0.520	n/a	0.016	0.506	n/a
n/a	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.049	0.539	n/a	0.066	0.556	n/a	0.084	0.574	n/a	0.044	0.534	n/a
n/a	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.018	0.508	n/a	0.039	0.529	n/a	0.044	0.534	n/a	0.025	0.515	n/a
n/a	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.052	0.542	n/a	0.076	0.566	n/a	0.079	0.569	n/a	0.048	0.538	n/a
n/a	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.024	0.514	n/a	0.030	0.520	n/a	0.034	0.524	n/a	0.021	0.511	n/a
n/a	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.017	0.507	n/a	0.032	0.527	n/a	0.034	0.524	n/a	0.021	0.511	n/a
n/a	ING-6	Royal Road Public School	510337	4765360	0.490	0.030	0.520	n/a	0.053	0.543	n/a	0.047	0.537	n/a	0.030	0.520	n/a
n/a	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.015	0.505	n/a	0.025	0.515	n/a	0.025	0.515	n/a	0.015	0.505	n/a
n/a	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.015	0.505	n/a	0.033	0.523	n/a	0.029	0.519	n/a	0.019	0.509	n/a
n/a	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.045	0.535	n/a	0.074	0.564	n/a	0.088	0.578	n/a	0.046	0.536	n/a
n/a	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.028	0.518	n/a	0.053	0.543	n/a	0.060	0.550	n/a	0.037	0.527	n/a
n/a	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.068	0.558	n/a	0.251	0.741	n/a	0.242	0.732	n/a	0.147	0.637	n/a
n/a	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.086	0.576	n/a	0.182	0.672	n/a	0.225	0.715	n/a	0.123	0.613	n/a
n/a	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.099	0.589	n/a	0.165	0.655	n/a	0.277	0.767	n/a	0.137	0.627	n/a
n/a	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.061	0.551	n/a	0.051	0.541	n/a	0.068	0.558	n/a	0.039	0.529	n/a
n/a	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.037	0.527	n/a	0.039	0.529	n/a	0.056	0.546	n/a	0.030	0.520	n/a
n/a	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.024	0.514	n/a	0.020	0.510	n/a	0.026	0.516	n/a	0.015	0.505	n/a
n/a	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.014	0.504	n/a	0.022	0.512	n/a	0.030	0.520	n/a	0.016	0.506	n/a
n/a	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.006	0.496	n/a	0.008	0.498	n/a	0.010	0.500	n/a	0.006	0.496	n/a
n/a	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.006	0.496	n/a	0.007	0.497	n/a	0.008	0.498	n/a	0.005	0.495	n/a
n/a	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.061	0.551	n/a	0.140	0.630	n/a	0.100	0.590	n/a	0.073	0.563	n/a
n/a	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.052	0.542	n/a	0.147	0.637	n/a	0.110	0.600	n/a	0.060	0.550	n/a
n/a	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.083	0.573	n/a	0.125	0.615	n/a	0.214	0.704	n/a	0.115	0.605	n/a
n/a	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.065	0.555	n/a	0.124	0.614	n/a	0.201	0.691	n/a	0.108	0.598	n/a
n/a	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.069	0.559	n/a	0.080	0.570	n/a	0.113	0.603	n/a	0.058	0.548	n/a
n/a	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.047	0.537	n/a	0.086	0.576	n/a	0.109	0.599	n/a	0.057	0.547	n/a
n/a	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.054	0.544	n/a	0.092	0.582	n/a	0.122	0.612	n/a	0.065	0.555	n/a
n/a	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.048	0.538	n/a	0.052	0.542	n/a	0.086	0.576	n/a	0.045	0.535	n/a
n/a	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.058	0.548	n/a	0.057	0.547	n/a	0.062	0.552	n/a	0.038	0.528	n/a
n/a	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.022	0.512	n/a	0.039	0.529	n/a	0.054	0.544	n/a	0.029	0.519	n/a
n/a	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.014	0.504	n/a	0.010	0.500	n/a	0.012	0.502	n/a	0.008	0.498	n/a

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Pentane (CAS 109-66-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
4,200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.090	0.049	1.139	0.027%	0.057	1.147	0.027%	0.058	1.148	0.027%	0.038	1.128	0.027%
4,200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.090	0.046	1.136	0.027%	0.065	1.155	0.027%	0.053	1.143	0.027%	0.031	1.121	0.027%
4,200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.090	0.046	1.136	0.027%	0.048	1.138	0.027%	0.058	1.148	0.027%	0.033	1.123	0.027%
4,200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.090	0.036	1.126	0.027%	0.054	1.144	0.027%	0.048	1.138	0.027%	0.032	1.122	0.027%
4,200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.090	0.100	1.190	0.028%	0.069	1.159	0.028%	0.101	1.191	0.028%	0.067	1.157	0.028%
4,200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.090	0.135	1.225	0.029%	0.138	1.228	0.029%	0.166	1.256	0.030%	0.105	1.195	0.028%
4,200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.090	0.027	1.117	0.027%	0.044	1.134	0.027%	0.044	1.134	0.027%	0.030	1.120	0.027%
4,200	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.090	0.103	1.193	0.028%	0.106	1.196	0.028%	0.112	1.202	0.029%	0.064	1.154	0.027%
4,200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.090	0.103	1.193	0.028%	0.133	1.223	0.029%	0.138	1.228	0.029%	0.085	1.175	0.028%
4,200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.090	0.058	1.148	0.027%	0.085	1.175	0.028%	0.093	1.183	0.028%	0.052	1.142	0.027%
4,200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.090	0.124	1.214	0.029%	0.276	1.366	0.033%	0.240	1.330	0.032%	0.149	1.239	0.030%
4,200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.090	0.071	1.161	0.028%	0.128	1.218	0.029%	0.118	1.208	0.029%	0.074	1.164	0.028%
4,200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.090	0.022	1.112	0.026%	0.028	1.118	0.027%	0.037	1.127	0.027%	0.020	1.110	0.026%
4,200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.090	0.060	1.150	0.027%	0.081	1.171	0.028%	0.104	1.194	0.028%	0.054	1.144	0.027%
4,200	ING-2	Laurie Hawkins Public School	509019	4765860	1.090	0.022	1.112	0.026%	0.048	1.138	0.027%	0.055	1.145	0.027%	0.031	1.121	0.027%
4,200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.090	0.064	1.154	0.027%	0.095	1.185	0.028%	0.098	1.188	0.028%	0.060	1.150	0.027%
4,200	ING-4	On the river north of 209 County Road 9	509480	4765180	1.090	0.030	1.120	0.027%	0.037	1.127	0.027%	0.042	1.132	0.027%	0.026	1.116	0.027%
4,200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.090	0.021	1.111	0.026%	0.040	1.130	0.027%	0.042	1.132	0.027%	0.026	1.116	0.027%
4,200	ING-6	Royal Road Public School	510337	4765360	1.090	0.037	1.127	0.027%	0.065	1.155	0.028%	0.058	1.148	0.027%	0.038	1.128	0.027%
4,200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.090	0.018	1.108	0.026%	0.031	1.121	0.027%	0.031	1.121	0.027%	0.019	1.109	0.026%
4,200	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.090	0.018	1.108	0.026%	0.042	1.132	0.027%	0.035	1.125	0.027%	0.024	1.114	0.027%
4,200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.090	0.055	1.145	0.027%	0.092	1.182	0.028%	0.109	1.199	0.029%	0.057	1.147	0.027%
4,200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.090	0.035	1.125	0.027%	0.066	1.156	0.028%	0.074	1.164	0.028%	0.045	1.135	0.027%
4,200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.090	0.085	1.175	0.028%	0.312	1.402	0.033%	0.300	1.390	0.033%	0.182	1.272	0.030%
4,200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.090	0.106	1.196	0.028%	0.226	1.316	0.031%	0.279	1.369	0.033%	0.152	1.242	0.030%
4,200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.090	0.123	1.213	0.029%	0.204	1.294	0.031%	0.343	1.433	0.034%	0.170	1.260	0.030%
4,200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.090	0.076	1.166	0.028%	0.063	1.153	0.027%	0.084	1.174	0.028%	0.049	1.139	0.027%
4,200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.090	0.046	1.136	0.027%	0.048	1.138	0.027%	0.069	1.159	0.028%	0.037	1.127	0.027%
4,200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.090	0.030	1.120	0.027%	0.025	1.115	0.027%	0.033	1.123	0.027%	0.018	1.108	0.026%
4,200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.090	0.017	1.107	0.026%	0.028	1.118	0.027%	0.037	1.127	0.027%	0.020	1.110	0.026%
4,200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.090	0.007	1.097	0.026%	0.010	1.100	0.026%	0.013	1.103	0.026%	0.007	1.097	0.026%
4,200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.090	0.007	1.097	0.026%	0.008	1.098	0.026%	0.010	1.100	0.026%	0.006	1.096	0.026%
4,200	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.090	0.075	1.165	0.028%	0.173	1.263	0.030%	0.124	1.214	0.029%	0.090	1.180	0.028%
4,200	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.090	0.064	1.154	0.027%	0.182	1.272	0.030%	0.136	1.226	0.029%	0.074	1.164	0.028%
4,200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.090	0.103	1.193	0.028%	0.155	1.245	0.030%	0.266	1.356	0.032%	0.142	1.232	0.029%
4,200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.090	0.081	1.171	0.028%	0.154	1.244	0.030%	0.249	1.339	0.032%	0.134	1.224	0.029%
4,200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.090	0.086	1.176	0.028%	0.100	1.190	0.028%	0.140	1.230	0.029%	0.072	1.162	0.028%
4,200	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.090	0.058	1.148	0.027%	0.106	1.196	0.028%	0.135	1.225	0.029%	0.070	1.160	0.028%
4,200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.090	0.067	1.157	0.028%	0.114	1.204	0.029%	0.151	1.241	0.030%	0.081	1.171	0.028%
4,200	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.090	0.059	1.149	0.027%	0.064	1.154	0.027%	0.106	1.196	0.028%	0.056	1.146	0.027%
4,200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.090	0.072	1.162	0.028%	0.070	1.160	0.028%	0.077	1.167	0.028%	0.047	1.137	0.027%
4,200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.090	0.028	1.118	0.027%	0.048	1.138	0.027%	0.067	1.157	0.028%	0.036	1.126	0.027%
4,200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.090	0.017	1.107	0.026%	0.013	1.103	0.026%	0.015	1.105	0.026%	0.010	1.100	0.026%

Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation

Propyl Benzene (CAS 103-65-1)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
20	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.029	0.519	2.6%	0.034	0.524	2.6%	0.035	0.525	2.6%	0.023	0.513	2.6%
20	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.028	0.518	2.6%	0.039	0.529	2.6%	0.032	0.522	2.6%	0.019	0.509	2.5%
20	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.028	0.518	2.6%	0.029	0.519	2.6%	0.035	0.525	2.6%	0.020	0.510	2.5%
20	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.022	0.512	2.6%	0.033	0.523	2.6%	0.029	0.519	2.6%	0.019	0.509	2.5%
20	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.060	0.550	2.8%	0.042	0.532	2.7%	0.061	0.551	2.6%	0.040	0.530	2.6%
20	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.081	0.571	2.9%	0.083	0.573	2.9%	0.100	0.590	2.9%	0.063	0.553	2.8%
20	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.016	0.506	2.5%	0.026	0.516	2.6%	0.027	0.517	2.6%	0.018	0.508	2.5%
20	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.062	0.552	2.8%	0.063	0.553	2.8%	0.067	0.557	2.6%	0.038	0.528	2.6%
20	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.062	0.552	2.8%	0.080	0.570	2.9%	0.083	0.573	2.9%	0.051	0.541	2.7%
20	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.035	0.525	2.6%	0.051	0.541	2.7%	0.056	0.546	2.7%	0.031	0.521	2.6%
20	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.075	0.565	2.8%	0.166	0.656	3.3%	0.144	0.634	3.2%	0.090	0.580	2.9%
20	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.042	0.532	2.7%	0.077	0.567	2.8%	0.071	0.561	2.8%	0.044	0.534	2.7%
20	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.013	0.503	2.5%	0.017	0.507	2.5%	0.022	0.512	2.6%	0.012	0.502	2.5%
20	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.036	0.526	2.6%	0.049	0.539	2.7%	0.062	0.552	2.8%	0.033	0.523	2.6%
20	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.013	0.503	2.5%	0.029	0.519	2.6%	0.033	0.523	2.6%	0.019	0.509	2.5%
20	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.039	0.529	2.6%	0.057	0.547	2.7%	0.059	0.549	2.7%	0.036	0.526	2.6%
20	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.018	0.508	2.5%	0.022	0.512	2.6%	0.025	0.515	2.6%	0.016	0.506	2.5%
20	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.012	0.502	2.5%	0.024	0.514	2.6%	0.026	0.516	2.6%	0.016	0.506	2.5%
20	ING-6	Royal Road Public School	510337	4765360	0.490	0.022	0.512	2.6%	0.039	0.529	2.6%	0.035	0.525	2.6%	0.023	0.513	2.6%
20	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.011	0.501	2.5%	0.018	0.508	2.5%	0.019	0.509	2.5%	0.011	0.501	2.5%
20	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.011	0.501	2.5%	0.025	0.515	2.6%	0.021	0.511	2.6%	0.014	0.504	2.5%
20	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.033	0.523	2.6%	0.055	0.545	2.7%	0.066	0.556	2.8%	0.034	0.524	2.6%
20	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.021	0.511	2.6%	0.040	0.530	2.6%	0.044	0.534	2.7%	0.027	0.517	2.6%
20	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.051	0.541	2.7%	0.187	0.677	3.4%	0.180	0.670	3.4%	0.109	0.599	3.0%
20	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.064	0.554	2.8%	0.136	0.626	3.1%	0.167	0.657	3.3%	0.091	0.581	2.9%
20	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.074	0.564	2.8%	0.123	0.613	3.1%	0.206	0.696	3.5%	0.102	0.592	3.0%
20	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.046	0.536	2.7%	0.038	0.528	2.6%	0.050	0.540	2.7%	0.029	0.519	2.6%
20	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.027	0.517	2.6%	0.029	0.519	2.6%	0.041	0.531	2.7%	0.022	0.512	2.6%
20	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.018	0.508	2.5%	0.015	0.505	2.5%	0.020	0.510	2.5%	0.011	0.501	2.5%
20	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.010	0.500	2.5%	0.017	0.507	2.5%	0.022	0.512	2.6%	0.012	0.502	2.5%
20	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.004	0.494	2.5%	0.006	0.496	2.5%	0.008	0.498	2.5%	0.004	0.494	2.5%
20	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.004	0.494	2.5%	0.005	0.495	2.5%	0.006	0.496	2.5%	0.003	0.493	2.5%
20	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.045	0.535	2.7%	0.104	0.594	3.0%	0.075	0.565	2.8%	0.054	0.544	2.7%
20	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.038	0.528	2.6%	0.110	0.600	3.0%	0.082	0.572	2.9%	0.045	0.535	2.7%
20	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.062	0.552	2.8%	0.093	0.583	2.9%	0.160	0.650	3.2%	0.086	0.576	2.9%
20	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.048	0.538	2.7%	0.093	0.583	2.9%	0.150	0.640	3.2%	0.080	0.570	2.9%
20	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.051	0.541	2.7%	0.060	0.550	2.7%	0.084	0.574	2.9%	0.043	0.533	2.7%
20	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.035	0.525	2.6%	0.064	0.554	2.8%	0.081	0.571	2.9%	0.042	0.532	2.7%
20	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.040	0.530	2.7%	0.069	0.559	2.8%	0.091	0.581	2.9%	0.049	0.539	2.7%
20	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.036	0.526	2.6%	0.038	0.528	2.6%	0.064	0.554	2.8%	0.034	0.524	2.6%
20	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.043	0.533	2.7%	0.042	0.532	2.7%	0.046	0.536	2.7%	0.028	0.518	2.6%
20	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.017	0.507	2.5%	0.029	0.519	2.6%	0.040	0.530	2.7%	0.022	0.512	2.6%
20	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.010	0.500	2.5%	0.008	0.498	2.5%	0.009	0.499	2.5%	0.006	0.496	2.5%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Total Mercaptans (as Methyl Mercaptan) (CAS 74-93-1)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
13	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.950	0.076	4.026	31%	0.120	4.070	31%	0.133	4.083	31%	0.132	4.082	31%
13	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.950	0.109	4.059	31%	0.156	4.106	32%	0.215	4.165	32%	0.212	4.162	32%
13	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.950	0.113	4.063	31%	0.235	4.185	32%	0.240	4.190	32%	0.240	4.190	32%
13	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.950	0.093	4.043	31%	0.184	4.134	32%	0.187	4.137	32%	0.187	4.137	32%
13	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.950	0.126	4.076	31%	0.195	4.145	32%	0.211	4.161	32%	0.211	4.161	32%
13	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.950	0.129	4.079	31%	0.208	4.158	32%	0.224	4.174	32%	0.221	4.171	32%
13	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.950	0.060	4.010	31%	0.112	4.062	31%	0.116	4.066	31%	0.116	4.066	31%
13	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.950	0.104	4.054	31%	0.168	4.118	32%	0.180	4.130	32%	0.180	4.130	32%
13	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.950	0.096	4.046	31%	0.157	4.107	32%	0.176	4.126	32%	0.169	4.119	32%
13	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.950	0.144	4.094	31%	0.180	4.130	32%	0.180	4.130	32%	0.180	4.130	32%
13	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.950	0.265	4.215	32%	0.577	4.527	35%	0.587	4.537	35%	0.587	4.537	35%
13	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.950	0.173	4.123	32%	0.329	4.279	33%	0.332	4.282	33%	0.332	4.282	33%
13	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.950	0.060	4.010	31%	0.109	4.059	31%	0.113	4.063	31%	0.113	4.063	31%
13	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.950	0.149	4.099	32%	0.213	4.163	32%	0.213	4.163	32%	0.213	4.163	32%
13	ING-2	Laurie Hawkins Public School	509019	4765860	3.950	0.065	4.015	31%	0.115	4.065	31%	0.118	4.068	31%	0.118	4.068	31%
13	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.950	0.154	4.104	32%	0.360	4.310	33%	0.370	4.320	33%	0.370	4.320	33%
13	ING-4	On the river north of 209 County Road 9	509480	4765180	3.950	0.091	4.041	31%	0.170	4.120	32%	0.178	4.128	32%	0.178	4.128	32%
13	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.950	0.055	4.005	31%	0.099	4.049	31%	0.102	4.052	31%	0.102	4.052	31%
13	ING-6	Royal Road Public School	510337	4765360	3.950	0.115	4.065	32%	0.257	4.207	32%	0.277	4.227	33%	0.277	4.227	33%
13	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.950	0.067	4.017	31%	0.147	4.097	32%	0.163	4.113	32%	0.163	4.113	32%
13	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.950	0.083	4.033	31%	0.192	4.142	32%	0.205	4.155	32%	0.205	4.155	32%
13	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.950	0.117	4.067	31%	0.290	4.240	33%	0.302	4.252	33%	0.302	4.252	33%
13	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.950	0.085	4.035	31%	0.214	4.164	32%	0.240	4.190	32%	0.239	4.189	32%
13	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.950	0.209	4.159	32%	0.486	4.436	34%	0.497	4.447	34%	0.497	4.447	34%
13	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.950	0.208	4.158	32%	0.253	4.203	32%	0.458	4.408	34%	0.452	4.402	34%
13	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.950	0.175	4.125	32%	0.275	4.225	33%	0.346	4.296	33%	0.346	4.296	33%
13	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.950	0.101	4.051	31%	0.180	4.130	32%	0.186	4.136	32%	0.186	4.136	32%
13	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.950	0.085	4.035	31%	0.152	4.102	32%	0.152	4.102	32%	0.152	4.102	32%
13	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.950	0.061	4.011	31%	0.108	4.058	31%	0.109	4.059	31%	0.109	4.059	31%
13	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.950	0.041	3.991	31%	0.077	4.027	31%	0.085	4.035	31%	0.085	4.035	31%
13	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.950	0.025	3.975	31%	0.049	3.999	31%	0.056	4.006	31%	0.056	4.006	31%
13	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.950	0.030	3.980	31%	0.052	4.002	31%	0.053	4.003	31%	0.053	4.003	31%
13	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.950	0.155	4.105	32%	0.389	4.339	33%	0.387	4.337	33%	0.387	4.337	33%
13	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.950	0.168	4.118	32%	0.365	4.315	33%	0.398	4.348	33%	0.398	4.348	33%
13	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.950	0.167	4.117	32%	0.287	4.237	33%	0.371	4.321	33%	0.367	4.317	33%
13	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.950	0.184	4.134	32%	0.269	4.219	32%	0.425	4.375	34%	0.411	4.361	34%
13	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.950	0.144	4.094	31%	0.201	4.151	32%	0.274	4.224	32%	0.272	4.222	32%
13	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.950	0.125	4.075	31%	0.194	4.144	32%	0.233	4.183	32%	0.233	4.183	32%
13	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.950	0.117	4.067	31%	0.191	4.141	32%	0.221	4.171	32%	0.221	4.171	32%
13	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.950	0.081	4.031	31%	0.142	4.092	31%	0.142	4.092	31%	0.142	4.092	31%
13	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.950	0.075	4.025	31%	0.130	4.080	31%	0.132	4.082	31%	0.132	4.082	31%
13	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.950	0.068	4.018	31%	0.113	4.063	31%	0.120	4.070	31%	0.120	4.070	31%
13	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.950	0.029	3.979	31%	0.051	4.001	31%	0.063	4.013	31%	0.063	4.013	31%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Hydrogen Sulphide (CAS 7783-06-4)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
13	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.500	0.054	3.554	27%	0.085	3.585	28%	0.103	3.603	28%	0.112	3.612	28%
13	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.500	0.077	3.577	28%	0.110	3.610	28%	0.152	3.652	28%	0.150	3.650	28%
13	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.500	0.080	3.580	28%	0.167	3.667	28%	0.171	3.671	28%	0.171	3.671	28%
13	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.500	0.066	3.566	27%	0.132	3.632	28%	0.134	3.634	28%	0.148	3.648	28%
13	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.500	0.089	3.589	28%	0.138	3.638	28%	0.149	3.649	28%	0.166	3.666	28%
13	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.500	0.091	3.591	28%	0.147	3.647	28%	0.158	3.658	28%	0.174	3.674	28%
13	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.500	0.043	3.543	27%	0.090	3.590	28%	0.112	3.612	28%	0.127	3.627	28%
13	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.500	0.073	3.573	27%	0.119	3.619	28%	0.150	3.650	28%	0.175	3.675	28%
13	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.500	0.068	3.568	27%	0.130	3.630	28%	0.160	3.660	28%	0.184	3.684	28%
13	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.500	0.102	3.602	28%	0.128	3.628	28%	0.128	3.628	28%	0.128	3.628	28%
13	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.500	0.188	3.688	28%	0.409	3.909	30%	0.417	3.917	30%	0.417	3.917	30%
13	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.500	0.122	3.622	28%	0.233	3.733	29%	0.236	3.736	29%	0.236	3.736	29%
13	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.500	0.043	3.543	27%	0.087	3.587	28%	0.108	3.608	28%	0.125	3.625	28%
13	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.500	0.106	3.606	28%	0.152	3.652	28%	0.152	3.652	28%	0.152	3.652	28%
13	ING-2	Laurie Hawkins Public School	509019	4765860	3.500	0.046	3.546	27%	0.081	3.581	28%	0.089	3.589	28%	0.101	3.601	28%
13	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.500	0.109	3.609	28%	0.255	3.755	29%	0.263	3.763	29%	0.263	3.763	29%
13	ING-4	On the river north of 209 County Road 9	509480	4765180	3.500	0.065	3.565	27%	0.121	3.621	28%	0.126	3.626	28%	0.126	3.626	28%
13	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.500	0.039	3.539	27%	0.070	3.570	27%	0.084	3.584	28%	0.096	3.596	28%
13	ING-6	Royal Road Public School	510337	4765360	3.500	0.081	3.581	28%	0.182	3.682	28%	0.197	3.697	28%	0.197	3.697	28%
13	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.500	0.048	3.548	27%	0.105	3.605	28%	0.116	3.616	28%	0.116	3.616	28%
13	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.500	0.059	3.559	27%	0.136	3.636	28%	0.146	3.646	28%	0.146	3.646	28%
13	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.500	0.083	3.583	28%	0.205	3.705	29%	0.214	3.714	29%	0.214	3.714	29%
13	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.500	0.060	3.560	27%	0.152	3.652	28%	0.170	3.670	28%	0.173	3.673	28%
13	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.500	0.148	3.648	28%	0.344	3.844	30%	0.352	3.852	30%	0.352	3.852	30%
13	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.500	0.147	3.647	28%	0.179	3.679	28%	0.324	3.824	29%	0.321	3.821	29%
13	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.500	0.124	3.624	28%	0.195	3.695	28%	0.245	3.745	29%	0.245	3.745	29%
13	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.500	0.072	3.572	27%	0.128	3.628	28%	0.152	3.652	28%	0.178	3.678	28%
13	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.500	0.060	3.560	27%	0.108	3.608	28%	0.116	3.616	28%	0.135	3.635	28%
13	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.500	0.043	3.543	27%	0.120	3.620	28%	0.145	3.645	28%	0.163	3.663	28%
13	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.500	0.034	3.534	27%	0.103	3.603	28%	0.127	3.627	28%	0.145	3.645	28%
13	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.500	0.037	3.537	27%	0.108	3.608	28%	0.131	3.631	28%	0.149	3.649	28%
13	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.500	0.037	3.537	27%	0.105	3.605	28%	0.125	3.625	28%	0.140	3.640	28%
13	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.500	0.110	3.610	28%	0.276	3.776	29%	0.274	3.774	29%	0.274	3.774	29%
13	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.500	0.119	3.619	28%	0.258	3.758	29%	0.282	3.782	29%	0.282	3.782	29%
13	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.500	0.119	3.619	28%	0.203	3.703	28%	0.263	3.763	29%	0.260	3.760	29%
13	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.500	0.130	3.630	28%	0.191	3.691	28%	0.301	3.801	29%	0.291	3.791	29%
13	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.500	0.102	3.602	28%	0.143	3.643	28%	0.194	3.694	28%	0.193	3.693	28%
13	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.500	0.089	3.589	28%	0.137	3.637	28%	0.165	3.665	28%	0.165	3.665	28%
13	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.500	0.083	3.583	28%	0.135	3.635	28%	0.156	3.656	28%	0.156	3.656	28%
13	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.500	0.058	3.558	27%	0.101	3.601	28%	0.107	3.607	28%	0.124	3.624	28%
13	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.500	0.053	3.553	27%	0.092	3.592	28%	0.104	3.604	28%	0.121	3.621	28%
13	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.500	0.049	3.549	27%	0.099	3.599	28%	0.124	3.624	28%	0.134	3.634	28%
13	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.500	0.026	3.526	27%	0.072	3.572	27%	0.090	3.590	28%	0.098	3.598	28%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Hydrogen Sulphide (CAS 7783-06-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.500	0.004	3.504	50%	0.011	3.511	50%	0.013	3.513	50%	0.015	3.515	50%
7	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.500	0.004	3.504	50%	0.011	3.511	50%	0.014	3.514	50%	0.016	3.516	50%
7	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.500	0.005	3.505	50%	0.019	3.519	50%	0.024	3.524	50%	0.028	3.528	50%
7	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.500	0.005	3.505	50%	0.021	3.521	50%	0.026	3.526	50%	0.031	3.531	50%
7	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.500	0.009	3.509	50%	0.024	3.524	50%	0.030	3.530	50%	0.035	3.535	51%
7	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.500	0.012	3.512	50%	0.035	3.535	51%	0.045	3.545	51%	0.053	3.553	51%
7	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.500	0.006	3.506	50%	0.024	3.524	50%	0.030	3.530	50%	0.035	3.535	51%
7	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.500	0.009	3.509	50%	0.033	3.533	50%	0.042	3.542	51%	0.049	3.549	51%
7	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.500	0.009	3.509	50%	0.022	3.522	50%	0.027	3.527	50%	0.032	3.532	50%
7	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.500	0.005	3.505	50%	0.013	3.513	50%	0.015	3.515	50%	0.015	3.515	50%
7	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.500	0.011	3.511	50%	0.035	3.535	51%	0.042	3.542	51%	0.042	3.542	51%
7	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.500	0.006	3.506	50%	0.016	3.516	50%	0.019	3.519	50%	0.019	3.519	50%
7	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.500	0.003	3.503	50%	0.012	3.512	50%	0.016	3.516	50%	0.018	3.518	50%
7	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.500	0.005	3.505	50%	0.013	3.513	50%	0.015	3.515	50%	0.016	3.516	50%
7	ING-2	Laurie Hawkins Public School	509019	4765860	3.500	0.002	3.502	50%	0.007	3.507	50%	0.008	3.508	50%	0.010	3.510	50%
7	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.500	0.006	3.506	50%	0.014	3.514	50%	0.017	3.517	50%	0.018	3.518	50%
7	ING-4	On the river north of 209 County Road 9	509480	4765180	3.500	0.003	3.503	50%	0.006	3.506	50%	0.008	3.508	50%	0.009	3.509	50%
7	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.500	0.002	3.502	50%	0.007	3.507	50%	0.008	3.508	50%	0.010	3.510	50%
7	ING-6	Royal Road Public School	510337	4765360	3.500	0.003	3.503	50%	0.010	3.510	50%	0.012	3.512	50%	0.012	3.512	50%
7	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.500	0.002	3.502	50%	0.006	3.506	50%	0.007	3.507	50%	0.008	3.508	50%
7	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.500	0.002	3.502	50%	0.007	3.507	50%	0.008	3.508	50%	0.009	3.509	50%
7	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.500	0.005	3.505	50%	0.014	3.514	50%	0.016	3.516	50%	0.018	3.518	50%
7	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.500	0.003	3.503	50%	0.010	3.510	50%	0.012	3.512	50%	0.013	3.513	50%
7	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.500	0.007	3.507	50%	0.038	3.538	51%	0.048	3.548	51%	0.047	3.547	51%
7	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.500	0.011	3.511	50%	0.027	3.527	50%	0.041	3.541	51%	0.042	3.542	51%
7	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.500	0.011	3.511	50%	0.028	3.528	50%	0.039	3.539	51%	0.039	3.539	51%
7	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.500	0.007	3.507	50%	0.022	3.522	50%	0.027	3.527	50%	0.032	3.532	50%
7	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.500	0.005	3.505	50%	0.018	3.518	50%	0.023	3.523	50%	0.026	3.526	50%
7	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.500	0.004	3.504	50%	0.014	3.514	50%	0.018	3.518	50%	0.020	3.520	50%
7	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.500	0.003	3.503	50%	0.011	3.511	50%	0.014	3.514	50%	0.017	3.517	50%
7	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.500	0.002	3.502	50%	0.006	3.506	50%	0.008	3.508	50%	0.009	3.509	50%
7	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.500	0.001	3.501	50%	0.004	3.504	50%	0.005	3.505	50%	0.006	3.506	50%
7	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.500	0.006	3.506	50%	0.024	3.524	50%	0.026	3.526	50%	0.026	3.526	50%
7	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.500	0.006	3.506	50%	0.022	3.522	50%	0.023	3.523	50%	0.023	3.523	50%
7	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.500	0.009	3.509	50%	0.024	3.524	50%	0.034	3.534	50%	0.034	3.534	50%
7	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.500	0.007	3.507	50%	0.025	3.525	50%	0.031	3.531	50%	0.033	3.533	50%
7	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.500	0.007	3.507	50%	0.019	3.519	50%	0.025	3.525	50%	0.028	3.528	50%
7	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.500	0.005	3.505	50%	0.020	3.520	50%	0.025	3.525	50%	0.028	3.528	50%
7	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.500	0.006	3.506	50%	0.018	3.518	50%	0.024	3.524	50%	0.027	3.527	50%
7	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.500	0.005	3.505	50%	0.013	3.513	50%	0.016	3.516	50%	0.018	3.518	50%
7	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.500	0.007	3.507	50%	0.013	3.513	50%	0.016	3.516	50%	0.019	3.519	50%
7	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.500	0.003	3.503	50%	0.009	3.509	50%	0.011	3.511	50%	0.013	3.513	50%
7	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.500	0.002	3.502	50%	0.009	3.509	50%	0.011	3.511	50%	0.013	3.513	50%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Dimethyl Sulphide (CAS 75-18-3)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
30	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	7.500	0.098	7.598	25%	0.102	7.602	25%	0.118	7.618	25%	0.085	7.585	25%
30	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	7.500	0.141	7.641	25%	0.153	7.653	26%	0.182	7.682	26%	0.137	7.637	25%
30	ZOR-3	Residence at 663951 Rd 66	510216	4770270	7.500	0.147	7.647	25%	0.224	7.724	26%	0.182	7.682	26%	0.155	7.655	26%
30	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	7.500	0.120	7.620	25%	0.169	7.669	26%	0.137	7.637	25%	0.121	7.621	25%
30	ZOR-5	Residence at 334789 33rd Line	508931	4768760	7.500	0.162	7.662	26%	0.162	7.662	26%	0.181	7.681	26%	0.136	7.636	25%
30	ZOR-6	Residence at 334742 33rd Line	509185	4768350	7.500	0.167	7.667	26%	0.173	7.673	26%	0.200	7.700	26%	0.143	7.643	25%
30	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	7.500	0.078	7.578	25%	0.092	7.592	25%	0.101	7.601	25%	0.075	7.575	25%
30	ZOR-8	Residence at 643743 Road 64	508940	4767980	7.500	0.134	7.634	25%	0.145	7.645	25%	0.162	7.662	26%	0.116	7.616	25%
30	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	7.500	0.124	7.624	25%	0.154	7.654	26%	0.151	7.651	26%	0.110	7.610	25%
30	ZOR-10	Residence at 334578 33rd Line	509739	4766780	7.500	0.186	7.686	26%	0.160	7.660	26%	0.150	7.650	25%	0.116	7.616	25%
30	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	7.500	0.342	7.842	26%	0.605	8.105	27%	0.452	7.952	27%	0.380	7.880	26%
30	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	7.500	0.223	7.723	26%	0.319	7.819	26%	0.266	7.766	26%	0.215	7.715	26%
30	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	7.500	0.077	7.577	25%	0.100	7.600	25%	0.100	7.600	25%	0.073	7.573	25%
30	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	7.500	0.192	7.692	26%	0.162	7.662	26%	0.151	7.651	26%	0.138	7.638	25%
30	ING-2	Laurie Hawkins Public School	509019	4765860	7.500	0.084	7.584	25%	0.098	7.598	25%	0.103	7.603	25%	0.076	7.576	25%
30	ING-3	Ingersoll District Collegiate Institute	510512	4766230	7.500	0.199	7.699	26%	0.375	7.875	26%	0.253	7.753	26%	0.239	7.739	26%
30	ING-4	On the river north of 209 County Road 9	509480	4765180	7.500	0.118	7.618	25%	0.160	7.660	26%	0.135	7.635	25%	0.115	7.615	25%
30	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	7.500	0.071	7.571	25%	0.084	7.584	25%	0.088	7.588	25%	0.066	7.566	25%
30	ING-6	Royal Road Public School	510337	4765360	7.500	0.148	7.648	25%	0.267	7.767	26%	0.202	7.702	26%	0.179	7.679	26%
30	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	7.500	0.087	7.587	25%	0.144	7.644	25%	0.123	7.623	25%	0.105	7.605	25%
30	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	7.500	0.108	7.608	25%	0.187	7.687	26%	0.153	7.653	26%	0.133	7.633	25%
30	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	7.500	0.151	7.651	26%	0.294	7.794	26%	0.229	7.729	26%	0.195	7.695	26%
30	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	7.500	0.109	7.609	25%	0.212	7.712	26%	0.179	7.679	26%	0.155	7.655	26%
30	SWO-1	Residence at 584052 Beachville Road	511124	4766750	7.500	0.270	7.770	26%	0.496	7.996	27%	0.427	7.927	26%	0.322	7.822	26%
30	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	7.500	0.269	7.769	26%	0.279	7.779	26%	0.433	7.933	26%	0.293	7.793	26%
30	SWO-3	Residence at 584142 Beachville Road	511722	4767480	7.500	0.226	7.726	26%	0.225	7.725	26%	0.323	7.823	26%	0.224	7.724	26%
30	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	7.500	0.131	7.631	25%	0.129	7.629	25%	0.166	7.666	26%	0.120	7.620	25%
30	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	7.500	0.110	7.610	25%	0.109	7.609	25%	0.136	7.636	25%	0.098	7.598	25%
30	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	7.500	0.079	7.579	25%	0.073	7.573	25%	0.080	7.580	25%	0.070	7.570	25%
30	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	7.500	0.053	7.553	25%	0.066	7.566	25%	0.071	7.571	25%	0.055	7.555	25%
30	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	7.500	0.033	7.533	25%	0.042	7.542	25%	0.043	7.543	25%	0.036	7.536	25%
30	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	7.500	0.038	7.538	25%	0.036	7.536	25%	0.036	7.536	25%	0.036	7.536	25%
30	SWO-10	Residence at 563977 Karn Road	510980	4765990	7.500	0.201	7.701	26%	0.399	7.899	26%	0.285	7.785	26%	0.250	7.750	26%
30	SWO-11	Residence at 564028 Karn Road	511396	4766310	7.500	0.217	7.717	26%	0.372	7.872	26%	0.338	7.838	26%	0.257	7.757	26%
30	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	7.500	0.217	7.717	26%	0.306	7.806	26%	0.345	7.845	26%	0.237	7.737	26%
30	SWO-13	Centreville Pond and Conservation Area	511570	4766920	7.500	0.238	7.738	26%	0.337	7.837	26%	0.402	7.902	26%	0.266	7.766	26%
30	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	7.500	0.186	7.686	26%	0.183	7.683	26%	0.254	7.754	26%	0.176	7.676	26%
30	SWO-15	Residences at 564146 Karn Road	512251	4767100	7.500	0.162	7.662	26%	0.158	7.658	26%	0.213	7.713	26%	0.151	7.651	26%
30	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	7.500	0.152	7.652	26%	0.151	7.651	26%	0.199	7.699	26%	0.143	7.643	25%
30	SWO-17	Residence at 564226 Karn Road	512958	4767760	7.500	0.105	7.605	25%	0.096	7.596	25%	0.122	7.622	25%	0.092	7.592	25%
30	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	7.500	0.097	7.597	25%	0.092	7.592	25%	0.117	7.617	25%	0.085	7.585	25%
30	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	7.500	0.088	7.588	25%	0.089	7.589	25%	0.109	7.609	25%	0.077	7.577	25%
30	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	7.500	0.038	7.538	25%	0.041	7.541	25%	0.049	7.549	25%	0.042	7.542	25%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Dimethyl Disulphide (CAS 624-92-0)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
56	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.850	0.049	3.899	7%	0.155	4.005	7%	0.158	4.008	7%	0.170	4.020	7%
56	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.850	0.070	3.920	7%	0.200	4.050	7%	0.235	4.085	7%	0.274	4.124	7%
56	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.850	0.073	3.923	7%	0.233	4.083	7%	0.303	4.153	7%	0.310	4.160	7%
56	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.850	0.060	3.910	7%	0.191	4.041	7%	0.239	4.089	7%	0.242	4.092	7%
56	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.850	0.081	3.931	7%	0.252	4.102	7%	0.256	4.106	7%	0.272	4.122	7%
56	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.850	0.083	3.933	7%	0.268	4.118	7%	0.268	4.118	7%	0.286	4.136	7%
56	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.850	0.039	3.889	7%	0.136	3.986	7%	0.147	3.997	7%	0.149	3.999	7%
56	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.850	0.067	3.917	7%	0.217	4.067	7%	0.219	4.069	7%	0.232	4.082	7%
56	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.850	0.062	3.912	7%	0.202	4.052	7%	0.202	4.052	7%	0.219	4.069	7%
56	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.850	0.093	3.943	7%	0.233	4.083	7%	0.233	4.083	7%	0.233	4.083	7%
56	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.850	0.171	4.021	7%	0.528	4.378	8%	0.752	4.602	8%	0.759	4.609	8%
56	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.850	0.112	3.962	7%	0.341	4.191	7%	0.427	4.277	8%	0.429	4.279	8%
56	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.850	0.039	3.889	7%	0.135	3.985	7%	0.142	3.992	7%	0.146	3.996	7%
56	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.850	0.096	3.946	7%	0.275	4.125	7%	0.276	4.126	7%	0.276	4.126	7%
56	ING-2	Laurie Hawkins Public School	509019	4765860	3.850	0.042	3.892	7%	0.135	3.985	7%	0.150	4.000	7%	0.152	4.002	7%
56	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.850	0.099	3.949	7%	0.336	4.186	7%	0.464	4.314	8%	0.478	4.328	8%
56	ING-4	On the river north of 209 County Road 9	509480	4765180	3.850	0.059	3.909	7%	0.190	4.040	7%	0.221	4.071	7%	0.230	4.080	7%
56	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.850	0.036	3.886	7%	0.120	3.970	7%	0.129	3.979	7%	0.132	3.982	7%
56	ING-6	Royal Road Public School	510337	4765360	3.850	0.074	3.924	7%	0.259	4.109	7%	0.341	4.191	7%	0.358	4.208	8%
56	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.850	0.043	3.893	7%	0.152	4.002	7%	0.197	4.047	7%	0.210	4.060	7%
56	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.850	0.054	3.904	7%	0.187	4.037	7%	0.253	4.103	7%	0.265	4.115	7%
56	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.850	0.075	3.925	7%	0.268	4.118	7%	0.373	4.223	8%	0.390	4.240	8%
56	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.850	0.055	3.905	7%	0.204	4.054	7%	0.288	4.138	7%	0.309	4.159	7%
56	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.850	0.135	3.985	7%	0.446	4.296	8%	0.635	4.485	8%	0.643	4.493	8%
56	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.850	0.134	3.984	7%	0.323	4.173	7%	0.454	4.304	8%	0.584	4.434	8%
56	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.850	0.113	3.963	7%	0.356	4.206	8%	0.382	4.232	8%	0.447	4.297	8%
56	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.850	0.065	3.915	7%	0.232	4.082	7%	0.236	4.086	7%	0.240	4.090	7%
56	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.850	0.055	3.905	7%	0.196	4.046	7%	0.196	4.046	7%	0.196	4.046	7%
56	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.850	0.040	3.890	7%	0.139	3.989	7%	0.140	3.990	7%	0.141	3.991	7%
56	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.850	0.027	3.877	7%	0.096	3.946	7%	0.100	3.950	7%	0.110	3.960	7%
56	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.850	0.016	3.866	7%	0.059	3.909	7%	0.067	3.917	7%	0.073	3.923	7%
56	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.850	0.019	3.869	7%	0.066	3.916	7%	0.068	3.918	7%	0.068	3.918	7%
56	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.850	0.100	3.950	7%	0.356	4.206	8%	0.498	4.348	8%	0.500	4.350	8%
56	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.850	0.109	3.959	7%	0.343	4.193	7%	0.487	4.337	8%	0.514	4.364	8%
56	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.850	0.108	3.958	7%	0.277	4.127	7%	0.406	4.256	8%	0.473	4.323	8%
56	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.850	0.119	3.969	7%	0.280	4.130	7%	0.429	4.279	8%	0.530	4.380	8%
56	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.850	0.093	3.943	7%	0.260	4.110	7%	0.306	4.156	7%	0.351	4.201	8%
56	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.850	0.081	3.931	7%	0.250	4.100	7%	0.267	4.117	7%	0.302	4.152	7%
56	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.850	0.076	3.926	7%	0.246	4.096	7%	0.258	4.108	7%	0.285	4.135	7%
56	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.850	0.053	3.903	7%	0.183	4.033	7%	0.184	4.034	7%	0.184	4.034	7%
56	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.850	0.048	3.898	7%	0.168	4.018	7%	0.169	4.019	7%	0.170	4.020	7%
56	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.850	0.044	3.894	7%	0.146	3.996	7%	0.148	3.998	7%	0.155	4.005	7%
56	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.850	0.019	3.869	7%	0.065	3.915	7%	0.074	3.924	7%	0.081	3.931	7%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Total Reduced Sulphurs (TRS) (CAS N/A-2)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
13	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	5.000	0.137	5.137	40%	0.448	5.448	42%	0.456	5.456	42%	0.491	5.491	42%
13	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	5.000	0.198	5.198	40%	0.577	5.577	43%	0.679	5.679	44%	0.792	5.792	45%
13	ZOR-3	Residence at 663951 Rd 66	510216	4770270	5.000	0.204	5.204	40%	0.668	5.668	44%	0.876	5.876	45%	0.897	5.897	45%
13	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	5.000	0.165	5.165	40%	0.550	5.550	43%	0.693	5.693	44%	0.700	5.700	44%
13	ZOR-5	Residence at 334789 33rd Line	508931	4768760	5.000	0.235	5.235	40%	0.727	5.727	44%	0.738	5.738	44%	0.786	5.786	45%
13	ZOR-6	Residence at 334742 33rd Line	509185	4768350	5.000	0.244	5.244	40%	0.775	5.775	44%	0.775	5.775	44%	0.826	5.826	45%
13	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	5.000	0.107	5.107	39%	0.392	5.392	41%	0.423	5.423	42%	0.431	5.431	42%
13	ZOR-8	Residence at 643743 Road 64	508940	4767980	5.000	0.183	5.183	40%	0.628	5.628	43%	0.632	5.632	43%	0.670	5.670	44%
13	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	5.000	0.171	5.171	40%	0.585	5.585	43%	0.585	5.585	43%	0.632	5.632	43%
13	ZOR-10	Residence at 334578 33rd Line	509739	4766780	5.000	0.256	5.256	40%	0.672	5.672	44%	0.672	5.672	44%	0.672	5.672	44%
13	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	5.000	0.473	5.473	42%	1.495	6.495	50%	2.171	7.171	55%	2.191	7.191	55%
13	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	5.000	0.306	5.306	41%	0.976	5.976	46%	1.233	6.233	48%	1.241	6.241	48%
13	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	5.000	0.106	5.106	39%	0.390	5.390	41%	0.411	5.411	42%	0.422	5.422	42%
13	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	5.000	0.264	5.264	40%	0.794	5.794	45%	0.796	5.796	45%	0.796	5.796	45%
13	ING-2	Laurie Hawkins Public School	509019	4765860	5.000	0.116	5.116	39%	0.390	5.390	41%	0.434	5.434	42%	0.440	5.440	42%
13	ING-3	Ingersoll District Collegiate Institute	510512	4766230	5.000	0.276	5.276	41%	0.964	5.964	46%	1.340	6.340	49%	1.382	6.382	49%
13	ING-4	On the river north of 209 County Road 9	509480	4765180	5.000	0.163	5.163	40%	0.547	5.547	43%	0.638	5.638	43%	0.664	5.664	44%
13	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	5.000	0.098	5.098	39%	0.346	5.346	41%	0.374	5.374	41%	0.380	5.380	41%
13	ING-6	Royal Road Public School	510337	4765360	5.000	0.204	5.204	40%	0.741	5.741	44%	0.981	5.981	46%	1.035	6.035	46%
13	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	5.000	0.121	5.121	39%	0.435	5.435	42%	0.567	5.567	43%	0.607	5.607	43%
13	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	5.000	0.150	5.150	40%	0.536	5.536	43%	0.730	5.730	44%	0.765	5.765	44%
13	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	5.000	0.212	5.212	40%	0.767	5.767	44%	1.078	6.078	47%	1.126	6.126	47%
13	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	5.000	0.153	5.153	40%	0.584	5.584	43%	0.831	5.831	45%	0.893	5.893	45%
13	SWO-1	Residence at 584052 Beachville Road	511124	4766750	5.000	0.385	5.385	41%	1.262	6.262	48%	1.833	6.833	53%	1.856	6.856	53%
13	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	5.000	0.382	5.382	41%	0.931	5.931	46%	1.305	6.305	48%	1.688	6.688	51%
13	SWO-3	Residence at 584142 Beachville Road	511722	4767480	5.000	0.321	5.321	41%	1.027	6.027	46%	1.098	6.098	47%	1.290	6.290	48%
13	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	5.000	0.179	5.179	40%	0.669	5.669	44%	0.681	5.681	44%	0.695	5.695	44%
13	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	5.000	0.152	5.152	40%	0.567	5.567	43%	0.567	5.567	43%	0.567	5.567	43%
13	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	5.000	0.109	5.109	39%	0.402	5.402	42%	0.405	5.405	42%	0.407	5.407	42%
13	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	5.000	0.074	5.074	39%	0.277	5.277	41%	0.288	5.288	41%	0.318	5.318	41%
13	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	5.000	0.066	5.066	39%	0.223	5.223	40%	0.247	5.247	40%	0.265	5.265	40%
13	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	5.000	0.070	5.070	39%	0.259	5.259	40%	0.285	5.285	41%	0.302	5.302	41%
13	SWO-10	Residence at 563977 Karn Road	510980	4765990	5.000	0.283	5.283	41%	1.020	6.020	46%	1.438	6.438	50%	1.444	6.444	50%
13	SWO-11	Residence at 564028 Karn Road	511396	4766310	5.000	0.307	5.307	41%	0.970	5.970	46%	1.405	6.405	49%	1.484	6.484	50%
13	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	5.000	0.309	5.309	41%	0.791	5.791	45%	1.169	6.169	47%	1.367	6.367	49%
13	SWO-13	Centreville Pond and Conservation Area	511570	4766920	5.000	0.339	5.339	41%	0.805	5.805	45%	1.256	6.256	48%	1.531	6.531	50%
13	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	5.000	0.272	5.272	41%	0.750	5.750	44%	0.876	5.876	45%	1.015	6.015	46%
13	SWO-15	Residences at 564146 Karn Road	512251	4767100	5.000	0.232	5.232	40%	0.723	5.723	44%	0.769	5.769	44%	0.871	5.871	45%
13	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	5.000	0.217	5.217	40%	0.712	5.712	44%	0.744	5.744	44%	0.824	5.824	45%
13	SWO-17	Residence at 564226 Karn Road	512958	4767760	5.000	0.152	5.152	40%	0.529	5.529	43%	0.530	5.530	43%	0.531	5.531	43%
13	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	5.000	0.133	5.133	39%	0.486	5.486	42%	0.489	5.489	42%	0.492	5.492	42%
13	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	5.000	0.123	5.123	39%	0.422	5.422	42%	0.427	5.427	42%	0.447	5.447	42%
13	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	5.000	0.053	5.053	39%	0.204	5.204	40%	0.258	5.258	40%	0.289	5.289	41%

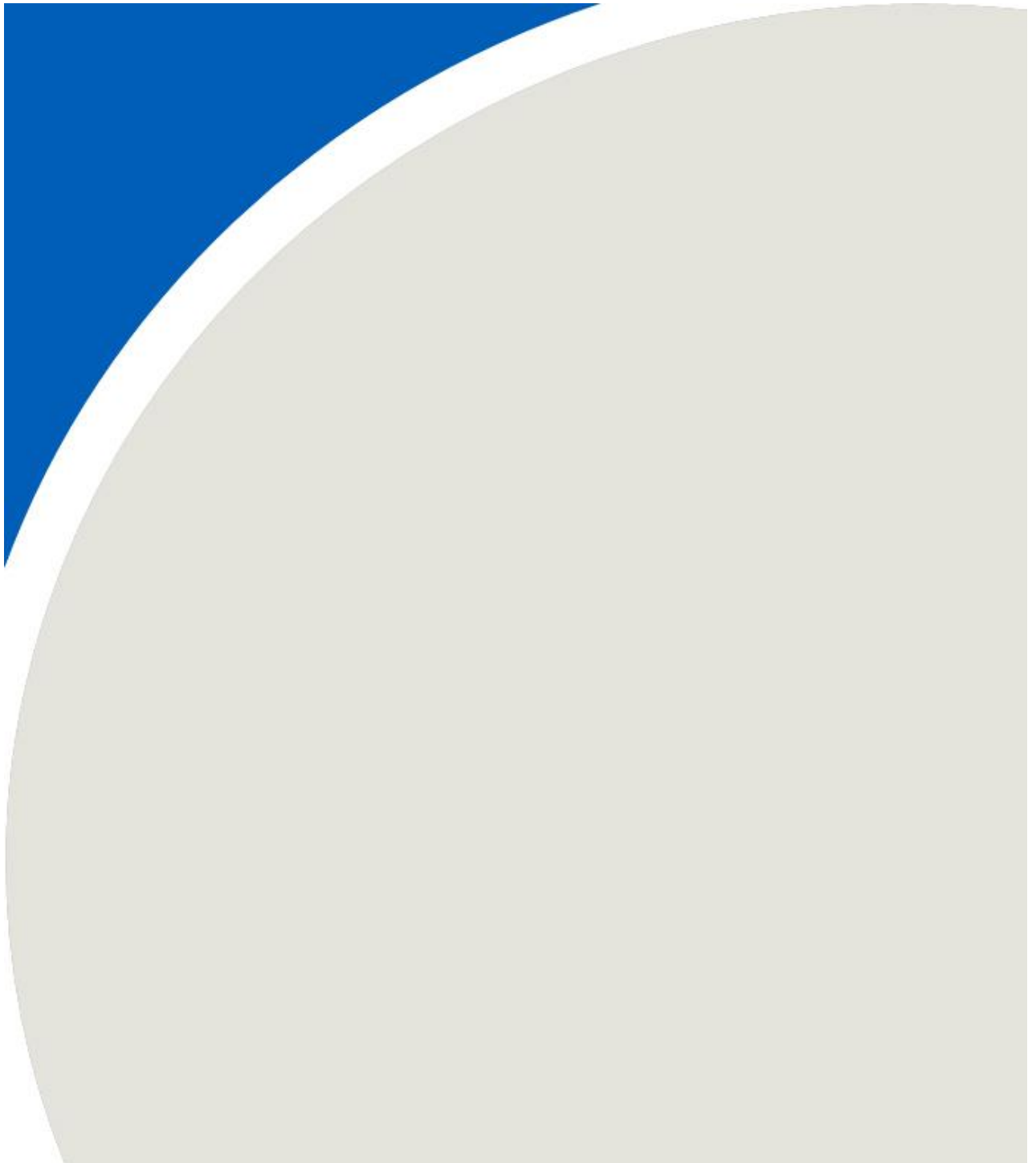
**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Total Reduced Sulphurs (TRS) (CAS N/A-2)**

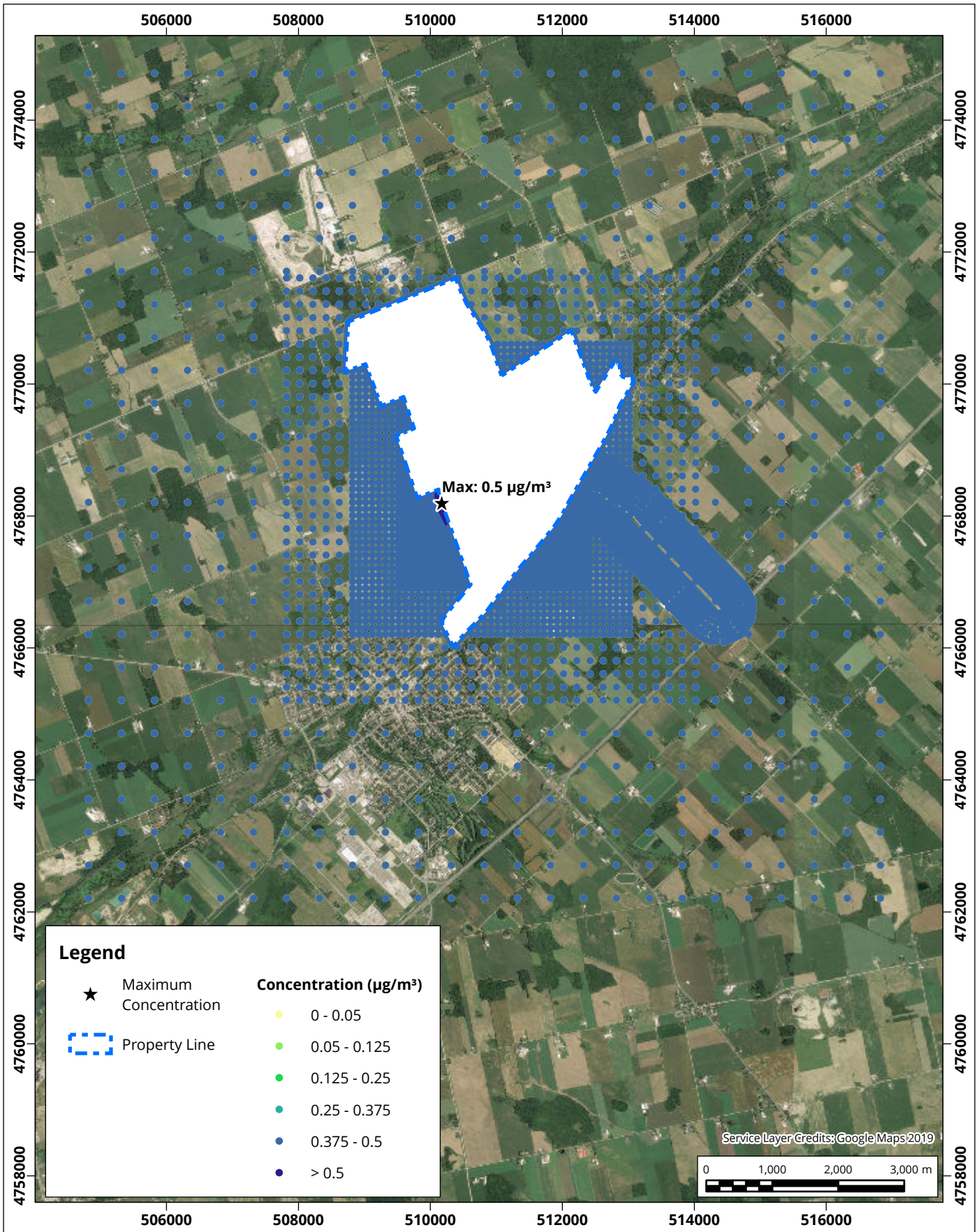
**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	5.000	0.011	5.011	72%	0.037	5.037	72%	0.051	5.051	72%	0.055	5.055	72%
7	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	5.000	0.011	5.011	72%	0.031	5.031	72%	0.046	5.046	72%	0.047	5.047	72%
7	ZOR-3	Residence at 663951 Rd 66	510216	4770270	5.000	0.010	5.010	72%	0.034	5.034	72%	0.042	5.042	72%	0.042	5.042	72%
7	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	5.000	0.009	5.009	72%	0.035	5.035	72%	0.043	5.043	72%	0.048	5.048	72%
7	ZOR-5	Residence at 334789 33rd Line	508931	4768760	5.000	0.022	5.022	72%	0.079	5.079	73%	0.090	5.090	73%	0.097	5.097	73%
7	ZOR-6	Residence at 334742 33rd Line	509185	4768350	5.000	0.029	5.029	72%	0.106	5.106	73%	0.139	5.139	73%	0.152	5.152	74%
7	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	5.000	0.006	5.006	72%	0.029	5.029	72%	0.038	5.038	72%	0.042	5.042	72%
7	ZOR-8	Residence at 643743 Road 64	508940	4767980	5.000	0.023	5.023	72%	0.075	5.075	72%	0.084	5.084	73%	0.089	5.089	73%
7	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	5.000	0.022	5.022	72%	0.091	5.091	73%	0.118	5.118	73%	0.126	5.126	73%
7	ZOR-10	Residence at 334578 33rd Line	509739	4766780	5.000	0.013	5.013	72%	0.048	5.048	72%	0.061	5.061	72%	0.066	5.066	72%
7	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	5.000	0.026	5.026	72%	0.120	5.120	73%	0.190	5.190	74%	0.209	5.209	74%
7	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	5.000	0.016	5.016	72%	0.055	5.055	72%	0.090	5.090	73%	0.099	5.099	73%
7	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	5.000	0.005	5.005	72%	0.022	5.022	72%	0.028	5.028	72%	0.030	5.030	72%
7	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	5.000	0.014	5.014	72%	0.047	5.047	72%	0.059	5.059	72%	0.065	5.065	72%
7	ING-2	Laurie Hawkins Public School	509019	4765860	5.000	0.005	5.005	71%	0.022	5.022	72%	0.035	5.035	72%	0.040	5.040	72%
7	ING-3	Ingersoll District Collegiate Institute	510512	4766230	5.000	0.014	5.014	72%	0.053	5.053	72%	0.073	5.073	72%	0.082	5.082	73%
7	ING-4	On the river north of 209 County Road 9	509480	4765180	5.000	0.006	5.006	72%	0.025	5.025	72%	0.034	5.034	72%	0.037	5.037	72%
7	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	5.000	0.005	5.005	71%	0.020	5.020	72%	0.032	5.032	72%	0.035	5.035	72%
7	ING-6	Royal Road Public School	510337	4765360	5.000	0.009	5.009	72%	0.032	5.032	72%	0.049	5.049	72%	0.053	5.053	72%
7	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	5.000	0.004	5.004	71%	0.014	5.014	72%	0.023	5.023	72%	0.025	5.025	72%
7	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	5.000	0.004	5.004	71%	0.024	5.024	72%	0.034	5.034	72%	0.036	5.036	72%
7	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	5.000	0.013	5.013	72%	0.049	5.049	72%	0.069	5.069	72%	0.072	5.072	72%
7	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	5.000	0.008	5.008	72%	0.038	5.038	72%	0.056	5.056	72%	0.062	5.062	72%
7	SWO-1	Residence at 584052 Beachville Road	511124	4766750	5.000	0.019	5.019	72%	0.130	5.130	73%	0.225	5.225	75%	0.246	5.246	75%
7	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	5.000	0.023	5.023	72%	0.099	5.099	73%	0.168	5.168	74%	0.192	5.192	74%
7	SWO-3	Residence at 584142 Beachville Road	511722	4767480	5.000	0.027	5.027	72%	0.108	5.108	73%	0.170	5.170	74%	0.200	5.200	74%
7	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	5.000	0.017	5.017	72%	0.066	5.066	72%	0.071	5.071	72%	0.073	5.073	72%
7	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	5.000	0.010	5.010	72%	0.038	5.038	72%	0.043	5.043	72%	0.049	5.049	72%
7	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	5.000	0.007	5.007	72%	0.025	5.025	72%	0.026	5.026	72%	0.026	5.026	72%
7	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	5.000	0.004	5.004	71%	0.015	5.015	72%	0.022	5.022	72%	0.026	5.026	72%
7	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	5.000	0.002	5.002	71%	0.008	5.008	72%	0.011	5.011	72%	0.012	5.012	72%
7	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	5.000	0.002	5.002	71%	0.008	5.008	72%	0.009	5.009	72%	0.009	5.009	72%
7	SWO-10	Residence at 563977 Karn Road	510980	4765990	5.000	0.016	5.016	72%	0.089	5.089	73%	0.129	5.129	73%	0.136	5.136	73%
7	SWO-11	Residence at 564028 Karn Road	511396	4766310	5.000	0.014	5.014	72%	0.073	5.073	72%	0.118	5.118	73%	0.121	5.121	73%
7	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	5.000	0.023	5.023	72%	0.098	5.098	73%	0.153	5.153	74%	0.178	5.178	74%
7	SWO-13	Centreville Pond and Conservation Area	511570	4766920	5.000	0.018	5.018	72%	0.098	5.098	73%	0.134	5.134	73%	0.157	5.157	74%
7	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	5.000	0.019	5.019	72%	0.055	5.055	72%	0.079	5.079	73%	0.092	5.092	73%
7	SWO-15	Residences at 564146 Karn Road	512251	4767100	5.000	0.013	5.013	72%	0.055	5.055	72%	0.075	5.075	73%	0.088	5.088	73%
7	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	5.000	0.015	5.015	72%	0.054	5.054	72%	0.088	5.088	73%	0.102	5.102	73%
7	SWO-17	Residence at 564226 Karn Road	512958	4767760	5.000	0.013	5.013	72%	0.055	5.055	72%	0.068	5.068	72%	0.072	5.072	72%
7	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	5.000	0.016	5.016	72%	0.057	5.057	72%	0.060	5.060	72%	0.066	5.066	72%
7	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	5.000	0.006	5.006	72%	0.024	5.024	72%	0.042	5.042	72%	0.048	5.048	72%
7	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	5.000	0.005	5.005	71%	0.017	5.017	72%	0.018	5.018	72%	0.019	5.019	72%

# APPENDIX I








Map Document: C:\GIS\Temp - Copy\1800160\1800160\_Walker\_LF\_Contour\_Plots.aprx

## Annual Benzene Concentration Contours

### Stage 1 - 2023 to 2027

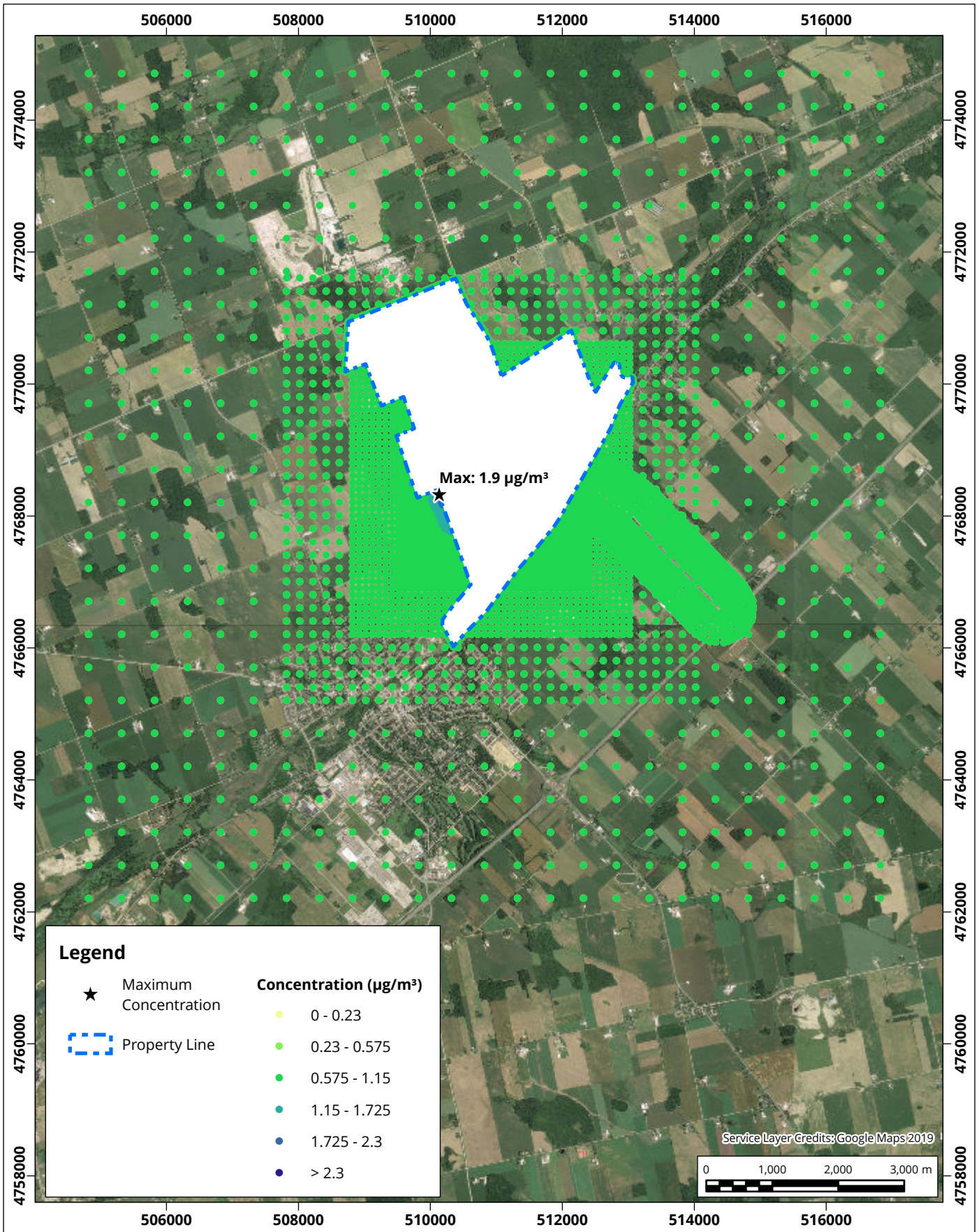
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
  
 Background = 0.378 µg/m³  
 Limit = 0.5 µg/m³  
 Project #: 1800160

Drawn by: DJH	Figure: 11
Exact Scale: 1:80,000	
Date Revised: Feb 18, 2020	







## 24-hour Benzene Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.585 \mu\text{g}/\text{m}^3$

Limit =  $2.3 \mu\text{g}/\text{m}^3$

Project #: 1800160

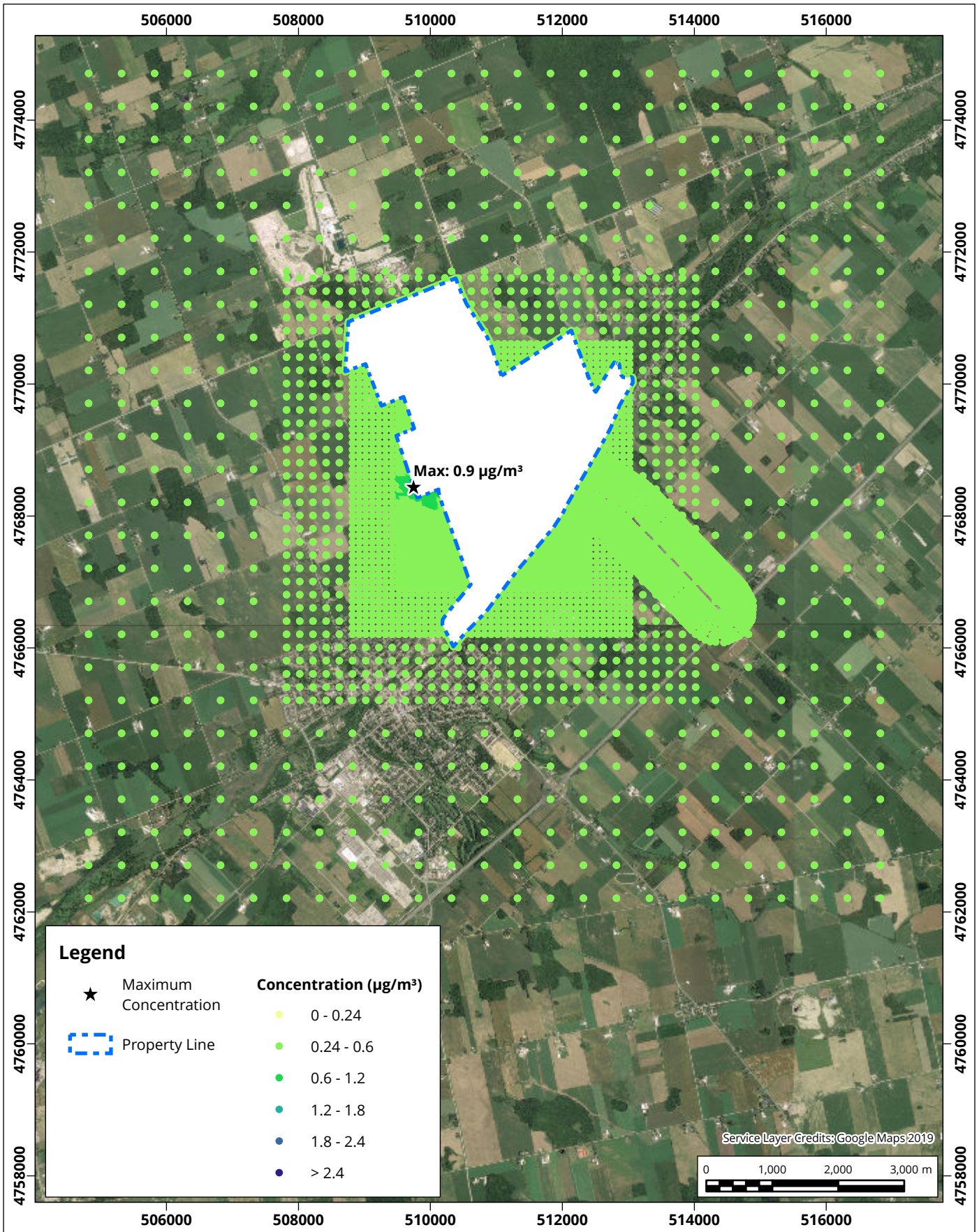
Drawn by: DJH Figure: I2

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Carbon Tetrachloride Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.5 \mu\text{g}/\text{m}^3$   
Limit =  $2.4 \mu\text{g}/\text{m}^3$   
Project #: 1800160

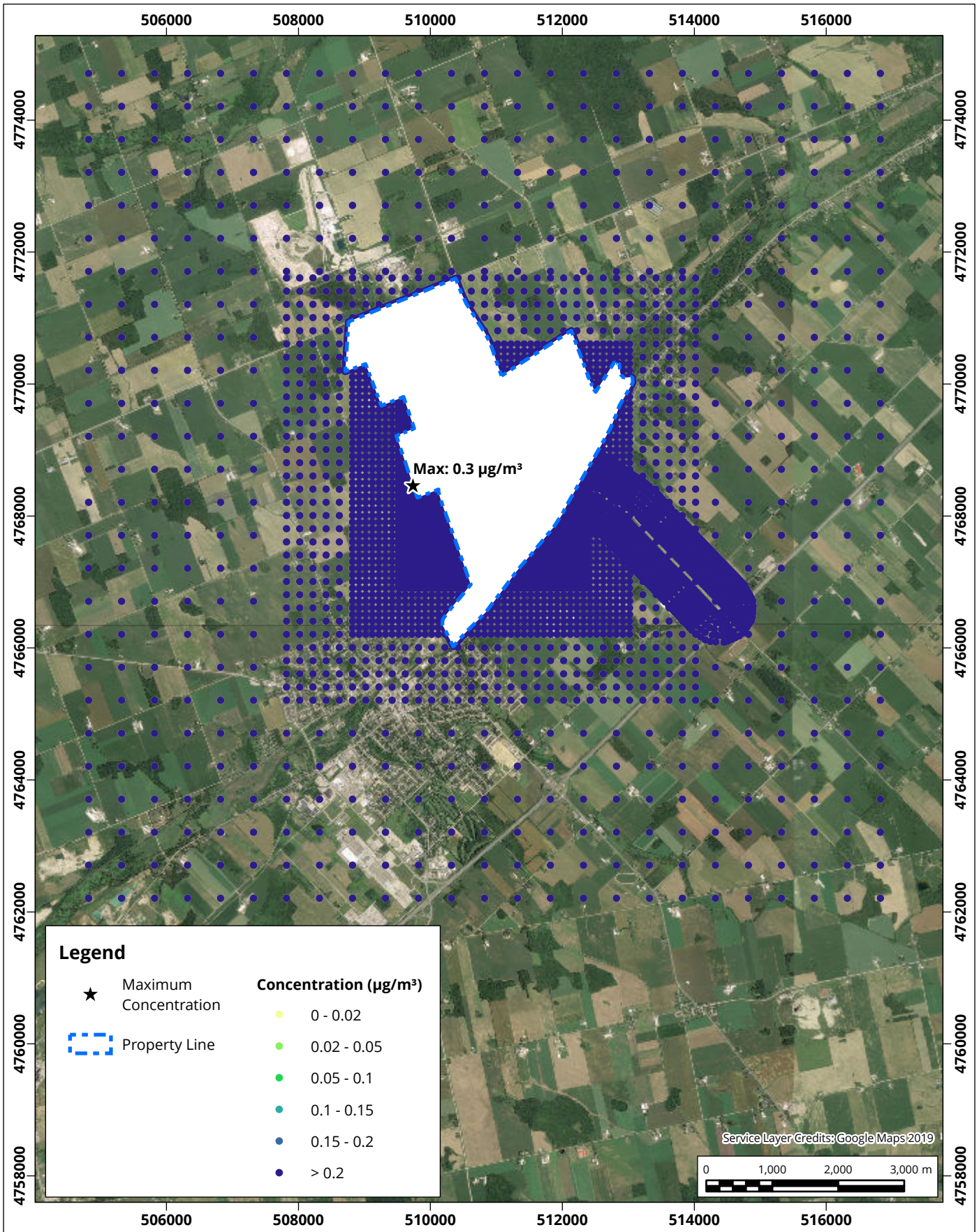
Drawn by: DJH Figure: I3

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## Annual- Chloroform Concentration Contours



Background =  $0.241 \mu\text{g}/\text{m}^3$   
 Limit =  $0.2 \mu\text{g}/\text{m}^3$   
 Project #: 1800160

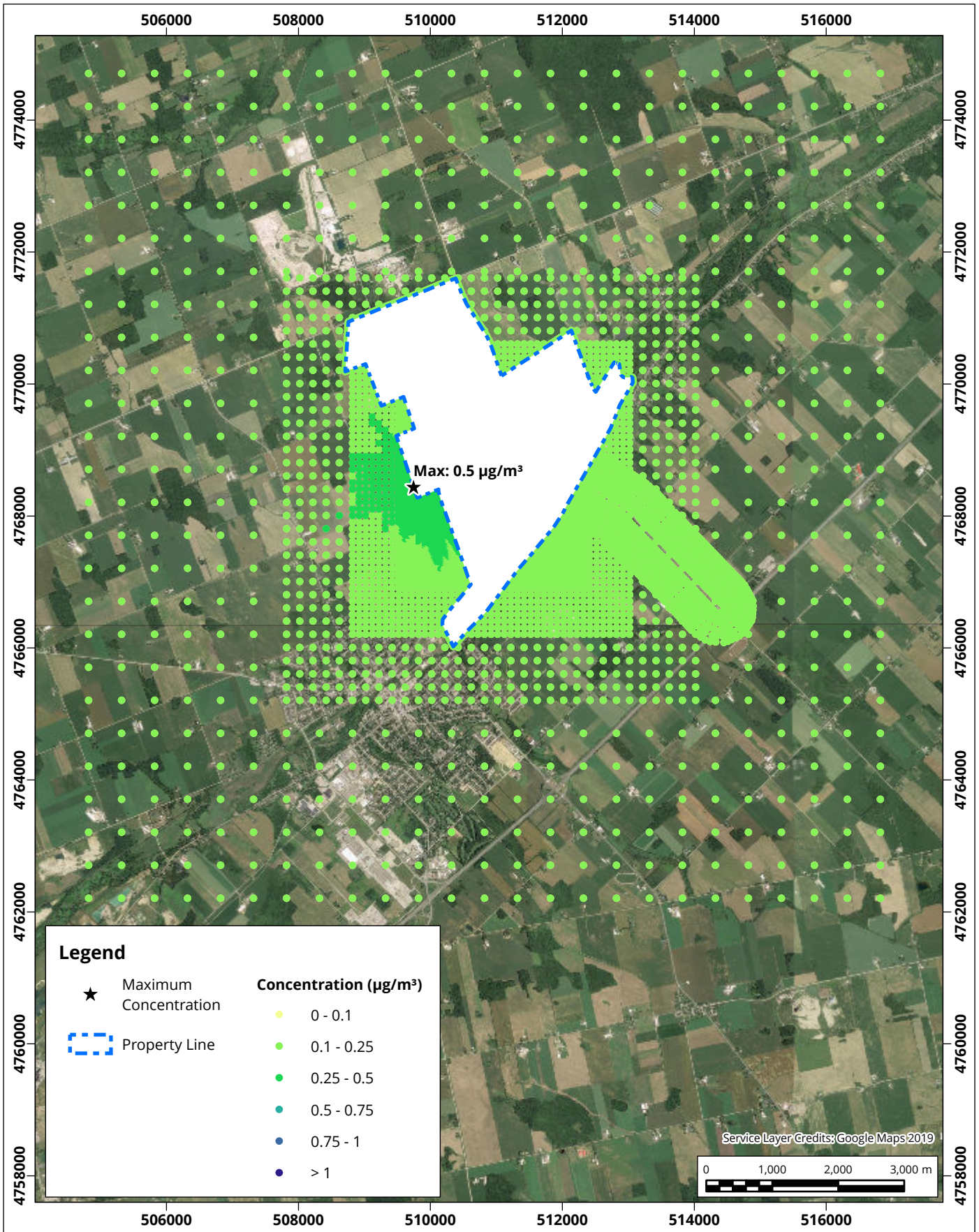
### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N  
 Walker's Southwest Landfill - Beachville, Ontario

Drawn by: DJH	Figure: 14
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 24-hour Chloroform Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.237 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

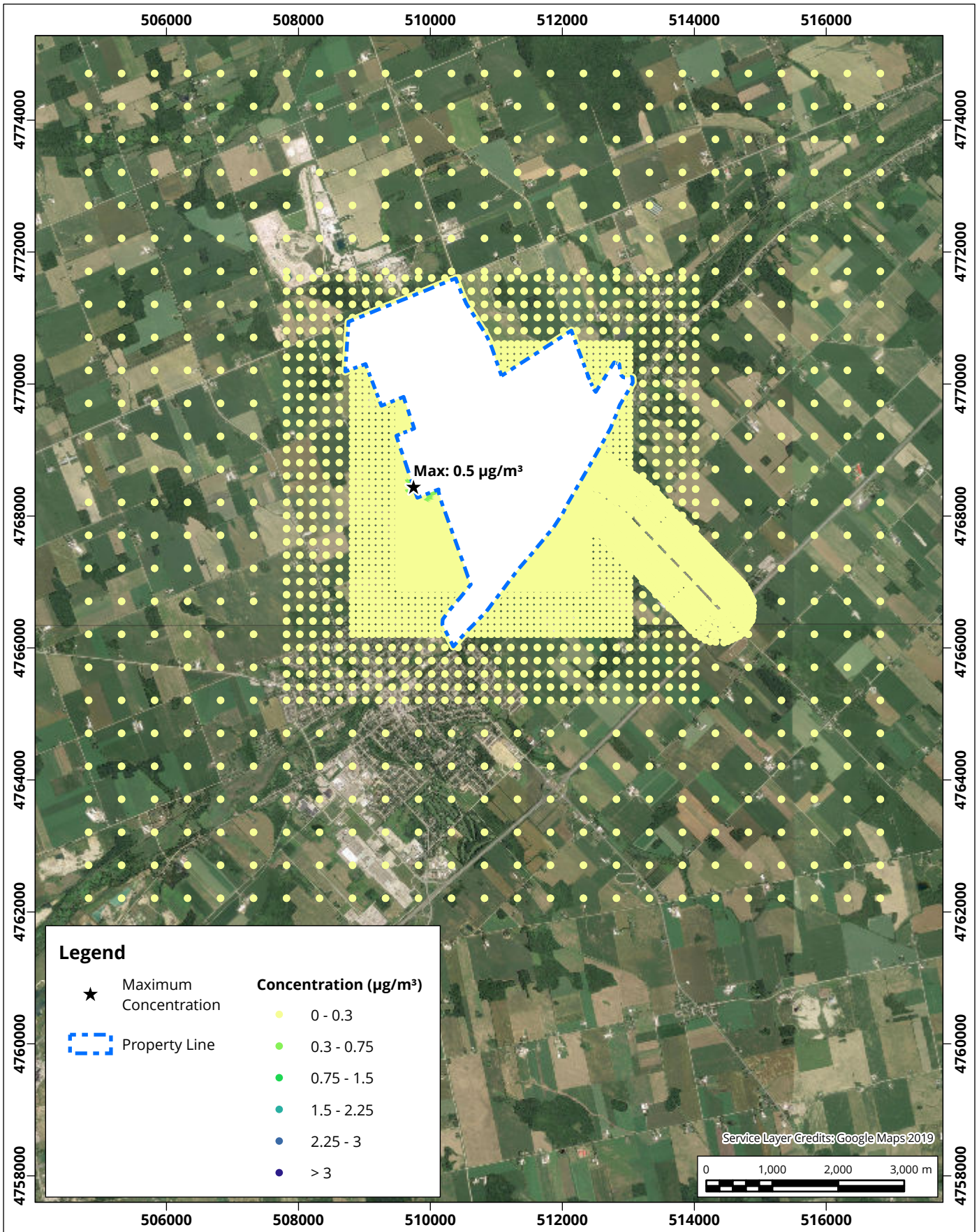
Drawn by: DJH Figure: 15

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Ethylene Dibromide Concentration Contours

### Stage 1 - 2023 to 2028

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

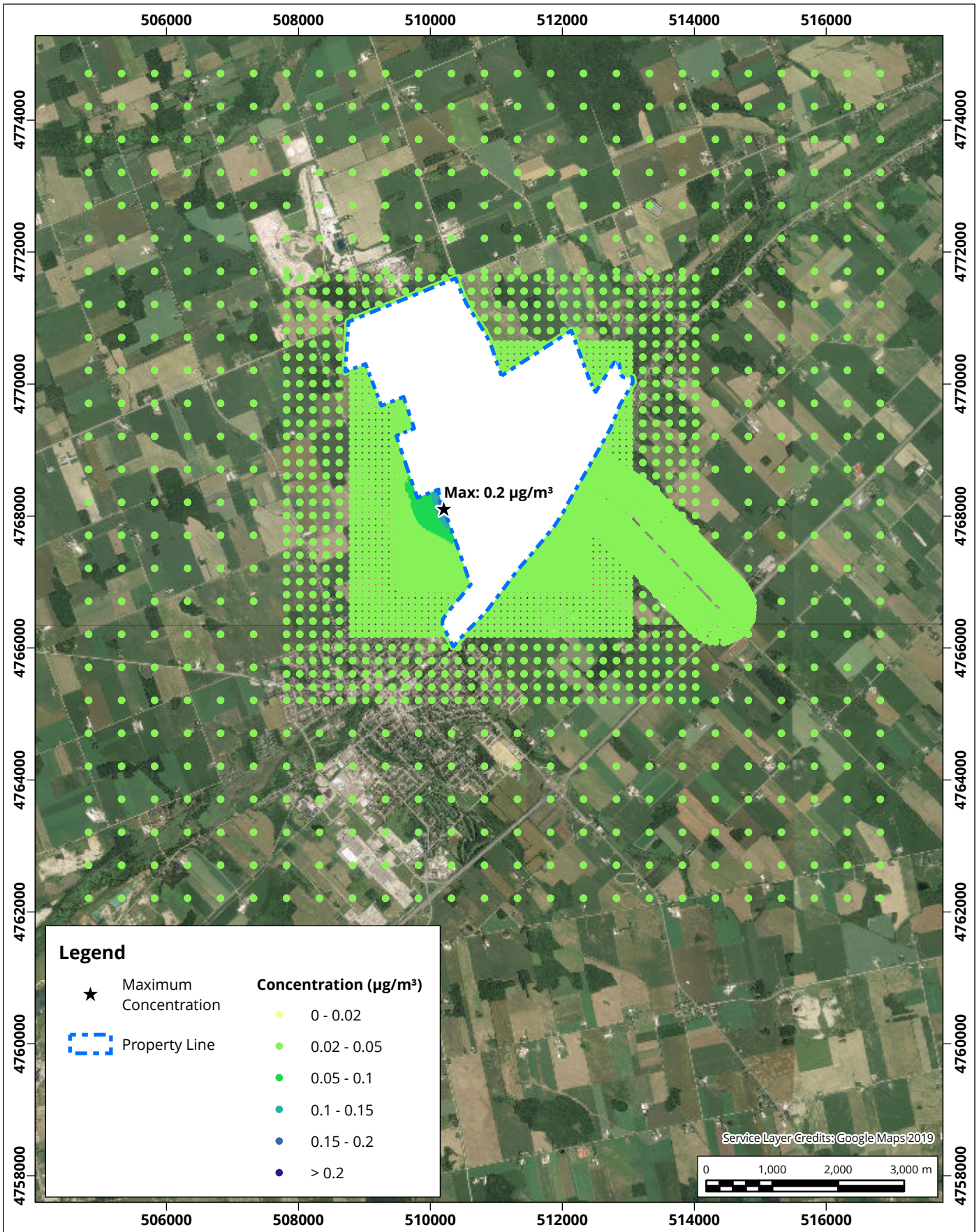


Background =  $0.039 \mu\text{g}/\text{m}^3$   
Limit =  $3 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: 16
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







# Annual- Vinyl Chloride Concentration

## Contours Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

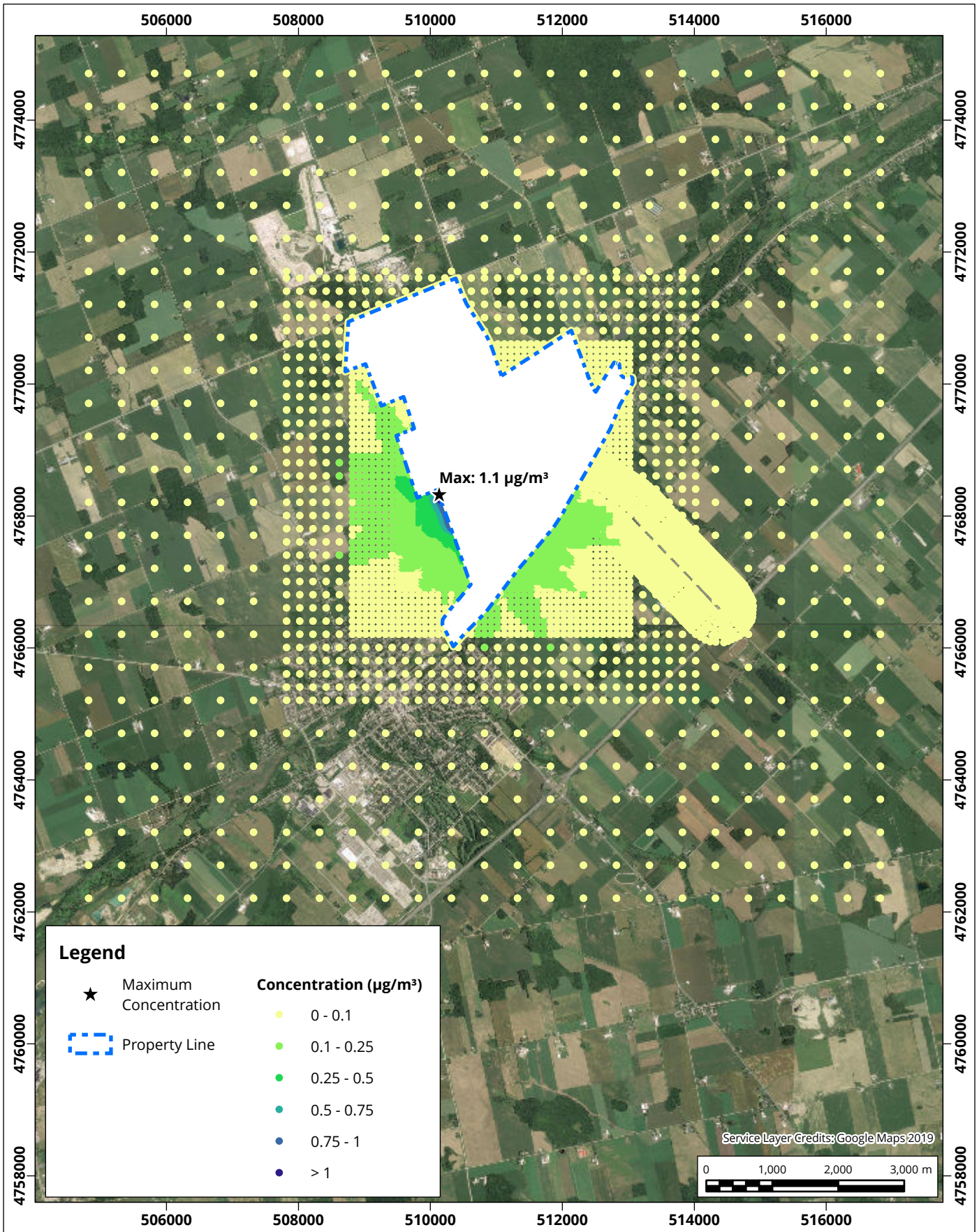


Background =  $0.026 \mu\text{g}/\text{m}^3$   
Limit =  $0.2 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: 17
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







**Legend**

- ★ Maximum Concentration
  - Property Line
- | Concentration ( $\mu\text{g}/\text{m}^3$ ) |            |
|--|------------|
| ●  | 0 - 0.1    |
| ●  | 0.1 - 0.25 |
| ●  | 0.25 - 0.5 |
| ●  | 0.5 - 0.75 |
| ●  | 0.75 - 1   |
| ●  | > 1        |

Service Layer Credits: Google Maps 2019



**24-hour Vinyl Chloride Concentration Contours**

**Stage 1 - 2023 to 2027**

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

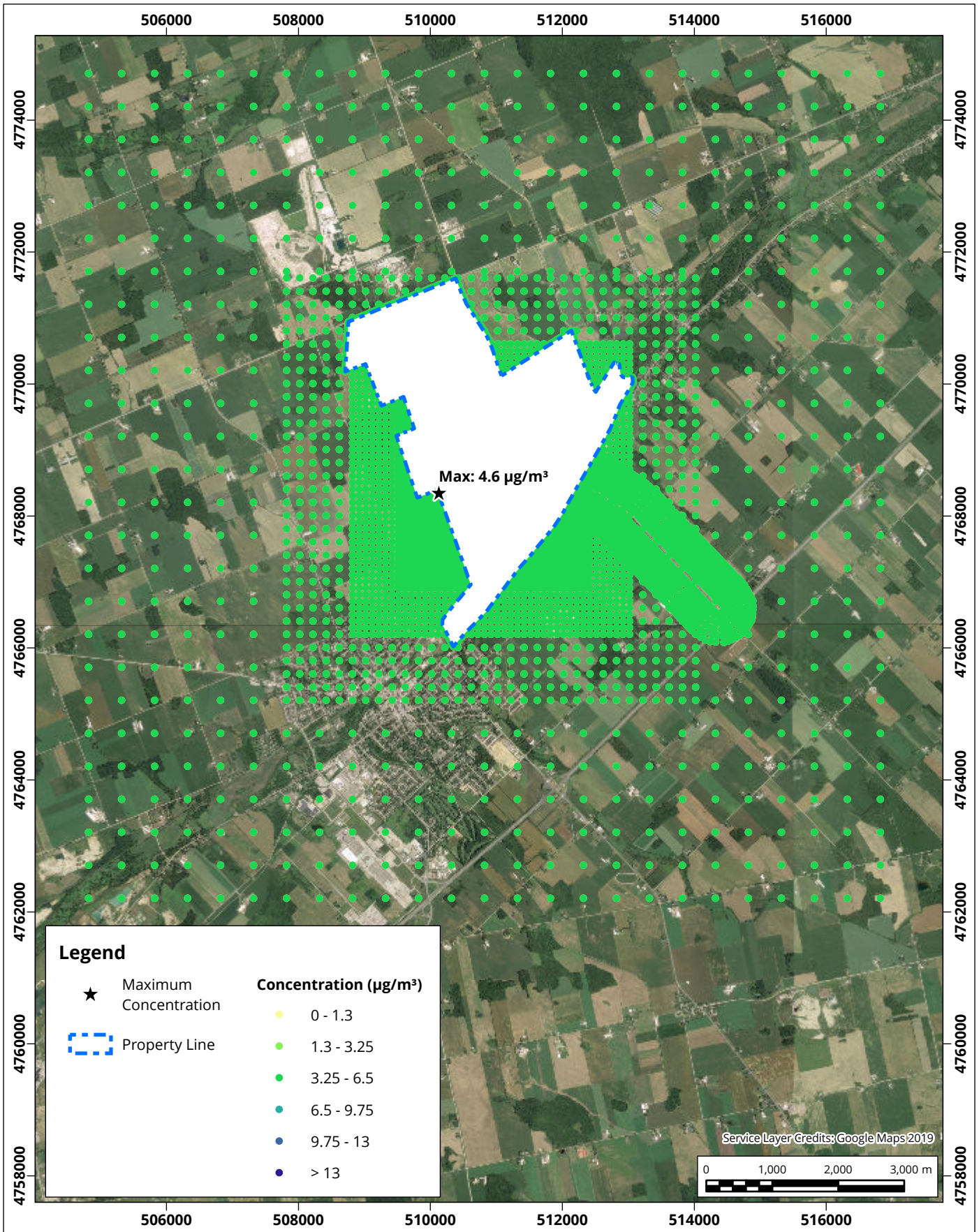


Background =  $0.026 \mu\text{g}/\text{m}^3$   
Limit =  $1 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: 18
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 10-Minute Total Mercaptans (as Methyl Mercaptan) True North

### Concentration Contours

#### Stage 1 - 2023 to 2027

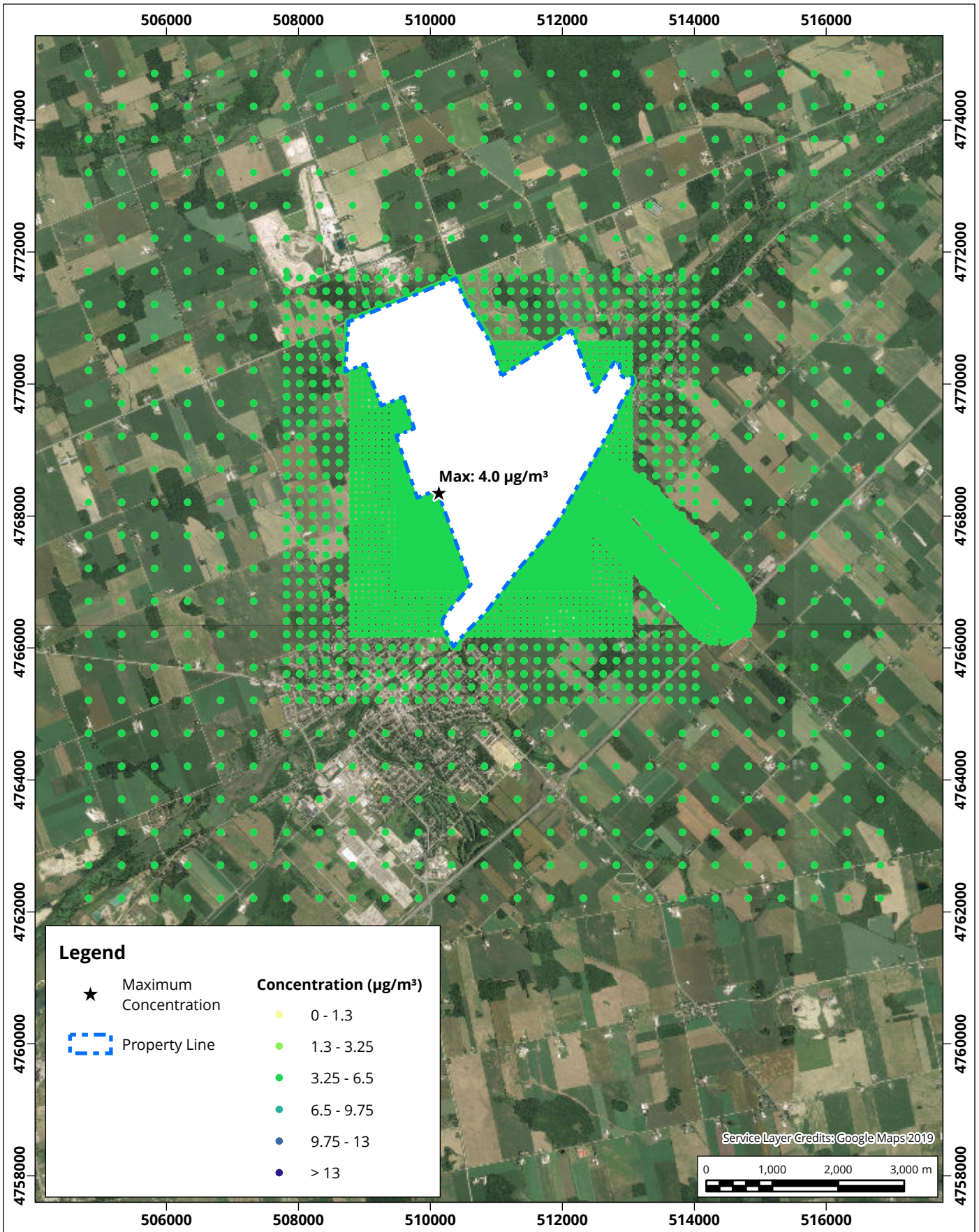
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

Background =  $3.95 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: 19
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







# 10-Minute Hydrogen Sulphide Concentration Contours

## Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $3.5 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

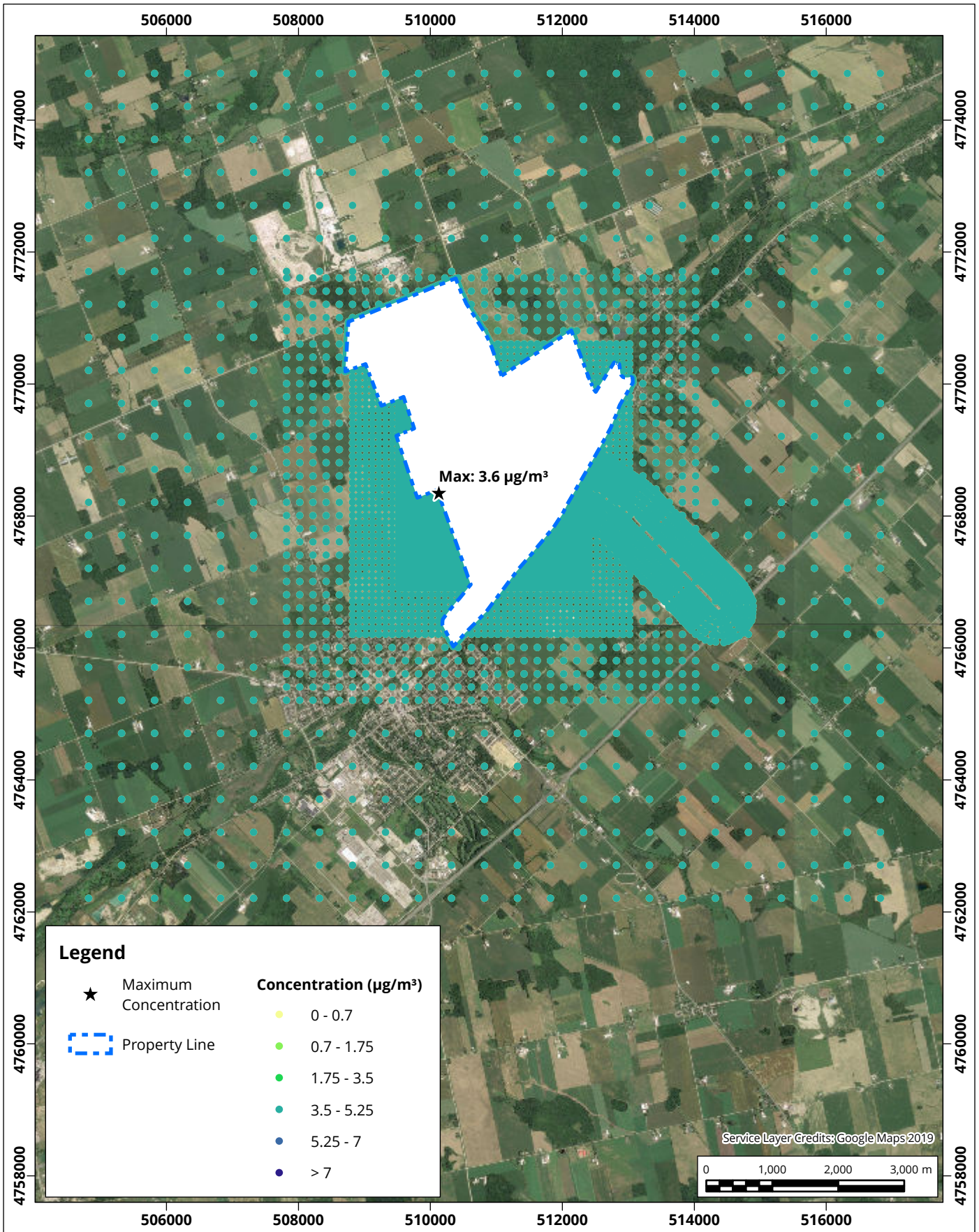
Drawn by: DJH | Figure: I10

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Hydrogen Sulphide Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

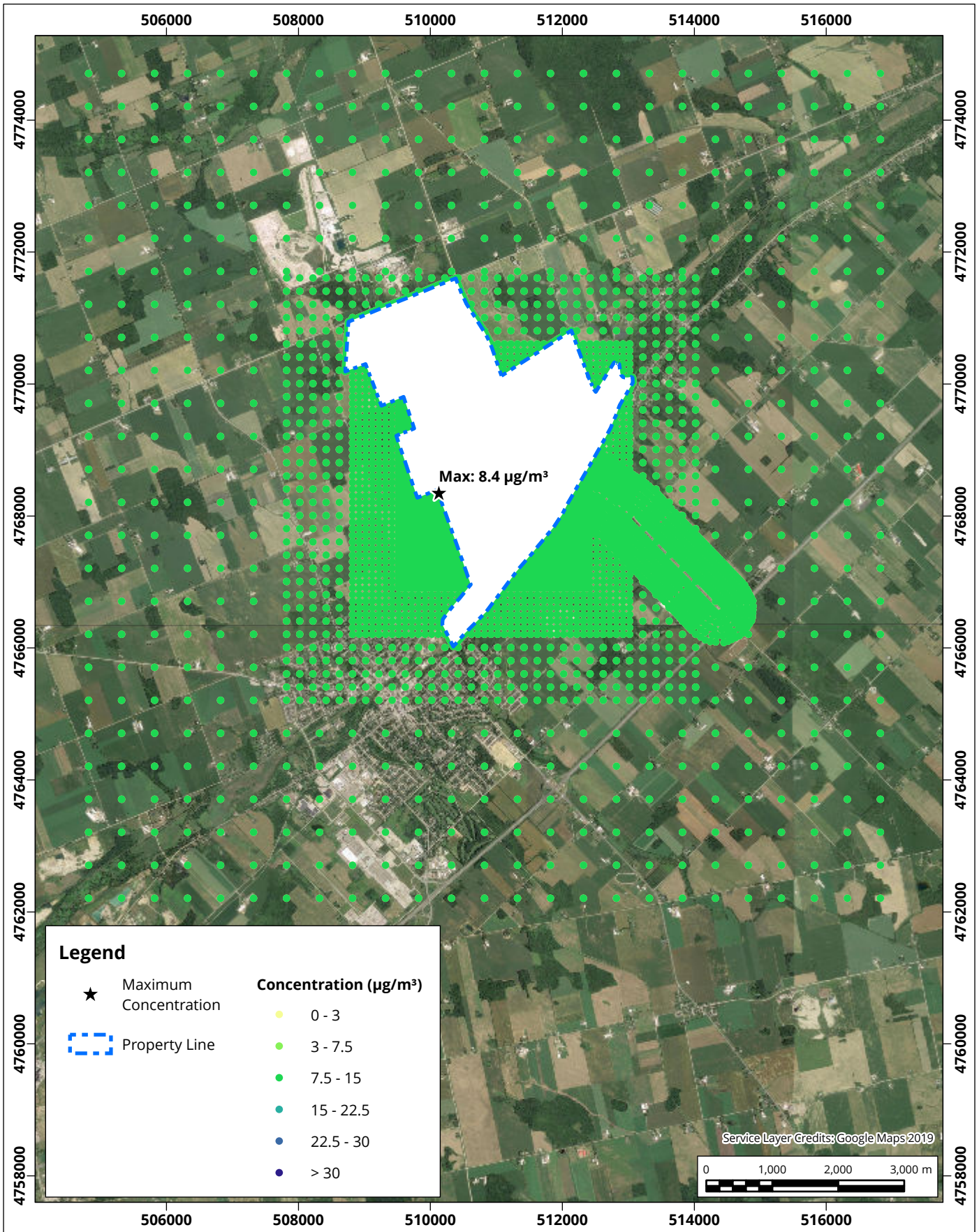


Background =  $3.5 \mu\text{g}/\text{m}^3$   
Limit =  $7 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I11
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020








# 10-Minute Dimethyl Sulphide Concentration Contours

## Stage 1 - 2023 to 2027

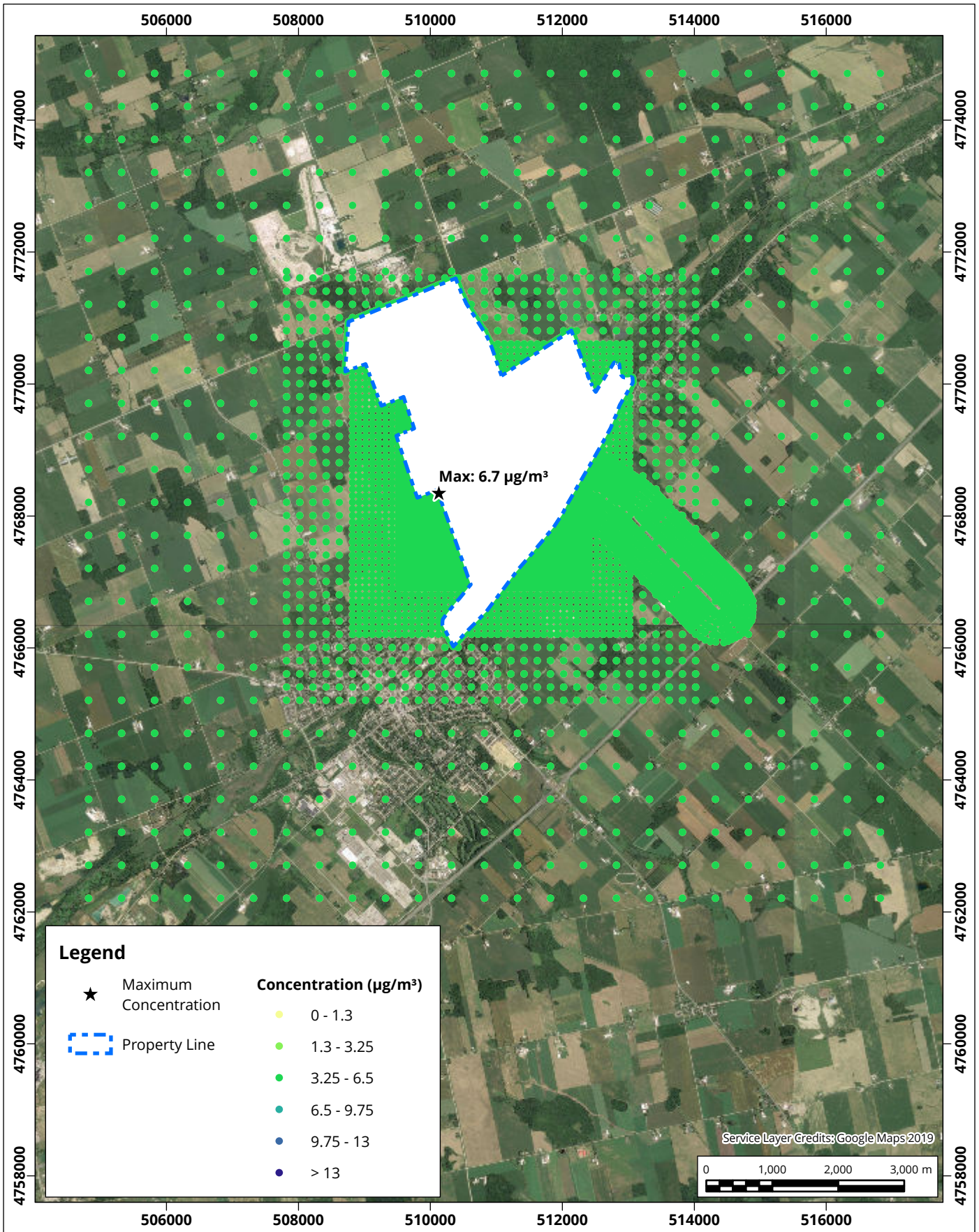
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
  
 Background = 7.5 µg/m³  
 Limit = 30 µg/m³  
 Project #: 1800160

Drawn by: DJH	Figure: I12
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020








## 10-Minute Total Reduced Sulphurs (TRS) Concentration Contours Stage 1 - 2023 to 2027

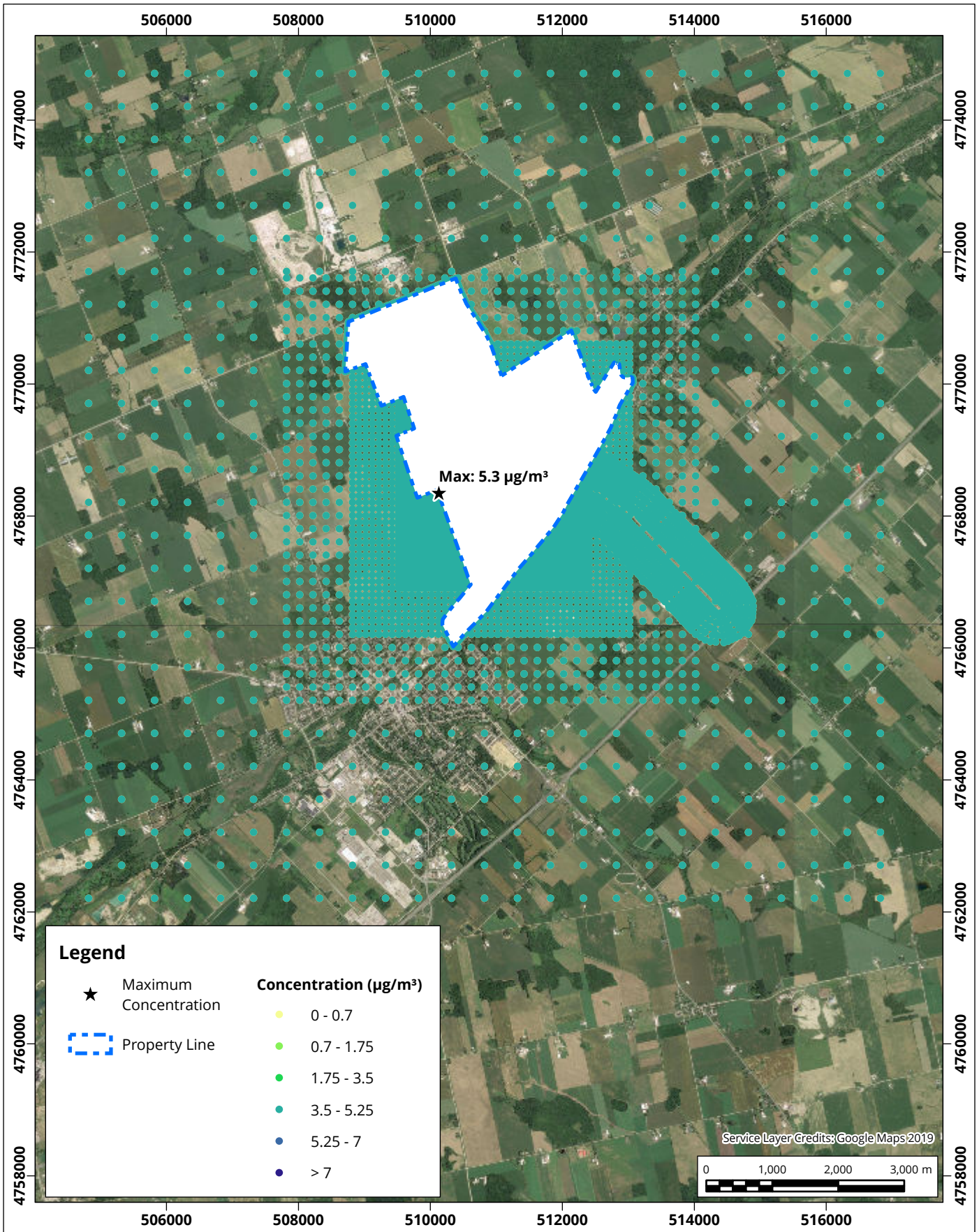
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
  
 Background =  $5 \mu\text{g}/\text{m}^3$   
 Limit =  $13 \mu\text{g}/\text{m}^3$   
 Project #: 1800160

Drawn by: DJH	Figure: I13
Exact Scale:	1:80,000
Date Revised: Feb 18, 2020	



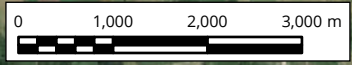




**Legend**

- ★ Maximum Concentration
  - Property Line
- | Concentration (µg/m³) |            |
|-----------------------|------------|
| ●                     | 0 - 0.7    |
| ●                     | 0.7 - 1.75 |
| ●                     | 1.75 - 3.5 |
| ●                     | 3.5 - 5.25 |
| ●                     | 5.25 - 7   |
| ●                     | > 7        |

Service Layer Credits: Google Maps 2019



**24-hour Total Reduced Sulphurs (TRS)  
Concentration Contours  
Stage 1 - 2023 to 2027**

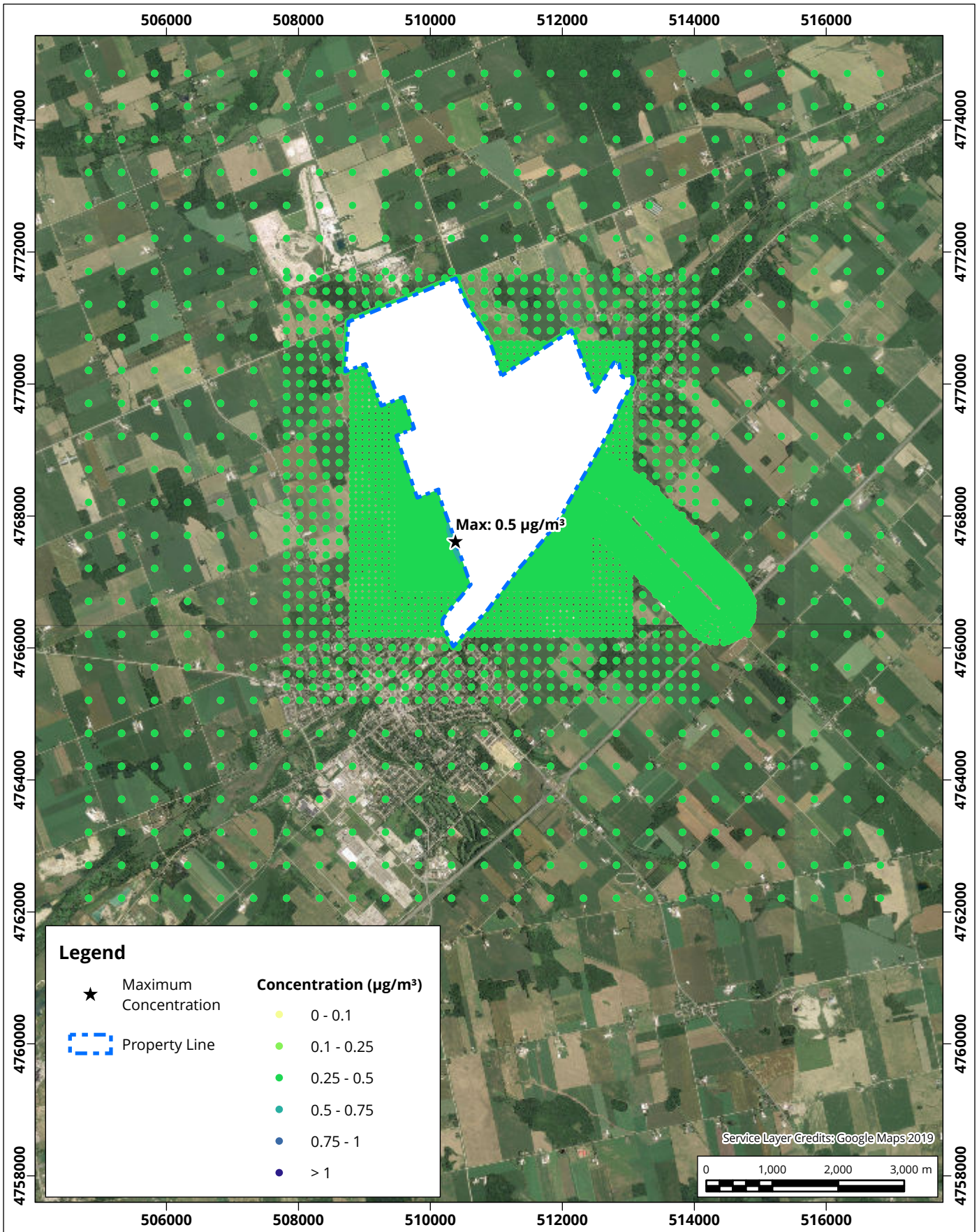
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
  
 Background = 5 µg/m³  
 Limit = 7 µg/m³  
 Project #: 1800160

Drawn by: DJH	Figure: I14
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







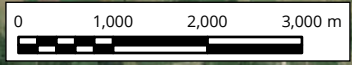
**Legend**

- ★ Maximum Concentration
- Property Line

**Concentration (µg/m³)**

- 0 - 0.1
- 0.1 - 0.25
- 0.25 - 0.5
- 0.5 - 0.75
- 0.75 - 1
- > 1

Service Layer Credits: Google Maps 2019



**Annual Benzene Concentration Contours**

**Stage 3 - 2033 to 2037**

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background = 0.378 µg/m³

Limit = 1 µg/m³

Project #: 1800160

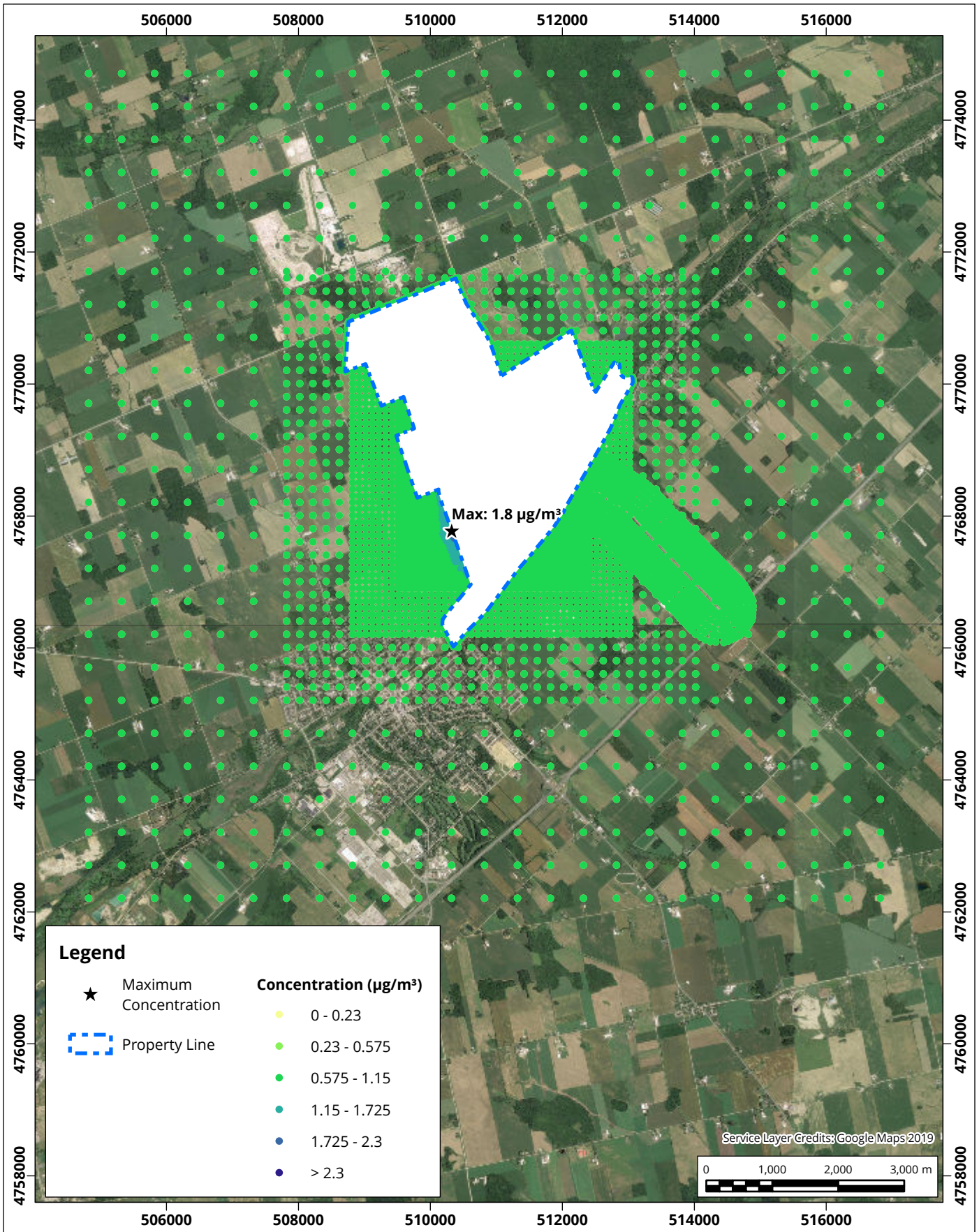
Drawn by: DJH | Figure: I15

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Benzene Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.585 \mu\text{g}/\text{m}^3$

Limit =  $2.3 \mu\text{g}/\text{m}^3$

Project #: 1800160

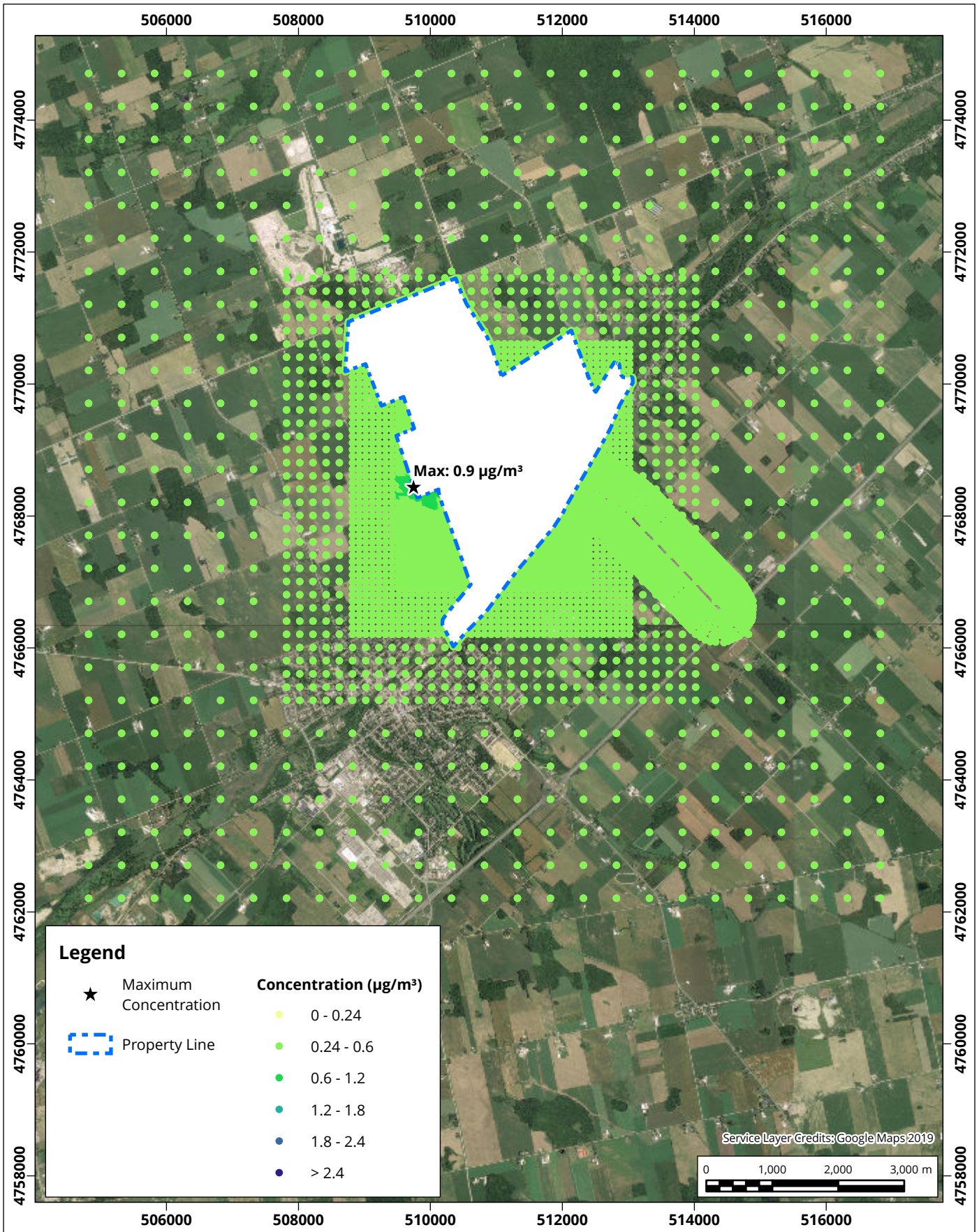
Drawn by: DJH Figure: I16

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Carbon Tetrachloride Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

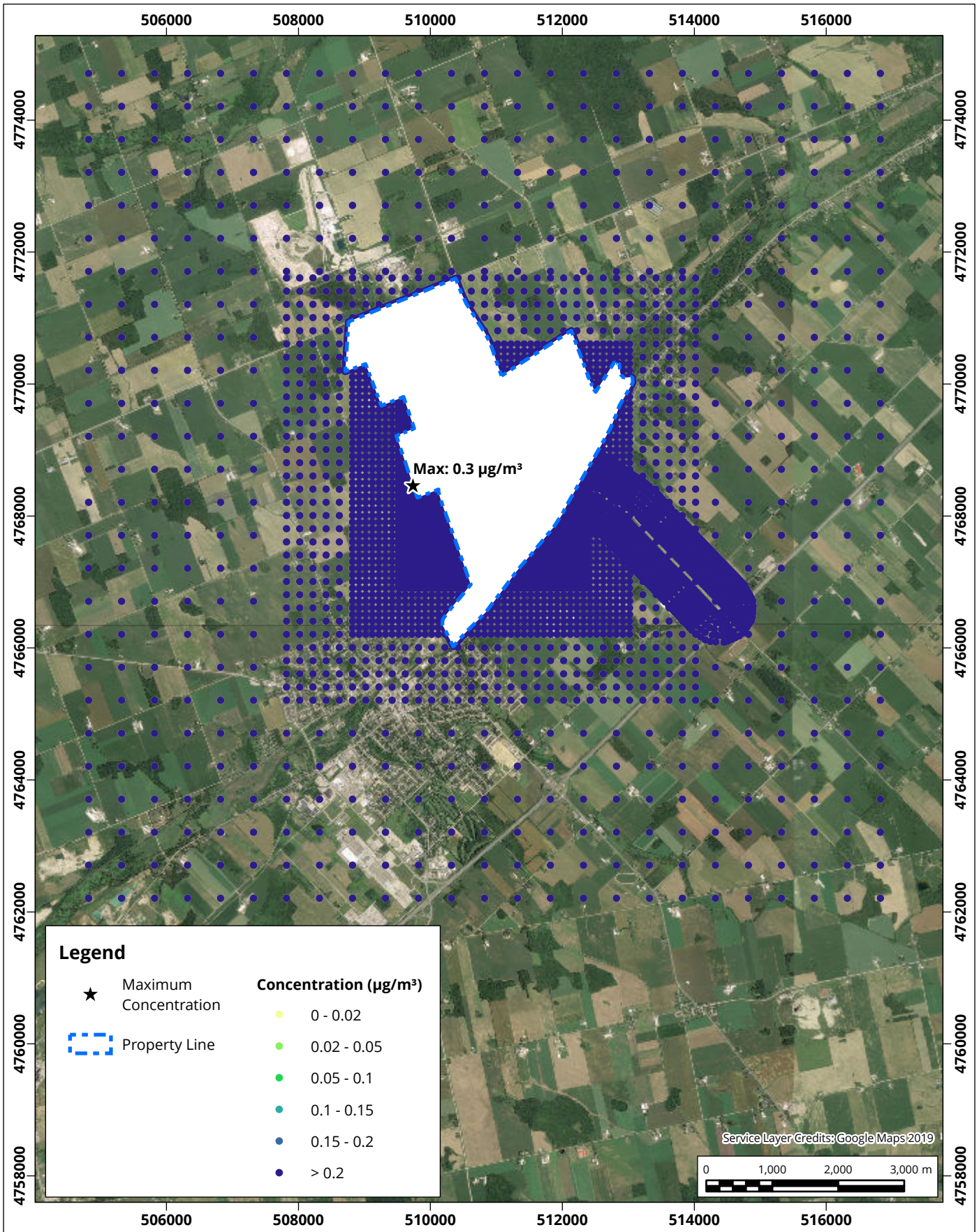


Background =  $0.5 \mu\text{g}/\text{m}^3$   
Limit =  $2.4 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I17
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## Annual- Chloroform Concentration Contours



Background =  $0.241 \mu\text{g}/\text{m}^3$   
 Limit =  $0.2 \mu\text{g}/\text{m}^3$   
 Project #: 1800160

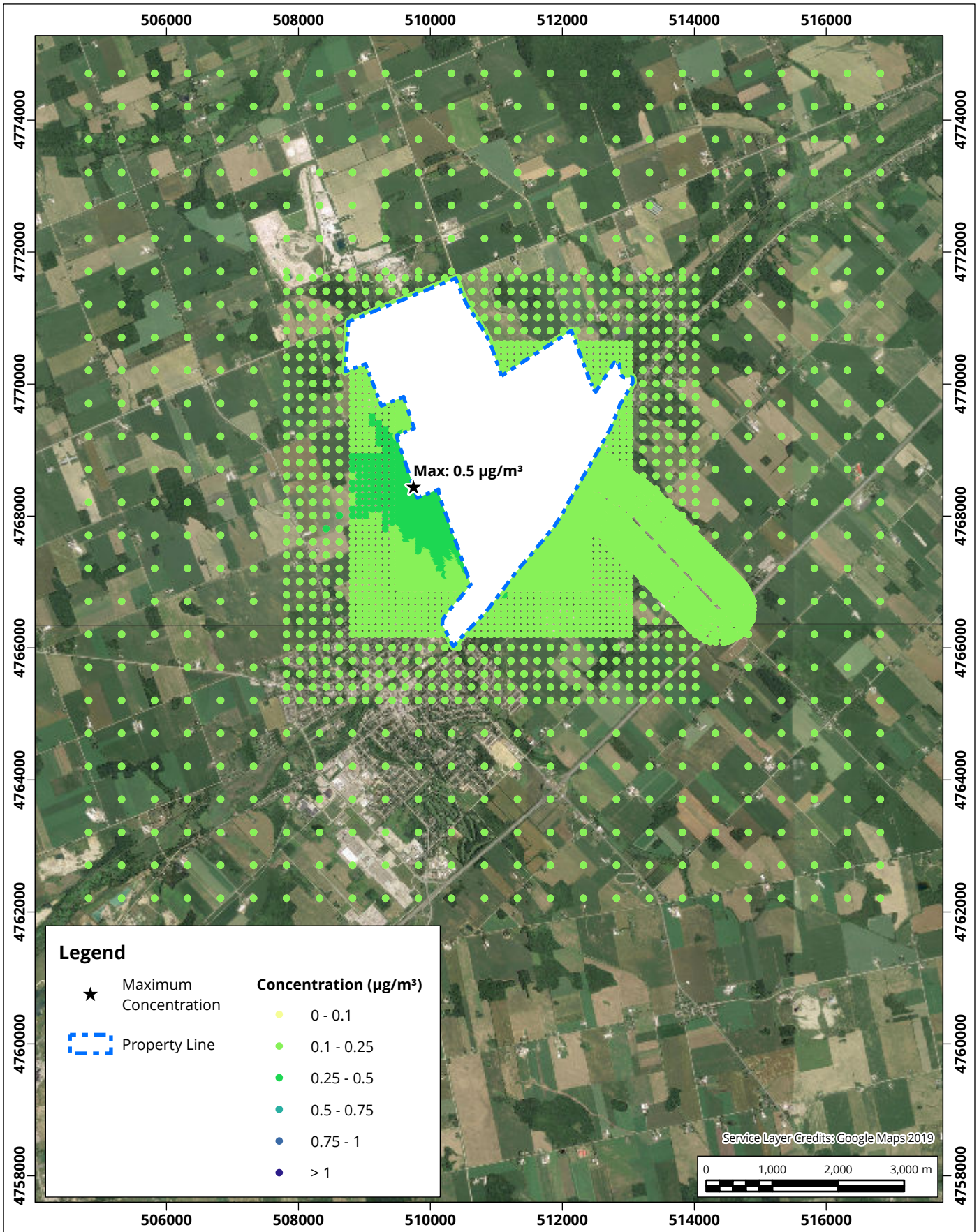
### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N  
 Walker's Southwest Landfill - Beachville, Ontario

Drawn by: DJH	Figure: I18
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 24-hour Chloroform Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.237 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

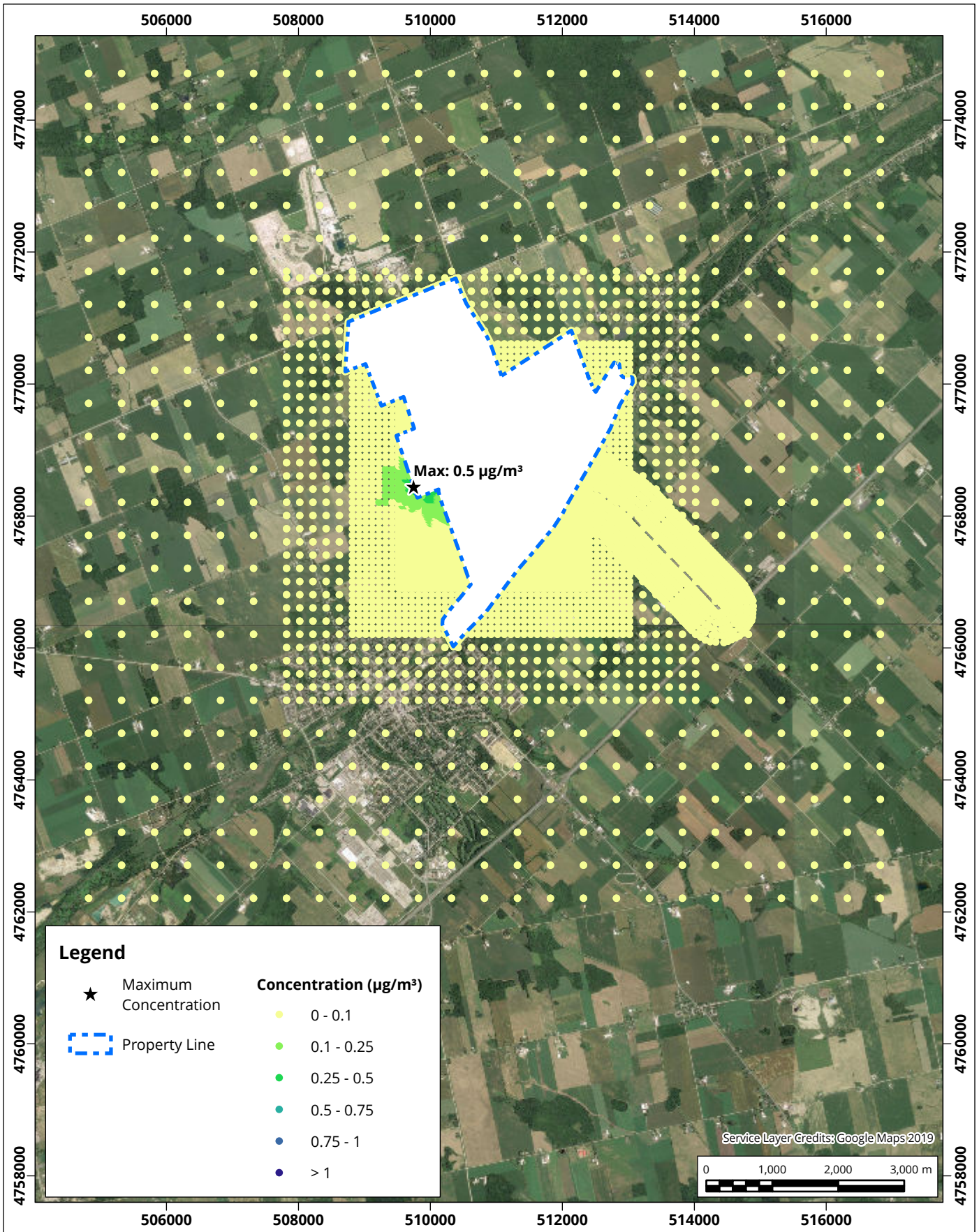
Drawn by: DJH | Figure: I19

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Ethylene Dibromide Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.039 \mu\text{g}/\text{m}^3$   
Limit =  $1 \mu\text{g}/\text{m}^3$   
Project #: 1800160

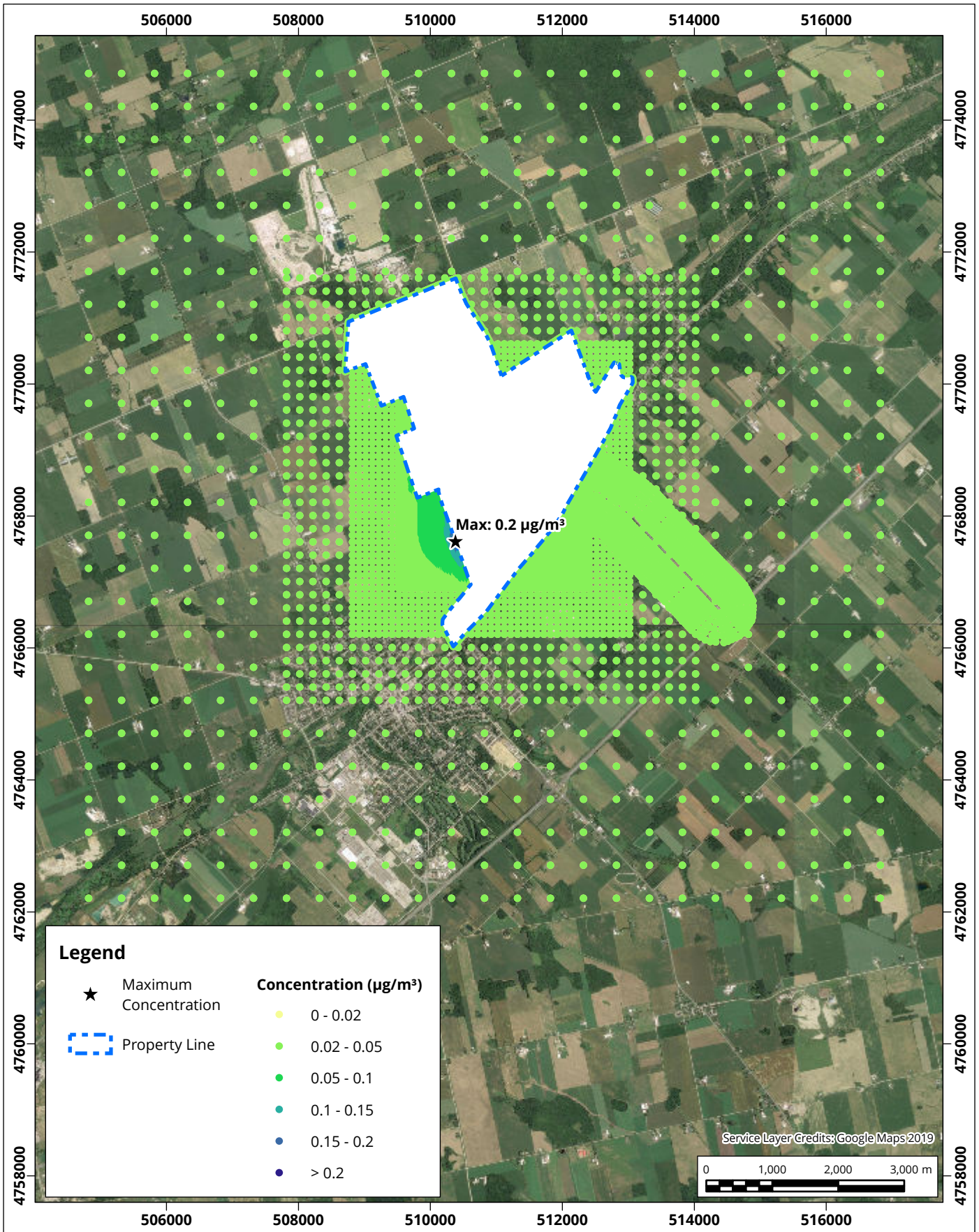
Drawn by: DJH | Figure: I20

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







# Annual-Vinyl Chloride Concentration

## Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

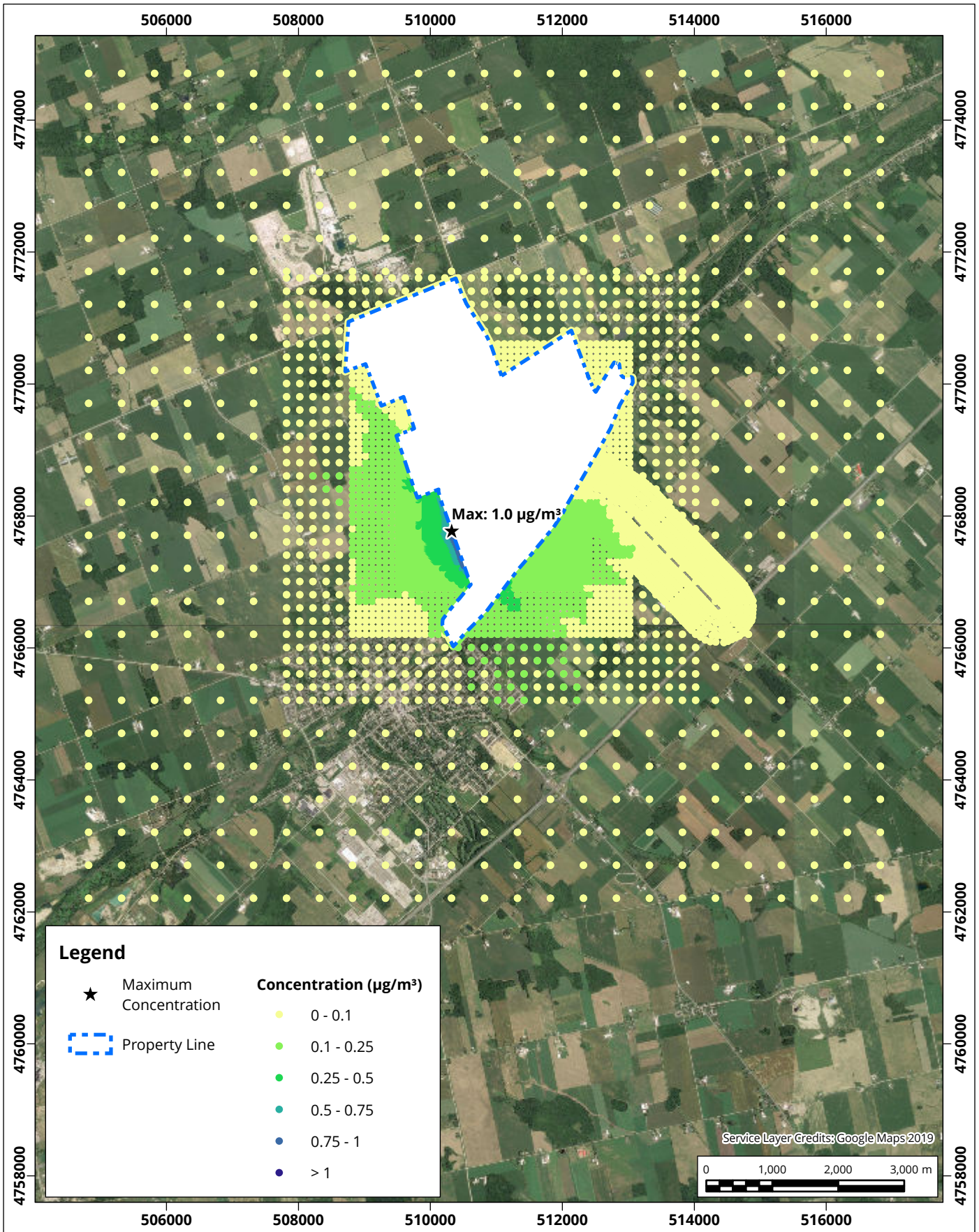


Background =  $0.026 \mu\text{g}/\text{m}^3$   
Limit =  $0.2 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I21
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 24-hour Vinyl Chloride Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.026 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

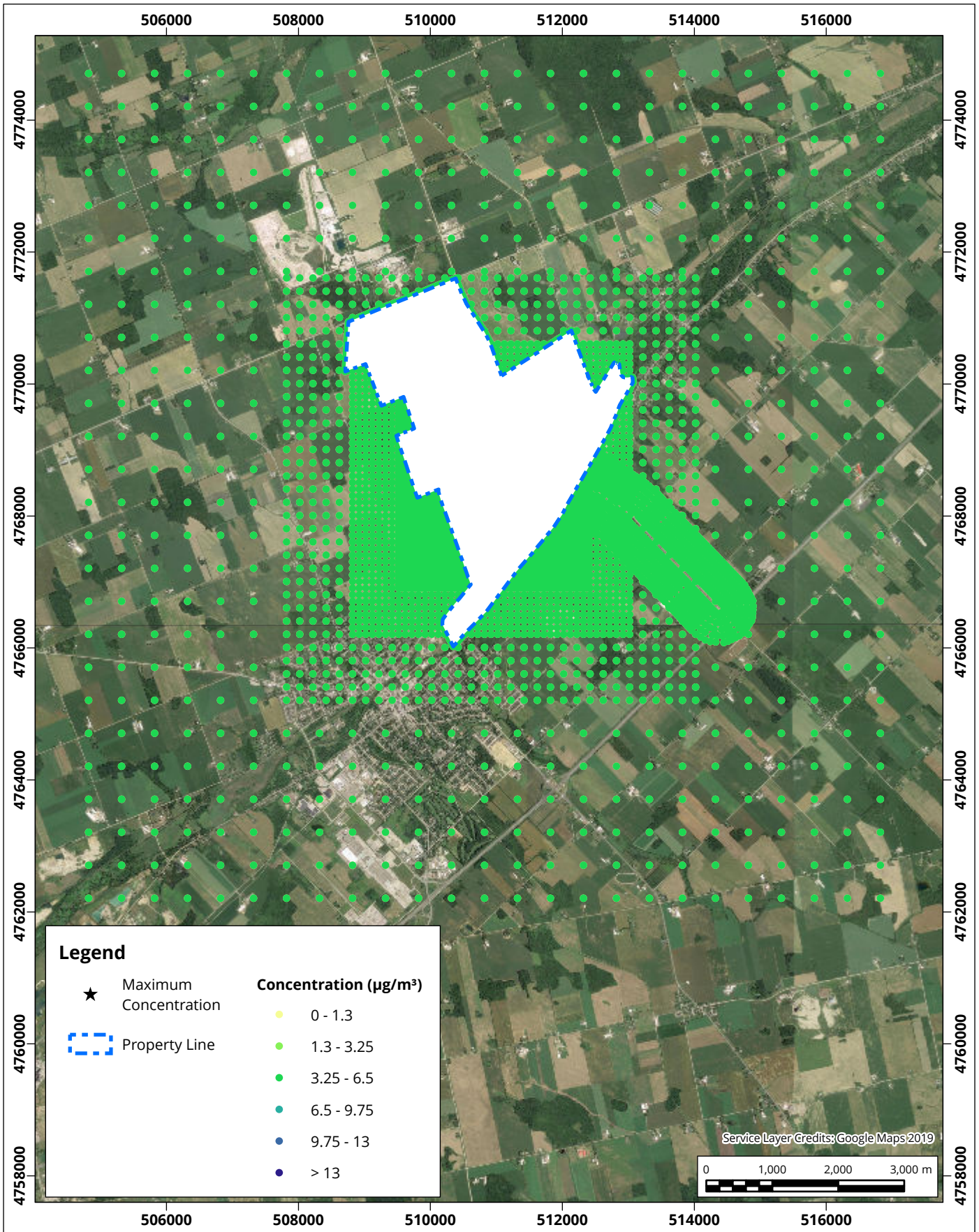
Drawn by: DJH Figure: I22

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 10-Minute-hour Total Mercaptans (as Methyl Mercaptan) Concentration Contours Stage 3 - 2033 to 2037

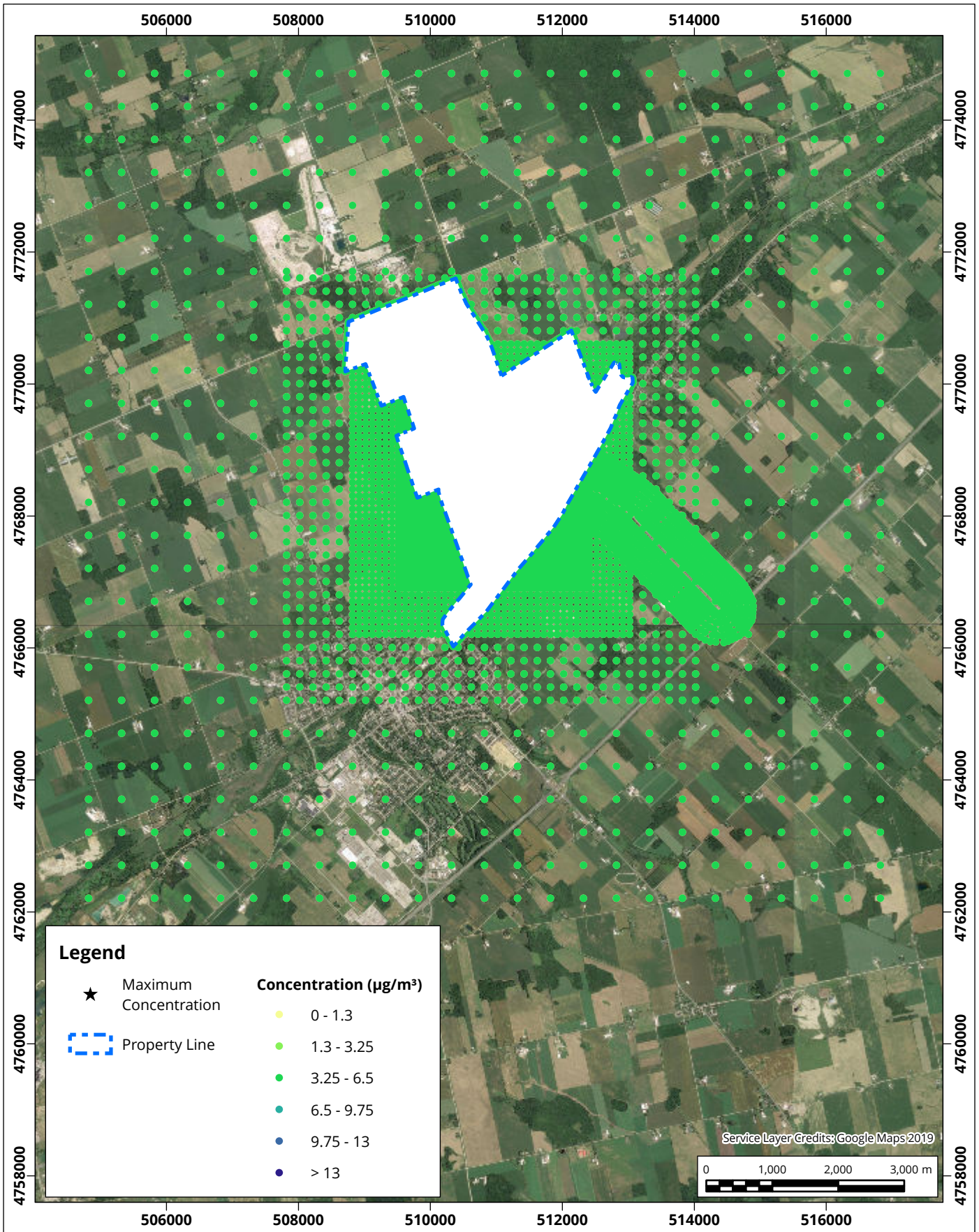
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
Background =  $3.95 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I23
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







# 10-Minute-hour Hydrogen Sulphide Concentration Contours

## Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

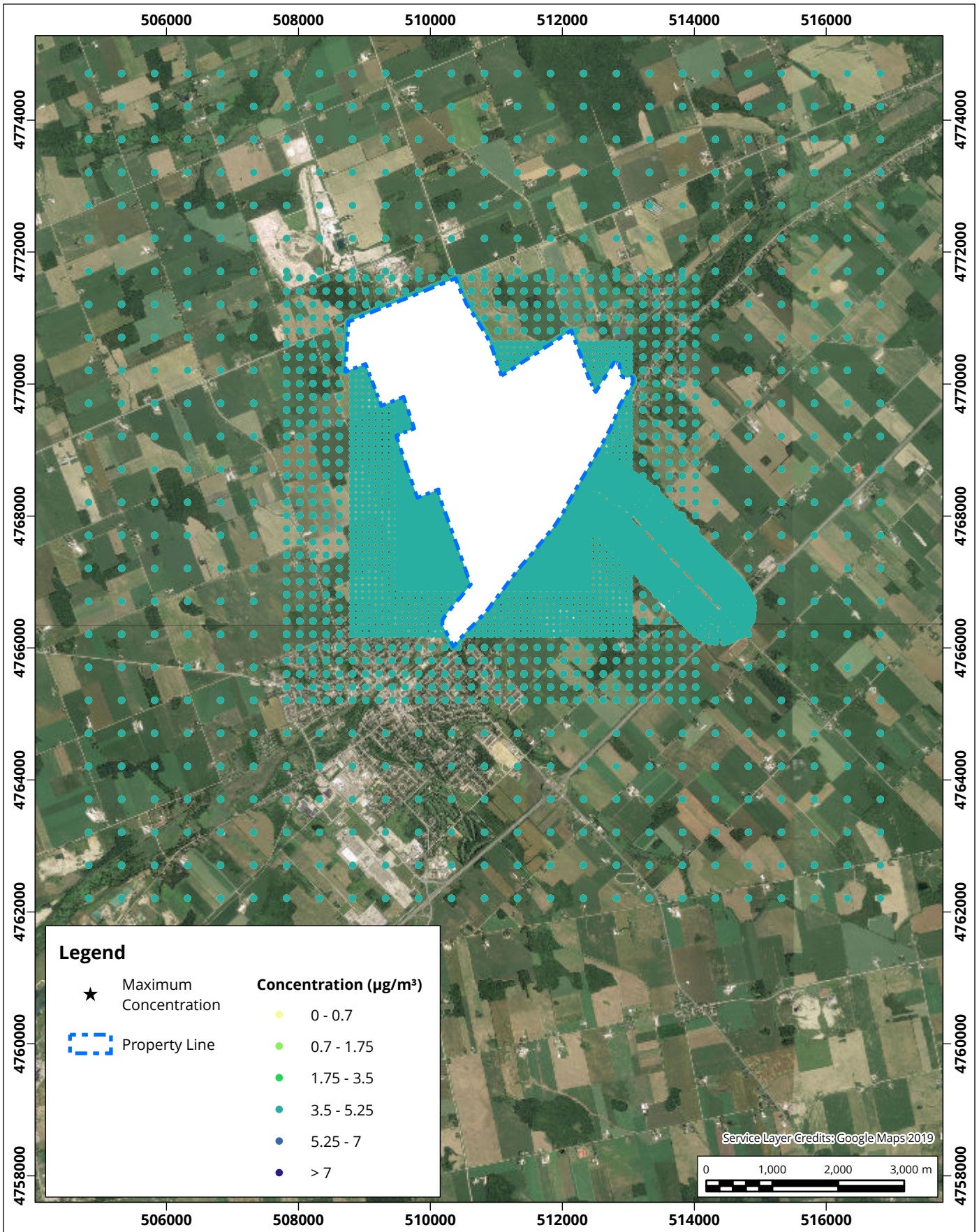


Background =  $3.5 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I24
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020








## 24-hour Hydrogen Sulphide Concentration Contours

### Stage 3 - 2033 to 2037

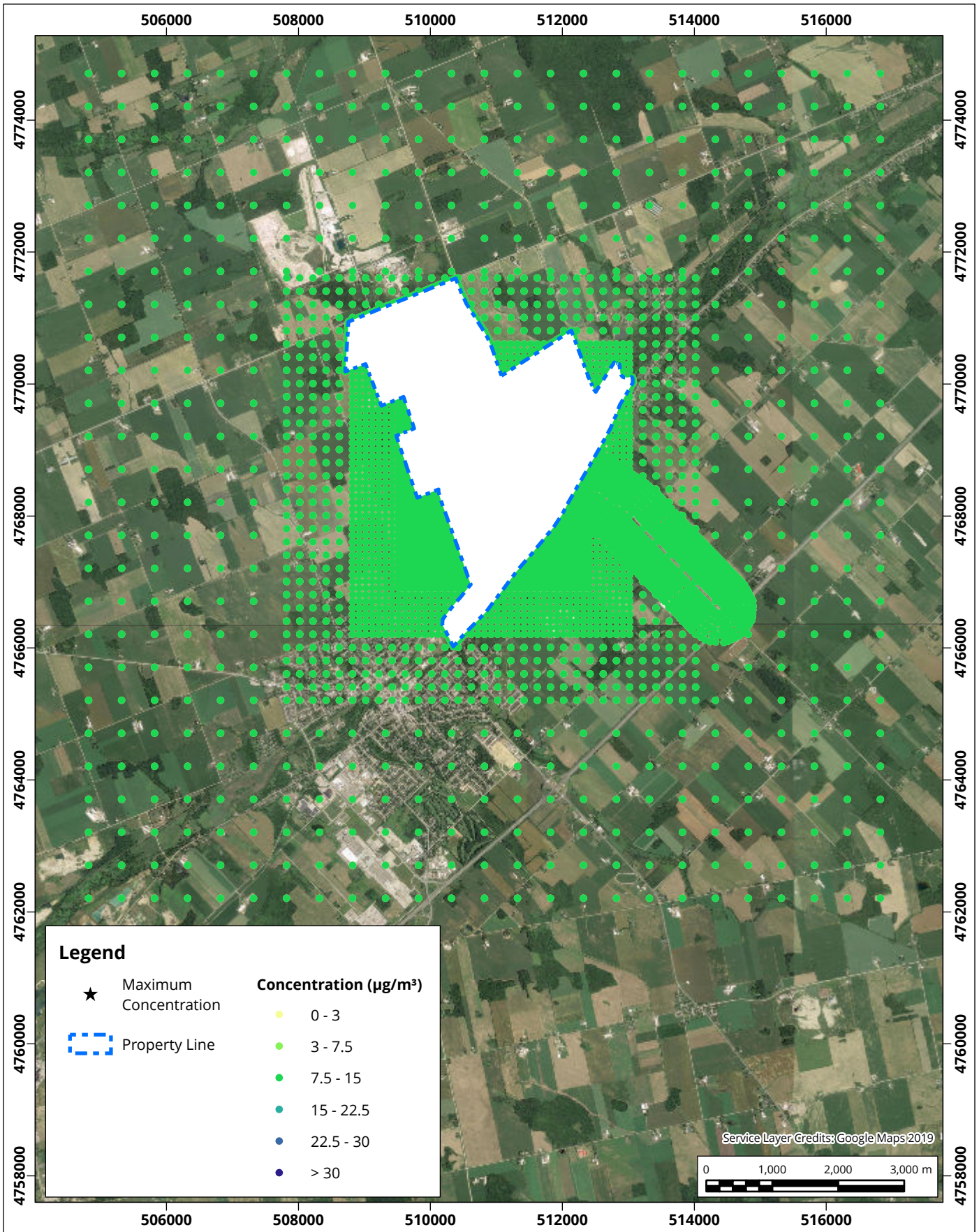
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
  
 Background =  $3.5 \mu\text{g}/\text{m}^3$   
 Limit =  $7 \mu\text{g}/\text{m}^3$   
 Project #: 1800160

Drawn by: DJH	Figure: I25
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 10-Minute-hour Dimethyl Sulphide Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $7.5 \mu\text{g}/\text{m}^3$   
Limit =  $30 \mu\text{g}/\text{m}^3$   
Project #: 1800160

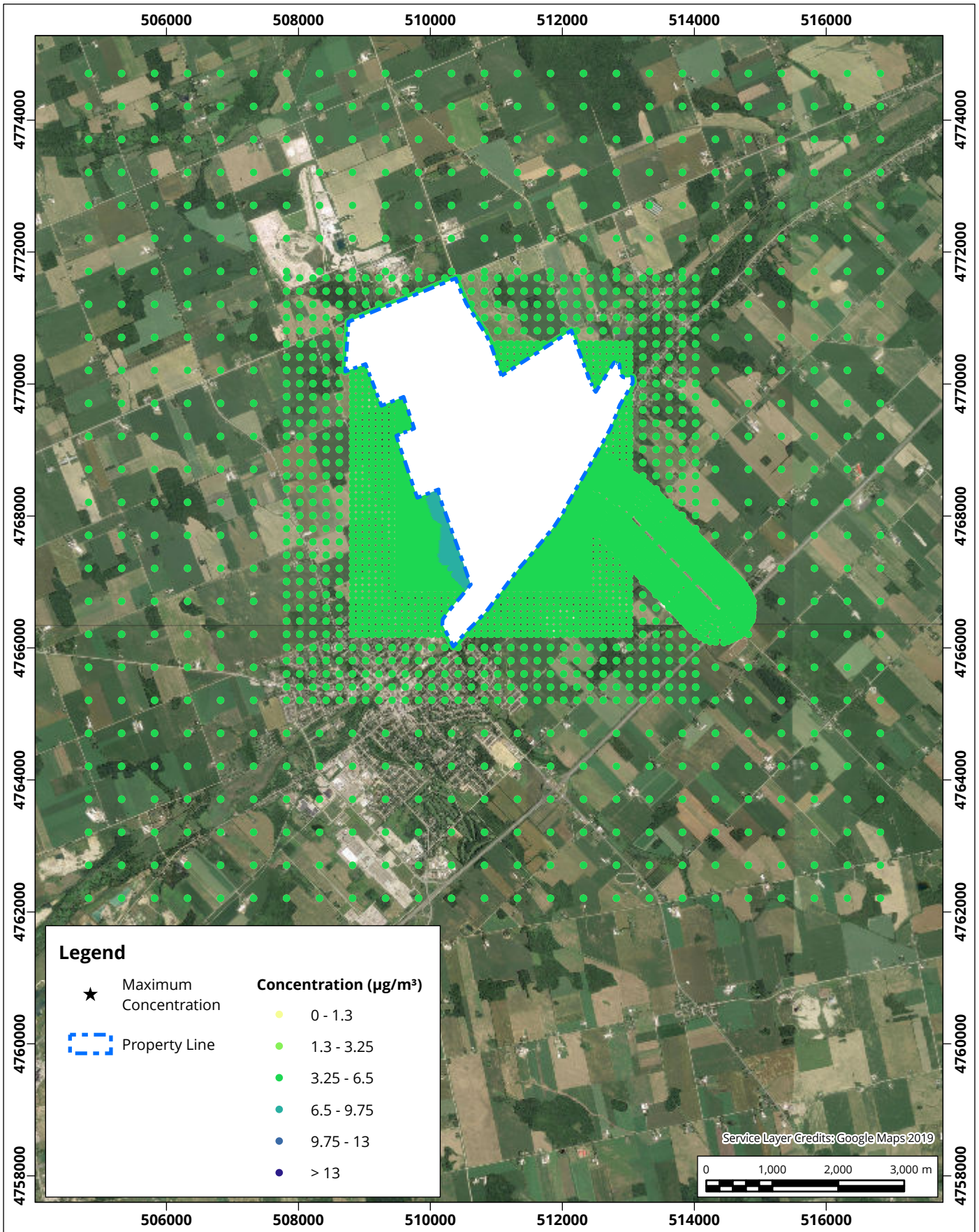
Drawn by: DJH Figure: I26

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 10-Minute-hour Total Reduced Sulphurs (TRS) Concentration Contours Stage 3 - 2033 to 2037

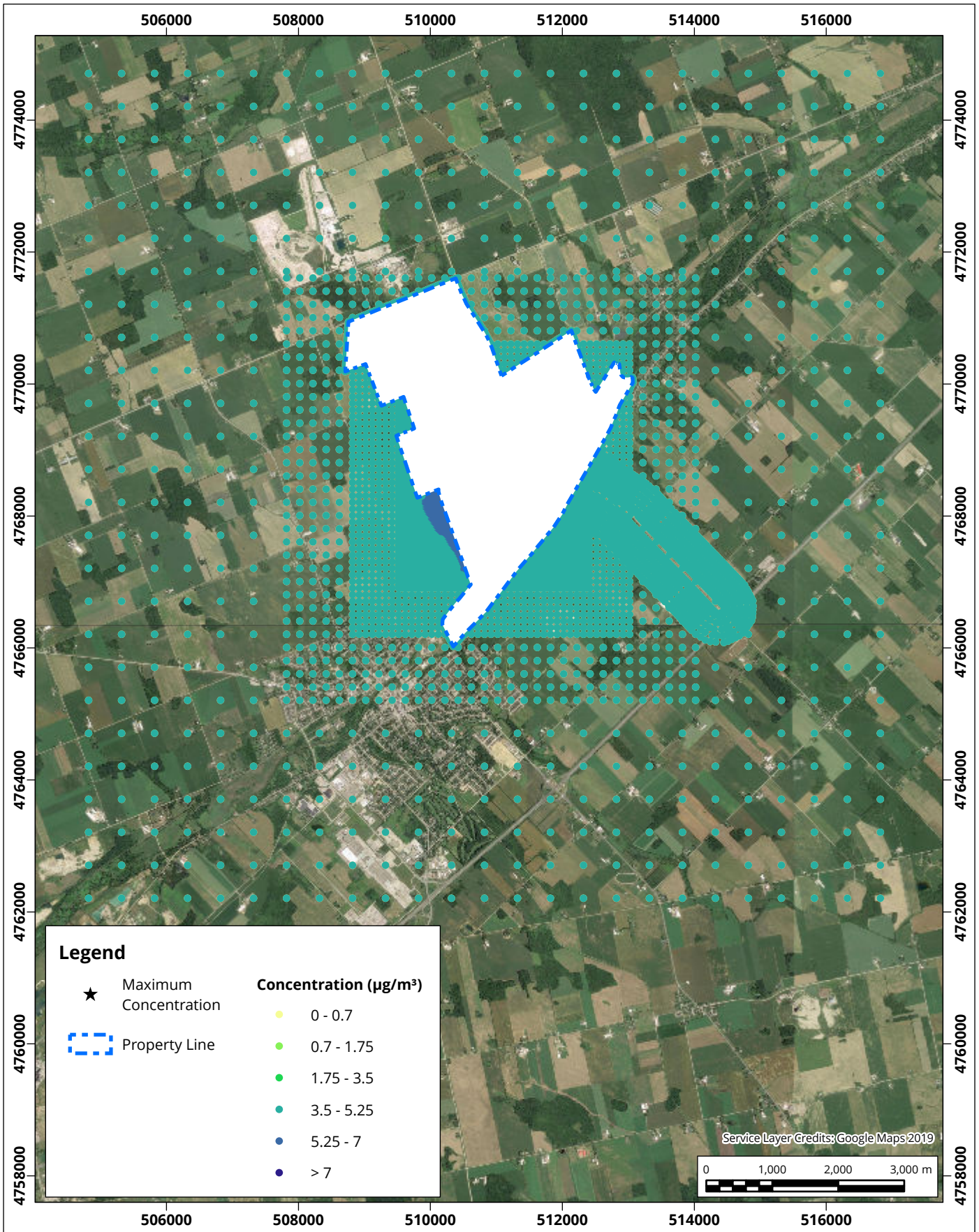
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
Background =  $5 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I27
Exact Scale:	1:80,000
Date Revised: Feb 18, 2020	








## 24-hour Total Reduced Sulphurs (TRS) Concentration Contours Stage 3 - 2033 to 2037

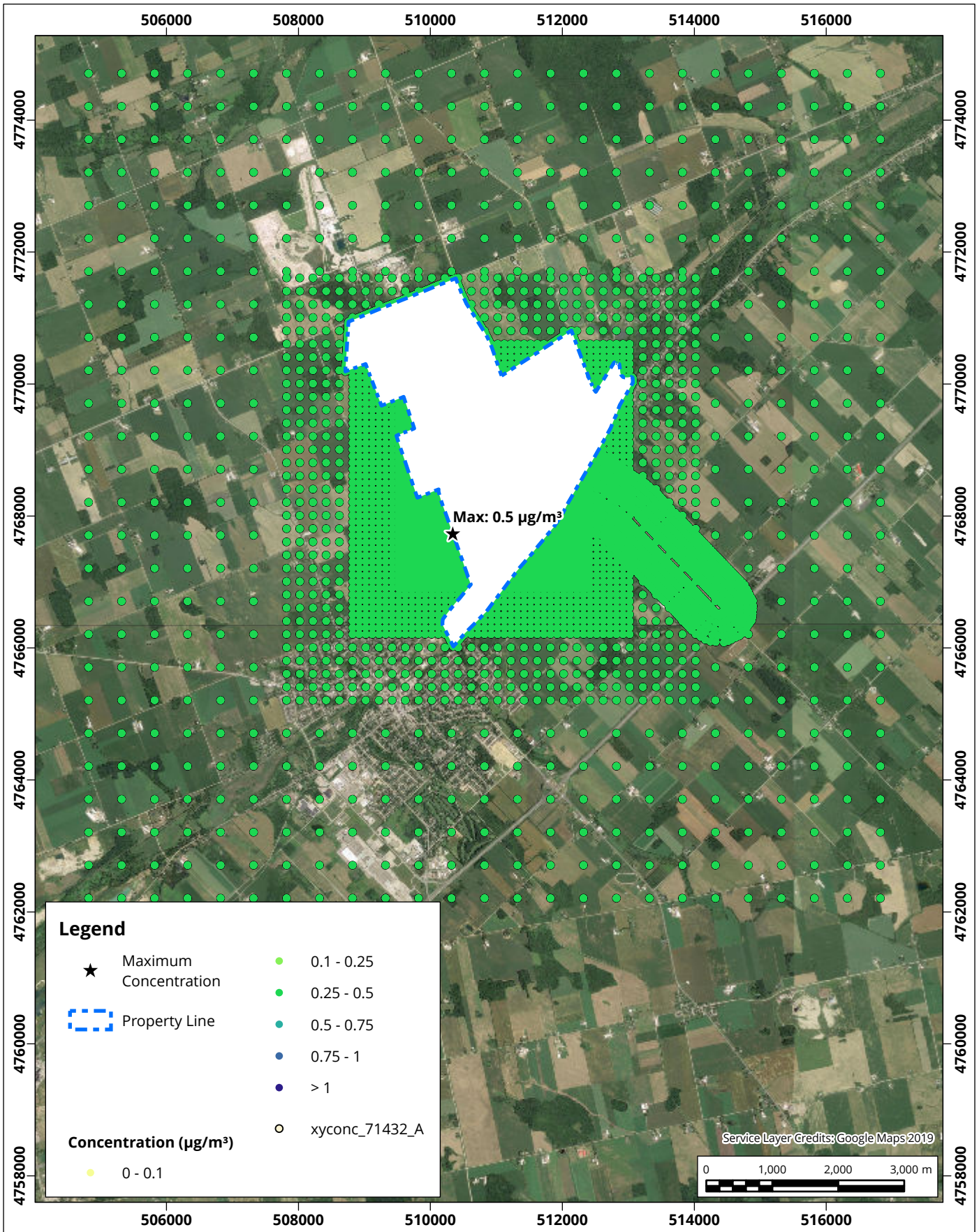
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
  
 Background =  $5 \mu\text{g}/\text{m}^3$   
 Limit =  $7 \mu\text{g}/\text{m}^3$   
 Project #: 1800160

Drawn by: DJH	Figure: I28
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## Annual- Benzene Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.378 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

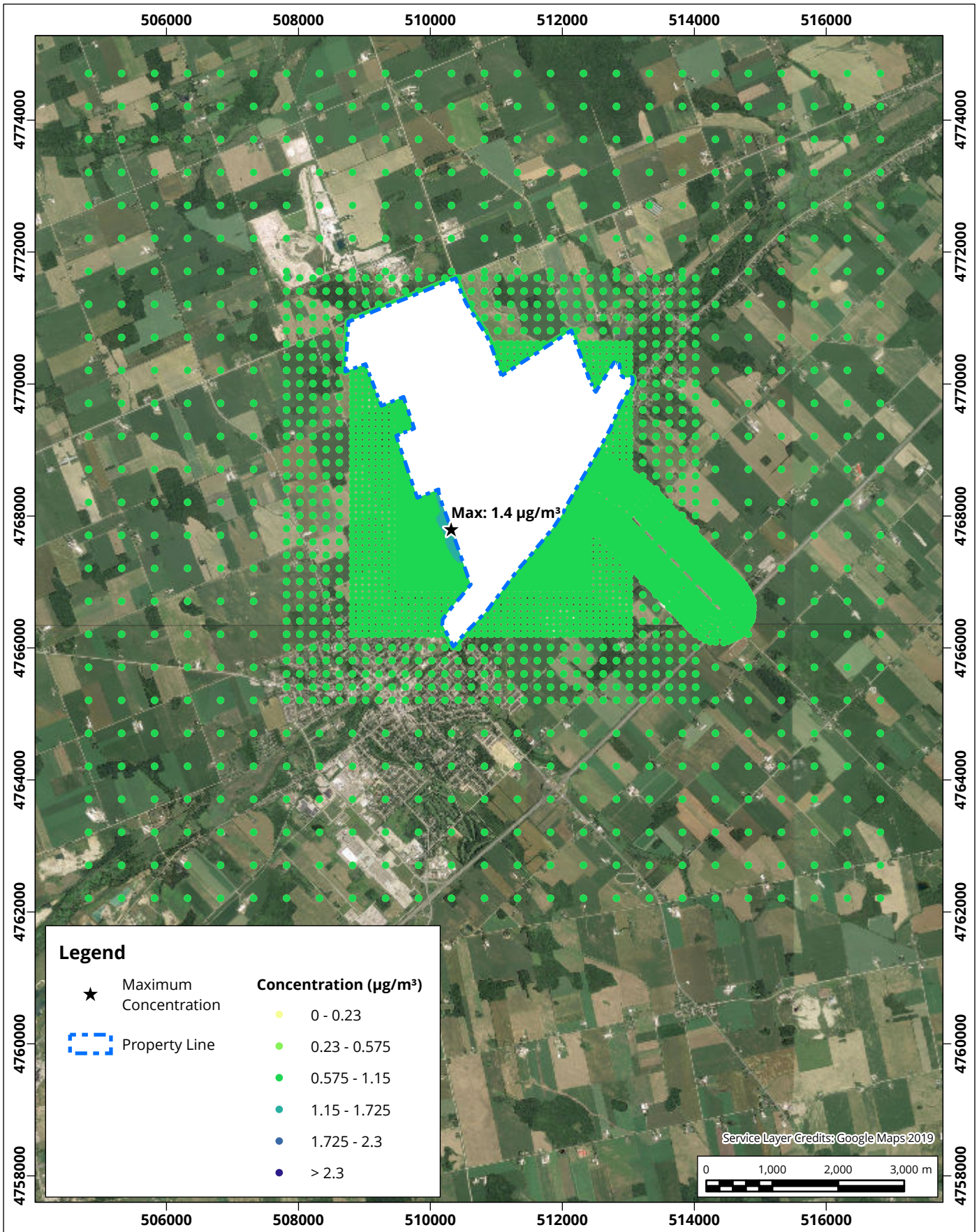
Drawn by: DJH Figure: I29

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Benzene Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.585 \mu\text{g}/\text{m}^3$

Limit =  $2.3 \mu\text{g}/\text{m}^3$

Project #: 1800160

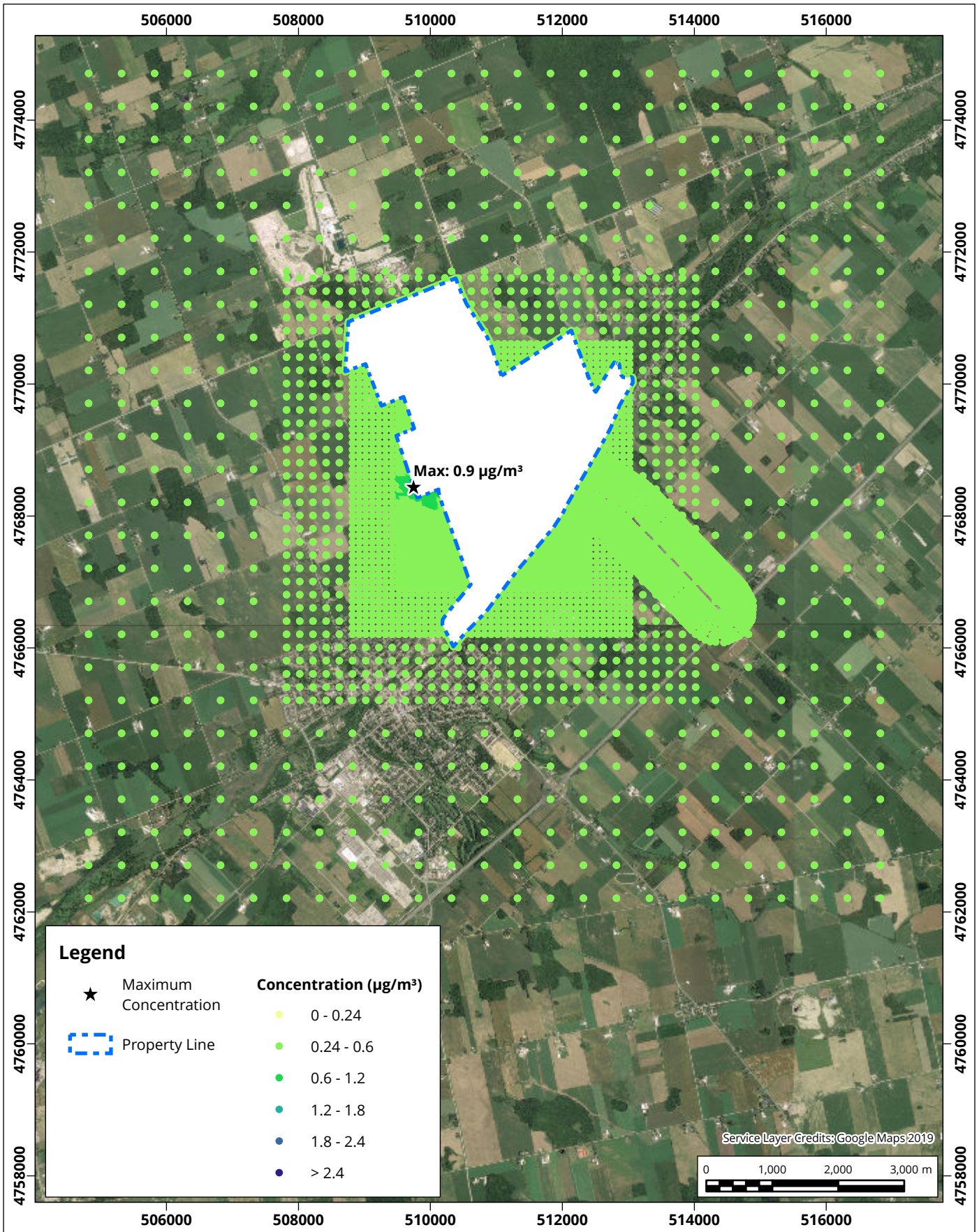
Drawn by: DJH | Figure: I30

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Carbon Tetrachloride Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.5 \mu\text{g}/\text{m}^3$   
Limit =  $2.4 \mu\text{g}/\text{m}^3$   
Project #: 1800160

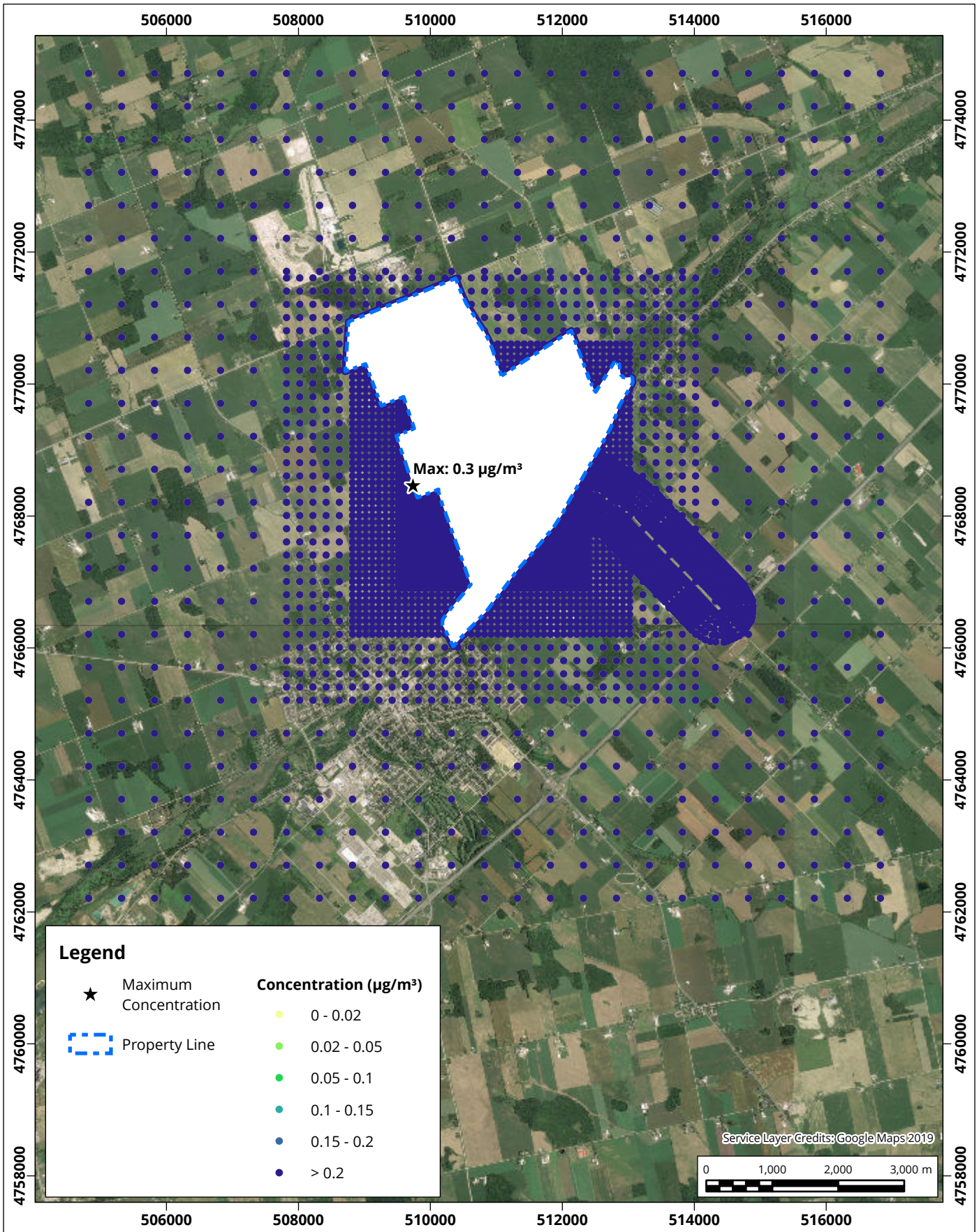
Drawn by: DJH | Figure: I31

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## Annual- Chloroform Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.241 \mu\text{g}/\text{m}^3$

Limit =  $0.2 \mu\text{g}/\text{m}^3$

Project #: 1800160

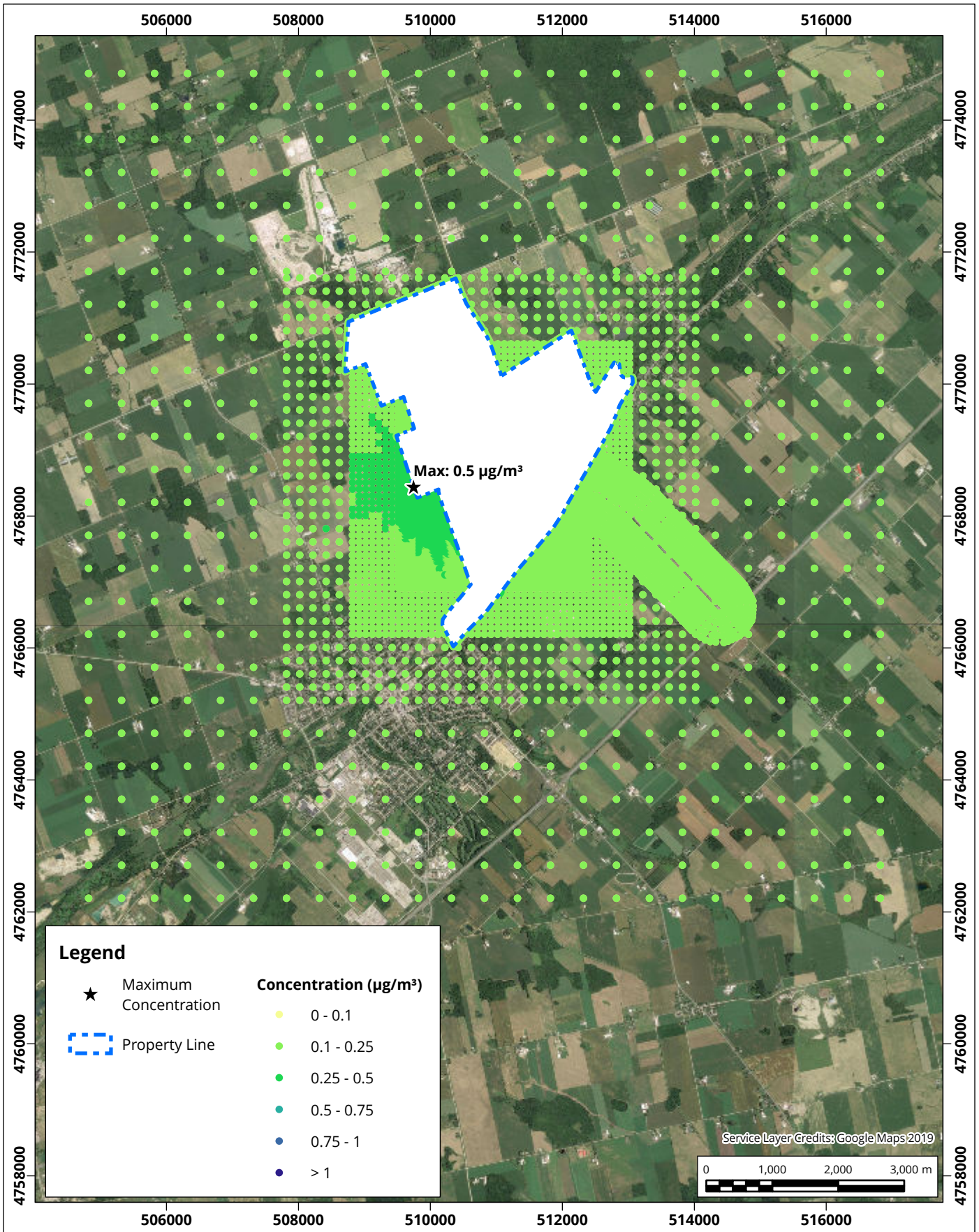
Drawn by: DJH Figure: I32

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Chloroform Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.237 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

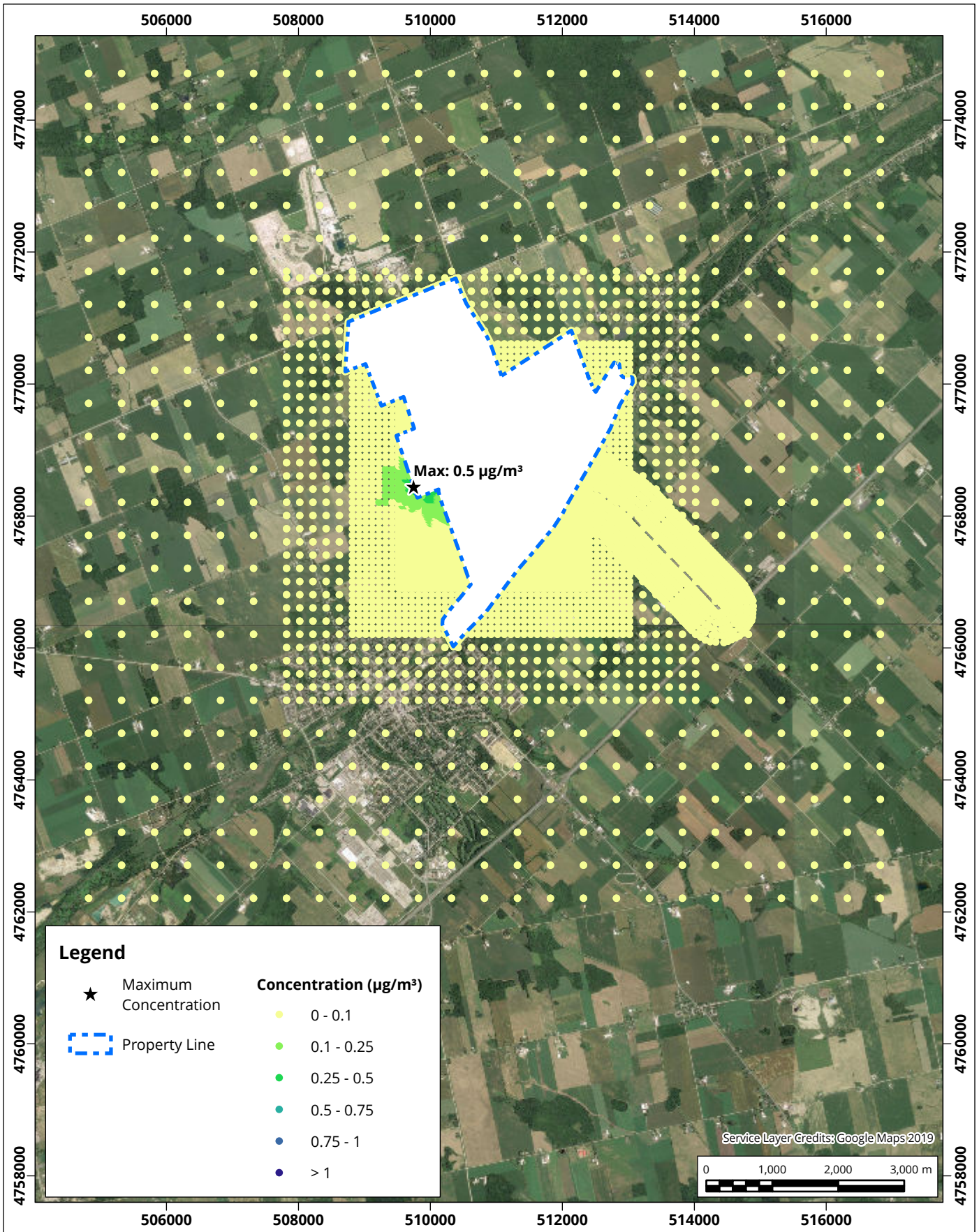
Drawn by: DJH | Figure: I33

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Ethylene Dibromide Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

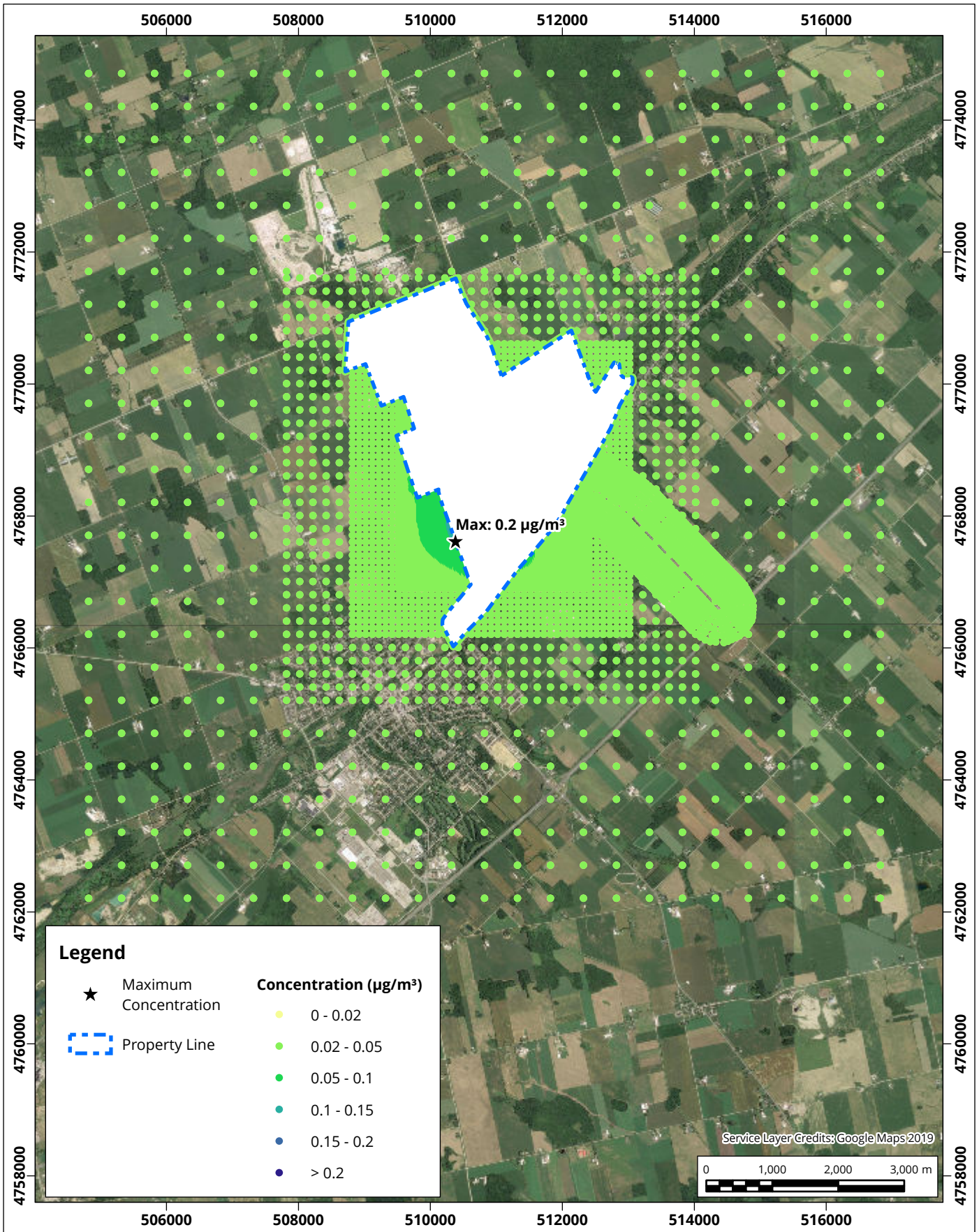


Background =  $0.039 \mu\text{g}/\text{m}^3$   
Limit =  $1 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I34
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







# Annual-Vinyl Chloride Concentration Contours Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

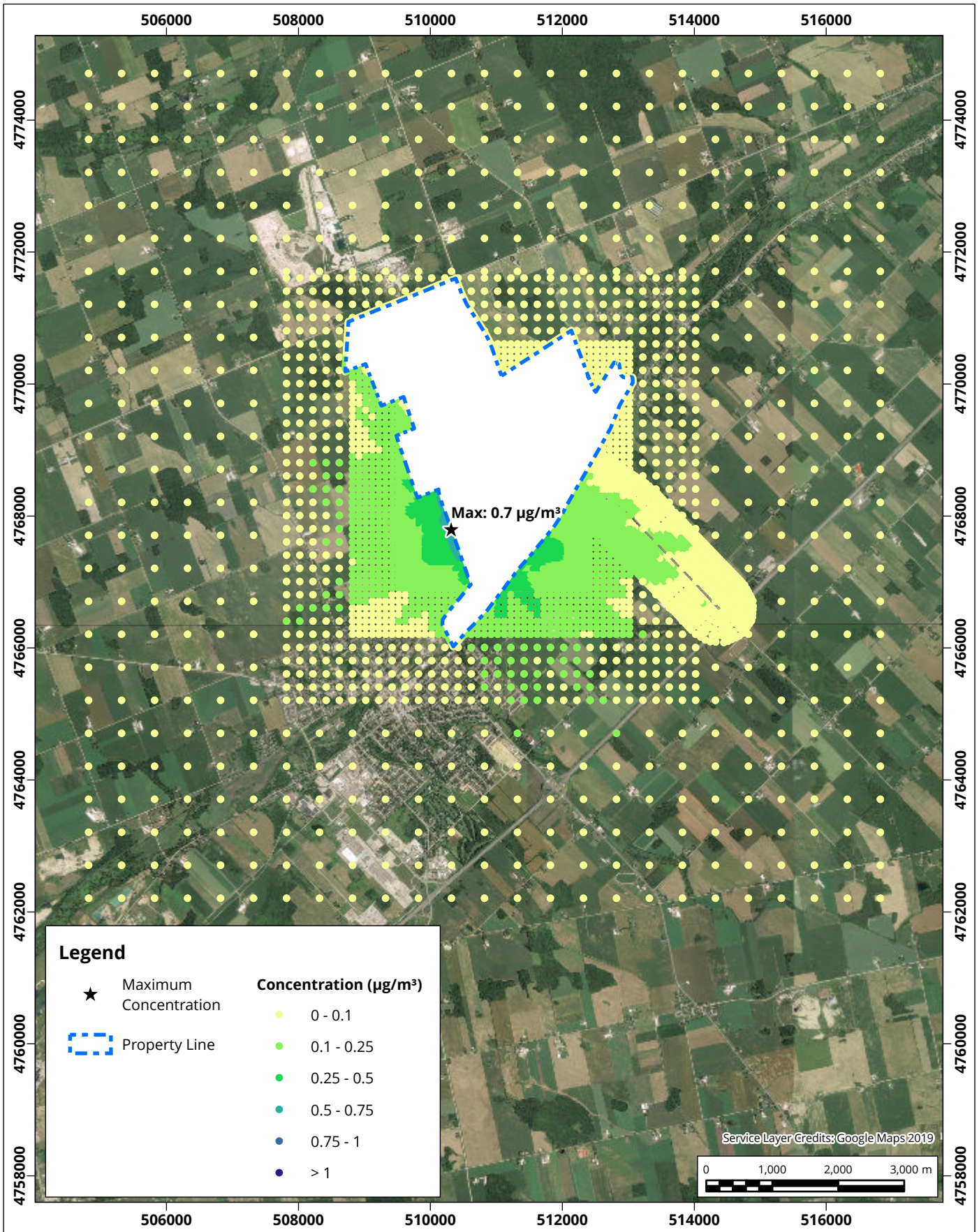


Background =  $0.026 \mu\text{g}/\text{m}^3$   
Limit =  $0.2 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I35
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 24-hour Vinyl Chloride Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.026 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

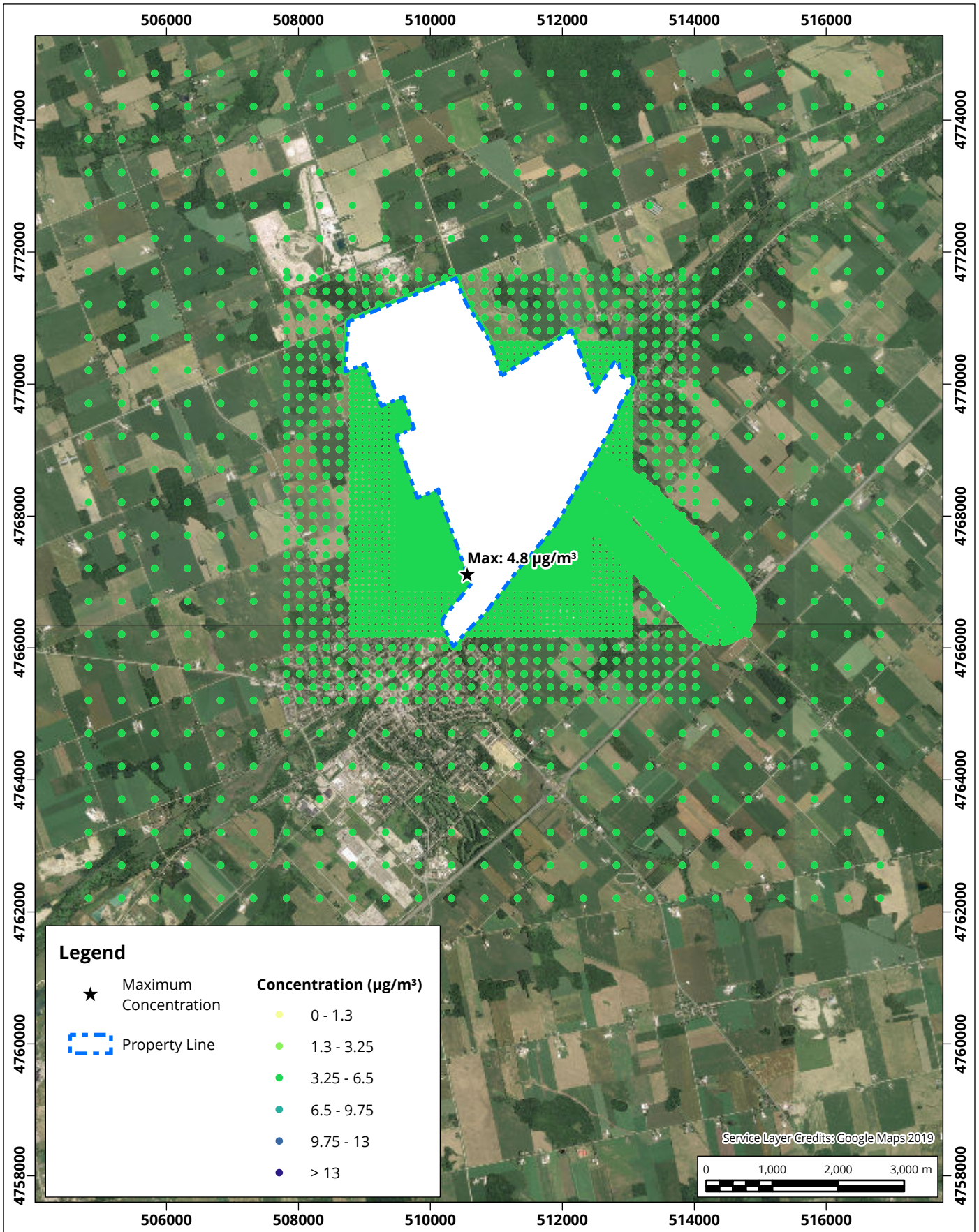
Drawn by: DJH Figure: I36

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 10-Minute-hour Total Mercaptans (as Methyl Mercaptan) Concentration Contours Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $3.95 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

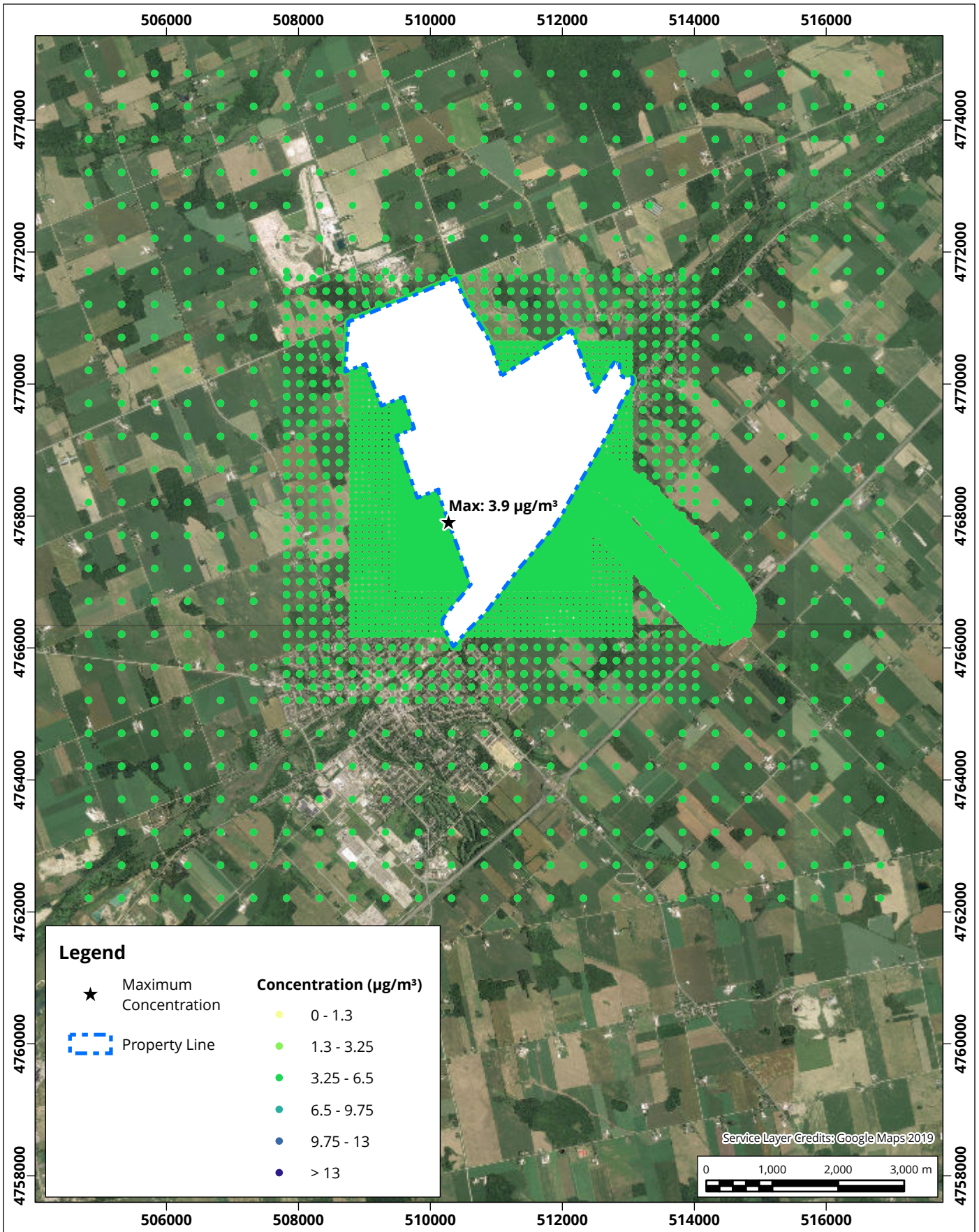
Drawn by: DJH Figure: I37

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







# 10-Minute-hour Hydrogen Sulphide Concentration Contours

## Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

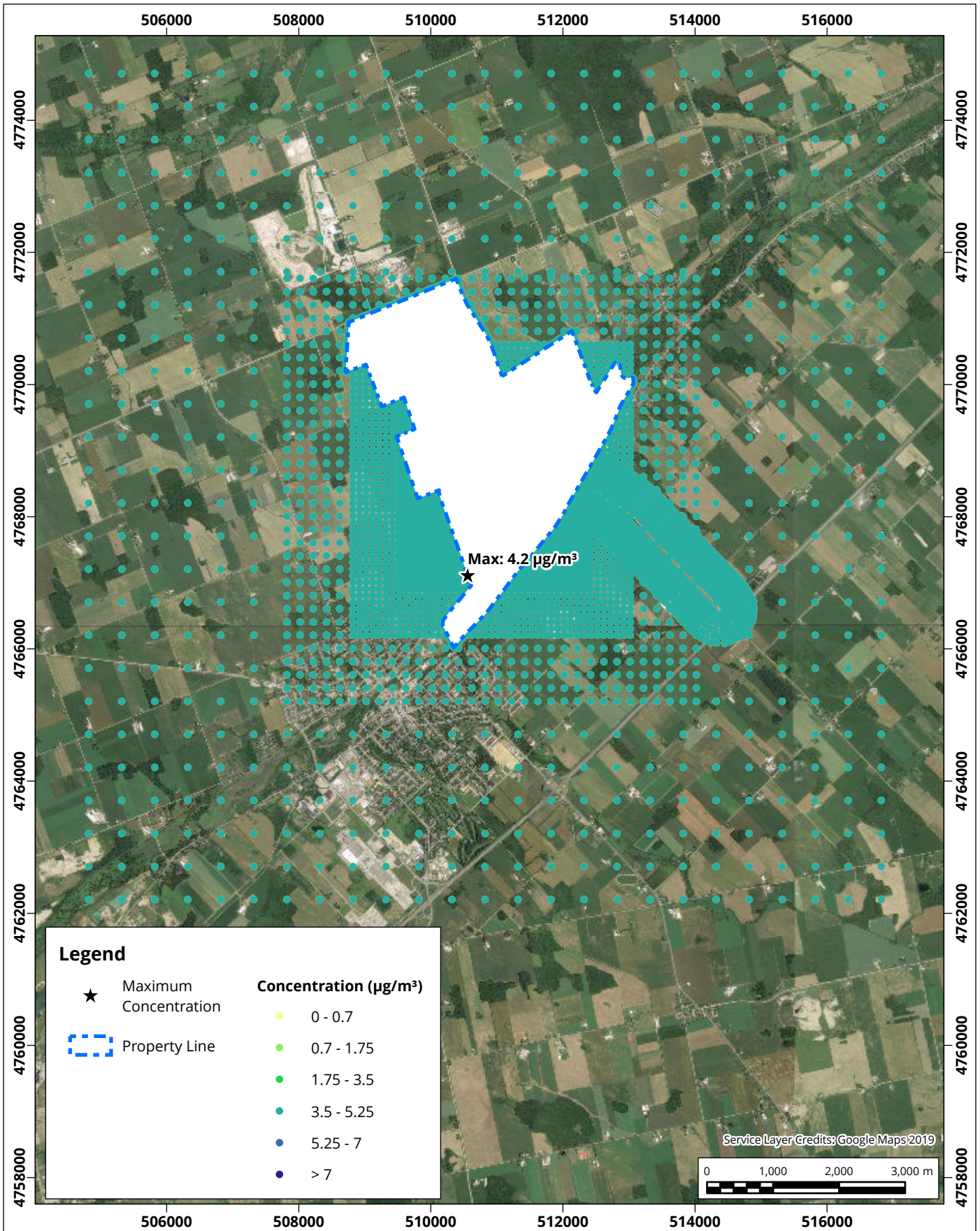


Background =  $3.5 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I38
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 24-hour Hydrogen Sulphide Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

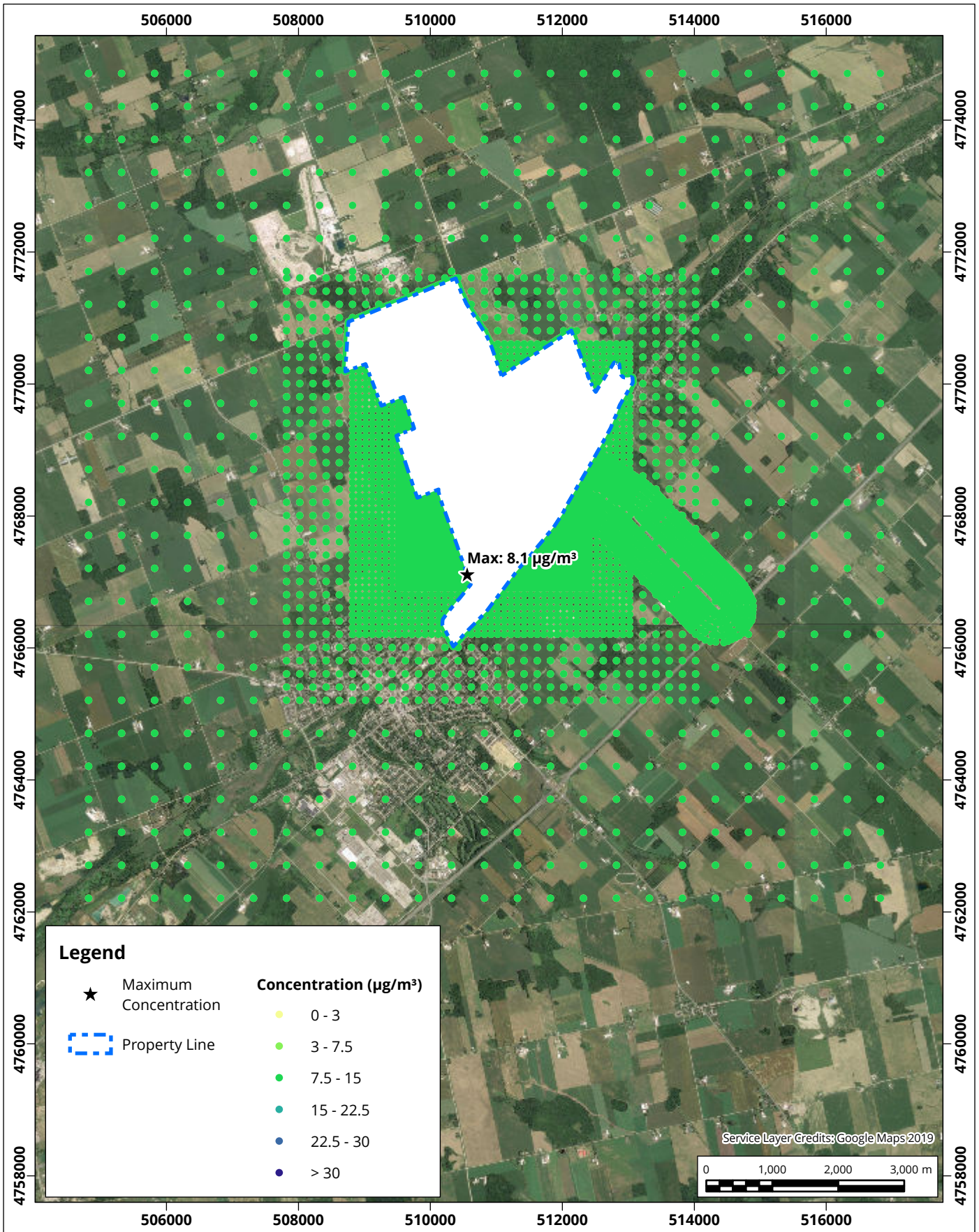


Background =  $3.5 \mu\text{g}/\text{m}^3$   
Limit =  $7 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I39
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







**Legend**

- ★ Maximum Concentration
  - Property Line
- | Concentration ( $\mu\text{g}/\text{m}^3$ ) |           |
|--|-----------|
| ●  | 0 - 3     |
| ●  | 3 - 7.5   |
| ●  | 7.5 - 15  |
| ●  | 15 - 22.5 |
| ●  | 22.5 - 30 |
| ●  | > 30      |

Service Layer Credits: Google Maps 2019

**10-Minute-hour Dimethyl Sulphide Concentration Contours**  
**Stage 4 - 2038 to 2042**

Map Projection: NAD 1983 UTM Zone 17N  
 Walker's Southwest Landfill - Beachville, Ontario

True North

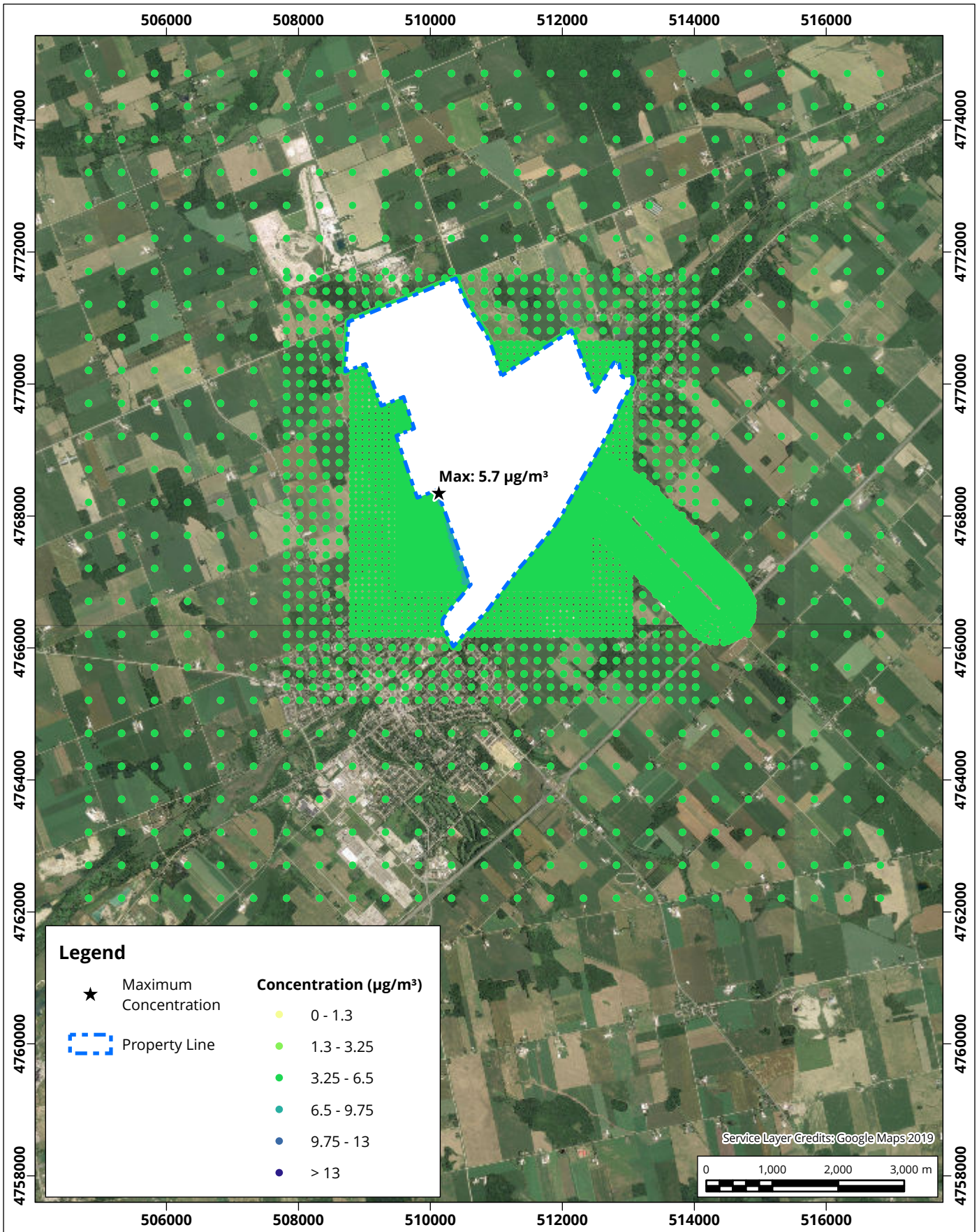


Background =  $7.5 \mu\text{g}/\text{m}^3$   
 Limit =  $30 \mu\text{g}/\text{m}^3$   
 Project #: 1800160

Drawn by: DJH	Figure: I40
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 10-Minute-hour Total Reduced Sulphurs (TRS) Concentration Contours Stage 4 - 2038 to 2042

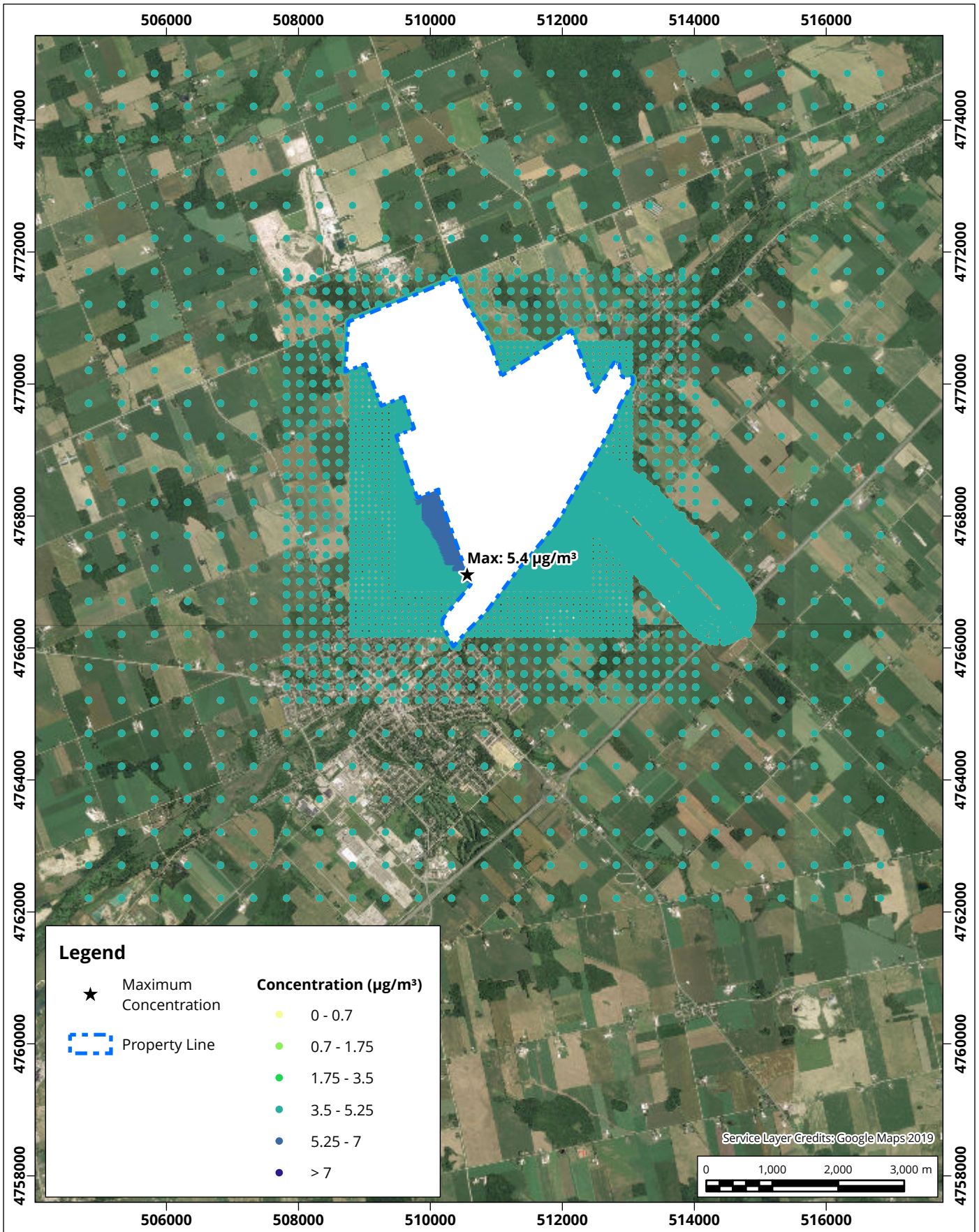
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
Background =  $5 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I41
Exact Scale:	1:80,000
Date Revised: Feb 18, 2020	







## 24-hour Total Reduced Sulphurs (TRS) Concentration Contours Stage 4 - 2038 to 2042

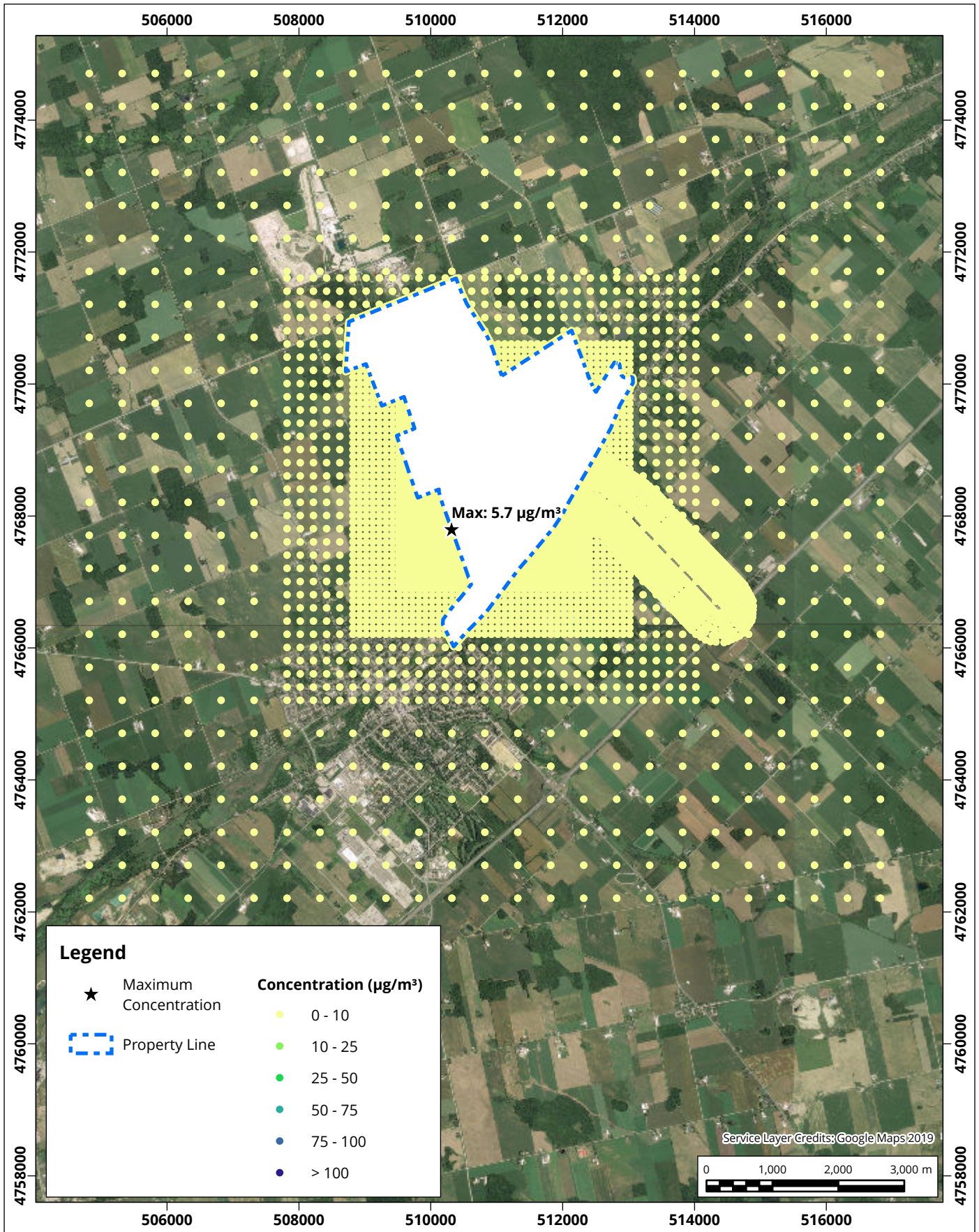
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
Background =  $5 \mu\text{g}/\text{m}^3$   
Limit =  $7 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I42
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 24-hour m/p-Xylene Concentration Contours

### Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.85 \mu\text{g}/\text{m}^3$

Limit =  $100 \mu\text{g}/\text{m}^3$

Project #: 1800160

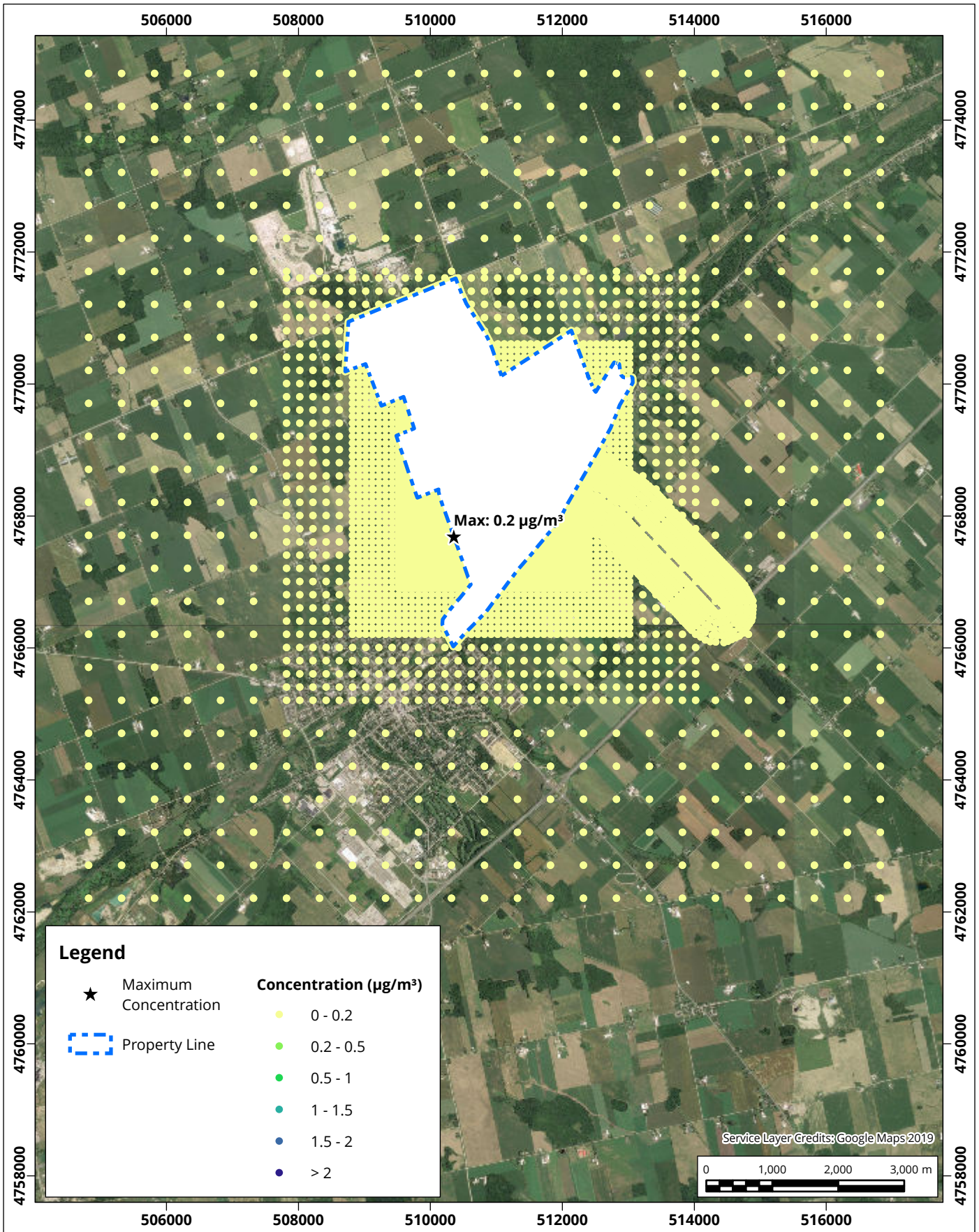
Drawn by: DJH Figure: I43

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







# Annual- Trichloroethylene Concentration

## Contours Stage 4 - 2038 to 2042

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

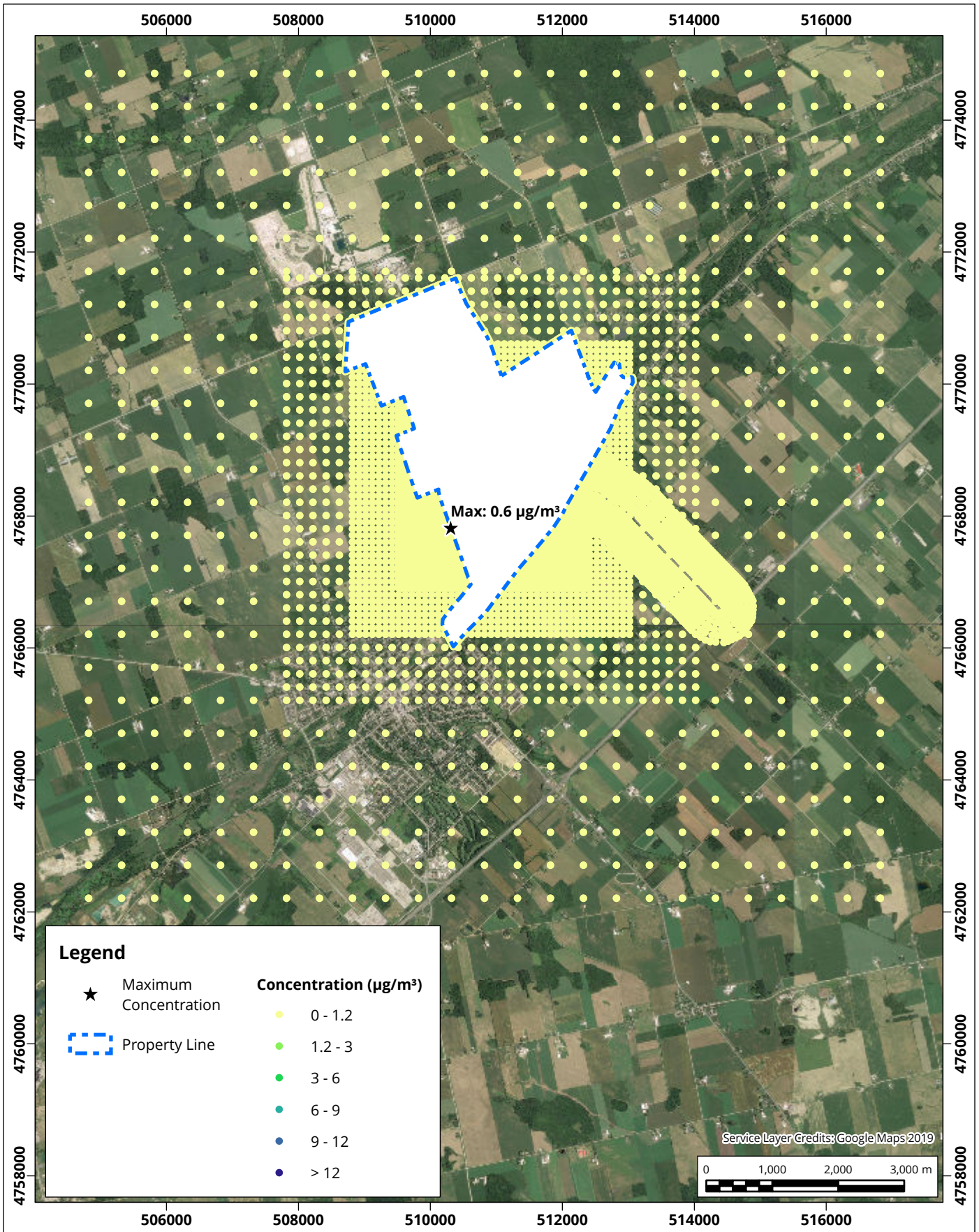


Background =  $0.061 \mu\text{g}/\text{m}^3$   
Limit =  $2 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I44
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







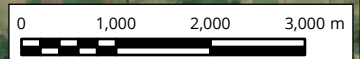
**Legend**

- ★ Maximum Concentration
- Property Line

**Concentration (µg/m³)**

- 0 - 1.2
- 1.2 - 3
- 3 - 6
- 6 - 9
- 9 - 12
- > 12

Service Layer Credits: Google Maps 2019



**24-hour Trichloroethylene Concentration Contours**

True North



**Stage 4 - 2038 to 2042**

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

Background = 0.055 µg/m³

Limit = 12 µg/m³

Project #: 1800160

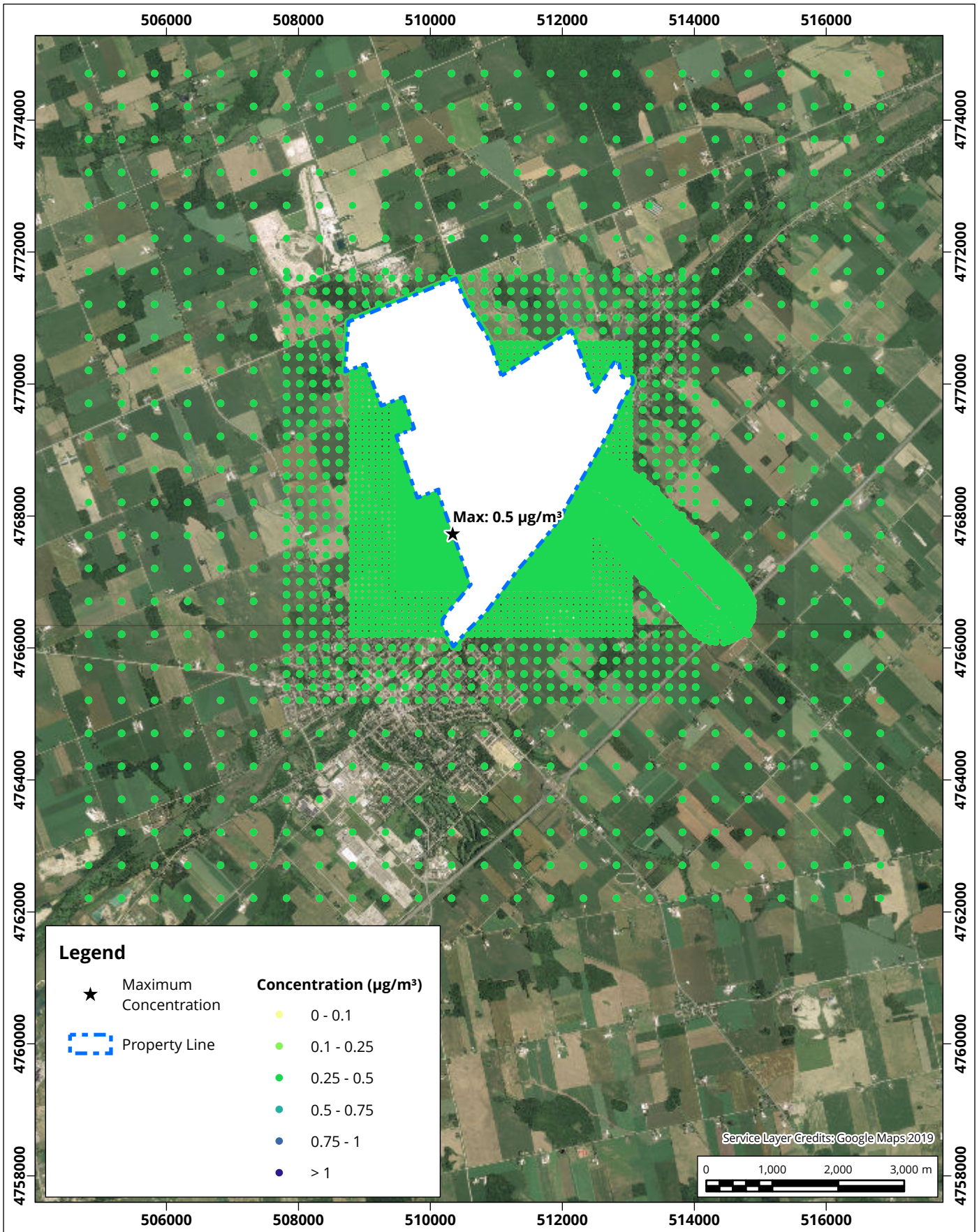
Drawn by: DJH Figure: I45

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## Annual Benzene Concentration Contours

### Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.378 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

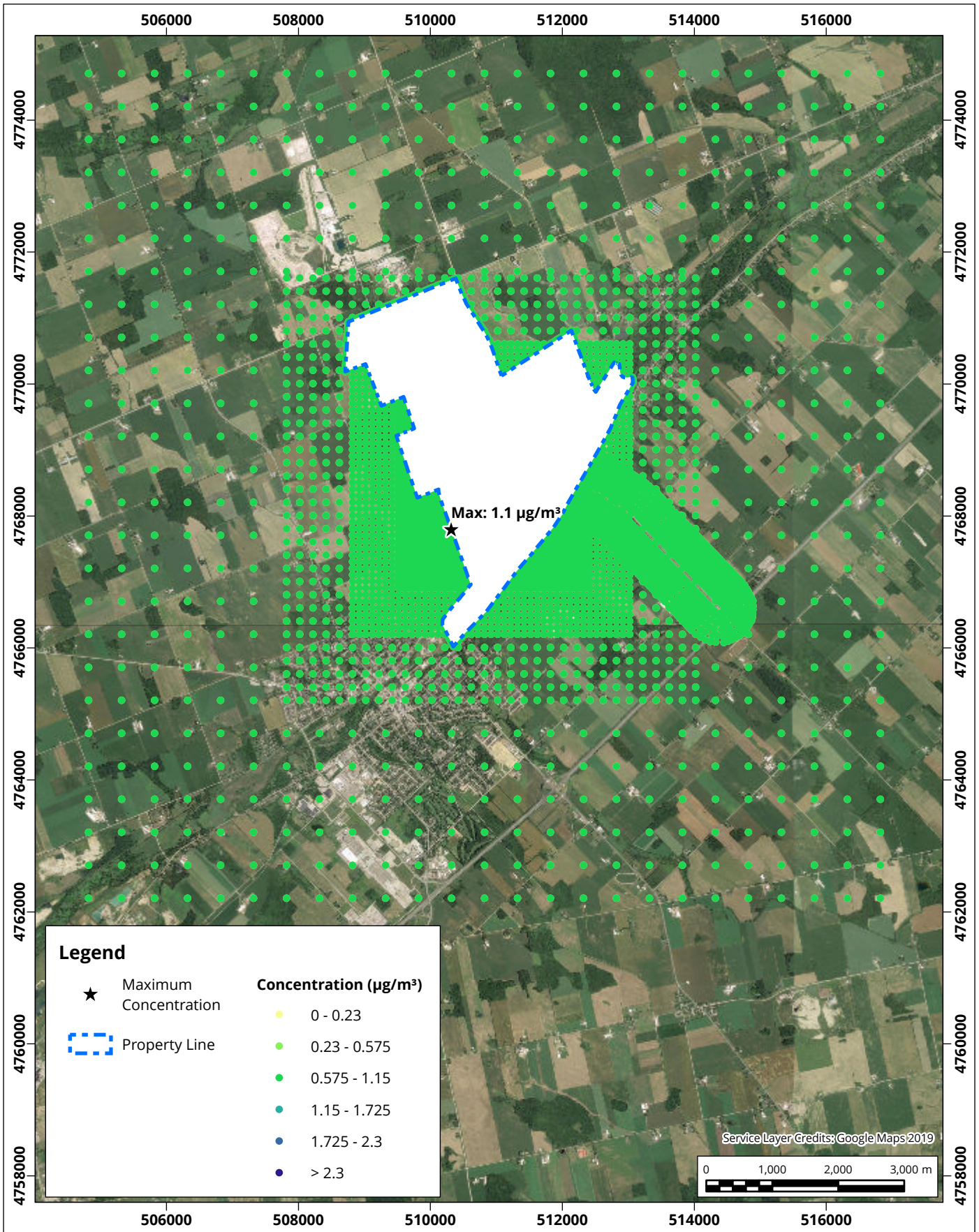
Drawn by: DJH Figure: I46

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Benzene Concentration Contours

### Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background = 0.585  $\mu\text{g}/\text{m}^3$

Limit = 2.3  $\mu\text{g}/\text{m}^3$

Project #: 1800160

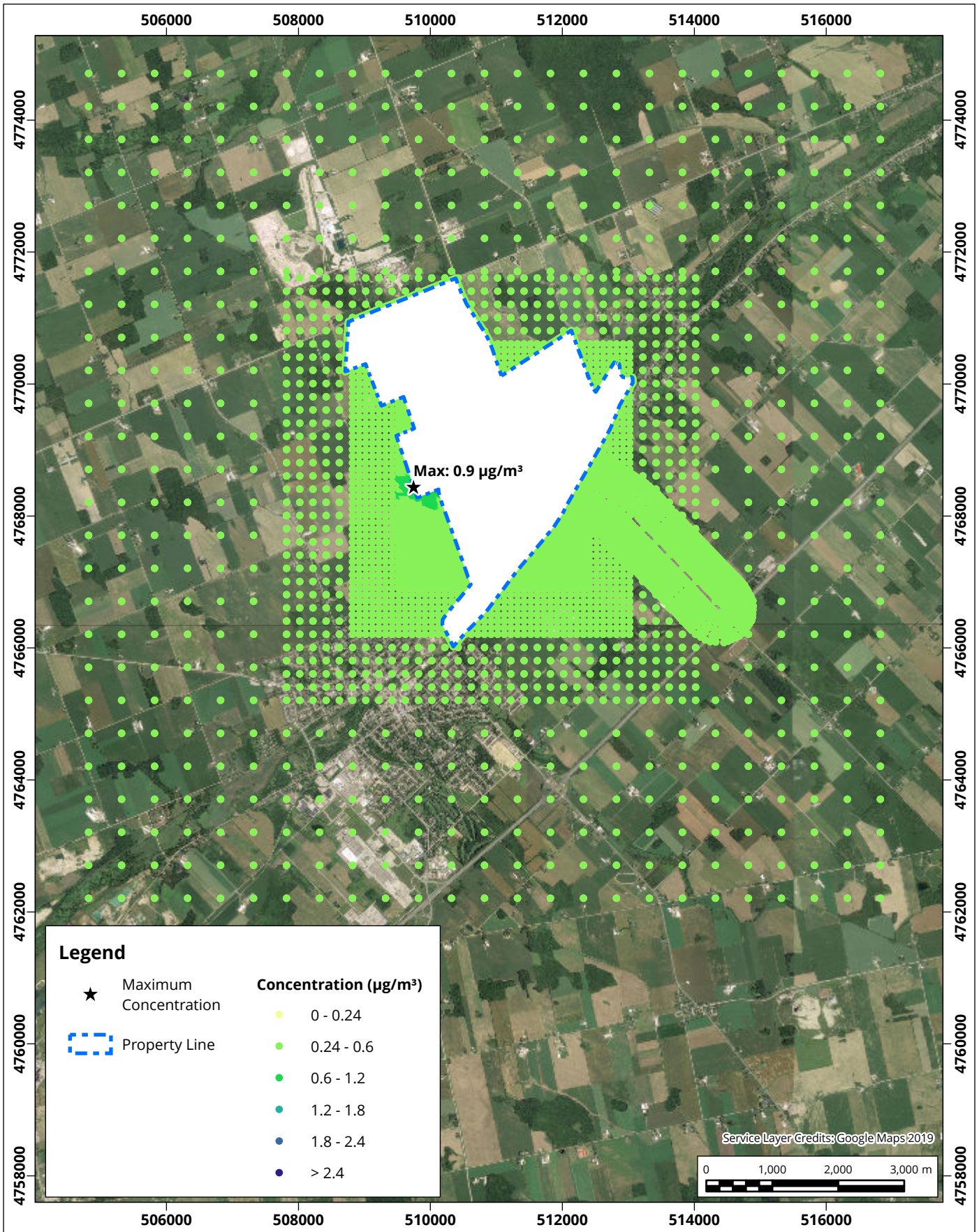
Drawn by: DJH Figure: I47

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Carbon Tetrachloride Concentration Contours

### Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

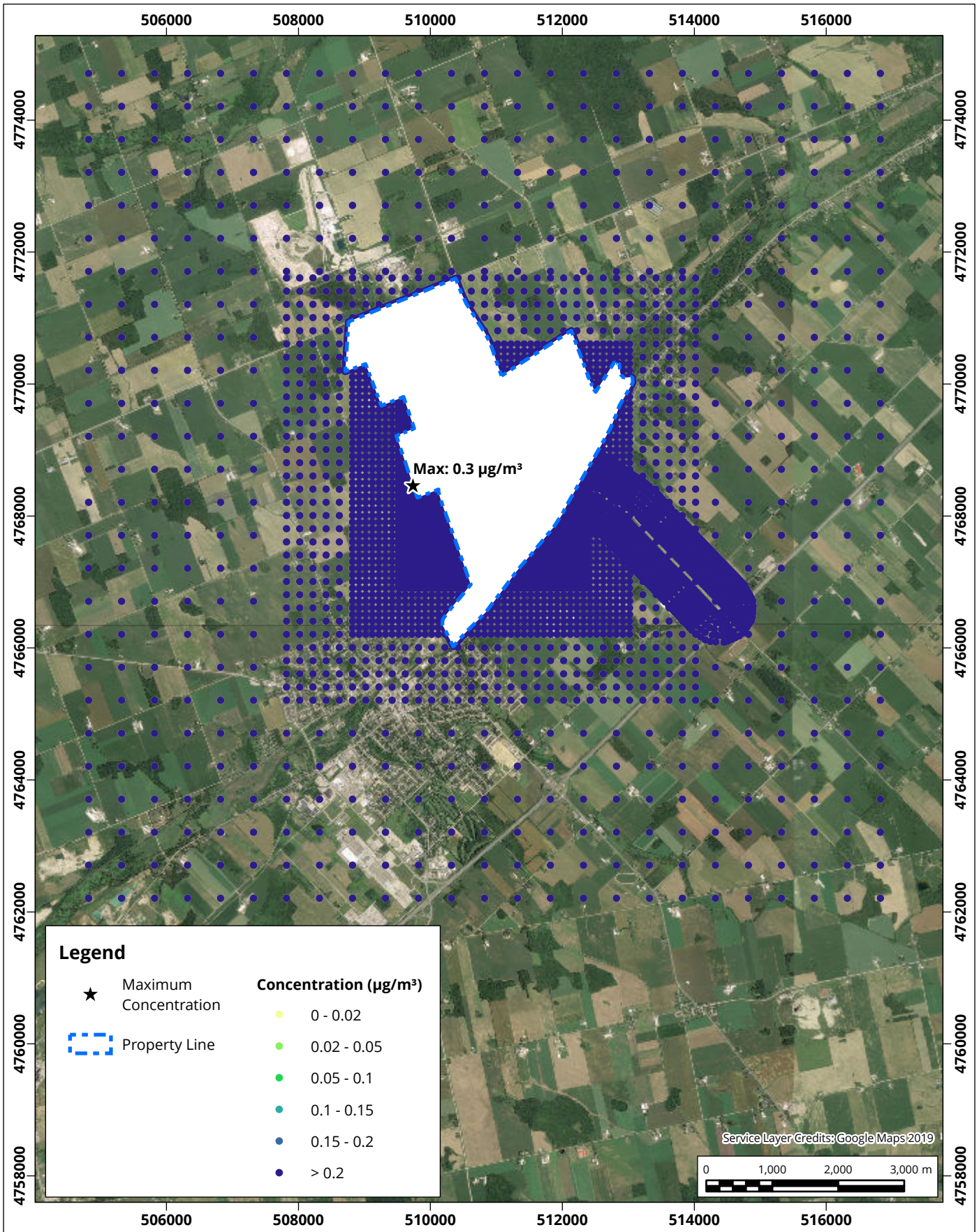


Background =  $0.5 \mu\text{g}/\text{m}^3$   
Limit =  $2.4 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I48
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## Annual Chloroform Concentration Contours

### Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.241 \mu\text{g}/\text{m}^3$

Limit =  $0.2 \mu\text{g}/\text{m}^3$

Project #: 1800160

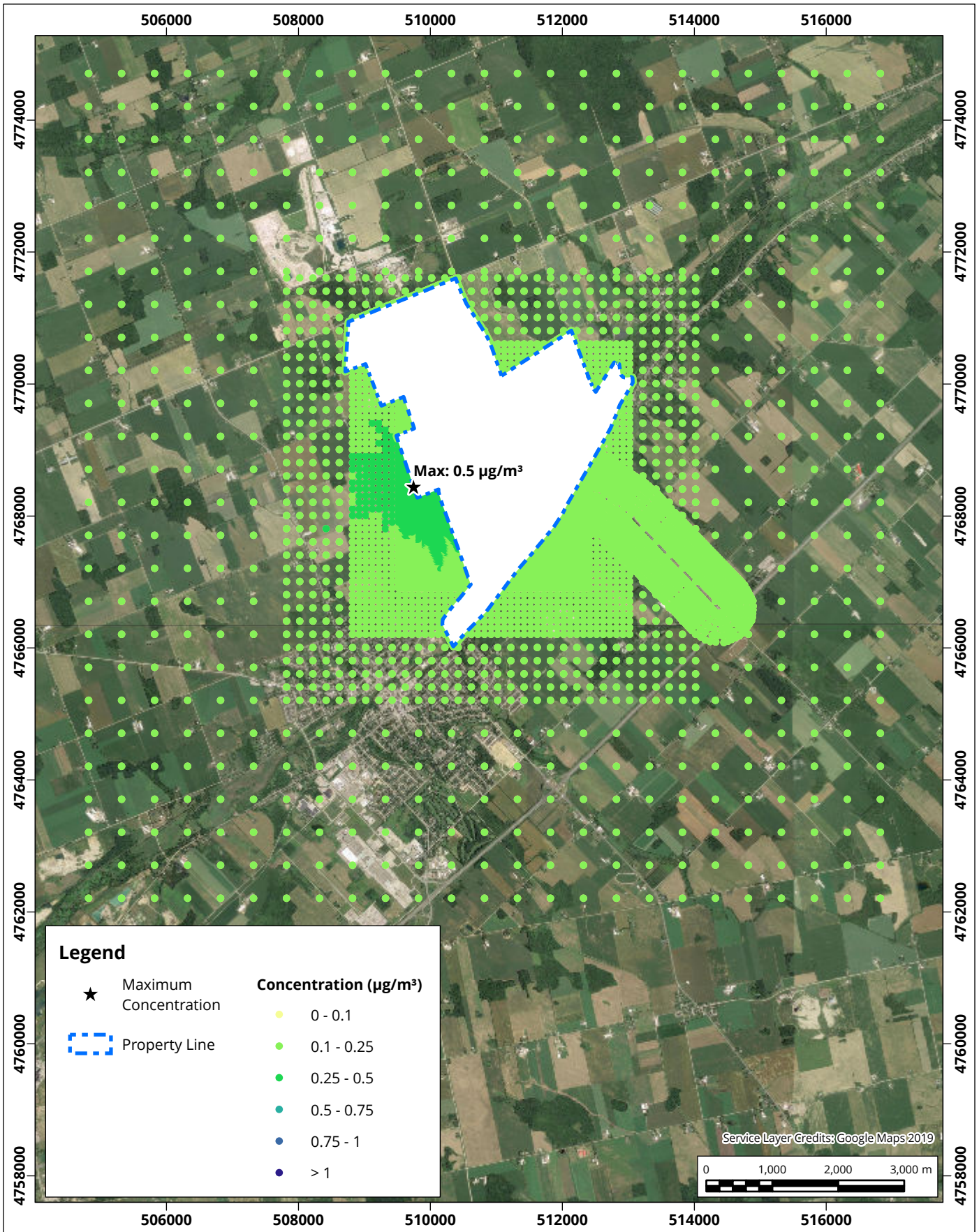
Drawn by: DJH Figure: I49

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Chloroform Concentration Contours

### Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $0.237 \mu\text{g}/\text{m}^3$

Limit =  $1 \mu\text{g}/\text{m}^3$

Project #: 1800160

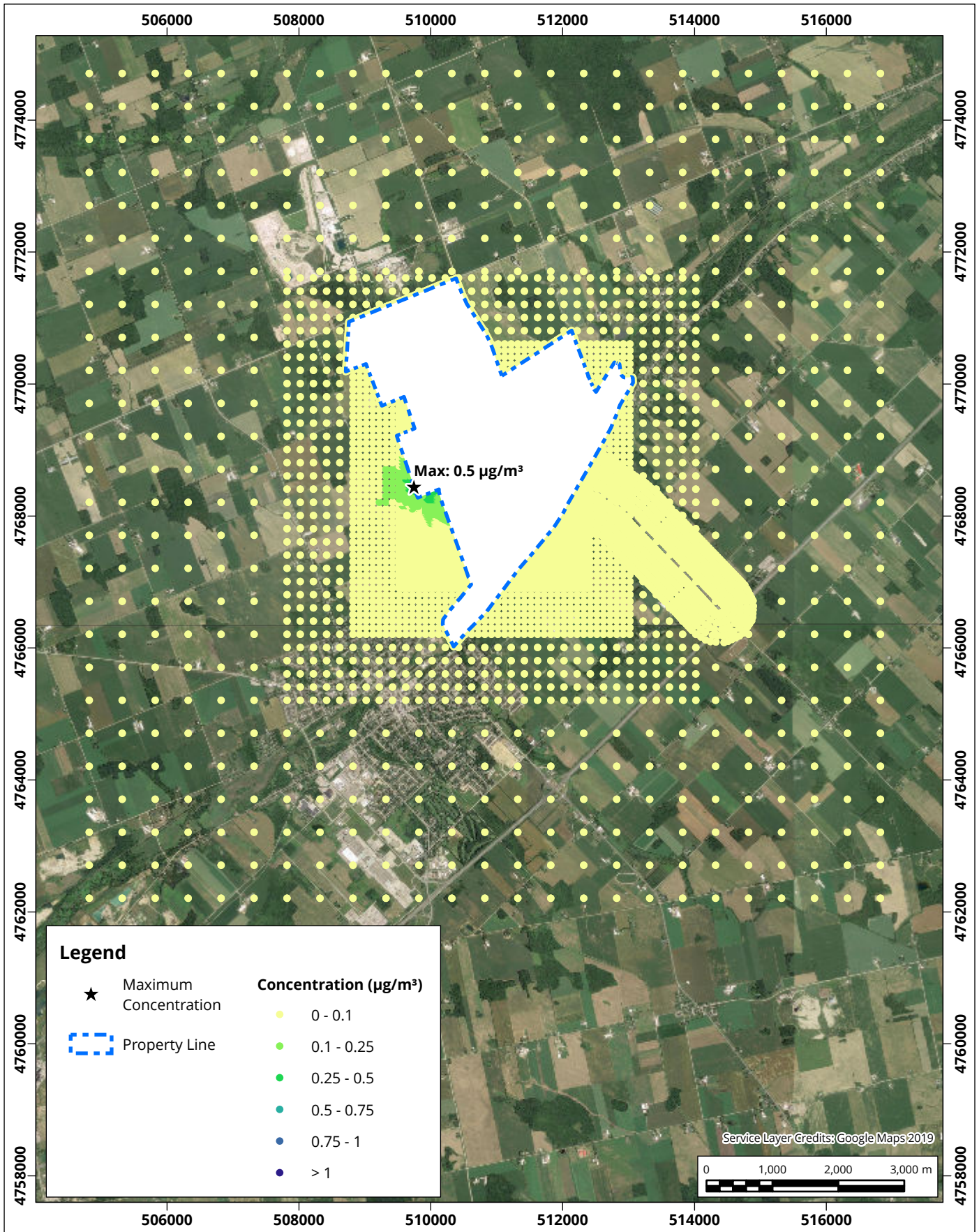
Drawn by: DJH Figure: 150

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 24-hour Ethylene Dibromide Concentration Contours

### Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North

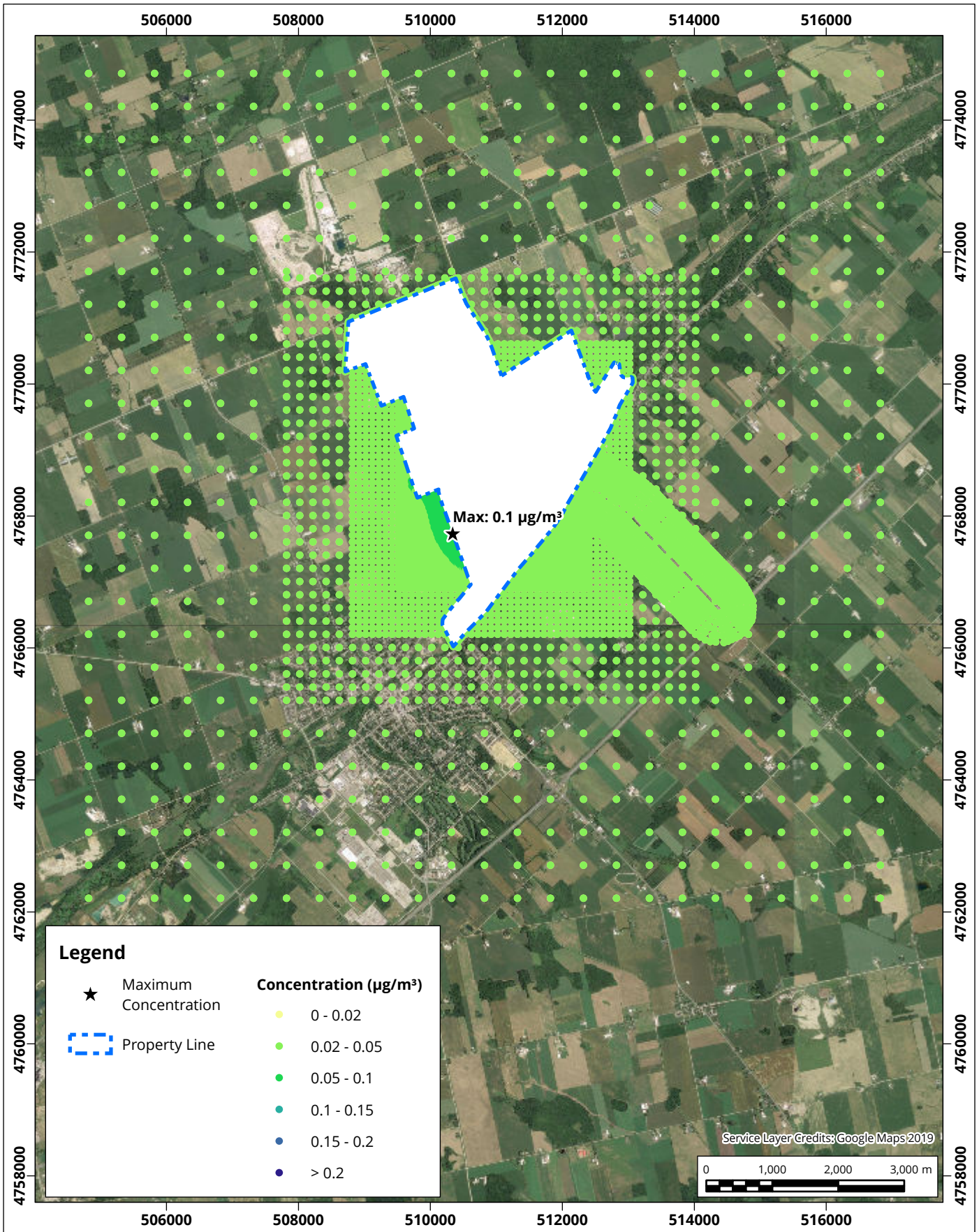


Background =  $0.039 \mu\text{g}/\text{m}^3$   
Limit =  $1 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I51
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







# Annual Vinyl Chloride Concentration Contours Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

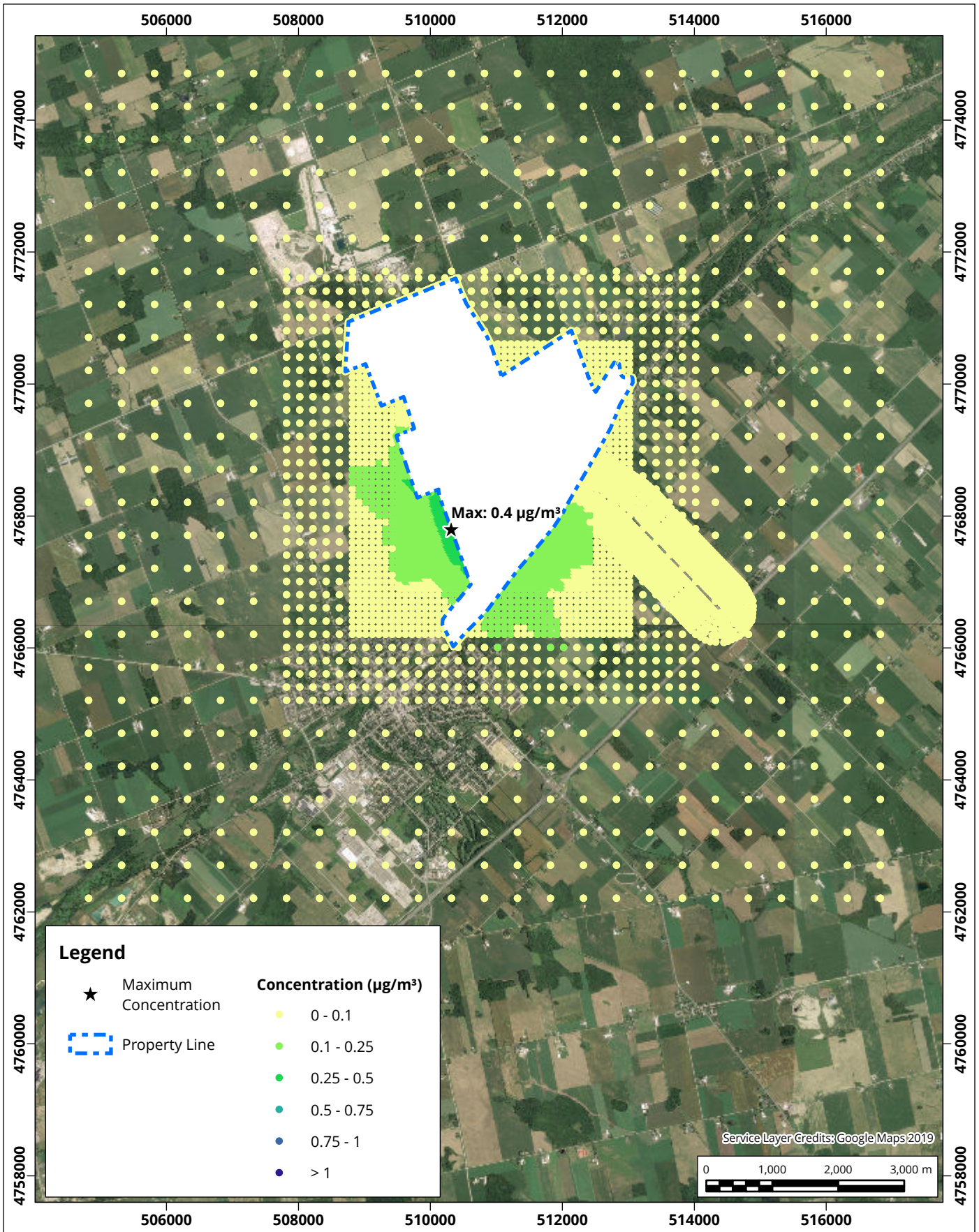


Background =  $0.026 \mu\text{g}/\text{m}^3$   
Limit =  $0.2 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: 152
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020



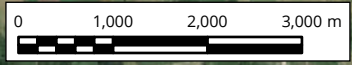




**Legend**

- ★ Maximum Concentration
  - Property Line
- | Concentration (µg/m³) |            |
|-----------------------|------------|
| ●                     | 0 - 0.1    |
| ●                     | 0.1 - 0.25 |
| ●                     | 0.25 - 0.5 |
| ●                     | 0.5 - 0.75 |
| ●                     | 0.75 - 1   |
| ●                     | > 1        |

Service Layer Credits: Google Maps 2019



**24-hour Vinyl Chloride Concentration Contours**

**Post Closure - 2043**

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

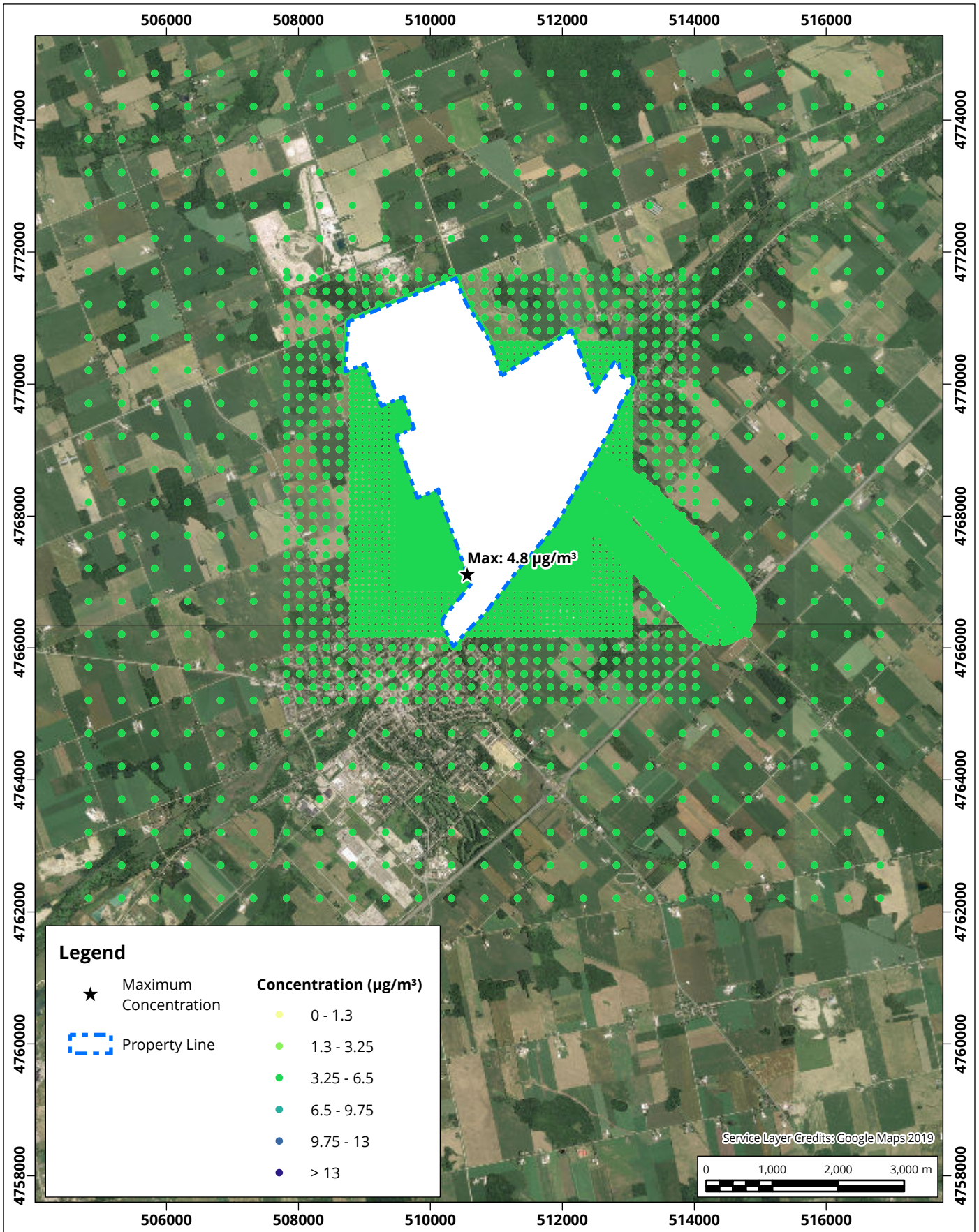


Background = 0.026 µg/m³  
Limit = 1 µg/m³  
Project #: 1800160

Drawn by: DJH	Figure: I53
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 10-Minute-hour Total Mercaptans (as Methyl Mercaptan) Concentration Contours Post Closure - 2043

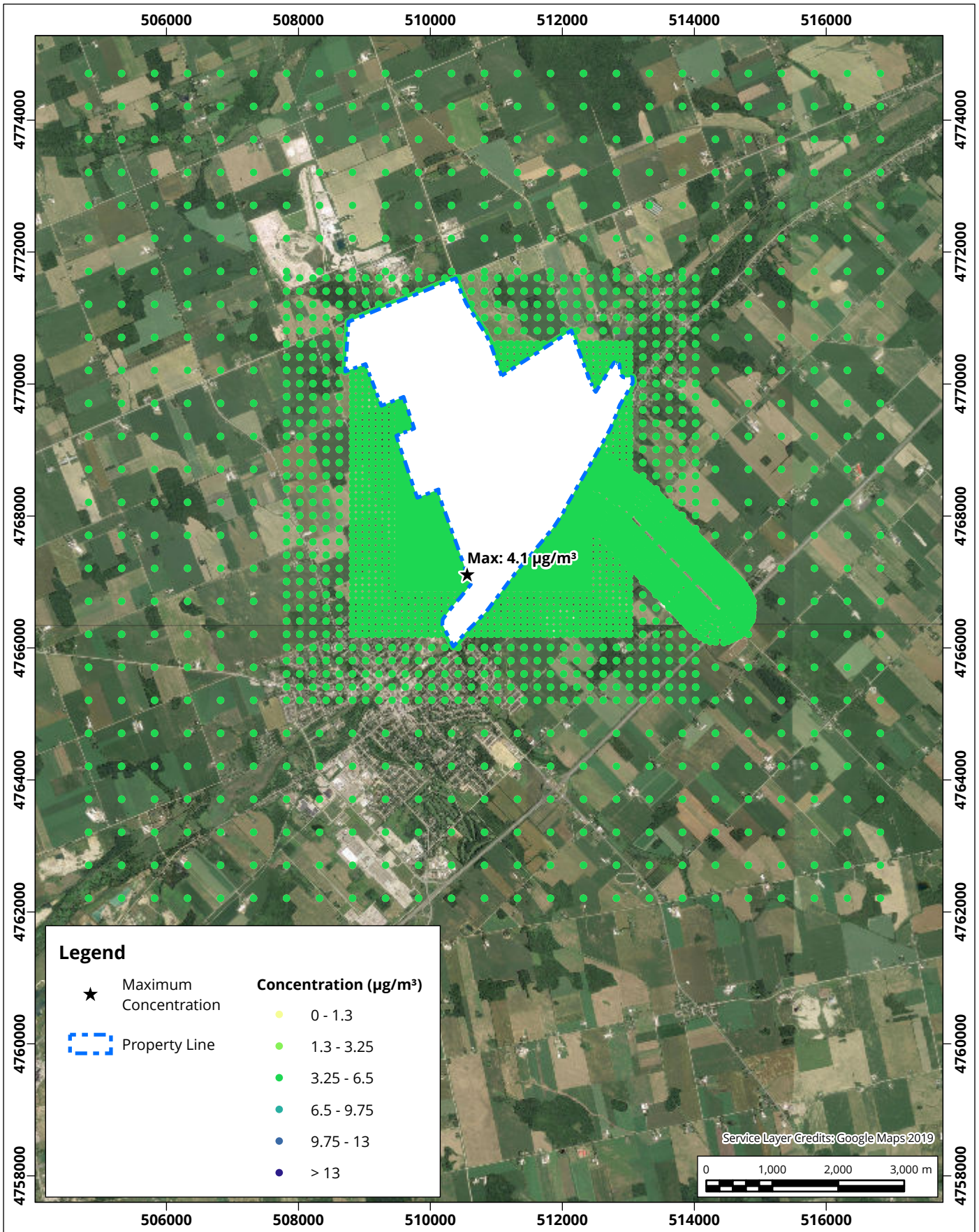
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
Background =  $3.95 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I54
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020



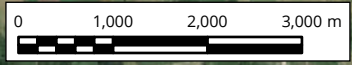




**Legend**

- ★ Maximum Concentration
  - Property Line
- | Concentration (µg/m³) |            |
|-----------------------|------------|
| ●                     | 0 - 1.3    |
| ●                     | 1.3 - 3.25 |
| ●                     | 3.25 - 6.5 |
| ●                     | 6.5 - 9.75 |
| ●                     | 9.75 - 13  |
| ●                     | > 13       |

Service Layer Credits: Google Maps 2019



**10-Minute-hour Hydrogen Sulphide Concentration Contours**  
**Post Closure - 2043**

Map Projection: NAD 1983 UTM Zone 17N  
 Walker's Southwest Landfill - Beachville, Ontario

True North

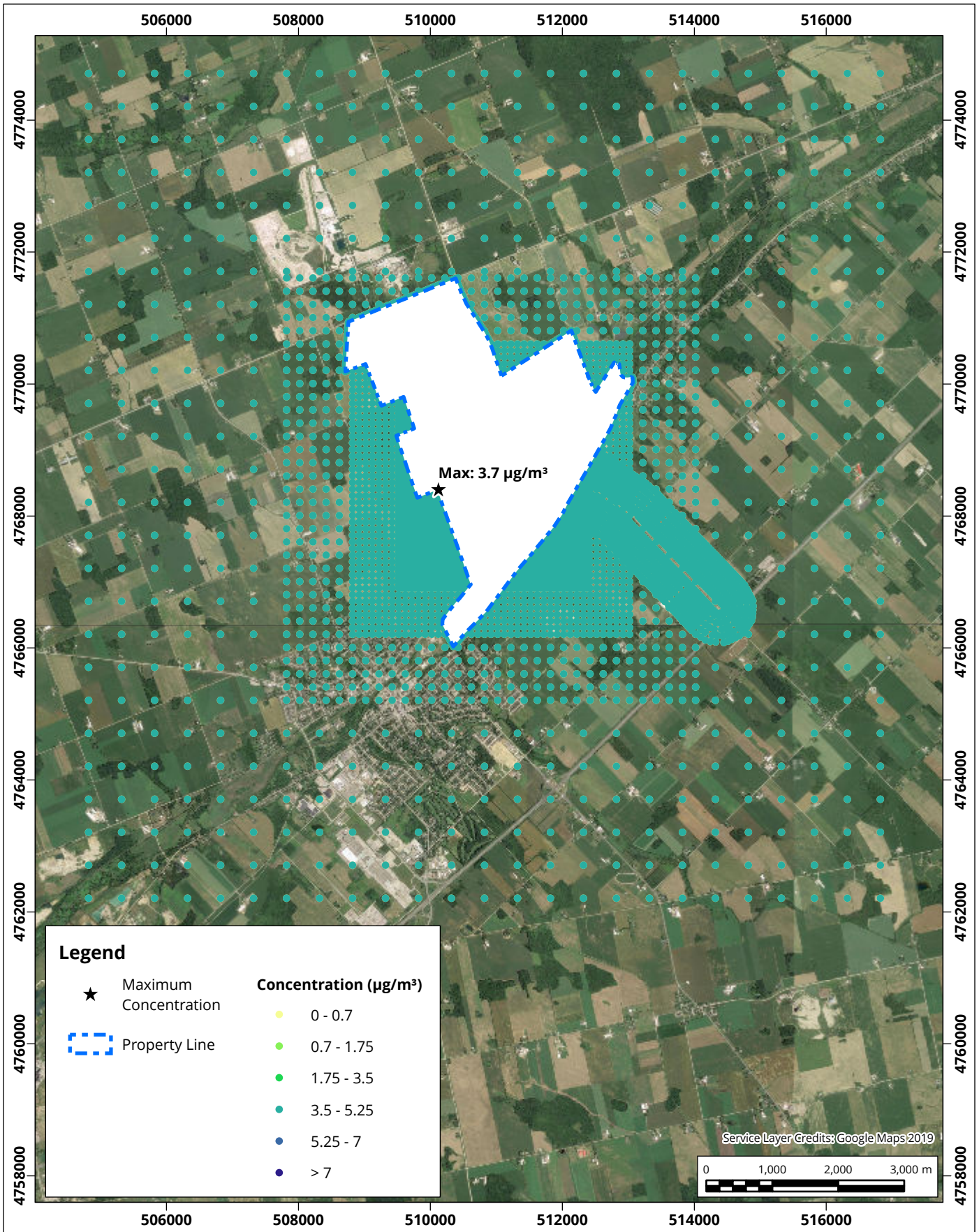


Background = 3.5 µg/m³  
 Limit = 13 µg/m³  
 Project #: 1800160

Drawn by: DJH	Figure: I55
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 24-hour Hydrogen Sulphide Concentration Contours Post Closure - 2043

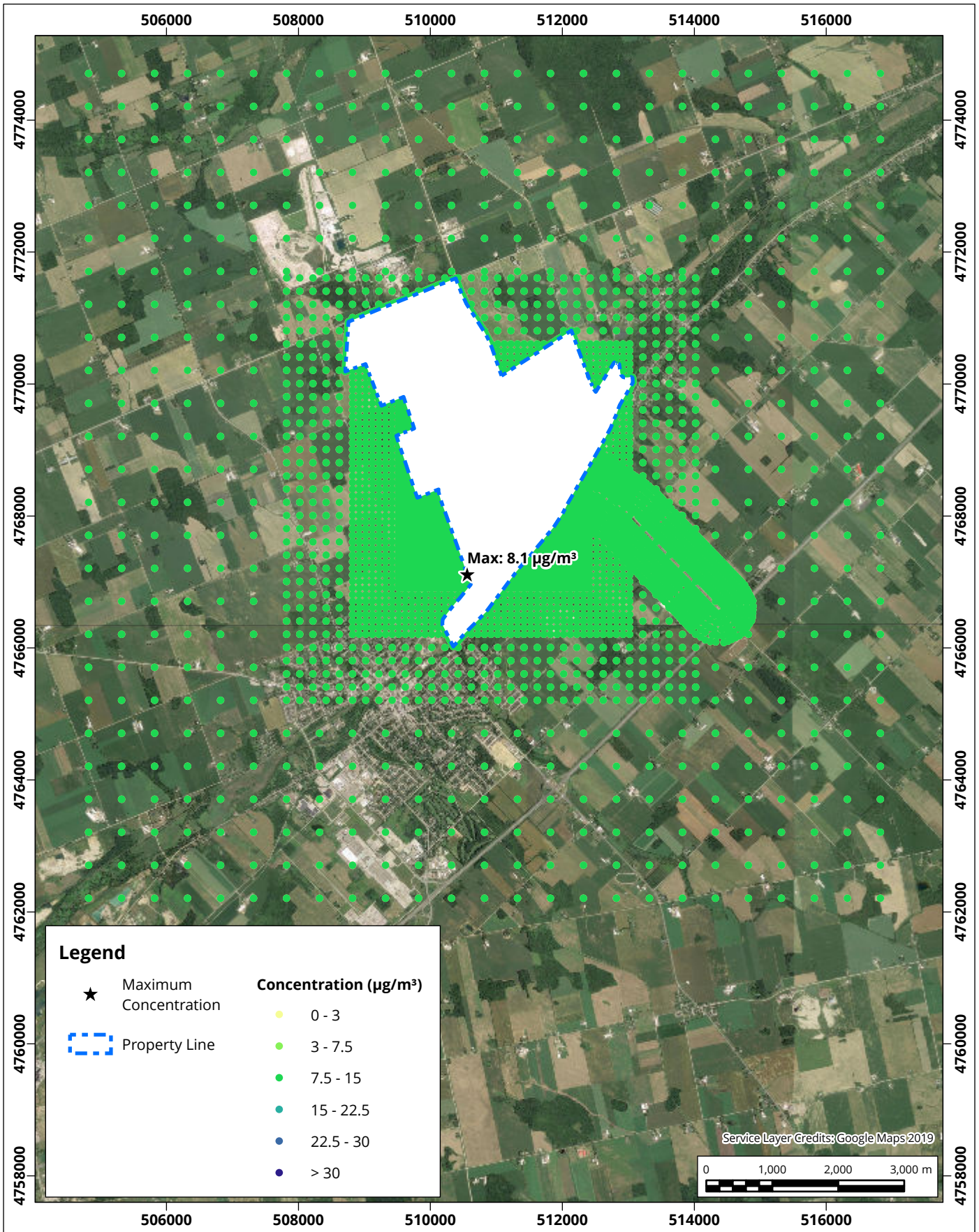
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
Background =  $3.5 \mu\text{g}/\text{m}^3$   
Limit =  $7 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: 156
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020







## 10-Minute-hour Dimethyl Sulphide Concentration Contours

### Post Closure - 2043

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $7.5 \mu\text{g}/\text{m}^3$   
Limit =  $30 \mu\text{g}/\text{m}^3$   
Project #: 1800160

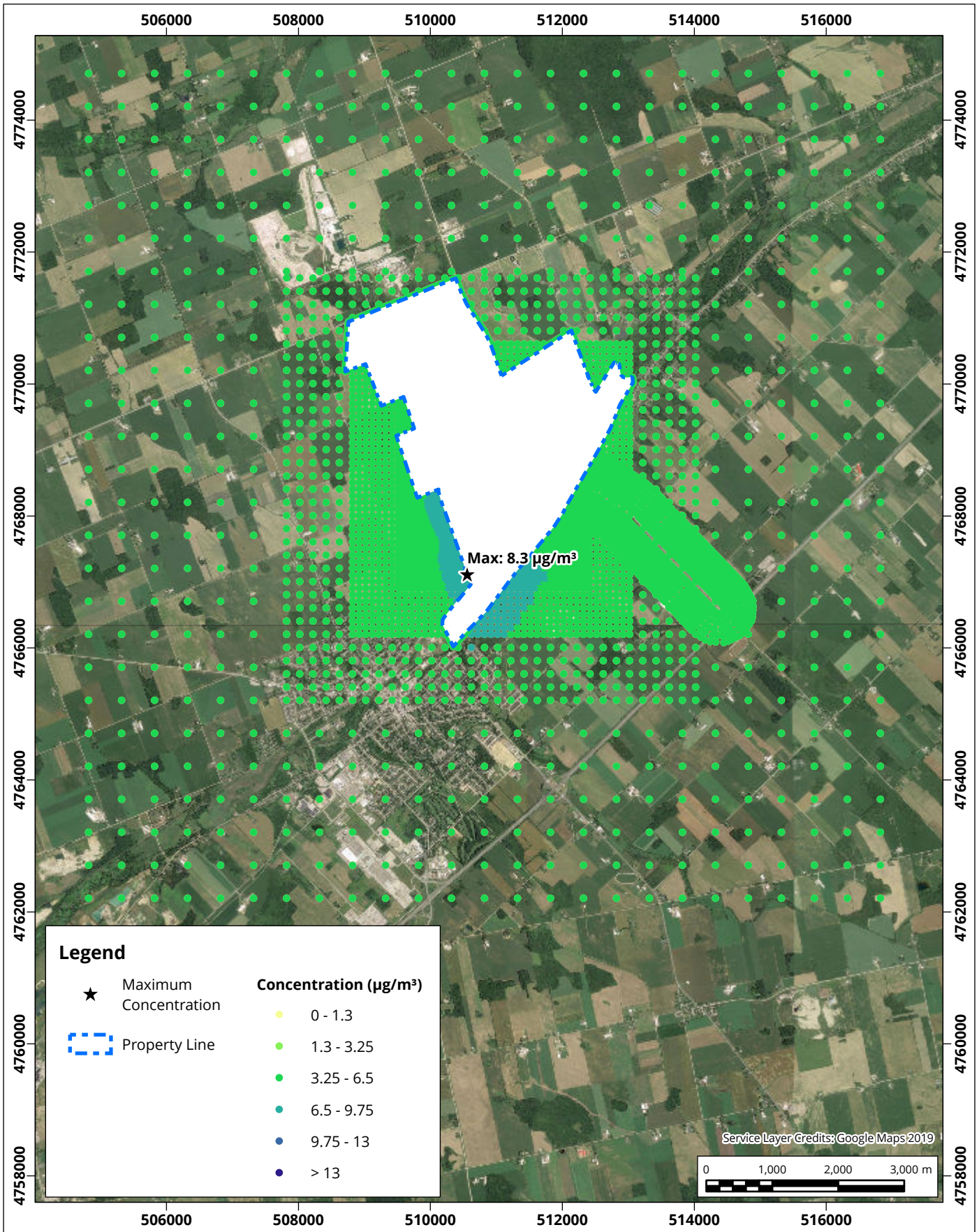
Drawn by: DJH Figure: 157

Exact Scale: 1:80,000

Date Revised: Feb 18, 2020







## 10-Minute-hour Total Reduced Sulphurs (TRS) Concentration Contours Post Closure - 2043

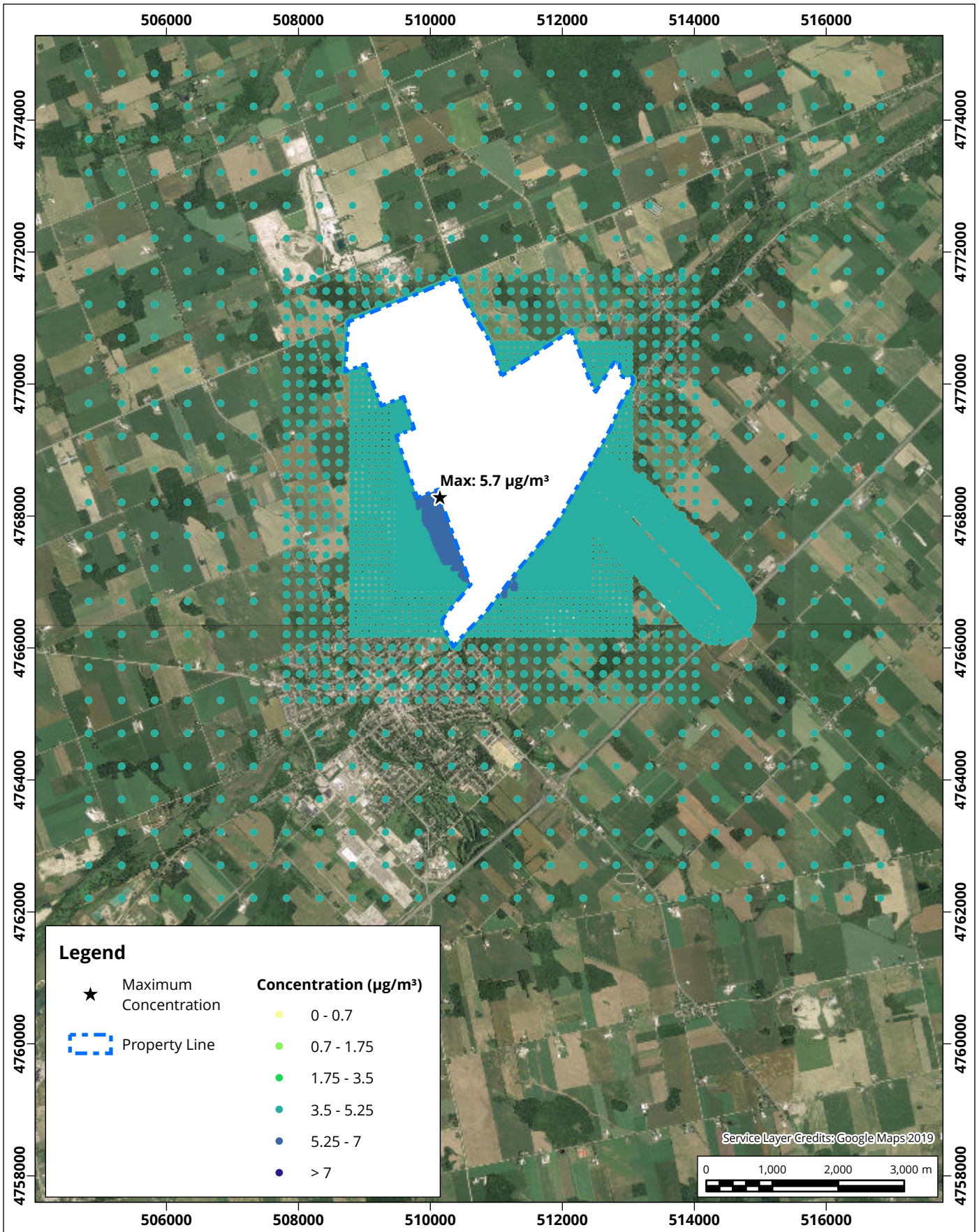
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
Background =  $5 \mu\text{g}/\text{m}^3$   
Limit =  $13 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I58
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020



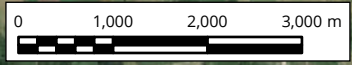




**Legend**

- ★ Maximum Concentration
  - Property Line
- | Concentration ( $\mu\text{g}/\text{m}^3$ ) |            |
|--|------------|
| ●  | 0 - 0.7    |
| ●  | 0.7 - 1.75 |
| ●  | 1.75 - 3.5 |
| ●  | 3.5 - 5.25 |
| ●  | 5.25 - 7   |
| ●  | > 7        |

Service Layer Credits: Google Maps 2019



Map Document: C:\GIS\Temp - Copy\1800160\1800160\_Walker\_LF\_Contour\_Plots.aprx

**24-hour Total Reduced Sulphurs (TRS) Concentration Contours Post Closure - 2043**

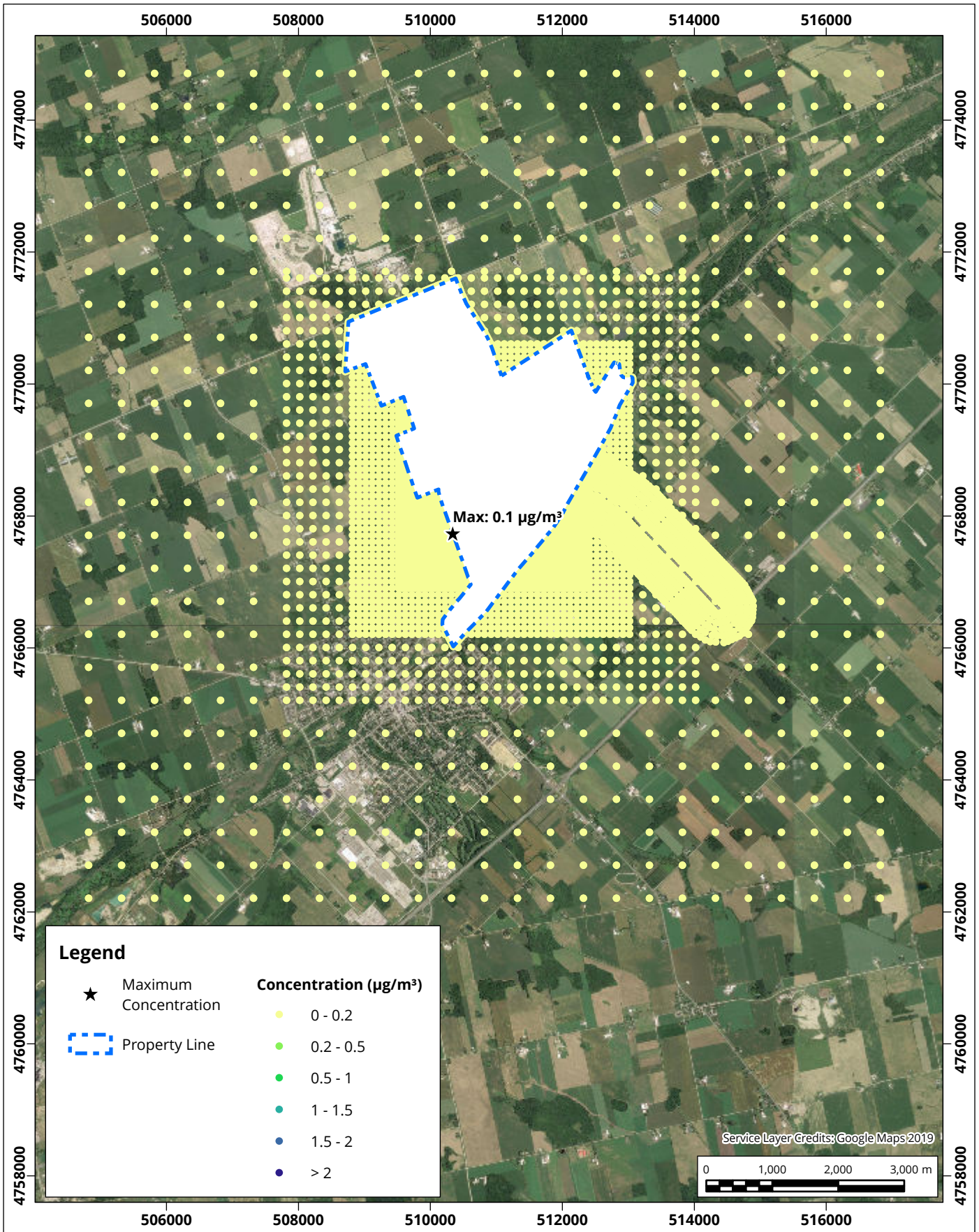
Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

True North  
  
 Background =  $5 \mu\text{g}/\text{m}^3$   
 Limit =  $7 \mu\text{g}/\text{m}^3$   
 Project #: 1800160

Drawn by: DJH	Figure: I59
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020



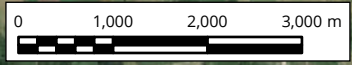




**Legend**

- ★ Maximum Concentration
  - Property Line
- | Concentration ( $\mu\text{g}/\text{m}^3$ ) |           |
|--|-----------|
| ●  | 0 - 0.2   |
| ●  | 0.2 - 0.5 |
| ●  | 0.5 - 1   |
| ●  | 1 - 1.5   |
| ●  | 1.5 - 2   |
| ●  | > 2       |

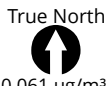
Service Layer Credits: Google Maps 2019



Map Document: C:\GIS\Temp - Copy\1800160\1800160\_Walker\_LF\_Contour\_Plots.aprx

**Annual Trichloroethylene Concentration Contours Post Closure - 2043**

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

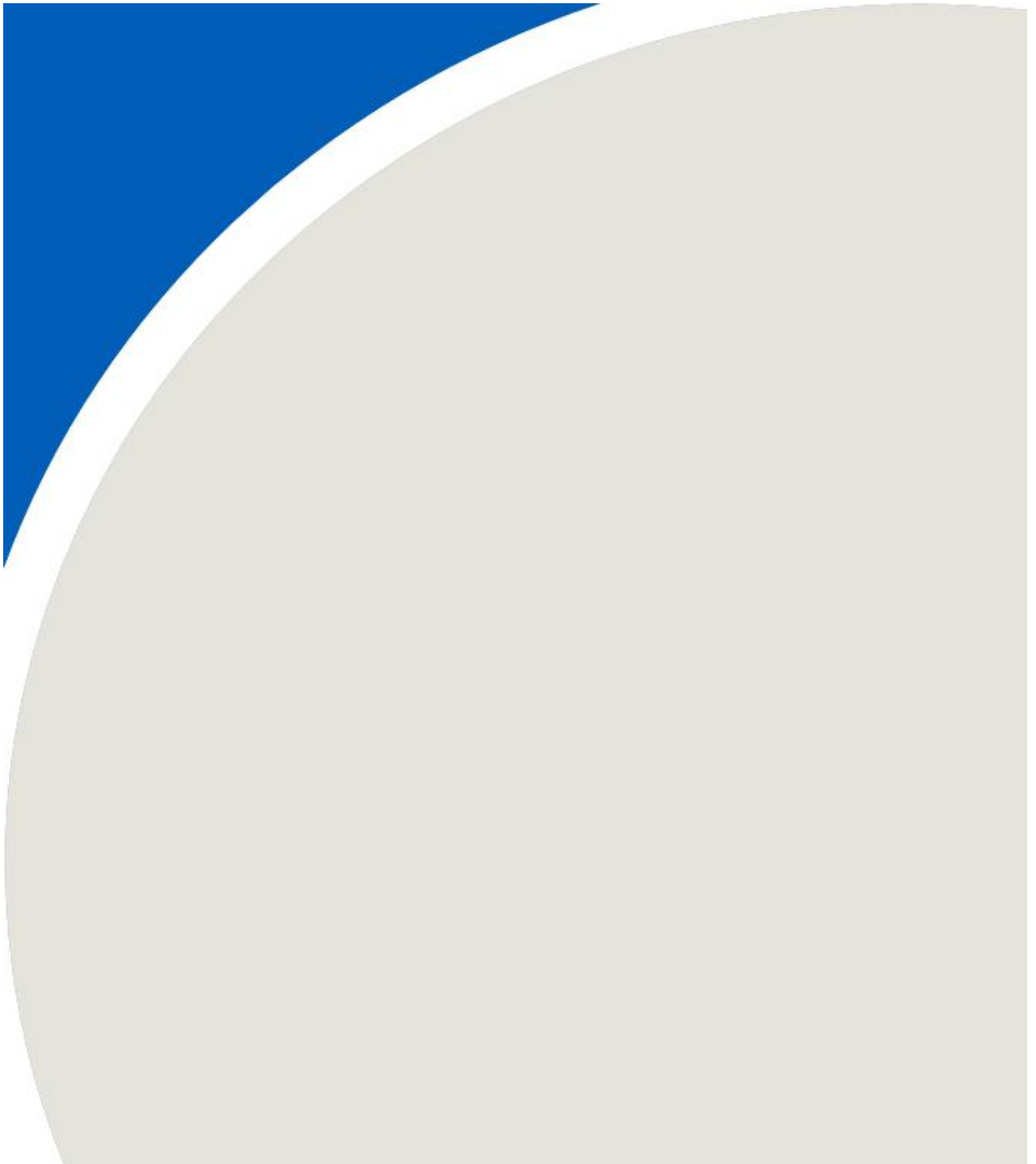


Background =  $0.061 \mu\text{g}/\text{m}^3$   
Limit =  $2 \mu\text{g}/\text{m}^3$   
Project #: 1800160

Drawn by: DJH	Figure: I60
Exact Scale:	1:80,000
Date Revised:	Feb 18, 2020



## APPENDIX J





**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,1,1-Trichloroethane (CAS 71-55-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
115,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.550	0.010	0.560	0.0005%	0.013	0.563	0.0005%	0.013	0.563	0.0005%	0.011	0.561	0.0005%
115,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.550	0.012	0.562	0.0005%	0.011	0.561	0.0005%	0.012	0.562	0.0005%	0.009	0.559	0.0005%
115,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.550	0.007	0.557	0.0005%	0.008	0.558	0.0005%	0.008	0.558	0.0005%	0.007	0.557	0.0005%
115,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.550	0.005	0.555	0.0005%	0.007	0.557	0.0005%	0.007	0.557	0.0005%	0.005	0.555	0.0005%
115,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.550	0.030	0.580	0.0005%	0.026	0.576	0.0005%	0.029	0.579	0.0005%	0.025	0.575	0.0005%
115,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.550	0.033	0.583	0.0005%	0.036	0.586	0.0005%	0.034	0.584	0.0005%	0.032	0.582	0.0005%
115,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.550	0.005	0.555	0.0005%	0.007	0.557	0.0005%	0.007	0.557	0.0005%	0.005	0.555	0.0005%
115,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.550	0.022	0.572	0.0005%	0.022	0.572	0.0005%	0.021	0.571	0.0005%	0.020	0.570	0.0005%
115,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.550	0.013	0.563	0.0005%	0.016	0.566	0.0005%	0.017	0.567	0.0005%	0.011	0.561	0.0005%
115,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.550	0.009	0.559	0.0005%	0.012	0.562	0.0005%	0.013	0.563	0.0005%	0.009	0.559	0.0005%
115,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.550	0.016	0.566	0.0005%	0.034	0.584	0.0005%	0.030	0.580	0.0005%	0.021	0.571	0.0005%
115,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.550	0.011	0.561	0.0005%	0.017	0.567	0.0005%	0.016	0.566	0.0005%	0.011	0.561	0.0005%
115,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.550	0.004	0.554	0.0005%	0.004	0.554	0.0005%	0.005	0.555	0.0005%	0.003	0.553	0.0005%
115,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.550	0.009	0.559	0.0005%	0.012	0.562	0.0005%	0.014	0.564	0.0005%	0.008	0.558	0.0005%
115,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.550	0.005	0.555	0.0005%	0.006	0.556	0.0005%	0.007	0.557	0.0005%	0.005	0.555	0.0005%
115,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.550	0.008	0.558	0.0005%	0.013	0.563	0.0005%	0.013	0.563	0.0005%	0.008	0.558	0.0005%
115,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.550	0.004	0.554	0.0005%	0.005	0.555	0.0005%	0.006	0.556	0.0005%	0.004	0.554	0.0005%
115,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.550	0.003	0.553	0.0005%	0.005	0.555	0.0005%	0.005	0.555	0.0005%	0.004	0.554	0.0005%
115,000	ING-6	Royal Road Public School	510337	4765360	0.550	0.005	0.555	0.0005%	0.009	0.559	0.0005%	0.009	0.559	0.0005%	0.006	0.556	0.0005%
115,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.550	0.003	0.553	0.0005%	0.004	0.554	0.0005%	0.004	0.554	0.0005%	0.002	0.552	0.0005%
115,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.550	0.003	0.553	0.0005%	0.006	0.556	0.0005%	0.005	0.555	0.0005%	0.004	0.554	0.0005%
115,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.550	0.008	0.558	0.0005%	0.012	0.562	0.0005%	0.014	0.564	0.0005%	0.008	0.558	0.0005%
115,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.550	0.004	0.554	0.0005%	0.008	0.558	0.0005%	0.009	0.559	0.0005%	0.006	0.556	0.0005%
115,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.550	0.019	0.569	0.0005%	0.047	0.597	0.0005%	0.045	0.595	0.0005%	0.030	0.580	0.0005%
115,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.550	0.021	0.571	0.0005%	0.028	0.578	0.0005%	0.040	0.590	0.0005%	0.022	0.572	0.0005%
115,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.550	0.020	0.570	0.0005%	0.029	0.579	0.0005%	0.044	0.594	0.0005%	0.023	0.573	0.0005%
115,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.550	0.012	0.562	0.0005%	0.013	0.563	0.0005%	0.013	0.563	0.0005%	0.011	0.561	0.0005%
115,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.550	0.008	0.558	0.0005%	0.007	0.557	0.0005%	0.009	0.559	0.0005%	0.007	0.557	0.0005%
115,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.550	0.004	0.554	0.0005%	0.005	0.555	0.0005%	0.006	0.556	0.0005%	0.004	0.554	0.0005%
115,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.550	0.003	0.553	0.0005%	0.004	0.554	0.0005%	0.005	0.555	0.0005%	0.003	0.553	0.0005%
115,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.550	0.001	0.551	0.0005%	0.002	0.552	0.0005%	0.002	0.552	0.0005%	0.001	0.551	0.0005%
115,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.550	0.001	0.551	0.0005%	0.001	0.551	0.0005%	0.001	0.551	0.0005%	0.001	0.551	0.0005%
115,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.550	0.010	0.560	0.0005%	0.022	0.572	0.0005%	0.016	0.566	0.0005%	0.011	0.561	0.0005%
115,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.550	0.014	0.564	0.0005%	0.029	0.579	0.0005%	0.018	0.568	0.0005%	0.015	0.565	0.0005%
115,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.550	0.015	0.565	0.0005%	0.022	0.572	0.0005%	0.035	0.585	0.0005%	0.020	0.570	0.0005%
115,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.550	0.014	0.564	0.0005%	0.021	0.571	0.0005%	0.034	0.584	0.0005%	0.020	0.570	0.0005%
115,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.550	0.018	0.568	0.0005%	0.015	0.565	0.0005%	0.025	0.575	0.0005%	0.016	0.566	0.0005%
115,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.550	0.012	0.562	0.0005%	0.015	0.565	0.0005%	0.020	0.570	0.0005%	0.012	0.562	0.0005%
115,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.550	0.013	0.563	0.0005%	0.017	0.567	0.0005%	0.021	0.571	0.0005%	0.012	0.562	0.0005%
115,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.550	0.010	0.560	0.0005%	0.011	0.561	0.0005%	0.016	0.566	0.0005%	0.010	0.560	0.0005%
115,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.550	0.011	0.561	0.0005%	0.011	0.561	0.0005%	0.013	0.563	0.0005%	0.010	0.560	0.0005%
115,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.550	0.005	0.555	0.0005%	0.006	0.556	0.0005%	0.008	0.558	0.0005%	0.004	0.554	0.0005%
115,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.550	0.002	0.552	0.0005%	0.002	0.552	0.0005%	0.002	0.552	0.0005%	0.001	0.551	0.0005%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,1,2,2-Tetrachloroethane (CAS 79-34-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
n/a	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.035	0.027	0.062	n/a	0.036	0.070	n/a	0.036	0.071	n/a	0.029	0.064	n/a
n/a	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.035	0.032	0.066	n/a	0.030	0.065	n/a	0.034	0.068	n/a	0.025	0.060	n/a
n/a	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.035	0.019	0.053	n/a	0.022	0.057	n/a	0.023	0.057	n/a	0.018	0.052	n/a
n/a	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.035	0.015	0.049	n/a	0.021	0.055	n/a	0.018	0.052	n/a	0.013	0.048	n/a
n/a	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.035	0.078	0.113	n/a	0.068	0.102	n/a	0.078	0.112	n/a	0.066	0.100	n/a
n/a	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.035	0.084	0.119	n/a	0.094	0.128	n/a	0.090	0.124	n/a	0.082	0.117	n/a
n/a	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.035	0.013	0.048	n/a	0.020	0.055	n/a	0.020	0.055	n/a	0.015	0.050	n/a
n/a	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.035	0.058	0.092	n/a	0.056	0.090	n/a	0.053	0.088	n/a	0.051	0.086	n/a
n/a	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.035	0.037	0.071	n/a	0.048	0.082	n/a	0.049	0.084	n/a	0.030	0.065	n/a
n/a	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.035	0.026	0.060	n/a	0.035	0.070	n/a	0.037	0.072	n/a	0.024	0.058	n/a
n/a	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.035	0.046	0.080	n/a	0.099	0.133	n/a	0.086	0.120	n/a	0.058	0.093	n/a
n/a	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.035	0.031	0.066	n/a	0.049	0.084	n/a	0.045	0.080	n/a	0.030	0.064	n/a
n/a	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.035	0.011	0.045	n/a	0.010	0.045	n/a	0.045	0.048	n/a	0.009	0.044	n/a
n/a	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.035	0.026	0.061	n/a	0.033	0.067	n/a	0.041	0.075	n/a	0.023	0.058	n/a
n/a	ING-2	Laurie Hawkins Public School	509019	4765860	0.035	0.014	0.048	n/a	0.017	0.052	n/a	0.020	0.054	n/a	0.012	0.047	n/a
n/a	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.035	0.023	0.058	n/a	0.036	0.070	n/a	0.037	0.071	n/a	0.023	0.058	n/a
n/a	ING-4	On the river north of 209 County Road 9	509480	4765180	0.035	0.012	0.046	n/a	0.014	0.049	n/a	0.016	0.051	n/a	0.010	0.045	n/a
n/a	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.035	0.008	0.043	n/a	0.014	0.049	n/a	0.015	0.050	n/a	0.009	0.044	n/a
n/a	ING-6	Royal Road Public School	510337	4765360	0.035	0.014	0.049	n/a	0.026	0.061	n/a	0.024	0.059	n/a	0.017	0.051	n/a
n/a	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.035	0.007	0.042	n/a	0.011	0.045	n/a	0.012	0.046	n/a	0.007	0.041	n/a
n/a	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.035	0.007	0.041	n/a	0.016	0.051	n/a	0.014	0.048	n/a	0.010	0.044	n/a
n/a	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.035	0.022	0.056	n/a	0.035	0.070	n/a	0.040	0.074	n/a	0.022	0.056	n/a
n/a	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.035	0.013	0.047	n/a	0.024	0.059	n/a	0.027	0.061	n/a	0.016	0.051	n/a
n/a	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.035	0.051	0.085	n/a	0.131	0.166	n/a	0.127	0.162	n/a	0.085	0.119	n/a
n/a	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.035	0.057	0.091	n/a	0.081	0.115	n/a	0.113	0.148	n/a	0.062	0.096	n/a
n/a	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.035	0.057	0.092	n/a	0.082	0.116	n/a	0.126	0.160	n/a	0.064	0.099	n/a
n/a	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.035	0.033	0.068	n/a	0.034	0.068	n/a	0.036	0.070	n/a	0.029	0.064	n/a
n/a	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.035	0.020	0.054	n/a	0.020	0.055	n/a	0.025	0.059	n/a	0.017	0.052	n/a
n/a	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.035	0.013	0.047	n/a	0.013	0.047	n/a	0.016	0.051	n/a	0.011	0.045	n/a
n/a	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.035	0.008	0.042	n/a	0.011	0.045	n/a	0.014	0.048	n/a	0.008	0.042	n/a
n/a	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.035	0.004	0.038	n/a	0.004	0.039	n/a	0.005	0.039	n/a	0.003	0.038	n/a
n/a	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.035	0.003	0.038	n/a	0.003	0.038	n/a	0.004	0.039	n/a	0.003	0.037	n/a
n/a	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.035	0.028	0.062	n/a	0.063	0.097	n/a	0.045	0.080	n/a	0.033	0.067	n/a
n/a	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.035	0.038	0.073	n/a	0.080	0.115	n/a	0.049	0.083	n/a	0.042	0.076	n/a
n/a	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.035	0.043	0.078	n/a	0.062	0.096	n/a	0.101	0.135	n/a	0.057	0.091	n/a
n/a	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.035	0.039	0.074	n/a	0.058	0.092	n/a	0.098	0.132	n/a	0.056	0.091	n/a
n/a	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.035	0.050	0.084	n/a	0.041	0.075	n/a	0.068	0.103	n/a	0.044	0.079	n/a
n/a	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.035	0.032	0.067	n/a	0.042	0.077	n/a	0.055	0.090	n/a	0.034	0.068	n/a
n/a	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.035	0.035	0.070	n/a	0.047	0.081	n/a	0.060	0.094	n/a	0.035	0.069	n/a
n/a	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.035	0.027	0.062	n/a	0.032	0.066	n/a	0.044	0.078	n/a	0.027	0.061	n/a
n/a	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.035	0.030	0.064	n/a	0.029	0.064	n/a	0.034	0.068	n/a	0.027	0.061	n/a
n/a	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.035	0.015	0.049	n/a	0.018	0.052	n/a	0.024	0.058	n/a	0.013	0.047	n/a
n/a	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.035	0.007	0.041	n/a	0.005	0.039	n/a	0.006	0.040	n/a	0.004	0.038	n/a

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,1,2-Trichloro-1,2,2-Trifluoromethane (CAS 76-13-1)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
800,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.750	0.003	0.753	0.0001%	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.750	0.004	0.754	0.0001%	0.004	0.754	0.0001%	0.005	0.755	0.0001%	0.003	0.753	0.0001%
800,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.750	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.750	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.004	0.754	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.750	0.003	0.753	0.0001%	0.007	0.757	0.0001%	0.006	0.756	0.0001%	0.004	0.754	0.0001%
800,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.001	0.751	0.0001%
800,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-6	Royal Road Public School	510337	4765360	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%
800,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.001	0.751	0.0001%
800,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.750	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.750	0.002	0.752	0.0001%	0.008	0.758	0.0001%	0.008	0.758	0.0001%	0.004	0.754	0.0001%
800,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.750	0.003	0.753	0.0001%	0.006	0.756	0.0001%	0.007	0.757	0.0001%	0.004	0.754	0.0001%
800,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.750	0.003	0.753	0.0001%	0.006	0.756	0.0001%	0.009	0.759	0.0001%	0.004	0.754	0.0001%
800,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.750	0.000	0.750	0.0001%	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.000	0.750	0.0001%
800,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.750	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%
800,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.750	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%
800,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.750	0.002	0.752	0.0001%	0.005	0.755	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.750	0.002	0.752	0.0001%	0.005	0.755	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.750	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.007	0.757	0.0001%	0.003	0.753	0.0001%
800,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.750	0.002	0.752	0.0001%	0.004	0.754	0.0001%	0.006	0.756	0.0001%	0.003	0.753	0.0001%
800,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.750	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.003	0.753	0.0001%	0.002	0.752	0.0001%
800,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.002	0.752	0.0001%
800,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.750	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.004	0.754	0.0001%	0.002	0.752	0.0001%
800,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.003	0.753	0.0001%	0.001	0.751	0.0001%
800,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.750	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.750	0.001	0.751	0.0001%	0.001	0.751	0.0001%	0.002	0.752	0.0001%	0.001	0.751	0.0001%
800,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.750	0.001	0.751	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%	0.000	0.750	0.0001%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,1,2-Trichloroethane (CAS 79-00-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
n/a	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.028	0.010	0.037	#VALUE!	0.011	0.038	#VALUE!	0.011	0.038	#VALUE!	0.010	0.037	#VALUE!
n/a	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.028	0.010	0.037	#VALUE!	0.009	0.036	#VALUE!	0.010	0.038	#VALUE!	0.009	0.037	#VALUE!
n/a	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.028	0.006	0.034	#VALUE!	0.007	0.034	#VALUE!	0.007	0.035	#VALUE!	0.007	0.034	#VALUE!
n/a	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.028	0.006	0.033	#VALUE!	0.006	0.033	#VALUE!	0.006	0.033	#VALUE!	0.006	0.033	#VALUE!
n/a	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.028	0.031	0.058	#VALUE!	0.029	0.057	#VALUE!	0.029	0.057	#VALUE!	0.029	0.056	#VALUE!
n/a	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.028	0.036	0.064	#VALUE!	0.037	0.064	#VALUE!	0.037	0.064	#VALUE!	0.036	0.063	#VALUE!
n/a	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.028	0.005	0.033	#VALUE!	0.006	0.033	#VALUE!	0.006	0.033	#VALUE!	0.006	0.033	#VALUE!
n/a	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.028	0.024	0.052	#VALUE!	0.024	0.052	#VALUE!	0.024	0.051	#VALUE!	0.024	0.051	#VALUE!
n/a	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.028	0.011	0.039	#VALUE!	0.011	0.039	#VALUE!	0.011	0.039	#VALUE!	0.011	0.038	#VALUE!
n/a	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.028	0.008	0.036	#VALUE!	0.010	0.037	#VALUE!	0.010	0.039	#VALUE!	0.009	0.037	#VALUE!
n/a	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.028	0.014	0.041	#VALUE!	0.017	0.045	#VALUE!	0.016	0.044	#VALUE!	0.014	0.041	#VALUE!
n/a	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.028	0.009	0.037	#VALUE!	0.011	0.039	#VALUE!	0.011	0.039	#VALUE!	0.010	0.038	#VALUE!
n/a	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.028	0.004	0.032	#VALUE!	0.004	0.032	#VALUE!	0.004	0.032	#VALUE!	0.004	0.032	#VALUE!
n/a	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.028	0.006	0.034	#VALUE!	0.007	0.035	#VALUE!	0.008	0.035	#VALUE!	0.007	0.034	#VALUE!
n/a	ING-2	Laurie Hawkins Public School	509019	4765860	0.028	0.005	0.032	#VALUE!	0.005	0.032	#VALUE!	0.005	0.032	#VALUE!	0.005	0.032	#VALUE!
n/a	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.028	0.008	0.035	#VALUE!	0.008	0.035	#VALUE!	0.008	0.035	#VALUE!	0.007	0.035	#VALUE!
n/a	ING-4	On the river north of 209 County Road 9	509480	4765180	0.028	0.004	0.031	#VALUE!	0.004	0.031	#VALUE!	0.004	0.031	#VALUE!	0.004	0.031	#VALUE!
n/a	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.028	0.003	0.030	#VALUE!	0.003	0.031	#VALUE!	0.004	0.031	#VALUE!	0.003	0.031	#VALUE!
n/a	ING-6	Royal Road Public School	510337	4765360	0.028	0.004	0.032	#VALUE!	0.005	0.032	#VALUE!	0.004	0.032	#VALUE!	0.004	0.032	#VALUE!
n/a	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.028	0.002	0.029	#VALUE!	0.002	0.030	#VALUE!	0.002	0.029	#VALUE!	0.002	0.029	#VALUE!
n/a	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.028	0.003	0.030	#VALUE!	0.003	0.030	#VALUE!	0.003	0.030	#VALUE!	0.003	0.030	#VALUE!
n/a	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.028	0.003	0.031	#VALUE!	0.005	0.032	#VALUE!	0.006	0.033	#VALUE!	0.004	0.032	#VALUE!
n/a	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.028	0.004	0.031	#VALUE!	0.004	0.031	#VALUE!	0.004	0.031	#VALUE!	0.003	0.031	#VALUE!
n/a	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.028	0.014	0.042	#VALUE!	0.024	0.051	#VALUE!	0.023	0.051	#VALUE!	0.018	0.046	#VALUE!
n/a	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.028	0.015	0.043	#VALUE!	0.014	0.041	#VALUE!	0.020	0.047	#VALUE!	0.014	0.041	#VALUE!
n/a	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.028	0.012	0.040	#VALUE!	0.014	0.042	#VALUE!	0.017	0.044	#VALUE!	0.012	0.039	#VALUE!
n/a	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.028	0.010	0.037	#VALUE!	0.010	0.038	#VALUE!	0.011	0.038	#VALUE!	0.010	0.037	#VALUE!
n/a	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.028	0.008	0.036	#VALUE!	0.008	0.035	#VALUE!	0.008	0.035	#VALUE!	0.008	0.035	#VALUE!
n/a	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.028	0.003	0.031	#VALUE!	0.003	0.031	#VALUE!	0.004	0.031	#VALUE!	0.003	0.031	#VALUE!
n/a	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.028	0.003	0.030	#VALUE!	0.003	0.030	#VALUE!	0.003	0.030	#VALUE!	0.003	0.030	#VALUE!
n/a	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.028	0.001	0.029	#VALUE!	0.001	0.028	#VALUE!	0.001	0.028	#VALUE!	0.001	0.028	#VALUE!
n/a	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.028	0.001	0.028	#VALUE!	0.001	0.028	#VALUE!	0.001	0.028	#VALUE!	0.001	0.028	#VALUE!
n/a	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.028	0.005	0.033	#VALUE!	0.008	0.035	#VALUE!	0.006	0.034	#VALUE!	0.005	0.033	#VALUE!
n/a	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.028	0.011	0.038	#VALUE!	0.016	0.043	#VALUE!	0.012	0.040	#VALUE!	0.011	0.038	#VALUE!
n/a	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.028	0.008	0.035	#VALUE!	0.010	0.037	#VALUE!	0.014	0.042	#VALUE!	0.009	0.037	#VALUE!
n/a	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.028	0.010	0.037	#VALUE!	0.011	0.038	#VALUE!	0.015	0.043	#VALUE!	0.010	0.038	#VALUE!
n/a	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.028	0.014	0.041	#VALUE!	0.013	0.040	#VALUE!	0.016	0.043	#VALUE!	0.013	0.040	#VALUE!
n/a	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.028	0.009	0.036	#VALUE!	0.010	0.038	#VALUE!	0.011	0.038	#VALUE!	0.009	0.037	#VALUE!
n/a	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.028	0.009	0.036	#VALUE!	0.008	0.036	#VALUE!	0.010	0.038	#VALUE!	0.008	0.036	#VALUE!
n/a	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.028	0.007	0.034	#VALUE!	0.007	0.035	#VALUE!	0.008	0.035	#VALUE!	0.007	0.034	#VALUE!
n/a	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.028	0.009	0.037	#VALUE!	0.009	0.037	#VALUE!	0.010	0.038	#VALUE!	0.009	0.037	#VALUE!
n/a	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.028	0.005	0.032	#VALUE!	0.004	0.032	#VALUE!	0.004	0.032	#VALUE!	0.004	0.032	#VALUE!
n/a	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.028	0.001	0.029	#VALUE!	0.001	0.029	#VALUE!	0.001	0.029	#VALUE!	0.001	0.029	#VALUE!



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,2,4-Trimethyl Benzene (CAS 95-63-6)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
220	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.068	0.558	0.3%	0.077	0.567	0.3%	0.079	0.569	0.3%	0.051	0.541	0.2%
220	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.064	0.554	0.3%	0.087	0.577	0.3%	0.071	0.561	0.3%	0.041	0.531	0.2%
220	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.063	0.553	0.3%	0.066	0.556	0.3%	0.077	0.567	0.3%	0.043	0.533	0.2%
220	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.050	0.540	0.2%	0.073	0.563	0.3%	0.064	0.554	0.3%	0.042	0.532	0.2%
220	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.139	0.629	0.3%	0.094	0.584	0.3%	0.136	0.626	0.3%	0.088	0.578	0.3%
220	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.185	0.675	0.3%	0.189	0.679	0.3%	0.225	0.715	0.3%	0.139	0.629	0.3%
220	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.037	0.527	0.2%	0.060	0.550	0.3%	0.061	0.551	0.3%	0.039	0.529	0.2%
220	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.140	0.630	0.3%	0.143	0.633	0.3%	0.152	0.642	0.3%	0.085	0.575	0.3%
220	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.137	0.627	0.3%	0.180	0.670	0.3%	0.186	0.676	0.3%	0.112	0.602	0.3%
220	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.079	0.569	0.3%	0.116	0.606	0.3%	0.124	0.614	0.3%	0.069	0.559	0.3%
220	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.166	0.656	0.3%	0.370	0.860	0.4%	0.321	0.811	0.4%	0.197	0.687	0.3%
220	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.095	0.585	0.3%	0.172	0.662	0.3%	0.158	0.648	0.3%	0.098	0.588	0.3%
220	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.030	0.520	0.2%	0.037	0.529	0.2%	0.049	0.539	0.2%	0.026	0.516	0.2%
220	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.084	0.574	0.3%	0.109	0.599	0.3%	0.138	0.628	0.3%	0.072	0.562	0.3%
220	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.030	0.520	0.2%	0.065	0.555	0.3%	0.074	0.564	0.3%	0.041	0.531	0.2%
220	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.086	0.576	0.3%	0.127	0.617	0.3%	0.131	0.621	0.3%	0.079	0.569	0.3%
220	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.040	0.530	0.2%	0.050	0.540	0.2%	0.056	0.546	0.2%	0.035	0.525	0.2%
220	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.028	0.518	0.2%	0.055	0.545	0.2%	0.058	0.548	0.2%	0.034	0.524	0.2%
220	ING-6	Royal Road Public School	510337	4765360	0.490	0.053	0.543	0.2%	0.088	0.578	0.3%	0.078	0.568	0.3%	0.050	0.540	0.2%
220	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.025	0.515	0.2%	0.041	0.531	0.2%	0.042	0.532	0.2%	0.025	0.515	0.2%
220	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.025	0.515	0.2%	0.056	0.546	0.2%	0.047	0.537	0.2%	0.032	0.522	0.2%
220	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.076	0.566	0.3%	0.125	0.615	0.3%	0.145	0.635	0.3%	0.076	0.566	0.3%
220	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.047	0.537	0.2%	0.090	0.580	0.3%	0.100	0.590	0.3%	0.060	0.550	0.2%
220	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.117	0.607	0.3%	0.419	0.909	0.4%	0.403	0.893	0.4%	0.241	0.731	0.3%
220	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.145	0.635	0.3%	0.301	0.791	0.4%	0.376	0.866	0.4%	0.201	0.691	0.3%
220	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.168	0.658	0.3%	0.279	0.769	0.3%	0.225	0.952	0.4%	0.225	0.715	0.3%
220	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.103	0.593	0.3%	0.085	0.575	0.3%	0.115	0.605	0.3%	0.065	0.555	0.3%
220	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.063	0.553	0.3%	0.065	0.555	0.3%	0.093	0.583	0.3%	0.049	0.539	0.2%
220	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.040	0.530	0.2%	0.034	0.524	0.2%	0.044	0.534	0.2%	0.024	0.514	0.2%
220	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.023	0.513	0.2%	0.038	0.528	0.2%	0.050	0.540	0.2%	0.027	0.517	0.2%
220	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.010	0.500	0.2%	0.014	0.504	0.2%	0.017	0.507	0.2%	0.010	0.500	0.2%
220	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.010	0.500	0.2%	0.011	0.501	0.2%	0.014	0.504	0.2%	0.008	0.498	0.2%
220	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.102	0.592	0.3%	0.235	0.725	0.3%	0.169	0.659	0.3%	0.119	0.609	0.3%
220	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.088	0.578	0.3%	0.246	0.736	0.3%	0.180	0.670	0.3%	0.098	0.588	0.3%
220	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.141	0.631	0.3%	0.209	0.699	0.3%	0.356	0.846	0.4%	0.188	0.678	0.3%
220	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.110	0.600	0.3%	0.205	0.695	0.3%	0.334	0.824	0.4%	0.177	0.667	0.3%
220	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.119	0.609	0.3%	0.136	0.626	0.3%	0.186	0.676	0.3%	0.096	0.586	0.3%
220	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.079	0.569	0.3%	0.142	0.632	0.3%	0.182	0.672	0.3%	0.093	0.583	0.3%
220	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.092	0.582	0.3%	0.155	0.645	0.3%	0.203	0.693	0.3%	0.107	0.597	0.3%
220	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.082	0.572	0.3%	0.086	0.576	0.3%	0.147	0.637	0.3%	0.074	0.564	0.3%
220	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.098	0.588	0.3%	0.094	0.584	0.3%	0.102	0.592	0.3%	0.063	0.553	0.3%
220	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.038	0.528	0.2%	0.066	0.556	0.3%	0.090	0.580	0.3%	0.048	0.538	0.2%
220	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.024	0.514	0.2%	0.017	0.507	0.2%	0.020	0.510	0.2%	0.013	0.503	0.2%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,1-Dichloroethane (CAS 75-34-3)**

**24-hour**

Criteria (µg/m3)	Receptor Information				Ambient Background Concentration (µg/m3)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
165	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.041	0.023	0.064	0.04%	0.030	0.070	0.04%	0.030	0.071	0.04%	0.021	0.062	0.04%
165	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.041	0.025	0.065	0.04%	0.031	0.071	0.04%	0.027	0.068	0.04%	0.017	0.057	0.03%
165	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.041	0.021	0.062	0.04%	0.022	0.063	0.04%	0.026	0.066	0.04%	0.016	0.056	0.03%
165	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.041	0.017	0.057	0.03%	0.024	0.065	0.04%	0.021	0.062	0.04%	0.015	0.055	0.03%
165	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.041	0.057	0.067	0.06%	0.043	0.093	0.05%	0.056	0.097	0.06%	0.041	0.082	0.05%
165	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.041	0.062	0.102	0.06%	0.063	0.104	0.06%	0.075	0.116	0.07%	0.048	0.089	0.05%
165	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.041	0.012	0.053	0.03%	0.021	0.061	0.04%	0.021	0.061	0.04%	0.014	0.055	0.03%
165	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.041	0.047	0.087	0.05%	0.047	0.088	0.05%	0.050	0.090	0.05%	0.028	0.069	0.04%
165	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.041	0.046	0.086	0.05%	0.059	0.100	0.06%	0.061	0.102	0.06%	0.037	0.078	0.05%
165	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.041	0.027	0.068	0.04%	0.039	0.080	0.05%	0.042	0.082	0.05%	0.024	0.065	0.04%
165	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.041	0.055	0.096	0.06%	0.123	0.163	0.10%	0.106	0.147	0.09%	0.066	0.106	0.06%
165	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.041	0.033	0.074	0.04%	0.058	0.098	0.06%	0.053	0.094	0.06%	0.034	0.074	0.04%
165	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.041	0.011	0.051	0.03%	0.012	0.053	0.03%	0.016	0.057	0.03%	0.009	0.049	0.03%
165	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.041	0.028	0.069	0.04%	0.037	0.078	0.05%	0.047	0.088	0.05%	0.025	0.066	0.04%
165	ING-2	Laurie Hawkins Public School	509019	4765860	0.041	0.011	0.051	0.03%	0.021	0.062	0.04%	0.024	0.065	0.04%	0.014	0.054	0.03%
165	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.041	0.029	0.069	0.04%	0.043	0.083	0.05%	0.044	0.085	0.05%	0.027	0.067	0.04%
165	ING-4	On the river north of 209 County Road 9	509480	4765180	0.041	0.013	0.054	0.03%	0.017	0.057	0.03%	0.019	0.059	0.04%	0.012	0.052	0.03%
165	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.041	0.010	0.050	0.03%	0.018	0.058	0.04%	0.019	0.059	0.04%	0.011	0.052	0.03%
165	ING-6	Royal Road Public School	510337	4765360	0.041	0.017	0.057	0.03%	0.029	0.070	0.04%	0.027	0.067	0.04%	0.018	0.058	0.04%
165	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.041	0.008	0.049	0.03%	0.014	0.054	0.03%	0.014	0.054	0.03%	0.008	0.049	0.03%
165	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.041	0.008	0.049	0.03%	0.019	0.059	0.04%	0.016	0.056	0.03%	0.011	0.051	0.03%
165	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.041	0.025	0.066	0.04%	0.042	0.082	0.05%	0.049	0.089	0.05%	0.026	0.066	0.04%
165	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.041	0.016	0.056	0.03%	0.030	0.070	0.04%	0.033	0.073	0.04%	0.020	0.061	0.04%
165	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.041	0.044	0.084	0.05%	0.144	0.185	0.11%	0.139	0.179	0.11%	0.086	0.127	0.08%
165	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.041	0.052	0.092	0.06%	0.100	0.141	0.09%	0.126	0.167	0.10%	0.068	0.109	0.07%
165	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.041	0.058	0.099	0.06%	0.092	0.133	0.08%	0.153	0.194	0.12%	0.076	0.117	0.07%
165	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.041	0.035	0.076	0.05%	0.028	0.069	0.04%	0.037	0.078	0.05%	0.022	0.063	0.04%
165	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.041	0.021	0.062	0.04%	0.021	0.062	0.04%	0.031	0.071	0.04%	0.017	0.057	0.03%
165	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.041	0.014	0.054	0.03%	0.012	0.052	0.03%	0.016	0.056	0.03%	0.009	0.050	0.03%
165	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.041	0.008	0.049	0.03%	0.013	0.053	0.03%	0.017	0.057	0.03%	0.009	0.050	0.03%
165	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.041	0.003	0.044	0.03%	0.005	0.045	0.03%	0.006	0.046	0.03%	0.003	0.044	0.03%
165	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.041	0.003	0.044	0.03%	0.004	0.044	0.03%	0.005	0.045	0.03%	0.003	0.043	0.03%
165	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.041	0.034	0.074	0.05%	0.077	0.118	0.07%	0.055	0.096	0.06%	0.040	0.081	0.05%
165	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.041	0.033	0.073	0.04%	0.085	0.126	0.08%	0.060	0.101	0.06%	0.037	0.078	0.05%
165	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.041	0.048	0.088	0.05%	0.071	0.111	0.07%	0.120	0.160	0.10%	0.065	0.105	0.06%
165	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.041	0.038	0.079	0.05%	0.069	0.109	0.07%	0.113	0.153	0.09%	0.062	0.102	0.06%
165	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.041	0.044	0.084	0.05%	0.045	0.086	0.05%	0.067	0.107	0.07%	0.037	0.078	0.05%
165	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.041	0.029	0.069	0.04%	0.047	0.088	0.05%	0.062	0.102	0.06%	0.033	0.074	0.04%
165	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.041	0.033	0.074	0.04%	0.053	0.093	0.06%	0.069	0.109	0.07%	0.037	0.078	0.05%
165	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.041	0.028	0.069	0.04%	0.031	0.071	0.04%	0.049	0.089	0.05%	0.026	0.067	0.04%
165	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.041	0.033	0.073	0.04%	0.032	0.073	0.04%	0.035	0.075	0.05%	0.022	0.062	0.04%
165	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.041	0.013	0.054	0.03%	0.022	0.062	0.04%	0.030	0.070	0.04%	0.016	0.057	0.03%
165	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.041	0.008	0.048	0.03%	0.006	0.046	0.03%	0.007	0.047	0.03%	0.004	0.045	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,2-Dichloroethylene (cis) (CAS 156-59-2)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
105	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.040	0.030	0.070	0.07%	0.042	0.082	0.08%	0.043	0.083	0.08%	0.032	0.072	0.07%
105	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.040	0.036	0.076	0.07%	0.040	0.079	0.08%	0.039	0.079	0.08%	0.027	0.066	0.06%
105	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.040	0.026	0.066	0.06%	0.027	0.067	0.06%	0.031	0.071	0.07%	0.021	0.060	0.06%
105	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.040	0.021	0.060	0.06%	0.030	0.069	0.07%	0.025	0.065	0.06%	0.018	0.057	0.05%
105	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.040	0.086	0.126	0.12%	0.070	0.129	0.10%	0.086	0.126	0.12%	0.068	0.108	0.10%
105	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.040	0.082	0.121	0.12%	0.096	0.135	0.13%	0.092	0.132	0.13%	0.078	0.118	0.11%
105	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.040	0.016	0.056	0.05%	0.027	0.066	0.06%	0.027	0.066	0.06%	0.019	0.059	0.06%
105	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.040	0.057	0.097	0.09%	0.056	0.095	0.09%	0.059	0.099	0.09%	0.047	0.086	0.08%
105	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.040	0.054	0.094	0.09%	0.070	0.110	0.10%	0.073	0.112	0.11%	0.044	0.084	0.08%
105	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.040	0.034	0.074	0.07%	0.049	0.088	0.08%	0.052	0.091	0.09%	0.031	0.070	0.07%
105	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.040	0.065	0.105	0.10%	0.145	0.185	0.18%	0.126	0.166	0.16%	0.078	0.118	0.11%
105	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.040	0.042	0.081	0.08%	0.070	0.109	0.10%	0.065	0.104	0.10%	0.041	0.081	0.08%
105	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.040	0.014	0.054	0.05%	0.015	0.054	0.05%	0.020	0.059	0.06%	0.010	0.050	0.05%
105	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.040	0.036	0.075	0.07%	0.046	0.085	0.08%	0.058	0.097	0.09%	0.032	0.071	0.07%
105	ING-2	Laurie Hawkins Public School	509019	4765860	0.040	0.016	0.055	0.05%	0.025	0.065	0.06%	0.029	0.068	0.07%	0.016	0.056	0.05%
105	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.040	0.034	0.073	0.07%	0.052	0.091	0.09%	0.053	0.093	0.09%	0.033	0.072	0.07%
105	ING-4	On the river north of 209 County Road 9	509480	4765180	0.040	0.016	0.056	0.05%	0.020	0.060	0.06%	0.023	0.063	0.06%	0.015	0.054	0.05%
105	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.040	0.012	0.051	0.05%	0.021	0.061	0.06%	0.022	0.062	0.06%	0.014	0.053	0.05%
105	ING-6	Royal Road Public School	510337	4765360	0.040	0.020	0.060	0.06%	0.036	0.076	0.07%	0.033	0.073	0.07%	0.022	0.062	0.06%
105	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.040	0.010	0.050	0.05%	0.016	0.056	0.05%	0.017	0.056	0.05%	0.010	0.049	0.05%
105	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.040	0.010	0.049	0.05%	0.023	0.063	0.06%	0.019	0.059	0.06%	0.014	0.053	0.05%
105	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.040	0.031	0.070	0.07%	0.050	0.090	0.09%	0.058	0.098	0.09%	0.031	0.070	0.07%
105	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.040	0.019	0.058	0.06%	0.035	0.075	0.07%	0.039	0.079	0.07%	0.024	0.063	0.06%
105	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.040	0.061	0.100	0.10%	0.180	0.219	0.21%	0.174	0.213	0.20%	0.111	0.151	0.14%
105	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.040	0.070	0.109	0.10%	0.119	0.158	0.15%	0.157	0.196	0.19%	0.083	0.122	0.12%
105	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.040	0.075	0.115	0.11%	0.113	0.152	0.15%	0.123	0.163	0.21%	0.092	0.131	0.13%
105	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.040	0.045	0.084	0.08%	0.039	0.079	0.08%	0.044	0.084	0.08%	0.033	0.072	0.07%
105	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.040	0.027	0.066	0.06%	0.025	0.065	0.06%	0.036	0.076	0.07%	0.020	0.059	0.06%
105	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.040	0.017	0.057	0.05%	0.016	0.055	0.05%	0.021	0.060	0.06%	0.013	0.052	0.05%
105	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.040	0.010	0.050	0.05%	0.015	0.055	0.05%	0.020	0.060	0.06%	0.011	0.051	0.05%
105	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.040	0.005	0.044	0.04%	0.006	0.046	0.04%	0.007	0.046	0.04%	0.004	0.044	0.04%
105	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.040	0.004	0.044	0.04%	0.005	0.044	0.04%	0.006	0.045	0.04%	0.003	0.043	0.04%
105	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.040	0.040	0.080	0.08%	0.092	0.131	0.13%	0.066	0.106	0.10%	0.048	0.087	0.08%
105	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.040	0.046	0.085	0.08%	0.108	0.147	0.14%	0.071	0.111	0.11%	0.051	0.090	0.09%
105	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.040	0.059	0.099	0.09%	0.086	0.126	0.12%	0.145	0.184	0.18%	0.080	0.119	0.11%
105	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.040	0.050	0.089	0.09%	0.081	0.121	0.12%	0.138	0.178	0.17%	0.077	0.117	0.11%
105	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.040	0.060	0.100	0.10%	0.056	0.095	0.09%	0.088	0.128	0.12%	0.053	0.092	0.09%
105	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.040	0.039	0.079	0.08%	0.056	0.096	0.09%	0.077	0.116	0.11%	0.042	0.082	0.08%
105	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.040	0.044	0.084	0.08%	0.065	0.104	0.10%	0.084	0.124	0.12%	0.047	0.087	0.08%
105	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.040	0.036	0.076	0.07%	0.041	0.080	0.08%	0.061	0.100	0.10%	0.034	0.073	0.07%
105	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.040	0.039	0.078	0.07%	0.040	0.079	0.08%	0.043	0.082	0.08%	0.030	0.069	0.07%
105	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.040	0.018	0.058	0.06%	0.026	0.065	0.06%	0.035	0.075	0.07%	0.019	0.059	0.06%
105	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.040	0.010	0.049	0.05%	0.007	0.046	0.04%	0.008	0.048	0.05%	0.005	0.045	0.04%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,2-Dichloroethylene (trans) (CAS 156-60-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
105	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.040	0.011	0.051	0.05%	0.012	0.051	0.05%	0.012	0.051	0.05%	0.011	0.051	0.05%
105	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.040	0.011	0.051	0.05%	0.010	0.050	0.05%	0.011	0.051	0.05%	0.010	0.050	0.05%
105	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.040	0.008	0.047	0.04%	0.008	0.047	0.05%	0.008	0.048	0.05%	0.008	0.047	0.05%
105	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.040	0.007	0.047	0.04%	0.007	0.047	0.04%	0.007	0.047	0.04%	0.007	0.047	0.04%
105	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.040	0.035	0.075	0.07%	0.034	0.074	0.07%	0.035	0.074	0.07%	0.034	0.074	0.07%
105	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.040	0.042	0.082	0.08%	0.043	0.083	0.08%	0.043	0.082	0.08%	0.042	0.082	0.08%
105	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.040	0.006	0.046	0.04%	0.007	0.046	0.04%	0.007	0.046	0.04%	0.007	0.046	0.04%
105	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.040	0.029	0.068	0.06%	0.029	0.068	0.06%	0.028	0.068	0.06%	0.028	0.068	0.06%
105	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.040	0.013	0.052	0.05%	0.013	0.052	0.05%	0.013	0.052	0.05%	0.012	0.052	0.05%
105	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.040	0.010	0.049	0.05%	0.011	0.051	0.05%	0.011	0.051	0.05%	0.011	0.050	0.05%
105	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.040	0.016	0.055	0.05%	0.018	0.057	0.05%	0.016	0.056	0.05%	0.016	0.056	0.05%
105	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.040	0.011	0.051	0.05%	0.012	0.052	0.05%	0.012	0.052	0.05%	0.012	0.051	0.05%
105	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.040	0.005	0.045	0.04%	0.005	0.045	0.04%	0.005	0.045	0.04%	0.005	0.045	0.04%
105	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.040	0.008	0.047	0.04%	0.008	0.048	0.05%	0.009	0.048	0.05%	0.008	0.048	0.05%
105	ING-2	Laurie Hawkins Public School	509019	4765860	0.040	0.006	0.045	0.04%	0.006	0.045	0.04%	0.006	0.045	0.04%	0.006	0.045	0.04%
105	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.040	0.009	0.048	0.05%	0.009	0.048	0.05%	0.009	0.048	0.05%	0.008	0.048	0.05%
105	ING-4	On the river north of 209 County Road 9	509480	4765180	0.040	0.005	0.044	0.04%	0.005	0.044	0.04%	0.005	0.044	0.04%	0.005	0.044	0.04%
105	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.040	0.003	0.043	0.04%	0.004	0.043	0.04%	0.004	0.043	0.04%	0.004	0.043	0.04%
105	ING-6	Royal Road Public School	510337	4765360	0.040	0.005	0.045	0.04%	0.005	0.044	0.04%	0.005	0.044	0.04%	0.005	0.044	0.04%
105	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.040	0.002	0.042	0.04%	0.002	0.042	0.04%	0.002	0.042	0.04%	0.002	0.042	0.04%
105	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.040	0.003	0.043	0.04%	0.003	0.043	0.04%	0.003	0.043	0.04%	0.003	0.043	0.04%
105	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.040	0.004	0.044	0.04%	0.004	0.044	0.04%	0.006	0.045	0.04%	0.005	0.044	0.04%
105	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.040	0.004	0.044	0.04%	0.004	0.044	0.04%	0.004	0.043	0.04%	0.004	0.043	0.04%
105	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.040	0.016	0.055	0.05%	0.023	0.062	0.06%	0.022	0.062	0.06%	0.018	0.058	0.06%
105	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.040	0.016	0.056	0.05%	0.014	0.054	0.05%	0.018	0.058	0.06%	0.015	0.055	0.05%
105	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.040	0.012	0.052	0.05%	0.013	0.053	0.05%	0.015	0.055	0.05%	0.012	0.052	0.05%
105	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.040	0.012	0.051	0.05%	0.012	0.051	0.05%	0.012	0.051	0.05%	0.012	0.051	0.05%
105	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.040	0.010	0.049	0.05%	0.009	0.049	0.05%	0.009	0.049	0.05%	0.009	0.049	0.05%
105	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.040	0.004	0.043	0.04%	0.004	0.043	0.04%	0.004	0.043	0.04%	0.003	0.043	0.04%
105	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.040	0.003	0.043	0.04%	0.003	0.043	0.04%	0.003	0.043	0.04%	0.003	0.043	0.04%
105	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.040	0.001	0.041	0.04%	0.001	0.041	0.04%	0.001	0.041	0.04%	0.001	0.041	0.04%
105	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.040	0.001	0.040	0.04%	0.001	0.040	0.04%	0.001	0.040	0.04%	0.001	0.040	0.04%
105	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.040	0.006	0.045	0.04%	0.007	0.047	0.04%	0.006	0.046	0.04%	0.006	0.045	0.04%
105	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.040	0.012	0.051	0.05%	0.015	0.055	0.05%	0.013	0.052	0.05%	0.012	0.051	0.05%
105	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.040	0.008	0.047	0.05%	0.010	0.049	0.05%	0.012	0.052	0.05%	0.008	0.048	0.05%
105	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.040	0.010	0.050	0.05%	0.011	0.050	0.05%	0.013	0.053	0.05%	0.010	0.050	0.05%
105	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.040	0.015	0.054	0.05%	0.014	0.054	0.05%	0.016	0.056	0.05%	0.014	0.054	0.05%
105	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.040	0.010	0.049	0.05%	0.011	0.050	0.05%	0.011	0.051	0.05%	0.010	0.049	0.05%
105	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.040	0.009	0.049	0.05%	0.009	0.048	0.05%	0.010	0.050	0.05%	0.009	0.048	0.05%
105	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.040	0.007	0.047	0.04%	0.008	0.047	0.04%	0.008	0.048	0.05%	0.007	0.047	0.04%
105	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.040	0.010	0.050	0.05%	0.011	0.050	0.05%	0.011	0.051	0.05%	0.010	0.050	0.05%
105	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.040	0.005	0.045	0.04%	0.005	0.045	0.04%	0.005	0.045	0.04%	0.005	0.045	0.04%
105	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.040	0.002	0.041	0.04%	0.002	0.041	0.04%	0.002	0.041	0.04%	0.002	0.041	0.04%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,3,5-Trimethyl Benzene (CAS 108-67-8)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.008	0.498	0.25%	0.009	0.499	0.25%	0.009	0.499	0.25%	0.005	0.495	0.25%
200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.008	0.498	0.25%	0.010	0.500	0.25%	0.008	0.498	0.25%	0.004	0.494	0.25%
200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.007	0.497	0.25%	0.008	0.498	0.25%	0.008	0.498	0.25%	0.005	0.495	0.25%
200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.006	0.496	0.25%	0.008	0.498	0.25%	0.007	0.497	0.25%	0.005	0.495	0.25%
200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.017	0.507	0.25%	0.011	0.501	0.25%	0.016	0.506	0.25%	0.009	0.499	0.25%
200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.023	0.513	0.26%	0.023	0.513	0.26%	0.027	0.517	0.26%	0.015	0.505	0.25%
200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.004	0.494	0.25%	0.007	0.497	0.25%	0.007	0.497	0.25%	0.004	0.494	0.25%
200	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.017	0.507	0.25%	0.017	0.507	0.25%	0.018	0.508	0.25%	0.009	0.499	0.25%
200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.015	0.505	0.25%	0.023	0.513	0.26%	0.023	0.513	0.26%	0.012	0.502	0.25%
200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.010	0.500	0.25%	0.014	0.504	0.25%	0.014	0.504	0.25%	0.007	0.497	0.25%
200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.019	0.509	0.25%	0.041	0.531	0.27%	0.036	0.526	0.26%	0.021	0.511	0.26%
200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.011	0.501	0.25%	0.019	0.509	0.25%	0.018	0.508	0.25%	0.011	0.501	0.25%
200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.004	0.494	0.25%	0.004	0.494	0.25%	0.005	0.495	0.25%	0.003	0.493	0.25%
200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.011	0.501	0.25%	0.012	0.502	0.25%	0.015	0.505	0.25%	0.008	0.498	0.25%
200	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.004	0.494	0.25%	0.008	0.498	0.25%	0.009	0.499	0.25%	0.004	0.494	0.25%
200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.010	0.500	0.25%	0.015	0.505	0.25%	0.015	0.505	0.25%	0.009	0.499	0.25%
200	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.005	0.495	0.25%	0.006	0.496	0.25%	0.006	0.496	0.25%	0.004	0.494	0.25%
200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.003	0.493	0.25%	0.007	0.497	0.25%	0.007	0.497	0.25%	0.004	0.494	0.25%
200	ING-6	Royal Road Public School	510337	4765360	0.490	0.007	0.497	0.25%	0.010	0.500	0.25%	0.009	0.499	0.25%	0.005	0.495	0.25%
200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.003	0.493	0.25%	0.005	0.495	0.25%	0.005	0.495	0.25%	0.003	0.493	0.25%
200	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.490	0.003	0.493	0.25%	0.007	0.497	0.25%	0.006	0.496	0.25%	0.003	0.493	0.25%
200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.009	0.499	0.25%	0.015	0.505	0.25%	0.016	0.506	0.25%	0.008	0.498	0.25%
200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.006	0.496	0.25%	0.011	0.501	0.25%	0.012	0.502	0.25%	0.006	0.496	0.25%
200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.015	0.505	0.25%	0.048	0.538	0.27%	0.046	0.536	0.27%	0.026	0.516	0.26%
200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.018	0.508	0.25%	0.033	0.523	0.26%	0.043	0.533	0.27%	0.022	0.512	0.26%
200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.020	0.510	0.26%	0.034	0.524	0.26%	0.053	0.543	0.27%	0.024	0.514	0.26%
200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.012	0.502	0.25%	0.010	0.500	0.25%	0.014	0.504	0.25%	0.007	0.497	0.25%
200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.008	0.498	0.25%	0.007	0.497	0.25%	0.011	0.501	0.25%	0.005	0.495	0.25%
200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.005	0.495	0.25%	0.004	0.494	0.25%	0.005	0.495	0.25%	0.003	0.493	0.25%
200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.003	0.493	0.25%	0.004	0.494	0.25%	0.006	0.496	0.25%	0.003	0.493	0.25%
200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.001	0.491	0.25%	0.002	0.492	0.25%	0.002	0.492	0.25%	0.001	0.491	0.25%
200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.001	0.491	0.25%	0.001	0.491	0.25%	0.002	0.492	0.25%	0.001	0.491	0.25%
200	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.012	0.502	0.25%	0.027	0.517	0.26%	0.020	0.510	0.26%	0.013	0.503	0.25%
200	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.011	0.501	0.25%	0.028	0.518	0.26%	0.019	0.509	0.25%	0.011	0.501	0.25%
200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.017	0.507	0.25%	0.024	0.514	0.26%	0.040	0.530	0.27%	0.020	0.510	0.26%
200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.013	0.503	0.25%	0.023	0.513	0.26%	0.038	0.528	0.26%	0.019	0.509	0.25%
200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.015	0.505	0.25%	0.016	0.506	0.25%	0.021	0.511	0.26%	0.010	0.500	0.25%
200	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.010	0.500	0.25%	0.016	0.506	0.25%	0.021	0.511	0.26%	0.010	0.500	0.25%
200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.011	0.501	0.25%	0.018	0.508	0.25%	0.023	0.513	0.26%	0.012	0.502	0.25%
200	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.010	0.500	0.25%	0.011	0.501	0.25%	0.018	0.508	0.25%	0.008	0.498	0.25%
200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.012	0.502	0.25%	0.011	0.501	0.25%	0.012	0.502	0.25%	0.007	0.497	0.25%
200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.005	0.495	0.25%	0.008	0.498	0.25%	0.010	0.500	0.25%	0.005	0.495	0.25%
200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.003	0.493	0.25%	0.002	0.492	0.25%	0.002	0.492	0.25%	0.001	0.491	0.25%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**2-Butanol (CAS 78-92-2)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
496	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.050	0.080	3.130	0.63%	0.097	3.147	0.63%	0.100	3.150	0.64%	0.068	3.118	0.63%
496	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.050	0.080	3.130	0.63%	0.105	3.155	0.64%	0.090	3.140	0.63%	0.053	3.103	0.63%
496	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.050	0.074	3.124	0.63%	0.077	3.127	0.63%	0.091	3.141	0.63%	0.054	3.104	0.63%
496	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.050	0.058	3.108	0.63%	0.086	3.136	0.63%	0.076	3.126	0.63%	0.051	3.101	0.63%
496	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.050	0.179	3.229	0.65%	0.130	3.180	0.64%	0.180	3.230	0.65%	0.126	3.176	0.64%
496	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.050	0.215	3.265	0.66%	0.220	3.270	0.66%	0.265	3.315	0.67%	0.168	3.218	0.65%
496	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.050	0.043	3.093	0.62%	0.071	3.121	0.63%	0.072	3.122	0.63%	0.049	3.099	0.62%
496	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.050	0.164	3.214	0.65%	0.166	3.216	0.65%	0.177	3.227	0.65%	0.101	3.151	0.64%
496	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.050	0.162	3.212	0.65%	0.210	3.260	0.66%	0.218	3.268	0.66%	0.133	3.183	0.64%
496	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.050	0.093	3.143	0.63%	0.136	3.186	0.64%	0.146	3.196	0.64%	0.084	3.134	0.63%
496	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.050	0.195	3.245	0.65%	0.435	3.485	0.70%	0.378	3.428	0.69%	0.234	3.284	0.66%
496	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.050	0.114	3.164	0.64%	0.203	3.253	0.66%	0.187	3.237	0.65%	0.118	3.168	0.64%
496	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.050	0.037	3.087	0.62%	0.043	3.093	0.62%	0.059	3.109	0.63%	0.031	3.081	0.62%
496	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.050	0.097	3.147	0.63%	0.130	3.180	0.64%	0.166	3.216	0.65%	0.087	3.137	0.63%
496	ING-2	Laurie Hawkins Public School	509019	4765860	3.050	0.035	3.085	0.62%	0.076	3.126	0.63%	0.086	3.136	0.63%	0.049	3.099	0.62%
496	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.050	0.101	3.151	0.64%	0.150	3.200	0.65%	0.156	3.206	0.65%	0.095	3.145	0.63%
496	ING-4	On the river north of 209 County Road 9	509480	4765180	3.050	0.047	3.097	0.62%	0.059	3.109	0.63%	0.067	3.117	0.63%	0.042	3.092	0.62%
496	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.050	0.033	3.083	0.62%	0.063	3.113	0.63%	0.067	3.117	0.63%	0.041	3.091	0.62%
496	ING-6	Royal Road Public School	510337	4765360	3.050	0.059	3.109	0.63%	0.103	3.153	0.64%	0.093	3.143	0.63%	0.061	3.111	0.63%
496	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.050	0.029	3.079	0.62%	0.048	3.098	0.62%	0.049	3.099	0.62%	0.030	3.080	0.62%
496	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.050	0.029	3.079	0.62%	0.066	3.116	0.63%	0.056	3.106	0.63%	0.038	3.088	0.62%
496	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.050	0.088	3.138	0.63%	0.146	3.196	0.64%	0.173	3.223	0.65%	0.091	3.141	0.63%
496	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.050	0.055	3.105	0.63%	0.105	3.155	0.64%	0.117	3.167	0.64%	0.071	3.121	0.63%
496	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.050	0.144	3.194	0.64%	0.500	3.550	0.72%	0.483	3.533	0.71%	0.297	3.347	0.67%
496	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.050	0.175	3.225	0.65%	0.356	3.406	0.69%	0.441	3.491	0.70%	0.241	3.291	0.66%
496	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.050	0.200	3.250	0.66%	0.323	3.373	0.68%	0.543	3.593	0.72%	0.269	3.319	0.67%
496	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.050	0.122	3.172	0.64%	0.100	3.150	0.64%	0.132	3.182	0.64%	0.077	3.127	0.63%
496	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.050	0.073	3.123	0.63%	0.076	3.126	0.63%	0.109	3.159	0.64%	0.059	3.109	0.63%
496	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.050	0.048	3.098	0.62%	0.040	3.090	0.62%	0.054	3.104	0.63%	0.030	3.080	0.62%
496	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.050	0.028	3.078	0.62%	0.044	3.094	0.62%	0.059	3.109	0.63%	0.032	3.082	0.62%
496	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.050	0.012	3.062	0.62%	0.017	3.067	0.62%	0.020	3.070	0.62%	0.012	3.062	0.62%
496	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.050	0.011	3.061	0.62%	0.013	3.063	0.62%	0.017	3.067	0.62%	0.009	3.059	0.62%
496	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.050	0.119	3.169	0.64%	0.273	3.323	0.67%	0.196	3.246	0.65%	0.142	3.192	0.64%
496	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.050	0.108	3.158	0.64%	0.295	3.345	0.67%	0.215	3.265	0.66%	0.125	3.175	0.64%
496	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.050	0.165	3.215	0.65%	0.247	3.297	0.66%	0.422	3.472	0.70%	0.227	3.277	0.66%
496	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.050	0.131	3.181	0.64%	0.243	3.293	0.66%	0.397	3.447	0.70%	0.215	3.265	0.66%
496	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.050	0.144	3.194	0.64%	0.159	3.209	0.65%	0.229	3.279	0.66%	0.123	3.173	0.64%
496	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.050	0.096	3.146	0.63%	0.168	3.218	0.65%	0.217	3.267	0.66%	0.114	3.164	0.64%
496	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.050	0.112	3.162	0.64%	0.183	3.233	0.65%	0.241	3.291	0.66%	0.130	3.180	0.64%
496	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.050	0.097	3.147	0.63%	0.105	3.155	0.64%	0.170	3.220	0.65%	0.091	3.141	0.63%
496	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.050	0.114	3.164	0.64%	0.112	3.162	0.64%	0.122	3.172	0.64%	0.076	3.126	0.63%
496	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.050	0.045	3.095	0.62%	0.076	3.126	0.63%	0.105	3.155	0.64%	0.057	3.107	0.63%
496	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.050	0.028	3.078	0.62%	0.020	3.070	0.62%	0.024	3.074	0.62%	0.016	3.066	0.62%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Acetone (CAS 67-64-1)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
11,880	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	19.200	0.143	19.343	0.16%	0.164	19.364	0.16%	0.168	19.368	0.16%	0.108	19.308	0.16%
11,880	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	19.200	0.136	19.336	0.16%	0.186	19.386	0.16%	0.151	19.351	0.16%	0.088	19.288	0.16%
11,880	ZOR-3	Residence at 663951 Rd 66	510216	4770270	19.200	0.134	19.334	0.16%	0.140	19.340	0.16%	0.164	19.364	0.16%	0.093	19.293	0.16%
11,880	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	19.200	0.106	19.306	0.16%	0.156	19.356	0.16%	0.137	19.337	0.16%	0.091	19.291	0.16%
11,880	ZOR-5	Residence at 334789 33rd Line	508931	4768760	19.200	0.294	19.494	0.16%	0.201	19.401	0.16%	0.289	19.489	0.16%	0.188	19.388	0.16%
11,880	ZOR-6	Residence at 334742 33rd Line	509185	4768350	19.200	0.392	19.592	0.16%	0.401	19.601	0.16%	0.480	19.680	0.17%	0.297	19.497	0.16%
11,880	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	19.200	0.078	19.278	0.16%	0.128	19.328	0.16%	0.129	19.329	0.16%	0.084	19.284	0.16%
11,880	ZOR-8	Residence at 643743 Road 64	508940	4767980	19.200	0.297	19.497	0.16%	0.305	19.505	0.16%	0.323	19.523	0.16%	0.181	19.381	0.16%
11,880	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	19.200	0.292	19.492	0.16%	0.384	19.584	0.16%	0.397	19.597	0.16%	0.240	19.440	0.16%
11,880	ZOR-10	Residence at 334578 33rd Line	509739	4766780	19.200	0.168	19.368	0.16%	0.246	19.446	0.16%	0.264	19.464	0.16%	0.147	19.347	0.16%
11,880	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	19.200	0.353	19.553	0.16%	0.789	19.989	0.17%	0.685	19.885	0.17%	0.422	19.622	0.17%
11,880	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	19.200	0.202	19.402	0.16%	0.367	19.567	0.16%	0.337	19.537	0.16%	0.209	19.409	0.16%
11,880	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	19.200	0.065	19.265	0.16%	0.079	19.279	0.16%	0.106	19.306	0.16%	0.056	19.256	0.16%
11,880	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	19.200	0.177	19.377	0.16%	0.232	19.432	0.16%	0.295	19.495	0.16%	0.153	19.353	0.16%
11,880	ING-2	Laurie Hawkins Public School	509019	4765860	19.200	0.064	19.264	0.16%	0.139	19.339	0.16%	0.157	19.357	0.16%	0.088	19.288	0.16%
11,880	ING-3	Ingersoll District Collegiate Institute	510512	4766230	19.200	0.183	19.383	0.16%	0.271	19.471	0.16%	0.279	19.479	0.16%	0.169	19.369	0.16%
11,880	ING-4	On the river north of 209 County Road 9	509480	4765180	19.200	0.085	19.285	0.16%	0.106	19.306	0.16%	0.120	19.320	0.16%	0.074	19.274	0.16%
11,880	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	19.200	0.060	19.260	0.16%	0.116	19.316	0.16%	0.123	19.323	0.16%	0.073	19.273	0.16%
11,880	ING-6	Royal Road Public School	510337	4765360	19.200	0.111	19.311	0.16%	0.188	19.388	0.16%	0.166	19.366	0.16%	0.106	19.306	0.16%
11,880	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	19.200	0.053	19.253	0.16%	0.088	19.288	0.16%	0.089	19.289	0.16%	0.054	19.254	0.16%
11,880	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	19.200	0.052	19.252	0.16%	0.120	19.320	0.16%	0.101	19.301	0.16%	0.068	19.268	0.16%
11,880	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	19.200	0.160	19.360	0.16%	0.267	19.467	0.16%	0.311	19.511	0.16%	0.162	19.362	0.16%
11,880	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	19.200	0.101	19.301	0.16%	0.192	19.392	0.16%	0.213	19.413	0.16%	0.128	19.328	0.16%
11,880	SWO-1	Residence at 584052 Beachville Road	511124	4766750	19.200	0.248	19.448	0.16%	0.894	20.094	0.17%	0.861	20.061	0.17%	0.515	19.715	0.17%
11,880	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	19.200	0.307	19.507	0.16%	0.643	19.843	0.17%	0.801	20.001	0.17%	0.430	19.630	0.17%
11,880	SWO-3	Residence at 584142 Beachville Road	511722	4767480	19.200	0.356	19.556	0.16%	0.595	19.795	0.17%	0.986	20.186	0.17%	0.481	19.681	0.17%
11,880	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	19.200	0.218	19.418	0.16%	0.181	19.381	0.16%	0.244	19.444	0.16%	0.138	19.338	0.16%
11,880	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	19.200	0.133	19.333	0.16%	0.138	19.338	0.16%	0.197	19.397	0.16%	0.106	19.306	0.16%
11,880	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	19.200	0.086	19.286	0.16%	0.072	19.272	0.16%	0.093	19.293	0.16%	0.051	19.251	0.16%
11,880	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	19.200	0.050	19.250	0.16%	0.080	19.280	0.16%	0.106	19.306	0.16%	0.058	19.258	0.16%
11,880	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	19.200	0.021	19.221	0.16%	0.030	19.230	0.16%	0.037	19.237	0.16%	0.021	19.221	0.16%
11,880	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	19.200	0.020	19.220	0.16%	0.023	19.223	0.16%	0.030	19.230	0.16%	0.016	19.216	0.16%
11,880	SWO-10	Residence at 563977 Karn Road	510980	4765990	19.200	0.217	19.417	0.16%	0.500	19.700	0.17%	0.361	19.561	0.16%	0.255	19.455	0.16%
11,880	SWO-11	Residence at 564028 Karn Road	511396	4766310	19.200	0.187	19.387	0.16%	0.525	19.725	0.17%	0.385	19.585	0.16%	0.211	19.411	0.16%
11,880	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	19.200	0.298	19.498	0.16%	0.446	19.646	0.17%	0.759	19.959	0.17%	0.403	19.603	0.17%
11,880	SWO-13	Centreville Pond and Conservation Area	511570	4766920	19.200	0.233	19.433	0.16%	0.438	19.638	0.17%	0.713	19.913	0.17%	0.378	19.578	0.16%
11,880	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	19.200	0.252	19.452	0.16%	0.290	19.490	0.16%	0.397	19.597	0.16%	0.204	19.404	0.16%
11,880	SWO-15	Residences at 564146 Karn Road	512251	4767100	19.200	0.167	19.367	0.16%	0.304	19.504	0.16%	0.388	19.588	0.16%	0.199	19.399	0.16%
11,880	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	19.200	0.195	19.395	0.16%	0.331	19.531	0.16%	0.434	19.634	0.17%	0.229	19.429	0.16%
11,880	SWO-17	Residence at 564226 Karn Road	512958	4767760	19.200	0.174	19.374	0.16%	0.183	19.383	0.16%	0.312	19.512	0.16%	0.159	19.359	0.16%
11,880	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	19.200	0.209	19.409	0.16%	0.201	19.401	0.16%	0.219	19.419	0.16%	0.134	19.334	0.16%
11,880	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	19.200	0.080	19.280	0.16%	0.140	19.340	0.16%	0.192	19.392	0.16%	0.102	19.302	0.16%
11,880	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	19.200	0.050	19.250	0.16%	0.037	19.237	0.16%	0.044	19.244	0.16%	0.029	19.229	0.16%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Benzene (CAS 71-43-2)**

**Annual**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
0.5	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.378	0.0025	0.380	85%	0.0033	0.381	85%	0.0037	0.381	85%	0.0024	0.380	84%
0.5	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.378	0.0031	0.381	85%	0.0037	0.381	85%	0.0039	0.382	85%	0.0027	0.380	85%
0.5	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.378	0.0028	0.381	85%	0.0038	0.382	85%	0.0044	0.382	85%	0.0029	0.381	85%
0.5	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.378	0.0024	0.380	84%	0.0031	0.381	85%	0.0034	0.381	85%	0.0023	0.380	84%
0.5	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.378	0.0074	0.385	86%	0.0069	0.385	85%	0.0078	0.386	86%	0.0057	0.383	85%
0.5	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.378	0.0119	0.390	87%	0.0121	0.390	87%	0.0132	0.391	87%	0.0094	0.387	86%
0.5	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.378	0.0019	0.380	84%	0.0026	0.380	85%	0.0031	0.381	85%	0.0020	0.380	84%
0.5	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.378	0.0087	0.386	86%	0.0100	0.388	86%	0.0104	0.388	86%	0.0071	0.385	86%
0.5	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.378	0.0074	0.385	86%	0.0147	0.392	87%	0.0146	0.392	87%	0.0093	0.387	86%
0.5	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.378	0.0034	0.381	85%	0.0080	0.386	86%	0.0078	0.386	86%	0.0049	0.383	85%
0.5	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.378	0.0085	0.386	86%	0.0259	0.404	90%	0.0202	0.398	88%	0.0136	0.391	87%
0.5	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.378	0.0039	0.382	85%	0.0089	0.387	86%	0.0079	0.386	86%	0.0053	0.383	85%
0.5	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.378	0.0013	0.379	84%	0.0019	0.380	84%	0.0023	0.380	84%	0.0015	0.379	84%
0.5	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.378	0.0033	0.381	85%	0.0070	0.385	85%	0.0070	0.385	86%	0.0044	0.382	85%
0.5	ING-2	Laurie Hawkins Public School	509019	4765860	0.378	0.0013	0.379	84%	0.0027	0.380	85%	0.0029	0.381	85%	0.0018	0.380	84%
0.5	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.378	0.0035	0.381	85%	0.0069	0.385	85%	0.0069	0.385	85%	0.0043	0.382	85%
0.5	ING-4	On the river north of 209 County Road 9	509480	4765180	0.378	0.0015	0.379	84%	0.0020	0.380	84%	0.0020	0.380	84%	0.0014	0.379	84%
0.5	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.378	0.0011	0.379	84%	0.0021	0.380	84%	0.0022	0.380	84%	0.0014	0.379	84%
0.5	ING-6	Royal Road Public School	510337	4765360	0.378	0.0019	0.380	84%	0.0030	0.381	85%	0.0034	0.381	85%	0.0021	0.380	84%
0.5	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.378	0.0007	0.378	84%	0.0014	0.379	84%	0.0016	0.379	84%	0.0010	0.379	84%
0.5	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.378	0.0010	0.379	84%	0.0016	0.379	84%	0.0019	0.380	84%	0.0012	0.379	84%
0.5	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.378	0.0021	0.380	84%	0.0041	0.382	85%	0.0045	0.382	85%	0.0028	0.381	85%
0.5	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.378	0.0012	0.379	84%	0.0023	0.380	84%	0.0027	0.380	85%	0.0016	0.379	84%
0.5	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.378	0.0057	0.383	85%	0.0160	0.394	88%	0.0180	0.396	88%	0.0106	0.388	86%
0.5	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.378	0.0090	0.387	86%	0.0223	0.400	89%	0.0304	0.408	91%	0.0169	0.395	88%
0.5	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.378	0.0094	0.387	86%	0.0192	0.397	88%	0.0279	0.406	90%	0.0156	0.393	87%
0.5	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.378	0.0052	0.383	85%	0.0079	0.386	86%	0.0101	0.388	86%	0.0062	0.384	85%
0.5	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.378	0.0036	0.381	85%	0.0048	0.383	85%	0.0057	0.383	85%	0.0038	0.382	85%
0.5	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.378	0.0016	0.379	84%	0.0020	0.380	84%	0.0023	0.380	84%	0.0016	0.379	84%
0.5	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.378	0.0009	0.379	84%	0.0013	0.379	84%	0.0016	0.379	84%	0.0010	0.379	84%
0.5	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.378	0.0004	0.378	84%	0.0006	0.378	84%	0.0007	0.378	84%	0.0005	0.378	84%
0.5	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.378	0.0003	0.378	84%	0.0004	0.378	84%	0.0004	0.378	84%	0.0003	0.378	84%
0.5	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.378	0.0031	0.381	85%	0.0069	0.385	85%	0.0072	0.385	86%	0.0045	0.382	85%
0.5	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.378	0.0035	0.381	85%	0.0081	0.386	86%	0.0096	0.387	86%	0.0057	0.383	85%
0.5	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.378	0.0038	0.382	85%	0.0091	0.387	86%	0.0100	0.388	86%	0.0060	0.384	85%
0.5	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.378	0.0056	0.383	85%	0.0161	0.394	88%	0.0176	0.395	88%	0.0105	0.388	86%
0.5	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.378	0.0053	0.383	85%	0.0100	0.388	86%	0.0127	0.390	87%	0.0075	0.385	86%
0.5	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.378	0.0049	0.383	85%	0.0093	0.387	86%	0.0119	0.390	87%	0.0070	0.385	86%
0.5	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.378	0.0048	0.383	85%	0.0087	0.386	86%	0.0111	0.389	86%	0.0066	0.384	85%
0.5	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.378	0.0033	0.381	85%	0.0054	0.383	85%	0.0070	0.385	86%	0.0043	0.382	85%
0.5	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.378	0.0031	0.381	85%	0.0049	0.383	85%	0.0061	0.384	85%	0.0038	0.382	85%
0.5	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.378	0.0018	0.380	84%	0.0029	0.381	85%	0.0033	0.381	85%	0.0021	0.380	84%
0.5	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.378	0.0008	0.379	84%	0.0011	0.379	84%	0.0013	0.379	84%	0.0009	0.379	84%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Benzene (CAS 71-43-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2.3	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.585	0.057	0.642	28%	0.071	0.656	29%	0.073	0.658	29%	0.050	0.635	28%
2.3	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.585	0.059	0.644	28%	0.076	0.661	29%	0.066	0.651	28%	0.040	0.625	27%
2.3	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.585	0.053	0.638	28%	0.055	0.640	28%	0.065	0.650	28%	0.039	0.624	27%
2.3	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.585	0.042	0.627	27%	0.061	0.646	28%	0.054	0.639	28%	0.036	0.621	27%
2.3	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.585	0.133	0.718	31%	0.098	0.683	30%	0.133	0.718	31%	0.094	0.679	30%
2.3	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.585	0.154	0.739	32%	0.158	0.743	32%	0.189	0.774	34%	0.121	0.706	31%
2.3	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.585	0.030	0.615	27%	0.051	0.636	28%	0.052	0.637	28%	0.035	0.620	27%
2.3	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.585	0.117	0.702	31%	0.119	0.704	31%	0.126	0.711	31%	0.072	0.657	29%
2.3	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.585	0.115	0.700	30%	0.150	0.735	32%	0.155	0.740	32%	0.095	0.680	30%
2.3	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.585	0.067	0.652	28%	0.098	0.683	30%	0.104	0.689	30%	0.060	0.645	28%
2.3	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.585	0.139	0.724	31%	0.310	0.895	39%	0.269	0.854	37%	0.167	0.752	33%
2.3	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.585	0.082	0.667	29%	0.145	0.730	32%	0.134	0.719	31%	0.084	0.669	29%
2.3	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.585	0.026	0.611	27%	0.031	0.616	27%	0.042	0.627	27%	0.022	0.607	26%
2.3	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.585	0.070	0.655	28%	0.093	0.678	29%	0.118	0.703	31%	0.063	0.648	28%
2.3	ING-2	Laurie Hawkins Public School	509019	4765860	0.585	0.025	0.610	27%	0.054	0.639	28%	0.061	0.646	28%	0.035	0.620	27%
2.3	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.585	0.072	0.657	29%	0.107	0.692	30%	0.111	0.696	30%	0.068	0.653	28%
2.3	ING-4	On the river north of 209 County Road 9	509480	4765180	0.585	0.033	0.618	27%	0.042	0.627	27%	0.048	0.633	28%	0.030	0.615	27%
2.3	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.585	0.024	0.609	26%	0.045	0.630	27%	0.048	0.633	28%	0.029	0.614	27%
2.3	ING-6	Royal Road Public School	510337	4765360	0.585	0.042	0.627	27%	0.073	0.658	29%	0.067	0.652	28%	0.044	0.629	27%
2.3	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.585	0.021	0.606	26%	0.034	0.619	27%	0.035	0.620	27%	0.021	0.606	26%
2.3	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.585	0.020	0.605	26%	0.047	0.632	27%	0.040	0.625	27%	0.027	0.612	27%
2.3	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.585	0.063	0.648	28%	0.104	0.689	30%	0.123	0.708	31%	0.065	0.650	28%
2.3	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.585	0.039	0.624	27%	0.075	0.660	29%	0.083	0.668	29%	0.051	0.636	28%
2.3	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.585	0.105	0.690	30%	0.359	0.944	41%	0.346	0.931	40%	0.214	0.799	35%
2.3	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.585	0.127	0.712	31%	0.253	0.838	36%	0.315	0.900	39%	0.172	0.757	33%
2.3	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.585	0.144	0.729	32%	0.231	0.816	35%	0.386	0.971	42%	0.192	0.777	34%
2.3	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.585	0.088	0.673	29%	0.071	0.656	29%	0.094	0.679	30%	0.055	0.640	28%
2.3	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.585	0.053	0.638	28%	0.054	0.639	28%	0.077	0.662	29%	0.042	0.627	27%
2.3	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.585	0.034	0.619	27%	0.029	0.614	27%	0.039	0.624	27%	0.022	0.607	26%
2.3	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.585	0.020	0.605	26%	0.031	0.616	27%	0.042	0.627	27%	0.023	0.608	26%
2.3	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.585	0.009	0.594	26%	0.012	0.597	26%	0.014	0.599	26%	0.009	0.594	26%
2.3	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.585	0.008	0.593	26%	0.009	0.594	26%	0.012	0.597	26%	0.007	0.592	26%
2.3	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.585	0.085	0.670	29%	0.195	0.780	34%	0.140	0.725	32%	0.101	0.686	30%
2.3	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.585	0.079	0.664	29%	0.212	0.797	35%	0.152	0.737	32%	0.090	0.675	29%
2.3	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.585	0.119	0.704	31%	0.177	0.762	33%	0.301	0.886	39%	0.163	0.748	33%
2.3	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.585	0.095	0.680	30%	0.173	0.758	33%	0.283	0.868	38%	0.154	0.739	32%
2.3	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.585	0.105	0.690	30%	0.114	0.699	30%	0.165	0.750	33%	0.090	0.675	29%
2.3	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.585	0.070	0.655	28%	0.119	0.704	31%	0.155	0.740	32%	0.082	0.667	29%
2.3	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.585	0.081	0.666	29%	0.131	0.716	31%	0.172	0.757	33%	0.094	0.679	30%
2.3	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.585	0.070	0.655	28%	0.076	0.661	29%	0.122	0.707	31%	0.065	0.650	28%
2.3	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.585	0.082	0.667	29%	0.080	0.665	29%	0.087	0.672	29%	0.055	0.640	28%
2.3	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.585	0.032	0.617	27%	0.054	0.639	28%	0.075	0.660	29%	0.041	0.626	27%
2.3	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.585	0.020	0.605	26%	0.014	0.599	26%	0.017	0.602	26%	0.011	0.596	26%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Bromodichloromethane (CAS 75-27-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
350	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.335	0.050	0.385	0.1%	0.063	0.398	0.1%	0.064	0.399	0.1%	0.045	0.380	0.1%
350	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.335	0.052	0.387	0.1%	0.067	0.402	0.1%	0.058	0.393	0.1%	0.035	0.370	0.1%
350	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.335	0.047	0.382	0.1%	0.048	0.383	0.1%	0.057	0.392	0.1%	0.034	0.369	0.1%
350	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.335	0.036	0.371	0.1%	0.054	0.389	0.1%	0.047	0.382	0.1%	0.032	0.367	0.1%
350	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.335	0.118	0.453	0.1%	0.087	0.422	0.1%	0.118	0.453	0.1%	0.085	0.420	0.1%
350	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.335	0.135	0.470	0.1%	0.138	0.473	0.1%	0.165	0.500	0.1%	0.105	0.440	0.1%
350	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.335	0.027	0.362	0.1%	0.045	0.380	0.1%	0.045	0.380	0.1%	0.031	0.366	0.1%
350	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.335	0.103	0.438	0.1%	0.103	0.438	0.1%	0.110	0.445	0.1%	0.062	0.397	0.1%
350	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.335	0.101	0.436	0.1%	0.130	0.465	0.1%	0.135	0.470	0.1%	0.083	0.418	0.1%
350	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.335	0.059	0.394	0.1%	0.085	0.420	0.1%	0.091	0.426	0.1%	0.053	0.388	0.1%
350	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.335	0.121	0.456	0.1%	0.270	0.605	0.2%	0.234	0.569	0.2%	0.146	0.481	0.1%
350	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.335	0.072	0.407	0.1%	0.127	0.462	0.1%	0.117	0.452	0.1%	0.074	0.409	0.1%
350	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.335	0.023	0.358	0.1%	0.027	0.371	0.1%	0.036	0.371	0.1%	0.019	0.354	0.1%
350	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.335	0.062	0.397	0.1%	0.081	0.416	0.1%	0.103	0.438	0.1%	0.055	0.390	0.1%
350	ING-2	Laurie Hawkins Public School	509019	4765860	0.335	0.022	0.357	0.1%	0.047	0.382	0.1%	0.054	0.389	0.1%	0.030	0.365	0.1%
350	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.335	0.063	0.398	0.1%	0.094	0.429	0.1%	0.097	0.432	0.1%	0.059	0.394	0.1%
350	ING-4	On the river north of 209 County Road 9	509480	4765180	0.335	0.029	0.364	0.1%	0.037	0.372	0.1%	0.042	0.377	0.1%	0.026	0.361	0.1%
350	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.335	0.021	0.356	0.1%	0.039	0.374	0.1%	0.042	0.377	0.1%	0.025	0.360	0.1%
350	ING-6	Royal Road Public School	510337	4765360	0.335	0.037	0.372	0.1%	0.064	0.399	0.1%	0.058	0.393	0.1%	0.038	0.373	0.1%
350	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.335	0.018	0.353	0.1%	0.030	0.365	0.1%	0.030	0.365	0.1%	0.019	0.354	0.1%
350	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.335	0.018	0.353	0.1%	0.041	0.376	0.1%	0.035	0.370	0.1%	0.024	0.359	0.1%
350	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.335	0.055	0.390	0.1%	0.091	0.426	0.1%	0.107	0.442	0.1%	0.056	0.391	0.1%
350	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.335	0.034	0.369	0.1%	0.065	0.400	0.1%	0.072	0.407	0.1%	0.044	0.379	0.1%
350	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.335	0.093	0.428	0.1%	0.314	0.649	0.2%	0.303	0.638	0.2%	0.187	0.522	0.1%
350	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.335	0.111	0.446	0.1%	0.221	0.556	0.2%	0.276	0.611	0.2%	0.150	0.485	0.1%
350	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.335	0.126	0.461	0.1%	0.202	0.537	0.2%	0.337	0.672	0.2%	0.168	0.503	0.1%
350	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.335	0.077	0.412	0.1%	0.062	0.397	0.1%	0.082	0.417	0.1%	0.048	0.383	0.1%
350	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.335	0.046	0.381	0.1%	0.047	0.382	0.1%	0.067	0.402	0.1%	0.037	0.372	0.1%
350	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.335	0.030	0.365	0.1%	0.025	0.360	0.1%	0.034	0.369	0.1%	0.020	0.355	0.1%
350	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.335	0.017	0.352	0.1%	0.027	0.362	0.1%	0.037	0.372	0.1%	0.020	0.355	0.1%
350	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.335	0.008	0.343	0.1%	0.010	0.345	0.1%	0.013	0.348	0.1%	0.008	0.343	0.1%
350	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.335	0.007	0.342	0.1%	0.008	0.343	0.1%	0.010	0.345	0.1%	0.006	0.341	0.1%
350	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.335	0.074	0.409	0.1%	0.170	0.505	0.1%	0.122	0.457	0.1%	0.088	0.423	0.1%
350	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.335	0.070	0.405	0.1%	0.185	0.520	0.1%	0.133	0.468	0.1%	0.080	0.415	0.1%
350	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.335	0.104	0.439	0.1%	0.154	0.489	0.1%	0.263	0.598	0.2%	0.142	0.477	0.1%
350	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.335	0.083	0.418	0.1%	0.151	0.486	0.1%	0.248	0.583	0.2%	0.135	0.470	0.1%
350	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.335	0.093	0.428	0.1%	0.099	0.434	0.1%	0.145	0.480	0.1%	0.079	0.414	0.1%
350	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.335	0.061	0.396	0.1%	0.104	0.439	0.1%	0.135	0.470	0.1%	0.072	0.407	0.1%
350	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.335	0.071	0.406	0.1%	0.115	0.450	0.1%	0.150	0.485	0.1%	0.082	0.417	0.1%
350	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.335	0.061	0.396	0.1%	0.067	0.402	0.1%	0.107	0.442	0.1%	0.057	0.392	0.1%
350	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.335	0.071	0.406	0.1%	0.070	0.405	0.1%	0.076	0.411	0.1%	0.048	0.383	0.1%
350	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.335	0.029	0.364	0.1%	0.047	0.382	0.1%	0.065	0.400	0.1%	0.035	0.370	0.1%
350	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.335	0.017	0.352	0.1%	0.013	0.348	0.1%	0.015	0.350	0.1%	0.010	0.345	0.1%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Carbon Tetrachloride (CAS 56-23-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information				Ambient Background Concentration (µg/m3)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
2.4	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.500	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%
2.4	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.500	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%
2.4	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.500	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%
2.4	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.500	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%
2.4	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.500	0.027	0.527	22%	0.027	0.527	22%	0.027	0.527	22%	0.027	0.527	22%
2.4	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.500	0.033	0.533	22%	0.033	0.533	22%	0.033	0.533	22%	0.033	0.533	22%
2.4	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.500	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%
2.4	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.500	0.022	0.522	22%	0.022	0.522	22%	0.022	0.522	22%	0.022	0.522	22%
2.4	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.500	0.010	0.510	21%	0.010	0.510	21%	0.010	0.510	21%	0.010	0.510	21%
2.4	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.500	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%
2.4	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.500	0.012	0.512	21%	0.013	0.513	21%	0.013	0.513	21%	0.012	0.512	21%
2.4	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.500	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%
2.4	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.500	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%
2.4	ING-2	Laurie Hawkins Public School	509019	4765860	0.500	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%
2.4	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.500	0.007	0.507	21%	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%
2.4	ING-4	On the river north of 209 County Road 9	509480	4765180	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.500	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%
2.4	ING-6	Royal Road Public School	510337	4765360	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.500	0.001	0.501	21%	0.002	0.502	21%	0.002	0.502	21%	0.001	0.501	21%
2.4	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.500	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%
2.4	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.500	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%
2.4	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.500	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%
2.4	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.500	0.011	0.511	21%	0.012	0.512	21%	0.012	0.512	21%	0.011	0.511	21%
2.4	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.500	0.011	0.511	21%	0.010	0.510	21%	0.011	0.511	21%	0.010	0.510	21%
2.4	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.500	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%
2.4	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.500	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%
2.4	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.500	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%
2.4	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.500	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%	0.003	0.503	21%
2.4	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.500	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%	0.002	0.502	21%
2.4	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.500	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%
2.4	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.500	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%
2.4	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.500	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%	0.009	0.509	21%
2.4	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.500	0.005	0.505	21%	0.006	0.506	21%	0.006	0.506	21%	0.005	0.505	21%
2.4	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.500	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%	0.006	0.506	21%
2.4	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.500	0.010	0.510	21%	0.010	0.510	21%	0.010	0.510	21%	0.010	0.510	21%
2.4	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.500	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%	0.007	0.507	21%
2.4	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.500	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%	0.006	0.506	21%
2.4	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.500	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%	0.005	0.505	21%
2.4	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.500	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%	0.008	0.508	21%
2.4	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.500	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%	0.004	0.504	21%
2.4	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.500	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%	0.001	0.501	21%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated Chlorobenzene (CAS 108-90-7)**

1-hour

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
3,500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.460	0.041	0.501	0.01%	0.037	0.497	0.01%	0.053	0.513	0.01%	0.025	0.485	0.01%
3,500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.460	0.058	0.518	0.01%	0.054	0.514	0.01%	0.073	0.533	0.02%	0.037	0.497	0.01%
3,500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.460	0.061	0.521	0.01%	0.073	0.533	0.02%	0.085	0.545	0.02%	0.045	0.505	0.01%
3,500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.460	0.050	0.510	0.01%	0.059	0.519	0.01%	0.065	0.525	0.01%	0.033	0.493	0.01%
3,500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.460	0.069	0.529	0.02%	0.058	0.518	0.01%	0.080	0.540	0.02%	0.038	0.498	0.01%
3,500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.460	0.070	0.530	0.02%	0.062	0.522	0.01%	0.091	0.551	0.02%	0.043	0.503	0.01%
3,500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.460	0.032	0.492	0.01%	0.033	0.493	0.01%	0.047	0.507	0.01%	0.023	0.483	0.01%
3,500	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.460	0.055	0.515	0.01%	0.052	0.512	0.01%	0.076	0.536	0.02%	0.036	0.496	0.01%
3,500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.460	0.053	0.513	0.01%	0.056	0.516	0.01%	0.065	0.525	0.01%	0.032	0.492	0.01%
3,500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.460	0.077	0.537	0.02%	0.058	0.528	0.01%	0.069	0.529	0.02%	0.034	0.494	0.01%
3,500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.460	0.141	0.601	0.02%	0.217	0.677	0.02%	0.193	0.653	0.02%	0.103	0.563	0.02%
3,500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.460	0.091	0.551	0.02%	0.115	0.575	0.02%	0.118	0.578	0.02%	0.061	0.521	0.01%
3,500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.460	0.032	0.492	0.01%	0.036	0.496	0.01%	0.047	0.507	0.01%	0.023	0.483	0.01%
3,500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.460	0.079	0.539	0.02%	0.059	0.519	0.01%	0.070	0.530	0.02%	0.035	0.495	0.01%
3,500	ING-2	Laurie Hawkins Public School	509019	4765860	0.460	0.035	0.495	0.01%	0.035	0.495	0.01%	0.047	0.507	0.01%	0.023	0.483	0.01%
3,500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.460	0.082	0.542	0.02%	0.129	0.589	0.02%	0.118	0.578	0.02%	0.060	0.520	0.01%
3,500	ING-4	On the river north of 209 County Road 9	509480	4765180	0.460	0.049	0.509	0.01%	0.057	0.517	0.01%	0.051	0.511	0.01%	0.032	0.492	0.01%
3,500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.460	0.029	0.489	0.01%	0.030	0.490	0.01%	0.040	0.500	0.01%	0.020	0.480	0.01%
3,500	ING-6	Royal Road Public School	510337	4765360	0.460	0.061	0.521	0.01%	0.093	0.553	0.02%	0.093	0.553	0.02%	0.047	0.507	0.01%
3,500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.460	0.036	0.496	0.01%	0.050	0.510	0.01%	0.051	0.511	0.01%	0.029	0.489	0.01%
3,500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.460	0.044	0.504	0.01%	0.065	0.525	0.01%	0.066	0.526	0.02%	0.036	0.496	0.01%
3,500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.460	0.062	0.522	0.01%	0.095	0.555	0.02%	0.108	0.568	0.02%	0.053	0.513	0.01%
3,500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.460	0.045	0.505	0.01%	0.068	0.528	0.02%	0.076	0.536	0.02%	0.041	0.501	0.01%
3,500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.460	0.110	0.570	0.02%	0.165	0.625	0.02%	0.222	0.682	0.02%	0.104	0.564	0.02%
3,500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.460	0.111	0.571	0.02%	0.101	0.561	0.02%	0.205	0.665	0.02%	0.092	0.552	0.02%
3,500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.460	0.094	0.554	0.02%	0.083	0.543	0.02%	0.156	0.616	0.02%	0.070	0.530	0.02%
3,500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.460	0.053	0.513	0.01%	0.047	0.507	0.01%	0.081	0.541	0.02%	0.038	0.498	0.01%
3,500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.460	0.046	0.506	0.01%	0.040	0.500	0.01%	0.066	0.526	0.02%	0.031	0.491	0.01%
3,500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.460	0.033	0.493	0.01%	0.024	0.484	0.01%	0.038	0.498	0.01%	0.018	0.478	0.01%
3,500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.460	0.022	0.482	0.01%	0.023	0.483	0.01%	0.032	0.492	0.01%	0.016	0.476	0.01%
3,500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.460	0.013	0.473	0.01%	0.014	0.474	0.01%	0.017	0.477	0.01%	0.010	0.470	0.01%
3,500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.460	0.016	0.476	0.01%	0.011	0.471	0.01%	0.014	0.474	0.01%	0.008	0.468	0.01%
3,500	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.460	0.082	0.542	0.02%	0.132	0.592	0.02%	0.142	0.602	0.02%	0.070	0.530	0.02%
3,500	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.460	0.089	0.549	0.02%	0.125	0.585	0.02%	0.167	0.627	0.02%	0.080	0.540	0.02%
3,500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.460	0.088	0.548	0.02%	0.106	0.566	0.02%	0.163	0.623	0.02%	0.076	0.536	0.02%
3,500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.460	0.097	0.557	0.02%	0.121	0.581	0.02%	0.183	0.643	0.02%	0.084	0.544	0.02%
3,500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.460	0.077	0.537	0.02%	0.066	0.526	0.02%	0.118	0.578	0.02%	0.054	0.514	0.01%
3,500	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.460	0.068	0.528	0.02%	0.057	0.517	0.01%	0.101	0.561	0.02%	0.046	0.506	0.01%
3,500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.460	0.063	0.523	0.01%	0.055	0.515	0.01%	0.094	0.554	0.02%	0.043	0.503	0.01%
3,500	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.460	0.044	0.504	0.01%	0.035	0.495	0.01%	0.059	0.519	0.01%	0.028	0.488	0.01%
3,500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.460	0.041	0.501	0.01%	0.033	0.493	0.01%	0.056	0.516	0.01%	0.026	0.486	0.01%
3,500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.460	0.036	0.496	0.01%	0.032	0.492	0.01%	0.052	0.512	0.01%	0.024	0.484	0.01%
3,500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.460	0.016	0.476	0.01%	0.014	0.474	0.01%	0.022	0.482	0.01%	0.011	0.471	0.01%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated Chlorobenzene (CAS 108-90-7)**

10-minute

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
4,500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.460	0.068	0.528	0.01%	0.061	0.521	0.01%	0.087	0.547	0.01%	0.041	0.501	0.01%
4,500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.460	0.096	0.556	0.01%	0.088	0.548	0.01%	0.121	0.581	0.01%	0.062	0.522	0.01%
4,500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.460	0.100	0.560	0.01%	0.121	0.581	0.01%	0.140	0.600	0.01%	0.074	0.534	0.01%
4,500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.460	0.082	0.542	0.01%	0.098	0.558	0.01%	0.107	0.567	0.01%	0.054	0.514	0.01%
4,500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.460	0.114	0.574	0.01%	0.132	0.596	0.01%	0.132	0.592	0.01%	0.062	0.522	0.01%
4,500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.460	0.116	0.576	0.01%	0.103	0.563	0.01%	0.151	0.611	0.01%	0.071	0.531	0.01%
4,500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.460	0.053	0.513	0.01%	0.054	0.514	0.01%	0.078	0.538	0.01%	0.038	0.498	0.01%
4,500	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.460	0.090	0.550	0.01%	0.087	0.547	0.01%	0.126	0.586	0.01%	0.060	0.520	0.01%
4,500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.460	0.088	0.548	0.01%	0.092	0.552	0.01%	0.107	0.567	0.01%	0.053	0.513	0.01%
4,500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.460	0.128	0.588	0.01%	0.096	0.556	0.01%	0.114	0.574	0.01%	0.057	0.517	0.01%
4,500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.460	0.233	0.693	0.02%	0.359	0.819	0.02%	0.318	0.778	0.02%	0.170	0.630	0.01%
4,500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.460	0.151	0.611	0.01%	0.190	0.650	0.01%	0.194	0.654	0.01%	0.101	0.561	0.01%
4,500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.460	0.053	0.513	0.01%	0.059	0.519	0.01%	0.077	0.537	0.01%	0.038	0.498	0.01%
4,500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.460	0.130	0.590	0.01%	0.098	0.558	0.01%	0.115	0.575	0.01%	0.057	0.517	0.01%
4,500	ING-2	Laurie Hawkins Public School	509019	4765860	0.460	0.057	0.517	0.01%	0.058	0.518	0.01%	0.077	0.537	0.01%	0.039	0.499	0.01%
4,500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.460	0.135	0.595	0.01%	0.213	0.673	0.01%	0.195	0.655	0.01%	0.098	0.558	0.01%
4,500	ING-4	On the river north of 209 County Road 9	509480	4765180	0.460	0.080	0.540	0.01%	0.094	0.554	0.01%	0.084	0.544	0.01%	0.052	0.512	0.01%
4,500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.460	0.048	0.508	0.01%	0.049	0.509	0.01%	0.065	0.525	0.01%	0.033	0.493	0.01%
4,500	ING-6	Royal Road Public School	510337	4765360	0.460	0.100	0.560	0.01%	0.153	0.613	0.01%	0.154	0.614	0.01%	0.078	0.538	0.01%
4,500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.460	0.059	0.519	0.01%	0.083	0.543	0.01%	0.084	0.544	0.01%	0.047	0.507	0.01%
4,500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.460	0.073	0.533	0.01%	0.107	0.567	0.01%	0.109	0.569	0.01%	0.059	0.519	0.01%
4,500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.460	0.102	0.562	0.01%	0.157	0.617	0.01%	0.179	0.639	0.01%	0.088	0.548	0.01%
4,500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.460	0.074	0.534	0.01%	0.113	0.573	0.01%	0.125	0.585	0.01%	0.068	0.528	0.01%
4,500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.460	0.182	0.642	0.01%	0.273	0.733	0.02%	0.366	0.826	0.02%	0.172	0.632	0.01%
4,500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.460	0.182	0.642	0.01%	0.167	0.627	0.01%	0.338	0.798	0.02%	0.151	0.611	0.01%
4,500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.460	0.155	0.615	0.01%	0.136	0.596	0.01%	0.258	0.718	0.02%	0.115	0.575	0.01%
4,500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.460	0.088	0.548	0.01%	0.078	0.538	0.01%	0.133	0.593	0.01%	0.063	0.523	0.01%
4,500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.460	0.076	0.536	0.01%	0.066	0.526	0.01%	0.108	0.568	0.01%	0.052	0.512	0.01%
4,500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.460	0.054	0.514	0.01%	0.040	0.500	0.01%	0.523	0.030	0.01%	0.490	0.01%	
4,500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.460	0.036	0.496	0.01%	0.038	0.498	0.01%	0.052	0.512	0.01%	0.027	0.487	0.01%
4,500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.460	0.022	0.482	0.01%	0.023	0.483	0.01%	0.027	0.487	0.01%	0.016	0.476	0.01%
4,500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.460	0.026	0.486	0.01%	0.018	0.478	0.01%	0.023	0.483	0.01%	0.013	0.473	0.01%
4,500	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.460	0.136	0.596	0.01%	0.217	0.677	0.02%	0.235	0.695	0.02%	0.115	0.575	0.01%
4,500	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.460	0.146	0.606	0.01%	0.206	0.666	0.01%	0.276	0.736	0.02%	0.132	0.592	0.01%
4,500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.460	0.146	0.606	0.01%	0.175	0.635	0.01%	0.268	0.728	0.02%	0.126	0.586	0.01%
4,500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.460	0.161	0.621	0.01%	0.200	0.660	0.01%	0.302	0.762	0.02%	0.138	0.598	0.01%
4,500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.460	0.127	0.587	0.01%	0.109	0.569	0.01%	0.194	0.654	0.01%	0.088	0.548	0.01%
4,500	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.460	0.112	0.572	0.01%	0.094	0.554	0.01%	0.167	0.627	0.01%	0.075	0.535	0.01%
4,500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.460	0.104	0.564	0.01%	0.090	0.550	0.01%	0.155	0.615	0.01%	0.070	0.530	0.01%
4,500	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.460	0.073	0.533	0.01%	0.058	0.518	0.01%	0.098	0.558	0.01%	0.046	0.506	0.01%
4,500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.460	0.067	0.527	0.01%	0.055	0.515	0.01%	0.092	0.552	0.01%	0.043	0.503	0.01%
4,500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.460	0.060	0.520	0.01%	0.053	0.513	0.01%	0.085	0.545	0.01%	0.039	0.499	0.01%
4,500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.460	0.026	0.486	0.01%	0.023	0.483	0.01%	0.036	0.496	0.01%	0.018	0.478	0.01%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated Chloroethane (CAS 75-00-3)**

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
5,600	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.265	0.026	0.291	0.005%	0.033	0.298	0.005%	0.034	0.299	0.005%	0.024	0.289	0.005%
5,600	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.265	0.028	0.293	0.005%	0.034	0.299	0.005%	0.031	0.296	0.005%	0.019	0.284	0.005%
5,600	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.265	0.023	0.288	0.005%	0.024	0.289	0.005%	0.028	0.293	0.005%	0.017	0.282	0.005%
5,600	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.265	0.018	0.283	0.005%	0.027	0.292	0.005%	0.023	0.288	0.005%	0.016	0.281	0.005%
5,600	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.265	0.064	0.329	0.006%	0.049	0.314	0.006%	0.064	0.329	0.006%	0.048	0.313	0.006%
5,600	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.265	0.068	0.333	0.006%	0.069	0.334	0.006%	0.083	0.348	0.006%	0.053	0.318	0.006%
5,600	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.265	0.013	0.278	0.005%	0.023	0.288	0.005%	0.023	0.288	0.005%	0.016	0.281	0.005%
5,600	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.265	0.052	0.317	0.006%	0.051	0.316	0.006%	0.055	0.320	0.006%	0.031	0.296	0.005%
5,600	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.265	0.050	0.315	0.006%	0.065	0.330	0.006%	0.067	0.332	0.006%	0.041	0.306	0.005%
5,600	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.265	0.030	0.295	0.005%	0.043	0.308	0.006%	0.046	0.311	0.006%	0.027	0.292	0.005%
5,600	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.265	0.060	0.325	0.006%	0.134	0.399	0.007%	0.116	0.381	0.007%	0.072	0.337	0.006%
5,600	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.265	0.037	0.302	0.005%	0.064	0.329	0.006%	0.058	0.323	0.006%	0.037	0.302	0.005%
5,600	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.265	0.012	0.277	0.005%	0.013	0.278	0.005%	0.018	0.283	0.005%	0.010	0.275	0.005%
5,600	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.265	0.031	0.296	0.005%	0.041	0.306	0.005%	0.052	0.317	0.006%	0.028	0.293	0.005%
5,600	ING-2	Laurie Hawkins Public School	509019	4765860	0.265	0.012	0.277	0.005%	0.023	0.288	0.005%	0.027	0.292	0.005%	0.015	0.280	0.005%
5,600	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.265	0.031	0.296	0.005%	0.047	0.312	0.006%	0.048	0.313	0.006%	0.030	0.295	0.005%
5,600	ING-4	On the river north of 209 County Road 9	509480	4765180	0.265	0.015	0.280	0.005%	0.018	0.283	0.005%	0.021	0.286	0.005%	0.013	0.278	0.005%
5,600	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.265	0.010	0.275	0.005%	0.020	0.285	0.005%	0.021	0.286	0.005%	0.013	0.278	0.005%
5,600	ING-6	Royal Road Public School	510337	4765360	0.265	0.019	0.284	0.005%	0.032	0.297	0.005%	0.029	0.294	0.005%	0.020	0.285	0.005%
5,600	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.265	0.009	0.274	0.005%	0.015	0.280	0.005%	0.015	0.280	0.005%	0.009	0.274	0.005%
5,600	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.265	0.009	0.274	0.005%	0.021	0.286	0.005%	0.017	0.282	0.005%	0.012	0.277	0.005%
5,600	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.265	0.028	0.293	0.005%	0.046	0.311	0.006%	0.053	0.318	0.006%	0.028	0.293	0.005%
5,600	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.265	0.017	0.282	0.005%	0.032	0.297	0.005%	0.036	0.301	0.005%	0.022	0.287	0.005%
5,600	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.265	0.049	0.314	0.006%	0.159	0.424	0.008%	0.153	0.418	0.007%	0.096	0.361	0.006%
5,600	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.265	0.057	0.322	0.006%	0.110	0.375	0.007%	0.139	0.404	0.007%	0.075	0.340	0.006%
5,600	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.265	0.065	0.330	0.006%	0.101	0.366	0.007%	0.168	0.433	0.008%	0.084	0.349	0.006%
5,600	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.265	0.039	0.304	0.005%	0.031	0.296	0.005%	0.041	0.306	0.005%	0.025	0.290	0.005%
5,600	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.265	0.023	0.288	0.005%	0.023	0.288	0.005%	0.034	0.299	0.005%	0.018	0.283	0.005%
5,600	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.265	0.015	0.280	0.005%	0.013	0.278	0.005%	0.018	0.283	0.005%	0.010	0.275	0.005%
5,600	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.265	0.009	0.274	0.005%	0.014	0.279	0.005%	0.018	0.283	0.005%	0.010	0.275	0.005%
5,600	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.265	0.004	0.269	0.005%	0.005	0.270	0.005%	0.006	0.271	0.005%	0.004	0.269	0.005%
5,600	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.265	0.004	0.269	0.005%	0.004	0.269	0.005%	0.005	0.270	0.005%	0.003	0.268	0.005%
5,600	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.265	0.037	0.302	0.005%	0.085	0.350	0.006%	0.061	0.326	0.006%	0.044	0.309	0.006%
5,600	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.265	0.037	0.302	0.005%	0.094	0.359	0.006%	0.066	0.331	0.006%	0.042	0.307	0.005%
5,600	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.265	0.052	0.317	0.006%	0.078	0.343	0.006%	0.131	0.396	0.007%	0.071	0.336	0.006%
5,600	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.265	0.043	0.308	0.005%	0.075	0.340	0.006%	0.124	0.389	0.007%	0.068	0.333	0.006%
5,600	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.265	0.049	0.314	0.006%	0.050	0.315	0.006%	0.075	0.340	0.006%	0.042	0.307	0.005%
5,600	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.265	0.032	0.297	0.005%	0.052	0.317	0.006%	0.068	0.333	0.006%	0.037	0.302	0.005%
5,600	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.265	0.037	0.302	0.005%	0.058	0.323	0.006%	0.076	0.341	0.006%	0.042	0.307	0.005%
5,600	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.265	0.031	0.296	0.005%	0.034	0.299	0.005%	0.054	0.319	0.006%	0.029	0.294	0.005%
5,600	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.265	0.036	0.301	0.005%	0.035	0.300	0.005%	0.038	0.303	0.005%	0.024	0.289	0.005%
5,600	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.265	0.015	0.280	0.005%	0.024	0.289	0.005%	0.032	0.297	0.005%	0.018	0.283	0.005%
5,600	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.265	0.009	0.274	0.005%	0.006	0.271	0.005%	0.007	0.272	0.005%	0.005	0.270	0.005%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated Chloroform (CAS 67-66-3)**

Annual

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
0.2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.241	0.0002	0.241	121%	0.0002	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.241	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.241	0.0002	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.241	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.241	0.0009	0.242	121%	0.0009	0.242	121%	0.0009	0.242	121%	0.0009	0.242	121%
0.2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.241	0.0016	0.242	121%	0.0016	0.242	121%	0.0016	0.242	121%	0.0015	0.242	121%
0.2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.241	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0001	0.241	121%
0.2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.241	0.0007	0.242	121%	0.0007	0.242	121%	0.0007	0.242	121%	0.0006	0.242	121%
0.2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.241	0.0004	0.241	121%	0.0005	0.241	121%	0.0005	0.241	121%	0.0004	0.241	121%
0.2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.241	0.0002	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.241	0.0005	0.241	121%	0.0007	0.242	121%	0.0006	0.242	121%	0.0005	0.241	121%
0.2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.241	0.0003	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%
0.2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.241	0.0002	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	ING-2	Laurie Hawkins Public School	509019	4765860	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.241	0.0002	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-6	Royal Road Public School	510337	4765360	0.241	0.0001	0.241	120%	0.0002	0.241	121%	0.0002	0.241	121%	0.0001	0.241	120%
0.2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.241	0.0000	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.241	0.0001	0.241	120%	0.0002	0.241	121%	0.0002	0.241	121%	0.0001	0.241	120%
0.2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.241	0.0003	0.241	121%	0.0004	0.241	121%	0.0005	0.241	121%	0.0003	0.241	121%
0.2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.241	0.0004	0.241	121%	0.0006	0.241	121%	0.0008	0.242	121%	0.0005	0.241	121%
0.2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.241	0.0004	0.241	121%	0.0006	0.241	121%	0.0007	0.242	121%	0.0005	0.241	121%
0.2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.241	0.0003	0.241	121%	0.0003	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%
0.2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.241	0.0002	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.241	0.0000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%
0.2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.241	0.0000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%	0.0000	0.241	120%
0.2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.241	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.241	0.0002	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.241	0.0002	0.241	121%	0.0003	0.241	121%	0.0003	0.241	121%	0.0002	0.241	121%
0.2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.241	0.0003	0.241	121%	0.0004	0.241	121%	0.0005	0.241	121%	0.0003	0.241	121%
0.2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.241	0.0003	0.241	121%	0.0004	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%
0.2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.241	0.0003	0.241	121%	0.0003	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%
0.2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.241	0.0003	0.241	121%	0.0003	0.241	121%	0.0004	0.241	121%	0.0003	0.241	121%
0.2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.241	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.241	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%	0.0002	0.241	121%
0.2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.241	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%	0.0001	0.241	120%
0.2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.241	0.0000	0.241	120%	0.0000	0.241	120%	0.0001	0.241	120%	0.0000	0.241	120%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated Chloroform (CAS 67-66-3)**

24-hour

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
1	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.237	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.237	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.237	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%
1	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.237	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%
1	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.237	0.019	0.256	26%	0.018	0.255	26%	0.018	0.255	26%	0.018	0.255	26%
1	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.237	0.023	0.260	26%	0.023	0.260	26%	0.023	0.260	26%	0.022	0.259	26%
1	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.237	0.003	0.240	24%	0.004	0.241	24%	0.004	0.241	24%	0.003	0.240	24%
1	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.237	0.015	0.252	25%	0.015	0.252	25%	0.015	0.252	25%	0.015	0.252	25%
1	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.237	0.007	0.244	24%	0.007	0.244	24%	0.007	0.244	24%	0.007	0.244	24%
1	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.237	0.005	0.242	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.237	0.008	0.245	25%	0.010	0.247	25%	0.009	0.246	25%	0.009	0.246	25%
1	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.237	0.006	0.243	24%	0.007	0.244	24%	0.007	0.244	24%	0.006	0.243	24%
1	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.237	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.237	0.004	0.241	24%	0.004	0.241	24%	0.005	0.242	24%	0.004	0.241	24%
1	ING-2	Laurie Hawkins Public School	509019	4765860	0.237	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.237	0.005	0.242	24%	0.005	0.242	24%	0.005	0.242	24%	0.004	0.241	24%
1	ING-4	On the river north of 209 County Road 9	509480	4765180	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	ING-6	Royal Road Public School	510337	4765360	0.237	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.237	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%
1	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.237	0.002	0.239	24%	0.002	0.239	24%	0.003	0.240	24%	0.002	0.239	24%
1	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.237	0.009	0.246	25%	0.013	0.250	25%	0.012	0.249	25%	0.010	0.247	25%
1	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.237	0.009	0.246	25%	0.008	0.245	24%	0.010	0.247	25%	0.008	0.245	25%
1	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.237	0.007	0.244	24%	0.008	0.245	24%	0.009	0.246	25%	0.007	0.244	24%
1	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.237	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.237	0.005	0.242	24%	0.005	0.242	24%	0.005	0.242	24%	0.005	0.242	24%
1	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.237	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%	0.002	0.239	24%
1	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.237	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%
1	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.237	0.000	0.237	24%	0.000	0.237	24%	0.000	0.237	24%	0.000	0.237	24%
1	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.237	0.003	0.240	24%	0.004	0.241	24%	0.004	0.241	24%	0.003	0.240	24%
1	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.237	0.006	0.243	24%	0.009	0.246	25%	0.007	0.244	24%	0.006	0.243	24%
1	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.237	0.004	0.241	24%	0.005	0.242	24%	0.007	0.244	24%	0.005	0.242	24%
1	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.237	0.006	0.243	24%	0.006	0.243	24%	0.008	0.245	24%	0.006	0.243	24%
1	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.237	0.008	0.245	25%	0.008	0.245	24%	0.009	0.246	25%	0.008	0.245	24%
1	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.237	0.005	0.242	24%	0.006	0.243	24%	0.006	0.243	24%	0.005	0.242	24%
1	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.237	0.005	0.242	24%	0.005	0.242	24%	0.006	0.243	24%	0.005	0.242	24%
1	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.237	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%	0.004	0.241	24%
1	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.237	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%	0.006	0.243	24%
1	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.237	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%	0.003	0.240	24%
1	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.237	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%	0.001	0.238	24%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated  
Chloromethane (CAS 74-87-3)**

24-hour

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
320	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.260	0.006	1.266	0.40%	0.007	1.267	0.40%	0.007	1.267	0.40%	0.004	1.264	0.40%
320	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.260	0.005	1.265	0.40%	0.008	1.268	0.40%	0.006	1.266	0.40%	0.004	1.264	0.39%
320	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.260	0.005	1.265	0.40%	0.006	1.266	0.40%	0.007	1.267	0.40%	0.004	1.264	0.39%
320	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.260	0.004	1.264	0.40%	0.006	1.266	0.40%	0.006	1.266	0.40%	0.004	1.264	0.39%
320	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.260	0.012	1.272	0.40%	0.008	1.268	0.40%	0.012	1.272	0.40%	0.008	1.268	0.40%
320	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.260	0.016	1.276	0.40%	0.016	1.276	0.40%	0.019	1.279	0.40%	0.012	1.272	0.40%
320	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.260	0.003	1.263	0.39%	0.005	1.265	0.40%	0.005	1.265	0.40%	0.003	1.263	0.39%
320	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.260	0.012	1.272	0.40%	0.012	1.272	0.40%	0.013	1.273	0.40%	0.007	1.267	0.40%
320	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.260	0.012	1.272	0.40%	0.016	1.276	0.40%	0.016	1.276	0.40%	0.010	1.270	0.40%
320	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.260	0.007	1.267	0.40%	0.010	1.270	0.40%	0.011	1.271	0.40%	0.006	1.266	0.40%
320	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.260	0.014	1.274	0.40%	0.032	1.292	0.40%	0.028	1.288	0.40%	0.017	1.277	0.40%
320	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.260	0.008	1.268	0.40%	0.015	1.275	0.40%	0.014	1.274	0.40%	0.009	1.269	0.40%
320	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.260	0.003	1.263	0.39%	0.003	1.263	0.39%	0.004	1.264	0.40%	0.002	1.262	0.39%
320	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.260	0.007	1.267	0.40%	0.009	1.269	0.40%	0.012	1.272	0.40%	0.006	1.266	0.40%
320	ING-2	Laurie Hawkins Public School	509019	4765860	1.260	0.003	1.263	0.39%	0.006	1.266	0.40%	0.006	1.266	0.40%	0.004	1.264	0.39%
320	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.260	0.008	1.268	0.40%	0.011	1.271	0.40%	0.011	1.271	0.40%	0.007	1.267	0.40%
320	ING-4	On the river north of 209 County Road 9	509480	4765180	1.260	0.003	1.263	0.39%	0.004	1.264	0.40%	0.005	1.265	0.40%	0.003	1.263	0.39%
320	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.260	0.002	1.262	0.39%	0.005	1.265	0.40%	0.005	1.265	0.40%	0.003	1.263	0.39%
320	ING-6	Royal Road Public School	510337	4765360	1.260	0.004	1.264	0.40%	0.008	1.268	0.40%	0.007	1.267	0.40%	0.004	1.264	0.40%
320	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.260	0.002	1.262	0.39%	0.004	1.264	0.39%	0.004	1.264	0.39%	0.002	1.262	0.39%
320	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	1.260	0.002	1.262	0.39%	0.005	1.265	0.40%	0.004	1.264	0.40%	0.003	1.263	0.39%
320	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.260	0.007	1.267	0.40%	0.011	1.271	0.40%	0.013	1.273	0.40%	0.007	1.267	0.40%
320	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.260	0.004	1.264	0.40%	0.008	1.268	0.40%	0.009	1.269	0.40%	0.005	1.265	0.40%
320	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.260	0.010	1.270	0.40%	0.036	1.296	0.41%	0.035	1.295	0.40%	0.021	1.281	0.40%
320	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.260	0.013	1.273	0.40%	0.026	1.286	0.40%	0.033	1.293	0.40%	0.018	1.278	0.40%
320	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.260	0.014	1.274	0.40%	0.024	1.284	0.40%	0.040	1.300	0.41%	0.020	1.280	0.40%
320	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.260	0.009	1.269	0.40%	0.007	1.267	0.40%	0.010	1.270	0.40%	0.006	1.266	0.40%
320	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.260	0.005	1.265	0.40%	0.006	1.266	0.40%	0.008	1.268	0.40%	0.004	1.264	0.40%
320	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.260	0.004	1.264	0.39%	0.003	1.263	0.39%	0.004	1.264	0.39%	0.002	1.262	0.39%
320	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.260	0.002	1.262	0.39%	0.003	1.263	0.39%	0.004	1.264	0.40%	0.002	1.262	0.39%
320	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.260	0.001	1.261	0.39%	0.001	1.261	0.39%	0.002	1.262	0.39%	0.001	1.261	0.39%
320	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.260	0.001	1.261	0.39%	0.001	1.261	0.39%	0.001	1.261	0.39%	0.001	1.261	0.39%
320	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.260	0.009	1.269	0.40%	0.020	1.280	0.40%	0.015	1.275	0.40%	0.010	1.270	0.40%
320	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.260	0.008	1.268	0.40%	0.021	1.281	0.40%	0.016	1.276	0.40%	0.009	1.269	0.40%
320	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.260	0.012	1.272	0.40%	0.018	1.278	0.40%	0.031	1.291	0.40%	0.017	1.277	0.40%
320	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.260	0.009	1.269	0.40%	0.018	1.278	0.40%	0.029	1.289	0.40%	0.016	1.276	0.40%
320	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.260	0.010	1.270	0.40%	0.012	1.272	0.40%	0.016	1.276	0.40%	0.008	1.268	0.40%
320	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.260	0.007	1.267	0.40%	0.012	1.272	0.40%	0.016	1.276	0.40%	0.008	1.268	0.40%
320	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.260	0.008	1.268	0.40%	0.013	1.273	0.40%	0.018	1.278	0.40%	0.009	1.269	0.40%
320	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.260	0.007	1.267	0.40%	0.007	1.267	0.40%	0.013	1.273	0.40%	0.007	1.267	0.40%
320	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.260	0.008	1.268	0.40%	0.008	1.268	0.40%	0.009	1.269	0.40%	0.005	1.265	0.40%
320	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.260	0.003	1.263	0.39%	0.006	1.266	0.40%	0.008	1.268	0.40%	0.004	1.264	0.40%
320	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.260	0.002	1.262	0.39%	0.002	1.262	0.39%	0.002	1.262	0.39%	0.001	1.261	0.39%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

Dichlorodifluoromethane (CAS 75-71-8)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
500,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	2.420	0.177	2.597	0.0005%	0.205	2.625	0.0005%	0.211	2.631	0.0005%	0.138	2.558	0.0005%
500,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	2.420	0.168	2.588	0.0005%	0.233	2.653	0.0005%	0.190	2.610	0.0005%	0.113	2.533	0.0005%
500,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	2.420	0.169	2.589	0.0005%	0.174	2.594	0.0005%	0.209	2.629	0.0005%	0.118	2.538	0.0005%
500,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	2.420	0.131	2.551	0.0005%	0.196	2.616	0.0005%	0.175	2.595	0.0005%	0.116	2.536	0.0005%
500,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	2.420	0.365	2.785	0.0006%	0.251	2.671	0.0006%	0.364	2.784	0.0006%	0.241	2.661	0.0005%
500,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	2.420	0.489	2.909	0.0006%	0.499	2.919	0.0006%	0.600	3.020	0.0006%	0.380	2.800	0.0006%
500,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	2.420	0.098	2.518	0.0005%	0.158	2.578	0.0005%	0.160	2.580	0.0005%	0.107	2.527	0.0005%
500,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	2.420	0.372	2.792	0.0006%	0.381	2.801	0.0006%	0.406	2.826	0.0006%	0.231	2.651	0.0005%
500,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	2.420	0.374	2.794	0.0006%	0.481	2.901	0.0006%	0.499	2.919	0.0006%	0.306	2.726	0.0005%
500,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	2.420	0.209	2.629	0.0005%	0.307	2.727	0.0005%	0.335	2.755	0.0006%	0.187	2.607	0.0005%
500,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	2.420	0.450	2.870	0.0006%	0.997	3.417	0.0007%	0.867	3.287	0.0007%	0.539	2.959	0.0006%
500,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	2.420	0.256	2.676	0.0005%	0.462	2.882	0.0006%	0.426	2.846	0.0006%	0.266	2.686	0.0005%
500,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	2.420	0.081	2.501	0.0005%	0.100	2.550	0.0005%	0.135	2.555	0.0005%	0.072	2.492	0.0005%
500,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	2.420	0.220	2.640	0.0005%	0.293	2.713	0.0005%	0.375	2.795	0.0006%	0.196	2.616	0.0005%
500,000	ING-2	Laurie Hawkins Public School	509019	4765860	2.420	0.080	2.500	0.0005%	0.174	2.594	0.0005%	0.198	2.618	0.0005%	0.112	2.532	0.0005%
500,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	2.420	0.233	2.653	0.0005%	0.342	2.762	0.0006%	0.354	2.774	0.0006%	0.215	2.635	0.0005%
500,000	ING-4	On the river north of 209 County Road 9	509480	4765180	2.420	0.108	2.528	0.0005%	0.133	2.553	0.0005%	0.152	2.572	0.0005%	0.094	2.514	0.0005%
500,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	2.420	0.076	2.496	0.0005%	0.145	2.565	0.0005%	0.154	2.574	0.0005%	0.093	2.513	0.0005%
500,000	ING-6	Royal Road Public School	510337	4765360	2.420	0.136	2.556	0.0005%	0.236	2.656	0.0005%	0.210	2.630	0.0005%	0.136	2.556	0.0005%
500,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	2.420	0.066	2.486	0.0005%	0.111	2.531	0.0005%	0.113	2.533	0.0005%	0.069	2.489	0.0005%
500,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	2.420	0.066	2.486	0.0005%	0.150	2.570	0.0005%	0.128	2.548	0.0005%	0.086	2.506	0.0005%
500,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	2.420	0.201	2.621	0.0005%	0.333	2.753	0.0006%	0.395	2.815	0.0006%	0.207	2.627	0.0005%
500,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	2.420	0.127	2.547	0.0005%	0.240	2.660	0.0005%	0.267	2.687	0.0005%	0.164	2.584	0.0005%
500,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	2.420	0.308	2.728	0.0005%	1.124	3.544	0.0007%	1.085	3.505	0.0007%	0.658	3.078	0.0006%
500,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	2.420	0.386	2.806	0.0006%	0.816	3.236	0.0006%	1.007	3.427	0.0007%	0.549	2.969	0.0006%
500,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	2.420	0.446	2.866	0.0006%	0.738	3.158	0.0006%	1.241	3.661	0.0007%	0.614	3.034	0.0006%
500,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	2.420	0.275	2.695	0.0005%	0.229	2.649	0.0005%	0.304	2.724	0.0005%	0.177	2.597	0.0005%
500,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	2.420	0.165	2.585	0.0005%	0.174	2.594	0.0005%	0.249	2.669	0.0005%	0.135	2.555	0.0005%
500,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	2.420	0.109	2.529	0.0005%	0.089	2.509	0.0005%	0.119	2.539	0.0005%	0.066	2.486	0.0005%
500,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	2.420	0.062	2.482	0.0005%	0.100	2.520	0.0005%	0.134	2.554	0.0005%	0.074	2.494	0.0005%
500,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	2.420	0.027	2.447	0.0005%	0.038	2.458	0.0005%	0.047	2.467	0.0005%	0.027	2.447	0.0005%
500,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	2.420	0.026	2.446	0.0005%	0.029	2.449	0.0005%	0.037	2.457	0.0005%	0.021	2.441	0.0005%
500,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	2.420	0.274	2.694	0.0005%	0.625	3.045	0.0006%	0.449	2.869	0.0006%	0.326	2.746	0.0005%
500,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	2.420	0.232	2.652	0.0005%	0.659	3.079	0.0006%	0.492	2.912	0.0006%	0.269	2.689	0.0005%
500,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	2.420	0.374	2.794	0.0006%	0.559	2.979	0.0006%	0.961	3.381	0.0007%	0.515	2.935	0.0006%
500,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	2.420	0.292	2.712	0.0005%	0.556	2.976	0.0006%	0.901	3.321	0.0007%	0.483	2.903	0.0006%
500,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	2.420	0.311	2.731	0.0005%	0.360	2.780	0.0005%	0.504	2.924	0.0006%	0.261	2.681	0.0005%
500,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	2.420	0.209	2.629	0.0005%	0.384	2.804	0.0006%	0.489	2.909	0.0006%	0.254	2.674	0.0005%
500,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	2.420	0.245	2.665	0.0005%	0.413	2.833	0.0006%	0.546	2.966	0.0006%	0.293	2.713	0.0005%
500,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	2.420	0.216	2.636	0.0005%	0.231	2.651	0.0005%	0.385	2.805	0.0006%	0.203	2.623	0.0005%
500,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	2.420	0.263	2.683	0.0005%	0.253	2.673	0.0005%	0.276	2.696	0.0005%	0.171	2.591	0.0005%
500,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	2.420	0.100	2.520	0.0005%	0.175	2.595	0.0005%	0.241	2.661	0.0005%	0.131	2.551	0.0005%
500,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	2.420	0.063	2.483	0.0005%	0.046	2.466	0.0005%	0.055	2.475	0.0005%	0.036	2.456	0.0005%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

Dichloromethane (CAS 75-09-2)

Annual

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
44	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.517	0.0048	0.522	1%	0.0064	0.524	1%	0.0072	0.524	1%	0.0047	0.522	1%
44	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.517	0.0059	0.523	1%	0.0071	0.524	1%	0.0075	0.525	1%	0.0050	0.522	1%
44	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.517	0.0054	0.523	1%	0.0074	0.525	1%	0.0086	0.526	1%	0.0056	0.523	1%
44	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.517	0.0047	0.522	1%	0.0061	0.523	1%	0.0067	0.524	1%	0.0045	0.522	1%
44	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.517	0.0135	0.531	1%	0.0125	0.530	1%	0.0145	0.532	1%	0.0099	0.527	1%
44	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.517	0.0220	0.539	1%	0.0223	0.539	1%	0.0246	0.542	1%	0.0167	0.534	1%
44	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.517	0.0035	0.521	1%	0.0050	0.522	1%	0.0060	0.523	1%	0.0038	0.521	1%
44	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.517	0.0166	0.534	1%	0.0196	0.537	1%	0.0202	0.537	1%	0.0134	0.531	1%
44	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.517	0.0146	0.532	1%	0.0297	0.547	1%	0.0295	0.547	1%	0.0186	0.536	1%
44	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.517	0.0067	0.524	1%	0.0163	0.533	1%	0.0158	0.533	1%	0.0098	0.527	1%
44	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.517	0.0171	0.534	1%	0.0528	0.570	1%	0.0409	0.558	1%	0.0274	0.545	1%
44	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.517	0.0076	0.525	1%	0.0178	0.535	1%	0.0158	0.533	1%	0.0105	0.528	1%
44	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.517	0.0025	0.520	1%	0.0037	0.521	1%	0.0045	0.522	1%	0.0029	0.520	1%
44	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.517	0.0065	0.524	1%	0.0141	0.531	1%	0.0141	0.531	1%	0.0088	0.526	1%
44	ING-2	Laurie Hawkins Public School	509019	4765860	0.517	0.0026	0.520	1%	0.0055	0.523	1%	0.0058	0.523	1%	0.0036	0.521	1%
44	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.517	0.0070	0.524	1%	0.0139	0.531	1%	0.0139	0.531	1%	0.0085	0.526	1%
44	ING-4	On the river north of 209 County Road 9	509480	4765180	0.517	0.0030	0.520	1%	0.0040	0.521	1%	0.0040	0.521	1%	0.0027	0.520	1%
44	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.517	0.0023	0.519	1%	0.0041	0.521	1%	0.0044	0.522	1%	0.0028	0.520	1%
44	ING-6	Royal Road Public School	510337	4765360	0.517	0.0037	0.521	1%	0.0060	0.523	1%	0.0067	0.524	1%	0.0041	0.521	1%
44	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.517	0.0013	0.518	1%	0.0029	0.520	1%	0.0033	0.520	1%	0.0020	0.519	1%
44	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.517	0.0018	0.519	1%	0.0032	0.520	1%	0.0037	0.521	1%	0.0023	0.519	1%
44	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.517	0.0041	0.521	1%	0.0082	0.525	1%	0.0091	0.526	1%	0.0056	0.523	1%
44	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.517	0.0024	0.520	1%	0.0046	0.522	1%	0.0053	0.522	1%	0.0032	0.520	1%
44	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.517	0.0113	0.528	1%	0.0326	0.550	1%	0.0367	0.554	1%	0.0216	0.539	1%
44	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.517	0.0179	0.535	1%	0.0453	0.562	1%	0.0620	0.579	1%	0.0342	0.551	1%
44	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.517	0.0187	0.536	1%	0.0389	0.556	1%	0.0568	0.574	1%	0.0317	0.549	1%
44	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.517	0.0102	0.527	1%	0.0158	0.533	1%	0.0203	0.537	1%	0.0124	0.530	1%
44	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.517	0.0070	0.524	1%	0.0094	0.527	1%	0.0114	0.529	1%	0.0073	0.524	1%
44	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.517	0.0031	0.520	1%	0.0040	0.521	1%	0.0046	0.522	1%	0.0030	0.520	1%
44	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.517	0.0017	0.519	1%	0.0025	0.520	1%	0.0031	0.520	1%	0.0019	0.519	1%
44	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.517	0.0008	0.518	1%	0.0012	0.518	1%	0.0013	0.518	1%	0.0009	0.518	1%
44	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.517	0.0005	0.518	1%	0.0007	0.518	1%	0.0009	0.518	1%	0.0006	0.518	1%
44	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.517	0.0060	0.523	1%	0.0140	0.531	1%	0.0146	0.532	1%	0.0091	0.526	1%
44	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.517	0.0069	0.524	1%	0.0164	0.534	1%	0.0195	0.537	1%	0.0115	0.529	1%
44	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.517	0.0075	0.525	1%	0.0184	0.536	1%	0.0202	0.537	1%	0.0122	0.529	1%
44	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.517	0.0111	0.528	1%	0.0328	0.550	1%	0.0359	0.553	1%	0.0213	0.538	1%
44	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.517	0.0105	0.528	1%	0.0202	0.537	1%	0.0258	0.543	1%	0.0150	0.532	1%
44	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.517	0.0096	0.527	1%	0.0188	0.536	1%	0.0241	0.541	1%	0.0141	0.531	1%
44	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.517	0.0094	0.527	1%	0.0174	0.535	1%	0.0224	0.540	1%	0.0132	0.530	1%
44	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.517	0.0065	0.524	1%	0.0109	0.528	1%	0.0142	0.531	1%	0.0085	0.526	1%
44	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.517	0.0061	0.523	1%	0.0096	0.527	1%	0.0122	0.529	1%	0.0074	0.525	1%
44	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.517	0.0034	0.521	1%	0.0058	0.523	1%	0.0067	0.524	1%	0.0042	0.521	1%
44	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.517	0.0016	0.519	1%	0.0022	0.519	1%	0.0026	0.520	1%	0.0017	0.519	1%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

Dichloromethane (CAS 75-09-2)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
220	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.345	0.114	0.459	0.2%	0.135	0.480	0.2%	0.139	0.484	0.2%	0.092	0.437	0.2%
220	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.345	0.111	0.456	0.2%	0.151	0.496	0.2%	0.125	0.470	0.2%	0.074	0.419	0.2%
220	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.345	0.108	0.453	0.2%	0.112	0.457	0.2%	0.134	0.479	0.2%	0.077	0.422	0.2%
220	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.345	0.084	0.429	0.2%	0.126	0.471	0.2%	0.112	0.457	0.2%	0.074	0.419	0.2%
220	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.345	0.243	0.588	0.3%	0.171	0.516	0.2%	0.243	0.588	0.3%	0.164	0.509	0.2%
220	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.345	0.313	0.658	0.3%	0.321	0.666	0.3%	0.385	0.730	0.3%	0.245	0.590	0.3%
220	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.345	0.063	0.408	0.2%	0.102	0.447	0.2%	0.103	0.448	0.2%	0.070	0.415	0.2%
220	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.345	0.239	0.584	0.3%	0.244	0.589	0.3%	0.259	0.604	0.3%	0.148	0.493	0.2%
220	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.345	0.239	0.584	0.3%	0.308	0.653	0.3%	0.319	0.664	0.3%	0.196	0.541	0.2%
220	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.345	0.135	0.480	0.2%	0.198	0.543	0.2%	0.214	0.559	0.3%	0.121	0.466	0.2%
220	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.345	0.287	0.632	0.3%	0.639	0.984	0.4%	0.554	0.899	0.4%	0.345	0.690	0.3%
220	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.345	0.165	0.510	0.2%	0.297	0.642	0.3%	0.273	0.618	0.3%	0.171	0.516	0.2%
220	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.345	0.052	0.397	0.2%	0.064	0.409	0.2%	0.086	0.431	0.2%	0.046	0.391	0.2%
220	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.345	0.141	0.486	0.2%	0.189	0.534	0.2%	0.240	0.585	0.3%	0.126	0.471	0.2%
220	ING-2	Laurie Hawkins Public School	509019	4765860	0.345	0.051	0.396	0.2%	0.112	0.457	0.2%	0.126	0.471	0.2%	0.072	0.417	0.2%
220	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.345	0.149	0.494	0.2%	0.220	0.565	0.3%	0.227	0.572	0.3%	0.138	0.483	0.2%
220	ING-4	On the river north of 209 County Road 9	509480	4765180	0.345	0.069	0.414	0.2%	0.086	0.431	0.2%	0.098	0.443	0.2%	0.061	0.406	0.2%
220	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.345	0.048	0.393	0.2%	0.093	0.438	0.2%	0.098	0.443	0.2%	0.060	0.405	0.2%
220	ING-6	Royal Road Public School	510337	4765360	0.345	0.087	0.432	0.2%	0.151	0.496	0.2%	0.135	0.480	0.2%	0.088	0.433	0.2%
220	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.345	0.042	0.387	0.2%	0.071	0.416	0.2%	0.072	0.417	0.2%	0.044	0.389	0.2%
220	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.345	0.042	0.387	0.2%	0.097	0.442	0.2%	0.082	0.427	0.2%	0.056	0.401	0.2%
220	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.345	0.129	0.474	0.2%	0.214	0.559	0.3%	0.253	0.598	0.3%	0.132	0.477	0.2%
220	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.345	0.081	0.426	0.2%	0.154	0.499	0.2%	0.171	0.516	0.2%	0.105	0.450	0.2%
220	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.345	0.202	0.547	0.2%	0.725	1.070	0.5%	0.698	1.043	0.5%	0.426	0.771	0.4%
220	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.345	0.250	0.595	0.3%	0.523	0.868	0.4%	0.644	0.989	0.4%	0.353	0.698	0.3%
220	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.345	0.288	0.633	0.3%	0.474	0.819	0.4%	1.138	1.138	0.5%	0.394	0.739	0.3%
220	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.345	0.177	0.522	0.2%	0.146	0.491	0.2%	0.194	0.539	0.2%	0.113	0.458	0.2%
220	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.345	0.106	0.451	0.2%	0.111	0.456	0.2%	0.159	0.504	0.2%	0.086	0.431	0.2%
220	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.345	0.070	0.415	0.2%	0.058	0.403	0.2%	0.077	0.422	0.2%	0.043	0.388	0.2%
220	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.345	0.040	0.385	0.2%	0.064	0.409	0.2%	0.086	0.431	0.2%	0.047	0.392	0.2%
220	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.345	0.017	0.362	0.2%	0.024	0.369	0.2%	0.030	0.375	0.2%	0.017	0.362	0.2%
220	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.345	0.016	0.361	0.2%	0.019	0.364	0.2%	0.024	0.369	0.2%	0.014	0.359	0.2%
220	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.345	0.175	0.520	0.2%	0.401	0.746	0.3%	0.287	0.632	0.3%	0.209	0.554	0.3%
220	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.345	0.152	0.497	0.2%	0.426	0.771	0.4%	0.314	0.659	0.3%	0.176	0.521	0.2%
220	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.345	0.240	0.585	0.3%	0.359	0.704	0.3%	0.615	0.960	0.4%	0.331	0.676	0.3%
220	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.345	0.189	0.534	0.2%	0.356	0.701	0.3%	0.578	0.923	0.4%	0.311	0.656	0.3%
220	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.345	0.203	0.548	0.2%	0.232	0.577	0.3%	0.326	0.671	0.3%	0.172	0.517	0.2%
220	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.345	0.135	0.480	0.2%	0.246	0.591	0.3%	0.314	0.659	0.3%	0.164	0.509	0.2%
220	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.345	0.159	0.504	0.2%	0.266	0.611	0.3%	0.350	0.695	0.3%	0.189	0.534	0.2%
220	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.345	0.139	0.484	0.2%	0.150	0.495	0.2%	0.247	0.592	0.3%	0.131	0.476	0.2%
220	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.345	0.168	0.513	0.2%	0.163	0.508	0.2%	0.177	0.522	0.2%	0.110	0.455	0.2%
220	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.345	0.064	0.409	0.2%	0.112	0.457	0.2%	0.154	0.499	0.2%	0.084	0.429	0.2%
220	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.345	0.040	0.385	0.2%	0.030	0.375	0.2%	0.035	0.380	0.2%	0.023	0.368	0.2%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated  
Ethyl Acetate (CAS 141-78-6)**

1-hour

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
19,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.360	0.340	0.700	0.004%	0.316	0.676	0.004%	0.443	0.803	0.004%	0.216	0.576	0.003%
19,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.360	0.485	0.845	0.004%	0.454	0.814	0.004%	0.620	0.980	0.005%	0.321	0.681	0.004%
19,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.360	0.511	0.871	0.005%	0.621	0.981	0.005%	0.729	1.089	0.006%	0.387	0.747	0.004%
19,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.360	0.422	0.782	0.004%	0.499	0.859	0.005%	0.558	0.918	0.005%	0.283	0.643	0.003%
19,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.360	0.568	0.928	0.005%	0.499	0.859	0.005%	0.670	1.030	0.005%	0.325	0.685	0.004%
19,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.360	0.584	0.944	0.005%	0.537	0.897	0.005%	0.760	1.120	0.006%	0.368	0.728	0.004%
19,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.360	0.272	0.632	0.003%	0.278	0.638	0.003%	0.406	0.766	0.004%	0.201	0.561	0.003%
19,000	ZOR-8	Residence at 643743 Rd 64	508940	4767980	0.360	0.468	0.828	0.004%	0.452	0.812	0.004%	0.638	0.998	0.005%	0.311	0.671	0.004%
19,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.360	0.438	0.798	0.004%	0.479	0.839	0.004%	0.547	0.907	0.005%	0.278	0.638	0.003%
19,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.360	0.654	1.014	0.005%	0.484	0.844	0.004%	0.593	0.953	0.005%	0.296	0.656	0.003%
19,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.360	1.194	1.554	0.008%	1.853	2.213	0.012%	1.659	2.019	0.011%	0.887	1.247	0.007%
19,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.360	0.781	1.141	0.006%	0.976	1.336	0.007%	1.010	1.370	0.007%	0.525	0.885	0.005%
19,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.360	0.270	0.630	0.003%	0.303	0.663	0.003%	0.403	0.763	0.004%	0.198	0.558	0.003%
19,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.360	0.673	1.033	0.005%	0.495	0.855	0.004%	0.598	0.958	0.005%	0.299	0.659	0.003%
19,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.360	0.294	0.654	0.003%	0.297	0.657	0.003%	0.400	0.760	0.004%	0.202	0.562	0.003%
19,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.360	0.691	1.051	0.006%	1.102	1.462	0.008%	1.018	1.378	0.007%	0.513	0.873	0.005%
19,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.360	0.412	0.772	0.004%	0.481	0.841	0.004%	0.432	0.792	0.004%	0.272	0.632	0.003%
19,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.360	0.249	0.609	0.003%	0.254	0.614	0.003%	0.339	0.699	0.004%	0.173	0.533	0.003%
19,000	ING-6	Royal Road Public School	510337	4765360	0.360	0.517	0.877	0.005%	0.792	1.152	0.006%	0.801	1.161	0.006%	0.407	0.767	0.004%
19,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.360	0.301	0.661	0.003%	0.425	0.785	0.004%	0.435	0.795	0.004%	0.246	0.606	0.003%
19,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.360	0.375	0.735	0.004%	0.551	0.911	0.005%	0.565	0.925	0.005%	0.307	0.667	0.004%
19,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.360	0.519	0.879	0.005%	0.805	1.165	0.006%	0.932	1.292	0.007%	0.460	0.820	0.004%
19,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.360	0.378	0.738	0.004%	0.577	0.937	0.005%	0.651	1.011	0.005%	0.357	0.717	0.004%
19,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.360	0.923	1.283	0.007%	1.386	1.746	0.009%	1.907	2.267	0.012%	0.896	1.256	0.007%
19,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.360	0.920	1.280	0.007%	0.868	1.228	0.006%	1.746	2.106	0.011%	0.789	1.149	0.006%
19,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.360	0.783	1.143	0.006%	0.698	1.058	0.006%	1.317	1.677	0.009%	0.601	0.961	0.005%
19,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.360	0.458	0.818	0.004%	0.402	0.762	0.004%	0.690	1.050	0.006%	0.328	0.688	0.004%
19,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.360	0.386	0.746	0.004%	0.336	0.696	0.004%	0.561	0.921	0.005%	0.269	0.629	0.003%
19,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.360	0.277	0.637	0.003%	0.205	0.565	0.003%	0.325	0.685	0.004%	0.158	0.518	0.003%
19,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.360	0.185	0.545	0.003%	0.195	0.555	0.003%	0.269	0.629	0.003%	0.139	0.499	0.003%
19,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.360	0.111	0.471	0.002%	0.120	0.480	0.003%	0.142	0.502	0.003%	0.084	0.444	0.002%
19,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.360	0.132	0.492	0.003%	0.094	0.454	0.002%	0.120	0.480	0.003%	0.067	0.427	0.002%
19,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.360	0.691	1.051	0.006%	1.110	1.470	0.008%	1.223	1.583	0.008%	0.598	0.958	0.005%
19,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.360	0.746	1.106	0.006%	1.051	1.411	0.007%	1.439	1.799	0.009%	0.686	1.046	0.006%
19,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.360	0.737	1.097	0.006%	0.899	1.259	0.007%	1.397	1.757	0.009%	0.655	1.015	0.005%
19,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.360	0.811	1.171	0.006%	1.036	1.396	0.007%	1.565	1.925	0.010%	0.721	1.081	0.006%
19,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.360	0.639	0.999	0.005%	0.569	0.929	0.005%	0.998	1.358	0.007%	0.461	0.821	0.004%
19,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.360	0.564	0.924	0.005%	0.487	0.847	0.004%	0.847	1.207	0.006%	0.392	0.752	0.004%
19,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.360	0.528	0.888	0.005%	0.471	0.831	0.004%	0.787	1.147	0.006%	0.367	0.727	0.004%
19,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.360	0.365	0.725	0.004%	0.299	0.659	0.003%	0.500	0.860	0.005%	0.239	0.599	0.003%
19,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.360	0.340	0.700	0.004%	0.286	0.646	0.003%	0.472	0.832	0.004%	0.226	0.586	0.003%
19,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.360	0.302	0.662	0.003%	0.277	0.637	0.003%	0.432	0.792	0.004%	0.205	0.565	0.003%
19,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.360	0.132	0.492	0.003%	0.120	0.480	0.003%	0.186	0.546	0.003%	0.091	0.451	0.002%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Ethyl Benzene (CAS 100-41-4)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,900	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.435	1.740	2.175	0.11%	1.610	2.045	0.11%	2.267	2.702	0.14%	1.104	1.539	0.08%
1,900	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.435	2.480	2.915	0.15%	2.314	2.749	0.14%	3.170	3.605	0.19%	1.638	2.073	0.11%
1,900	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.435	2.606	3.041	0.16%	3.168	3.603	0.19%	3.717	4.152	0.22%	1.976	2.411	0.13%
1,900	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.435	2.151	2.586	0.14%	2.550	2.985	0.16%	2.846	3.281	0.17%	1.443	1.878	0.10%
1,900	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.435	2.905	3.340	0.18%	2.540	2.975	0.16%	3.428	3.863	0.20%	1.659	2.094	0.11%
1,900	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.435	2.975	3.410	0.18%	2.732	3.167	0.17%	3.890	4.325	0.23%	1.880	2.315	0.12%
1,900	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.435	1.389	1.824	0.10%	1.419	1.854	0.10%	2.070	2.505	0.13%	1.023	1.458	0.08%
1,900	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.435	2.384	2.819	0.15%	2.298	2.733	0.15%	3.264	3.699	0.19%	1.588	2.023	0.11%
1,900	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.435	2.242	2.677	0.14%	2.438	2.873	0.15%	2.790	3.225	0.17%	1.415	1.850	0.10%
1,900	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.435	3.338	3.773	0.20%	2.476	2.911	0.15%	3.021	3.456	0.18%	1.508	1.943	0.10%
1,900	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.435	6.089	6.524	0.34%	9.446	9.881	0.52%	8.450	8.885	0.47%	4.523	4.958	0.26%
1,900	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.435	3.977	4.412	0.23%	4.977	5.412	0.28%	5.146	5.581	0.29%	2.677	3.112	0.16%
1,900	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.435	1.379	1.814	0.10%	1.549	1.984	0.10%	2.052	2.487	0.13%	1.012	1.447	0.08%
1,900	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.435	3.432	3.867	0.20%	2.529	2.964	0.16%	3.045	3.480	0.18%	1.523	1.958	0.10%
1,900	ING-2	Laurie Hawkins Public School	509019	4765860	0.435	1.501	1.936	0.10%	1.519	1.954	0.10%	2.040	2.475	0.13%	1.029	1.464	0.08%
1,900	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.435	3.524	3.959	0.21%	5.616	6.051	0.32%	5.189	5.624	0.30%	2.616	3.051	0.16%
1,900	ING-4	On the river north of 209 County Road 9	509480	4765180	0.435	2.100	2.535	0.13%	2.458	2.893	0.15%	2.204	2.639	0.14%	1.384	1.819	0.10%
1,900	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.435	1.272	1.707	0.09%	1.294	1.729	0.09%	1.728	2.163	0.11%	0.880	1.315	0.07%
1,900	ING-6	Royal Road Public School	510337	4765360	0.435	2.635	3.070	0.16%	4.037	4.472	0.24%	4.083	4.518	0.24%	2.074	2.509	0.13%
1,900	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.435	1.536	1.971	0.10%	2.167	2.602	0.14%	2.219	2.654	0.14%	1.254	1.689	0.09%
1,900	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.435	1.912	2.347	0.12%	2.811	3.246	0.17%	2.880	3.315	0.17%	1.566	2.001	0.11%
1,900	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.435	2.649	3.084	0.16%	4.110	4.545	0.24%	4.748	5.183	0.27%	2.348	2.783	0.15%
1,900	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.435	1.928	2.363	0.12%	2.946	3.381	0.18%	3.319	3.754	0.20%	1.820	2.255	0.12%
1,900	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.435	4.715	5.150	0.27%	7.082	7.517	0.40%	9.716	10.151	0.53%	4.577	5.012	0.26%
1,900	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.435	4.703	5.138	0.27%	4.417	4.852	0.26%	8.910	9.345	0.49%	4.032	4.467	0.24%
1,900	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.435	4.003	4.438	0.23%	3.561	3.996	0.21%	6.731	7.166	0.38%	3.069	3.504	0.18%
1,900	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.435	2.332	2.767	0.15%	2.045	2.480	0.13%	3.517	3.952	0.21%	1.675	2.110	0.11%
1,900	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.435	1.973	2.408	0.13%	1.713	2.148	0.11%	2.859	3.294	0.17%	1.374	1.809	0.10%
1,900	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.435	1.412	1.847	0.10%	1.046	1.481	0.08%	1.657	2.092	0.11%	0.808	1.243	0.07%
1,900	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.435	0.946	1.381	0.07%	0.998	1.433	0.08%	1.372	1.807	0.10%	0.710	1.145	0.06%
1,900	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.435	0.566	1.001	0.05%	0.611	1.046	0.06%	0.721	1.156	0.06%	0.428	0.863	0.05%
1,900	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.435	0.676	1.111	0.06%	0.478	0.913	0.05%	0.613	1.048	0.06%	0.340	0.775	0.04%
1,900	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.435	3.525	3.960	0.21%	5.668	6.103	0.32%	6.232	6.667	0.35%	3.051	3.486	0.18%
1,900	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.435	3.807	4.242	0.22%	5.364	5.799	0.31%	7.332	7.767	0.41%	3.502	3.937	0.21%
1,900	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.435	3.766	4.201	0.22%	4.587	5.022	0.26%	7.122	7.557	0.40%	3.345	3.780	0.20%
1,900	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.435	4.147	4.582	0.24%	5.279	5.714	0.30%	7.983	8.418	0.44%	3.685	4.120	0.22%
1,900	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.435	3.269	3.704	0.19%	2.897	3.332	0.18%	5.096	5.531	0.29%	2.355	2.790	0.15%
1,900	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.435	2.883	3.318	0.17%	2.477	2.912	0.15%	4.331	4.766	0.25%	2.003	2.438	0.13%
1,900	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.435	2.698	3.133	0.16%	2.395	2.830	0.15%	4.620	5.055	0.23%	1.873	2.308	0.12%
1,900	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.435	1.866	2.301	0.12%	1.521	1.956	0.10%	2.552	2.987	0.16%	1.217	1.652	0.09%
1,900	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.435	1.736	2.171	0.11%	1.454	1.889	0.10%	2.410	2.845	0.15%	1.152	1.587	0.08%
1,900	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.435	1.547	1.982	0.10%	1.411	1.846	0.10%	2.207	2.642	0.14%	1.047	1.482	0.08%
1,900	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.435	0.676	1.111	0.06%	0.610	1.045	0.06%	0.947	1.382	0.07%	0.466	0.901	0.05%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Ethyl Benzene (CAS 100-41-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.435	0.135	0.570	0.06%	0.157	0.592	0.06%	0.162	0.597	0.06%	0.105	0.540	0.05%
1,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.435	0.128	0.563	0.06%	0.178	0.613	0.06%	0.145	0.580	0.06%	0.086	0.521	0.05%
1,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.435	0.128	0.563	0.06%	0.133	0.568	0.06%	0.159	0.594	0.06%	0.090	0.525	0.05%
1,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.435	0.100	0.535	0.05%	0.150	0.585	0.06%	0.133	0.568	0.06%	0.088	0.523	0.05%
1,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.435	0.279	0.714	0.07%	0.192	0.627	0.06%	0.279	0.714	0.07%	0.184	0.619	0.06%
1,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.435	0.373	0.808	0.08%	0.383	0.818	0.08%	0.460	0.895	0.09%	0.290	0.725	0.07%
1,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.435	0.075	0.510	0.05%	0.121	0.556	0.06%	0.123	0.558	0.06%	0.082	0.517	0.05%
1,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.435	0.284	0.719	0.07%	0.292	0.747	0.07%	0.310	0.727	0.07%	0.177	0.612	0.06%
1,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.435	0.284	0.719	0.07%	0.368	0.803	0.08%	0.382	0.817	0.08%	0.234	0.669	0.07%
1,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.435	0.159	0.594	0.06%	0.235	0.670	0.07%	0.256	0.691	0.07%	0.143	0.578	0.06%
1,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.435	0.342	0.777	0.08%	0.762	1.197	0.12%	0.663	1.098	0.11%	0.411	0.846	0.08%
1,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.435	0.195	0.630	0.06%	0.353	0.788	0.08%	0.325	0.760	0.08%	0.203	0.638	0.06%
1,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.435	0.062	0.497	0.05%	0.076	0.511	0.05%	0.103	0.538	0.05%	0.055	0.490	0.05%
1,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.435	0.168	0.603	0.06%	0.224	0.659	0.07%	0.286	0.721	0.07%	0.150	0.585	0.06%
1,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.435	0.061	0.496	0.05%	0.133	0.568	0.06%	0.151	0.586	0.06%	0.085	0.520	0.05%
1,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.435	0.177	0.612	0.06%	0.262	0.697	0.07%	0.271	0.706	0.07%	0.165	0.600	0.06%
1,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.435	0.082	0.517	0.05%	0.102	0.537	0.05%	0.116	0.551	0.06%	0.072	0.507	0.05%
1,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.435	0.057	0.492	0.05%	0.111	0.546	0.05%	0.118	0.553	0.06%	0.071	0.506	0.05%
1,000	ING-6	Royal Road Public School	510337	4765360	0.435	0.104	0.539	0.05%	0.181	0.616	0.06%	0.160	0.595	0.06%	0.104	0.539	0.05%
1,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.435	0.050	0.485	0.05%	0.085	0.520	0.05%	0.086	0.521	0.05%	0.052	0.487	0.05%
1,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.435	0.050	0.485	0.05%	0.115	0.550	0.05%	0.098	0.533	0.05%	0.066	0.501	0.05%
1,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.435	0.153	0.588	0.06%	0.255	0.690	0.07%	0.301	0.736	0.07%	0.158	0.593	0.06%
1,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.435	0.097	0.532	0.05%	0.184	0.619	0.06%	0.204	0.639	0.06%	0.125	0.560	0.06%
1,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.435	0.235	0.670	0.07%	0.860	1.295	0.13%	0.830	1.265	0.13%	0.503	0.938	0.09%
1,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.435	0.294	0.729	0.07%	0.623	1.058	0.11%	0.770	1.205	0.12%	0.419	0.854	0.09%
1,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.435	0.340	0.775	0.08%	0.566	1.001	0.10%	0.949	1.384	0.14%	0.469	0.904	0.09%
1,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.435	0.209	0.644	0.06%	0.175	0.610	0.06%	0.233	0.668	0.07%	0.135	0.570	0.06%
1,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.435	0.126	0.561	0.06%	0.133	0.568	0.06%	0.191	0.626	0.06%	0.103	0.538	0.05%
1,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.435	0.082	0.517	0.05%	0.069	0.504	0.05%	0.090	0.525	0.05%	0.050	0.485	0.05%
1,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.435	0.047	0.482	0.05%	0.077	0.512	0.05%	0.102	0.537	0.05%	0.056	0.491	0.05%
1,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.435	0.020	0.455	0.05%	0.029	0.464	0.05%	0.036	0.471	0.05%	0.021	0.456	0.05%
1,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.435	0.019	0.454	0.05%	0.022	0.457	0.05%	0.029	0.464	0.05%	0.016	0.451	0.05%
1,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.435	0.208	0.643	0.06%	0.479	0.914	0.09%	0.344	0.779	0.08%	0.249	0.684	0.07%
1,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.435	0.177	0.612	0.06%	0.504	0.939	0.09%	0.375	0.810	0.08%	0.205	0.640	0.06%
1,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.435	0.285	0.720	0.07%	0.428	0.863	0.09%	0.734	1.169	0.12%	0.393	0.828	0.08%
1,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.435	0.223	0.658	0.07%	0.424	0.859	0.09%	0.688	1.123	0.11%	0.369	0.804	0.08%
1,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.435	0.238	0.673	0.07%	0.276	0.711	0.07%	0.384	0.819	0.08%	0.199	0.634	0.06%
1,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.435	0.159	0.594	0.06%	0.293	0.728	0.07%	0.374	0.809	0.08%	0.194	0.629	0.06%
1,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.435	0.186	0.621	0.06%	0.316	0.751	0.08%	0.418	0.853	0.09%	0.224	0.659	0.07%
1,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.435	0.165	0.600	0.06%	0.177	0.612	0.06%	0.295	0.730	0.07%	0.155	0.590	0.06%
1,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.435	0.200	0.635	0.06%	0.194	0.629	0.06%	0.211	0.646	0.06%	0.130	0.565	0.06%
1,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.435	0.076	0.511	0.05%	0.134	0.569	0.06%	0.184	0.619	0.06%	0.100	0.535	0.05%
1,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.435	0.048	0.483	0.05%	0.035	0.470	0.05%	0.042	0.477	0.05%	0.028	0.463	0.05%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Ethylene Dibromide (CAS 106-93-4)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
3	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.039	0.011	0.049	2%	0.011	0.049	2%	0.011	0.049	2%	0.010	0.049	2%
3	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.039	0.010	0.049	2%	0.010	0.049	2%	0.010	0.049	2%	0.010	0.048	2%
3	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.039	0.008	0.046	2%	0.008	0.046	2%	0.008	0.046	2%	0.008	0.046	2%
3	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.039	0.007	0.046	2%	0.007	0.046	2%	0.007	0.046	2%	0.007	0.046	2%
3	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.039	0.035	0.073	2%	0.034	0.073	2%	0.034	0.073	2%	0.034	0.073	2%
3	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.039	0.042	0.081	3%	0.042	0.081	3%	0.042	0.081	3%	0.042	0.081	3%
3	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.039	0.007	0.045	2%	0.007	0.045	2%	0.007	0.045	2%	0.007	0.045	2%
3	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.039	0.029	0.067	2%	0.029	0.067	2%	0.029	0.067	2%	0.029	0.067	2%
3	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.039	0.013	0.051	2%	0.012	0.051	2%	0.012	0.051	2%	0.012	0.051	2%
3	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.039	0.010	0.049	2%	0.010	0.049	2%	0.010	0.049	2%	0.010	0.049	2%
3	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.039	0.016	0.054	2%	0.016	0.055	2%	0.016	0.055	2%	0.016	0.054	2%
3	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.039	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%
3	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.039	0.005	0.044	1%	0.005	0.044	1%	0.005	0.044	1%	0.005	0.044	1%
3	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.039	0.008	0.046	2%	0.008	0.046	2%	0.008	0.046	2%	0.008	0.046	2%
3	ING-2	Laurie Hawkins Public School	509019	4765860	0.039	0.006	0.044	1%	0.006	0.044	1%	0.006	0.044	1%	0.006	0.044	1%
3	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.039	0.009	0.047	2%	0.008	0.047	2%	0.008	0.047	2%	0.008	0.047	2%
3	ING-4	On the river north of 209 County Road 9	509480	4765180	0.039	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%
3	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.039	0.003	0.042	1%	0.003	0.042	1%	0.003	0.042	1%	0.003	0.042	1%
3	ING-6	Royal Road Public School	510337	4765360	0.039	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%
3	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.039	0.002	0.040	1%	0.002	0.040	1%	0.002	0.040	1%	0.002	0.040	1%
3	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.039	0.003	0.042	1%	0.003	0.042	1%	0.003	0.042	1%	0.003	0.042	1%
3	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.039	0.004	0.043	1%	0.004	0.043	1%	0.004	0.043	1%	0.004	0.043	1%
3	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.039	0.004	0.042	1%	0.004	0.042	1%	0.004	0.042	1%	0.004	0.042	1%
3	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.039	0.014	0.053	2%	0.015	0.053	2%	0.015	0.053	2%	0.014	0.052	2%
3	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.039	0.014	0.053	2%	0.013	0.052	2%	0.014	0.052	2%	0.013	0.052	2%
3	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.039	0.011	0.049	2%	0.011	0.049	2%	0.011	0.049	2%	0.010	0.049	2%
3	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.039	0.012	0.050	2%	0.012	0.050	2%	0.012	0.050	2%	0.012	0.050	2%
3	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.039	0.010	0.048	2%	0.010	0.048	2%	0.010	0.048	2%	0.009	0.048	2%
3	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.039	0.004	0.042	1%	0.004	0.042	1%	0.004	0.042	1%	0.004	0.042	1%
3	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.039	0.003	0.042	1%	0.003	0.042	1%	0.003	0.042	1%	0.003	0.042	1%
3	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.039	0.001	0.040	1%	0.001	0.040	1%	0.001	0.040	1%	0.001	0.040	1%
3	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.039	0.001	0.039	1%	0.001	0.039	1%	0.001	0.039	1%	0.001	0.039	1%
3	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.039	0.005	0.043	1%	0.005	0.044	1%	0.005	0.043	1%	0.005	0.043	1%
3	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.039	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%	0.011	0.050	2%
3	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.039	0.007	0.045	2%	0.007	0.046	2%	0.007	0.046	2%	0.006	0.045	1%
3	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.039	0.008	0.047	2%	0.008	0.047	2%	0.009	0.047	2%	0.008	0.046	2%
3	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.039	0.013	0.052	2%	0.013	0.051	2%	0.013	0.051	2%	0.013	0.051	2%
3	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.039	0.009	0.047	2%	0.009	0.047	2%	0.009	0.047	2%	0.009	0.047	2%
3	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.039	0.008	0.046	2%	0.008	0.046	2%	0.008	0.046	2%	0.007	0.046	2%
3	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.039	0.006	0.045	1%	0.006	0.045	1%	0.006	0.045	1%	0.006	0.045	1%
3	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.039	0.010	0.048	2%	0.010	0.049	2%	0.010	0.049	2%	0.010	0.048	2%
3	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.039	0.005	0.044	1%	0.005	0.043	1%	0.005	0.043	1%	0.005	0.043	1%
3	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.039	0.002	0.040	1%	0.002	0.040	1%	0.002	0.040	1%	0.002	0.040	1%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Heptane (CAS 142-82-5)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
11,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.410	0.074	0.484	0.004%	0.083	0.493	0.004%	0.086	0.496	0.005%	0.054	0.464	0.004%
11,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.410	0.071	0.481	0.004%	0.094	0.504	0.005%	0.076	0.486	0.004%	0.044	0.454	0.004%
11,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.410	0.069	0.479	0.004%	0.072	0.482	0.004%	0.082	0.492	0.004%	0.046	0.456	0.004%
11,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.410	0.055	0.465	0.004%	0.079	0.489	0.004%	0.069	0.479	0.004%	0.045	0.455	0.004%
11,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.410	0.152	0.562	0.005%	0.102	0.512	0.005%	0.147	0.557	0.005%	0.095	0.505	0.005%
11,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.410	0.202	0.612	0.006%	0.205	0.615	0.006%	0.245	0.655	0.006%	0.149	0.559	0.005%
11,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.410	0.040	0.450	0.004%	0.066	0.476	0.004%	0.066	0.476	0.004%	0.042	0.452	0.004%
11,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.410	0.153	0.563	0.005%	0.155	0.565	0.005%	0.164	0.574	0.005%	0.091	0.501	0.005%
11,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.410	0.147	0.557	0.005%	0.195	0.605	0.005%	0.201	0.611	0.006%	0.120	0.530	0.005%
11,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.410	0.087	0.478	0.005%	0.125	0.535	0.005%	0.134	0.544	0.005%	0.074	0.484	0.004%
11,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.410	0.179	0.589	0.005%	0.398	0.808	0.007%	0.347	0.757	0.007%	0.212	0.622	0.006%
11,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.410	0.103	0.513	0.005%	0.186	0.596	0.005%	0.171	0.581	0.005%	0.105	0.515	0.005%
11,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.410	0.033	0.443	0.004%	0.040	0.450	0.004%	0.053	0.463	0.004%	0.028	0.438	0.004%
11,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.410	0.092	0.502	0.005%	0.117	0.527	0.005%	0.149	0.559	0.005%	0.077	0.487	0.004%
11,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.410	0.032	0.442	0.004%	0.071	0.481	0.004%	0.080	0.490	0.004%	0.044	0.454	0.004%
11,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.410	0.093	0.503	0.005%	0.137	0.547	0.005%	0.141	0.551	0.005%	0.085	0.495	0.004%
11,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.410	0.043	0.453	0.004%	0.054	0.464	0.004%	0.061	0.471	0.004%	0.037	0.447	0.004%
11,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.410	0.031	0.441	0.004%	0.059	0.469	0.004%	0.063	0.473	0.004%	0.037	0.447	0.004%
11,000	ING-6	Royal Road Public School	510337	4765360	0.410	0.058	0.468	0.004%	0.095	0.505	0.005%	0.084	0.494	0.004%	0.053	0.463	0.004%
11,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.410	0.027	0.437	0.004%	0.045	0.455	0.004%	0.045	0.455	0.004%	0.027	0.437	0.004%
11,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.410	0.027	0.437	0.004%	0.061	0.471	0.004%	0.051	0.461	0.004%	0.034	0.444	0.004%
11,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.410	0.082	0.492	0.004%	0.136	0.546	0.005%	0.157	0.567	0.005%	0.081	0.491	0.004%
11,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.410	0.052	0.462	0.004%	0.097	0.507	0.005%	0.108	0.518	0.005%	0.064	0.474	0.004%
11,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.410	0.128	0.538	0.005%	0.453	0.863	0.008%	0.437	0.847	0.008%	0.259	0.669	0.006%
11,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.410	0.157	0.567	0.005%	0.324	0.734	0.007%	0.407	0.817	0.007%	0.216	0.626	0.006%
11,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.410	0.183	0.593	0.005%	0.304	0.714	0.006%	0.501	0.911	0.008%	0.242	0.652	0.006%
11,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.410	0.111	0.521	0.005%	0.091	0.501	0.005%	0.125	0.535	0.005%	0.069	0.479	0.004%
11,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.410	0.069	0.479	0.004%	0.070	0.480	0.004%	0.100	0.510	0.005%	0.053	0.463	0.004%
11,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.410	0.044	0.454	0.004%	0.037	0.447	0.004%	0.047	0.457	0.004%	0.026	0.436	0.004%
11,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.410	0.025	0.435	0.004%	0.041	0.451	0.004%	0.054	0.464	0.004%	0.029	0.439	0.004%
11,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.410	0.011	0.421	0.004%	0.015	0.425	0.004%	0.019	0.429	0.004%	0.011	0.421	0.004%
11,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.410	0.010	0.420	0.004%	0.012	0.422	0.004%	0.015	0.425	0.004%	0.008	0.418	0.004%
11,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.410	0.111	0.521	0.005%	0.254	0.664	0.006%	0.185	0.595	0.005%	0.128	0.538	0.005%
11,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.410	0.097	0.507	0.005%	0.267	0.677	0.006%	0.193	0.603	0.005%	0.106	0.516	0.005%
11,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.410	0.153	0.563	0.005%	0.226	0.636	0.006%	0.384	0.794	0.007%	0.202	0.612	0.006%
11,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.410	0.119	0.529	0.005%	0.221	0.631	0.006%	0.361	0.771	0.007%	0.190	0.600	0.005%
11,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.410	0.131	0.541	0.005%	0.148	0.558	0.005%	0.200	0.610	0.006%	0.103	0.513	0.005%
11,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.410	0.086	0.496	0.005%	0.153	0.563	0.005%	0.197	0.607	0.006%	0.100	0.510	0.005%
11,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.410	0.100	0.510	0.005%	0.168	0.578	0.005%	0.220	0.630	0.006%	0.115	0.525	0.005%
11,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.410	0.090	0.500	0.005%	0.092	0.502	0.005%	0.160	0.570	0.005%	0.080	0.490	0.004%
11,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.410	0.107	0.517	0.005%	0.102	0.512	0.005%	0.111	0.521	0.005%	0.067	0.477	0.004%
11,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.410	0.041	0.451	0.004%	0.072	0.482	0.004%	0.097	0.507	0.005%	0.051	0.461	0.004%
11,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.410	0.026	0.436	0.004%	0.019	0.429	0.004%	0.022	0.432	0.004%	0.014	0.424	0.004%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

Hexane (CAS 110-54-3)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2,500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.760	0.055	0.815	0.033%	0.063	0.823	0.033%	0.064	0.824	0.033%	0.041	0.801	0.032%
2,500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.760	0.052	0.812	0.032%	0.071	0.831	0.033%	0.058	0.818	0.033%	0.034	0.794	0.032%
2,500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.760	0.051	0.811	0.032%	0.054	0.814	0.033%	0.062	0.822	0.033%	0.035	0.795	0.032%
2,500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.760	0.041	0.801	0.032%	0.059	0.819	0.033%	0.052	0.812	0.032%	0.034	0.794	0.032%
2,500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.760	0.113	0.873	0.035%	0.077	0.837	0.033%	0.111	0.871	0.035%	0.072	0.832	0.033%
2,500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.760	0.151	0.911	0.036%	0.153	0.913	0.037%	0.183	0.943	0.038%	0.113	0.873	0.035%
2,500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.760	0.030	0.790	0.032%	0.049	0.809	0.032%	0.049	0.809	0.032%	0.032	0.792	0.032%
2,500	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.760	0.114	0.874	0.035%	0.116	0.876	0.035%	0.123	0.883	0.035%	0.069	0.829	0.033%
2,500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.760	0.112	0.872	0.035%	0.146	0.906	0.036%	0.151	0.911	0.036%	0.091	0.851	0.034%
2,500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.760	0.065	0.825	0.033%	0.094	0.854	0.034%	0.101	0.861	0.034%	0.056	0.816	0.033%
2,500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.760	0.135	0.895	0.036%	0.300	1.060	0.042%	0.261	1.021	0.041%	0.160	0.920	0.037%
2,500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.760	0.077	0.837	0.033%	0.140	0.900	0.036%	0.129	0.889	0.036%	0.079	0.839	0.034%
2,500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.760	0.025	0.785	0.031%	0.030	0.790	0.032%	0.040	0.800	0.032%	0.021	0.781	0.031%
2,500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.760	0.068	0.828	0.033%	0.088	0.848	0.034%	0.112	0.872	0.035%	0.058	0.818	0.033%
2,500	ING-2	Laurie Hawkins Public School	509019	4765860	0.760	0.024	0.784	0.031%	0.053	0.813	0.033%	0.060	0.820	0.033%	0.033	0.793	0.032%
2,500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.760	0.070	0.830	0.033%	0.103	0.863	0.035%	0.106	0.866	0.035%	0.064	0.824	0.033%
2,500	ING-4	On the river north of 209 County Road 9	509480	4765180	0.760	0.032	0.792	0.032%	0.040	0.800	0.032%	0.046	0.806	0.032%	0.028	0.788	0.032%
2,500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.760	0.023	0.783	0.031%	0.044	0.804	0.032%	0.047	0.807	0.032%	0.028	0.788	0.032%
2,500	ING-6	Royal Road Public School	510337	4765360	0.760	0.043	0.803	0.032%	0.072	0.832	0.033%	0.063	0.823	0.033%	0.040	0.800	0.032%
2,500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.760	0.020	0.780	0.031%	0.034	0.794	0.032%	0.034	0.794	0.032%	0.020	0.780	0.031%
2,500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.760	0.020	0.780	0.031%	0.046	0.806	0.032%	0.038	0.798	0.032%	0.026	0.786	0.031%
2,500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.760	0.062	0.822	0.033%	0.102	0.862	0.034%	0.118	0.878	0.035%	0.062	0.822	0.033%
2,500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.760	0.039	0.799	0.032%	0.073	0.833	0.033%	0.081	0.841	0.034%	0.049	0.809	0.032%
2,500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.760	0.095	0.855	0.034%	0.341	1.101	0.044%	0.328	1.088	0.044%	0.196	0.956	0.038%
2,500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.760	0.118	0.878	0.035%	0.245	1.005	0.040%	0.306	1.066	0.043%	0.164	0.924	0.037%
2,500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.760	0.137	0.897	0.036%	0.227	0.987	0.039%	0.376	1.136	0.045%	0.183	0.943	0.038%
2,500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.760	0.084	0.844	0.034%	0.069	0.829	0.033%	0.093	0.853	0.034%	0.053	0.813	0.033%
2,500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.760	0.051	0.811	0.032%	0.053	0.813	0.033%	0.075	0.835	0.033%	0.040	0.800	0.032%
2,500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.760	0.033	0.793	0.032%	0.028	0.788	0.032%	0.036	0.796	0.032%	0.020	0.780	0.031%
2,500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.760	0.019	0.779	0.031%	0.031	0.791	0.032%	0.041	0.801	0.032%	0.022	0.782	0.031%
2,500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.760	0.008	0.768	0.031%	0.012	0.772	0.031%	0.014	0.774	0.031%	0.008	0.768	0.031%
2,500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.760	0.008	0.768	0.031%	0.009	0.769	0.031%	0.011	0.771	0.031%	0.006	0.766	0.031%
2,500	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.760	0.083	0.843	0.034%	0.191	0.951	0.038%	0.138	0.898	0.036%	0.097	0.857	0.034%
2,500	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.760	0.072	0.832	0.033%	0.200	0.960	0.038%	0.147	0.907	0.036%	0.080	0.840	0.034%
2,500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.760	0.114	0.874	0.035%	0.170	0.930	0.037%	0.290	1.050	0.042%	0.153	0.913	0.037%
2,500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.760	0.089	0.849	0.034%	0.167	0.927	0.037%	0.272	1.032	0.041%	0.144	0.904	0.036%
2,500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.760	0.097	0.857	0.034%	0.111	0.871	0.035%	0.151	0.911	0.036%	0.078	0.838	0.034%
2,500	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.760	0.064	0.824	0.033%	0.116	0.876	0.035%	0.148	0.908	0.036%	0.076	0.836	0.033%
2,500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.760	0.075	0.835	0.033%	0.126	0.886	0.035%	0.166	0.926	0.037%	0.087	0.847	0.034%
2,500	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.760	0.067	0.827	0.033%	0.070	0.830	0.033%	0.119	0.879	0.035%	0.060	0.820	0.033%
2,500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.760	0.080	0.840	0.034%	0.077	0.837	0.033%	0.083	0.843	0.034%	0.051	0.811	0.032%
2,500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.760	0.031	0.791	0.032%	0.054	0.814	0.033%	0.073	0.833	0.033%	0.039	0.799	0.032%
2,500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.760	0.019	0.779	0.031%	0.014	0.774	0.031%	0.017	0.777	0.031%	0.011	0.771	0.031%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Isopropyl Alcohol (CAS 67-63-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7,300	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	7,500	0.281	7.781	0.11%	0.326	7.826	0.11%	0.335	7.835	0.11%	0.219	7.719	0.11%
7,300	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	7,500	0.265	7.765	0.11%	0.371	7.871	0.11%	0.301	7.801	0.11%	0.179	7.679	0.11%
7,300	ZOR-3	Residence at 663951 Rd 66	510216	4770270	7,500	0.267	7.767	0.11%	0.276	7.776	0.11%	0.332	7.832	0.11%	0.188	7.688	0.11%
7,300	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	7,500	0.208	7.708	0.11%	0.312	7.812	0.11%	0.277	7.777	0.11%	0.184	7.684	0.11%
7,300	ZOR-5	Residence at 334789 33rd Line	508931	4768760	7,500	0.577	8.077	0.11%	0.399	8.099	0.11%	0.578	8.078	0.11%	0.382	7.882	0.11%
7,300	ZOR-6	Residence at 334742 33rd Line	509185	4768350	7,500	0.773	8.273	0.11%	0.793	8.293	0.11%	0.951	8.451	0.12%	0.603	8.103	0.11%
7,300	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	7,500	0.155	7.655	0.10%	0.251	7.751	0.11%	0.253	7.753	0.11%	0.170	7.670	0.11%
7,300	ZOR-8	Residence at 643743 Road 64	508940	4767980	7,500	0.589	8.089	0.11%	0.607	8.107	0.11%	0.643	8.143	0.11%	0.367	7.867	0.11%
7,300	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	7,500	0.591	8.091	0.11%	0.766	8.266	0.11%	0.791	8.291	0.11%	0.486	7.986	0.11%
7,300	ZOR-10	Residence at 334578 33rd Line	509739	4766780	7,500	0.331	7.831	0.11%	0.488	7.988	0.11%	0.531	8.031	0.11%	0.297	7.797	0.11%
7,300	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	7,500	0.712	8.212	0.11%	1.588	9.088	0.12%	1.375	8.875	0.12%	0.855	8.355	0.11%
7,300	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	7,500	0.405	7.905	0.11%	0.735	8.235	0.11%	0.675	8.175	0.11%	0.423	7.923	0.11%
7,300	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	7,500	0.128	7.628	0.10%	0.159	7.714	0.10%	0.214	7.714	0.11%	0.114	7.614	0.10%
7,300	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	7,500	0.347	7.847	0.11%	0.467	7.967	0.11%	0.594	8.094	0.11%	0.311	7.811	0.11%
7,300	ING-2	Laurie Hawkins Public School	509019	4765860	7,500	0.127	7.627	0.10%	0.277	7.777	0.11%	0.314	7.814	0.11%	0.177	7.677	0.11%
7,300	ING-3	Ingersoll District Collegiate Institute	510512	4766230	7,500	0.369	7.869	0.11%	0.545	8.045	0.11%	0.562	8.062	0.11%	0.342	7.842	0.11%
7,300	ING-4	On the river north of 209 County Road 9	509480	4765180	7,500	0.171	7.671	0.11%	0.212	7.712	0.11%	0.241	7.741	0.11%	0.150	7.650	0.10%
7,300	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	7,500	0.119	7.619	0.10%	0.230	7.730	0.11%	0.244	7.744	0.11%	0.148	7.648	0.10%
7,300	ING-6	Royal Road Public School	510337	4765360	7,500	0.215	7.715	0.11%	0.375	7.875	0.11%	0.332	7.832	0.11%	0.215	7.715	0.11%
7,300	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	7,500	0.104	7.604	0.10%	0.176	7.676	0.11%	0.178	7.678	0.11%	0.109	7.609	0.10%
7,300	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	7,500	0.105	7.605	0.10%	0.239	7.739	0.11%	0.203	7.703	0.11%	0.137	7.637	0.10%
7,300	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	7,500	0.318	7.818	0.11%	0.530	8.030	0.11%	0.626	8.126	0.11%	0.328	7.828	0.11%
7,300	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	7,500	0.201	7.701	0.11%	0.381	7.881	0.11%	0.423	7.923	0.11%	0.260	7.760	0.11%
7,300	SWO-1	Residence at 584052 Beachville Road	511124	4766750	7,500	0.488	7.988	0.11%	1.790	9.290	0.13%	1.720	9.220	0.13%	1.045	8.545	0.12%
7,300	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	7,500	0.611	8.111	0.11%	1.299	8.799	0.12%	1.596	9.096	0.12%	0.872	8.372	0.11%
7,300	SWO-3	Residence at 584142 Beachville Road	511722	4767480	7,500	0.705	8.205	0.11%	1.176	8.676	0.12%	1.967	9.467	0.13%	0.976	8.476	0.12%
7,300	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	7,500	0.435	7.935	0.11%	0.363	7.863	0.11%	0.482	7.982	0.11%	0.280	7.780	0.11%
7,300	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	7,500	0.261	7.761	0.11%	0.276	7.776	0.11%	0.395	7.895	0.11%	0.215	7.715	0.11%
7,300	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	7,500	0.172	7.672	0.11%	0.142	7.642	0.10%	0.188	7.688	0.11%	0.104	7.604	0.10%
7,300	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	7,500	0.098	7.598	0.10%	0.160	7.660	0.10%	0.213	7.713	0.11%	0.117	7.617	0.10%
7,300	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	7,500	0.042	7.542	0.10%	0.060	7.560	0.10%	0.074	7.574	0.10%	0.043	7.543	0.10%
7,300	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	7,500	0.040	7.540	0.10%	0.046	7.546	0.10%	0.059	7.559	0.10%	0.033	7.533	0.10%
7,300	SWO-10	Residence at 563977 Karn Road	510980	4765990	7,500	0.433	7.933	0.11%	0.995	8.495	0.12%	0.712	8.212	0.11%	0.517	8.017	0.11%
7,300	SWO-11	Residence at 564028 Karn Road	511396	4766310	7,500	0.368	7.868	0.11%	1.049	8.549	0.12%	0.780	8.280	0.11%	0.427	7.927	0.11%
7,300	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	7,500	0.591	8.091	0.11%	0.889	8.389	0.11%	1.523	9.023	0.12%	0.817	8.317	0.11%
7,300	SWO-13	Centreville Pond and Conservation Area	511570	4766920	7,500	0.462	7.962	0.11%	0.885	8.385	0.11%	1.429	8.929	0.12%	0.767	8.267	0.11%
7,300	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	7,500	0.492	7.992	0.11%	0.574	8.074	0.11%	0.799	8.299	0.11%	0.415	7.915	0.11%
7,300	SWO-15	Residences at 564146 Karn Road	512251	4767100	7,500	0.331	7.831	0.11%	0.611	8.111	0.11%	0.775	8.275	0.11%	0.403	7.903	0.11%
7,300	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	7,500	0.387	7.887	0.11%	0.657	8.157	0.11%	0.866	8.366	0.11%	0.465	7.965	0.11%
7,300	SWO-17	Residence at 564226 Karn Road	512958	4767760	7,500	0.342	7.842	0.11%	0.367	7.867	0.11%	0.610	8.110	0.11%	0.322	7.822	0.11%
7,300	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	7,500	0.416	7.916	0.11%	0.403	7.903	0.11%	0.438	7.938	0.11%	0.271	7.771	0.11%
7,300	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	7,500	0.158	7.658	0.10%	0.278	7.778	0.11%	0.382	7.882	0.11%	0.207	7.707	0.11%
7,300	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	7,500	0.100	7.600	0.10%	0.074	7.574	0.10%	0.088	7.588	0.10%	0.058	7.558	0.10%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**m/p-Xylene (CAS 108-38-3)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
3,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.850	4.230	5.080	0.17%	3.857	4.707	0.16%	5.475	6.325	0.21%	2.626	3.476	0.12%
3,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.850	6.021	6.871	0.23%	5.565	6.415	0.21%	7.622	8.472	0.28%	3.897	4.747	0.16%
3,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.850	6.297	7.147	0.24%	7.600	8.450	0.28%	8.877	9.727	0.32%	4.702	5.552	0.19%
3,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.850	5.182	6.032	0.20%	6.134	6.984	0.23%	6.796	7.646	0.25%	3.436	4.286	0.14%
3,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.850	7.082	7.932	0.26%	6.079	6.929	0.23%	8.283	9.133	0.30%	3.947	4.797	0.16%
3,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.850	7.221	8.071	0.27%	6.529	7.379	0.25%	9.419	10.269	0.34%	4.470	5.320	0.18%
3,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.850	3.355	4.205	0.14%	3.409	4.259	0.14%	4.948	5.798	0.19%	2.433	3.283	0.11%
3,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.850	5.724	6.574	0.22%	5.488	6.338	0.21%	7.889	8.739	0.29%	3.776	4.626	0.15%
3,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.850	5.464	6.314	0.21%	5.822	6.672	0.22%	6.709	7.559	0.25%	3.366	4.216	0.14%
3,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.850	8.055	8.905	0.30%	5.994	6.844	0.23%	7.213	8.063	0.27%	3.586	4.436	0.15%
3,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.850	14.692	15.542	0.52%	22.627	23.477	0.78%	20.166	21.016	0.70%	10.762	11.612	0.39%
3,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.850	9.553	10.403	0.35%	11.940	12.790	0.43%	12.284	13.134	0.44%	6.369	7.219	0.24%
3,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.850	3.322	4.172	0.14%	3.726	4.576	0.15%	4.901	5.751	0.19%	2.407	3.257	0.11%
3,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.850	8.253	9.103	0.30%	6.113	6.963	0.23%	7.269	8.119	0.27%	3.621	4.471	0.15%
3,000	ING-2	Laurie Hawkins Public School	509019	4765860	0.850	3.620	4.470	0.15%	3.661	4.511	0.15%	4.875	5.725	0.19%	2.448	3.298	0.11%
3,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.850	8.504	9.354	0.31%	13.444	14.294	0.48%	12.390	13.240	0.44%	6.226	7.076	0.24%
3,000	ING-4	On the river north of 209 County Road 9	509480	4765180	0.850	5.064	5.914	0.20%	5.908	6.758	0.23%	5.287	6.137	0.20%	3.296	4.146	0.14%
3,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.850	3.062	3.912	0.13%	3.111	3.961	0.13%	4.130	4.980	0.17%	2.093	2.943	0.10%
3,000	ING-6	Royal Road Public School	510337	4765360	0.850	6.336	7.186	0.24%	9.665	10.515	0.35%	9.749	10.599	0.35%	4.937	5.787	0.19%
3,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.850	3.709	4.559	0.15%	5.200	6.050	0.20%	5.305	6.155	0.21%	2.986	3.836	0.13%
3,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.850	4.613	5.463	0.18%	6.740	7.590	0.25%	6.879	7.729	0.26%	3.726	4.576	0.15%
3,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.850	6.403	7.253	0.24%	9.893	10.743	0.36%	11.343	12.193	0.41%	5.588	6.438	0.21%
3,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.850	4.655	5.505	0.18%	7.085	7.935	0.26%	7.936	8.786	0.29%	4.331	5.181	0.17%
3,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.850	11.427	12.277	0.41%	17.107	17.957	0.60%	23.209	24.059	0.80%	10.885	11.735	0.39%
3,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.850	11.418	12.268	0.41%	10.557	11.407	0.38%	21.356	22.206	0.74%	9.587	10.437	0.35%
3,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.850	9.708	10.558	0.35%	8.570	9.420	0.31%	16.214	17.064	0.57%	7.297	8.147	0.27%
3,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.850	5.592	6.442	0.21%	4.902	5.752	0.19%	8.414	9.264	0.31%	3.983	4.833	0.16%
3,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.850	4.784	5.634	0.19%	4.120	4.970	0.17%	6.840	7.690	0.26%	3.267	4.117	0.14%
3,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.850	3.410	4.260	0.14%	2.508	3.358	0.11%	3.958	4.808	0.16%	1.922	2.772	0.09%
3,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.850	2.287	3.137	0.10%	2.405	3.255	0.11%	3.287	4.137	0.14%	1.690	2.540	0.08%
3,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.850	1.371	2.221	0.07%	1.472	2.322	0.08%	1.725	2.575	0.09%	1.019	1.869	0.06%
3,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.850	1.634	2.484	0.08%	1.151	2.001	0.07%	1.470	2.320	0.08%	0.810	1.660	0.06%
3,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.850	8.523	9.373	0.31%	13.652	14.502	0.48%	14.885	15.735	0.52%	7.260	8.110	0.27%
3,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.850	9.201	10.051	0.34%	12.926	13.776	0.46%	17.515	18.365	0.61%	8.331	9.181	0.31%
3,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.850	9.133	9.983	0.33%	11.040	11.890	0.40%	17.017	17.867	0.60%	7.956	8.806	0.29%
3,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.850	10.062	10.912	0.36%	12.640	13.490	0.45%	19.090	19.940	0.66%	8.763	9.613	0.32%
3,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.850	7.943	8.793	0.29%	6.919	7.769	0.26%	12.241	13.091	0.44%	5.601	6.451	0.22%
3,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.850	6.998	7.848	0.26%	5.931	6.781	0.23%	10.443	11.293	0.38%	4.763	5.613	0.19%
3,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.850	6.524	7.374	0.25%	5.723	6.573	0.22%	9.724	10.574	0.35%	4.455	5.305	0.18%
3,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.850	4.550	5.400	0.18%	3.658	4.508	0.15%	6.150	7.000	0.23%	2.895	3.745	0.12%
3,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.850	4.201	5.051	0.17%	3.475	4.325	0.14%	5.798	6.648	0.22%	2.739	3.589	0.12%
3,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.850	3.761	4.611	0.15%	3.379	4.229	0.14%	5.329	6.179	0.21%	2.491	3.341	0.11%
3,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.850	1.635	2.485	0.08%	1.461	2.311	0.08%	2.263	3.113	0.10%	1.109	1.959	0.07%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated  
m/p-Xylene (CAS 108-38-3)**

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
100	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.850	0.328	1.178	1.18%	0.377	1.227	1.23%	0.388	1.238	1.24%	0.251	1.101	1.10%
100	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.850	0.311	1.161	1.16%	0.428	1.278	1.28%	0.348	1.198	1.20%	0.205	1.055	1.05%
100	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.850	0.310	1.160	1.16%	0.321	1.171	1.17%	0.381	1.231	1.23%	0.215	1.065	1.07%
100	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.850	0.244	1.094	1.09%	0.359	1.209	1.21%	0.318	1.168	1.17%	0.210	1.060	1.06%
100	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.850	0.675	1.525	1.53%	0.461	1.311	1.31%	0.668	1.518	1.52%	0.437	1.287	1.29%
100	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.850	0.902	1.752	1.75%	0.920	1.770	1.77%	1.104	1.954	1.95%	0.690	1.540	1.54%
100	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.850	0.180	1.030	1.03%	0.292	1.142	1.14%	0.295	1.145	1.15%	0.194	1.044	1.04%
100	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.850	0.686	1.536	1.54%	0.702	1.552	1.55%	0.745	1.595	1.60%	0.420	1.270	1.27%
100	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.850	0.680	1.530	1.53%	0.884	1.734	1.73%	0.915	1.765	1.77%	0.556	1.406	1.41%
100	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.850	0.386	1.236	1.24%	0.565	1.415	1.42%	0.612	1.462	1.46%	0.340	1.190	1.19%
100	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.850	0.821	1.671	1.67%	1.823	2.673	2.67%	1.586	2.436	2.44%	0.979	1.829	1.83%
100	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.850	0.469	1.319	1.32%	0.846	1.696	1.70%	0.780	1.630	1.63%	0.484	1.334	1.33%
100	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.850	0.149	1.099	1.00%	0.182	1.032	1.03%	0.245	1.095	1.10%	0.131	0.981	0.98%
100	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.850	0.407	1.257	1.26%	0.536	1.386	1.39%	0.684	1.534	1.53%	0.356	1.206	1.21%
100	ING-2	Laurie Hawkins Public School	509019	4765860	0.850	0.147	0.997	1.00%	0.320	1.170	1.17%	0.363	1.213	1.21%	0.203	1.053	1.05%
100	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.850	0.426	1.276	1.28%	0.626	1.476	1.48%	0.647	1.497	1.50%	0.392	1.242	1.24%
100	ING-4	On the river north of 209 County Road 9	509480	4765180	0.850	0.197	1.047	1.05%	0.244	1.094	1.09%	0.278	1.128	1.13%	0.171	1.021	1.02%
100	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.850	0.139	0.989	0.99%	0.267	1.117	1.12%	0.283	1.133	1.13%	0.170	1.020	1.02%
100	ING-6	Royal Road Public School	510337	4765360	0.850	0.253	1.103	1.10%	0.432	1.282	1.28%	0.384	1.234	1.23%	0.247	1.097	1.10%
100	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.850	0.121	0.971	0.97%	0.203	1.053	1.05%	0.206	1.056	1.06%	0.125	0.975	0.97%
100	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.850	0.121	0.971	0.97%	0.276	1.126	1.13%	0.234	1.084	1.08%	0.157	1.007	1.01%
100	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.850	0.370	1.220	1.22%	0.613	1.463	1.46%	0.721	1.571	1.57%	0.375	1.225	1.23%
100	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.850	0.233	1.083	1.08%	0.440	1.290	1.29%	0.490	1.340	1.34%	0.297	1.147	1.15%
100	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.850	0.570	1.420	1.42%	2.062	2.912	2.91%	1.988	2.838	2.84%	1.196	2.046	2.05%
100	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.850	0.710	1.560	1.56%	1.489	2.339	2.34%	1.848	2.698	2.70%	0.998	1.848	1.85%
100	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.850	0.821	1.671	1.67%	1.363	2.213	2.21%	2.276	3.126	3.13%	1.116	1.966	1.97%
100	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.850	0.505	1.355	1.35%	0.418	1.268	1.27%	0.561	1.411	1.41%	0.321	1.171	1.17%
100	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.850	0.306	1.156	1.16%	0.319	1.169	1.17%	0.456	1.306	1.31%	0.245	1.095	1.10%
100	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.850	0.199	1.049	1.05%	0.166	1.016	1.02%	0.216	1.066	1.07%	0.119	0.969	0.97%
100	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.850	0.114	0.964	0.96%	0.184	1.034	1.03%	0.245	1.095	1.10%	0.134	0.984	0.98%
100	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.850	0.049	0.899	0.90%	0.069	0.919	0.92%	0.086	0.936	0.94%	0.049	0.899	0.90%
100	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.850	0.047	0.897	0.90%	0.054	0.904	0.90%	0.068	0.918	0.92%	0.038	0.888	0.89%
100	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.850	0.502	1.352	1.35%	1.149	1.999	2.00%	0.828	1.678	1.68%	0.592	1.442	1.44%
100	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.850	0.430	1.280	1.28%	1.210	2.060	2.06%	0.896	1.746	1.75%	0.489	1.339	1.34%
100	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.850	0.688	1.538	1.54%	1.026	1.876	1.88%	1.757	2.607	2.61%	0.935	1.785	1.79%
100	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.850	0.538	1.388	1.39%	1.015	1.865	1.87%	1.649	2.499	2.50%	0.878	1.728	1.73%
100	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.850	0.665	1.427	1.43%	0.665	1.515	1.51%	0.920	1.770	1.77%	0.474	1.324	1.32%
100	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.850	0.385	1.235	1.24%	0.702	1.552	1.55%	0.896	1.746	1.75%	0.461	1.311	1.31%
100	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.850	0.450	1.300	1.30%	0.759	1.609	1.61%	1.002	1.852	1.85%	0.532	1.382	1.38%
100	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.850	0.400	1.250	1.25%	0.422	1.272	1.27%	0.713	1.563	1.56%	0.368	1.218	1.22%
100	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.850	0.482	1.332	1.33%	0.464	1.314	1.31%	0.506	1.356	1.36%	0.310	1.160	1.16%
100	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.850	0.184	1.034	1.03%	0.322	1.172	1.17%	0.442	1.292	1.29%	0.237	1.087	1.09%
100	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.850	0.116	0.966	0.97%	0.085	0.935	0.93%	0.101	0.951	0.95%	0.066	0.916	0.92%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Methyl Ethyl Ketone (CAS 78-93-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.390	0.229	1.619	0.2%	0.266	1.656	0.2%	0.273	1.663	0.2%	0.178	1.568	0.2%
1,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.390	0.216	1.606	0.2%	0.302	1.692	0.2%	0.245	1.635	0.2%	0.145	1.535	0.2%
1,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.390	0.217	1.607	0.2%	0.225	1.615	0.2%	0.270	1.660	0.2%	0.153	1.543	0.2%
1,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.390	0.169	1.559	0.2%	0.254	1.644	0.2%	0.225	1.615	0.2%	0.149	1.539	0.2%
1,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.390	0.470	1.860	0.2%	0.324	1.714	0.2%	0.470	1.860	0.2%	0.311	1.701	0.2%
1,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.390	0.630	2.020	0.2%	0.646	2.036	0.2%	0.775	2.165	0.2%	0.490	1.880	0.2%
1,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.390	0.127	1.517	0.2%	0.205	1.595	0.2%	0.206	1.596	0.2%	0.138	1.528	0.2%
1,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.390	0.480	1.870	0.2%	0.495	1.885	0.2%	0.524	1.914	0.2%	0.299	1.689	0.2%
1,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.390	0.481	1.871	0.2%	0.624	2.014	0.2%	0.644	2.034	0.2%	0.395	1.785	0.2%
1,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.390	0.269	1.659	0.2%	0.398	1.788	0.2%	0.432	1.822	0.2%	0.242	1.632	0.2%
1,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.390	0.579	1.969	0.2%	1.292	2.682	0.3%	1.119	2.509	0.3%	0.695	2.085	0.2%
1,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.390	0.330	1.720	0.2%	0.599	1.989	0.2%	0.549	1.939	0.2%	0.344	1.734	0.2%
1,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.390	0.104	1.494	0.1%	0.129	1.564	0.2%	0.174	1.564	0.2%	0.093	1.483	0.1%
1,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.390	0.283	1.673	0.2%	0.380	1.770	0.2%	0.484	1.874	0.2%	0.252	1.642	0.2%
1,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.390	0.103	1.493	0.1%	0.226	1.616	0.2%	0.255	1.645	0.2%	0.144	1.534	0.2%
1,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.390	0.300	1.690	0.2%	0.444	1.834	0.2%	0.457	1.847	0.2%	0.278	1.668	0.2%
1,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.390	0.139	1.529	0.2%	0.172	1.562	0.2%	0.196	1.586	0.2%	0.122	1.512	0.2%
1,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.390	0.097	1.487	0.1%	0.187	1.577	0.2%	0.198	1.588	0.2%	0.121	1.511	0.2%
1,000	ING-6	Royal Road Public School	510337	4765360	1.390	0.176	1.566	0.2%	0.306	1.696	0.2%	0.270	1.660	0.2%	0.175	1.565	0.2%
1,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.390	0.085	1.475	0.1%	0.144	1.534	0.2%	0.145	1.535	0.2%	0.088	1.478	0.1%
1,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.390	0.086	1.476	0.1%	0.194	1.584	0.2%	0.165	1.555	0.2%	0.112	1.502	0.2%
1,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.390	0.259	1.649	0.2%	0.431	1.821	0.2%	0.509	1.899	0.2%	0.266	1.656	0.2%
1,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.390	0.163	1.553	0.2%	0.310	1.700	0.2%	0.345	1.735	0.2%	0.211	1.601	0.2%
1,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.390	0.397	1.787	0.2%	1.457	2.847	0.3%	1.400	2.790	0.3%	0.849	2.239	0.2%
1,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.390	0.498	1.888	0.2%	1.057	2.447	0.2%	1.299	2.689	0.3%	0.709	2.099	0.2%
1,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.390	0.575	1.965	0.2%	0.958	2.348	0.2%	1.601	2.991	0.3%	0.792	2.182	0.2%
1,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.390	0.354	1.744	0.2%	0.296	1.686	0.2%	0.392	1.782	0.2%	0.228	1.618	0.2%
1,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.390	0.213	1.603	0.2%	0.225	1.615	0.2%	0.322	1.712	0.2%	0.174	1.564	0.2%
1,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.390	0.140	1.530	0.2%	0.116	1.506	0.2%	0.153	1.543	0.2%	0.085	1.475	0.1%
1,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.390	0.080	1.470	0.1%	0.130	1.520	0.2%	0.173	1.563	0.2%	0.095	1.485	0.1%
1,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.390	0.034	1.424	0.1%	0.049	1.439	0.1%	0.060	1.450	0.1%	0.035	1.425	0.1%
1,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.390	0.033	1.423	0.1%	0.038	1.428	0.1%	0.048	1.438	0.1%	0.027	1.417	0.1%
1,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.390	0.353	1.743	0.2%	0.810	2.200	0.2%	0.579	1.969	0.2%	0.420	1.810	0.2%
1,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.390	0.300	1.690	0.2%	0.854	2.244	0.2%	0.634	2.024	0.2%	0.347	1.737	0.2%
1,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.390	0.481	1.871	0.2%	0.723	2.113	0.2%	1.239	2.629	0.3%	0.664	2.054	0.2%
1,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.390	0.377	1.767	0.2%	0.721	2.111	0.2%	1.162	2.552	0.3%	0.623	2.013	0.2%
1,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.390	0.401	1.791	0.2%	0.467	1.857	0.2%	0.650	2.040	0.2%	0.337	1.727	0.2%
1,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.390	0.270	1.660	0.2%	0.497	1.887	0.2%	0.630	2.020	0.2%	0.327	1.717	0.2%
1,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.390	0.315	1.705	0.2%	0.535	1.925	0.2%	0.704	2.094	0.2%	0.378	1.768	0.2%
1,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.390	0.279	1.669	0.2%	0.299	1.689	0.2%	0.497	1.887	0.2%	0.261	1.651	0.2%
1,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.390	0.338	1.728	0.2%	0.328	1.718	0.2%	0.356	1.746	0.2%	0.220	1.610	0.2%
1,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.390	0.129	1.519	0.2%	0.226	1.616	0.2%	0.311	1.701	0.2%	0.169	1.559	0.2%
1,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.390	0.081	1.471	0.1%	0.060	1.450	0.1%	0.071	1.461	0.1%	0.047	1.437	0.1%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Methyl Isobutyl Ketone (CAS 108-10-1)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
1,200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.410	0.029	0.439	0.04%	0.033	0.443	0.04%	0.034	0.444	0.04%	0.022	0.432	0.04%
1,200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.410	0.027	0.437	0.04%	0.038	0.448	0.04%	0.031	0.441	0.04%	0.018	0.428	0.04%
1,200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.410	0.027	0.437	0.04%	0.028	0.438	0.04%	0.034	0.444	0.04%	0.019	0.429	0.04%
1,200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.410	0.021	0.431	0.04%	0.032	0.442	0.04%	0.028	0.438	0.04%	0.019	0.429	0.04%
1,200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.410	0.059	0.469	0.04%	0.041	0.461	0.04%	0.059	0.469	0.04%	0.039	0.449	0.04%
1,200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.410	0.079	0.489	0.04%	0.081	0.491	0.04%	0.097	0.507	0.04%	0.061	0.471	0.04%
1,200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.410	0.016	0.426	0.04%	0.026	0.436	0.04%	0.026	0.436	0.04%	0.017	0.427	0.04%
1,200	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.410	0.060	0.470	0.04%	0.062	0.472	0.04%	0.066	0.476	0.04%	0.037	0.447	0.04%
1,200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.410	0.060	0.470	0.04%	0.078	0.488	0.04%	0.081	0.491	0.04%	0.049	0.459	0.04%
1,200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.410	0.034	0.444	0.04%	0.050	0.460	0.04%	0.054	0.464	0.04%	0.030	0.440	0.04%
1,200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.410	0.072	0.482	0.04%	0.161	0.571	0.05%	0.140	0.550	0.05%	0.087	0.497	0.04%
1,200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.410	0.041	0.451	0.04%	0.075	0.485	0.04%	0.069	0.479	0.04%	0.043	0.453	0.04%
1,200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.410	0.013	0.423	0.04%	0.016	0.426	0.04%	0.022	0.432	0.04%	0.012	0.422	0.04%
1,200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.410	0.035	0.445	0.04%	0.047	0.457	0.04%	0.061	0.471	0.04%	0.032	0.442	0.04%
1,200	ING-2	Laurie Hawkins Public School	509019	4765860	0.410	0.013	0.423	0.04%	0.028	0.438	0.04%	0.032	0.442	0.04%	0.018	0.428	0.04%
1,200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.410	0.038	0.448	0.04%	0.055	0.465	0.04%	0.057	0.467	0.04%	0.035	0.445	0.04%
1,200	ING-4	On the river north of 209 County Road 9	509480	4765180	0.410	0.017	0.427	0.04%	0.022	0.432	0.04%	0.025	0.435	0.04%	0.015	0.425	0.04%
1,200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.410	0.012	0.422	0.04%	0.023	0.433	0.04%	0.023	0.435	0.04%	0.015	0.425	0.04%
1,200	ING-6	Royal Road Public School	510337	4765360	0.410	0.022	0.432	0.04%	0.038	0.448	0.04%	0.034	0.444	0.04%	0.022	0.432	0.04%
1,200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.410	0.011	0.421	0.04%	0.018	0.428	0.04%	0.018	0.428	0.04%	0.011	0.421	0.04%
1,200	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.410	0.011	0.421	0.04%	0.024	0.434	0.04%	0.021	0.431	0.04%	0.014	0.424	0.04%
1,200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.410	0.032	0.442	0.04%	0.054	0.464	0.04%	0.064	0.474	0.04%	0.033	0.443	0.04%
1,200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.410	0.020	0.430	0.04%	0.039	0.449	0.04%	0.043	0.453	0.04%	0.026	0.436	0.04%
1,200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.410	0.050	0.460	0.04%	0.182	0.592	0.05%	0.175	0.585	0.05%	0.106	0.516	0.04%
1,200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.410	0.062	0.472	0.04%	0.132	0.542	0.05%	0.163	0.573	0.05%	0.089	0.499	0.04%
1,200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.410	0.072	0.482	0.04%	0.201	0.530	0.04%	0.201	0.611	0.05%	0.099	0.509	0.04%
1,200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.410	0.044	0.454	0.04%	0.037	0.447	0.04%	0.049	0.459	0.04%	0.029	0.439	0.04%
1,200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.410	0.027	0.437	0.04%	0.028	0.438	0.04%	0.040	0.450	0.04%	0.022	0.432	0.04%
1,200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.410	0.017	0.427	0.04%	0.015	0.425	0.04%	0.019	0.429	0.04%	0.011	0.421	0.04%
1,200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.410	0.010	0.420	0.04%	0.016	0.426	0.04%	0.022	0.432	0.04%	0.012	0.422	0.04%
1,200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.410	0.004	0.414	0.03%	0.006	0.416	0.03%	0.008	0.418	0.03%	0.004	0.414	0.03%
1,200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.410	0.004	0.414	0.03%	0.005	0.415	0.03%	0.006	0.416	0.03%	0.003	0.413	0.03%
1,200	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.410	0.044	0.454	0.04%	0.101	0.511	0.04%	0.073	0.483	0.04%	0.053	0.463	0.04%
1,200	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.410	0.038	0.448	0.04%	0.107	0.517	0.04%	0.079	0.489	0.04%	0.043	0.453	0.04%
1,200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.410	0.060	0.470	0.04%	0.090	0.500	0.04%	0.155	0.565	0.05%	0.083	0.493	0.04%
1,200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.410	0.047	0.457	0.04%	0.090	0.500	0.04%	0.146	0.556	0.05%	0.078	0.488	0.04%
1,200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.410	0.050	0.460	0.04%	0.058	0.468	0.04%	0.081	0.491	0.04%	0.042	0.452	0.04%
1,200	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.410	0.034	0.444	0.04%	0.062	0.472	0.04%	0.079	0.489	0.04%	0.041	0.451	0.04%
1,200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.410	0.039	0.449	0.04%	0.067	0.477	0.04%	0.088	0.498	0.04%	0.047	0.457	0.04%
1,200	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.410	0.035	0.445	0.04%	0.037	0.447	0.04%	0.062	0.472	0.04%	0.033	0.443	0.04%
1,200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.410	0.042	0.452	0.04%	0.041	0.451	0.04%	0.045	0.455	0.04%	0.028	0.438	0.04%
1,200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.410	0.016	0.426	0.04%	0.028	0.438	0.04%	0.039	0.449	0.04%	0.021	0.431	0.04%
1,200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.410	0.010	0.420	0.04%	0.007	0.417	0.03%	0.009	0.419	0.03%	0.006	0.416	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated Naphthalene (CAS 91-20-3)**

10-minute

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
50	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.650	0.094	0.744	1.49%	0.088	0.738	1.48%	0.123	0.773	1.55%	0.060	0.710	1.42%
50	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.650	0.134	0.784	1.57%	0.126	0.776	1.55%	0.172	0.822	1.64%	0.089	0.739	1.48%
50	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.650	0.142	0.792	1.58%	0.172	0.822	1.64%	0.203	0.853	1.71%	0.107	0.757	1.51%
50	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.650	0.117	0.767	1.53%	0.138	0.788	1.58%	0.155	0.805	1.61%	0.078	0.728	1.46%
50	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.650	0.157	0.807	1.61%	0.138	0.788	1.58%	0.185	0.835	1.67%	0.090	0.740	1.48%
50	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.650	0.162	0.812	1.62%	0.149	0.799	1.60%	0.210	0.860	1.72%	0.102	0.752	1.50%
50	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.650	0.076	0.726	1.45%	0.077	0.727	1.45%	0.113	0.763	1.53%	0.056	0.706	1.41%
50	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.650	0.130	0.780	1.56%	0.125	0.775	1.55%	0.176	0.826	1.65%	0.086	0.736	1.47%
50	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.650	0.121	0.771	1.54%	0.133	0.783	1.57%	0.152	0.802	1.60%	0.077	0.727	1.45%
50	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.650	0.182	0.832	1.66%	0.133	0.783	1.57%	0.165	0.815	1.63%	0.082	0.732	1.46%
50	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.650	0.331	0.981	1.96%	0.513	1.163	2.33%	0.461	1.111	2.22%	0.246	0.896	1.79%
50	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.650	0.217	0.867	1.73%	0.270	0.920	1.84%	0.281	0.931	1.86%	0.146	0.796	1.59%
50	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.650	0.075	0.725	1.45%	0.084	0.734	1.47%	0.112	0.762	1.52%	0.055	0.705	1.41%
50	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.650	0.187	0.837	1.67%	0.137	0.787	1.57%	0.166	0.816	1.63%	0.083	0.733	1.47%
50	ING-2	Laurie Hawkins Public School	509019	4765860	0.650	0.082	0.732	1.46%	0.082	0.732	1.46%	0.111	0.761	1.52%	0.056	0.706	1.41%
50	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.650	0.192	0.842	1.68%	0.305	0.955	1.91%	0.283	0.933	1.87%	0.142	0.792	1.58%
50	ING-4	On the river north of 209 County Road 9	509480	4765180	0.650	0.114	0.764	1.53%	0.133	0.783	1.57%	0.120	0.770	1.54%	0.075	0.725	1.45%
50	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.650	0.069	0.719	1.44%	0.070	0.720	1.44%	0.094	0.744	1.49%	0.048	0.698	1.40%
50	ING-6	Royal Road Public School	510337	4765360	0.650	0.144	0.794	1.59%	0.219	0.869	1.74%	0.223	0.873	1.75%	0.113	0.763	1.53%
50	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.650	0.083	0.733	1.47%	0.118	0.768	1.54%	0.121	0.771	1.54%	0.068	0.718	1.44%
50	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.650	0.104	0.754	1.51%	0.153	0.803	1.61%	0.157	0.807	1.61%	0.085	0.735	1.47%
50	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.650	0.144	0.794	1.59%	0.223	0.873	1.75%	0.259	0.909	1.82%	0.128	0.778	1.56%
50	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.650	0.105	0.755	1.51%	0.160	0.810	1.62%	0.181	0.831	1.66%	0.099	0.749	1.50%
50	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.650	0.256	0.906	1.81%	0.383	1.033	2.07%	0.530	1.180	2.36%	0.249	0.899	1.80%
50	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.650	0.255	0.905	1.81%	0.241	0.891	1.78%	0.485	1.135	2.27%	0.219	0.869	1.74%
50	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.650	0.217	0.867	1.73%	0.193	0.843	1.69%	0.365	1.015	2.03%	0.167	0.817	1.63%
50	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.650	0.127	0.777	1.55%	0.111	0.761	1.52%	0.192	0.842	1.68%	0.091	0.741	1.48%
50	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.650	0.107	0.757	1.51%	0.093	0.743	1.49%	0.156	0.806	1.61%	0.075	0.725	1.45%
50	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.650	0.077	0.727	1.45%	0.057	0.707	1.41%	0.090	0.740	1.48%	0.044	0.694	1.39%
50	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.650	0.051	0.701	1.40%	0.054	0.704	1.41%	0.075	0.725	1.45%	0.039	0.689	1.38%
50	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.650	0.031	0.681	1.36%	0.033	0.683	1.37%	0.039	0.689	1.38%	0.023	0.673	1.35%
50	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.650	0.037	0.687	1.37%	0.026	0.676	1.35%	0.033	0.683	1.37%	0.019	0.669	1.34%
50	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.650	0.192	0.842	1.68%	0.307	0.957	1.91%	0.340	0.990	1.98%	0.166	0.816	1.63%
50	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.650	0.207	0.857	1.71%	0.291	0.941	1.88%	0.400	1.050	2.10%	0.190	0.840	1.68%
50	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.650	0.204	0.854	1.71%	0.249	0.899	1.80%	0.388	1.038	2.08%	0.182	0.832	1.66%
50	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.650	0.225	0.875	1.75%	0.287	0.937	1.87%	0.435	1.085	2.17%	0.201	0.851	1.70%
50	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.650	0.177	0.827	1.65%	0.158	0.808	1.62%	0.277	0.927	1.85%	0.128	0.778	1.56%
50	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.650	0.156	0.806	1.61%	0.135	0.785	1.57%	0.235	0.885	1.77%	0.109	0.759	1.52%
50	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.650	0.146	0.796	1.59%	0.131	0.781	1.56%	0.218	0.868	1.74%	0.102	0.752	1.50%
50	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.650	0.101	0.751	1.50%	0.083	0.733	1.47%	0.138	0.788	1.58%	0.066	0.716	1.43%
50	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.650	0.094	0.744	1.49%	0.079	0.729	1.46%	0.131	0.781	1.56%	0.063	0.713	1.43%
50	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.650	0.084	0.734	1.47%	0.077	0.727	1.45%	0.119	0.769	1.54%	0.057	0.707	1.41%
50	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.650	0.037	0.687	1.37%	0.033	0.683	1.37%	0.052	0.702	1.40%	0.025	0.675	1.35%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Naphthalene (CAS 91-20-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
23	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.650	0.007	0.657	3%	0.009	0.659	3%	0.009	0.659	3%	0.006	0.656	3%
23	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.650	0.007	0.657	3%	0.010	0.660	3%	0.008	0.658	3%	0.005	0.655	3%
23	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.650	0.007	0.657	3%	0.007	0.657	3%	0.009	0.659	3%	0.005	0.655	3%
23	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.650	0.005	0.655	3%	0.008	0.658	3%	0.007	0.657	3%	0.005	0.655	3%
23	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.650	0.015	0.665	3%	0.010	0.660	3%	0.015	0.665	3%	0.010	0.660	3%
23	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.650	0.020	0.670	3%	0.021	0.671	3%	0.025	0.675	3%	0.016	0.666	3%
23	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.650	0.004	0.654	3%	0.007	0.657	3%	0.007	0.657	3%	0.004	0.654	3%
23	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.650	0.015	0.665	3%	0.016	0.666	3%	0.017	0.667	3%	0.010	0.660	3%
23	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.650	0.015	0.665	3%	0.020	0.670	3%	0.021	0.671	3%	0.013	0.663	3%
23	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.650	0.009	0.659	3%	0.013	0.663	3%	0.014	0.664	3%	0.008	0.658	3%
23	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.650	0.019	0.669	3%	0.041	0.691	3%	0.036	0.686	3%	0.022	0.672	3%
23	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.650	0.011	0.661	3%	0.019	0.669	3%	0.018	0.668	3%	0.011	0.661	3%
23	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.650	0.003	0.653	3%	0.004	0.654	3%	0.006	0.656	3%	0.003	0.653	3%
23	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.650	0.009	0.659	3%	0.012	0.662	3%	0.016	0.666	3%	0.008	0.658	3%
23	ING-2	Laurie Hawkins Public School	509019	4765860	0.650	0.003	0.653	3%	0.007	0.657	3%	0.008	0.658	3%	0.005	0.655	3%
23	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.650	0.010	0.660	3%	0.014	0.664	3%	0.015	0.665	3%	0.009	0.659	3%
23	ING-4	On the river north of 209 County Road 9	509480	4765180	0.650	0.004	0.654	3%	0.006	0.656	3%	0.006	0.656	3%	0.004	0.654	3%
23	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.650	0.003	0.653	3%	0.006	0.656	3%	0.006	0.656	3%	0.004	0.654	3%
23	ING-6	Royal Road Public School	510337	4765360	0.650	0.006	0.656	3%	0.010	0.660	3%	0.009	0.659	3%	0.006	0.656	3%
23	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.650	0.003	0.653	3%	0.005	0.655	3%	0.005	0.655	3%	0.003	0.653	3%
23	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.650	0.003	0.653	3%	0.006	0.656	3%	0.005	0.655	3%	0.004	0.654	3%
23	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.650	0.008	0.658	3%	0.014	0.664	3%	0.016	0.666	3%	0.009	0.659	3%
23	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.650	0.005	0.655	3%	0.010	0.660	3%	0.011	0.661	3%	0.007	0.657	3%
23	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.650	0.013	0.663	3%	0.047	0.697	3%	0.045	0.695	3%	0.027	0.677	3%
23	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.650	0.016	0.666	3%	0.034	0.684	3%	0.042	0.692	3%	0.023	0.673	3%
23	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.650	0.018	0.668	3%	0.031	0.681	3%	0.052	0.702	3%	0.026	0.676	3%
23	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.650	0.011	0.661	3%	0.010	0.660	3%	0.013	0.663	3%	0.007	0.657	3%
23	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.650	0.007	0.657	3%	0.007	0.657	3%	0.010	0.660	3%	0.006	0.656	3%
23	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.650	0.004	0.654	3%	0.004	0.654	3%	0.005	0.655	3%	0.003	0.653	3%
23	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.650	0.003	0.653	3%	0.004	0.654	3%	0.006	0.656	3%	0.003	0.653	3%
23	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.650	0.001	0.651	3%	0.002	0.652	3%	0.002	0.652	3%	0.001	0.651	3%
23	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.650	0.001	0.651	3%	0.001	0.651	3%	0.002	0.652	3%	0.001	0.651	3%
23	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.650	0.011	0.661	3%	0.026	0.676	3%	0.019	0.669	3%	0.014	0.664	3%
23	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.650	0.010	0.660	3%	0.027	0.677	3%	0.020	0.670	3%	0.011	0.661	3%
23	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.650	0.015	0.665	3%	0.023	0.673	3%	0.040	0.690	3%	0.021	0.671	3%
23	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.650	0.012	0.662	3%	0.023	0.673	3%	0.037	0.687	3%	0.020	0.670	3%
23	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.650	0.013	0.663	3%	0.015	0.665	3%	0.021	0.671	3%	0.011	0.661	3%
23	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.650	0.009	0.659	3%	0.016	0.666	3%	0.020	0.670	3%	0.011	0.661	3%
23	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.650	0.010	0.660	3%	0.017	0.667	3%	0.023	0.673	3%	0.012	0.662	3%
23	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.650	0.009	0.659	3%	0.010	0.660	3%	0.016	0.666	3%	0.008	0.658	3%
23	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.650	0.011	0.661	3%	0.011	0.661	3%	0.011	0.661	3%	0.007	0.657	3%
23	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.650	0.004	0.654	3%	0.007	0.657	3%	0.010	0.660	3%	0.005	0.655	3%
23	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.650	0.003	0.653	3%	0.002	0.652	3%	0.002	0.652	3%	0.002	0.652	3%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated  
Octane (CAS 111-65-9)**

10-minute

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
61,800	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.465	0.464	0.929	0.002%	0.366	0.831	0.001%	0.513	0.978	0.002%	0.312	0.777	0.001%
61,800	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.465	0.791	1.256	0.002%	0.618	1.083	0.002%	0.949	1.414	0.002%	0.603	1.068	0.002%
61,800	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.465	0.592	1.057	0.002%	0.719	1.184	0.002%	0.847	1.312	0.002%	0.449	0.914	0.001%
61,800	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.465	0.489	0.954	0.002%	0.577	1.042	0.002%	0.649	1.114	0.002%	0.328	0.793	0.001%
61,800	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.465	0.925	1.390	0.002%	0.747	1.212	0.002%	0.775	1.240	0.002%	0.683	1.148	0.002%
61,800	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.465	0.679	1.144	0.002%	0.623	1.088	0.002%	0.877	1.342	0.002%	0.503	0.968	0.002%
61,800	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.465	0.316	0.781	0.001%	0.322	0.787	0.001%	0.471	0.936	0.002%	0.233	0.698	0.001%
61,800	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.465	0.544	1.009	0.002%	0.524	0.989	0.002%	0.737	1.202	0.002%	0.361	0.826	0.001%
61,800	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.465	0.506	0.971	0.002%	0.556	1.021	0.002%	0.635	1.100	0.002%	0.419	0.884	0.001%
61,800	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.465	0.759	1.224	0.002%	0.558	1.023	0.002%	0.689	1.154	0.002%	0.343	0.808	0.001%
61,800	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.465	1.384	1.849	0.003%	2.147	2.612	0.004%	1.926	2.391	0.004%	1.029	1.494	0.002%
61,800	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.465	0.907	1.372	0.002%	1.130	1.595	0.003%	1.173	1.638	0.003%	0.609	1.074	0.002%
61,800	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.465	0.314	0.779	0.001%	0.351	0.816	0.001%	0.468	0.933	0.002%	0.230	0.695	0.001%
61,800	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.465	0.782	1.247	0.002%	0.571	1.036	0.002%	0.694	1.159	0.002%	0.346	0.811	0.001%
61,800	ING-2	Laurie Hawkins Public School	509019	4765860	0.465	0.341	0.806	0.001%	0.344	0.809	0.001%	0.465	0.930	0.002%	0.234	0.699	0.001%
61,800	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.465	0.801	1.266	0.002%	1.277	1.742	0.003%	1.183	1.648	0.003%	0.595	1.060	0.002%
61,800	ING-4	On the river north of 209 County Road 9	509480	4765180	0.465	0.477	0.942	0.002%	0.557	1.022	0.002%	0.500	0.965	0.002%	0.315	0.780	0.001%
61,800	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.465	0.290	0.755	0.001%	0.394	0.759	0.001%	0.394	0.859	0.001%	0.200	0.665	0.001%
61,800	ING-6	Royal Road Public School	510337	4765360	0.465	0.600	1.065	0.002%	0.918	1.383	0.002%	0.931	1.396	0.002%	0.472	0.937	0.002%
61,800	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.465	0.349	0.814	0.001%	0.492	0.957	0.002%	0.505	0.970	0.002%	0.285	0.750	0.001%
61,800	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.465	0.435	0.900	0.001%	0.638	1.103	0.002%	0.656	1.121	0.002%	0.356	0.821	0.001%
61,800	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.465	0.605	1.070	0.002%	0.935	1.400	0.002%	1.082	1.547	0.003%	0.534	0.999	0.002%
61,800	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.465	0.440	0.905	0.001%	0.671	1.136	0.002%	0.756	1.221	0.002%	0.414	0.879	0.001%
61,800	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.465	1.077	1.542	0.002%	1.669	2.134	0.003%	2.216	2.681	0.004%	1.041	1.506	0.002%
61,800	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.465	1.290	1.755	0.003%	1.007	1.472	0.002%	2.251	2.716	0.004%	1.142	1.607	0.003%
61,800	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.465	1.100	1.565	0.003%	0.808	1.273	0.002%	1.525	1.990	0.003%	0.754	1.219	0.002%
61,800	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.465	0.532	0.997	0.002%	0.465	0.930	0.002%	0.801	1.266	0.002%	0.381	0.846	0.001%
61,800	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.465	0.447	0.912	0.001%	0.390	0.855	0.001%	0.651	1.116	0.002%	0.312	0.777	0.001%
61,800	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.465	0.321	0.786	0.001%	0.238	0.703	0.001%	0.377	0.842	0.001%	0.184	0.649	0.001%
61,800	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.465	0.215	0.680	0.001%	0.226	0.691	0.001%	0.312	0.777	0.001%	0.162	0.627	0.001%
61,800	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.465	0.131	0.596	0.001%	0.138	0.603	0.001%	0.164	0.629	0.001%	0.097	0.562	0.001%
61,800	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.465	0.154	0.619	0.001%	0.108	0.573	0.001%	0.139	0.604	0.001%	0.078	0.543	0.001%
61,800	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.465	0.802	1.267	0.002%	1.284	1.749	0.003%	1.421	1.886	0.003%	0.694	1.159	0.002%
61,800	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.465	1.336	1.871	0.002%	1.284	1.749	0.003%	1.672	2.137	0.003%	0.797	1.262	0.002%
61,800	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.465	0.898	1.363	0.002%	1.184	1.649	0.003%	1.625	2.090	0.003%	0.762	1.227	0.002%
61,800	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.465	1.044	1.509	0.002%	1.203	1.668	0.003%	1.858	2.323	0.004%	0.912	1.377	0.002%
61,800	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.465	0.925	1.390	0.002%	0.661	1.126	0.002%	1.262	1.727	0.003%	0.696	1.161	0.002%
61,800	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.465	0.805	1.270	0.002%	0.565	1.030	0.002%	0.992	1.457	0.002%	0.552	1.017	0.002%
61,800	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.465	0.766	1.231	0.002%	0.546	1.011	0.002%	0.910	1.375	0.002%	0.496	0.961	0.002%
61,800	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.465	0.505	0.970	0.002%	0.386	0.851	0.001%	0.579	1.044	0.002%	0.339	0.804	0.001%
61,800	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.465	0.421	0.886	0.001%	0.344	0.809	0.001%	0.546	1.011	0.002%	0.307	0.772	0.001%
61,800	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.465	0.430	0.895	0.001%	0.321	0.786	0.001%	0.499	0.964	0.002%	0.278	0.743	0.001%
61,800	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.465	0.153	0.618	0.001%	0.139	0.604	0.001%	0.216	0.681	0.001%	0.106	0.571	0.001%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**o-Xylene (CAS 95-47-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
100	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.435	0.126	0.561	0.56%	0.146	0.581	0.58%	0.150	0.585	0.58%	0.097	0.532	0.53%
100	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.435	0.119	0.554	0.55%	0.165	0.600	0.60%	0.135	0.570	0.57%	0.079	0.514	0.51%
100	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.435	0.119	0.554	0.55%	0.124	0.559	0.56%	0.147	0.582	0.58%	0.083	0.518	0.52%
100	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.435	0.093	0.528	0.53%	0.139	0.574	0.57%	0.123	0.558	0.56%	0.082	0.517	0.52%
100	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.435	0.258	0.693	0.69%	0.178	0.613	0.61%	0.258	0.693	0.69%	0.170	0.605	0.60%
100	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.435	0.346	0.781	0.78%	0.355	0.790	0.79%	0.426	0.861	0.86%	0.268	0.703	0.70%
100	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.435	0.069	0.504	0.50%	0.113	0.548	0.55%	0.114	0.549	0.55%	0.075	0.510	0.51%
100	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.435	0.263	0.698	0.70%	0.271	0.706	0.71%	0.287	0.722	0.72%	0.163	0.598	0.60%
100	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.435	0.262	0.697	0.70%	0.341	0.776	0.78%	0.353	0.788	0.79%	0.216	0.651	0.65%
100	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.435	0.148	0.583	0.58%	0.218	0.653	0.65%	0.236	0.671	0.67%	0.132	0.567	0.57%
100	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.435	0.316	0.751	0.75%	0.705	1.140	1.14%	0.612	1.047	1.05%	0.380	0.815	0.81%
100	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.435	0.180	0.615	0.62%	0.327	0.762	0.76%	0.301	0.736	0.74%	0.188	0.623	0.62%
100	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.435	0.057	0.492	0.49%	0.071	0.506	0.51%	0.095	0.530	0.53%	0.051	0.486	0.49%
100	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.435	0.156	0.591	0.59%	0.207	0.642	0.64%	0.264	0.699	0.70%	0.138	0.573	0.57%
100	ING-2	Laurie Hawkins Public School	509019	4765860	0.435	0.056	0.491	0.49%	0.123	0.558	0.56%	0.140	0.575	0.58%	0.079	0.514	0.51%
100	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.435	0.164	0.599	0.60%	0.242	0.677	0.68%	0.250	0.685	0.69%	0.152	0.587	0.59%
100	ING-4	On the river north of 209 County Road 9	509480	4765180	0.435	0.076	0.511	0.51%	0.094	0.529	0.53%	0.108	0.543	0.54%	0.066	0.501	0.50%
100	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.435	0.053	0.488	0.49%	0.103	0.538	0.54%	0.109	0.544	0.54%	0.066	0.501	0.50%
100	ING-6	Royal Road Public School	510337	4765360	0.435	0.097	0.532	0.53%	0.167	0.602	0.60%	0.148	0.583	0.58%	0.096	0.531	0.53%
100	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.435	0.046	0.481	0.48%	0.079	0.514	0.51%	0.080	0.515	0.51%	0.048	0.483	0.48%
100	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.435	0.046	0.481	0.48%	0.107	0.542	0.54%	0.090	0.525	0.53%	0.061	0.496	0.50%
100	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.435	0.142	0.577	0.58%	0.237	0.672	0.67%	0.279	0.714	0.71%	0.146	0.581	0.58%
100	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.435	0.089	0.524	0.52%	0.170	0.605	0.61%	0.189	0.624	0.62%	0.115	0.550	0.55%
100	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.435	0.218	0.653	0.65%	0.797	1.232	1.23%	0.767	1.202	1.20%	0.464	0.899	0.90%
100	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.435	0.272	0.707	0.71%	0.576	1.011	1.01%	0.713	1.148	1.15%	0.387	0.822	0.82%
100	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.435	0.315	0.750	0.75%	0.960	1.313	1.31%	0.878	1.313	1.31%	0.433	0.868	0.87%
100	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.435	0.194	0.629	0.63%	0.162	0.597	0.60%	0.216	0.651	0.65%	0.124	0.559	0.56%
100	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.435	0.117	0.552	0.55%	0.123	0.558	0.56%	0.176	0.611	0.61%	0.095	0.530	0.53%
100	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.435	0.076	0.511	0.51%	0.064	0.499	0.50%	0.084	0.519	0.52%	0.046	0.481	0.48%
100	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.435	0.044	0.479	0.48%	0.071	0.506	0.51%	0.095	0.530	0.53%	0.052	0.487	0.49%
100	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.435	0.019	0.454	0.45%	0.027	0.462	0.46%	0.033	0.468	0.47%	0.019	0.454	0.45%
100	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.435	0.018	0.453	0.45%	0.021	0.456	0.46%	0.026	0.461	0.46%	0.015	0.450	0.45%
100	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.435	0.193	0.628	0.63%	0.444	0.879	0.88%	0.319	0.754	0.75%	0.229	0.664	0.66%
100	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.435	0.165	0.600	0.60%	0.467	0.902	0.90%	0.347	0.782	0.78%	0.190	0.625	0.62%
100	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.435	0.264	0.699	0.70%	0.396	0.831	0.83%	0.679	1.114	1.11%	0.363	0.798	0.80%
100	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.435	0.206	0.641	0.64%	0.393	0.828	0.83%	0.637	1.072	1.07%	0.340	0.775	0.78%
100	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.435	0.221	0.656	0.66%	0.256	0.691	0.69%	0.355	0.790	0.79%	0.184	0.619	0.62%
100	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.435	0.148	0.583	0.58%	0.271	0.706	0.71%	0.346	0.781	0.78%	0.179	0.614	0.61%
100	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.435	0.173	0.608	0.61%	0.293	0.728	0.73%	0.386	0.821	0.82%	0.206	0.641	0.64%
100	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.435	0.153	0.588	0.59%	0.163	0.598	0.60%	0.274	0.709	0.71%	0.143	0.578	0.58%
100	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.435	0.185	0.620	0.62%	0.179	0.614	0.61%	0.195	0.630	0.63%	0.120	0.555	0.56%
100	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.435	0.071	0.506	0.51%	0.124	0.559	0.56%	0.170	0.605	0.61%	0.092	0.527	0.53%
100	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.435	0.044	0.479	0.48%	0.033	0.468	0.47%	0.039	0.474	0.47%	0.026	0.461	0.46%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Styrene (CAS 100-42-5)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
400	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.425	0.004	0.429	0.11%	0.005	0.430	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.425	0.004	0.429	0.11%	0.005	0.430	0.11%	0.004	0.429	0.11%	0.003	0.428	0.11%
400	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.425	0.004	0.429	0.11%	0.004	0.429	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.425	0.003	0.428	0.11%	0.004	0.429	0.11%	0.004	0.429	0.11%	0.003	0.428	0.11%
400	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.425	0.009	0.434	0.11%	0.006	0.431	0.11%	0.008	0.433	0.11%	0.005	0.430	0.11%
400	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.425	0.011	0.436	0.11%	0.012	0.437	0.11%	0.014	0.439	0.11%	0.009	0.434	0.11%
400	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.425	0.002	0.427	0.11%	0.004	0.429	0.11%	0.004	0.429	0.11%	0.002	0.427	0.11%
400	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.425	0.009	0.434	0.11%	0.009	0.434	0.11%	0.009	0.434	0.11%	0.005	0.430	0.11%
400	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.425	0.008	0.433	0.11%	0.011	0.436	0.11%	0.011	0.436	0.11%	0.007	0.432	0.11%
400	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.425	0.005	0.430	0.11%	0.007	0.432	0.11%	0.008	0.433	0.11%	0.004	0.429	0.11%
400	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.425	0.010	0.435	0.11%	0.023	0.448	0.11%	0.020	0.445	0.11%	0.012	0.437	0.11%
400	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.425	0.006	0.431	0.11%	0.011	0.436	0.11%	0.010	0.435	0.11%	0.006	0.431	0.11%
400	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.425	0.002	0.427	0.11%	0.002	0.427	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.425	0.005	0.430	0.11%	0.007	0.432	0.11%	0.008	0.433	0.11%	0.004	0.429	0.11%
400	ING-2	Laurie Hawkins Public School	509019	4765860	0.425	0.002	0.427	0.11%	0.004	0.429	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.425	0.005	0.430	0.11%	0.008	0.433	0.11%	0.008	0.433	0.11%	0.005	0.430	0.11%
400	ING-4	On the river north of 209 County Road 9	509480	4765180	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.004	0.429	0.11%	0.002	0.427	0.11%
400	ING-6	Royal Road Public School	510337	4765360	0.425	0.003	0.428	0.11%	0.005	0.430	0.11%	0.005	0.430	0.11%	0.003	0.428	0.11%
400	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.425	0.002	0.427	0.11%	0.003	0.428	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.425	0.005	0.430	0.11%	0.008	0.433	0.11%	0.009	0.434	0.11%	0.005	0.430	0.11%
400	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.425	0.003	0.428	0.11%	0.006	0.431	0.11%	0.006	0.431	0.11%	0.004	0.429	0.11%
400	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.425	0.007	0.432	0.11%	0.026	0.451	0.11%	0.025	0.450	0.11%	0.015	0.440	0.11%
400	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.425	0.009	0.434	0.11%	0.019	0.444	0.11%	0.023	0.448	0.11%	0.012	0.437	0.11%
400	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.425	0.010	0.435	0.11%	0.017	0.442	0.11%	0.028	0.453	0.11%	0.014	0.439	0.11%
400	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.425	0.006	0.431	0.11%	0.005	0.430	0.11%	0.007	0.432	0.11%	0.004	0.429	0.11%
400	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.425	0.004	0.429	0.11%	0.004	0.429	0.11%	0.006	0.431	0.11%	0.003	0.428	0.11%
400	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.425	0.002	0.427	0.11%	0.002	0.427	0.11%	0.003	0.428	0.11%	0.001	0.426	0.11%
400	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.425	0.001	0.426	0.11%	0.002	0.427	0.11%	0.003	0.428	0.11%	0.002	0.427	0.11%
400	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.425	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%
400	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.425	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%	0.000	0.425	0.11%
400	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.425	0.006	0.431	0.11%	0.014	0.439	0.11%	0.010	0.435	0.11%	0.007	0.432	0.11%
400	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.425	0.005	0.430	0.11%	0.015	0.440	0.11%	0.011	0.436	0.11%	0.006	0.431	0.11%
400	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.425	0.009	0.434	0.11%	0.013	0.438	0.11%	0.022	0.447	0.11%	0.012	0.437	0.11%
400	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.425	0.007	0.432	0.11%	0.013	0.438	0.11%	0.021	0.446	0.11%	0.011	0.436	0.11%
400	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.425	0.007	0.432	0.11%	0.008	0.433	0.11%	0.011	0.436	0.11%	0.006	0.431	0.11%
400	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.425	0.005	0.430	0.11%	0.009	0.434	0.11%	0.011	0.436	0.11%	0.006	0.431	0.11%
400	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.425	0.006	0.431	0.11%	0.010	0.435	0.11%	0.013	0.438	0.11%	0.007	0.432	0.11%
400	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.425	0.005	0.430	0.11%	0.005	0.430	0.11%	0.009	0.434	0.11%	0.005	0.430	0.11%
400	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.425	0.006	0.431	0.11%	0.006	0.431	0.11%	0.006	0.431	0.11%	0.004	0.429	0.11%
400	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.425	0.002	0.427	0.11%	0.004	0.429	0.11%	0.006	0.431	0.11%	0.003	0.428	0.11%
400	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.425	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%	0.001	0.426	0.11%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Tetrachloroethylene (CAS 127-18-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
360	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.070	0.060	0.130	0.04%	0.074	0.144	0.04%	0.076	0.146	0.04%	0.052	0.122	0.03%
360	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.070	0.062	0.132	0.04%	0.080	0.150	0.04%	0.069	0.139	0.04%	0.041	0.111	0.03%
360	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.070	0.056	0.126	0.03%	0.058	0.128	0.04%	0.068	0.138	0.04%	0.040	0.110	0.03%
360	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.070	0.044	0.114	0.03%	0.065	0.135	0.04%	0.057	0.127	0.04%	0.038	0.108	0.03%
360	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.070	0.139	0.209	0.06%	0.102	0.172	0.05%	0.138	0.208	0.06%	0.098	0.168	0.05%
360	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.070	0.162	0.232	0.06%	0.166	0.236	0.07%	0.198	0.268	0.07%	0.127	0.197	0.05%
360	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.070	0.032	0.102	0.03%	0.054	0.124	0.03%	0.054	0.124	0.03%	0.037	0.107	0.03%
360	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.070	0.123	0.193	0.05%	0.125	0.195	0.05%	0.132	0.202	0.06%	0.075	0.145	0.04%
360	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.070	0.121	0.191	0.05%	0.157	0.227	0.06%	0.163	0.233	0.06%	0.100	0.170	0.05%
360	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.070	0.070	0.140	0.04%	0.103	0.173	0.05%	0.109	0.179	0.05%	0.063	0.133	0.04%
360	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.070	0.146	0.216	0.06%	0.326	0.396	0.11%	0.282	0.352	0.10%	0.176	0.246	0.07%
360	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.070	0.086	0.156	0.04%	0.153	0.223	0.06%	0.140	0.210	0.06%	0.088	0.158	0.04%
360	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.070	0.028	0.098	0.03%	0.038	0.103	0.03%	0.044	0.114	0.03%	0.023	0.093	0.03%
360	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.070	0.074	0.144	0.04%	0.098	0.168	0.05%	0.124	0.194	0.05%	0.066	0.136	0.04%
360	ING-2	Laurie Hawkins Public School	509019	4765860	0.070	0.026	0.096	0.03%	0.057	0.127	0.04%	0.065	0.135	0.04%	0.036	0.106	0.03%
360	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.070	0.076	0.146	0.04%	0.113	0.183	0.05%	0.116	0.186	0.05%	0.071	0.141	0.04%
360	ING-4	On the river north of 209 County Road 9	509480	4765180	0.070	0.035	0.105	0.03%	0.044	0.114	0.03%	0.050	0.120	0.03%	0.031	0.101	0.03%
360	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.070	0.025	0.095	0.03%	0.047	0.117	0.03%	0.050	0.120	0.03%	0.030	0.100	0.03%
360	ING-6	Royal Road Public School	510337	4765360	0.070	0.045	0.115	0.03%	0.077	0.147	0.04%	0.070	0.140	0.04%	0.046	0.116	0.03%
360	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.070	0.022	0.092	0.03%	0.036	0.106	0.03%	0.037	0.107	0.03%	0.022	0.092	0.03%
360	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.070	0.022	0.092	0.03%	0.050	0.120	0.03%	0.042	0.112	0.03%	0.029	0.099	0.03%
360	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.070	0.066	0.136	0.04%	0.110	0.180	0.05%	0.129	0.199	0.06%	0.068	0.138	0.04%
360	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.070	0.041	0.111	0.03%	0.079	0.149	0.04%	0.087	0.157	0.04%	0.053	0.123	0.03%
360	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.070	0.110	0.180	0.05%	0.377	0.447	0.12%	0.433	0.503	0.12%	0.224	0.294	0.08%
360	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.070	0.133	0.203	0.06%	0.267	0.337	0.09%	0.331	0.401	0.11%	0.181	0.251	0.07%
360	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.070	0.151	0.221	0.06%	0.243	0.313	0.09%	0.406	0.476	0.13%	0.202	0.272	0.08%
360	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.070	0.092	0.162	0.05%	0.075	0.145	0.04%	0.099	0.169	0.05%	0.058	0.128	0.04%
360	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.070	0.055	0.125	0.03%	0.057	0.127	0.04%	0.081	0.151	0.04%	0.044	0.114	0.03%
360	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.070	0.036	0.106	0.03%	0.030	0.100	0.03%	0.041	0.111	0.03%	0.023	0.093	0.03%
360	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.070	0.021	0.091	0.03%	0.033	0.103	0.03%	0.044	0.114	0.03%	0.024	0.094	0.03%
360	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.070	0.009	0.079	0.02%	0.013	0.083	0.02%	0.015	0.085	0.02%	0.009	0.079	0.02%
360	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.070	0.008	0.078	0.02%	0.010	0.080	0.02%	0.012	0.082	0.02%	0.007	0.077	0.02%
360	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.070	0.089	0.159	0.04%	0.205	0.275	0.08%	0.147	0.217	0.06%	0.107	0.177	0.05%
360	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.070	0.083	0.153	0.04%	0.223	0.293	0.08%	0.160	0.230	0.06%	0.095	0.165	0.05%
360	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.070	0.125	0.195	0.05%	0.186	0.256	0.07%	0.316	0.386	0.11%	0.171	0.241	0.07%
360	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.070	0.099	0.169	0.05%	0.182	0.252	0.07%	0.298	0.368	0.10%	0.162	0.232	0.06%
360	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.070	0.110	0.180	0.05%	0.120	0.190	0.05%	0.173	0.243	0.07%	0.094	0.164	0.05%
360	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.070	0.073	0.143	0.04%	0.126	0.196	0.05%	0.163	0.233	0.06%	0.086	0.156	0.04%
360	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.070	0.085	0.155	0.04%	0.138	0.208	0.06%	0.181	0.251	0.07%	0.098	0.168	0.05%
360	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.070	0.073	0.143	0.04%	0.080	0.150	0.04%	0.128	0.198	0.06%	0.069	0.139	0.04%
360	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.070	0.086	0.156	0.04%	0.084	0.154	0.04%	0.092	0.162	0.04%	0.057	0.127	0.04%
360	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.070	0.034	0.104	0.03%	0.057	0.127	0.04%	0.079	0.149	0.04%	0.043	0.113	0.03%
360	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.070	0.021	0.091	0.03%	0.015	0.085	0.02%	0.018	0.088	0.02%	0.012	0.082	0.02%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Toluene (CAS 108-88-3)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.610	0.338	1.948	0.10%	0.392	2.002	0.10%	0.403	2.013	0.10%	0.263	1.873	0.09%
2,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.610	0.319	1.929	0.10%	0.445	2.055	0.10%	0.363	1.973	0.10%	0.215	1.825	0.09%
2,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.610	0.321	1.931	0.10%	0.332	1.942	0.10%	0.399	2.009	0.10%	0.225	1.835	0.09%
2,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.610	0.250	1.860	0.09%	0.374	1.984	0.10%	0.333	1.943	0.10%	0.221	1.831	0.09%
2,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.610	0.695	2.305	0.12%	0.479	2.089	0.10%	0.695	2.305	0.12%	0.458	2.068	0.10%
2,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.610	0.931	2.541	0.13%	0.953	2.563	0.13%	1.145	2.755	0.14%	0.724	2.334	0.12%
2,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.610	0.187	1.797	0.09%	0.302	1.912	0.10%	0.305	1.915	0.10%	0.204	1.814	0.09%
2,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.610	0.709	2.319	0.12%	0.729	2.339	0.12%	0.774	2.384	0.12%	0.441	2.051	0.10%
2,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.610	0.711	2.321	0.12%	0.920	2.530	0.13%	0.952	2.562	0.13%	0.583	2.193	0.11%
2,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.610	0.398	2.008	0.10%	0.587	2.197	0.11%	0.639	2.249	0.11%	0.357	1.967	0.10%
2,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.610	0.856	2.466	0.12%	1.906	3.516	0.18%	1.653	3.263	0.16%	1.027	2.637	0.13%
2,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.610	0.488	2.098	0.10%	0.883	2.493	0.12%	0.812	2.422	0.12%	0.508	2.118	0.11%
2,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.610	0.154	1.764	0.09%	0.191	1.801	0.09%	0.257	1.867	0.09%	0.137	1.747	0.09%
2,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.610	0.418	2.028	0.10%	0.561	2.171	0.11%	0.715	2.325	0.12%	0.373	1.983	0.10%
2,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.610	0.152	1.762	0.09%	0.333	1.943	0.10%	0.378	1.988	0.10%	0.213	1.823	0.09%
2,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.610	0.444	2.054	0.10%	0.654	2.264	0.11%	0.675	2.285	0.11%	0.411	2.021	0.10%
2,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.610	0.205	1.815	0.09%	0.254	1.864	0.09%	0.290	1.900	0.10%	0.180	1.790	0.09%
2,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.610	0.144	1.754	0.09%	0.276	1.886	0.09%	0.293	1.903	0.10%	0.178	1.788	0.09%
2,000	ING-6	Royal Road Public School	510337	4765360	1.610	0.259	1.869	0.09%	0.451	2.061	0.10%	0.400	2.010	0.10%	0.258	1.868	0.09%
2,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.610	0.125	1.735	0.09%	0.212	1.822	0.09%	0.215	1.825	0.09%	0.131	1.741	0.09%
2,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.610	0.126	1.736	0.09%	0.287	1.897	0.09%	0.244	1.854	0.09%	0.165	1.775	0.09%
2,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.610	0.382	1.992	0.10%	0.636	2.246	0.11%	0.753	2.363	0.12%	0.393	2.003	0.10%
2,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.610	0.241	1.851	0.09%	0.458	2.068	0.10%	0.509	2.119	0.11%	0.312	1.922	0.10%
2,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.610	0.587	2.197	0.11%	2.149	3.759	0.19%	2.069	3.679	0.18%	1.254	2.864	0.14%
2,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.610	0.735	2.345	0.12%	1.559	3.169	0.16%	1.921	3.531	0.18%	1.047	2.657	0.13%
2,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.610	0.849	2.459	0.12%	1.412	3.022	0.15%	2.367	3.977	0.20%	1.171	2.781	0.14%
2,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.610	0.523	2.133	0.11%	0.436	2.046	0.10%	0.580	2.190	0.11%	0.336	1.946	0.10%
2,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.610	0.315	1.925	0.10%	0.332	1.942	0.10%	0.475	2.085	0.10%	0.257	1.867	0.09%
2,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.610	0.207	1.817	0.09%	0.171	1.781	0.09%	0.226	1.836	0.09%	0.125	1.735	0.09%
2,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.610	0.118	1.728	0.09%	0.192	1.802	0.09%	0.256	1.866	0.09%	0.141	1.751	0.09%
2,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.610	0.051	1.661	0.08%	0.072	1.682	0.08%	0.089	1.699	0.08%	0.052	1.662	0.08%
2,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.610	0.049	1.659	0.08%	0.056	1.666	0.08%	0.071	1.681	0.08%	0.040	1.650	0.08%
2,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.610	0.521	2.131	0.11%	1.195	2.805	0.14%	0.856	2.466	0.12%	0.621	2.231	0.11%
2,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.610	0.443	2.053	0.10%	1.259	2.869	0.14%	0.938	2.548	0.13%	0.513	2.123	0.11%
2,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.610	0.711	2.321	0.12%	1.067	2.677	0.13%	1.832	3.442	0.17%	0.981	2.591	0.13%
2,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.610	0.557	2.167	0.11%	1.063	2.673	0.13%	1.718	3.328	0.17%	0.920	2.530	0.13%
2,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.610	0.593	2.203	0.11%	0.689	2.299	0.11%	0.961	2.571	0.13%	0.497	2.107	0.11%
2,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.610	0.399	2.009	0.10%	0.733	2.343	0.12%	0.932	2.542	0.13%	0.483	2.093	0.10%
2,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.610	0.466	2.076	0.10%	0.789	2.399	0.12%	1.042	2.652	0.13%	0.558	2.168	0.11%
2,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.610	0.412	2.022	0.10%	0.440	2.050	0.10%	0.735	2.345	0.12%	0.386	1.996	0.10%
2,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.610	0.500	2.110	0.11%	0.483	2.093	0.10%	0.527	2.137	0.11%	0.325	1.935	0.10%
2,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.610	0.191	1.801	0.09%	0.334	1.944	0.10%	0.459	2.069	0.10%	0.249	1.859	0.09%
2,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.610	0.120	1.730	0.09%	0.088	1.698	0.08%	0.105	1.715	0.09%	0.069	1.679	0.08%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Trichloroethylene (CAS 79-01-6)**

**Annual**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.061	0.0017	0.063	2.7%	0.0022	0.063	2.7%	0.0025	0.063	2.8%	0.0016	0.062	2.7%
2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.061	0.0022	0.063	2.7%	0.0025	0.063	2.8%	0.0026	0.063	2.8%	0.0018	0.063	2.7%
2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.061	0.0019	0.063	2.7%	0.0025	0.063	2.8%	0.0029	0.064	2.8%	0.0019	0.063	2.7%
2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.061	0.0017	0.062	2.7%	0.0021	0.063	2.7%	0.0022	0.063	2.7%	0.0015	0.062	2.7%
2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.061	0.0052	0.066	2.9%	0.0047	0.066	2.8%	0.0053	0.066	2.9%	0.0037	0.065	2.8%
2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.061	0.0084	0.069	3.0%	0.0082	0.069	3.0%	0.0089	0.070	3.0%	0.0062	0.067	2.9%
2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.061	0.0013	0.062	2.7%	0.0017	0.063	2.7%	0.0020	0.063	2.7%	0.0012	0.062	2.7%
2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.061	0.0060	0.062	2.9%	0.0067	0.068	2.9%	0.0069	0.068	2.9%	0.0046	0.065	2.8%
2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.061	0.0050	0.066	2.9%	0.0097	0.071	3.1%	0.0097	0.071	3.1%	0.0059	0.067	2.9%
2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.061	0.0024	0.063	2.7%	0.0053	0.066	2.9%	0.0051	0.066	2.9%	0.0031	0.064	2.8%
2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.061	0.0057	0.067	2.9%	0.0168	0.078	3.4%	0.0132	0.074	3.2%	0.0086	0.069	3.0%
2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.061	0.0027	0.063	2.8%	0.0059	0.067	2.9%	0.0053	0.066	2.9%	0.0034	0.064	2.8%
2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.061	0.0009	0.062	2.7%	0.0013	0.062	2.7%	0.0015	0.062	2.7%	0.0009	0.062	2.7%
2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.061	0.0023	0.063	2.7%	0.0046	0.065	2.8%	0.0046	0.065	2.8%	0.0028	0.064	2.8%
2	ING-2	Laurie Hawkins Public School	509019	4765860	0.061	0.0009	0.062	2.7%	0.0018	0.063	2.7%	0.0019	0.063	2.7%	0.0012	0.062	2.7%
2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.061	0.0024	0.062	2.7%	0.0045	0.065	2.8%	0.0045	0.065	2.8%	0.0027	0.064	2.8%
2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.061	0.0010	0.062	2.7%	0.0013	0.062	2.7%	0.0013	0.062	2.7%	0.0009	0.062	2.7%
2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.061	0.0008	0.062	2.7%	0.0014	0.062	2.7%	0.0014	0.062	2.7%	0.0009	0.062	2.7%
2	ING-6	Royal Road Public School	510337	4765360	0.061	0.0013	0.062	2.7%	0.0020	0.063	2.7%	0.0022	0.063	2.7%	0.0013	0.062	2.7%
2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.061	0.0005	0.061	2.7%	0.0009	0.062	2.7%	0.0011	0.062	2.7%	0.0006	0.061	2.7%
2	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.061	0.0007	0.061	2.7%	0.0011	0.062	2.7%	0.0012	0.062	2.7%	0.0007	0.062	2.7%
2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.061	0.0014	0.062	2.7%	0.0027	0.064	2.8%	0.0030	0.064	2.8%	0.0018	0.063	2.7%
2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.061	0.0008	0.062	2.7%	0.0015	0.062	2.7%	0.0017	0.063	2.7%	0.0010	0.062	2.7%
2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.061	0.0038	0.065	2.8%	0.0104	0.071	3.1%	0.0117	0.073	3.2%	0.0067	0.068	2.9%
2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.061	0.0061	0.067	2.9%	0.0146	0.075	3.3%	0.0197	0.081	3.5%	0.0107	0.071	3.1%
2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.061	0.0063	0.067	2.9%	0.0126	0.073	3.2%	0.0181	0.079	3.4%	0.0099	0.071	3.1%
2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.061	0.0034	0.064	2.8%	0.0052	0.066	2.9%	0.0066	0.067	2.9%	0.0039	0.065	2.8%
2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.061	0.0024	0.063	2.7%	0.0032	0.064	2.8%	0.0038	0.065	2.8%	0.0024	0.063	2.7%
2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.061	0.0011	0.062	2.7%	0.0013	0.062	2.7%	0.0015	0.062	2.7%	0.0010	0.062	2.7%
2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.061	0.0006	0.061	2.7%	0.0008	0.062	2.7%	0.0010	0.062	2.7%	0.0006	0.061	2.7%
2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.061	0.0003	0.061	2.7%	0.0004	0.061	2.7%	0.0004	0.061	2.7%	0.0003	0.061	2.7%
2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.061	0.0002	0.061	2.7%	0.0003	0.061	2.7%	0.0003	0.061	2.7%	0.0002	0.061	2.7%
2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.061	0.0021	0.063	2.7%	0.0045	0.065	2.8%	0.0047	0.066	2.9%	0.0029	0.064	2.8%
2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.061	0.0023	0.063	2.7%	0.0053	0.066	2.9%	0.0062	0.067	2.9%	0.0036	0.064	2.8%
2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.061	0.0026	0.063	2.8%	0.0060	0.067	2.9%	0.0065	0.067	2.9%	0.0038	0.065	2.8%
2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.061	0.0037	0.065	2.8%	0.0105	0.071	3.1%	0.0115	0.072	3.1%	0.0066	0.067	2.9%
2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.061	0.0036	0.064	2.8%	0.0066	0.067	2.9%	0.0083	0.069	3.0%	0.0047	0.066	2.8%
2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.061	0.0033	0.064	2.8%	0.0061	0.067	2.9%	0.0078	0.069	3.0%	0.0044	0.065	2.8%
2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.061	0.0032	0.064	2.8%	0.0057	0.067	2.9%	0.0072	0.068	3.0%	0.0042	0.065	2.8%
2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.061	0.0022	0.063	2.7%	0.0036	0.064	2.8%	0.0046	0.065	2.8%	0.0027	0.063	2.8%
2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.061	0.0021	0.063	2.7%	0.0032	0.064	2.8%	0.0040	0.065	2.8%	0.0024	0.063	2.7%
2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.061	0.0012	0.062	2.7%	0.0019	0.063	2.7%	0.0022	0.063	2.7%	0.0013	0.062	2.7%
2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.061	0.0005	0.061	2.7%	0.0007	0.062	2.7%	0.0009	0.062	2.7%	0.0005	0.061	2.7%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Trichloroethylene (CAS 79-01-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
12	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.055	0.040	0.095	0.8%	0.048	0.103	0.9%	0.049	0.104	0.9%	0.033	0.088	0.7%
12	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.055	0.042	0.097	0.8%	0.050	0.105	0.9%	0.044	0.099	0.8%	0.026	0.081	0.7%
12	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.055	0.035	0.090	0.8%	0.037	0.092	0.8%	0.041	0.096	0.8%	0.025	0.080	0.7%
12	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.055	0.029	0.084	0.7%	0.040	0.095	0.8%	0.034	0.089	0.7%	0.023	0.078	0.7%
12	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.055	0.093	0.148	1.2%	0.067	0.122	1.0%	0.089	0.144	1.2%	0.063	0.118	1.0%
12	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.055	0.105	0.160	1.3%	0.106	0.161	1.3%	0.126	0.181	1.5%	0.076	0.131	1.1%
12	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.055	0.020	0.075	0.6%	0.035	0.090	0.8%	0.035	0.090	0.8%	0.023	0.078	0.6%
12	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.055	0.079	0.134	1.1%	0.078	0.133	1.1%	0.083	0.138	1.1%	0.045	0.100	0.8%
12	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.055	0.073	0.128	1.1%	0.098	0.153	1.3%	0.101	0.156	1.3%	0.060	0.115	1.0%
12	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.055	0.046	0.101	0.8%	0.065	0.120	1.0%	0.069	0.124	1.0%	0.038	0.093	0.8%
12	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.055	0.090	0.145	1.2%	0.199	0.254	2.1%	0.173	0.228	1.9%	0.105	0.160	1.3%
12	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.055	0.054	0.109	0.9%	0.094	0.149	1.2%	0.087	0.142	1.2%	0.053	0.108	0.9%
12	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.055	0.018	0.073	0.6%	0.020	0.075	0.6%	0.026	0.081	0.7%	0.014	0.069	0.6%
12	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.055	0.049	0.104	0.9%	0.060	0.115	1.0%	0.076	0.131	1.1%	0.040	0.095	0.8%
12	ING-2	Laurie Hawkins Public School	509019	4765860	0.055	0.018	0.073	0.6%	0.036	0.091	0.8%	0.040	0.095	0.8%	0.022	0.077	0.6%
12	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.055	0.046	0.101	0.8%	0.069	0.124	1.0%	0.071	0.126	1.1%	0.043	0.098	0.8%
12	ING-4	On the river north of 209 County Road 9	509480	4765180	0.055	0.022	0.077	0.6%	0.027	0.082	0.7%	0.031	0.086	0.7%	0.019	0.074	0.6%
12	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.055	0.016	0.071	0.6%	0.030	0.085	0.7%	0.032	0.087	0.7%	0.018	0.073	0.6%
12	ING-6	Royal Road Public School	510337	4765360	0.055	0.030	0.085	0.7%	0.048	0.103	0.9%	0.044	0.099	0.8%	0.028	0.083	0.7%
12	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.055	0.014	0.069	0.6%	0.022	0.077	0.6%	0.023	0.078	0.6%	0.013	0.068	0.6%
12	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.055	0.014	0.069	0.6%	0.031	0.086	0.7%	0.026	0.081	0.7%	0.017	0.072	0.6%
12	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.055	0.043	0.098	0.8%	0.069	0.124	1.0%	0.079	0.134	1.1%	0.041	0.096	0.8%
12	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.055	0.026	0.081	0.7%	0.049	0.104	0.9%	0.055	0.110	0.9%	0.032	0.087	0.7%
12	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.055	0.073	0.128	1.1%	0.235	0.290	2.4%	0.227	0.282	2.3%	0.136	0.191	1.6%
12	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.055	0.087	0.142	1.2%	0.161	0.216	1.8%	0.208	0.263	2.2%	0.109	0.164	1.4%
12	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.055	0.097	0.152	1.3%	0.155	0.210	1.8%	0.253	0.308	2.6%	0.121	0.176	1.5%
12	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.055	0.059	0.114	0.9%	0.046	0.101	0.8%	0.063	0.118	1.0%	0.035	0.090	0.7%
12	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.055	0.036	0.091	0.8%	0.035	0.090	0.8%	0.050	0.105	0.9%	0.026	0.081	0.7%
12	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.055	0.023	0.078	0.6%	0.020	0.075	0.6%	0.025	0.080	0.7%	0.014	0.069	0.6%
12	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.055	0.013	0.068	0.6%	0.021	0.076	0.6%	0.027	0.082	0.7%	0.015	0.070	0.6%
12	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.055	0.006	0.061	0.5%	0.008	0.063	0.5%	0.009	0.064	0.5%	0.005	0.060	0.5%
12	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.055	0.005	0.060	0.5%	0.006	0.061	0.5%	0.008	0.063	0.5%	0.004	0.059	0.5%
12	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.055	0.056	0.111	0.9%	0.128	0.183	1.5%	0.094	0.149	1.2%	0.064	0.119	1.0%
12	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.055	0.055	0.110	0.9%	0.140	0.195	1.6%	0.096	0.151	1.3%	0.058	0.113	0.9%
12	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.055	0.080	0.135	1.1%	0.116	0.171	1.4%	0.195	0.250	2.1%	0.103	0.158	1.3%
12	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.055	0.064	0.119	1.0%	0.110	0.165	1.4%	0.184	0.239	2.0%	0.097	0.152	1.3%
12	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.055	0.074	0.129	1.1%	0.076	0.131	1.1%	0.107	0.162	1.3%	0.058	0.113	0.9%
12	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.055	0.049	0.104	0.9%	0.077	0.132	1.1%	0.101	0.156	1.3%	0.052	0.107	0.9%
12	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.055	0.055	0.110	0.9%	0.087	0.142	1.2%	0.113	0.168	1.4%	0.059	0.114	1.0%
12	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.055	0.048	0.103	0.9%	0.050	0.105	0.9%	0.084	0.139	1.2%	0.042	0.097	0.8%
12	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.055	0.054	0.109	0.9%	0.052	0.107	0.9%	0.057	0.112	0.9%	0.035	0.090	0.7%
12	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.055	0.023	0.078	0.7%	0.036	0.091	0.8%	0.049	0.104	0.9%	0.026	0.081	0.7%
12	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.055	0.014	0.069	0.6%	0.009	0.064	0.5%	0.011	0.066	0.6%	0.007	0.062	0.5%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Trichlorofluoromethane (CAS 75-69-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
6,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.300	0.004	1.304	0.02%	0.004	1.304	0.02%	0.004	1.304	0.02%	0.003	1.303	0.02%
6,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.300	0.003	1.303	0.02%	0.005	1.305	0.02%	0.004	1.304	0.02%	0.002	1.302	0.02%
6,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.300	0.003	1.303	0.02%	0.003	1.303	0.02%	0.004	1.304	0.02%	0.002	1.302	0.02%
6,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.300	0.003	1.303	0.02%	0.004	1.304	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.300	0.007	1.307	0.02%	0.005	1.305	0.02%	0.007	1.307	0.02%	0.005	1.305	0.02%
6,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.300	0.010	1.310	0.02%	0.010	1.310	0.02%	0.012	1.312	0.02%	0.007	1.307	0.02%
6,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.300	0.007	1.307	0.02%	0.008	1.308	0.02%	0.008	1.308	0.02%	0.004	1.304	0.02%
6,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.300	0.007	1.307	0.02%	0.009	1.309	0.02%	0.010	1.310	0.02%	0.006	1.306	0.02%
6,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.300	0.004	1.304	0.02%	0.006	1.306	0.02%	0.007	1.307	0.02%	0.004	1.304	0.02%
6,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.300	0.009	1.309	0.02%	0.019	1.319	0.02%	0.017	1.317	0.02%	0.010	1.310	0.02%
6,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.300	0.005	1.305	0.02%	0.009	1.309	0.02%	0.008	1.308	0.02%	0.005	1.305	0.02%
6,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.300	0.002	1.302	0.02%	0.002	1.302	0.02%	0.003	1.303	0.02%	0.001	1.301	0.02%
6,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.300	0.004	1.304	0.02%	0.006	1.306	0.02%	0.007	1.307	0.02%	0.004	1.304	0.02%
6,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.004	1.304	0.02%	0.002	1.302	0.02%
6,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.300	0.005	1.305	0.02%	0.007	1.307	0.02%	0.007	1.307	0.02%	0.004	1.304	0.02%
6,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.300	0.001	1.301	0.02%	0.003	1.303	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%
6,000	ING-6	Royal Road Public School	510337	4765360	1.300	0.003	1.303	0.02%	0.005	1.305	0.02%	0.004	1.304	0.02%	0.003	1.303	0.02%
6,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.300	0.001	1.301	0.02%	0.002	1.302	0.02%	0.002	1.302	0.02%	0.001	1.301	0.02%
6,000	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	1.300	0.001	1.301	0.02%	0.003	1.303	0.02%	0.002	1.302	0.02%	0.002	1.302	0.02%
6,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.300	0.004	1.304	0.02%	0.007	1.307	0.02%	0.008	1.308	0.02%	0.004	1.304	0.02%
6,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.300	0.003	1.303	0.02%	0.005	1.305	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.300	0.006	1.306	0.02%	0.022	1.322	0.02%	0.021	1.321	0.02%	0.013	1.313	0.02%
6,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.300	0.008	1.308	0.02%	0.016	1.316	0.02%	0.020	1.320	0.02%	0.011	1.311	0.02%
6,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.300	0.009	1.309	0.02%	0.015	1.315	0.02%	0.024	1.324	0.02%	0.012	1.312	0.02%
6,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.300	0.005	1.305	0.02%	0.004	1.304	0.02%	0.006	1.306	0.02%	0.003	1.303	0.02%
6,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.300	0.003	1.303	0.02%	0.003	1.303	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.300	0.002	1.302	0.02%	0.002	1.302	0.02%	0.002	1.302	0.02%	0.001	1.301	0.02%
6,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.300	0.001	1.301	0.02%	0.002	1.302	0.02%	0.003	1.303	0.02%	0.001	1.301	0.02%
6,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.300	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%
6,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.300	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%	0.000	1.300	0.02%
6,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.300	0.005	1.305	0.02%	0.012	1.312	0.02%	0.009	1.309	0.02%	0.006	1.306	0.02%
6,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.300	0.005	1.305	0.02%	0.013	1.313	0.02%	0.009	1.309	0.02%	0.005	1.305	0.02%
6,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.300	0.007	1.307	0.02%	0.011	1.311	0.02%	0.019	1.319	0.02%	0.010	1.310	0.02%
6,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.300	0.006	1.306	0.02%	0.011	1.311	0.02%	0.018	1.318	0.02%	0.009	1.309	0.02%
6,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.300	0.006	1.306	0.02%	0.007	1.307	0.02%	0.010	1.310	0.02%	0.005	1.305	0.02%
6,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.300	0.004	1.304	0.02%	0.007	1.307	0.02%	0.010	1.310	0.02%	0.005	1.305	0.02%
6,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.300	0.005	1.305	0.02%	0.008	1.308	0.02%	0.011	1.311	0.02%	0.006	1.306	0.02%
6,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.300	0.004	1.304	0.02%	0.005	1.305	0.02%	0.008	1.308	0.02%	0.004	1.304	0.02%
6,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.300	0.005	1.305	0.02%	0.005	1.305	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.300	0.002	1.302	0.02%	0.003	1.303	0.02%	0.005	1.305	0.02%	0.003	1.303	0.02%
6,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.300	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%	0.001	1.301	0.02%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

Vinyl Chloride (CAS 75-01-4)

Annual

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
0.2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.026	0.0019	0.027	14%	0.0025	0.028	14%	0.0029	0.028	14%	0.0019	0.027	14%
0.2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.026	0.0024	0.028	14%	0.0029	0.028	14%	0.0030	0.029	14%	0.0021	0.028	14%
0.2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.026	0.0022	0.028	14%	0.0029	0.028	14%	0.0034	0.029	14%	0.0023	0.028	14%
0.2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.026	0.0019	0.027	14%	0.0024	0.028	14%	0.0026	0.028	14%	0.0018	0.027	14%
0.2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.026	0.0057	0.031	16%	0.0053	0.031	15%	0.0061	0.032	16%	0.0044	0.030	15%
0.2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.026	0.0092	0.035	17%	0.0093	0.035	17%	0.0102	0.036	18%	0.0073	0.033	16%
0.2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.026	0.0014	0.027	13%	0.0020	0.027	14%	0.0023	0.028	14%	0.0015	0.027	13%
0.2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.026	0.0067	0.032	16%	0.0078	0.033	17%	0.0080	0.034	17%	0.0055	0.031	15%
0.2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.026	0.0058	0.031	16%	0.0114	0.037	18%	0.0114	0.037	18%	0.0072	0.033	16%
0.2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.026	0.0026	0.028	14%	0.0063	0.032	16%	0.0061	0.032	16%	0.0038	0.029	15%
0.2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.026	0.0066	0.032	16%	0.0202	0.046	23%	0.0157	0.041	21%	0.0106	0.036	18%
0.2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.026	0.0031	0.029	14%	0.0069	0.032	16%	0.0061	0.032	16%	0.0041	0.030	15%
0.2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.026	0.0010	0.027	13%	0.0015	0.027	13%	0.0018	0.027	14%	0.0011	0.027	13%
0.2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.026	0.0026	0.028	14%	0.0054	0.031	15%	0.0055	0.031	15%	0.0034	0.029	14%
0.2	ING-2	Laurie Hawkins Public School	509019	4765860	0.026	0.0010	0.027	13%	0.0021	0.028	14%	0.0023	0.028	14%	0.0014	0.027	13%
0.2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.026	0.0027	0.028	14%	0.0053	0.031	15%	0.0054	0.031	15%	0.0033	0.029	14%
0.2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.026	0.0012	0.027	13%	0.0015	0.027	14%	0.0016	0.027	14%	0.0011	0.027	13%
0.2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.026	0.0009	0.026	13%	0.0016	0.027	14%	0.0017	0.027	14%	0.0011	0.027	13%
0.2	ING-6	Royal Road Public School	510337	4765360	0.026	0.0015	0.027	13%	0.0023	0.028	14%	0.0026	0.028	14%	0.0016	0.027	14%
0.2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.026	0.0005	0.026	13%	0.0011	0.027	13%	0.0013	0.027	13%	0.0008	0.026	13%
0.2	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.026	0.0007	0.026	13%	0.0013	0.027	13%	0.0015	0.027	13%	0.0009	0.026	13%
0.2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.026	0.0016	0.027	14%	0.0032	0.029	14%	0.0035	0.029	15%	0.0022	0.028	14%
0.2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.026	0.0009	0.026	13%	0.0018	0.027	14%	0.0021	0.028	14%	0.0013	0.027	13%
0.2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.026	0.0044	0.030	15%	0.0125	0.038	19%	0.0140	0.039	20%	0.0083	0.034	17%
0.2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.026	0.0070	0.033	16%	0.0173	0.043	21%	0.0237	0.049	25%	0.0131	0.039	19%
0.2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.026	0.0073	0.033	16%	0.0149	0.040	20%	0.0217	0.047	24%	0.0122	0.038	19%
0.2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.026	0.0040	0.029	15%	0.0061	0.032	16%	0.0078	0.033	17%	0.0048	0.030	15%
0.2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.026	0.0028	0.028	14%	0.0037	0.029	15%	0.0044	0.030	15%	0.0029	0.028	14%
0.2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.026	0.0013	0.027	13%	0.0016	0.027	14%	0.0018	0.027	14%	0.0012	0.027	13%
0.2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.026	0.0007	0.026	13%	0.0010	0.026	13%	0.0012	0.027	13%	0.0007	0.026	13%
0.2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.026	0.0003	0.026	13%	0.0005	0.026	13%	0.0005	0.026	13%	0.0003	0.026	13%
0.2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.026	0.0002	0.026	13%	0.0003	0.026	13%	0.0003	0.026	13%	0.0002	0.026	13%
0.2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.026	0.0024	0.028	14%	0.0054	0.031	15%	0.0056	0.031	16%	0.0035	0.029	15%
0.2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.026	0.0027	0.028	14%	0.0063	0.032	16%	0.0075	0.033	16%	0.0044	0.030	15%
0.2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.026	0.0030	0.028	14%	0.0071	0.033	16%	0.0077	0.033	17%	0.0047	0.030	15%
0.2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.026	0.0043	0.030	15%	0.0125	0.038	19%	0.0137	0.039	20%	0.0082	0.034	17%
0.2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.026	0.0041	0.030	15%	0.0078	0.033	17%	0.0099	0.035	18%	0.0058	0.031	16%
0.2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.026	0.0038	0.029	15%	0.0072	0.033	16%	0.0092	0.035	17%	0.0055	0.031	15%
0.2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.026	0.0037	0.029	15%	0.0067	0.032	16%	0.0086	0.034	17%	0.0051	0.031	15%
0.2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.026	0.0025	0.028	14%	0.0042	0.030	15%	0.0054	0.031	15%	0.0033	0.029	14%
0.2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.026	0.0024	0.028	14%	0.0038	0.029	15%	0.0047	0.030	15%	0.0029	0.028	14%
0.2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.026	0.0014	0.027	13%	0.0022	0.028	14%	0.0026	0.028	14%	0.0016	0.027	14%
0.2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.026	0.0006	0.026	13%	0.0009	0.026	13%	0.0010	0.027	13%	0.0007	0.026	13%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

Vinyl Chloride (CAS 75-01-4)

24-hour

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
1	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.026	0.045	0.070	7%	0.055	0.081	8%	0.057	0.082	8%	0.039	0.064	6%
1	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.026	0.046	0.071	7%	0.059	0.085	8%	0.051	0.077	8%	0.031	0.056	6%
1	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.026	0.041	0.067	7%	0.043	0.068	7%	0.051	0.076	8%	0.030	0.056	6%
1	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.026	0.032	0.058	6%	0.048	0.073	7%	0.042	0.068	7%	0.028	0.054	5%
1	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.026	0.103	0.128	13%	0.076	0.101	10%	0.103	0.128	13%	0.073	0.099	10%
1	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.026	0.120	0.146	15%	0.123	0.148	15%	0.147	0.173	17%	0.094	0.119	12%
1	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.026	0.024	0.049	5%	0.040	0.065	7%	0.040	0.066	7%	0.027	0.053	5%
1	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.026	0.091	0.117	12%	0.092	0.118	12%	0.098	0.123	12%	0.056	0.081	8%
1	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.026	0.090	0.116	12%	0.117	0.142	14%	0.120	0.146	15%	0.074	0.099	10%
1	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.026	0.052	0.078	8%	0.076	0.101	11%	0.081	0.106	11%	0.047	0.072	7%
1	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.026	0.109	0.134	13%	0.241	0.267	27%	0.209	0.235	23%	0.130	0.156	16%
1	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.026	0.064	0.089	9%	0.113	0.139	14%	0.104	0.129	13%	0.066	0.091	9%
1	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.026	0.021	0.046	5%	0.024	0.050	5%	0.033	0.058	6%	0.017	0.043	4%
1	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.026	0.055	0.080	8%	0.072	0.098	10%	0.092	0.117	12%	0.049	0.074	7%
1	ING-2	Laurie Hawkins Public School	509019	4765860	0.026	0.019	0.045	4%	0.042	0.068	7%	0.048	0.073	7%	0.027	0.053	5%
1	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.026	0.056	0.082	8%	0.084	0.109	11%	0.086	0.112	11%	0.053	0.078	8%
1	ING-4	On the river north of 209 County Road 9	509480	4765180	0.026	0.026	0.052	5%	0.033	0.058	6%	0.037	0.063	6%	0.023	0.049	5%
1	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.026	0.019	0.044	4%	0.035	0.061	6%	0.037	0.063	6%	0.023	0.048	5%
1	ING-6	Royal Road Public School	510337	4765360	0.026	0.033	0.059	6%	0.057	0.083	8%	0.052	0.077	8%	0.034	0.060	6%
1	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.026	0.016	0.042	4%	0.027	0.052	5%	0.027	0.053	5%	0.017	0.042	4%
1	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.026	0.016	0.042	4%	0.037	0.062	6%	0.031	0.056	6%	0.021	0.047	5%
1	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.026	0.049	0.075	7%	0.081	0.107	11%	0.096	0.121	12%	0.050	0.076	8%
1	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.026	0.031	0.056	6%	0.058	0.084	8%	0.065	0.090	9%	0.040	0.065	7%
1	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.026	0.082	0.107	11%	0.279	0.305	30%	0.269	0.295	29%	0.166	0.192	19%
1	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.026	0.099	0.124	12%	0.198	0.223	22%	0.245	0.271	27%	0.134	0.160	16%
1	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.026	0.112	0.138	14%	0.180	0.206	21%	0.301	0.326	33%	0.150	0.175	18%
1	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.026	0.069	0.094	9%	0.055	0.081	8%	0.073	0.099	10%	0.043	0.068	7%
1	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.026	0.041	0.066	7%	0.042	0.068	7%	0.060	0.086	9%	0.033	0.058	6%
1	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.026	0.027	0.052	5%	0.022	0.048	5%	0.030	0.056	6%	0.017	0.043	4%
1	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.026	0.015	0.041	4%	0.025	0.050	5%	0.033	0.058	6%	0.018	0.044	4%
1	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.026	0.007	0.032	3%	0.009	0.035	3%	0.011	0.037	4%	0.007	0.032	3%
1	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.026	0.006	0.032	3%	0.007	0.033	3%	0.009	0.035	3%	0.005	0.031	3%
1	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.026	0.066	0.092	9%	0.152	0.177	18%	0.109	0.134	13%	0.079	0.105	10%
1	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.026	0.061	0.087	9%	0.165	0.190	19%	0.119	0.144	14%	0.070	0.096	10%
1	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.026	0.092	0.118	12%	0.137	0.163	16%	0.234	0.260	26%	0.127	0.152	15%
1	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.026	0.074	0.099	10%	0.135	0.160	16%	0.221	0.246	25%	0.120	0.146	15%
1	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.026	0.082	0.107	11%	0.089	0.114	11%	0.128	0.154	15%	0.070	0.095	10%
1	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.026	0.054	0.080	8%	0.093	0.119	12%	0.121	0.146	15%	0.064	0.089	9%
1	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.026	0.063	0.088	9%	0.102	0.128	13%	0.134	0.159	16%	0.073	0.098	10%
1	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.026	0.054	0.080	8%	0.059	0.085	8%	0.095	0.120	12%	0.051	0.076	8%
1	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.026	0.064	0.089	9%	0.062	0.088	9%	0.068	0.093	9%	0.043	0.068	7%
1	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.026	0.025	0.051	5%	0.042	0.068	7%	0.058	0.084	8%	0.032	0.057	6%
1	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.026	0.015	0.041	4%	0.011	0.037	4%	0.013	0.039	4%	0.009	0.034	3%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Vinylidene Chloride (CAS 75-35-4)**

**24-hour**

Criteria (µg/m3)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m3)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m3)	Maximum Modelled Concentration With Background (µg/m3)	Percent of Criteria (%)
10	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.040	0.014	0.054	0.5%	0.015	0.054	0.5%	0.015	0.055	0.5%	0.014	0.054	0.5%
10	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.040	0.014	0.054	0.5%	0.013	0.053	0.5%	0.014	0.054	0.5%	0.013	0.053	0.5%
10	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.040	0.010	0.049	0.5%	0.010	0.049	0.5%	0.011	0.050	0.5%	0.010	0.050	0.5%
10	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.040	0.009	0.049	0.5%	0.009	0.049	0.5%	0.009	0.049	0.5%	0.009	0.049	0.5%
10	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.040	0.045	0.085	0.8%	0.044	0.083	0.8%	0.044	0.083	0.8%	0.044	0.083	0.8%
10	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.040	0.054	0.093	0.9%	0.055	0.094	0.9%	0.054	0.094	0.9%	0.054	0.093	0.9%
10	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.040	0.008	0.048	0.5%	0.008	0.048	0.5%	0.009	0.048	0.5%	0.008	0.048	0.5%
10	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.040	0.037	0.076	0.8%	0.036	0.076	0.8%	0.036	0.076	0.8%	0.036	0.075	0.8%
10	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.040	0.016	0.056	0.6%	0.016	0.056	0.6%	0.016	0.056	0.6%	0.016	0.055	0.6%
10	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.040	0.013	0.052	0.5%	0.014	0.053	0.5%	0.014	0.054	0.5%	0.013	0.053	0.5%
10	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.040	0.020	0.060	0.6%	0.022	0.062	0.6%	0.021	0.060	0.6%	0.021	0.060	0.6%
10	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.040	0.014	0.054	0.5%	0.016	0.055	0.6%	0.016	0.055	0.6%	0.015	0.054	0.5%
10	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.040	0.007	0.046	0.5%	0.007	0.046	0.5%	0.006	0.046	0.5%	0.006	0.046	0.5%
10	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.040	0.010	0.049	0.5%	0.011	0.050	0.5%	0.011	0.050	0.5%	0.010	0.050	0.5%
10	ING-2	Laurie Hawkins Public School	509019	4765860	0.040	0.007	0.047	0.5%	0.007	0.047	0.5%	0.007	0.047	0.5%	0.007	0.047	0.5%
10	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.040	0.011	0.051	0.5%	0.011	0.051	0.5%	0.011	0.051	0.5%	0.011	0.050	0.5%
10	ING-4	On the river north of 209 County Road 9	509480	4765180	0.040	0.006	0.045	0.5%	0.006	0.045	0.5%	0.006	0.045	0.5%	0.006	0.045	0.5%
10	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.040	0.004	0.044	0.4%	0.005	0.044	0.4%	0.005	0.044	0.4%	0.004	0.044	0.4%
10	ING-6	Royal Road Public School	510337	4765360	0.040	0.006	0.046	0.5%	0.006	0.046	0.5%	0.006	0.046	0.5%	0.006	0.046	0.5%
10	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.040	0.003	0.042	0.4%	0.003	0.042	0.4%	0.003	0.042	0.4%	0.003	0.042	0.4%
10	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.040	0.004	0.044	0.4%	0.004	0.043	0.4%	0.004	0.043	0.4%	0.004	0.043	0.4%
10	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.040	0.005	0.045	0.4%	0.005	0.045	0.4%	0.007	0.046	0.5%	0.006	0.045	0.5%
10	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.040	0.005	0.045	0.4%	0.005	0.045	0.4%	0.005	0.044	0.4%	0.005	0.044	0.4%
10	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.040	0.020	0.059	0.6%	0.028	0.068	0.7%	0.028	0.067	0.7%	0.023	0.063	0.6%
10	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.040	0.020	0.060	0.6%	0.018	0.058	0.6%	0.023	0.063	0.6%	0.019	0.059	0.6%
10	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.040	0.016	0.055	0.6%	0.017	0.056	0.6%	0.019	0.058	0.6%	0.016	0.055	0.6%
10	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.040	0.015	0.054	0.5%	0.015	0.055	0.5%	0.015	0.055	0.5%	0.015	0.054	0.5%
10	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.040	0.012	0.052	0.5%	0.012	0.052	0.5%	0.012	0.051	0.5%	0.012	0.051	0.5%
10	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.040	0.005	0.044	0.4%	0.004	0.044	0.4%	0.005	0.044	0.4%	0.004	0.044	0.4%
10	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.040	0.004	0.043	0.4%	0.004	0.043	0.4%	0.004	0.044	0.4%	0.004	0.043	0.4%
10	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.040	0.002	0.041	0.4%	0.001	0.041	0.4%	0.001	0.041	0.4%	0.001	0.041	0.4%
10	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.040	0.001	0.041	0.4%	0.001	0.040	0.4%	0.001	0.040	0.4%	0.001	0.040	0.4%
10	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.040	0.007	0.047	0.5%	0.009	0.048	0.5%	0.008	0.048	0.5%	0.007	0.047	0.5%
10	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.040	0.015	0.054	0.5%	0.019	0.059	0.6%	0.016	0.056	0.6%	0.015	0.055	0.5%
10	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.040	0.010	0.049	0.5%	0.012	0.052	0.5%	0.015	0.055	0.5%	0.011	0.050	0.5%
10	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.040	0.013	0.052	0.5%	0.013	0.053	0.5%	0.017	0.056	0.6%	0.013	0.053	0.5%
10	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.040	0.019	0.058	0.6%	0.018	0.057	0.6%	0.021	0.060	0.6%	0.018	0.058	0.6%
10	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.040	0.012	0.052	0.5%	0.013	0.053	0.5%	0.014	0.053	0.5%	0.013	0.052	0.5%
10	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.040	0.012	0.051	0.5%	0.011	0.051	0.5%	0.013	0.052	0.5%	0.011	0.051	0.5%
10	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.040	0.009	0.049	0.5%	0.010	0.049	0.5%	0.010	0.050	0.5%	0.009	0.049	0.5%
10	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.040	0.013	0.053	0.5%	0.014	0.053	0.5%	0.014	0.054	0.5%	0.013	0.053	0.5%
10	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.040	0.007	0.046	0.5%	0.007	0.046	0.5%	0.006	0.046	0.5%	0.006	0.046	0.5%
10	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.040	0.002	0.041	0.4%	0.002	0.042	0.4%	0.002	0.042	0.4%	0.002	0.041	0.4%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

Dichlorobenzene (CAS 106-46-7)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
95	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.340	0.013	0.353	0.4%	0.015	0.355	0.4%	0.016	0.356	0.4%	0.010	0.350	0.4%
95	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.340	0.012	0.352	0.4%	0.017	0.357	0.4%	0.014	0.354	0.4%	0.008	0.348	0.4%
95	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.340	0.012	0.352	0.4%	0.013	0.353	0.4%	0.015	0.355	0.4%	0.009	0.349	0.4%
95	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.340	0.010	0.350	0.4%	0.014	0.354	0.4%	0.013	0.353	0.4%	0.008	0.348	0.4%
95	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.340	0.027	0.367	0.4%	0.018	0.358	0.4%	0.027	0.367	0.4%	0.018	0.358	0.4%
95	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.340	0.036	0.376	0.4%	0.037	0.377	0.4%	0.044	0.384	0.4%	0.028	0.368	0.4%
95	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.340	0.007	0.347	0.4%	0.012	0.352	0.4%	0.012	0.352	0.4%	0.008	0.348	0.4%
95	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.340	0.027	0.367	0.4%	0.028	0.368	0.4%	0.030	0.370	0.4%	0.017	0.357	0.4%
95	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.340	0.027	0.367	0.4%	0.035	0.375	0.4%	0.037	0.377	0.4%	0.022	0.362	0.4%
95	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.340	0.015	0.355	0.4%	0.023	0.363	0.4%	0.024	0.364	0.4%	0.014	0.354	0.4%
95	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.340	0.033	0.373	0.4%	0.073	0.413	0.4%	0.063	0.403	0.4%	0.039	0.379	0.4%
95	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.340	0.019	0.359	0.4%	0.034	0.374	0.4%	0.031	0.371	0.4%	0.019	0.359	0.4%
95	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.340	0.006	0.346	0.4%	0.007	0.347	0.4%	0.010	0.350	0.4%	0.005	0.345	0.4%
95	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.340	0.016	0.356	0.4%	0.021	0.361	0.4%	0.027	0.367	0.4%	0.014	0.354	0.4%
95	ING-2	Laurie Hawkins Public School	509019	4765860	0.340	0.006	0.346	0.4%	0.013	0.353	0.4%	0.015	0.355	0.4%	0.008	0.348	0.4%
95	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.340	0.017	0.357	0.4%	0.025	0.365	0.4%	0.026	0.366	0.4%	0.016	0.356	0.4%
95	ING-4	On the river north of 209 County Road 9	509480	4765180	0.340	0.008	0.348	0.4%	0.010	0.350	0.4%	0.011	0.351	0.4%	0.007	0.347	0.4%
95	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.340	0.006	0.346	0.4%	0.011	0.351	0.4%	0.011	0.351	0.4%	0.007	0.347	0.4%
95	ING-6	Royal Road Public School	510337	4765360	0.340	0.010	0.350	0.4%	0.017	0.357	0.4%	0.015	0.355	0.4%	0.010	0.350	0.4%
95	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.340	0.005	0.345	0.4%	0.008	0.348	0.4%	0.008	0.348	0.4%	0.005	0.345	0.4%
95	ING-8	Alexandra Hospital (Noxon St and Thames St 5)	510135	4764360	0.340	0.005	0.345	0.4%	0.011	0.351	0.4%	0.009	0.349	0.4%	0.006	0.346	0.4%
95	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.340	0.015	0.355	0.4%	0.024	0.364	0.4%	0.029	0.369	0.4%	0.015	0.355	0.4%
95	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.340	0.009	0.349	0.4%	0.018	0.358	0.4%	0.020	0.360	0.4%	0.012	0.352	0.4%
95	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.340	0.023	0.363	0.4%	0.082	0.422	0.4%	0.080	0.420	0.4%	0.048	0.388	0.4%
95	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.340	0.028	0.368	0.4%	0.060	0.400	0.4%	0.074	0.414	0.4%	0.040	0.380	0.4%
95	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.340	0.033	0.373	0.4%	0.054	0.394	0.4%	0.091	0.431	0.5%	0.045	0.385	0.4%
95	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.340	0.020	0.360	0.4%	0.017	0.357	0.4%	0.022	0.362	0.4%	0.013	0.353	0.4%
95	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.340	0.012	0.352	0.4%	0.013	0.353	0.4%	0.018	0.358	0.4%	0.010	0.350	0.4%
95	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.340	0.008	0.348	0.4%	0.007	0.347	0.4%	0.009	0.349	0.4%	0.005	0.345	0.4%
95	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.340	0.005	0.345	0.4%	0.007	0.347	0.4%	0.010	0.350	0.4%	0.005	0.345	0.4%
95	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.340	0.002	0.342	0.4%	0.003	0.343	0.4%	0.003	0.343	0.4%	0.002	0.342	0.4%
95	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.340	0.002	0.342	0.4%	0.002	0.342	0.4%	0.003	0.343	0.4%	0.002	0.342	0.4%
95	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.340	0.020	0.360	0.4%	0.046	0.386	0.4%	0.033	0.373	0.4%	0.024	0.364	0.4%
95	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.340	0.017	0.357	0.4%	0.048	0.388	0.4%	0.036	0.376	0.4%	0.020	0.360	0.4%
95	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.340	0.027	0.367	0.4%	0.041	0.381	0.4%	0.070	0.410	0.4%	0.037	0.377	0.4%
95	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.340	0.021	0.361	0.4%	0.041	0.381	0.4%	0.066	0.406	0.4%	0.035	0.375	0.4%
95	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.340	0.023	0.363	0.4%	0.027	0.367	0.4%	0.037	0.377	0.4%	0.019	0.359	0.4%
95	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.340	0.015	0.355	0.4%	0.028	0.368	0.4%	0.036	0.376	0.4%	0.018	0.358	0.4%
95	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.340	0.018	0.358	0.4%	0.030	0.370	0.4%	0.040	0.380	0.4%	0.021	0.361	0.4%
95	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.340	0.016	0.356	0.4%	0.017	0.357	0.4%	0.028	0.368	0.4%	0.015	0.355	0.4%
95	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.340	0.019	0.359	0.4%	0.019	0.359	0.4%	0.020	0.360	0.4%	0.012	0.352	0.4%
95	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.340	0.007	0.347	0.4%	0.013	0.353	0.4%	0.018	0.358	0.4%	0.010	0.350	0.4%
95	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.340	0.005	0.345	0.4%	0.003	0.343	0.4%	0.004	0.344	0.4%	0.003	0.343	0.4%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated  
Chlorodifluoromethane (CAS 75-45-6)**

**24-hour**

Criteria (µg/m³)	Receptor Information				Ambient Background Concentration (µg/m³)	Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y		With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
350,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.020	0.010	1.030	0.0003%	0.012	1.032	0.0003%	0.013	1.033	0.0003%	0.008	1.028	0.0003%
350,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.020	0.010	1.030	0.0003%	0.014	1.034	0.0003%	0.011	1.031	0.0003%	0.007	1.027	0.0003%
350,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.020	0.010	1.030	0.0003%	0.010	1.030	0.0003%	0.012	1.032	0.0003%	0.007	1.027	0.0003%
350,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.020	0.008	1.028	0.0003%	0.012	1.032	0.0003%	0.010	1.030	0.0003%	0.007	1.027	0.0003%
350,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.020	0.022	1.042	0.0003%	0.015	1.035	0.0003%	0.022	1.042	0.0003%	0.014	1.034	0.0003%
350,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.020	0.029	1.049	0.0003%	0.030	1.050	0.0003%	0.036	1.056	0.0003%	0.022	1.042	0.0003%
350,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.020	0.006	1.026	0.0003%	0.009	1.029	0.0003%	0.009	1.029	0.0003%	0.006	1.026	0.0003%
350,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.020	0.022	1.042	0.0003%	0.023	1.043	0.0003%	0.024	1.044	0.0003%	0.014	1.034	0.0003%
350,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.020	0.022	1.042	0.0003%	0.029	1.049	0.0003%	0.030	1.050	0.0003%	0.018	1.038	0.0003%
350,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.020	0.012	1.032	0.0003%	0.018	1.038	0.0003%	0.020	1.040	0.0003%	0.011	1.031	0.0003%
350,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.020	0.027	1.047	0.0003%	0.059	1.079	0.0003%	0.051	1.071	0.0003%	0.032	1.052	0.0003%
350,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.020	0.015	1.035	0.0003%	0.027	1.047	0.0003%	0.025	1.045	0.0003%	0.016	1.036	0.0003%
350,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.020	0.005	1.025	0.0003%	0.006	1.026	0.0003%	0.008	1.028	0.0003%	0.004	1.024	0.0003%
350,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.020	0.013	1.033	0.0003%	0.017	1.037	0.0003%	0.022	1.042	0.0003%	0.012	1.032	0.0003%
350,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.020	0.005	1.025	0.0003%	0.010	1.030	0.0003%	0.012	1.032	0.0003%	0.007	1.027	0.0003%
350,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.020	0.014	1.034	0.0003%	0.020	1.040	0.0003%	0.021	1.041	0.0003%	0.013	1.033	0.0003%
350,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.020	0.006	1.026	0.0003%	0.008	1.028	0.0003%	0.009	1.029	0.0003%	0.006	1.026	0.0003%
350,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.020	0.004	1.024	0.0003%	0.009	1.029	0.0003%	0.009	1.029	0.0003%	0.006	1.026	0.0003%
350,000	ING-6	Royal Road Public School	510337	4765360	1.020	0.008	1.028	0.0003%	0.014	1.034	0.0003%	0.012	1.032	0.0003%	0.008	1.028	0.0003%
350,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.020	0.004	1.024	0.0003%	0.007	1.027	0.0003%	0.007	1.027	0.0003%	0.004	1.024	0.0003%
350,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.020	0.004	1.024	0.0003%	0.009	1.029	0.0003%	0.008	1.028	0.0003%	0.005	1.025	0.0003%
350,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.020	0.012	1.032	0.0003%	0.020	1.040	0.0003%	0.023	1.043	0.0003%	0.012	1.032	0.0003%
350,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.020	0.007	1.027	0.0003%	0.014	1.034	0.0003%	0.016	1.036	0.0003%	0.010	1.030	0.0003%
350,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.020	0.018	1.038	0.0003%	0.067	1.087	0.0003%	0.064	1.084	0.0003%	0.039	1.059	0.0003%
350,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.020	0.023	1.043	0.0003%	0.048	1.068	0.0003%	0.060	1.080	0.0003%	0.033	1.053	0.0003%
350,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.020	0.026	1.046	0.0003%	0.044	1.064	0.0003%	0.074	1.094	0.0003%	0.036	1.056	0.0003%
350,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.020	0.016	1.036	0.0003%	0.014	1.034	0.0003%	0.018	1.038	0.0003%	0.010	1.030	0.0003%
350,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.020	0.010	1.030	0.0003%	0.010	1.030	0.0003%	0.015	1.035	0.0003%	0.008	1.028	0.0003%
350,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.020	0.006	1.026	0.0003%	0.005	1.025	0.0003%	0.007	1.027	0.0003%	0.004	1.024	0.0003%
350,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.020	0.004	1.024	0.0003%	0.006	1.026	0.0003%	0.008	1.028	0.0003%	0.004	1.024	0.0003%
350,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.020	0.002	1.022	0.0003%	0.002	1.022	0.0003%	0.003	1.023	0.0003%	0.002	1.022	0.0003%
350,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.020	0.002	1.022	0.0003%	0.002	1.022	0.0003%	0.002	1.022	0.0003%	0.001	1.021	0.0003%
350,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.020	0.016	1.036	0.0003%	0.037	1.057	0.0003%	0.027	1.047	0.0003%	0.019	1.039	0.0003%
350,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.020	0.014	1.034	0.0003%	0.039	1.059	0.0003%	0.029	1.049	0.0003%	0.016	1.036	0.0003%
350,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.020	0.022	1.042	0.0003%	0.033	1.053	0.0003%	0.057	1.077	0.0003%	0.030	1.050	0.0003%
350,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.020	0.017	1.037	0.0003%	0.033	1.053	0.0003%	0.053	1.073	0.0003%	0.029	1.049	0.0003%
350,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.020	0.018	1.038	0.0003%	0.021	1.041	0.0003%	0.030	1.050	0.0003%	0.015	1.035	0.0003%
350,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.020	0.012	1.032	0.0003%	0.023	1.043	0.0003%	0.029	1.049	0.0003%	0.015	1.035	0.0003%
350,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.020	0.014	1.034	0.0003%	0.024	1.044	0.0003%	0.032	1.052	0.0003%	0.017	1.037	0.0003%
350,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.020	0.013	1.033	0.0003%	0.014	1.034	0.0003%	0.023	1.043	0.0003%	0.012	1.032	0.0003%
350,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.020	0.015	1.035	0.0003%	0.015	1.035	0.0003%	0.016	1.036	0.0003%	0.010	1.030	0.0003%
350,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.020	0.006	1.026	0.0003%	0.010	1.030	0.0003%	0.014	1.034	0.0003%	0.008	1.028	0.0003%
350,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.020	0.004	1.024	0.0003%	0.003	1.023	0.0003%	0.003	1.023	0.0003%	0.002	1.022	0.0003%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,2-Dichloroethene (CAS 540-59-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
105	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.079	0.103	0.182	0.2%	0.119	0.198	0.2%	0.123	0.202	0.2%	0.080	0.159	0.2%
105	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.079	0.097	0.176	0.2%	0.136	0.215	0.2%	0.111	0.190	0.2%	0.066	0.145	0.1%
105	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.079	0.098	0.177	0.2%	0.101	0.180	0.2%	0.122	0.201	0.2%	0.069	0.148	0.1%
105	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.079	0.076	0.155	0.1%	0.114	0.193	0.2%	0.102	0.181	0.2%	0.067	0.146	0.1%
105	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.079	0.211	0.290	0.3%	0.146	0.225	0.2%	0.212	0.291	0.3%	0.140	0.219	0.2%
105	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.079	0.283	0.362	0.3%	0.290	0.369	0.4%	0.349	0.428	0.4%	0.221	0.300	0.3%
105	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.079	0.057	0.136	0.1%	0.092	0.171	0.2%	0.093	0.172	0.2%	0.062	0.141	0.1%
105	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.079	0.216	0.295	0.3%	0.222	0.301	0.3%	0.236	0.315	0.3%	0.135	0.214	0.2%
105	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.079	0.217	0.296	0.3%	0.280	0.359	0.3%	0.290	0.369	0.4%	0.178	0.257	0.2%
105	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.079	0.121	0.200	0.2%	0.179	0.258	0.2%	0.195	0.274	0.3%	0.109	0.188	0.2%
105	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.079	0.261	0.340	0.3%	0.581	0.660	0.6%	0.505	0.584	0.6%	0.314	0.393	0.4%
105	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.079	0.149	0.228	0.2%	0.269	0.348	0.3%	0.248	0.327	0.3%	0.155	0.234	0.2%
105	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.079	0.047	0.126	0.1%	0.058	0.137	0.1%	0.078	0.157	0.1%	0.042	0.117	0.1%
105	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.079	0.127	0.206	0.2%	0.171	0.250	0.2%	0.218	0.297	0.3%	0.114	0.193	0.2%
105	ING-2	Laurie Hawkins Public School	509019	4765860	0.079	0.046	0.125	0.1%	0.101	0.180	0.2%	0.115	0.194	0.2%	0.065	0.144	0.1%
105	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.079	0.135	0.214	0.2%	0.200	0.279	0.3%	0.206	0.285	0.3%	0.125	0.204	0.2%
105	ING-4	On the river north of 209 County Road 9	509480	4765180	0.079	0.063	0.142	0.1%	0.078	0.157	0.1%	0.089	0.168	0.2%	0.055	0.134	0.1%
105	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.079	0.044	0.123	0.1%	0.084	0.163	0.2%	0.089	0.168	0.2%	0.054	0.133	0.1%
105	ING-6	Royal Road Public School	510337	4765360	0.079	0.079	0.158	0.2%	0.137	0.216	0.2%	0.122	0.201	0.2%	0.079	0.158	0.2%
105	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.079	0.038	0.117	0.1%	0.065	0.144	0.1%	0.066	0.145	0.1%	0.040	0.119	0.1%
105	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.079	0.039	0.118	0.1%	0.087	0.166	0.2%	0.075	0.154	0.1%	0.050	0.129	0.1%
105	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.079	0.116	0.195	0.2%	0.194	0.273	0.3%	0.230	0.309	0.3%	0.120	0.199	0.2%
105	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.079	0.074	0.153	0.1%	0.140	0.219	0.2%	0.155	0.234	0.2%	0.095	0.174	0.2%
105	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.079	0.179	0.258	0.2%	0.655	0.734	0.7%	0.632	0.711	0.7%	0.383	0.462	0.4%
105	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.079	0.224	0.303	0.3%	0.476	0.555	0.5%	0.586	0.665	0.6%	0.320	0.399	0.4%
105	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.079	0.258	0.337	0.3%	0.430	0.509	0.5%	0.723	0.802	0.8%	0.358	0.437	0.4%
105	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.079	0.159	0.238	0.2%	0.133	0.212	0.2%	0.177	0.256	0.2%	0.103	0.182	0.2%
105	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.079	0.096	0.175	0.2%	0.101	0.180	0.2%	0.145	0.224	0.2%	0.079	0.158	0.2%
105	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.079	0.063	0.142	0.1%	0.052	0.131	0.1%	0.069	0.148	0.1%	0.038	0.117	0.1%
105	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.079	0.036	0.115	0.1%	0.058	0.137	0.1%	0.078	0.157	0.1%	0.043	0.122	0.1%
105	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.079	0.015	0.094	0.1%	0.022	0.101	0.1%	0.027	0.106	0.1%	0.016	0.095	0.1%
105	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.079	0.015	0.094	0.1%	0.017	0.096	0.1%	0.022	0.101	0.1%	0.012	0.091	0.1%
105	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.079	0.159	0.238	0.2%	0.364	0.443	0.4%	0.261	0.340	0.3%	0.189	0.268	0.3%
105	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.079	0.135	0.214	0.2%	0.384	0.463	0.4%	0.287	0.366	0.3%	0.156	0.235	0.2%
105	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.079	0.216	0.295	0.3%	0.325	0.404	0.4%	0.560	0.639	0.6%	0.300	0.379	0.4%
105	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.079	0.169	0.248	0.2%	0.324	0.403	0.4%	0.525	0.604	0.6%	0.281	0.360	0.3%
105	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.079	0.180	0.259	0.2%	0.210	0.289	0.3%	0.294	0.373	0.4%	0.152	0.231	0.2%
105	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.079	0.121	0.200	0.2%	0.224	0.303	0.3%	0.285	0.364	0.3%	0.148	0.227	0.2%
105	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.079	0.142	0.221	0.2%	0.240	0.319	0.3%	0.318	0.397	0.4%	0.170	0.249	0.2%
105	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.079	0.125	0.204	0.2%	0.134	0.213	0.2%	0.224	0.303	0.3%	0.118	0.197	0.2%
105	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.079	0.152	0.231	0.2%	0.147	0.226	0.2%	0.161	0.240	0.2%	0.099	0.178	0.2%
105	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.079	0.058	0.137	0.1%	0.102	0.181	0.2%	0.140	0.219	0.2%	0.076	0.155	0.1%
105	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.079	0.036	0.115	0.1%	0.027	0.106	0.1%	0.032	0.111	0.1%	0.021	0.100	0.1%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**1,2,3-Trimethyl Benzene (CAS 526-73-8)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
220	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.021	0.511	0.2%	0.024	0.514	0.2%	0.025	0.515	0.2%	0.016	0.506	0.2%
220	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.020	0.510	0.2%	0.027	0.517	0.2%	0.022	0.512	0.2%	0.013	0.503	0.2%
220	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.020	0.510	0.2%	0.020	0.510	0.2%	0.025	0.515	0.2%	0.014	0.504	0.2%
220	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.015	0.505	0.2%	0.023	0.513	0.2%	0.021	0.511	0.2%	0.014	0.504	0.2%
220	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.043	0.533	0.2%	0.029	0.533	0.2%	0.043	0.533	0.2%	0.028	0.518	0.2%
220	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.057	0.547	0.2%	0.059	0.549	0.2%	0.071	0.561	0.3%	0.045	0.535	0.2%
220	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.012	0.502	0.2%	0.019	0.509	0.2%	0.019	0.509	0.2%	0.013	0.503	0.2%
220	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.044	0.534	0.2%	0.045	0.535	0.2%	0.048	0.538	0.2%	0.027	0.517	0.2%
220	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.044	0.534	0.2%	0.057	0.547	0.2%	0.059	0.549	0.2%	0.036	0.526	0.2%
220	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.024	0.514	0.2%	0.036	0.526	0.2%	0.039	0.529	0.2%	0.022	0.512	0.2%
220	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.053	0.543	0.2%	0.117	0.607	0.3%	0.102	0.592	0.3%	0.063	0.553	0.3%
220	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.030	0.520	0.2%	0.054	0.544	0.2%	0.050	0.540	0.2%	0.031	0.521	0.2%
220	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.009	0.499	0.2%	0.012	0.502	0.2%	0.016	0.506	0.2%	0.008	0.498	0.2%
220	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.026	0.516	0.2%	0.035	0.525	0.2%	0.044	0.534	0.2%	0.023	0.513	0.2%
220	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.009	0.499	0.2%	0.020	0.510	0.2%	0.023	0.513	0.2%	0.013	0.503	0.2%
220	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.027	0.517	0.2%	0.040	0.530	0.2%	0.042	0.532	0.2%	0.025	0.515	0.2%
220	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.013	0.503	0.2%	0.016	0.506	0.2%	0.018	0.508	0.2%	0.011	0.501	0.2%
220	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.009	0.499	0.2%	0.017	0.507	0.2%	0.018	0.508	0.2%	0.011	0.501	0.2%
220	ING-6	Royal Road Public School	510337	4765360	0.490	0.016	0.506	0.2%	0.028	0.518	0.2%	0.025	0.515	0.2%	0.016	0.506	0.2%
220	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.008	0.498	0.2%	0.013	0.503	0.2%	0.013	0.503	0.2%	0.008	0.498	0.2%
220	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.008	0.498	0.2%	0.018	0.508	0.2%	0.015	0.505	0.2%	0.010	0.500	0.2%
220	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.024	0.514	0.2%	0.039	0.529	0.2%	0.047	0.537	0.2%	0.024	0.514	0.2%
220	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.015	0.505	0.2%	0.028	0.518	0.2%	0.031	0.521	0.2%	0.019	0.509	0.2%
220	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.036	0.526	0.2%	0.132	0.622	0.3%	0.128	0.618	0.3%	0.077	0.567	0.3%
220	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.045	0.535	0.2%	0.096	0.586	0.3%	0.118	0.608	0.3%	0.065	0.555	0.3%
220	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.052	0.542	0.2%	0.087	0.577	0.3%	0.146	0.636	0.3%	0.072	0.562	0.3%
220	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.032	0.522	0.2%	0.027	0.517	0.2%	0.036	0.526	0.2%	0.021	0.511	0.2%
220	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.019	0.509	0.2%	0.020	0.510	0.2%	0.029	0.519	0.2%	0.016	0.506	0.2%
220	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.013	0.503	0.2%	0.011	0.501	0.2%	0.014	0.504	0.2%	0.008	0.498	0.2%
220	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.007	0.497	0.2%	0.012	0.502	0.2%	0.016	0.506	0.2%	0.009	0.499	0.2%
220	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.003	0.493	0.2%	0.004	0.494	0.2%	0.005	0.495	0.2%	0.003	0.493	0.2%
220	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.003	0.493	0.2%	0.003	0.493	0.2%	0.004	0.494	0.2%	0.002	0.492	0.2%
220	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.032	0.522	0.2%	0.074	0.564	0.3%	0.053	0.543	0.2%	0.038	0.528	0.2%
220	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.027	0.517	0.2%	0.078	0.568	0.3%	0.058	0.548	0.2%	0.032	0.522	0.2%
220	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.044	0.534	0.2%	0.066	0.556	0.3%	0.113	0.603	0.3%	0.061	0.551	0.3%
220	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.034	0.524	0.2%	0.065	0.555	0.3%	0.106	0.596	0.3%	0.057	0.547	0.2%
220	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.036	0.526	0.2%	0.042	0.532	0.2%	0.059	0.549	0.2%	0.031	0.521	0.2%
220	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.025	0.515	0.2%	0.045	0.535	0.2%	0.058	0.548	0.2%	0.030	0.520	0.2%
220	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.029	0.519	0.2%	0.049	0.539	0.2%	0.064	0.554	0.3%	0.034	0.524	0.2%
220	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.025	0.515	0.2%	0.027	0.517	0.2%	0.045	0.535	0.2%	0.024	0.514	0.2%
220	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.031	0.521	0.2%	0.030	0.520	0.2%	0.033	0.523	0.2%	0.020	0.510	0.2%
220	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.012	0.502	0.2%	0.021	0.511	0.2%	0.028	0.518	0.2%	0.015	0.505	0.2%
220	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.007	0.497	0.2%	0.005	0.495	0.2%	0.006	0.496	0.2%	0.004	0.494	0.2%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**2-Methyl Butane (CAS 78-78-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7,080	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	2.000	0.080	2.080	0.03%	0.093	2.093	0.03%	0.096	2.096	0.03%	0.063	2.063	0.03%
7,080	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	2.000	0.076	2.076	0.03%	0.106	2.106	0.03%	0.086	2.086	0.03%	0.051	2.051	0.03%
7,080	ZOR-3	Residence at 663951 Rd 66	510216	4770270	2.000	0.076	2.076	0.03%	0.079	2.079	0.03%	0.095	2.095	0.03%	0.054	2.054	0.03%
7,080	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	2.000	0.059	2.059	0.03%	0.089	2.089	0.03%	0.080	2.080	0.03%	0.053	2.053	0.03%
7,080	ZOR-5	Residence at 334789 33rd Line	508931	4768760	2.000	0.165	2.165	0.03%	0.114	2.114	0.03%	0.166	2.166	0.03%	0.109	2.109	0.03%
7,080	ZOR-6	Residence at 334742 33rd Line	509185	4768350	2.000	0.221	2.221	0.03%	0.227	2.227	0.03%	0.273	2.273	0.03%	0.172	2.172	0.03%
7,080	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	2.000	0.045	2.045	0.03%	0.072	2.072	0.03%	0.073	2.073	0.03%	0.049	2.049	0.03%
7,080	ZOR-8	Residence at 643743 Road 64	508940	4767980	2.000	0.168	2.168	0.03%	0.173	2.173	0.03%	0.184	2.184	0.03%	0.105	2.105	0.03%
7,080	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	2.000	0.169	2.169	0.03%	0.219	2.219	0.03%	0.227	2.227	0.03%	0.139	2.139	0.03%
7,080	ZOR-10	Residence at 334578 33rd Line	509739	4766780	2.000	0.094	2.094	0.03%	0.139	2.139	0.03%	0.152	2.152	0.03%	0.085	2.085	0.03%
7,080	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	2.000	0.204	2.204	0.03%	0.454	2.454	0.03%	0.394	2.394	0.03%	0.245	2.245	0.03%
7,080	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	2.000	0.116	2.116	0.03%	0.210	2.210	0.03%	0.193	2.193	0.03%	0.121	2.121	0.03%
7,080	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	2.000	0.037	2.037	0.03%	0.045	2.045	0.03%	0.061	2.061	0.03%	0.033	2.033	0.03%
7,080	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	2.000	0.099	2.099	0.03%	0.134	2.134	0.03%	0.170	2.170	0.03%	0.089	2.089	0.03%
7,080	ING-2	Laurie Hawkins Public School	509019	4765860	2.000	0.036	2.036	0.03%	0.079	2.079	0.03%	0.090	2.090	0.03%	0.051	2.051	0.03%
7,080	ING-3	Ingersoll District Collegiate Institute	510512	4766230	2.000	0.106	2.106	0.03%	0.156	2.156	0.03%	0.161	2.161	0.03%	0.098	2.098	0.03%
7,080	ING-4	On the river north of 209 County Road 9	509480	4765180	2.000	0.049	2.049	0.03%	0.061	2.061	0.03%	0.069	2.069	0.03%	0.043	2.043	0.03%
7,080	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	2.000	0.034	2.034	0.03%	0.066	2.066	0.03%	0.070	2.070	0.03%	0.042	2.042	0.03%
7,080	ING-6	Royal Road Public School	510337	4765360	2.000	0.061	2.061	0.03%	0.107	2.107	0.03%	0.095	2.095	0.03%	0.062	2.062	0.03%
7,080	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	2.000	0.030	2.030	0.03%	0.050	2.050	0.03%	0.051	2.051	0.03%	0.031	2.031	0.03%
7,080	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	2.000	0.030	2.030	0.03%	0.068	2.068	0.03%	0.058	2.058	0.03%	0.039	2.039	0.03%
7,080	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	2.000	0.091	2.091	0.03%	0.151	2.151	0.03%	0.180	2.180	0.03%	0.094	2.094	0.03%
7,080	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	2.000	0.057	2.057	0.03%	0.109	2.109	0.03%	0.121	2.121	0.03%	0.074	2.074	0.03%
7,080	SWO-1	Residence at 584052 Beachville Road	511124	4766750	2.000	0.139	2.139	0.03%	0.511	2.511	0.04%	0.493	2.493	0.04%	0.299	2.299	0.03%
7,080	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	2.000	0.175	2.175	0.03%	0.371	2.371	0.03%	0.458	2.458	0.03%	0.250	2.250	0.03%
7,080	SWO-3	Residence at 584142 Beachville Road	511722	4767480	2.000	0.202	2.202	0.03%	0.336	2.336	0.03%	0.564	2.564	0.04%	0.279	2.279	0.03%
7,080	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	2.000	0.124	2.124	0.03%	0.104	2.104	0.03%	0.138	2.138	0.03%	0.080	2.080	0.03%
7,080	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	2.000	0.075	2.075	0.03%	0.079	2.079	0.03%	0.113	2.113	0.03%	0.061	2.061	0.03%
7,080	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	2.000	0.049	2.049	0.03%	0.041	2.041	0.03%	0.054	2.054	0.03%	0.030	2.030	0.03%
7,080	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	2.000	0.028	2.028	0.03%	0.046	2.046	0.03%	0.061	2.061	0.03%	0.034	2.034	0.03%
7,080	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	2.000	0.012	2.012	0.03%	0.017	2.017	0.03%	0.021	2.021	0.03%	0.012	2.012	0.03%
7,080	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	2.000	0.012	2.012	0.03%	0.013	2.013	0.03%	0.017	2.017	0.03%	0.010	2.010	0.03%
7,080	SWO-10	Residence at 563977 Karn Road	510980	4765990	2.000	0.124	2.124	0.03%	0.284	2.284	0.03%	0.204	2.204	0.03%	0.148	2.148	0.03%
7,080	SWO-11	Residence at 564028 Karn Road	511396	4766310	2.000	0.105	2.105	0.03%	0.300	2.300	0.03%	0.224	2.224	0.03%	0.122	2.122	0.03%
7,080	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	2.000	0.169	2.169	0.03%	0.254	2.254	0.03%	0.437	2.437	0.03%	0.234	2.234	0.03%
7,080	SWO-13	Centreville Pond and Conservation Area	511570	4766920	2.000	0.132	2.132	0.03%	0.253	2.253	0.03%	0.410	2.410	0.03%	0.220	2.220	0.03%
7,080	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	2.000	0.141	2.141	0.03%	0.164	2.164	0.03%	0.229	2.229	0.03%	0.119	2.119	0.03%
7,080	SWO-15	Residences at 564146 Karn Road	512251	4767100	2.000	0.095	2.095	0.03%	0.175	2.175	0.03%	0.222	2.222	0.03%	0.115	2.115	0.03%
7,080	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	2.000	0.111	2.111	0.03%	0.188	2.188	0.03%	0.248	2.248	0.03%	0.133	2.133	0.03%
7,080	SWO-17	Residence at 564226 Karn Road	512958	4767760	2.000	0.098	2.098	0.03%	0.105	2.105	0.03%	0.175	2.175	0.03%	0.092	2.092	0.03%
7,080	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	2.000	0.119	2.119	0.03%	0.115	2.115	0.03%	0.126	2.126	0.03%	0.078	2.078	0.03%
7,080	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	2.000	0.045	2.045	0.03%	0.079	2.079	0.03%	0.109	2.109	0.03%	0.059	2.059	0.03%
7,080	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	2.000	0.028	2.028	0.03%	0.021	2.021	0.03%	0.025	2.025	0.03%	0.016	2.016	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**2-Methyl Hexane (CAS 591-76-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,228	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.100	0.038	4.138	0.34%	0.044	4.144	0.34%	0.046	4.146	0.34%	0.030	4.130	0.34%
1,228	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.100	0.036	4.136	0.34%	0.051	4.151	0.34%	0.041	4.141	0.34%	0.024	4.124	0.34%
1,228	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.100	0.036	4.136	0.34%	0.038	4.138	0.34%	0.045	4.145	0.34%	0.026	4.126	0.34%
1,228	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.100	0.028	4.128	0.34%	0.042	4.142	0.34%	0.038	4.138	0.34%	0.025	4.125	0.34%
1,228	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.100	0.079	4.179	0.34%	0.054	4.154	0.34%	0.079	4.179	0.34%	0.052	4.152	0.34%
1,228	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.100	0.105	4.205	0.34%	0.108	4.208	0.34%	0.130	4.230	0.34%	0.082	4.182	0.34%
1,228	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.100	0.021	4.121	0.34%	0.034	4.134	0.34%	0.035	4.135	0.34%	0.023	4.123	0.34%
1,228	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.100	0.080	4.180	0.34%	0.083	4.183	0.34%	0.088	4.188	0.34%	0.050	4.150	0.34%
1,228	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.100	0.081	4.181	0.34%	0.104	4.204	0.34%	0.108	4.208	0.34%	0.066	4.166	0.34%
1,228	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.100	0.045	4.145	0.34%	0.067	4.167	0.34%	0.073	4.173	0.34%	0.041	4.141	0.34%
1,228	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.100	0.097	4.197	0.34%	0.216	4.316	0.35%	0.188	4.288	0.35%	0.117	4.217	0.34%
1,228	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.100	0.055	4.155	0.34%	0.100	4.200	0.34%	0.092	4.192	0.34%	0.058	4.158	0.34%
1,228	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.100	0.017	4.117	0.34%	0.022	4.122	0.34%	0.029	4.129	0.34%	0.016	4.116	0.34%
1,228	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.100	0.047	4.147	0.34%	0.064	4.164	0.34%	0.081	4.181	0.34%	0.042	4.142	0.34%
1,228	ING-2	Laurie Hawkins Public School	509019	4765860	4.100	0.017	4.117	0.34%	0.038	4.138	0.34%	0.043	4.143	0.34%	0.024	4.124	0.34%
1,228	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.100	0.050	4.150	0.34%	0.074	4.174	0.34%	0.077	4.177	0.34%	0.047	4.147	0.34%
1,228	ING-4	On the river north of 209 County Road 9	509480	4765180	4.100	0.023	4.123	0.34%	0.029	4.129	0.34%	0.033	4.133	0.34%	0.020	4.120	0.34%
1,228	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.100	0.016	4.116	0.34%	0.031	4.131	0.34%	0.033	4.133	0.34%	0.020	4.120	0.34%
1,228	ING-6	Royal Road Public School	510337	4765360	4.100	0.029	4.129	0.34%	0.051	4.151	0.34%	0.045	4.145	0.34%	0.029	4.129	0.34%
1,228	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.100	0.014	4.114	0.34%	0.024	4.124	0.34%	0.024	4.124	0.34%	0.015	4.115	0.34%
1,228	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.100	0.014	4.114	0.34%	0.033	4.133	0.34%	0.028	4.128	0.34%	0.019	4.119	0.34%
1,228	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.100	0.043	4.143	0.34%	0.072	4.172	0.34%	0.086	4.186	0.34%	0.045	4.145	0.34%
1,228	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.100	0.027	4.127	0.34%	0.052	4.152	0.34%	0.058	4.158	0.34%	0.035	4.135	0.34%
1,228	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.100	0.066	4.166	0.34%	0.244	4.344	0.35%	0.235	4.335	0.35%	0.143	4.243	0.35%
1,228	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.100	0.083	4.183	0.34%	0.177	4.277	0.35%	0.218	4.318	0.35%	0.119	4.219	0.34%
1,228	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.100	0.096	4.196	0.34%	0.160	4.260	0.35%	0.269	4.369	0.36%	0.133	4.233	0.34%
1,228	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.100	0.059	4.159	0.34%	0.050	4.150	0.34%	0.066	4.166	0.34%	0.038	4.138	0.34%
1,228	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.100	0.036	4.136	0.34%	0.038	4.138	0.34%	0.054	4.154	0.34%	0.029	4.129	0.34%
1,228	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.100	0.023	4.123	0.34%	0.019	4.119	0.34%	0.026	4.126	0.34%	0.014	4.114	0.34%
1,228	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.100	0.013	4.113	0.33%	0.022	4.122	0.34%	0.029	4.129	0.34%	0.016	4.116	0.34%
1,228	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.100	0.006	4.106	0.33%	0.008	4.108	0.33%	0.010	4.110	0.33%	0.006	4.106	0.33%
1,228	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.100	0.006	4.106	0.33%	0.006	4.106	0.33%	0.008	4.108	0.33%	0.005	4.105	0.33%
1,228	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.100	0.059	4.159	0.34%	0.136	4.236	0.34%	0.097	4.197	0.34%	0.071	4.171	0.34%
1,228	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.100	0.050	4.150	0.34%	0.143	4.243	0.35%	0.107	4.207	0.34%	0.058	4.158	0.34%
1,228	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.100	0.081	4.181	0.34%	0.121	4.221	0.34%	0.208	4.308	0.35%	0.112	4.212	0.34%
1,228	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.100	0.063	4.163	0.34%	0.121	4.221	0.34%	0.195	4.295	0.35%	0.105	4.205	0.34%
1,228	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.100	0.067	4.167	0.34%	0.078	4.178	0.34%	0.109	4.209	0.34%	0.057	4.157	0.34%
1,228	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.100	0.045	4.145	0.34%	0.083	4.183	0.34%	0.106	4.206	0.34%	0.055	4.155	0.34%
1,228	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.100	0.053	4.153	0.34%	0.089	4.189	0.34%	0.118	4.218	0.34%	0.063	4.163	0.34%
1,228	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.100	0.047	4.147	0.34%	0.050	4.150	0.34%	0.083	4.183	0.34%	0.044	4.144	0.34%
1,228	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.100	0.057	4.157	0.34%	0.055	4.155	0.34%	0.060	4.160	0.34%	0.037	4.137	0.34%
1,228	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.100	0.022	4.122	0.34%	0.038	4.138	0.34%	0.052	4.152	0.34%	0.028	4.128	0.34%
1,228	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.100	0.014	4.114	0.33%	0.010	4.110	0.33%	0.012	4.112	0.33%	0.008	4.108	0.33%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**2-Methyl Pentane (CAS 107-83-5)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,750	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.350	0.020	0.370	0.02%	0.023	0.373	0.02%	0.023	0.373	0.02%	0.015	0.365	0.02%
1,750	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.350	0.018	0.368	0.02%	0.026	0.376	0.02%	0.021	0.371	0.02%	0.012	0.362	0.02%
1,750	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.350	0.019	0.369	0.02%	0.019	0.369	0.02%	0.023	0.373	0.02%	0.013	0.363	0.02%
1,750	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.350	0.014	0.364	0.02%	0.022	0.372	0.02%	0.019	0.369	0.02%	0.013	0.363	0.02%
1,750	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.350	0.040	0.390	0.02%	0.028	0.378	0.02%	0.040	0.390	0.02%	0.027	0.377	0.02%
1,750	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.350	0.054	0.404	0.02%	0.055	0.405	0.02%	0.066	0.416	0.02%	0.042	0.392	0.02%
1,750	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.350	0.011	0.361	0.02%	0.017	0.367	0.02%	0.018	0.368	0.02%	0.012	0.362	0.02%
1,750	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.350	0.041	0.391	0.02%	0.042	0.392	0.02%	0.045	0.395	0.02%	0.026	0.376	0.02%
1,750	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.350	0.041	0.391	0.02%	0.053	0.403	0.02%	0.055	0.405	0.02%	0.034	0.384	0.02%
1,750	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.350	0.023	0.373	0.02%	0.034	0.384	0.02%	0.037	0.387	0.02%	0.021	0.371	0.02%
1,750	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.350	0.050	0.400	0.02%	0.111	0.461	0.03%	0.096	0.446	0.03%	0.060	0.410	0.02%
1,750	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.350	0.028	0.378	0.02%	0.051	0.401	0.02%	0.047	0.397	0.02%	0.029	0.379	0.02%
1,750	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.350	0.009	0.359	0.02%	0.011	0.361	0.02%	0.015	0.365	0.02%	0.008	0.358	0.02%
1,750	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.350	0.024	0.374	0.02%	0.033	0.383	0.02%	0.042	0.392	0.02%	0.022	0.372	0.02%
1,750	ING-2	Laurie Hawkins Public School	509019	4765860	0.350	0.009	0.359	0.02%	0.019	0.369	0.02%	0.022	0.372	0.02%	0.012	0.362	0.02%
1,750	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.350	0.026	0.376	0.02%	0.038	0.388	0.02%	0.039	0.389	0.02%	0.024	0.374	0.02%
1,750	ING-4	On the river north of 209 County Road 9	509480	4765180	0.350	0.012	0.362	0.02%	0.015	0.365	0.02%	0.017	0.367	0.02%	0.010	0.360	0.02%
1,750	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.350	0.008	0.358	0.02%	0.016	0.366	0.02%	0.017	0.367	0.02%	0.010	0.360	0.02%
1,750	ING-6	Royal Road Public School	510337	4765360	0.350	0.015	0.365	0.02%	0.026	0.376	0.02%	0.023	0.373	0.02%	0.015	0.365	0.02%
1,750	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.350	0.007	0.357	0.02%	0.012	0.362	0.02%	0.012	0.362	0.02%	0.008	0.358	0.02%
1,750	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.350	0.007	0.357	0.02%	0.017	0.367	0.02%	0.014	0.364	0.02%	0.010	0.360	0.02%
1,750	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.350	0.022	0.372	0.02%	0.037	0.387	0.02%	0.044	0.394	0.02%	0.023	0.373	0.02%
1,750	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.350	0.014	0.364	0.02%	0.027	0.377	0.02%	0.030	0.380	0.02%	0.018	0.368	0.02%
1,750	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.350	0.034	0.384	0.02%	0.125	0.475	0.03%	0.120	0.470	0.03%	0.073	0.423	0.02%
1,750	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.350	0.043	0.393	0.02%	0.090	0.440	0.03%	0.111	0.461	0.03%	0.061	0.411	0.02%
1,750	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.350	0.049	0.399	0.02%	0.082	0.432	0.03%	0.137	0.487	0.03%	0.068	0.418	0.02%
1,750	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.350	0.030	0.380	0.02%	0.025	0.375	0.02%	0.034	0.384	0.02%	0.020	0.370	0.02%
1,750	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.350	0.018	0.368	0.02%	0.019	0.369	0.02%	0.028	0.378	0.02%	0.015	0.365	0.02%
1,750	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.350	0.012	0.362	0.02%	0.010	0.360	0.02%	0.013	0.363	0.02%	0.007	0.357	0.02%
1,750	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.350	0.007	0.357	0.02%	0.011	0.361	0.02%	0.015	0.365	0.02%	0.008	0.358	0.02%
1,750	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.350	0.003	0.353	0.02%	0.004	0.354	0.02%	0.005	0.355	0.02%	0.003	0.353	0.02%
1,750	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.350	0.003	0.353	0.02%	0.003	0.353	0.02%	0.004	0.354	0.02%	0.002	0.352	0.02%
1,750	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.350	0.030	0.380	0.02%	0.069	0.419	0.02%	0.050	0.400	0.02%	0.036	0.386	0.02%
1,750	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.350	0.026	0.376	0.02%	0.073	0.423	0.02%	0.055	0.405	0.02%	0.030	0.380	0.02%
1,750	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.350	0.041	0.391	0.02%	0.062	0.412	0.02%	0.106	0.456	0.03%	0.057	0.407	0.02%
1,750	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.350	0.032	0.382	0.02%	0.062	0.412	0.02%	0.100	0.450	0.03%	0.053	0.403	0.02%
1,750	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.350	0.034	0.384	0.02%	0.040	0.390	0.02%	0.056	0.406	0.02%	0.029	0.379	0.02%
1,750	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.350	0.023	0.373	0.02%	0.043	0.393	0.02%	0.054	0.404	0.02%	0.028	0.378	0.02%
1,750	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.350	0.027	0.377	0.02%	0.046	0.396	0.02%	0.060	0.410	0.02%	0.032	0.382	0.02%
1,750	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.350	0.024	0.374	0.02%	0.026	0.376	0.02%	0.043	0.393	0.02%	0.022	0.372	0.02%
1,750	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.350	0.029	0.379	0.02%	0.028	0.378	0.02%	0.031	0.381	0.02%	0.019	0.369	0.02%
1,750	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.350	0.011	0.361	0.02%	0.019	0.369	0.02%	0.027	0.377	0.02%	0.014	0.364	0.02%
1,750	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.350	0.007	0.357	0.02%	0.005	0.355	0.02%	0.006	0.356	0.02%	0.004	0.354	0.02%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**3-Methyl Hexane (CAS 589-34-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,535	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.410	0.054	0.464	0.03%	0.063	0.473	0.03%	0.065	0.475	0.03%	0.042	0.452	0.03%
1,535	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.410	0.051	0.461	0.03%	0.071	0.481	0.03%	0.058	0.468	0.03%	0.034	0.444	0.03%
1,535	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.410	0.051	0.461	0.03%	0.053	0.463	0.03%	0.064	0.474	0.03%	0.036	0.446	0.03%
1,535	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.410	0.040	0.450	0.03%	0.060	0.470	0.03%	0.054	0.464	0.03%	0.035	0.445	0.03%
1,535	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.410	0.111	0.521	0.03%	0.077	0.487	0.03%	0.112	0.522	0.03%	0.074	0.484	0.03%
1,535	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.410	0.149	0.559	0.04%	0.153	0.563	0.04%	0.184	0.594	0.04%	0.116	0.526	0.03%
1,535	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.410	0.030	0.440	0.03%	0.048	0.458	0.03%	0.049	0.459	0.03%	0.033	0.443	0.03%
1,535	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.410	0.114	0.524	0.03%	0.117	0.527	0.03%	0.124	0.534	0.03%	0.071	0.481	0.03%
1,535	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.410	0.114	0.524	0.03%	0.147	0.557	0.04%	0.153	0.563	0.04%	0.094	0.504	0.03%
1,535	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.410	0.064	0.474	0.03%	0.094	0.504	0.03%	0.103	0.513	0.03%	0.057	0.467	0.03%
1,535	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.410	0.137	0.547	0.04%	0.306	0.716	0.05%	0.266	0.676	0.04%	0.165	0.575	0.04%
1,535	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.410	0.078	0.488	0.03%	0.142	0.552	0.04%	0.130	0.540	0.04%	0.082	0.492	0.03%
1,535	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.410	0.025	0.435	0.03%	0.031	0.441	0.03%	0.041	0.451	0.03%	0.022	0.432	0.03%
1,535	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.410	0.067	0.477	0.03%	0.090	0.500	0.03%	0.115	0.525	0.03%	0.060	0.470	0.03%
1,535	ING-2	Laurie Hawkins Public School	509019	4765860	0.410	0.024	0.434	0.03%	0.053	0.463	0.03%	0.061	0.471	0.03%	0.034	0.444	0.03%
1,535	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.410	0.071	0.481	0.03%	0.105	0.515	0.03%	0.109	0.519	0.03%	0.066	0.476	0.03%
1,535	ING-4	On the river north of 209 County Road 9	509480	4765180	0.410	0.033	0.443	0.03%	0.041	0.451	0.03%	0.047	0.457	0.03%	0.029	0.439	0.03%
1,535	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.410	0.023	0.433	0.03%	0.044	0.454	0.03%	0.047	0.457	0.03%	0.029	0.439	0.03%
1,535	ING-6	Royal Road Public School	510337	4765360	0.410	0.041	0.451	0.03%	0.072	0.482	0.03%	0.064	0.474	0.03%	0.042	0.452	0.03%
1,535	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.410	0.020	0.430	0.03%	0.034	0.444	0.03%	0.034	0.444	0.03%	0.021	0.431	0.03%
1,535	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.410	0.020	0.430	0.03%	0.046	0.456	0.03%	0.039	0.449	0.03%	0.026	0.436	0.03%
1,535	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.410	0.061	0.471	0.03%	0.102	0.512	0.03%	0.121	0.531	0.03%	0.063	0.473	0.03%
1,535	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.410	0.039	0.449	0.03%	0.073	0.483	0.03%	0.082	0.492	0.03%	0.050	0.460	0.03%
1,535	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.410	0.094	0.504	0.03%	0.345	0.755	0.05%	0.332	0.742	0.05%	0.201	0.611	0.04%
1,535	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.410	0.118	0.528	0.03%	0.250	0.660	0.04%	0.308	0.718	0.05%	0.168	0.578	0.04%
1,535	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.410	0.136	0.546	0.04%	0.226	0.636	0.04%	0.380	0.790	0.05%	0.188	0.598	0.04%
1,535	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.410	0.084	0.494	0.03%	0.070	0.480	0.03%	0.093	0.503	0.03%	0.054	0.464	0.03%
1,535	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.410	0.050	0.460	0.03%	0.053	0.463	0.03%	0.076	0.486	0.03%	0.041	0.451	0.03%
1,535	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.410	0.033	0.443	0.03%	0.027	0.437	0.03%	0.036	0.446	0.03%	0.020	0.430	0.03%
1,535	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.410	0.019	0.429	0.03%	0.031	0.441	0.03%	0.041	0.451	0.03%	0.023	0.433	0.03%
1,535	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.410	0.008	0.418	0.03%	0.012	0.422	0.03%	0.014	0.424	0.03%	0.008	0.418	0.03%
1,535	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.410	0.008	0.418	0.03%	0.009	0.419	0.03%	0.011	0.421	0.03%	0.006	0.416	0.03%
1,535	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.410	0.084	0.494	0.03%	0.191	0.601	0.04%	0.137	0.547	0.04%	0.100	0.510	0.03%
1,535	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.410	0.071	0.481	0.03%	0.202	0.612	0.04%	0.151	0.561	0.04%	0.082	0.492	0.03%
1,535	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.410	0.114	0.524	0.03%	0.171	0.581	0.04%	0.294	0.704	0.05%	0.158	0.568	0.04%
1,535	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.410	0.089	0.499	0.03%	0.170	0.580	0.04%	0.276	0.686	0.04%	0.148	0.558	0.04%
1,535	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.410	0.095	0.505	0.03%	0.110	0.520	0.03%	0.154	0.564	0.04%	0.080	0.490	0.03%
1,535	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.410	0.064	0.474	0.03%	0.118	0.528	0.03%	0.150	0.560	0.04%	0.078	0.488	0.03%
1,535	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.410	0.075	0.485	0.03%	0.126	0.536	0.03%	0.167	0.577	0.04%	0.090	0.500	0.03%
1,535	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.410	0.066	0.476	0.03%	0.071	0.481	0.03%	0.118	0.528	0.03%	0.062	0.472	0.03%
1,535	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.410	0.080	0.490	0.03%	0.078	0.488	0.03%	0.085	0.495	0.03%	0.052	0.462	0.03%
1,535	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.410	0.031	0.441	0.03%	0.054	0.464	0.03%	0.074	0.484	0.03%	0.040	0.450	0.03%
1,535	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.410	0.019	0.429	0.03%	0.014	0.424	0.03%	0.017	0.427	0.03%	0.011	0.421	0.03%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**3-Methyl Pentane (CAS 96-14-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,400	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.350	0.009	0.359	0.03%	0.010	0.360	0.03%	0.010	0.360	0.03%	0.007	0.357	0.03%
1,400	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.350	0.008	0.358	0.03%	0.011	0.361	0.03%	0.009	0.359	0.03%	0.006	0.356	0.03%
1,400	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.350	0.008	0.358	0.03%	0.008	0.358	0.03%	0.010	0.360	0.03%	0.006	0.356	0.03%
1,400	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.350	0.006	0.356	0.03%	0.010	0.360	0.03%	0.009	0.359	0.03%	0.006	0.356	0.03%
1,400	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.350	0.018	0.368	0.03%	0.012	0.362	0.03%	0.018	0.368	0.03%	0.012	0.362	0.03%
1,400	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.350	0.024	0.374	0.03%	0.024	0.374	0.03%	0.029	0.379	0.03%	0.019	0.369	0.03%
1,400	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.350	0.005	0.355	0.03%	0.008	0.358	0.03%	0.008	0.358	0.03%	0.005	0.355	0.03%
1,400	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.350	0.018	0.368	0.03%	0.019	0.369	0.03%	0.020	0.370	0.03%	0.011	0.361	0.03%
1,400	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.350	0.018	0.368	0.03%	0.024	0.374	0.03%	0.024	0.374	0.03%	0.015	0.365	0.03%
1,400	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.350	0.010	0.360	0.03%	0.015	0.365	0.03%	0.016	0.366	0.03%	0.009	0.359	0.03%
1,400	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.350	0.022	0.372	0.03%	0.049	0.399	0.03%	0.042	0.392	0.03%	0.026	0.376	0.03%
1,400	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.350	0.012	0.362	0.03%	0.023	0.373	0.03%	0.021	0.371	0.03%	0.013	0.363	0.03%
1,400	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.350	0.004	0.354	0.03%	0.005	0.355	0.03%	0.007	0.357	0.03%	0.004	0.354	0.03%
1,400	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.350	0.011	0.361	0.03%	0.014	0.364	0.03%	0.018	0.368	0.03%	0.010	0.360	0.03%
1,400	ING-2	Laurie Hawkins Public School	509019	4765860	0.350	0.004	0.354	0.03%	0.009	0.359	0.03%	0.010	0.360	0.03%	0.005	0.355	0.03%
1,400	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.350	0.011	0.361	0.03%	0.017	0.367	0.03%	0.017	0.367	0.03%	0.011	0.361	0.03%
1,400	ING-4	On the river north of 209 County Road 9	509480	4765180	0.350	0.005	0.355	0.03%	0.007	0.357	0.03%	0.007	0.357	0.03%	0.005	0.355	0.03%
1,400	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.350	0.004	0.354	0.03%	0.007	0.357	0.03%	0.008	0.358	0.03%	0.005	0.355	0.03%
1,400	ING-6	Royal Road Public School	510337	4765360	0.350	0.007	0.357	0.03%	0.012	0.362	0.03%	0.010	0.360	0.03%	0.007	0.357	0.03%
1,400	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.350	0.003	0.353	0.03%	0.005	0.355	0.03%	0.006	0.356	0.03%	0.003	0.353	0.03%
1,400	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.350	0.003	0.353	0.03%	0.007	0.357	0.03%	0.006	0.356	0.03%	0.004	0.354	0.03%
1,400	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.350	0.010	0.360	0.03%	0.016	0.366	0.03%	0.019	0.369	0.03%	0.010	0.360	0.03%
1,400	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.350	0.006	0.356	0.03%	0.012	0.362	0.03%	0.013	0.363	0.03%	0.008	0.358	0.03%
1,400	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.350	0.015	0.365	0.03%	0.055	0.405	0.03%	0.053	0.403	0.03%	0.032	0.382	0.03%
1,400	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.350	0.019	0.369	0.03%	0.040	0.390	0.03%	0.049	0.399	0.03%	0.027	0.377	0.03%
1,400	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.350	0.022	0.372	0.03%	0.036	0.386	0.03%	0.061	0.411	0.03%	0.030	0.380	0.03%
1,400	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.350	0.013	0.363	0.03%	0.011	0.361	0.03%	0.015	0.365	0.03%	0.009	0.359	0.03%
1,400	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.350	0.008	0.358	0.03%	0.009	0.359	0.03%	0.012	0.362	0.03%	0.007	0.357	0.03%
1,400	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.350	0.005	0.355	0.03%	0.004	0.354	0.03%	0.006	0.356	0.03%	0.003	0.353	0.03%
1,400	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.350	0.003	0.353	0.03%	0.005	0.355	0.03%	0.007	0.357	0.03%	0.004	0.354	0.03%
1,400	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.350	0.001	0.351	0.03%	0.002	0.352	0.03%	0.002	0.352	0.03%	0.001	0.351	0.03%
1,400	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.350	0.001	0.351	0.03%	0.001	0.351	0.03%	0.002	0.352	0.03%	0.001	0.351	0.03%
1,400	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.350	0.013	0.363	0.03%	0.031	0.381	0.03%	0.022	0.372	0.03%	0.016	0.366	0.03%
1,400	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.350	0.011	0.361	0.03%	0.032	0.382	0.03%	0.024	0.374	0.03%	0.013	0.363	0.03%
1,400	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.350	0.018	0.368	0.03%	0.027	0.377	0.03%	0.047	0.397	0.03%	0.025	0.375	0.03%
1,400	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.350	0.014	0.364	0.03%	0.027	0.377	0.03%	0.044	0.394	0.03%	0.024	0.374	0.03%
1,400	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.350	0.015	0.365	0.03%	0.018	0.368	0.03%	0.025	0.375	0.03%	0.013	0.363	0.03%
1,400	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.350	0.010	0.360	0.03%	0.019	0.369	0.03%	0.024	0.374	0.03%	0.012	0.362	0.03%
1,400	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.350	0.012	0.362	0.03%	0.020	0.370	0.03%	0.027	0.377	0.03%	0.014	0.364	0.03%
1,400	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.350	0.011	0.361	0.03%	0.011	0.361	0.03%	0.019	0.369	0.03%	0.010	0.360	0.03%
1,400	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.350	0.013	0.363	0.03%	0.012	0.362	0.03%	0.014	0.364	0.03%	0.008	0.358	0.03%
1,400	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.350	0.005	0.355	0.03%	0.009	0.359	0.03%	0.012	0.362	0.03%	0.006	0.356	0.03%
1,400	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.350	0.003	0.353	0.03%	0.002	0.352	0.03%	0.003	0.353	0.03%	0.002	0.352	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Butyl Acetate (CAS 123-86-4)**

**1-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
15,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.750	0.332	5.082	0.03%	0.309	5.059	0.03%	0.433	5.183	0.03%	0.212	4.962	0.03%
15,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.750	0.473	5.223	0.03%	0.443	5.193	0.03%	0.607	5.357	0.04%	0.314	5.064	0.03%
15,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.750	0.499	5.249	0.03%	0.606	5.356	0.04%	0.716	5.466	0.04%	0.379	5.129	0.03%
15,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.750	0.413	5.163	0.03%	0.487	5.237	0.03%	0.548	5.298	0.04%	0.277	5.027	0.03%
15,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.750	0.553	5.303	0.04%	0.488	5.238	0.03%	0.654	5.404	0.04%	0.319	5.069	0.03%
15,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.750	0.573	5.323	0.04%	0.526	5.276	0.04%	0.741	5.491	0.04%	0.361	5.111	0.03%
15,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.750	0.266	5.016	0.03%	0.272	5.022	0.03%	0.398	5.148	0.03%	0.196	4.946	0.03%
15,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.750	0.459	5.209	0.03%	0.443	5.193	0.03%	0.623	5.373	0.04%	0.305	5.055	0.03%
15,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.750	0.427	5.177	0.03%	0.469	5.177	0.03%	0.536	5.286	0.04%	0.272	5.022	0.03%
15,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.750	0.640	5.390	0.04%	0.471	5.219	0.03%	0.582	5.332	0.04%	0.289	5.039	0.03%
15,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.750	1.168	5.918	0.04%	1.812	6.562	0.04%	1.627	6.377	0.04%	0.868	5.618	0.04%
15,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.750	0.765	5.515	0.04%	0.954	5.704	0.04%	0.991	5.741	0.04%	0.514	5.264	0.04%
15,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.750	0.265	5.015	0.03%	0.296	5.046	0.03%	0.395	5.145	0.03%	0.194	4.944	0.03%
15,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.750	0.660	5.410	0.04%	0.482	5.232	0.03%	0.586	5.336	0.04%	0.292	5.042	0.03%
15,000	ING-2	Laurie Hawkins Public School	509019	4765860	4.750	0.288	5.038	0.03%	0.290	5.040	0.03%	0.393	5.143	0.03%	0.198	4.948	0.03%
15,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.750	0.676	5.426	0.04%	1.078	5.828	0.04%	0.999	5.749	0.04%	0.502	5.252	0.04%
15,000	ING-4	On the river north of 209 County Road 9	509480	4765180	4.750	0.403	5.153	0.03%	0.470	5.220	0.03%	0.422	5.172	0.03%	0.266	5.016	0.03%
15,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.750	0.244	4.994	0.03%	0.248	4.998	0.03%	0.333	5.083	0.03%	0.169	4.919	0.03%
15,000	ING-6	Royal Road Public School	510337	4765360	4.750	0.507	5.257	0.04%	0.775	5.525	0.04%	0.786	5.536	0.04%	0.398	5.148	0.03%
15,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.750	0.294	5.044	0.03%	0.415	5.165	0.03%	0.427	5.177	0.03%	0.241	4.991	0.03%
15,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.750	0.367	5.117	0.03%	0.539	5.289	0.04%	0.554	5.304	0.04%	0.301	5.051	0.03%
15,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.750	0.508	5.258	0.04%	0.786	5.536	0.04%	0.914	5.664	0.04%	0.451	5.201	0.03%
15,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.750	0.370	5.120	0.03%	0.564	5.314	0.04%	0.639	5.389	0.04%	0.349	5.099	0.03%
15,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.750	0.901	5.651	0.04%	1.351	6.101	0.04%	1.872	6.622	0.04%	0.879	5.629	0.04%
15,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.750	0.898	5.648	0.04%	0.850	5.600	0.04%	1.712	6.462	0.04%	0.774	5.524	0.04%
15,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.750	0.765	5.515	0.04%	0.682	5.432	0.04%	1.288	6.038	0.04%	0.589	5.339	0.04%
15,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.750	0.449	5.199	0.03%	0.393	5.143	0.03%	0.676	5.426	0.04%	0.322	5.072	0.03%
15,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.750	0.377	5.127	0.03%	0.329	5.079	0.03%	0.550	5.300	0.04%	0.264	5.014	0.03%
15,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.750	0.271	5.021	0.03%	0.201	4.951	0.03%	0.319	5.069	0.03%	0.155	4.905	0.03%
15,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.750	0.181	4.931	0.03%	0.190	4.940	0.03%	0.264	5.014	0.03%	0.136	4.886	0.03%
15,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.750	0.108	4.858	0.03%	0.117	4.867	0.03%	0.139	4.889	0.03%	0.082	4.832	0.03%
15,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.750	0.130	4.880	0.03%	0.091	4.841	0.03%	0.117	4.867	0.03%	0.065	4.815	0.03%
15,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.750	0.676	5.426	0.04%	1.083	5.833	0.04%	1.201	5.951	0.04%	0.586	5.336	0.04%
15,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.750	0.729	5.479	0.04%	1.026	5.776	0.04%	1.413	6.163	0.04%	0.673	5.423	0.04%
15,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.750	0.719	5.469	0.04%	0.878	5.628	0.04%	1.372	6.122	0.04%	0.642	5.392	0.04%
15,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.750	0.792	5.542	0.04%	1.015	5.765	0.04%	1.536	6.286	0.04%	0.708	5.458	0.04%
15,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.750	0.624	5.374	0.04%	0.558	5.308	0.04%	0.977	5.727	0.04%	0.452	5.202	0.03%
15,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.750	0.550	5.300	0.04%	0.477	5.227	0.03%	0.829	5.579	0.04%	0.385	5.135	0.03%
15,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.750	0.517	5.267	0.04%	0.461	5.211	0.03%	0.768	5.518	0.04%	0.360	5.110	0.03%
15,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.750	0.355	5.105	0.03%	0.292	5.042	0.03%	0.489	5.239	0.03%	0.234	4.984	0.03%
15,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.750	0.332	5.082	0.03%	0.280	5.030	0.03%	0.462	5.212	0.03%	0.221	4.971	0.03%
15,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.750	0.295	5.045	0.03%	0.271	5.021	0.03%	0.422	5.172	0.03%	0.201	4.951	0.03%
15,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.750	0.129	4.879	0.03%	0.117	4.867	0.03%	0.182	4.932	0.03%	0.089	4.839	0.03%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Butyl Acetate (CAS 123-86-4)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
1,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.750	0.548	5.298	0.53%	0.510	5.260	0.53%	0.714	5.464	0.55%	0.350	5.100	0.51%
1,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.750	0.781	5.531	0.55%	0.731	5.481	0.55%	1.002	5.752	0.58%	0.519	5.269	0.53%
1,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.750	0.824	5.574	0.56%	1.001	5.751	0.58%	1.181	5.931	0.59%	0.626	5.376	0.54%
1,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.750	0.682	5.432	0.54%	0.803	5.553	0.56%	0.904	5.654	0.57%	0.457	5.207	0.52%
1,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.750	0.912	5.662	0.57%	0.806	5.556	0.56%	1.080	5.830	0.58%	0.526	5.276	0.53%
1,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.750	0.945	5.695	0.57%	0.867	5.617	0.56%	1.223	5.973	0.60%	0.595	5.345	0.53%
1,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.750	0.439	5.189	0.52%	0.449	5.199	0.52%	0.657	5.407	0.54%	0.324	5.074	0.51%
1,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.750	0.758	5.508	0.55%	0.730	5.480	0.55%	1.027	5.777	0.58%	0.503	5.253	0.53%
1,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.750	0.705	5.455	0.55%	0.775	5.525	0.55%	0.884	5.634	0.56%	0.448	5.198	0.52%
1,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.750	1.056	5.806	0.58%	0.777	5.527	0.55%	0.960	5.710	0.57%	0.478	5.228	0.52%
1,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.750	1.927	6.677	0.67%	2.990	7.740	0.77%	2.684	7.434	0.74%	1.433	6.183	0.62%
1,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.750	1.263	6.013	0.60%	1.573	6.323	0.63%	1.635	6.385	0.64%	0.848	5.598	0.56%
1,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.750	0.437	5.187	0.52%	0.489	5.239	0.52%	0.652	5.402	0.54%	0.321	5.071	0.51%
1,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.750	1.089	5.839	0.58%	0.795	5.545	0.55%	0.967	5.717	0.57%	0.482	5.232	0.52%
1,000	ING-2	Laurie Hawkins Public School	509019	4765860	4.750	0.475	5.225	0.52%	0.479	5.229	0.52%	0.648	5.398	0.54%	0.326	5.076	0.51%
1,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.750	1.115	5.865	0.59%	1.778	6.528	0.65%	1.649	6.399	0.64%	0.829	5.579	0.56%
1,000	ING-4	On the river north of 209 County Road 9	509480	4765180	4.750	0.665	5.415	0.54%	0.776	5.526	0.55%	0.697	5.447	0.54%	0.439	5.189	0.52%
1,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.750	0.403	5.153	0.52%	0.409	5.159	0.52%	0.549	5.299	0.53%	0.279	5.029	0.50%
1,000	ING-6	Royal Road Public School	510337	4765360	4.750	0.836	5.586	0.56%	1.278	6.028	0.60%	1.297	6.047	0.60%	0.657	5.407	0.54%
1,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.750	0.486	5.236	0.52%	0.685	5.435	0.54%	0.704	5.454	0.55%	0.397	5.147	0.51%
1,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.750	0.605	5.355	0.54%	0.889	5.639	0.56%	0.915	5.665	0.57%	0.496	5.246	0.52%
1,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.750	0.837	5.587	0.56%	1.297	6.047	0.60%	1.509	6.259	0.63%	0.744	5.494	0.55%
1,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.750	0.610	5.360	0.54%	0.930	5.680	0.57%	1.054	5.804	0.58%	0.576	5.326	0.53%
1,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.750	1.487	6.237	0.62%	2.229	6.979	0.70%	3.089	7.839	0.78%	1.450	6.200	0.62%
1,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.750	1.482	6.232	0.62%	1.403	6.153	0.62%	2.824	7.574	0.76%	1.277	6.027	0.60%
1,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.750	1.262	6.012	0.60%	1.125	5.875	0.59%	2.125	6.875	0.69%	0.972	5.722	0.57%
1,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.750	0.741	5.491	0.55%	0.648	5.398	0.54%	1.116	5.866	0.59%	0.531	5.281	0.53%
1,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.750	0.622	5.372	0.54%	0.543	5.293	0.53%	0.907	5.657	0.57%	0.435	5.185	0.52%
1,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.750	0.447	5.197	0.52%	0.331	5.081	0.51%	0.526	5.276	0.53%	0.256	5.006	0.50%
1,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.750	0.299	5.049	0.50%	0.314	5.064	0.51%	0.435	5.185	0.52%	0.225	4.975	0.50%
1,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.750	0.179	4.929	0.49%	0.193	4.943	0.49%	0.229	4.979	0.50%	0.136	4.886	0.49%
1,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.750	0.214	4.964	0.50%	0.151	4.901	0.49%	0.194	4.944	0.49%	0.108	4.858	0.49%
1,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.750	1.116	5.866	0.59%	1.787	6.537	0.65%	1.981	6.731	0.67%	0.967	5.717	0.57%
1,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.750	1.203	5.953	0.60%	1.692	6.442	0.64%	2.331	7.081	0.71%	1.110	5.860	0.59%
1,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.750	1.187	5.937	0.59%	1.449	6.199	0.62%	2.264	7.014	0.70%	1.060	5.810	0.58%
1,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.750	1.307	6.057	0.61%	1.674	6.424	0.64%	2.535	7.285	0.73%	1.167	5.917	0.59%
1,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.750	1.029	5.779	0.58%	0.920	5.670	0.57%	1.612	6.362	0.64%	0.746	5.496	0.55%
1,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.750	0.908	5.658	0.57%	0.786	5.536	0.55%	1.368	6.118	0.61%	0.635	5.385	0.54%
1,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.750	0.852	5.602	0.56%	0.761	5.511	0.55%	1.268	6.018	0.60%	0.593	5.343	0.53%
1,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.750	0.586	5.336	0.53%	0.482	5.232	0.52%	0.807	5.557	0.56%	0.386	5.136	0.51%
1,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.750	0.548	5.298	0.53%	0.462	5.212	0.52%	0.762	5.512	0.55%	0.365	5.115	0.51%
1,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.750	0.487	5.237	0.52%	0.447	5.197	0.52%	0.696	5.446	0.54%	0.332	5.082	0.51%
1,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.750	0.214	4.964	0.50%	0.194	4.944	0.49%	0.301	5.051	0.51%	0.148	4.898	0.49%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Decane (CAS 124-18-5)**

**1-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
60,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.450	1.603	3.053	0.005%	1.493	2.943	0.005%	2.091	3.541	0.006%	1.024	2.474	0.004%
60,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.450	2.287	3.737	0.006%	2.141	3.591	0.006%	2.933	4.383	0.007%	1.519	2.969	0.005%
60,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.450	2.411	3.861	0.006%	2.929	4.379	0.007%	3.458	4.908	0.008%	1.832	3.282	0.005%
60,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.450	1.995	3.445	0.006%	2.352	3.802	0.006%	2.648	4.098	0.007%	1.339	2.789	0.005%
60,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.450	2.670	4.120	0.007%	2.359	3.809	0.006%	3.161	4.611	0.008%	1.539	2.989	0.005%
60,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.450	2.766	4.216	0.007%	2.539	3.989	0.007%	3.580	5.030	0.008%	1.743	3.193	0.005%
60,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.450	1.286	2.736	0.005%	1.313	2.763	0.005%	1.923	3.373	0.006%	0.949	2.399	0.004%
60,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.450	2.218	3.668	0.006%	2.137	3.587	0.006%	3.007	4.457	0.007%	1.472	2.922	0.005%
60,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.450	2.063	3.513	0.006%	2.267	3.717	0.006%	2.589	4.039	0.007%	1.312	2.762	0.005%
60,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.450	3.092	4.542	0.008%	2.275	3.725	0.006%	2.810	4.260	0.007%	1.398	2.848	0.005%
60,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.450	5.641	7.091	0.012%	8.753	10.203	0.017%	7.857	9.307	0.016%	4.195	5.645	0.009%
60,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.450	3.696	5.146	0.009%	4.606	6.056	0.010%	4.786	6.236	0.010%	2.483	3.933	0.007%
60,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.450	1.279	2.729	0.005%	1.430	2.880	0.005%	1.909	3.359	0.006%	0.938	2.388	0.004%
60,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.450	3.189	4.639	0.008%	2.327	3.777	0.006%	2.831	4.281	0.007%	1.412	2.862	0.005%
60,000	ING-2	Laurie Hawkins Public School	509019	4765860	1.450	1.391	2.841	0.005%	1.402	2.852	0.005%	1.896	3.346	0.006%	0.955	2.405	0.004%
60,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.450	3.264	4.714	0.008%	5.206	6.656	0.011%	4.828	6.278	0.010%	2.426	3.876	0.006%
60,000	ING-4	On the river north of 209 County Road 9	509480	4765180	1.450	1.946	3.396	0.006%	2.270	3.720	0.006%	2.040	3.490	0.006%	1.284	2.734	0.005%
60,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.450	1.180	2.630	0.004%	1.198	2.648	0.004%	1.606	3.056	0.005%	0.816	2.266	0.004%
60,000	ING-6	Royal Road Public School	510337	4765360	1.450	2.447	3.897	0.006%	3.742	5.192	0.009%	3.798	5.248	0.009%	1.923	3.373	0.006%
60,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.450	1.422	2.872	0.005%	2.005	3.455	0.006%	2.061	3.511	0.006%	1.163	2.613	0.004%
60,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.450	1.771	3.221	0.005%	2.601	4.051	0.007%	2.678	4.128	0.007%	1.452	2.902	0.005%
60,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.450	2.451	3.901	0.007%	3.797	5.247	0.009%	4.417	5.867	0.010%	2.177	3.627	0.006%
60,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.450	1.785	3.235	0.005%	2.723	4.173	0.007%	3.085	4.535	0.008%	1.687	3.137	0.005%
60,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.450	4.354	5.804	0.010%	6.526	7.976	0.013%	9.042	10.492	0.017%	4.246	5.696	0.009%
60,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.450	4.338	5.788	0.010%	4.107	5.557	0.009%	8.268	9.718	0.016%	3.739	5.189	0.009%
60,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.450	3.694	5.144	0.009%	3.293	4.743	0.008%	6.221	7.671	0.013%	2.846	4.296	0.007%
60,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.450	2.170	3.620	0.006%	1.898	3.348	0.006%	3.266	4.716	0.008%	1.553	3.003	0.005%
60,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.450	1.822	3.272	0.005%	1.589	3.039	0.005%	2.655	4.105	0.007%	1.274	2.724	0.005%
60,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.450	1.308	2.758	0.005%	0.970	2.420	0.004%	1.540	2.990	0.005%	0.749	2.199	0.004%
60,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.450	0.875	2.325	0.004%	0.919	2.369	0.004%	1.273	2.723	0.005%	0.659	2.109	0.004%
60,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.450	0.523	1.973	0.003%	0.564	2.014	0.003%	0.670	2.120	0.004%	0.397	1.847	0.003%
60,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.450	0.626	2.076	0.003%	0.441	1.891	0.003%	0.567	2.017	0.003%	0.316	1.766	0.003%
60,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.450	3.266	4.716	0.008%	5.232	6.682	0.011%	5.800	7.250	0.012%	2.830	4.280	0.007%
60,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.450	3.522	4.972	0.008%	4.953	6.403	0.011%	6.823	8.273	0.014%	3.249	4.699	0.008%
60,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.450	3.475	4.925	0.008%	4.240	5.690	0.009%	6.626	8.076	0.013%	3.103	4.553	0.008%
60,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.450	3.825	5.275	0.009%	4.900	6.350	0.011%	7.420	8.870	0.015%	3.418	4.868	0.008%
60,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.450	3.012	4.462	0.007%	2.695	4.145	0.007%	4.719	6.169	0.010%	2.184	3.634	0.006%
60,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.450	2.658	4.108	0.007%	2.302	3.752	0.006%	4.003	5.453	0.009%	1.858	3.308	0.006%
60,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.450	2.495	3.945	0.007%	2.227	3.677	0.006%	3.712	5.162	0.009%	1.737	3.187	0.005%
60,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.450	1.715	3.165	0.005%	1.412	2.862	0.005%	2.361	3.811	0.006%	1.129	2.579	0.004%
60,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.450	1.605	3.055	0.005%	1.352	2.802	0.005%	2.230	3.680	0.006%	1.068	2.518	0.004%
60,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.450	1.425	2.875	0.005%	1.310	2.760	0.005%	2.036	3.486	0.006%	0.971	2.421	0.004%
60,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.450	0.625	2.075	0.003%	0.567	2.017	0.003%	0.880	2.330	0.004%	0.432	1.882	0.003%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Dichlorofluoromethane (CAS 75-43-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
500	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	4.200	0.007	4.207	0.84%	0.009	4.209	0.84%	0.009	4.209	0.84%	0.006	4.206	0.84%
500	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	4.200	0.007	4.207	0.84%	0.010	4.210	0.84%	0.008	4.208	0.84%	0.005	4.205	0.84%
500	ZOR-3	Residence at 663951 Rd 66	510216	4770270	4.200	0.007	4.207	0.84%	0.007	4.207	0.84%	0.009	4.209	0.84%	0.005	4.205	0.84%
500	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	4.200	0.006	4.206	0.84%	0.008	4.208	0.84%	0.007	4.207	0.84%	0.005	4.205	0.84%
500	ZOR-5	Residence at 334789 33rd Line	508931	4768760	4.200	0.015	4.215	0.84%	0.011	4.211	0.84%	0.015	4.215	0.84%	0.010	4.210	0.84%
500	ZOR-6	Residence at 334742 33rd Line	509185	4768350	4.200	0.021	4.221	0.84%	0.021	4.221	0.84%	0.025	4.225	0.85%	0.016	4.216	0.84%
500	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	4.200	0.004	4.204	0.84%	0.007	4.207	0.84%	0.007	4.207	0.84%	0.005	4.205	0.84%
500	ZOR-8	Residence at 643743 Road 64	508940	4767980	4.200	0.016	4.216	0.84%	0.016	4.216	0.84%	0.017	4.217	0.84%	0.010	4.210	0.84%
500	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	4.200	0.016	4.216	0.84%	0.020	4.220	0.84%	0.021	4.221	0.84%	0.013	4.213	0.84%
500	ZOR-10	Residence at 334578 33rd Line	509739	4766780	4.200	0.009	4.209	0.84%	0.013	4.213	0.84%	0.014	4.214	0.84%	0.008	4.208	0.84%
500	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	4.200	0.019	4.219	0.84%	0.042	4.242	0.85%	0.037	4.237	0.85%	0.023	4.223	0.84%
500	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	4.200	0.011	4.211	0.84%	0.020	4.220	0.84%	0.018	4.218	0.84%	0.011	4.211	0.84%
500	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	4.200	0.003	4.203	0.84%	0.004	4.204	0.84%	0.006	4.206	0.84%	0.006	4.206	0.84%
500	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	4.200	0.009	4.209	0.84%	0.012	4.212	0.84%	0.016	4.216	0.84%	0.008	4.208	0.84%
500	ING-2	Laurie Hawkins Public School	509019	4765860	4.200	0.003	4.203	0.84%	0.007	4.207	0.84%	0.008	4.208	0.84%	0.005	4.205	0.84%
500	ING-3	Ingersoll District Collegiate Institute	510512	4766230	4.200	0.010	4.210	0.84%	0.015	4.215	0.84%	0.015	4.215	0.84%	0.009	4.209	0.84%
500	ING-4	On the river north of 209 County Road 9	509480	4765180	4.200	0.005	4.205	0.84%	0.006	4.206	0.84%	0.006	4.206	0.84%	0.004	4.204	0.84%
500	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	4.200	0.003	4.203	0.84%	0.006	4.206	0.84%	0.007	4.207	0.84%	0.004	4.204	0.84%
500	ING-6	Royal Road Public School	510337	4765360	4.200	0.006	4.206	0.84%	0.010	4.210	0.84%	0.009	4.209	0.84%	0.006	4.206	0.84%
500	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	4.200	0.003	4.203	0.84%	0.005	4.205	0.84%	0.005	4.205	0.84%	0.003	4.203	0.84%
500	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	4.200	0.003	4.203	0.84%	0.006	4.206	0.84%	0.005	4.205	0.84%	0.004	4.204	0.84%
500	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	4.200	0.008	4.208	0.84%	0.014	4.214	0.84%	0.017	4.217	0.84%	0.009	4.209	0.84%
500	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	4.200	0.005	4.205	0.84%	0.010	4.210	0.84%	0.011	4.211	0.84%	0.007	4.207	0.84%
500	SWO-1	Residence at 584052 Beachville Road	511124	4766750	4.200	0.013	4.213	0.84%	0.048	4.248	0.85%	0.046	4.246	0.85%	0.028	4.228	0.85%
500	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	4.200	0.016	4.216	0.84%	0.035	4.235	0.85%	0.043	4.243	0.85%	0.023	4.223	0.84%
500	SWO-3	Residence at 584142 Beachville Road	511722	4767480	4.200	0.019	4.219	0.84%	0.031	4.231	0.85%	0.053	4.253	0.85%	0.026	4.226	0.85%
500	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	4.200	0.012	4.212	0.84%	0.010	4.210	0.84%	0.013	4.213	0.84%	0.007	4.207	0.84%
500	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	4.200	0.007	4.207	0.84%	0.007	4.207	0.84%	0.011	4.211	0.84%	0.006	4.206	0.84%
500	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	4.200	0.005	4.205	0.84%	0.004	4.204	0.84%	0.005	4.205	0.84%	0.003	4.203	0.84%
500	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	4.200	0.003	4.203	0.84%	0.004	4.204	0.84%	0.006	4.206	0.84%	0.003	4.203	0.84%
500	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	4.200	0.001	4.201	0.84%	0.002	4.202	0.84%	0.002	4.202	0.84%	0.001	4.201	0.84%
500	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	4.200	0.001	4.201	0.84%	0.001	4.201	0.84%	0.002	4.202	0.84%	0.001	4.201	0.84%
500	SWO-10	Residence at 563977 Karn Road	510980	4765990	4.200	0.012	4.212	0.84%	0.027	4.227	0.85%	0.019	4.219	0.84%	0.014	4.214	0.84%
500	SWO-11	Residence at 564028 Karn Road	511396	4766310	4.200	0.010	4.210	0.84%	0.028	4.228	0.85%	0.021	4.221	0.84%	0.011	4.211	0.84%
500	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	4.200	0.016	4.216	0.84%	0.024	4.224	0.84%	0.041	4.241	0.85%	0.022	4.222	0.84%
500	SWO-13	Centreville Pond and Conservation Area	511570	4766920	4.200	0.012	4.212	0.84%	0.024	4.224	0.84%	0.038	4.238	0.85%	0.021	4.221	0.84%
500	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	4.200	0.013	4.213	0.84%	0.015	4.215	0.84%	0.021	4.221	0.84%	0.011	4.211	0.84%
500	SWO-15	Residences at 564146 Karn Road	512251	4767100	4.200	0.009	4.209	0.84%	0.016	4.216	0.84%	0.021	4.221	0.84%	0.011	4.211	0.84%
500	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	4.200	0.010	4.210	0.84%	0.018	4.218	0.84%	0.023	4.223	0.84%	0.012	4.212	0.84%
500	SWO-17	Residence at 564226 Karn Road	512958	4767760	4.200	0.009	4.209	0.84%	0.010	4.210	0.84%	0.016	4.216	0.84%	0.009	4.209	0.84%
500	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	4.200	0.011	4.211	0.84%	0.011	4.211	0.84%	0.012	4.212	0.84%	0.007	4.207	0.84%
500	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	4.200	0.004	4.204	0.84%	0.007	4.207	0.84%	0.010	4.210	0.84%	0.006	4.206	0.84%
500	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	4.200	0.003	4.203	0.84%	0.002	4.202	0.84%	0.002	4.202	0.84%	0.002	4.202	0.84%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated Ethanol (CAS 64-17-5)**

1-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
19,000	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	7.700	1.309	9.009	0.05%	1.220	8.920	0.05%	1.708	9.408	0.05%	0.836	8.536	0.04%
19,000	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	7.700	1.868	9.568	0.05%	1.748	9.448	0.05%	2.395	10.095	0.05%	1.240	8.940	0.05%
19,000	ZOR-3	Residence at 663951 Rd 66	510216	4770270	7.700	1.969	9.669	0.05%	2.392	10.092	0.05%	2.825	10.525	0.06%	1.497	9.197	0.05%
19,000	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	7.700	1.630	9.330	0.05%	1.921	9.621	0.05%	2.162	9.862	0.05%	1.093	8.793	0.05%
19,000	ZOR-5	Residence at 334789 33rd Line	508931	4768760	7.700	2.181	9.881	0.05%	1.927	9.627	0.05%	2.582	10.282	0.05%	1.257	8.957	0.05%
19,000	ZOR-6	Residence at 334742 33rd Line	509185	4768350	7.700	2.259	9.959	0.05%	2.074	9.774	0.05%	2.924	10.624	0.06%	1.424	9.124	0.05%
19,000	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	7.700	1.051	8.751	0.05%	1.072	8.772	0.05%	1.571	9.271	0.05%	0.775	8.475	0.04%
19,000	ZOR-8	Residence at 643743 Road 64	508940	4767980	7.700	1.812	9.512	0.05%	1.746	9.446	0.05%	2.456	10.156	0.05%	1.203	8.903	0.05%
19,000	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	7.700	1.685	9.385	0.05%	1.852	9.552	0.05%	2.114	9.814	0.05%	1.071	8.771	0.05%
19,000	ZOR-10	Residence at 334578 33rd Line	509739	4766780	7.700	2.526	10.226	0.05%	1.858	9.558	0.05%	2.295	9.995	0.05%	1.142	8.842	0.05%
19,000	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	7.700	4.607	12.307	0.06%	7.149	14.849	0.08%	6.417	14.117	0.07%	3.426	11.126	0.06%
19,000	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	7.700	3.019	10.719	0.06%	3.762	11.462	0.06%	3.909	11.609	0.06%	2.028	9.728	0.05%
19,000	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	7.700	1.045	8.745	0.05%	1.168	8.868	0.05%	1.559	9.259	0.05%	0.766	8.466	0.04%
19,000	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	7.700	2.605	10.305	0.05%	1.901	9.601	0.05%	2.313	10.013	0.05%	1.153	8.853	0.05%
19,000	ING-2	Laurie Hawkins Public School	509019	4765860	7.700	1.136	8.836	0.05%	1.145	8.845	0.05%	1.549	9.249	0.05%	0.780	8.480	0.04%
19,000	ING-3	Ingersoll District Collegiate Institute	510512	4766230	7.700	2.666	10.366	0.05%	4.252	11.952	0.06%	3.943	11.643	0.06%	1.981	9.681	0.05%
19,000	ING-4	On the river north of 209 County Road 9	509480	4765180	7.700	1.590	9.290	0.05%	1.854	9.554	0.05%	1.666	9.366	0.05%	1.049	8.749	0.05%
19,000	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	7.700	0.964	8.664	0.05%	0.979	8.679	0.05%	1.312	9.012	0.05%	0.666	8.366	0.04%
19,000	ING-6	Royal Road Public School	510337	4765360	7.700	1.999	9.699	0.05%	3.056	10.756	0.06%	3.102	10.802	0.06%	1.571	9.271	0.05%
19,000	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	7.700	1.161	8.861	0.05%	1.638	9.338	0.05%	1.683	9.383	0.05%	0.950	8.650	0.05%
19,000	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	7.700	1.447	9.147	0.05%	2.125	9.825	0.05%	2.187	9.887	0.05%	1.186	8.886	0.05%
19,000	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	7.700	2.002	9.702	0.05%	3.102	10.802	0.06%	3.608	11.308	0.06%	1.778	9.478	0.05%
19,000	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	7.700	1.458	9.158	0.05%	2.224	9.924	0.05%	2.519	10.219	0.05%	1.378	9.078	0.05%
19,000	SWO-1	Residence at 584052 Beachville Road	511124	4766750	7.700	3.556	11.256	0.06%	5.330	13.030	0.07%	7.386	15.086	0.08%	3.468	11.168	0.06%
19,000	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	7.700	3.543	11.243	0.06%	3.355	11.055	0.06%	6.753	14.453	0.08%	3.054	10.754	0.06%
19,000	SWO-3	Residence at 584142 Beachville Road	511722	4767480	7.700	3.017	10.717	0.06%	2.690	10.390	0.05%	5.081	12.781	0.07%	2.324	10.024	0.05%
19,000	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	7.700	1.772	9.472	0.05%	1.550	9.250	0.05%	2.668	10.368	0.05%	1.269	8.969	0.05%
19,000	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	7.700	1.488	9.188	0.05%	1.298	8.998	0.05%	2.169	9.869	0.05%	1.041	8.741	0.05%
19,000	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	7.700	1.068	8.768	0.05%	0.792	8.492	0.04%	1.258	8.958	0.05%	0.612	8.312	0.04%
19,000	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	7.700	0.715	8.415	0.04%	0.751	8.451	0.04%	1.040	8.740	0.05%	0.538	8.238	0.04%
19,000	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	7.700	0.427	8.127	0.04%	0.461	8.161	0.04%	0.547	8.247	0.04%	0.324	8.024	0.04%
19,000	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	7.700	0.511	8.211	0.04%	0.361	8.061	0.04%	0.463	8.163	0.04%	0.258	7.958	0.04%
19,000	SWO-10	Residence at 563977 Karn Road	510980	4765990	7.700	2.668	10.368	0.05%	4.273	11.973	0.06%	4.737	12.437	0.07%	2.311	10.011	0.05%
19,000	SWO-11	Residence at 564028 Karn Road	511396	4766310	7.700	2.877	10.577	0.06%	4.046	11.746	0.06%	5.573	13.273	0.07%	2.654	10.354	0.05%
19,000	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	7.700	2.838	10.538	0.06%	3.463	11.163	0.06%	5.412	13.112	0.07%	2.534	10.234	0.05%
19,000	SWO-13	Centreville Pond and Conservation Area	511570	4766920	7.700	3.124	10.824	0.06%	4.003	11.703	0.06%	6.061	13.761	0.07%	2.791	10.491	0.06%
19,000	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	7.700	2.460	10.160	0.05%	2.201	9.901	0.05%	3.855	11.555	0.06%	1.784	9.484	0.05%
19,000	SWO-15	Residences at 564146 Karn Road	512251	4767100	7.700	2.171	9.871	0.05%	1.880	9.580	0.05%	3.270	10.970	0.06%	1.517	9.217	0.05%
19,000	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	7.700	2.038	9.738	0.05%	1.819	9.519	0.05%	3.032	10.732	0.06%	1.419	9.119	0.05%
19,000	SWO-17	Residence at 564226 Karn Road	512958	4767760	7.700	1.401	9.101	0.05%	1.153	8.853	0.05%	1.929	9.629	0.05%	0.922	8.622	0.05%
19,000	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	7.700	1.311	9.011	0.05%	1.104	8.804	0.05%	1.821	9.521	0.05%	0.873	8.573	0.05%
19,000	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	7.700	1.164	8.864	0.05%	1.070	8.770	0.05%	1.663	9.363	0.05%	0.793	8.493	0.04%
19,000	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	7.700	0.511	8.211	0.04%	0.463	8.163	0.04%	0.719	8.419	0.04%	0.353	8.053	0.04%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Ethylene Dichloride (CAS 107-06-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
2	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.087	0.004	0.091	4.54%	0.004	0.091	4.57%	0.005	0.092	4.58%	0.003	0.090	4.50%
2	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.087	0.004	0.091	4.53%	0.005	0.092	4.60%	0.004	0.091	4.55%	0.002	0.089	4.47%
2	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.087	0.004	0.091	4.53%	0.004	0.091	4.54%	0.004	0.091	4.57%	0.003	0.090	4.48%
2	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.087	0.003	0.090	4.49%	0.004	0.091	4.56%	0.004	0.091	4.54%	0.002	0.089	4.47%
2	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.087	0.008	0.095	4.74%	0.005	0.092	4.62%	0.008	0.095	4.74%	0.005	0.092	4.61%
2	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.087	0.010	0.097	4.87%	0.011	0.098	4.88%	0.013	0.100	4.99%	0.008	0.095	4.76%
2	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.087	0.002	0.089	4.45%	0.003	0.090	4.52%	0.003	0.090	4.52%	0.002	0.089	4.46%
2	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.087	0.008	0.095	4.75%	0.008	0.095	4.76%	0.009	0.096	4.78%	0.005	0.092	4.60%
2	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.087	0.008	0.095	4.75%	0.010	0.097	4.86%	0.011	0.098	4.88%	0.007	0.094	4.68%
2	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.087	0.004	0.091	4.57%	0.007	0.094	4.68%	0.007	0.094	4.71%	0.004	0.091	4.55%
2	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.087	0.010	0.097	4.83%	0.021	0.108	5.42%	0.019	0.106	5.28%	0.012	0.099	4.93%
2	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.087	0.005	0.092	4.62%	0.010	0.097	4.84%	0.009	0.096	4.80%	0.006	0.093	4.63%
2	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.087	0.002	0.089	4.44%	0.002	0.089	4.46%	0.003	0.090	4.49%	0.002	0.089	4.43%
2	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.087	0.005	0.092	4.58%	0.006	0.093	4.66%	0.008	0.095	4.75%	0.004	0.091	4.56%
2	ING-2	Laurie Hawkins Public School	509019	4765860	0.087	0.002	0.089	4.44%	0.004	0.091	4.54%	0.004	0.091	4.56%	0.002	0.089	4.47%
2	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.087	0.005	0.092	4.60%	0.007	0.094	4.72%	0.008	0.095	4.73%	0.005	0.092	4.58%
2	ING-4	On the river north of 209 County Road 9	509480	4765180	0.087	0.002	0.089	4.46%	0.003	0.090	4.49%	0.003	0.090	4.51%	0.002	0.089	4.45%
2	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.087	0.002	0.089	4.43%	0.003	0.090	4.50%	0.003	0.090	4.51%	0.002	0.089	4.45%
2	ING-6	Royal Road Public School	510337	4765360	0.087	0.003	0.090	4.49%	0.005	0.092	4.60%	0.004	0.091	4.57%	0.003	0.090	4.49%
2	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.087	0.001	0.088	4.42%	0.002	0.089	4.47%	0.002	0.089	4.47%	0.001	0.088	4.42%
2	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.087	0.001	0.088	4.42%	0.003	0.090	4.51%	0.003	0.090	4.49%	0.002	0.089	4.44%
2	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.087	0.004	0.091	4.56%	0.007	0.094	4.71%	0.008	0.095	4.77%	0.004	0.091	4.57%
2	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.087	0.003	0.090	4.48%	0.005	0.092	4.61%	0.006	0.093	4.64%	0.003	0.090	4.52%
2	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.087	0.007	0.094	4.68%	0.024	0.111	5.55%	0.023	0.110	5.51%	0.014	0.101	5.05%
2	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.087	0.008	0.095	4.76%	0.017	0.104	5.22%	0.022	0.109	5.43%	0.012	0.099	4.94%
2	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.087	0.009	0.096	4.82%	0.016	0.103	5.14%	0.027	0.114	5.68%	0.013	0.100	5.01%
2	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.087	0.006	0.093	4.64%	0.005	0.092	4.59%	0.006	0.093	4.67%	0.004	0.091	4.54%
2	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.087	0.004	0.091	4.53%	0.004	0.091	4.54%	0.005	0.092	4.62%	0.003	0.090	4.49%
2	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.087	0.002	0.089	4.47%	0.002	0.089	4.45%	0.003	0.090	4.48%	0.001	0.088	4.42%
2	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.087	0.001	0.088	4.42%	0.002	0.089	4.46%	0.003	0.090	4.49%	0.002	0.089	4.43%
2	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.087	0.001	0.088	4.38%	0.001	0.088	4.39%	0.001	0.088	4.40%	0.001	0.088	4.38%
2	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.087	0.001	0.088	4.38%	0.001	0.088	4.38%	0.001	0.088	4.39%	0.000	0.087	4.37%
2	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.087	0.006	0.093	4.64%	0.013	0.100	5.02%	0.010	0.097	4.83%	0.007	0.094	4.70%
2	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.087	0.005	0.092	4.60%	0.014	0.101	5.05%	0.011	0.098	4.88%	0.006	0.093	4.64%
2	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.087	0.008	0.095	4.75%	0.012	0.099	4.95%	0.021	0.108	5.38%	0.011	0.098	4.90%
2	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.087	0.006	0.093	4.66%	0.012	0.099	4.95%	0.019	0.106	5.31%	0.010	0.097	4.87%
2	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.087	0.007	0.094	4.68%	0.008	0.095	4.74%	0.011	0.098	4.89%	0.006	0.093	4.63%
2	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.087	0.004	0.091	4.57%	0.008	0.095	4.76%	0.010	0.097	4.87%	0.005	0.092	4.62%
2	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.087	0.005	0.092	4.61%	0.009	0.096	4.79%	0.012	0.099	4.93%	0.006	0.093	4.66%
2	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.087	0.005	0.092	4.58%	0.005	0.092	4.60%	0.008	0.095	4.76%	0.004	0.091	4.57%
2	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.087	0.006	0.093	4.63%	0.005	0.092	4.62%	0.006	0.093	4.65%	0.004	0.091	4.53%
2	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.087	0.002	0.089	4.46%	0.004	0.091	4.54%	0.005	0.092	4.61%	0.003	0.090	4.49%
2	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.087	0.001	0.088	4.42%	0.001	0.088	4.40%	0.001	0.088	4.41%	0.001	0.088	4.39%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**m/p-Ethyl Toluene (CAS 620-14-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
63	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.000	0.072	1.072	1.71%	0.083	1.083	1.73%	0.086	1.086	1.74%	0.056	1.056	1.69%
63	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.000	0.068	1.068	1.71%	0.095	1.095	1.75%	0.077	1.077	1.72%	0.046	1.046	1.67%
63	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.000	0.068	1.068	1.71%	0.071	1.071	1.71%	0.085	1.085	1.74%	0.048	1.048	1.68%
63	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.000	0.053	1.053	1.68%	0.080	1.080	1.73%	0.071	1.071	1.71%	0.047	1.047	1.68%
63	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.000	0.147	1.147	1.84%	0.102	1.102	1.76%	0.148	1.148	1.84%	0.098	1.098	1.76%
63	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.000	0.197	1.197	1.92%	0.202	1.202	1.92%	0.244	1.244	1.99%	0.154	1.154	1.85%
63	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.000	0.040	1.040	1.66%	0.064	1.064	1.70%	0.065	1.065	1.70%	0.043	1.043	1.67%
63	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.000	0.150	1.150	1.84%	0.155	1.155	1.85%	0.165	1.165	1.86%	0.094	1.094	1.75%
63	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.000	0.151	1.151	1.84%	0.196	1.196	1.91%	0.203	1.203	1.92%	0.124	1.124	1.80%
63	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.000	0.084	1.084	1.74%	0.125	1.125	1.80%	0.136	1.136	1.82%	0.076	1.076	1.72%
63	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.000	0.182	1.182	1.89%	0.405	1.405	2.25%	0.352	1.352	2.16%	0.219	1.219	1.95%
63	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.000	0.104	1.104	1.77%	0.188	1.188	1.90%	0.173	1.173	1.88%	0.108	1.108	1.77%
63	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.000	0.033	1.033	1.65%	0.041	1.041	1.66%	0.055	1.055	1.69%	0.029	1.029	1.65%
63	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.000	0.089	1.089	1.74%	0.119	1.119	1.79%	0.152	1.152	1.84%	0.079	1.079	1.73%
63	ING-2	Laurie Hawkins Public School	509019	4765860	1.000	0.032	1.032	1.65%	0.071	1.071	1.71%	0.080	1.080	1.73%	0.045	1.045	1.67%
63	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.000	0.094	1.094	1.75%	0.139	1.139	1.82%	0.144	1.144	1.83%	0.087	1.087	1.74%
63	ING-4	On the river north of 209 County Road 9	509480	4765180	1.000	0.044	1.044	1.67%	0.054	1.054	1.69%	0.062	1.062	1.70%	0.038	1.038	1.66%
63	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.000	0.031	1.031	1.65%	0.059	1.059	1.69%	0.062	1.062	1.70%	0.038	1.038	1.66%
63	ING-6	Royal Road Public School	510337	4765360	1.000	0.055	1.055	1.69%	0.096	1.096	1.75%	0.085	1.085	1.74%	0.055	1.055	1.69%
63	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.000	0.027	1.027	1.64%	0.045	1.045	1.67%	0.046	1.046	1.67%	0.028	1.028	1.64%
63	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.000	0.027	1.027	1.64%	0.061	1.061	1.70%	0.052	1.052	1.68%	0.035	1.035	1.66%
63	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.000	0.081	1.081	1.73%	0.135	1.135	1.82%	0.160	1.160	1.86%	0.084	1.084	1.73%
63	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.000	0.051	1.051	1.68%	0.097	1.097	1.76%	0.108	1.108	1.77%	0.066	1.066	1.71%
63	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.000	0.124	1.124	1.80%	0.457	1.457	2.33%	0.441	1.441	2.30%	0.267	1.267	2.03%
63	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.000	0.156	1.156	1.85%	0.332	1.332	2.13%	0.409	1.409	2.25%	0.223	1.223	1.96%
63	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.000	0.180	1.180	1.89%	0.300	1.300	2.08%	0.504	1.504	2.41%	0.249	1.249	2.00%
63	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.000	0.111	1.111	1.78%	0.093	1.093	1.75%	0.123	1.123	1.80%	0.072	1.072	1.71%
63	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.000	0.067	1.067	1.71%	0.071	1.071	1.71%	0.101	1.101	1.76%	0.055	1.055	1.69%
63	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.000	0.044	1.044	1.66%	0.036	1.036	1.66%	0.048	1.048	1.68%	0.027	1.027	1.64%
63	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.000	0.025	1.025	1.64%	0.041	1.041	1.67%	0.054	1.054	1.69%	0.030	1.030	1.65%
63	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.000	0.011	1.011	1.62%	0.015	1.015	1.62%	0.019	1.019	1.63%	0.011	1.011	1.62%
63	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.000	0.010	1.010	1.62%	0.012	1.012	1.62%	0.015	1.015	1.62%	0.009	1.009	1.61%
63	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.000	0.111	1.111	1.78%	0.254	1.254	2.01%	0.182	1.182	1.89%	0.132	1.132	1.81%
63	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.000	0.094	1.094	1.75%	0.268	1.268	2.03%	0.200	1.200	1.92%	0.109	1.109	1.77%
63	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.000	0.151	1.151	1.84%	0.227	1.227	1.96%	0.390	1.390	2.22%	0.209	1.209	1.93%
63	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.000	0.118	1.118	1.79%	0.226	1.226	1.96%	0.366	1.366	2.19%	0.196	1.196	1.91%
63	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.000	0.126	1.126	1.80%	0.146	1.146	1.83%	0.205	1.205	1.93%	0.106	1.106	1.77%
63	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.000	0.085	1.085	1.74%	0.156	1.156	1.85%	0.198	1.198	1.92%	0.103	1.103	1.76%
63	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.000	0.099	1.099	1.76%	0.168	1.168	1.87%	0.222	1.222	1.95%	0.119	1.119	1.79%
63	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.000	0.087	1.087	1.74%	0.094	1.094	1.75%	0.156	1.156	1.85%	0.082	1.082	1.73%
63	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.000	0.106	1.106	1.77%	0.103	1.103	1.76%	0.112	1.112	1.78%	0.069	1.069	1.71%
63	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.000	0.040	1.040	1.66%	0.071	1.071	1.71%	0.098	1.098	1.76%	0.053	1.053	1.68%
63	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.000	0.025	1.025	1.64%	0.019	1.019	1.63%	0.022	1.022	1.64%	0.015	1.015	1.62%



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Methyl Cyclohexane (CAS 108-87-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
6,440	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.400	0.049	0.449	0.01%	0.057	0.457	0.01%	0.059	0.459	0.01%	0.038	0.438	0.01%
6,440	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.400	0.046	0.446	0.01%	0.065	0.465	0.01%	0.053	0.453	0.01%	0.031	0.431	0.01%
6,440	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.400	0.047	0.447	0.01%	0.048	0.448	0.01%	0.058	0.458	0.01%	0.033	0.433	0.01%
6,440	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.400	0.036	0.436	0.01%	0.054	0.454	0.01%	0.049	0.449	0.01%	0.032	0.432	0.01%
6,440	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.400	0.101	0.501	0.01%	0.070	0.470	0.01%	0.101	0.501	0.01%	0.067	0.467	0.01%
6,440	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.400	0.135	0.535	0.01%	0.139	0.539	0.01%	0.167	0.567	0.01%	0.105	0.505	0.01%
6,440	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.400	0.027	0.427	0.01%	0.044	0.444	0.01%	0.044	0.444	0.01%	0.030	0.430	0.01%
6,440	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.400	0.103	0.503	0.01%	0.106	0.506	0.01%	0.113	0.513	0.01%	0.064	0.464	0.01%
6,440	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.400	0.104	0.504	0.01%	0.134	0.534	0.01%	0.139	0.539	0.01%	0.085	0.485	0.01%
6,440	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.400	0.058	0.458	0.01%	0.085	0.485	0.01%	0.093	0.493	0.01%	0.052	0.452	0.01%
6,440	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.400	0.125	0.525	0.01%	0.277	0.677	0.01%	0.241	0.641	0.01%	0.150	0.550	0.01%
6,440	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.400	0.071	0.471	0.01%	0.128	0.528	0.01%	0.118	0.518	0.01%	0.074	0.474	0.01%
6,440	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.400	0.022	0.422	0.01%	0.028	0.428	0.01%	0.037	0.437	0.01%	0.020	0.420	0.01%
6,440	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.400	0.061	0.461	0.01%	0.082	0.482	0.01%	0.104	0.504	0.01%	0.054	0.454	0.01%
6,440	ING-2	Laurie Hawkins Public School	509019	4765860	0.400	0.022	0.422	0.01%	0.048	0.448	0.01%	0.055	0.455	0.01%	0.031	0.431	0.01%
6,440	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.400	0.065	0.465	0.01%	0.095	0.495	0.01%	0.098	0.498	0.01%	0.060	0.460	0.01%
6,440	ING-4	On the river north of 209 County Road 9	509480	4765180	0.400	0.030	0.430	0.01%	0.037	0.437	0.01%	0.042	0.442	0.01%	0.026	0.426	0.01%
6,440	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.400	0.021	0.421	0.01%	0.040	0.440	0.01%	0.043	0.443	0.01%	0.026	0.426	0.01%
6,440	ING-6	Royal Road Public School	510337	4765360	0.400	0.038	0.438	0.01%	0.066	0.466	0.01%	0.058	0.458	0.01%	0.038	0.438	0.01%
6,440	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.400	0.018	0.418	0.01%	0.031	0.431	0.01%	0.031	0.431	0.01%	0.019	0.419	0.01%
6,440	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.400	0.018	0.418	0.01%	0.042	0.442	0.01%	0.036	0.436	0.01%	0.024	0.424	0.01%
6,440	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.400	0.056	0.456	0.01%	0.093	0.493	0.01%	0.110	0.510	0.01%	0.057	0.457	0.01%
6,440	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.400	0.035	0.435	0.01%	0.067	0.467	0.01%	0.074	0.474	0.01%	0.045	0.445	0.01%
6,440	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.400	0.085	0.485	0.01%	0.313	0.713	0.01%	0.302	0.702	0.01%	0.183	0.583	0.01%
6,440	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.400	0.107	0.507	0.01%	0.227	0.627	0.01%	0.280	0.680	0.01%	0.153	0.553	0.01%
6,440	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.400	0.123	0.523	0.01%	0.205	0.605	0.01%	0.345	0.745	0.01%	0.171	0.571	0.01%
6,440	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.400	0.076	0.476	0.01%	0.064	0.464	0.01%	0.084	0.484	0.01%	0.049	0.449	0.01%
6,440	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.400	0.046	0.446	0.01%	0.048	0.448	0.01%	0.069	0.469	0.01%	0.038	0.438	0.01%
6,440	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.400	0.030	0.430	0.01%	0.025	0.425	0.01%	0.033	0.433	0.01%	0.018	0.418	0.01%
6,440	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.400	0.017	0.417	0.01%	0.028	0.428	0.01%	0.037	0.437	0.01%	0.021	0.421	0.01%
6,440	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.400	0.007	0.407	0.01%	0.010	0.410	0.01%	0.013	0.413	0.01%	0.008	0.408	0.01%
6,440	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.400	0.007	0.407	0.01%	0.008	0.408	0.01%	0.010	0.410	0.01%	0.006	0.406	0.01%
6,440	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.400	0.076	0.476	0.01%	0.174	0.574	0.01%	0.125	0.525	0.01%	0.090	0.490	0.01%
6,440	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.400	0.064	0.464	0.01%	0.183	0.583	0.01%	0.137	0.537	0.01%	0.075	0.475	0.01%
6,440	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.400	0.103	0.503	0.01%	0.155	0.555	0.01%	0.267	0.667	0.01%	0.143	0.543	0.01%
6,440	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.400	0.081	0.481	0.01%	0.155	0.555	0.01%	0.250	0.650	0.01%	0.134	0.534	0.01%
6,440	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.400	0.086	0.486	0.01%	0.100	0.500	0.01%	0.140	0.540	0.01%	0.073	0.473	0.01%
6,440	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.400	0.058	0.458	0.01%	0.107	0.507	0.01%	0.136	0.536	0.01%	0.070	0.470	0.01%
6,440	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.400	0.068	0.468	0.01%	0.115	0.515	0.01%	0.152	0.552	0.01%	0.081	0.481	0.01%
6,440	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.400	0.060	0.460	0.01%	0.064	0.464	0.01%	0.107	0.507	0.01%	0.056	0.456	0.01%
6,440	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.400	0.073	0.473	0.01%	0.070	0.470	0.01%	0.077	0.477	0.01%	0.047	0.447	0.01%
6,440	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.400	0.028	0.428	0.01%	0.049	0.449	0.01%	0.067	0.467	0.01%	0.036	0.436	0.01%
6,440	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.400	0.017	0.417	0.01%	0.013	0.413	0.01%	0.015	0.415	0.01%	0.010	0.410	0.01%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**n-Butanal (CAS 123-72-8)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
6	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.000	0.011	0.011	0.20%	0.013	0.013	0.23%	0.013	0.013	0.24%	0.009	0.009	0.16%
6	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.000	0.011	0.011	0.19%	0.015	0.015	0.27%	0.012	0.012	0.22%	0.007	0.007	0.13%
6	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.000	0.011	0.011	0.19%	0.015	0.011	0.20%	0.013	0.013	0.24%	0.008	0.008	0.13%
6	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.000	0.008	0.008	0.15%	0.012	0.012	0.22%	0.011	0.011	0.20%	0.007	0.007	0.13%
6	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.000	0.023	0.023	0.41%	0.016	0.016	0.29%	0.023	0.023	0.41%	0.015	0.015	0.27%
6	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.000	0.031	0.031	0.55%	0.032	0.032	0.57%	0.038	0.038	0.68%	0.024	0.024	0.43%
6	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.000	0.006	0.006	0.11%	0.010	0.010	0.18%	0.010	0.010	0.18%	0.007	0.007	0.12%
6	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.000	0.024	0.024	0.42%	0.024	0.024	0.43%	0.026	0.026	0.46%	0.015	0.015	0.26%
6	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.000	0.024	0.024	0.42%	0.031	0.031	0.55%	0.032	0.032	0.57%	0.019	0.019	0.35%
6	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.000	0.013	0.013	0.24%	0.020	0.020	0.35%	0.021	0.021	0.38%	0.012	0.012	0.21%
6	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.000	0.029	0.029	0.51%	0.064	0.064	1.14%	0.055	0.055	0.99%	0.034	0.034	0.61%
6	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.000	0.016	0.016	0.29%	0.029	0.029	0.53%	0.027	0.027	0.48%	0.017	0.017	0.30%
6	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.000	0.005	0.005	0.09%	0.006	0.006	0.11%	0.009	0.009	0.15%	0.005	0.005	0.08%
6	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.000	0.014	0.014	0.25%	0.019	0.019	0.33%	0.024	0.024	0.43%	0.012	0.012	0.22%
6	ING-2	Laurie Hawkins Public School	509019	4765860	0.000	0.005	0.005	0.09%	0.011	0.011	0.20%	0.013	0.013	0.23%	0.007	0.007	0.13%
6	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.000	0.015	0.015	0.26%	0.022	0.022	0.39%	0.023	0.023	0.40%	0.014	0.014	0.24%
6	ING-4	On the river north of 209 County Road 9	509480	4765180	0.000	0.007	0.007	0.12%	0.008	0.008	0.15%	0.010	0.010	0.17%	0.006	0.006	0.11%
6	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.000	0.005	0.005	0.09%	0.009	0.009	0.16%	0.010	0.010	0.17%	0.006	0.006	0.11%
6	ING-6	Royal Road Public School	510337	4765360	0.000	0.009	0.009	0.15%	0.015	0.015	0.27%	0.013	0.013	0.24%	0.009	0.009	0.15%
6	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.000	0.004	0.004	0.07%	0.007	0.007	0.13%	0.007	0.007	0.13%	0.004	0.004	0.08%
6	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.000	0.004	0.004	0.08%	0.010	0.010	0.17%	0.008	0.008	0.15%	0.005	0.005	0.10%
6	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.000	0.013	0.013	0.23%	0.021	0.021	0.38%	0.025	0.025	0.45%	0.013	0.013	0.23%
6	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.000	0.008	0.008	0.14%	0.015	0.015	0.27%	0.017	0.017	0.30%	0.010	0.010	0.19%
6	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.000	0.020	0.020	0.35%	0.072	0.072	1.28%	0.069	0.069	1.23%	0.042	0.042	0.75%
6	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.000	0.024	0.024	0.44%	0.052	0.052	0.93%	0.064	0.064	1.14%	0.035	0.035	0.62%
6	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.000	0.028	0.028	0.50%	0.047	0.047	0.84%	0.079	0.079	1.41%	0.039	0.039	0.70%
6	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.000	0.017	0.017	0.31%	0.015	0.015	0.26%	0.019	0.019	0.35%	0.011	0.011	0.20%
6	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.000	0.010	0.010	0.19%	0.011	0.011	0.20%	0.016	0.016	0.28%	0.009	0.009	0.15%
6	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.000	0.007	0.007	0.12%	0.006	0.006	0.10%	0.008	0.008	0.13%	0.004	0.004	0.07%
6	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.000	0.004	0.004	0.07%	0.006	0.006	0.11%	0.009	0.009	0.15%	0.005	0.005	0.08%
6	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.000	0.002	0.002	0.03%	0.002	0.002	0.04%	0.003	0.003	0.05%	0.002	0.002	0.03%
6	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.000	0.002	0.002	0.03%	0.002	0.002	0.03%	0.002	0.002	0.04%	0.001	0.001	0.02%
6	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.000	0.017	0.017	0.31%	0.040	0.040	0.71%	0.029	0.029	0.51%	0.021	0.021	0.37%
6	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.000	0.015	0.015	0.26%	0.042	0.042	0.75%	0.031	0.031	0.56%	0.017	0.017	0.31%
6	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.000	0.024	0.024	0.42%	0.036	0.036	0.64%	0.061	0.061	1.09%	0.033	0.033	0.58%
6	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.000	0.019	0.019	0.33%	0.035	0.035	0.63%	0.057	0.057	1.02%	0.031	0.031	0.55%
6	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.000	0.020	0.020	0.35%	0.023	0.023	0.41%	0.032	0.032	0.57%	0.017	0.017	0.30%
6	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.000	0.013	0.013	0.24%	0.024	0.024	0.44%	0.031	0.031	0.56%	0.016	0.016	0.29%
6	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.000	0.016	0.016	0.28%	0.026	0.026	0.47%	0.035	0.035	0.62%	0.019	0.019	0.33%
6	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.000	0.014	0.014	0.24%	0.015	0.015	0.26%	0.024	0.024	0.44%	0.013	0.013	0.23%
6	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.000	0.017	0.017	0.30%	0.016	0.016	0.29%	0.018	0.018	0.31%	0.011	0.011	0.19%
6	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.000	0.006	0.006	0.11%	0.011	0.011	0.20%	0.015	0.015	0.27%	0.008	0.008	0.15%
6	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.000	0.004	0.004	0.07%	0.003	0.003	0.05%	0.004	0.004	0.06%	0.002	0.002	0.04%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Nonane (CAS 111-84-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
4,200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.500	0.028	0.528	0.01%	0.033	0.533	0.01%	0.034	0.534	0.01%	0.022	0.522	0.01%
4,200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.500	0.027	0.527	0.01%	0.037	0.537	0.01%	0.053	0.553	0.01%	0.018	0.518	0.01%
4,200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.500	0.027	0.527	0.01%	0.028	0.528	0.01%	0.058	0.558	0.01%	0.019	0.519	0.01%
4,200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.500	0.021	0.521	0.01%	0.031	0.531	0.01%	0.049	0.549	0.01%	0.019	0.519	0.01%
4,200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.500	0.058	0.558	0.01%	0.040	0.540	0.01%	0.101	0.601	0.01%	0.039	0.539	0.01%
4,200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.500	0.078	0.578	0.01%	0.080	0.580	0.01%	0.167	0.667	0.02%	0.061	0.561	0.01%
4,200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.500	0.016	0.516	0.01%	0.025	0.525	0.01%	0.044	0.544	0.01%	0.017	0.517	0.01%
4,200	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.500	0.059	0.559	0.01%	0.061	0.561	0.01%	0.113	0.613	0.01%	0.037	0.537	0.01%
4,200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.500	0.060	0.560	0.01%	0.077	0.577	0.01%	0.139	0.639	0.02%	0.049	0.549	0.01%
4,200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.500	0.033	0.533	0.01%	0.049	0.549	0.01%	0.093	0.593	0.01%	0.030	0.530	0.01%
4,200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.500	0.072	0.572	0.01%	0.160	0.660	0.02%	0.241	0.741	0.02%	0.086	0.586	0.01%
4,200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.500	0.041	0.541	0.01%	0.074	0.574	0.01%	0.118	0.618	0.01%	0.043	0.543	0.01%
4,200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.500	0.013	0.513	0.01%	0.016	0.516	0.01%	0.037	0.537	0.01%	0.012	0.512	0.01%
4,200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.500	0.035	0.535	0.01%	0.047	0.547	0.01%	0.104	0.604	0.01%	0.031	0.531	0.01%
4,200	ING-2	Laurie Hawkins Public School	509019	4765860	0.500	0.013	0.513	0.01%	0.028	0.528	0.01%	0.055	0.555	0.01%	0.018	0.518	0.01%
4,200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.500	0.037	0.537	0.01%	0.055	0.555	0.01%	0.098	0.598	0.01%	0.035	0.535	0.01%
4,200	ING-4	On the river north of 209 County Road 9	509480	4765180	0.500	0.017	0.517	0.01%	0.021	0.521	0.01%	0.042	0.542	0.01%	0.015	0.515	0.01%
4,200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.500	0.012	0.512	0.01%	0.023	0.523	0.01%	0.043	0.543	0.01%	0.015	0.515	0.01%
4,200	ING-6	Royal Road Public School	510337	4765360	0.500	0.022	0.522	0.01%	0.038	0.538	0.01%	0.058	0.558	0.01%	0.022	0.522	0.01%
4,200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.500	0.010	0.510	0.01%	0.018	0.518	0.01%	0.031	0.531	0.01%	0.011	0.511	0.01%
4,200	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.500	0.011	0.511	0.01%	0.024	0.524	0.01%	0.036	0.536	0.01%	0.014	0.514	0.01%
4,200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.500	0.032	0.532	0.01%	0.053	0.553	0.01%	0.110	0.610	0.01%	0.033	0.533	0.01%
4,200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.500	0.020	0.520	0.01%	0.038	0.538	0.01%	0.074	0.574	0.01%	0.026	0.526	0.01%
4,200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.500	0.049	0.549	0.02%	0.180	0.680	0.02%	0.302	0.802	0.02%	0.105	0.605	0.01%
4,200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.500	0.062	0.562	0.01%	0.131	0.631	0.02%	0.280	0.780	0.02%	0.088	0.588	0.01%
4,200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.500	0.071	0.571	0.01%	0.118	0.618	0.01%	0.345	0.845	0.02%	0.098	0.598	0.01%
4,200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.500	0.044	0.544	0.01%	0.037	0.537	0.01%	0.084	0.584	0.01%	0.028	0.528	0.01%
4,200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.500	0.026	0.526	0.01%	0.028	0.528	0.01%	0.069	0.569	0.01%	0.022	0.522	0.01%
4,200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.500	0.017	0.517	0.01%	0.014	0.514	0.01%	0.033	0.533	0.01%	0.011	0.511	0.01%
4,200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.500	0.010	0.510	0.01%	0.016	0.516	0.01%	0.037	0.537	0.01%	0.012	0.512	0.01%
4,200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.500	0.004	0.504	0.01%	0.006	0.506	0.01%	0.013	0.513	0.01%	0.004	0.504	0.01%
4,200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.500	0.004	0.504	0.01%	0.005	0.505	0.01%	0.010	0.510	0.01%	0.003	0.503	0.01%
4,200	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.500	0.044	0.544	0.01%	0.100	0.600	0.01%	0.125	0.625	0.01%	0.052	0.552	0.01%
4,200	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.500	0.037	0.537	0.01%	0.106	0.606	0.01%	0.137	0.637	0.02%	0.043	0.543	0.01%
4,200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.500	0.060	0.560	0.01%	0.089	0.589	0.01%	0.267	0.767	0.02%	0.082	0.582	0.01%
4,200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.500	0.047	0.547	0.01%	0.089	0.589	0.01%	0.250	0.750	0.02%	0.077	0.577	0.01%
4,200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.500	0.050	0.550	0.01%	0.058	0.558	0.01%	0.140	0.640	0.02%	0.042	0.542	0.01%
4,200	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.500	0.033	0.533	0.01%	0.062	0.562	0.01%	0.136	0.636	0.02%	0.041	0.541	0.01%
4,200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.500	0.039	0.539	0.01%	0.066	0.566	0.01%	0.152	0.652	0.02%	0.047	0.547	0.01%
4,200	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.500	0.034	0.534	0.01%	0.037	0.537	0.01%	0.107	0.607	0.01%	0.032	0.532	0.01%
4,200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.500	0.042	0.542	0.01%	0.041	0.541	0.01%	0.077	0.577	0.01%	0.027	0.527	0.01%
4,200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.500	0.016	0.516	0.01%	0.028	0.528	0.01%	0.067	0.567	0.01%	0.021	0.521	0.01%
4,200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.500	0.010	0.510	0.01%	0.007	0.507	0.01%	0.015	0.515	0.01%	0.006	0.506	0.01%

Maximum Predicted Concentrations at All Discrete Receptors - Mitigated

o-Ethyl Toluene (CAS 611-14-3)

24-hour

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
n/a	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.039	0.529	n/a	0.046	0.536	n/a	0.047	0.537	n/a	0.031	0.521	n/a
n/a	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.037	0.527	n/a	0.052	0.542	n/a	0.042	0.532	n/a	0.025	0.515	n/a
n/a	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.037	0.527	n/a	0.039	0.529	n/a	0.047	0.537	n/a	0.026	0.516	n/a
n/a	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.029	0.519	n/a	0.044	0.534	n/a	0.039	0.529	n/a	0.026	0.516	n/a
n/a	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.081	0.571	n/a	0.056	0.546	n/a	0.081	0.571	n/a	0.054	0.544	n/a
n/a	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.109	0.599	n/a	0.111	0.601	n/a	0.134	0.624	n/a	0.085	0.575	n/a
n/a	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.022	0.512	n/a	0.035	0.525	n/a	0.036	0.526	n/a	0.024	0.514	n/a
n/a	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.083	0.573	n/a	0.085	0.575	n/a	0.091	0.581	n/a	0.052	0.542	n/a
n/a	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.083	0.573	n/a	0.107	0.597	n/a	0.111	0.601	n/a	0.068	0.558	n/a
n/a	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.046	0.536	n/a	0.068	0.558	n/a	0.075	0.565	n/a	0.042	0.532	n/a
n/a	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.100	0.590	n/a	0.223	0.713	n/a	0.194	0.684	n/a	0.120	0.610	n/a
n/a	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.057	0.547	n/a	0.103	0.593	n/a	0.095	0.585	n/a	0.059	0.549	n/a
n/a	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.018	0.508	n/a	0.022	0.512	n/a	0.030	0.520	n/a	0.016	0.506	n/a
n/a	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.049	0.539	n/a	0.066	0.556	n/a	0.084	0.574	n/a	0.044	0.534	n/a
n/a	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.018	0.508	n/a	0.039	0.529	n/a	0.044	0.534	n/a	0.025	0.515	n/a
n/a	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.052	0.542	n/a	0.076	0.566	n/a	0.079	0.569	n/a	0.048	0.538	n/a
n/a	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.024	0.514	n/a	0.030	0.520	n/a	0.034	0.524	n/a	0.021	0.511	n/a
n/a	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.017	0.507	n/a	0.032	0.527	n/a	0.034	0.524	n/a	0.021	0.511	n/a
n/a	ING-6	Royal Road Public School	510337	4765360	0.490	0.030	0.520	n/a	0.053	0.543	n/a	0.047	0.537	n/a	0.030	0.520	n/a
n/a	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.015	0.505	n/a	0.025	0.515	n/a	0.025	0.515	n/a	0.015	0.505	n/a
n/a	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.015	0.505	n/a	0.033	0.523	n/a	0.029	0.519	n/a	0.019	0.509	n/a
n/a	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.045	0.535	n/a	0.074	0.564	n/a	0.088	0.578	n/a	0.046	0.536	n/a
n/a	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.028	0.518	n/a	0.053	0.543	n/a	0.060	0.550	n/a	0.037	0.527	n/a
n/a	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.068	0.558	n/a	0.251	0.741	n/a	0.242	0.732	n/a	0.147	0.637	n/a
n/a	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.086	0.576	n/a	0.182	0.672	n/a	0.225	0.715	n/a	0.123	0.613	n/a
n/a	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.099	0.589	n/a	0.165	0.655	n/a	0.277	0.767	n/a	0.137	0.627	n/a
n/a	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.061	0.551	n/a	0.051	0.541	n/a	0.068	0.558	n/a	0.039	0.529	n/a
n/a	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.037	0.527	n/a	0.039	0.529	n/a	0.056	0.546	n/a	0.030	0.520	n/a
n/a	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.024	0.514	n/a	0.020	0.510	n/a	0.026	0.516	n/a	0.015	0.505	n/a
n/a	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.014	0.504	n/a	0.022	0.512	n/a	0.030	0.520	n/a	0.016	0.506	n/a
n/a	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.006	0.496	n/a	0.008	0.498	n/a	0.010	0.500	n/a	0.006	0.496	n/a
n/a	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.006	0.496	n/a	0.007	0.497	n/a	0.008	0.498	n/a	0.005	0.495	n/a
n/a	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.061	0.551	n/a	0.140	0.630	n/a	0.100	0.590	n/a	0.073	0.563	n/a
n/a	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.052	0.542	n/a	0.147	0.637	n/a	0.110	0.600	n/a	0.060	0.550	n/a
n/a	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.083	0.573	n/a	0.125	0.615	n/a	0.214	0.704	n/a	0.115	0.605	n/a
n/a	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.065	0.555	n/a	0.124	0.614	n/a	0.201	0.691	n/a	0.108	0.598	n/a
n/a	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.069	0.559	n/a	0.080	0.570	n/a	0.113	0.603	n/a	0.058	0.548	n/a
n/a	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.047	0.537	n/a	0.086	0.576	n/a	0.109	0.599	n/a	0.057	0.547	n/a
n/a	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.054	0.544	n/a	0.092	0.582	n/a	0.122	0.612	n/a	0.065	0.555	n/a
n/a	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.048	0.538	n/a	0.052	0.542	n/a	0.086	0.576	n/a	0.045	0.535	n/a
n/a	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.058	0.548	n/a	0.057	0.547	n/a	0.062	0.552	n/a	0.038	0.528	n/a
n/a	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.022	0.512	n/a	0.039	0.529	n/a	0.054	0.544	n/a	0.029	0.519	n/a
n/a	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.014	0.504	n/a	0.010	0.500	n/a	0.012	0.502	n/a	0.008	0.498	n/a



**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Pentane (CAS 109-66-0)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
4,200	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	1.090	0.049	1.139	0.027%	0.057	1.147	0.027%	0.058	1.148	0.027%	0.038	1.128	0.027%
4,200	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	1.090	0.046	1.136	0.027%	0.065	1.155	0.027%	0.053	1.143	0.027%	0.031	1.121	0.027%
4,200	ZOR-3	Residence at 663951 Rd 66	510216	4770270	1.090	0.046	1.136	0.027%	0.048	1.138	0.027%	0.058	1.148	0.027%	0.033	1.123	0.027%
4,200	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	1.090	0.036	1.126	0.027%	0.054	1.144	0.027%	0.048	1.138	0.027%	0.032	1.122	0.027%
4,200	ZOR-5	Residence at 334789 33rd Line	508931	4768760	1.090	0.100	1.190	0.028%	0.069	1.159	0.028%	0.101	1.191	0.028%	0.067	1.157	0.028%
4,200	ZOR-6	Residence at 334742 33rd Line	509185	4768350	1.090	0.135	1.225	0.029%	0.138	1.228	0.029%	0.166	1.256	0.030%	0.105	1.195	0.028%
4,200	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	1.090	0.027	1.117	0.027%	0.044	1.134	0.027%	0.044	1.134	0.027%	0.030	1.120	0.027%
4,200	ZOR-8	Residence at 643743 Road 64	508940	4767980	1.090	0.103	1.193	0.028%	0.106	1.196	0.028%	0.112	1.202	0.029%	0.064	1.154	0.027%
4,200	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	1.090	0.103	1.193	0.028%	0.133	1.223	0.029%	0.138	1.228	0.029%	0.085	1.175	0.028%
4,200	ZOR-10	Residence at 334578 33rd Line	509739	4766780	1.090	0.058	1.148	0.027%	0.085	1.175	0.028%	0.093	1.183	0.028%	0.052	1.142	0.027%
4,200	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	1.090	0.124	1.214	0.029%	0.276	1.366	0.033%	0.240	1.330	0.032%	0.149	1.239	0.030%
4,200	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	1.090	0.071	1.161	0.028%	0.128	1.218	0.029%	0.118	1.208	0.029%	0.074	1.164	0.028%
4,200	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	1.090	0.022	1.112	0.026%	0.028	1.118	0.027%	0.037	1.127	0.027%	0.020	1.110	0.026%
4,200	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	1.090	0.060	1.150	0.027%	0.081	1.171	0.028%	0.104	1.194	0.028%	0.054	1.144	0.027%
4,200	ING-2	Laurie Hawkins Public School	509019	4765860	1.090	0.022	1.112	0.026%	0.048	1.138	0.027%	0.055	1.145	0.027%	0.031	1.121	0.027%
4,200	ING-3	Ingersoll District Collegiate Institute	510512	4766230	1.090	0.064	1.154	0.027%	0.095	1.185	0.028%	0.098	1.188	0.028%	0.060	1.150	0.027%
4,200	ING-4	On the river north of 209 County Road 9	509480	4765180	1.090	0.030	1.120	0.027%	0.037	1.127	0.027%	0.042	1.132	0.027%	0.026	1.116	0.027%
4,200	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	1.090	0.021	1.111	0.026%	0.040	1.130	0.027%	0.042	1.132	0.027%	0.026	1.116	0.027%
4,200	ING-6	Royal Road Public School	510337	4765360	1.090	0.037	1.127	0.027%	0.065	1.155	0.028%	0.058	1.148	0.027%	0.038	1.128	0.027%
4,200	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	1.090	0.018	1.108	0.026%	0.031	1.121	0.027%	0.031	1.121	0.027%	0.019	1.109	0.026%
4,200	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	1.090	0.018	1.108	0.026%	0.042	1.132	0.027%	0.035	1.125	0.027%	0.024	1.114	0.027%
4,200	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	1.090	0.055	1.145	0.027%	0.092	1.182	0.028%	0.109	1.199	0.029%	0.057	1.147	0.027%
4,200	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	1.090	0.035	1.125	0.027%	0.066	1.156	0.028%	0.074	1.164	0.028%	0.045	1.135	0.027%
4,200	SWO-1	Residence at 584052 Beachville Road	511124	4766750	1.090	0.085	1.175	0.028%	0.312	1.402	0.033%	0.300	1.390	0.033%	0.182	1.272	0.030%
4,200	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	1.090	0.106	1.196	0.028%	0.226	1.316	0.031%	0.279	1.369	0.033%	0.152	1.242	0.030%
4,200	SWO-3	Residence at 584142 Beachville Road	511722	4767480	1.090	0.123	1.213	0.029%	0.204	1.294	0.031%	0.343	1.433	0.034%	0.170	1.260	0.030%
4,200	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	1.090	0.076	1.166	0.028%	0.063	1.153	0.027%	0.084	1.174	0.028%	0.049	1.139	0.027%
4,200	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	1.090	0.046	1.136	0.027%	0.048	1.138	0.027%	0.069	1.159	0.028%	0.037	1.127	0.027%
4,200	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	1.090	0.030	1.120	0.027%	0.025	1.115	0.027%	0.033	1.123	0.027%	0.018	1.108	0.026%
4,200	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	1.090	0.017	1.107	0.026%	0.028	1.118	0.027%	0.037	1.127	0.027%	0.020	1.110	0.026%
4,200	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	1.090	0.007	1.097	0.026%	0.010	1.100	0.026%	0.013	1.103	0.026%	0.007	1.097	0.026%
4,200	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	1.090	0.007	1.097	0.026%	0.008	1.098	0.026%	0.010	1.100	0.026%	0.006	1.096	0.026%
4,200	SWO-10	Residence at 563977 Karn Road	510980	4765990	1.090	0.075	1.165	0.028%	0.173	1.263	0.030%	0.124	1.214	0.029%	0.090	1.180	0.028%
4,200	SWO-11	Residence at 564028 Karn Road	511396	4766310	1.090	0.064	1.154	0.027%	0.182	1.272	0.030%	0.136	1.226	0.029%	0.074	1.164	0.028%
4,200	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	1.090	0.103	1.193	0.028%	0.155	1.245	0.030%	0.266	1.356	0.032%	0.142	1.232	0.029%
4,200	SWO-13	Centreville Pond and Conservation Area	511570	4766920	1.090	0.081	1.171	0.028%	0.154	1.244	0.030%	0.249	1.339	0.032%	0.134	1.224	0.029%
4,200	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	1.090	0.086	1.176	0.028%	0.100	1.190	0.028%	0.140	1.230	0.029%	0.072	1.162	0.028%
4,200	SWO-15	Residences at 564146 Karn Road	512251	4767100	1.090	0.058	1.148	0.027%	0.106	1.196	0.028%	0.135	1.225	0.029%	0.070	1.160	0.028%
4,200	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	1.090	0.067	1.157	0.028%	0.114	1.204	0.029%	0.151	1.241	0.030%	0.081	1.171	0.028%
4,200	SWO-17	Residence at 564226 Karn Road	512958	4767760	1.090	0.059	1.149	0.027%	0.064	1.154	0.027%	0.106	1.196	0.028%	0.056	1.146	0.027%
4,200	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	1.090	0.072	1.162	0.028%	0.070	1.160	0.028%	0.077	1.167	0.028%	0.047	1.137	0.027%
4,200	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	1.090	0.028	1.118	0.027%	0.048	1.138	0.027%	0.067	1.157	0.028%	0.036	1.126	0.027%
4,200	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	1.090	0.017	1.107	0.026%	0.013	1.103	0.026%	0.015	1.105	0.026%	0.010	1.100	0.026%

**Maximum Predicted Concentrations at All Discrete Receptors - Mitigated**

**Propyl Benzene (CAS 103-65-1)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
20	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.490	0.029	0.519	2.6%	0.034	0.524	2.6%	0.035	0.525	2.6%	0.023	0.513	2.6%
20	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.490	0.028	0.518	2.6%	0.039	0.529	2.6%	0.032	0.522	2.6%	0.019	0.509	2.5%
20	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.490	0.028	0.518	2.6%	0.029	0.519	2.6%	0.035	0.525	2.6%	0.020	0.510	2.5%
20	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.490	0.022	0.512	2.6%	0.033	0.523	2.6%	0.029	0.519	2.6%	0.019	0.509	2.5%
20	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.490	0.060	0.550	2.8%	0.042	0.532	2.7%	0.061	0.551	2.6%	0.040	0.530	2.6%
20	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.490	0.081	0.571	2.9%	0.083	0.573	2.9%	0.100	0.590	2.9%	0.063	0.553	2.8%
20	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.490	0.016	0.506	2.5%	0.026	0.516	2.6%	0.027	0.517	2.6%	0.018	0.508	2.5%
20	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.490	0.062	0.552	2.8%	0.063	0.553	2.8%	0.067	0.557	2.6%	0.038	0.528	2.6%
20	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.490	0.062	0.552	2.8%	0.080	0.570	2.9%	0.083	0.573	2.9%	0.051	0.541	2.7%
20	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.490	0.035	0.525	2.6%	0.051	0.541	2.7%	0.056	0.546	2.7%	0.031	0.521	2.6%
20	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.490	0.075	0.565	2.8%	0.166	0.656	3.3%	0.144	0.634	3.2%	0.090	0.580	2.9%
20	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.490	0.042	0.532	2.7%	0.077	0.567	2.8%	0.071	0.561	2.8%	0.044	0.534	2.7%
20	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.490	0.013	0.503	2.5%	0.017	0.507	2.5%	0.022	0.512	2.6%	0.012	0.502	2.5%
20	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.490	0.036	0.526	2.6%	0.049	0.539	2.7%	0.062	0.552	2.8%	0.033	0.523	2.6%
20	ING-2	Laurie Hawkins Public School	509019	4765860	0.490	0.013	0.503	2.5%	0.029	0.519	2.6%	0.033	0.523	2.6%	0.019	0.509	2.5%
20	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.490	0.039	0.529	2.6%	0.057	0.547	2.7%	0.059	0.549	2.7%	0.036	0.526	2.6%
20	ING-4	On the river north of 209 County Road 9	509480	4765180	0.490	0.018	0.508	2.5%	0.022	0.512	2.6%	0.025	0.515	2.6%	0.016	0.506	2.5%
20	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.490	0.012	0.502	2.5%	0.024	0.514	2.6%	0.026	0.516	2.6%	0.016	0.506	2.5%
20	ING-6	Royal Road Public School	510337	4765360	0.490	0.022	0.512	2.6%	0.039	0.529	2.6%	0.035	0.525	2.6%	0.023	0.513	2.6%
20	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.490	0.011	0.501	2.5%	0.018	0.508	2.5%	0.019	0.509	2.5%	0.011	0.501	2.5%
20	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.490	0.011	0.501	2.5%	0.025	0.515	2.6%	0.021	0.511	2.6%	0.014	0.504	2.5%
20	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.490	0.033	0.523	2.6%	0.055	0.545	2.7%	0.066	0.556	2.8%	0.034	0.524	2.6%
20	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.490	0.021	0.511	2.6%	0.040	0.530	2.6%	0.044	0.534	2.7%	0.027	0.517	2.6%
20	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.490	0.051	0.541	2.7%	0.187	0.677	3.4%	0.180	0.670	3.4%	0.109	0.599	3.0%
20	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.490	0.064	0.554	2.8%	0.136	0.626	3.1%	0.167	0.657	3.3%	0.091	0.581	2.9%
20	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.490	0.074	0.564	2.8%	0.123	0.613	3.1%	0.206	0.696	3.5%	0.102	0.592	3.0%
20	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.490	0.046	0.536	2.7%	0.038	0.528	2.6%	0.050	0.540	2.7%	0.029	0.519	2.6%
20	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.490	0.027	0.517	2.6%	0.029	0.519	2.6%	0.041	0.531	2.7%	0.022	0.512	2.6%
20	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.490	0.018	0.508	2.5%	0.015	0.505	2.5%	0.020	0.510	2.5%	0.011	0.501	2.5%
20	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.490	0.010	0.500	2.5%	0.017	0.507	2.5%	0.022	0.512	2.6%	0.012	0.502	2.5%
20	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.490	0.004	0.494	2.5%	0.006	0.496	2.5%	0.008	0.498	2.5%	0.004	0.494	2.5%
20	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.490	0.004	0.494	2.5%	0.005	0.495	2.5%	0.006	0.496	2.5%	0.003	0.493	2.5%
20	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.490	0.045	0.535	2.7%	0.104	0.594	3.0%	0.075	0.565	2.8%	0.054	0.544	2.7%
20	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.490	0.038	0.528	2.6%	0.110	0.600	3.0%	0.082	0.572	2.9%	0.045	0.535	2.7%
20	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.490	0.062	0.552	2.8%	0.093	0.583	2.9%	0.160	0.650	3.2%	0.086	0.576	2.9%
20	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.490	0.048	0.538	2.7%	0.093	0.583	2.9%	0.150	0.640	3.2%	0.080	0.570	2.9%
20	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.490	0.051	0.541	2.7%	0.060	0.550	2.7%	0.084	0.574	2.9%	0.043	0.533	2.7%
20	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.490	0.035	0.525	2.6%	0.064	0.554	2.8%	0.081	0.571	2.9%	0.042	0.532	2.7%
20	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.490	0.040	0.530	2.7%	0.069	0.559	2.8%	0.091	0.581	2.9%	0.049	0.539	2.7%
20	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.490	0.036	0.526	2.6%	0.038	0.528	2.6%	0.064	0.554	2.8%	0.034	0.524	2.6%
20	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.490	0.043	0.533	2.7%	0.042	0.532	2.7%	0.046	0.536	2.7%	0.028	0.518	2.6%
20	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.490	0.017	0.507	2.5%	0.029	0.519	2.6%	0.040	0.530	2.7%	0.022	0.512	2.6%
20	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.490	0.010	0.500	2.5%	0.008	0.498	2.5%	0.009	0.499	2.5%	0.006	0.496	2.5%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Total Mercaptans (as Methyl Mercaptan) (CAS 74-93-1)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
13	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.950	0.076	4.026	31%	0.120	4.070	31%	0.133	4.083	31%	0.132	4.082	31%
13	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.950	0.109	4.059	31%	0.156	4.106	32%	0.215	4.165	32%	0.212	4.162	32%
13	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.950	0.113	4.063	31%	0.235	4.185	32%	0.240	4.190	32%	0.240	4.190	32%
13	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.950	0.093	4.043	31%	0.184	4.134	32%	0.187	4.137	32%	0.187	4.137	32%
13	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.950	0.126	4.076	31%	0.195	4.145	32%	0.211	4.161	32%	0.211	4.161	32%
13	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.950	0.129	4.079	31%	0.208	4.158	32%	0.224	4.174	32%	0.221	4.171	32%
13	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.950	0.060	4.010	31%	0.112	4.062	31%	0.116	4.066	31%	0.116	4.066	31%
13	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.950	0.104	4.054	31%	0.168	4.118	32%	0.180	4.130	32%	0.180	4.130	32%
13	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.950	0.096	4.046	31%	0.157	4.107	32%	0.176	4.126	32%	0.169	4.119	32%
13	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.950	0.144	4.094	31%	0.180	4.130	32%	0.180	4.130	32%	0.180	4.130	32%
13	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.950	0.265	4.215	32%	0.577	4.527	35%	0.587	4.537	35%	0.587	4.537	35%
13	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.950	0.173	4.123	32%	0.329	4.279	33%	0.332	4.282	33%	0.332	4.282	33%
13	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.950	0.060	4.010	31%	0.109	4.059	31%	0.113	4.063	31%	0.113	4.063	31%
13	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.950	0.149	4.099	32%	0.213	4.163	32%	0.213	4.163	32%	0.213	4.163	32%
13	ING-2	Laurie Hawkins Public School	509019	4765860	3.950	0.065	4.015	31%	0.115	4.065	31%	0.118	4.068	31%	0.118	4.068	31%
13	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.950	0.154	4.104	32%	0.360	4.310	33%	0.370	4.320	33%	0.370	4.320	33%
13	ING-4	On the river north of 209 County Road 9	509480	4765180	3.950	0.091	4.041	31%	0.170	4.120	32%	0.178	4.128	32%	0.178	4.128	32%
13	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.950	0.055	4.005	31%	0.099	4.049	31%	0.102	4.052	31%	0.102	4.052	31%
13	ING-6	Royal Road Public School	510337	4765360	3.950	0.115	4.065	32%	0.257	4.207	32%	0.277	4.227	33%	0.277	4.227	33%
13	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.950	0.067	4.017	31%	0.147	4.097	32%	0.163	4.113	32%	0.163	4.113	32%
13	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.950	0.083	4.033	31%	0.192	4.142	32%	0.205	4.155	32%	0.205	4.155	32%
13	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.950	0.117	4.067	31%	0.290	4.240	33%	0.302	4.252	33%	0.302	4.252	33%
13	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.950	0.085	4.035	31%	0.214	4.164	32%	0.240	4.190	32%	0.239	4.189	32%
13	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.950	0.209	4.159	32%	0.486	4.436	34%	0.497	4.447	34%	0.497	4.447	34%
13	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.950	0.208	4.158	32%	0.253	4.203	32%	0.458	4.408	34%	0.452	4.402	34%
13	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.950	0.175	4.125	32%	0.275	4.225	33%	0.346	4.296	33%	0.346	4.296	33%
13	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.950	0.101	4.051	31%	0.180	4.130	32%	0.186	4.136	32%	0.186	4.136	32%
13	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.950	0.085	4.035	31%	0.152	4.102	32%	0.152	4.102	32%	0.152	4.102	32%
13	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.950	0.061	4.011	31%	0.108	4.058	31%	0.109	4.059	31%	0.109	4.059	31%
13	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.950	0.041	3.991	31%	0.077	4.027	31%	0.085	4.035	31%	0.085	4.035	31%
13	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.950	0.025	3.975	31%	0.049	3.999	31%	0.056	4.006	31%	0.056	4.006	31%
13	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.950	0.030	3.980	31%	0.052	4.002	31%	0.053	4.003	31%	0.053	4.003	31%
13	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.950	0.155	4.105	32%	0.389	4.339	33%	0.387	4.337	33%	0.387	4.337	33%
13	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.950	0.168	4.118	32%	0.365	4.315	33%	0.398	4.348	33%	0.398	4.348	33%
13	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.950	0.167	4.117	32%	0.287	4.237	33%	0.371	4.321	33%	0.367	4.317	33%
13	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.950	0.184	4.134	32%	0.269	4.219	32%	0.425	4.375	34%	0.411	4.361	34%
13	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.950	0.144	4.094	31%	0.201	4.151	32%	0.274	4.224	32%	0.272	4.222	32%
13	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.950	0.125	4.075	31%	0.194	4.144	32%	0.233	4.183	32%	0.233	4.183	32%
13	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.950	0.117	4.067	31%	0.191	4.141	32%	0.221	4.171	32%	0.221	4.171	32%
13	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.950	0.081	4.031	31%	0.142	4.092	31%	0.142	4.092	31%	0.142	4.092	31%
13	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.950	0.075	4.025	31%	0.130	4.080	31%	0.132	4.082	31%	0.132	4.082	31%
13	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.950	0.068	4.018	31%	0.113	4.063	31%	0.120	4.070	31%	0.120	4.070	31%
13	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.950	0.029	3.979	31%	0.051	4.001	31%	0.063	4.013	31%	0.063	4.013	31%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Hydrogen Sulphide (CAS 7783-06-4)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
13	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.500	0.054	3.554	27%	0.085	3.585	28%	0.103	3.603	28%	0.112	3.612	28%
13	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.500	0.077	3.577	28%	0.110	3.610	28%	0.152	3.652	28%	0.150	3.650	28%
13	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.500	0.080	3.580	28%	0.167	3.667	28%	0.171	3.671	28%	0.171	3.671	28%
13	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.500	0.066	3.566	27%	0.132	3.632	28%	0.134	3.634	28%	0.148	3.648	28%
13	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.500	0.089	3.589	28%	0.138	3.638	28%	0.149	3.649	28%	0.166	3.666	28%
13	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.500	0.091	3.591	28%	0.147	3.647	28%	0.158	3.658	28%	0.174	3.674	28%
13	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.500	0.043	3.543	27%	0.090	3.590	28%	0.112	3.612	28%	0.127	3.627	28%
13	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.500	0.073	3.573	27%	0.119	3.619	28%	0.150	3.650	28%	0.175	3.675	28%
13	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.500	0.068	3.568	27%	0.130	3.630	28%	0.160	3.660	28%	0.184	3.684	28%
13	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.500	0.102	3.602	28%	0.128	3.628	28%	0.128	3.628	28%	0.128	3.628	28%
13	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.500	0.188	3.688	28%	0.409	3.909	30%	0.417	3.917	30%	0.417	3.917	30%
13	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.500	0.122	3.622	28%	0.233	3.733	29%	0.236	3.736	29%	0.236	3.736	29%
13	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.500	0.043	3.543	27%	0.087	3.587	28%	0.108	3.608	28%	0.125	3.625	28%
13	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.500	0.106	3.606	28%	0.152	3.652	28%	0.152	3.652	28%	0.152	3.652	28%
13	ING-2	Laurie Hawkins Public School	509019	4765860	3.500	0.046	3.546	27%	0.081	3.581	28%	0.089	3.589	28%	0.101	3.601	28%
13	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.500	0.109	3.609	28%	0.255	3.755	29%	0.263	3.763	29%	0.263	3.763	29%
13	ING-4	On the river north of 209 County Road 9	509480	4765180	3.500	0.065	3.565	27%	0.121	3.621	28%	0.126	3.626	28%	0.126	3.626	28%
13	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.500	0.039	3.539	27%	0.070	3.570	27%	0.084	3.584	28%	0.096	3.596	28%
13	ING-6	Royal Road Public School	510337	4765360	3.500	0.081	3.581	28%	0.182	3.682	28%	0.197	3.697	28%	0.197	3.697	28%
13	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.500	0.048	3.548	27%	0.105	3.605	28%	0.116	3.616	28%	0.116	3.616	28%
13	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.500	0.059	3.559	27%	0.136	3.636	28%	0.146	3.646	28%	0.146	3.646	28%
13	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.500	0.083	3.583	28%	0.205	3.705	29%	0.214	3.714	29%	0.214	3.714	29%
13	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.500	0.060	3.560	27%	0.152	3.652	28%	0.170	3.670	28%	0.173	3.673	28%
13	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.500	0.148	3.648	28%	0.344	3.844	30%	0.352	3.852	30%	0.352	3.852	30%
13	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.500	0.147	3.647	28%	0.179	3.679	28%	0.324	3.824	29%	0.321	3.821	29%
13	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.500	0.124	3.624	28%	0.195	3.695	28%	0.245	3.745	29%	0.245	3.745	29%
13	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.500	0.072	3.572	27%	0.128	3.628	28%	0.152	3.652	28%	0.178	3.678	28%
13	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.500	0.060	3.560	27%	0.108	3.608	28%	0.116	3.616	28%	0.135	3.635	28%
13	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.500	0.043	3.543	27%	0.120	3.620	28%	0.145	3.645	28%	0.163	3.663	28%
13	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.500	0.034	3.534	27%	0.103	3.603	28%	0.127	3.627	28%	0.145	3.645	28%
13	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.500	0.037	3.537	27%	0.108	3.608	28%	0.131	3.631	28%	0.149	3.649	28%
13	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.500	0.037	3.537	27%	0.105	3.605	28%	0.125	3.625	28%	0.140	3.640	28%
13	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.500	0.110	3.610	28%	0.276	3.776	29%	0.274	3.774	29%	0.274	3.774	29%
13	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.500	0.119	3.619	28%	0.258	3.758	29%	0.282	3.782	29%	0.282	3.782	29%
13	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.500	0.119	3.619	28%	0.203	3.703	28%	0.263	3.763	29%	0.260	3.760	29%
13	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.500	0.130	3.630	28%	0.191	3.691	28%	0.301	3.801	29%	0.291	3.791	29%
13	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.500	0.102	3.602	28%	0.143	3.643	28%	0.194	3.694	28%	0.193	3.693	28%
13	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.500	0.089	3.589	28%	0.137	3.637	28%	0.165	3.665	28%	0.165	3.665	28%
13	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.500	0.083	3.583	28%	0.135	3.635	28%	0.156	3.656	28%	0.156	3.656	28%
13	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.500	0.058	3.558	27%	0.101	3.601	28%	0.107	3.607	28%	0.124	3.624	28%
13	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.500	0.053	3.553	27%	0.092	3.592	28%	0.104	3.604	28%	0.121	3.621	28%
13	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.500	0.049	3.549	27%	0.099	3.599	28%	0.124	3.624	28%	0.134	3.634	28%
13	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.500	0.026	3.526	27%	0.072	3.572	27%	0.090	3.590	28%	0.098	3.598	28%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Hydrogen Sulphide (CAS 7783-06-4)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.500	0.004	3.504	50%	0.011	3.511	50%	0.013	3.513	50%	0.015	3.515	50%
7	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.500	0.004	3.504	50%	0.011	3.511	50%	0.014	3.514	50%	0.016	3.516	50%
7	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.500	0.005	3.505	50%	0.019	3.519	50%	0.024	3.524	50%	0.028	3.528	50%
7	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.500	0.005	3.505	50%	0.021	3.521	50%	0.026	3.526	50%	0.031	3.531	50%
7	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.500	0.009	3.509	50%	0.024	3.524	50%	0.030	3.530	50%	0.035	3.535	51%
7	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.500	0.012	3.512	50%	0.035	3.535	51%	0.045	3.545	51%	0.053	3.553	51%
7	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.500	0.006	3.506	50%	0.024	3.524	50%	0.030	3.530	50%	0.035	3.535	51%
7	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.500	0.009	3.509	50%	0.033	3.533	50%	0.042	3.542	51%	0.049	3.549	51%
7	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.500	0.009	3.509	50%	0.022	3.522	50%	0.027	3.527	50%	0.032	3.532	50%
7	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.500	0.005	3.505	50%	0.013	3.513	50%	0.015	3.515	50%	0.015	3.515	50%
7	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.500	0.011	3.511	50%	0.035	3.535	51%	0.042	3.542	51%	0.042	3.542	51%
7	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.500	0.006	3.506	50%	0.016	3.516	50%	0.019	3.519	50%	0.019	3.519	50%
7	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.500	0.003	3.503	50%	0.012	3.512	50%	0.016	3.516	50%	0.018	3.518	50%
7	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.500	0.005	3.505	50%	0.013	3.513	50%	0.015	3.515	50%	0.016	3.516	50%
7	ING-2	Laurie Hawkins Public School	509019	4765860	3.500	0.002	3.502	50%	0.007	3.507	50%	0.008	3.508	50%	0.010	3.510	50%
7	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.500	0.006	3.506	50%	0.014	3.514	50%	0.017	3.517	50%	0.018	3.518	50%
7	ING-4	On the river north of 209 County Road 9	509480	4765180	3.500	0.003	3.503	50%	0.006	3.506	50%	0.008	3.508	50%	0.009	3.509	50%
7	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.500	0.002	3.502	50%	0.007	3.507	50%	0.008	3.508	50%	0.010	3.510	50%
7	ING-6	Royal Road Public School	510337	4765360	3.500	0.003	3.503	50%	0.010	3.510	50%	0.012	3.512	50%	0.012	3.512	50%
7	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.500	0.002	3.502	50%	0.006	3.506	50%	0.007	3.507	50%	0.008	3.508	50%
7	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.500	0.002	3.502	50%	0.007	3.507	50%	0.008	3.508	50%	0.009	3.509	50%
7	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.500	0.005	3.505	50%	0.014	3.514	50%	0.016	3.516	50%	0.018	3.518	50%
7	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.500	0.003	3.503	50%	0.010	3.510	50%	0.012	3.512	50%	0.013	3.513	50%
7	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.500	0.007	3.507	50%	0.038	3.538	51%	0.048	3.548	51%	0.047	3.547	51%
7	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.500	0.011	3.511	50%	0.027	3.527	50%	0.041	3.541	51%	0.042	3.542	51%
7	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.500	0.011	3.511	50%	0.028	3.528	50%	0.039	3.539	51%	0.039	3.539	51%
7	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.500	0.007	3.507	50%	0.022	3.522	50%	0.027	3.527	50%	0.032	3.532	50%
7	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.500	0.005	3.505	50%	0.018	3.518	50%	0.023	3.523	50%	0.026	3.526	50%
7	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.500	0.004	3.504	50%	0.014	3.514	50%	0.018	3.518	50%	0.020	3.520	50%
7	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.500	0.003	3.503	50%	0.011	3.511	50%	0.014	3.514	50%	0.017	3.517	50%
7	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.500	0.002	3.502	50%	0.006	3.506	50%	0.008	3.508	50%	0.009	3.509	50%
7	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.500	0.001	3.501	50%	0.004	3.504	50%	0.005	3.505	50%	0.006	3.506	50%
7	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.500	0.006	3.506	50%	0.024	3.524	50%	0.026	3.526	50%	0.026	3.526	50%
7	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.500	0.006	3.506	50%	0.022	3.522	50%	0.023	3.523	50%	0.023	3.523	50%
7	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.500	0.009	3.509	50%	0.024	3.524	50%	0.034	3.534	50%	0.034	3.534	50%
7	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.500	0.007	3.507	50%	0.025	3.525	50%	0.031	3.531	50%	0.033	3.533	50%
7	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.500	0.007	3.507	50%	0.019	3.519	50%	0.025	3.525	50%	0.028	3.528	50%
7	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.500	0.005	3.505	50%	0.020	3.520	50%	0.025	3.525	50%	0.028	3.528	50%
7	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.500	0.006	3.506	50%	0.018	3.518	50%	0.024	3.524	50%	0.027	3.527	50%
7	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.500	0.005	3.505	50%	0.013	3.513	50%	0.016	3.516	50%	0.018	3.518	50%
7	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.500	0.007	3.507	50%	0.013	3.513	50%	0.016	3.516	50%	0.019	3.519	50%
7	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.500	0.003	3.503	50%	0.009	3.509	50%	0.011	3.511	50%	0.013	3.513	50%
7	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.500	0.002	3.502	50%	0.009	3.509	50%	0.011	3.511	50%	0.013	3.513	50%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Dimethyl Sulphide (CAS 75-18-3)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
30	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	7.500	0.098	7.598	25%	0.102	7.602	25%	0.118	7.618	25%	0.085	7.585	25%
30	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	7.500	0.141	7.641	25%	0.153	7.653	26%	0.182	7.682	26%	0.137	7.637	25%
30	ZOR-3	Residence at 663951 Rd 66	510216	4770270	7.500	0.147	7.647	25%	0.224	7.724	26%	0.182	7.682	26%	0.155	7.655	26%
30	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	7.500	0.120	7.620	25%	0.169	7.669	26%	0.137	7.637	25%	0.121	7.621	25%
30	ZOR-5	Residence at 334789 33rd Line	508931	4768760	7.500	0.162	7.662	26%	0.162	7.662	26%	0.181	7.681	26%	0.136	7.636	25%
30	ZOR-6	Residence at 334742 33rd Line	509185	4768350	7.500	0.167	7.667	26%	0.173	7.673	26%	0.200	7.700	26%	0.143	7.643	25%
30	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	7.500	0.078	7.578	25%	0.092	7.592	25%	0.101	7.601	25%	0.075	7.575	25%
30	ZOR-8	Residence at 643743 Road 64	508940	4767980	7.500	0.134	7.634	25%	0.145	7.645	25%	0.162	7.662	26%	0.116	7.616	25%
30	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	7.500	0.124	7.624	25%	0.154	7.654	26%	0.151	7.651	26%	0.110	7.610	25%
30	ZOR-10	Residence at 334578 33rd Line	509739	4766780	7.500	0.186	7.686	26%	0.160	7.660	26%	0.150	7.650	25%	0.116	7.616	25%
30	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	7.500	0.342	7.842	26%	0.605	8.105	27%	0.452	7.952	27%	0.380	7.880	26%
30	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	7.500	0.223	7.723	26%	0.319	7.819	26%	0.266	7.766	26%	0.215	7.715	26%
30	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	7.500	0.077	7.577	25%	0.100	7.600	25%	0.100	7.600	25%	0.073	7.573	25%
30	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	7.500	0.192	7.692	26%	0.162	7.662	26%	0.151	7.651	26%	0.138	7.638	25%
30	ING-2	Laurie Hawkins Public School	509019	4765860	7.500	0.084	7.584	25%	0.098	7.598	25%	0.103	7.603	25%	0.076	7.576	25%
30	ING-3	Ingersoll District Collegiate Institute	510512	4766230	7.500	0.199	7.699	26%	0.375	7.875	26%	0.253	7.753	26%	0.239	7.739	26%
30	ING-4	On the river north of 209 County Road 9	509480	4765180	7.500	0.118	7.618	25%	0.160	7.660	26%	0.135	7.635	25%	0.115	7.615	25%
30	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	7.500	0.071	7.571	25%	0.084	7.584	25%	0.088	7.588	25%	0.066	7.566	25%
30	ING-6	Royal Road Public School	510337	4765360	7.500	0.148	7.648	25%	0.267	7.767	26%	0.202	7.702	26%	0.179	7.679	26%
30	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	7.500	0.087	7.587	25%	0.144	7.644	25%	0.123	7.623	25%	0.105	7.605	25%
30	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	7.500	0.108	7.608	25%	0.187	7.687	26%	0.153	7.653	26%	0.133	7.633	25%
30	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	7.500	0.151	7.651	26%	0.294	7.794	26%	0.229	7.729	26%	0.195	7.695	26%
30	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	7.500	0.109	7.609	25%	0.212	7.712	26%	0.179	7.679	26%	0.155	7.655	26%
30	SWO-1	Residence at 584052 Beachville Road	511124	4766750	7.500	0.270	7.770	26%	0.496	7.996	27%	0.427	7.927	26%	0.322	7.822	26%
30	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	7.500	0.269	7.769	26%	0.279	7.779	26%	0.433	7.933	26%	0.293	7.793	26%
30	SWO-3	Residence at 584142 Beachville Road	511722	4767480	7.500	0.226	7.726	26%	0.225	7.725	26%	0.323	7.823	26%	0.224	7.724	26%
30	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	7.500	0.131	7.631	25%	0.129	7.629	25%	0.166	7.666	26%	0.120	7.620	25%
30	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	7.500	0.110	7.610	25%	0.109	7.609	25%	0.136	7.636	25%	0.098	7.598	25%
30	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	7.500	0.079	7.579	25%	0.073	7.573	25%	0.080	7.580	25%	0.070	7.570	25%
30	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	7.500	0.053	7.553	25%	0.066	7.566	25%	0.071	7.571	25%	0.055	7.555	25%
30	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	7.500	0.033	7.533	25%	0.042	7.542	25%	0.043	7.543	25%	0.036	7.536	25%
30	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	7.500	0.038	7.538	25%	0.036	7.536	25%	0.036	7.536	25%	0.036	7.536	25%
30	SWO-10	Residence at 563977 Karn Road	510980	4765990	7.500	0.201	7.701	26%	0.399	7.899	26%	0.285	7.785	26%	0.250	7.750	26%
30	SWO-11	Residence at 564028 Karn Road	511396	4766310	7.500	0.217	7.717	26%	0.372	7.872	26%	0.338	7.838	26%	0.257	7.757	26%
30	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	7.500	0.217	7.717	26%	0.306	7.806	26%	0.345	7.845	26%	0.237	7.737	26%
30	SWO-13	Centreville Pond and Conservation Area	511570	4766920	7.500	0.238	7.738	26%	0.337	7.837	26%	0.402	7.902	26%	0.266	7.766	26%
30	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	7.500	0.186	7.686	26%	0.183	7.683	26%	0.254	7.754	26%	0.176	7.676	26%
30	SWO-15	Residences at 564146 Karn Road	512251	4767100	7.500	0.162	7.662	26%	0.158	7.658	26%	0.213	7.713	26%	0.151	7.651	26%
30	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	7.500	0.152	7.652	26%	0.151	7.651	26%	0.199	7.699	26%	0.143	7.643	25%
30	SWO-17	Residence at 564226 Karn Road	512958	4767760	7.500	0.105	7.605	25%	0.096	7.596	25%	0.122	7.622	25%	0.092	7.592	25%
30	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	7.500	0.097	7.597	25%	0.092	7.592	25%	0.117	7.617	25%	0.085	7.585	25%
30	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	7.500	0.088	7.588	25%	0.089	7.589	25%	0.109	7.609	25%	0.077	7.577	25%
30	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	7.500	0.038	7.538	25%	0.041	7.541	25%	0.049	7.549	25%	0.042	7.542	25%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Dimethyl Disulphide (CAS 624-92-0)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
56	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	3.850	0.049	3.899	7%	0.155	4.005	7%	0.158	4.008	7%	0.170	4.020	7%
56	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	3.850	0.070	3.920	7%	0.200	4.050	7%	0.235	4.085	7%	0.274	4.124	7%
56	ZOR-3	Residence at 663951 Rd 66	510216	4770270	3.850	0.073	3.923	7%	0.233	4.083	7%	0.303	4.153	7%	0.310	4.160	7%
56	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	3.850	0.060	3.910	7%	0.191	4.041	7%	0.239	4.089	7%	0.242	4.092	7%
56	ZOR-5	Residence at 334789 33rd Line	508931	4768760	3.850	0.081	3.931	7%	0.252	4.102	7%	0.256	4.106	7%	0.272	4.122	7%
56	ZOR-6	Residence at 334742 33rd Line	509185	4768350	3.850	0.083	3.933	7%	0.268	4.118	7%	0.268	4.118	7%	0.286	4.136	7%
56	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	3.850	0.039	3.889	7%	0.136	3.986	7%	0.147	3.997	7%	0.149	3.999	7%
56	ZOR-8	Residence at 643743 Road 64	508940	4767980	3.850	0.067	3.917	7%	0.217	4.067	7%	0.219	4.069	7%	0.232	4.082	7%
56	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	3.850	0.062	3.912	7%	0.202	4.052	7%	0.202	4.052	7%	0.219	4.069	7%
56	ZOR-10	Residence at 334578 33rd Line	509739	4766780	3.850	0.093	3.943	7%	0.233	4.083	7%	0.233	4.083	7%	0.233	4.083	7%
56	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	3.850	0.171	4.021	7%	0.528	4.378	8%	0.752	4.602	8%	0.759	4.609	8%
56	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	3.850	0.112	3.962	7%	0.341	4.191	7%	0.427	4.277	8%	0.429	4.279	8%
56	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	3.850	0.039	3.889	7%	0.135	3.985	7%	0.142	3.992	7%	0.146	3.996	7%
56	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	3.850	0.096	3.946	7%	0.275	4.125	7%	0.276	4.126	7%	0.276	4.126	7%
56	ING-2	Laurie Hawkins Public School	509019	4765860	3.850	0.042	3.892	7%	0.135	3.985	7%	0.150	4.000	7%	0.152	4.002	7%
56	ING-3	Ingersoll District Collegiate Institute	510512	4766230	3.850	0.099	3.949	7%	0.336	4.186	7%	0.464	4.314	8%	0.478	4.328	8%
56	ING-4	On the river north of 209 County Road 9	509480	4765180	3.850	0.059	3.909	7%	0.190	4.040	7%	0.221	4.071	7%	0.230	4.080	7%
56	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	3.850	0.036	3.886	7%	0.120	3.970	7%	0.129	3.979	7%	0.132	3.982	7%
56	ING-6	Royal Road Public School	510337	4765360	3.850	0.074	3.924	7%	0.259	4.109	7%	0.341	4.191	7%	0.358	4.208	8%
56	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	3.850	0.043	3.893	7%	0.152	4.002	7%	0.197	4.047	7%	0.210	4.060	7%
56	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	3.850	0.054	3.904	7%	0.187	4.037	7%	0.253	4.103	7%	0.265	4.115	7%
56	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	3.850	0.075	3.925	7%	0.268	4.118	7%	0.373	4.223	8%	0.390	4.240	8%
56	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	3.850	0.055	3.905	7%	0.204	4.054	7%	0.288	4.138	7%	0.309	4.159	7%
56	SWO-1	Residence at 584052 Beachville Road	511124	4766750	3.850	0.135	3.985	7%	0.446	4.296	8%	0.635	4.485	8%	0.643	4.493	8%
56	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	3.850	0.134	3.984	7%	0.323	4.173	7%	0.454	4.304	8%	0.584	4.434	8%
56	SWO-3	Residence at 584142 Beachville Road	511722	4767480	3.850	0.113	3.963	7%	0.356	4.206	8%	0.382	4.232	8%	0.447	4.297	8%
56	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	3.850	0.065	3.915	7%	0.232	4.082	7%	0.236	4.086	7%	0.240	4.090	7%
56	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	3.850	0.055	3.905	7%	0.196	4.046	7%	0.196	4.046	7%	0.196	4.046	7%
56	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	3.850	0.040	3.890	7%	0.139	3.989	7%	0.140	3.990	7%	0.141	3.991	7%
56	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	3.850	0.027	3.877	7%	0.096	3.946	7%	0.100	3.950	7%	0.110	3.960	7%
56	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	3.850	0.016	3.866	7%	0.059	3.909	7%	0.067	3.917	7%	0.073	3.923	7%
56	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	3.850	0.019	3.869	7%	0.066	3.916	7%	0.068	3.918	7%	0.068	3.918	7%
56	SWO-10	Residence at 563977 Karn Road	510980	4765990	3.850	0.100	3.950	7%	0.356	4.206	8%	0.498	4.348	8%	0.500	4.350	8%
56	SWO-11	Residence at 564028 Karn Road	511396	4766310	3.850	0.109	3.959	7%	0.343	4.193	7%	0.487	4.337	8%	0.514	4.364	8%
56	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	3.850	0.108	3.958	7%	0.277	4.127	7%	0.406	4.256	8%	0.473	4.323	8%
56	SWO-13	Centreville Pond and Conservation Area	511570	4766920	3.850	0.119	3.969	7%	0.280	4.130	7%	0.429	4.279	8%	0.530	4.380	8%
56	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	3.850	0.093	3.943	7%	0.260	4.110	7%	0.306	4.156	7%	0.351	4.201	8%
56	SWO-15	Residences at 564146 Karn Road	512251	4767100	3.850	0.081	3.931	7%	0.250	4.100	7%	0.267	4.117	7%	0.302	4.152	7%
56	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	3.850	0.076	3.926	7%	0.246	4.096	7%	0.258	4.108	7%	0.285	4.135	7%
56	SWO-17	Residence at 564226 Karn Road	512958	4767760	3.850	0.053	3.903	7%	0.183	4.033	7%	0.184	4.034	7%	0.184	4.034	7%
56	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	3.850	0.048	3.898	7%	0.168	4.018	7%	0.169	4.019	7%	0.170	4.020	7%
56	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	3.850	0.044	3.894	7%	0.146	3.996	7%	0.148	3.998	7%	0.155	4.005	7%
56	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	3.850	0.019	3.869	7%	0.065	3.915	7%	0.074	3.924	7%	0.081	3.931	7%

**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Total Reduced Sulphurs (TRS) (CAS N/A-2)**

**10-minute**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
13	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	5.000	0.137	5.137	40%	0.448	5.448	42%	0.456	5.456	42%	0.491	5.491	42%
13	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	5.000	0.198	5.198	40%	0.577	5.577	43%	0.679	5.679	44%	0.792	5.792	45%
13	ZOR-3	Residence at 663951 Rd 66	510216	4770270	5.000	0.204	5.204	40%	0.668	5.668	44%	0.876	5.876	45%	0.897	5.897	45%
13	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	5.000	0.165	5.165	40%	0.550	5.550	43%	0.693	5.693	44%	0.700	5.700	44%
13	ZOR-5	Residence at 334789 33rd Line	508931	4768760	5.000	0.235	5.235	40%	0.727	5.727	44%	0.738	5.738	44%	0.786	5.786	45%
13	ZOR-6	Residence at 334742 33rd Line	509185	4768350	5.000	0.244	5.244	40%	0.775	5.775	44%	0.775	5.775	44%	0.826	5.826	45%
13	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	5.000	0.107	5.107	39%	0.392	5.392	41%	0.423	5.423	42%	0.431	5.431	42%
13	ZOR-8	Residence at 643743 Road 64	508940	4767980	5.000	0.183	5.183	40%	0.628	5.628	43%	0.632	5.632	43%	0.670	5.670	44%
13	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	5.000	0.171	5.171	40%	0.585	5.585	43%	0.585	5.585	43%	0.632	5.632	43%
13	ZOR-10	Residence at 334578 33rd Line	509739	4766780	5.000	0.256	5.256	40%	0.672	5.672	44%	0.672	5.672	44%	0.672	5.672	44%
13	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	5.000	0.473	5.473	42%	1.495	6.495	50%	2.171	7.171	55%	2.191	7.191	55%
13	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	5.000	0.306	5.306	41%	0.976	5.976	46%	1.233	6.233	48%	1.241	6.241	48%
13	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	5.000	0.106	5.106	39%	0.390	5.390	41%	0.411	5.411	42%	0.422	5.422	42%
13	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	5.000	0.264	5.264	40%	0.794	5.794	45%	0.796	5.796	45%	0.796	5.796	45%
13	ING-2	Laurie Hawkins Public School	509019	4765860	5.000	0.116	5.116	39%	0.390	5.390	41%	0.434	5.434	42%	0.440	5.440	42%
13	ING-3	Ingersoll District Collegiate Institute	510512	4766230	5.000	0.276	5.276	41%	0.964	5.964	46%	1.340	6.340	49%	1.382	6.382	49%
13	ING-4	On the river north of 209 County Road 9	509480	4765180	5.000	0.163	5.163	40%	0.547	5.547	43%	0.638	5.638	43%	0.664	5.664	44%
13	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	5.000	0.098	5.098	39%	0.346	5.346	41%	0.374	5.374	41%	0.380	5.380	41%
13	ING-6	Royal Road Public School	510337	4765360	5.000	0.204	5.204	40%	0.741	5.741	44%	0.981	5.981	46%	1.035	6.035	46%
13	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	5.000	0.121	5.121	39%	0.435	5.435	42%	0.567	5.567	43%	0.607	5.607	43%
13	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	5.000	0.150	5.150	40%	0.536	5.536	43%	0.730	5.730	44%	0.765	5.765	44%
13	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	5.000	0.212	5.212	40%	0.767	5.767	44%	1.078	6.078	47%	1.126	6.126	47%
13	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	5.000	0.153	5.153	40%	0.584	5.584	43%	0.831	5.831	45%	0.893	5.893	45%
13	SWO-1	Residence at 584052 Beachville Road	511124	4766750	5.000	0.385	5.385	41%	1.262	6.262	48%	1.833	6.833	53%	1.856	6.856	53%
13	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	5.000	0.382	5.382	41%	0.931	5.931	46%	1.305	6.305	48%	1.688	6.688	51%
13	SWO-3	Residence at 584142 Beachville Road	511722	4767480	5.000	0.321	5.321	41%	1.027	6.027	46%	1.098	6.098	47%	1.290	6.290	48%
13	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	5.000	0.179	5.179	40%	0.669	5.669	44%	0.681	5.681	44%	0.695	5.695	44%
13	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	5.000	0.152	5.152	40%	0.567	5.567	43%	0.567	5.567	43%	0.567	5.567	43%
13	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	5.000	0.109	5.109	39%	0.402	5.402	42%	0.405	5.405	42%	0.407	5.407	42%
13	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	5.000	0.074	5.074	39%	0.277	5.277	41%	0.288	5.288	41%	0.318	5.318	41%
13	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	5.000	0.066	5.066	39%	0.223	5.223	40%	0.247	5.247	40%	0.265	5.265	40%
13	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	5.000	0.070	5.070	39%	0.259	5.259	40%	0.285	5.285	41%	0.302	5.302	41%
13	SWO-10	Residence at 563977 Karn Road	510980	4765990	5.000	0.283	5.283	41%	1.020	6.020	46%	1.438	6.438	50%	1.444	6.444	50%
13	SWO-11	Residence at 564028 Karn Road	511396	4766310	5.000	0.307	5.307	41%	0.970	5.970	46%	1.405	6.405	49%	1.484	6.484	50%
13	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	5.000	0.309	5.309	41%	0.791	5.791	45%	1.169	6.169	47%	1.367	6.367	49%
13	SWO-13	Centreville Pond and Conservation Area	511570	4766920	5.000	0.339	5.339	41%	0.805	5.805	45%	1.256	6.256	48%	1.531	6.531	50%
13	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	5.000	0.272	5.272	41%	0.750	5.750	44%	0.876	5.876	45%	1.015	6.015	46%
13	SWO-15	Residences at 564146 Karn Road	512251	4767100	5.000	0.232	5.232	40%	0.723	5.723	44%	0.769	5.769	44%	0.871	5.871	45%
13	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	5.000	0.217	5.217	40%	0.712	5.712	44%	0.744	5.744	44%	0.824	5.824	45%
13	SWO-17	Residence at 564226 Karn Road	512958	4767760	5.000	0.152	5.152	40%	0.529	5.529	43%	0.530	5.530	43%	0.531	5.531	43%
13	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	5.000	0.133	5.133	39%	0.486	5.486	42%	0.489	5.489	42%	0.492	5.492	42%
13	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	5.000	0.123	5.123	39%	0.422	5.422	42%	0.427	5.427	42%	0.447	5.447	42%
13	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	5.000	0.053	5.053	39%	0.204	5.204	40%	0.258	5.258	40%	0.289	5.289	41%



**Maximum Predicted Concentrations at All Discrete Receptors - Pre-Mitigation**

**Total Reduced Sulphurs (TRS) (CAS N/A-2)**

**24-hour**

Criteria (µg/m³)	Receptor Information					Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 4 (2038-2042)			Post Closure (2043)		
	Receptor ID	Description	X	Y	Ambient Background Concentration (µg/m³)	With Landfill			With Landfill			With Landfill			With Landfill		
						Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)	Maximum Modelled Concentration Without Background (µg/m³)	Maximum Modelled Concentration With Background (µg/m³)	Percent of Criteria (%)
7	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	5.000	0.011	5.011	72%	0.037	5.037	72%	0.051	5.051	72%	0.055	5.055	72%
7	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	5.000	0.011	5.011	72%	0.031	5.031	72%	0.046	5.046	72%	0.047	5.047	72%
7	ZOR-3	Residence at 663951 Rd 66	510216	4770270	5.000	0.010	5.010	72%	0.034	5.034	72%	0.042	5.042	72%	0.042	5.042	72%
7	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	5.000	0.009	5.009	72%	0.035	5.035	72%	0.043	5.043	72%	0.048	5.048	72%
7	ZOR-5	Residence at 334789 33rd Line	508931	4768760	5.000	0.022	5.022	72%	0.079	5.079	73%	0.090	5.090	73%	0.097	5.097	73%
7	ZOR-6	Residence at 334742 33rd Line	509185	4768350	5.000	0.029	5.029	72%	0.106	5.106	73%	0.139	5.139	73%	0.152	5.152	74%
7	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	5.000	0.006	5.006	72%	0.029	5.029	72%	0.038	5.038	72%	0.042	5.042	72%
7	ZOR-8	Residence at 643743 Road 64	508940	4767980	5.000	0.023	5.023	72%	0.075	5.075	72%	0.084	5.084	73%	0.089	5.089	73%
7	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	5.000	0.022	5.022	72%	0.091	5.091	73%	0.118	5.118	73%	0.126	5.126	73%
7	ZOR-10	Residence at 334578 33rd Line	509739	4766780	5.000	0.013	5.013	72%	0.048	5.048	72%	0.061	5.061	72%	0.066	5.066	72%
7	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	5.000	0.026	5.026	72%	0.120	5.120	73%	0.190	5.190	74%	0.209	5.209	74%
7	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	5.000	0.016	5.016	72%	0.055	5.055	72%	0.090	5.090	73%	0.099	5.099	73%
7	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	5.000	0.005	5.005	72%	0.022	5.022	72%	0.028	5.028	72%	0.030	5.030	72%
7	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	5.000	0.014	5.014	72%	0.047	5.047	72%	0.059	5.059	72%	0.065	5.065	72%
7	ING-2	Laurie Hawkins Public School	509019	4765860	5.000	0.005	5.005	71%	0.022	5.022	72%	0.035	5.035	72%	0.040	5.040	72%
7	ING-3	Ingersoll District Collegiate Institute	510512	4766230	5.000	0.014	5.014	72%	0.053	5.053	72%	0.073	5.073	72%	0.082	5.082	73%
7	ING-4	On the river north of 209 County Road 9	509480	4765180	5.000	0.006	5.006	72%	0.025	5.025	72%	0.034	5.034	72%	0.037	5.037	72%
7	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	5.000	0.005	5.005	71%	0.020	5.020	72%	0.032	5.032	72%	0.035	5.035	72%
7	ING-6	Royal Road Public School	510337	4765360	5.000	0.009	5.009	72%	0.032	5.032	72%	0.049	5.049	72%	0.053	5.053	72%
7	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	5.000	0.004	5.004	71%	0.014	5.014	72%	0.023	5.023	72%	0.025	5.025	72%
7	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	5.000	0.004	5.004	71%	0.024	5.024	72%	0.034	5.034	72%	0.036	5.036	72%
7	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	5.000	0.013	5.013	72%	0.049	5.049	72%	0.069	5.069	72%	0.072	5.072	72%
7	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	5.000	0.008	5.008	72%	0.038	5.038	72%	0.056	5.056	72%	0.062	5.062	72%
7	SWO-1	Residence at 584052 Beachville Road	511124	4766750	5.000	0.019	5.019	72%	0.130	5.130	73%	0.225	5.225	75%	0.246	5.246	75%
7	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	5.000	0.023	5.023	72%	0.099	5.099	73%	0.168	5.168	74%	0.192	5.192	74%
7	SWO-3	Residence at 584142 Beachville Road	511722	4767480	5.000	0.027	5.027	72%	0.108	5.108	73%	0.170	5.170	74%	0.200	5.200	74%
7	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	5.000	0.017	5.017	72%	0.066	5.066	72%	0.071	5.071	72%	0.073	5.073	72%
7	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	5.000	0.010	5.010	72%	0.038	5.038	72%	0.043	5.043	72%	0.049	5.049	72%
7	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	5.000	0.007	5.007	72%	0.025	5.025	72%	0.026	5.026	72%	0.026	5.026	72%
7	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	5.000	0.004	5.004	71%	0.015	5.015	72%	0.022	5.022	72%	0.026	5.026	72%
7	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	5.000	0.002	5.002	71%	0.008	5.008	72%	0.011	5.011	72%	0.012	5.012	72%
7	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	5.000	0.002	5.002	71%	0.008	5.008	72%	0.009	5.009	72%	0.009	5.009	72%
7	SWO-10	Residence at 563977 Karn Road	510980	4765990	5.000	0.016	5.016	72%	0.089	5.089	73%	0.129	5.129	73%	0.136	5.136	73%
7	SWO-11	Residence at 564028 Karn Road	511396	4766310	5.000	0.014	5.014	72%	0.073	5.073	72%	0.118	5.118	73%	0.121	5.121	73%
7	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	5.000	0.023	5.023	72%	0.098	5.098	73%	0.153	5.153	74%	0.178	5.178	74%
7	SWO-13	Centreville Pond and Conservation Area	511570	4766920	5.000	0.018	5.018	72%	0.098	5.098	73%	0.134	5.134	73%	0.157	5.157	74%
7	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	5.000	0.019	5.019	72%	0.055	5.055	72%	0.079	5.079	73%	0.092	5.092	73%
7	SWO-15	Residences at 564146 Karn Road	512251	4767100	5.000	0.013	5.013	72%	0.055	5.055	72%	0.075	5.075	73%	0.088	5.088	73%
7	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	5.000	0.015	5.015	72%	0.054	5.054	72%	0.088	5.088	73%	0.102	5.102	73%
7	SWO-17	Residence at 564226 Karn Road	512958	4767760	5.000	0.013	5.013	72%	0.055	5.055	72%	0.068	5.068	72%	0.072	5.072	72%
7	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	5.000	0.016	5.016	72%	0.057	5.057	72%	0.060	5.060	72%	0.066	5.066	72%
7	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	5.000	0.006	5.006	72%	0.024	5.024	72%	0.042	5.042	72%	0.048	5.048	72%
7	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	5.000	0.005	5.005	71%	0.017	5.017	72%	0.018	5.018	72%	0.019	5.019	72%

## WALKER ENVIRONMENTAL GROUP INC.

NIAGRA FALLS, ONTARIO

### **PROPOSED SOUTHWESTERN LANDFILL: ENVIRONMENTAL ASSESSMENT AIR QUALITY REPORT**

RWDI #1800160  
February 24, 2020

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# 1 INTRODUCTION

An Environmental Assessment (“EA”) is being prepared by Walker Environmental Group Inc. (“Walker”) under Ontario’s Environmental Assessment Act (“Act”) for the ‘provision of future landfill capacity at the Carmeuse Lime (Canada) Ltd. (Carmeuse) site in Oxford County for solid, non-hazardous waste generated in the Province of Ontario’.

This is one in a series of technical studies that have been completed by qualified experts to examine the potential effects of the proposed landfill site on the environment, all in accordance with the requirements set out in the Approved Amended Terms of Reference (“ToR”) dated May 10, 2016. This report accompanies and supports the Environmental Assessment Report prepared by Walker.

Note that Walker has carried out extensive consultation with government agencies, Indigenous groups and interested members of the public regarding this study; details are provided separately in the EA report.

# 2 PURPOSE & OBJECTIVES

The purpose of this study is to complete a dust assessment of the landfill proposed by Walker.

The overall objectives of the study are listed below, in general accordance with the requirements for the assessment of an undertaking as set out in Section 6.1(2)(c) of the Environmental Assessment Act, and as specifically detailed in Section 8.1 of the ToR:

- a. Describe the environment potentially affected by the proposed undertaking, including both the existing environment as well as the environment that would otherwise be likely to exist in the future without the proposed undertaking.
- b. Carry out an evaluation of the environmental effects of the proposed undertaking, using the relevant environmental assessment criteria set out in the ToR (see Appendix B).
- c. Carry out an evaluation of any additional impact management actions that may be necessary to prevent, change or mitigate any (negative) environmental effects.
- d. Prepare a description and evaluation of the environmental advantages and disadvantages of the proposed undertaking, based on the net environmental effects that will result following mitigation.
- e. Prepare monitoring, contingency and impact management plans to remedy the environmental effects of the proposed undertaking.



### 3 THE PROPOSED UNDERTAKING

The landfill proposed by Walker is described in detail in the Environmental Assessment Report. Following is a brief summary for the benefit of the reader, highlighting aspects of the proposal most relevant to this study.

The landfill is to be located on a portion of Carmeuse's landholdings at its Beachville Quarry Operations in the Township of Zorra, Oxford County. Approximately 17.4 million m<sup>3</sup> of solid, non-hazardous waste and daily/intermediate cover will be deposited within a footprint of about 59 ha. The balance of the of the 81.6 ha site will be comprised of buffer areas for monitoring, maintenance, environmental controls and other necessary infrastructure. (**Figure 1**).

Landfill construction will proceed progressively in a series of cells, generally from north-to-south (**Figure 1**). The former quarry floor will be backfilled to within about 30 to 40 metres below ground surface with engineered fill, and then a Generic Design Option II – Double Liner system (as specified by the Ministry of Environment, Conservation & Parks in the Landfill Standards under O. Reg. 232/98; see **Figure 2**) will be constructed across the bottom and up the sides of the landfill to contain and collect leachate (**Figure 3**). Up to 850,000 tonnes per year of solid, non-hazardous waste, and up to 250,000 tonnes per year of daily/intermediate cover soils<sup>1</sup> will then be placed and compacted above the liner in a series of small working areas approximately 0.2 ha in size at any given time, in order to minimize the exposed waste. Waste will be covered with soil on a daily basis, and a final cover with vegetation will be applied as the landfill reaches its final height, which peaks at about 15 m above ground (**Figure 4**). A landfill gas collection system will also be installed as the landfill/cell development progresses.

Most of the supporting infrastructure for the landfill will be located in the buffer area along the northern site perimeter, including the leachate and gas treatment plants. Leachate collected from the liner system will be treated on-site and the clean effluent from the treatment plant will be discharged into the Patterson-Robbins Drain next to the treatment plant. Clean precipitation and groundwater that has not come into contact with waste will be segregated and treated in a stormwater management pond before being discharged from the site (**Figure 1**). Landfill gas will be collected in a network of extraction wells and pipes. Initially the landfill gas will be flared (combusted), but when the quantities permit the gas will be beneficially utilized as a renewable fuel.

---

<sup>1</sup> The daily/intermediate cover soil could consist of acceptable and suitable waste soils, and would be reported as waste, so the total reported waste receipts could be up to 1,100,000 tonnes per year.



The site will be open for waste deliveries from 7:00 a.m. to 5:00 p.m. on weekdays and from 7:00 a.m. to 1:00 p.m. on Saturdays but closed on Sundays and statutory holidays. On-site construction activities may start up to one hour before opening and continue up to two hours after closure. The primary designated haul route (i.e., for all waste trucks except deliveries from the local area, if any) is from Highway 401 north along County Road #6, then west into the quarry property; trucks will then follow a newly constructed haul route across the quarry site to a landfill site entrance at the northwestern corner of the site (**Figure 5**). Vehicle traffic, including waste trucks as well as construction vehicles and staff, is expected to average approximately 210 trips per day.

Nuisance controls will include speed enforcement, regular haul road cleaning (on- and off-site), litter fencing and pick-up, and bird/pest management, with a public complaint reporting and response system.

There will be monitoring programs for equipment operations, leachate, groundwater, surface water, air emissions, gas, noise, and particulates (dust).

The landfill is anticipated to receive waste for approximately 20 years commencing in about 2023. After closure, maintenance and operation of the relevant environmental controls and monitoring will carry on during the post-closure period, until there is no further risk of environmental contamination. The end-use is assumed to be passive green space and agriculture, but the design is flexible to accommodate other potential end-uses.

The dust assessment considered a waste filling rate of 850,000 tonnes per year of solid, non-hazardous waste, of which 70% consisted of biodegradable material. This waste was assumed to be distributed evenly throughout the landfill over the course of the 20-year lifespan, with filling occurring for 5 years within each Stage, as follows:

- Stage 1: 2023-2027;
- Stage 2: 2028-2032;
- Stage 3: 2033-2037; and
- Stage 4: 2038-2042.

Approximately 250,000 tonnes of waste soil will be imported per year to be used as daily cover for the active landfill cell. This waste soil is in addition to the 850,000 tonnes per year of solid, non-hazardous waste mentioned above. The dust assessment also considered the presence of a waste soil storage pile with a footprint area of up to 32,500 m<sup>2</sup>, present in one of two locations, depending on the current Stage of operations.



## 4 ENVIRONMENTAL ASSESSMENT CRITERIA & INDICATORS

The environmental assessment criteria, as approved in the ToR, are tabulated in **Appendix B**, Table B-1. In the table, check marks indicate which technical studies are assigned primary (“lead”) responsibility for assessing each of the criteria. Following are the EA criteria which are assigned to this study:

**Table 1:** Environmental Assessment Criteria

EA Criteria	Definition/Rationale
<b>Effects Due to Fine Particulate Exposure</b>	Construction, operation, and truck haulage activities at a waste disposal facility can lead to increased levels of particulate (dust) in the air. Airborne fine particulate is a health concern in certain size ranges exposure durations.

Furthermore, the criteria for this EA were designed to be cross-disciplinary to permit an assessment of cumulative effects. Table B-2 in **Appendix B**, from the ToR, illustrates some (though not necessarily all) of the key interconnectivities between the studies. As a result, this study provides input/data to additional environmental criteria that will be addressed through studies conducted by other experts including (but not limited to):

- Agricultural;
- Ecology;
- Economic/Financial;
- Human Health; and
- Social/Cultural.

Indicators identify how the potential environmental effects will be measured for each criterion. Following are the indicators that were applied to each of the primary EA criteria addressed in this assessment:

**Table 2:** Environmental Assessment Indicators

EA Criteria	Proposed Indicators/Measures
<b>Effects Due to Fine Particulate Exposure</b>	Ontario Regulation 419 Standards and Guidelines, Ambient Air Quality Criteria, Canadian Air Quality Objectives (CAAQS) and Canada Wide Standards (PM <sub>2.5</sub> )

For the dust assessment, the primary EA Criteria is “Effects due to exposure to fine particulate exposure” with proposed indicators from MECP’s Ontario Regulation 419 Standards and Guidelines, Ambient Air Quality Criteria, and other guideline values.

Dust or particulate matter emissions can become a nuisance by infiltrating residences through open windows, soiling cars and house siding, affecting visibility, and in the case of the smaller particulate fractions, cause health effects. Dust at landfills consists primarily of relatively inert particulate matter from native and impacted soils. The dust is emitted on an intermittent basis, largely during landfill operations and construction activities, with significant emissions occurring during dry weather only. There are typically four contaminants of interest related to the dust emissions from landfills: total suspended particulate matter (TSP), inhalable particulate matter (PM<sub>10</sub>), respirable particulate matter (PM<sub>2.5</sub>), and dustfall. The primary concern for total suspended particulate matter (TSP) is reduced visibility and general nuisance, while inhalable (PM<sub>10</sub>) and respirable (PM<sub>2.5</sub>) particulate matter fractions may result in health effects. The primary concern for dustfall is soiling and general nuisance.

TSP refers to particles less than 44 µm in aerodynamic diameter (defined as a particle that would have the same aerodynamic behaviour in air as a sphere, with a specific gravity of 1.0 and a diameter of 44 µm). These particles are small enough to remain suspended in the atmosphere over long periods of time due to their low settling velocity. When present in large quantities, they can affect visibility and cause soiling effects.

PM<sub>10</sub> refers to particles that are less than 10 µm in aerodynamic diameter. These particles are referred to as the inhalable portion of particulate matter as they have the ability to enter the lungs. When exposed to elevated levels of PM<sub>10</sub> over a long period of time, negative health effects can result.

PM<sub>2.5</sub> refers to solid or liquid particles that are less than 2.5 µm in aerodynamic diameter. These particles are referred to as the respirable portion of particulate matter as these very small particles can be inhaled into the lungs and are small enough to reach the gas transfer sites in the lungs. When exposed to elevated levels of PM<sub>2.5</sub> over a long period of time, detrimental health effects can result.

Dustfall refers to larger particles that settle at a sufficient rate to produce a dust film on surfaces. Dustfall is a nuisance issue due to its soiling nature. Dustfall impacts were not included within the scope of the ambient monitoring assessment; however, dustfall from particulate deposition was predicted in the dispersion modelling portion of the study.

**Table 3** summarizes the applicable Air Quality Criteria to be used to assess potential dust impacts from the baseline and future scenarios. Where multiple criteria are available for a given contaminant and averaging period combination, the most stringent criterion was selected for use in the assessment.





**Table 3:** Summary of Dust Assessment Criteria

Compounds of Interest	Averaging Period	Air Quality Criteria	Limiting Effect
<b>TSP</b>	24-Hour Annual <sup>[1]</sup>	120 µg/m <sup>3</sup> (AAQC and O.Reg.419/05) 60 µg/m <sup>3</sup> (AAQC)	Visibility Visibility
<b>PM<sub>10</sub></b> <sup>[2]</sup>	24-Hour	50 µg/m <sup>3</sup> (AAQC)	Health
<b>PM<sub>2.5</sub></b>	24-Hour 24-Hour 24-Hour Annual Annual	25 µg/m <sup>3</sup> (AAQC) 28 µg/m <sup>3</sup> (CAAQS) 27 µg/m <sup>3</sup> (CAAQS Future) 10 µg/m <sup>3</sup> (CAAQS) 8.8 µg/m <sup>3</sup> (CAAQS Future)	Health Health Health Health Health
<b>Dustfall</b>	30-Day Annual	7 g/m <sup>2</sup> (AAQC and O.Reg.419/05) 4.6 g/m <sup>2</sup> (AAQC) <sup>[3]</sup>	Soiling Soiling

**Notes:** [1] Based on geometric mean.  
[2] Based on interim 24-Hour AAQC.  
[3] Annual dustfall is based on the arithmetic mean of the monthly dustfall values.

The AAQC and CAAQS are outlined as guidelines to work towards achieving good air quality. These differ from an enforceable limit, where in order to operate a facility, compliance with air quality limits must be achieved. The guidelines for TSP, PM<sub>10</sub>, PM<sub>2.5</sub>, and dustfall are set out as benchmarks to determine whether dust management plans should be triggered or if a potential dust problem exists. A measured or modelled level of these parameters in excess of their respective guidelines does not necessarily identify an immediate health hazard. Recent human health risk assessments conducted for transportation studies have reported that the chemically active nature of the particulate must be considered when assessing the potential risk as well. Exposure to fine particulates from native soils is typically less hazardous than particulates associated with sulphates or nitrates, derived from combustion processes.

The types of wastes proposed to be received are not generally expected to contain significant quantities of metals in the material. Therefore, the potential to release airborne metals with the handling and disposal of the material is low and a separate assessment of airborne metal emissions is not required.



## 5 STUDY DURATIONS

Two main study durations (or time frames) for this proposed landfill have been identified in the ToR:

<b>Operational Period</b>	The time during which the waste disposal facility is constructed, filled with waste, and capped. These activities are combined since they occur progressively (i.e., overlap) on a cell-by-cell basis, and they have a similar range of potential effects (e.g., there is heavy equipment active on the site).
<b>Post-Closure Period</b>	The time after the site is closed to waste receipt. Activities are normally limited to operation of control systems, routine property maintenance and monitoring, and thus have a more limited range of potential effects.

The approved EA Criteria in Table B-1, **Appendix B** indicate the relevant study duration(s) associated with each of the criteria used in this assessment.

The dust study considered only the operational period assuming that particulate impacts will be negligible following closure and rehabilitation efforts. The following periods were used in the dust assessment:

- Baseline;
- Stage 1: 2027; and
- Stage 3: 2037.

Stages 1 and 3 were chosen for the dust assessment as they represent worst-case conditions based on the location of sources relative to the property line and the nearest residential receptors. In addition, operation during these stages will also include simultaneous construction activities on the next stage (e.g., the scenario for Stage 1 includes both landfill operations in Stage 1 and construction activities in Stage 2).



## 6 STUDY AREAS

For the purposes of this EA, three general study areas were established in the ToR:

<b>On-Site and in the Site Vicinity:</b>	<i>On-site</i> includes the proposed waste disposal facility plus the associated buffer zones. <i>Site vicinity</i> is the area immediately adjacent to the waste disposal facility property that is directly affected by the on-site activities. Its size is variable depending on the particular criteria being addressed.
<b>Along the Haul Routes:</b>	The primary route along which the waste disposal facility truck traffic would move between a major provincial highway and the proposed waste disposal facility site entrance, plus the properties directly adjacent to these roads.
<b>Wider Area:</b>	The broader community, generally beyond the immediate site vicinity. Depending on the particular criteria this may include neighborhoods, local municipalities, the Oxford County, or the Province of Ontario.

The tables of approved EA Criteria in Appendix B indicate the relevant study area(s) associated with each of the criteria in this assessment.

Although these three general study areas were common across all the studies, their actual physical boundaries were not necessarily identical for every study or criterion; a flexible approach was used, and the study area boundaries were adjusted as the work progressed to ensure that they adequately encompassed the significant effects of the proposed landfill.

For dust assessment, the final study area considered on-site and in the site vicinity as well as along the haul routes. For the purposes of this study, the on-site and in the site vicinity area extends to approximately 5 kilometers from the proposed landfill. This is based on the maximum extent of air quality effects that can be anticipated. Since the Carmeuse site also emits dust, the Carmeuse property line has been used as the boundary.

To assess impacts along the primary haul route, as shown in **Figure 5**, receptors were placed along the haul route between the proposed landfill site entrance and Highway 401. These receptors extended a minimum of 500 m on either side of the haul route.

The receptor grid used for the dust modelling is illustrated in **Figure 6**.

Where appropriate and relevant, common receptor points were also selected collaboratively by the technical experts so that the potential overlapping or cumulative effects of the proposed landfill could be assessed at these common receptor points. Of the 50 common receptor points selected, a total of 43 were identified as relevant receptors for the Air Quality discipline. An additional receptor point, ZOR-13, was not identified as a receptor for air quality but has been included at the discretion of the air quality team. Only receptors representing residential locations or other locations where human activity regularly occurs were used to assess compliance with the criteria. The common receptor points for air quality used for the dust modelling are illustrated in **Figure 7**.

## 7 METHODOLOGIES

The following section outlines the key items that will be used to assess the baseline conditions and future (build and no-build) predicted impact scenarios:

- Completion of ambient monitoring for PM, PM<sub>10</sub> and PM<sub>2.5</sub> to determine the existing baseline conditions;
- Estimation of the level of dust emissions from proposed waste disposal facility operations;
- Determination of reasonable worst-case locations for the landfill operation dust sources; and,
- Computer modelling to simulate the effects of the proposed waste disposal facility compared to the baseline (existing before proposed waste disposal site) conditions, predicting dust impacts at critical receptor points in the site vicinity and along the haul routes. This evaluation will also consider the cumulative effects from the Carmeuse site operations.

The sections below outline the detailed approach including data to be collected, locations, and methodologies. For the dust assessment, the following scenarios will be examined:

- Baseline conditions;
- Two future operating scenarios, representing landfill operations during Stage 1 (2027) and Stage 3 (2037) combined with Carmeuse operations for the same periods; and,
- Future baseline conditions, representing conditions expected to occur in 2027 and 2037 if the landfill is not developed.

This dust study defines and documents the potential impact on the atmospheric environment from the proposed landfill, including the potential effects, mitigation, and net effects.

The baseline, future operating, and future baseline assessments for the dust study have been completed using an ambient air quality monitoring program in conjunction with a numerical modelling assessment. The ambient air quality monitoring program allowed for the development of site-specific data that can more accurately reflect predicted impacts from both the baseline case as well as the proposed waste disposal site alternatives.

Potential dust sources were identified based on data collected from other landfill sites within the Province of Ontario and the review of the background information on the proposed operational plans including technical support documents. Typical dust sources are discussed in the following sections.



## **7.1 Hours of Operation**

The hours of operation for the Walker's proposed landfill operations and the existing and future Carmeuse operations are as follows:

- Landfill Operation: 7:00 to 19:00
- Carmeuse Operation: 6:00 to 16:00

Landfill operations will begin at 7:00 with waste being delivered to the active face until approximately 17:00. For the last two hours (17:00 to 19:00), daily cover will be delivered to the active face. Carmeuse hours of operation are based on the current normal operating time for the facility; these operation hours are expected to remain the consistent over the life of the landfill.

## **7.2 Emission Sources**

The assessment of dust impacts resulting from the proposed landfill focused on emissions generated from the following landfilling activities:

- On-site vehicle traffic;
- Landfill traffic along the off-site haul route;
- Idling vehicles;
- Handling of materials including waste soils and daily cover material;
- Wind erosion of exposed areas;
- Construction activities; and
- The landfill gas flare.

In addition, the following activities from the Carmeuse operation were included as sources of like emissions:

- On-site vehicle traffic;
- Carmeuse traffic along the off-site haul route;
- Material handling;
- Crushing, screening, loading, and other processing activities;
- Blasting;
- Wind erosion of storage piles; and
- Kiln 1 and Kiln 3.

Background traffic along the off-site haul route, Country Road 6 (CR6) was also included as an emission source.



Each of these sources is discussed in the following sections. Specific dust sources were identified based on the Walker Environmental Group Inc.'s Southwestern Landfill Environmental Assessment Facility Characteristics Assumptions Report (FCA), Revision 3, March 5, 2019, (now incorporated into the Environmental Assessment Report as Section 7.2) along with data collected from other landfill sites within the Province of Ontario, review of technical documents, and a site visit conducted at the existing Carmeuse operation in August 2019.

Emissions from the Carmeuse processing operations were obtained from emissions tables provided by Carmeuse in August 2019. The emissions from the Carmeuse on-site vehicle traffic and wind erosion were not included in the emissions tables provided; instead, they were calculated based on information provided by Carmeuse using the same methodology as used for the landfill sources.

### **7.2.1 On-Site and Off-Site Roadway Sources**

A network of paved and unpaved roadways allows trucks to travel from the proposed entrance of the landfill site to the active face, waste soil pile, overburden pile, construction face, and other areas on-site. Carmeuse currently has a network of roadways for hauling aggregate and overburden as well as shipping of finished product. Particulate matter emissions generated by the vehicles traveling along these unpaved and paved surfaces include particulate matter emissions from tailpipes, brake wear, and tire wear as well as re-entrainment of loose material on the road surfaces.

Traffic volumes for the proposed landfill operations were obtained from the FCA report. The movement of on-site heavy equipment at the landfill active face was also included in the assessment of on-site roadway sources.

The traffic generated due to ancillary operations and landfill maintenance operations was not considered in the dust assessment because the traffic volumes are relatively small; the generation of particulate matter would therefore be insignificant relative to the generation of particulate matter from the traffic volumes traveling on the on-site main haul routes.

### **7.2.2 Idling Vehicles**

During landfill operation, there are some periods where trucks will be idling at specific locations. During idling, emissions are emitted from the vehicle tailpipes, but no road dust re-entrainment is occurring. For the purposes of the study, it was conservatively assumed that two landfill trucks will be idling at the weigh scale and two landfill trucks will be idling at the active face at all times during the operating hours of the landfill. In addition to trucks travelling along on-site and off-site haul routes, the particulate emissions from idling trucks were considered in the assessment.



### **7.2.3 Material Handling Sources**

Dust producing materials, such as overburden and waste soils, are handled during construction operations and normal landfill and quarry operations. Particulate matter emissions are generated during the following material handling activities at the landfill:

- Material loading and unloading at waste soil stockpile;
- Material loading and unloading at the overburden stockpile;
- Material unloading at the construction working face; and
- Material unloading at the landfill working face.

### **7.2.4 Wind Erosion**

Wind erosion occurs when exposed areas are subjected to high wind speeds, typically greater than 6 m/s. Wind erosion will cause both fine and sand size particles to become airborne, but the fine particles are of greatest importance since they can travel much further.

The wind erosion sources included all exposed areas that were not vegetated, such as soil stockpiles and areas with daily and interim soil cover.

At the proposed landfill, the exposed areas subject to wind erosion were assumed to be recently disturbed areas of the waste soil stockpile, the clay stockpile, the landfill interim cover area, and the construction working stage. Other areas, such as the landfill stages under final cover were assumed to be vegetated and/or crusted over and therefore not subject to wind erosion.

### **7.2.5 Construction Activities**

Construction activities include haulage, placement, and compaction of selected soils on the quarry floor, to create an engineered structural backfill layer. In addition, haulage and stockpiling of clay, crushed stone, geomembrane, geotextile, and piping to the area of the current cell construction for placement and construction of the liner system layers. While landfilling is occurring in a given stage, construction activities will be occurring in the next stage to prepare for future landfilling operations (i.e., when landfilling is occurring in Stage 1, construction will be occurring in Stage 2). Typically, construction activities occur approximately 8 months per year due to weather constraints; however, for the purposes of this assessment, construction activities were assumed to occur year-round as a conservative measure.

Construction activities were included in the assessment under the on-site roadways, material handling, and wind erosion source types.



## **7.2.6 Landfill Gas Flare**

Collected landfill gas will be combusted in fully enclosed flare(s). The combustion of the landfill gas results in the emission of combustion by-products, including particulate matter. One flare will be needed initially, but up to three may be required over the life of the landfill to match the gas production rate. The flares are designed to operate at temperatures between 875 °C and 950 °C with a residence time of 0.75 seconds to ensure air quality standards are met in the exhaust. Flaring of the landfill gas typically converts about 98% of the methane to carbon dioxide and consumes more than 99.9% of the trace organic compounds. The flare parameters were assumed to be similar to the existing flare at the Walker South Landfill, in Thorold, Ontario. As a conservative approach, all collected LFG was assumed to be combusted in a single flare throughout the entire life of the landfill.

At approximately operating year 5 of the landfill, LFG utilization is expected. Any impacts from utilization are expected to be less than the baseline of flaring onsite.

Emissions from the LFG flare was included in the quantitative assessment.

## **7.2.7 Carmeuse Sources**

The Carmeuse operation includes many of the same emission sources as the landfill, including vehicle traffic on on-site and off-site haul routes, material handling, and wind erosion. In addition, Carmeuse operations include aggregate processing activities, many of which are controlled through the use of baghouses, particulate emissions from the kiln stacks, and blasting.

## **7.3 Assessment Scenarios**

The assessment of dust impacts resulting from the proposed landfilling activities focused on emissions generated from the following landfilling activities:

- On-site and off-site roadway sources;
- Idling sources;
- Material handling and processing sources;
- Wind erosion sources; and
- The landfill gas flare.





In addition, the following sources were considered as sources of like emissions:

- Carmeuse:
  - On-site and off-site roadway sources;
  - Material handling sources;
  - Wind erosion sources;
  - Kilns;
  - Processing sources, including baghouses used to control emissions; and
  - Blasting.
  
- Off-site public traffic along the County Road 6 haul route between the landfill site entrance and the Highway 401 West exit 222

An overview of the modelling scenarios assessed in this study is presented in **Table 4**. The locations of these sources are presented in **Figure 8**.

**Table 4:** Summary of Modelled Scenarios

Scenario Assessed	Sources Modelled													
	On-Site Traffic: Landfill	Off-Site Traffic: Landfill	On-Site Traffic: Carmeuse	Off-Site Traffic: Carmeuse	Off-Site Traffic: Public	Idling Vehicles: Landfill	Material Handling: Landfill	Material Handling: Carmeuse	Wind Erosion: Landfill	Wind Erosion: Carmeuse	Landfill Gas Flare	Carmeuse Kilns	Carmeuse Processing	Carmeuse Blasting
Baseline			X	X	X			X		X		X	X	X
Stage 1 Operations 2027	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Future Baseline 2027				X	X			X		X		X	X	X
Stage 3 Operations 2037	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Future Baseline 2037				X	X			X		X		X	X	X

## 7.4 Emission Calculations

The emission rate development methodology for each source is presented in the following sections. Additional details and sample calculations are provided in the Appendices.

## 7.4.1 On-Site and Off-Site Roadway Emissions

Dust emissions from vehicle movements consist of two main categories; re-entrained road particulate and tailpipe particulate emissions. Estimates of the re-entrained road particulate matter emission rates from vehicle movements were obtained using the United States Environmental Protection Agency AP-42 documents, Sections 13.2.1 and 13.2.2. These documents provide a reasonable general estimate of emission rates in dry conditions. Formulas for calculating particulate matter emission rates from traffic on paved and unpaved roads were provided in these documents.

Estimates of tailpipe particulate emissions from on-road trucks were obtained using the United States Environmental Protection Agency's Motor Vehicle Emission Simulator (MOVES). MOVES is a model that has been developed for the purpose of estimating vehicular emissions using computer simulation techniques based on extensive previous testing of a wide range of vehicles. MOVES 2014b was used to generate vehicle emission factors for the baseline (2019) and future operating years (2027 and 2037).

Tailpipe emissions for landfill equipment, construction equipment, and off-highway trucks were developed using MOVES 2014b. These emissions were generated using the MOVES non-roads option. This option is designed specifically for calculating emissions of non-road sources and produces emission factors in terms of gram per horsepower-hour. The horsepower of all off-road equipment was based on equipment used at a similarly sized landfill. The horsepower of the off-highway trucks was based on typical quarry trucks.

Roadway particulate matter emissions were developed for landfill traffic, Carmeuse traffic, and traffic along the publicly-accessible haul route, CR6. The parameters used in the development of the roadway particulate matter emission rates are described in the following sections.

### 7.4.1.1 *Vehicle Traffic*

Traffic distribution data was obtained from three sources: the FCA Report for traffic related to landfill operations; data provided by Carmeuse staff for traffic related to quarry operations; and data provided by HDR Incorporated (HDR) for background traffic on public roadways. Details on the traffic data are provided below.

### 7.4.1.2 *Proposed Landfill Traffic Data*

The FCA document details the approximate daily vehicle traffic and vehicle type related to landfilling operations. Traffic volumes were distributed along specific on-site roadways based on time of day and activity. A summary of all traffic related to landfilling operations is detailed in **Table 5**.



**Table 5:** Estimated Landfill Traffic Volumes for Landfill Operations

Required Service	Vehicle Type	Trips per Day
Waste Import (Long-haul)	Tractor Trailer	79
Waste Import (Short-haul)	Collection Truck (Triaxle)	75
Soil Import (Long-haul)	Dump Trailer	21
Soil Import (Short-haul)	Triaxle	7
Liner Clay	End Dump - Tractor Trailer	7
Leachate Collection Stone	End Dump - Tractor Trailer	3
Misc. Construction Materials	Tractor Trailers	1
Misc. Construction Materials	Tandem Delivery Truck	1
Soil Delivery to Working Face	Triaxle Truck	30

**Note:** \*Trips/day noted in the above table is defined as a vehicle entering the facility, these values were doubled in the assessment to consider vehicles both leaving and entering the site.

Landfill related traffic travels along CR6 from Highway 401 to the site entrance, as shown in **Figure 5**, and along various on-site haul routes as shown in **Figure 8**. Trips/day noted in the above table is defined as a vehicle entering the facility. The calculations do not include the vehicle leaving the facility; therefore, every vehicle trip results in two traffic passes along the haul routes. Traffic was assumed to be evenly distributed over the working day.

The estimated traffic numbers were assigned to reasonable on-site routes to arrive at specific landfill destinations. Waste import vehicles were assumed to enter the site and travel to the landfill active face; whereas soil import vehicles were assumed to travel to the waste soil stockpile. For the final two hours of daily landfill operation, vehicles travel from the waste soil stockpile to the active face, delivering the daily cover material. Construction vehicles were assumed to proceed directly to the construction face or the clay stockpile area, which is a material staging area that may also be used to store pipe, liner, and stone. These routes were divided into roadway segments. New roadway segments were created to account for a change in traffic volumes or road characteristics.

The traffic volumes and hourly distributions used for the proposed landfill traffic are presented in **Appendix C**.

#### 7.4.1.3 Carmeuse Traffic Data

Traffic on the Carmeuse site is distributed among four areas: the north entrance finished goods loop, the south entrance finished goods loop, the quarry removal haul route, and the overburden removal haul route. Carmeuse traffic estimates for the finished good loops and the quarry haul route were provided by Carmeuse staff and are based on current operating capacities. At this time no changes in Carmeuse capacity are expected during the operating lifetime of the landfill.



Overburden traffic estimates were based on engineering calculations, which considered the maximum permitted quantity of overburden per year (534,800 m<sup>3</sup>), an assumed density of overburden (1,200 kg/m<sup>3</sup>), and an assumed vehicle payload (27 tonnes). This engineering calculation resulted in an estimated traffic volume of 78 trips per day, based on overburden removal occurring 250 days per year. A summary of the Carmeuse traffic is detailed in **Table 6**.

**Table 6:** Estimated Landfill Traffic Volumes for Carmeuse Operations

Haul Route	Vehicle Type	Trips per Day
North Entrance	Tractor Trailer	12
South Entrance	Triaxle	90
Quarry Haul Route	Off-Highway Truck	128
Overburden Removal	Articulated Hauler	78

For the purposes of this assessment, tailpipe emissions from the quarry and overburden removal haul routes were modelled as off-highway vehicles and emissions were based on typical quarry equipment observed while onsite. A total of three quarry haul trucks and three overburden removal haul trucks were assumed to be operating continuously during the quarry operating hours. The number of traffic passes for quarry and overburden trucks were considered only for calculations of road dust re-entrainment. For the quarry and overburden removal activities traffic passes are not considered for tailpipe emissions because emission rates are provided in gram per horsepower hour and depend on the quantity and horsepower of the vehicles rather than the number of traffic passes. The tailpipe emissions from each off-highway vehicle were evenly distributed along its entire on-site route. Further details are provided in Section 7.4.2.

The exact path of the quarry and overburden haul routes were provided by Carmeuse. The overburden haul route was adjusted for the future build scenario to assume that the overburden is brought to the next cell construction face to be used as backfill. This is a conservative assumption since the construction face is closer to the property line than the designated overburden stockpile area. On-site sources are detailed in **Figure 8**.

Daily vehicle trips were equally distributed over the operating hours of the quarry from approximately 06:00 h – 16:00 h. These operating times apply to all Carmeuse operations. Traffic counts included vehicles entering the site but did not account for the traffic passes as the vehicles leave. When calculating emissions and as a modelling conservatism, it was assumed that all of the vehicles entering the site would leave through the same entrance.

The traffic volumes and hourly distributions used for the Carmeuse traffic are presented in **Appendix C**.





7.4.1.4 *Background Traffic Data*

Impacts from public traffic along CR 6 between the landfill site entrance and the Highway 401 West exit 222 was included in the assessment. HDR Incorporated (HDR) provided hourly traffic counts and a breakdown of vehicle classes as a percentage of total traffic. HDR provided current (2019) and future (2033) traffic counts for five tube count locations, as shown in **Table 7**, below. HDR also provided hourly traffic distribution for 2019, but not for future years; however, it was assumed that although the traffic counts would increase, the hourly distribution of vehicles would remain constant over the future.

**Table 7:** Summary of Tube Count Data

Intersection	2019 CR6 Traffic			2033 CR6 Traffic			Percent Growth		
	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy
<b>Country Road 2 and Dundas</b>	356	60	155	419	69	178	18%	15%	15%
<b>SWLF Haul Route Driveway</b>	356	60	155	414	70	180	16%	16%	16%
<b>Carmeuse Truck Driveway</b>	<b>356</b>	<b>62</b>	<b>158</b>	<b>420</b>	<b>69</b>	<b>178</b>	18%	12%	12%
<b>Beachville Road</b>	306	63	161	361	71	182	18%	13%	13%
<b>Karn Road</b>	355	64	164	417	72	186	17%	13%	13%

For the assessment of CR6 traffic volumes the Carmeuse Truck Driveway tube counts were selected. This location best represents the traffic along CR6 overlapping with the study site.

The traffic volumes and hourly distributions used for the background traffic are presented in **Appendix C**.

7.4.1.5 *Re-entrained Road Dust Emissions*

To determine the roadway particulate emissions from re-entrained road particulate matter, the required inputs include; number of vehicles, average weight of vehicles, roadway length, surface silt content (for unpaved roads), and road surface silt loading (for paved roads). All on-site haul route vehicles are heavy duty vehicles and the average vehicle weight was based on a weighted average of the on-site vehicles as listed in **Table 5**. An average vehicle weight of 36.6 tonnes for landfill vehicles is based on the vehicle types, the vehicle frequency, and the average vehicle weight. For Carmeuse operations, the average vehicle weights for the various on-site haul routes were based on the average weight of the vehicle type on each haul route. For background traffic on CR6, the average vehicle weight was based on the mix of vehicles in the traffic distribution provided by the HDR. For on-site haul routes at the landfill and quarry, the surface silt content and silt loading were based on source testing at the existing Carmeuse site, as outlined in Section 8.2. Default silt loading values for publicly accessible roads, as provided in in AP-42 Chapter 13.2.1, were used for the off-site haul route, CR6. The values used in the assessment are summarized in **Appendix C**.

In addition to these inputs, the AP-42 equation requires the use of a “k” factor, which adjusts the equation to represent the various particle sizes (TSP, PM<sub>10</sub>, and PM<sub>2.5</sub>). However, the maximum “k” factors published in AP-42 Chapter 13.2.1 and 13.2.2 are representative of PM<sub>30</sub>. In Ontario, TSP is defined as PM<sub>44</sub>; therefore, the AP-42 “k” factor for TSP (PM<sub>44</sub>) was scaled up logarithmically from the published PM<sub>30</sub> “k” factors to PM<sub>44</sub> values of 4.79 and 7.32 for paved and unpaved roads, respectively.

Control factors were taken into account for emissions from the roadway sources. The proposed landfill was assumed to incorporate standard controls via watering, wet sweeping, etc. Standard controls were assumed to have a control efficiency of 90%. Carmeuse currently has a robust dust control program in place, including watering of unpaved haul roads, wet sweeping of paved haul roads, and tire wash stations for vehicles exiting the property and was assumed to have a control efficiency of 95%. These control factors were assumed to remain constant over future years.

#### 7.4.1.6 *Tailpipe Emission Rates*

The emissions from the tailpipe of a motor vehicle depend on a large number of factors, including the type, age, and weight of the vehicle, the mode of operation, the weather conditions, and the maintenance condition of the vehicle and of the road. The standard approach for estimating vehicular emissions is to use computer simulation techniques that are based on extensive previous testing of a wide range of vehicles. The most widely used software for this purpose was developed by the U.S. Environmental Protection Agency, and the latest version of the software is known as Motor Vehicle Emission Simulator (MOVES). MOVES 2014b was used to generate vehicle emission factors for the baseline (2019) and future operating years (2027 and 2037).

MOVES allows the user to generate emission factors by time of day, which accounts for diurnal fluctuations in temperature and relative humidity. In the present analysis, four sets of emission factors were generated – morning (AM, 6:00am to 9:00am), mid-day (MD, 9:00am-4:00pm), evening (PM, 4:00pm-7:00pm), and overnight (ON, 7:00pm-6:00am). The average of these emission rates was applied to the model providing a singular emission rate for all times of day. A summary of the key input parameters for the MOVES 2014b model are presented in **Table 8**.



**Table 8:** MOVES 2014b Input Parameters

Input Parameter	Value
Operating Years	2019, 2027, and 2037
Evaluation Month	January
Ambient Temperature	Minimum Temperature (F) = 15.44 Maximum Temperature (F) = 28.58 (Canadian Climate Normals)
Altitude	Low
Relative Humidity	At 6:00 LST = 83.5 At 15:00 LST = 75.9
Vehicle Population	MOBILE6.2C Default
Age Distribution	MOVES Default
Fuel Program	Ontario/ Quebec
Vehicle Speed	0 km hr <sup>-1</sup> , 35 km hr <sup>-1</sup> , and 80 km hr <sup>-1</sup>

In MOVES 2014b contaminant emission rates decrease over future years. This change in emission rates for a given vehicle category over time is due to fleet turnover, through which older vehicles built to less stringent emission standards are replaced by newer vehicles to comply with more stringent standards. For this reason, the model was set up to calculate emission rates for the current year (2019), and each of the future years relating to future scenarios. Emission from vehicle tailpipes vary with the speed at which the vehicle is travelling. The posted speed limits were assumed to represent the average vehicle speed along each roadway segment. Onsite roadways were assumed to have a maximum speed limit of 35 km per hour.

MOVES 2014b produces emission factors in grams per vehicle mile traveled (g/VMT). These emission factors were converted to grams per vehicle kilometer traveled (g/VKT) by multiplying the g/VMT factors by 0.621.

The MOVES 2014b emission factors are based on January ambient temperatures (minimum and maximum climate normal), which results in higher emission factors compared to warmer temperatures at other times of year. This is done to ensure that reasonable worst-case emissions are considered in the study.

Exhaust emissions vary widely by type of vehicle; MOVES provides emission factors for thirteen vehicle types. Four of these vehicle types were used for this assessment: passenger cars (light), light commercial trucks (medium), combination long haul trucks (heavy), and single unit short haul trucks (triale). Emission factors were applied to roadway segments based on the vehicle types on that roadway. For roadways with mixed vehicle fleets an aggregate emission rate was determined, using the weighted average of each vehicle type to produce a composite emission factor for each pollutant.

For the landfill operations, tractor trailers and triaxle trucks make up the majority of the landfill traffic. For the purposes of calculating tailpipe emissions, landfill vehicle distribution was assumed to be a mix of 50% combination long haul trucks (heavy) and 50% single unit short haul trucks (triale).



For the purposes of this assessment the quarry and overburden removal vehicles were modelled as off-highway vehicles and emissions were based on typical quarry equipment horsepower observed while onsite. Details on emission calculations from off-highway vehicles are provided in section 7.4.8. The north and south entrances were modelled as heavy and triaxle trucks, respectively.

For background traffic on CR6, an aggregate tailpipe emission rate was created based on a weighted average of light, medium and heavy vehicles. **Table 9** outlines the vehicle class distribution used to determine the aggregated emission rate and the corresponding MOVES 2014b vehicle class.

**Table 9:** Summary of County Road 6 Traffic Distribution

Vehicle Class	Percentage of Traffic
Light	63%
Medium	10%
Heavy	27%

#### 7.4.1.7 Composite Emission Rates

A gram per second (g/s) emission rate was calculated for each hour of the day for each roadway segment. This emission rate is based on the re-entrained road particulate matter emission factor calculated using AP-42 combined with the tailpipe emission factor developed using MOVES as well as the length of the roadway segment and the number of vehicles travelling upon it. The emission rate calculations for each roadway segment are presented in **Appendix C**. Roadways were modelled as line volume sources, meaning that the roadway segments were broken up into a number of volume sources. The emission rate calculations consider a single vehicle travelling across the entire length of the roadway segment. The single-vehicle emission rate is then multiplied by the number of vehicles travelling along the roadway over each hour of the day to develop hourly emission rates based on all traffic.

Please refer to **Appendix C** for full details on the roadway emissions calculations for on-site and off-site haul routes.

## 7.4.2 Idling Emissions

Idling emissions were calculated based on MOVES, as outlined in section 7.4.1. Idling was simulated by entering a vehicle speed of 0 km/hr into the MOVES run. MOVES provides a gram/hour emission factor during idling. For the purposes of the dust assessment, two waste trucks were assumed to be idling at the weigh scale and two waste trucks were assumed to be idling at the active face constantly over the entire operating day for the landfill.

Further details are provided in **Appendix C**.



### **7.4.3 Material Handling**

Estimates of the particulate matter emission rates from material handling during landfilling and construction operations were obtained using the United States Environmental Protection Agency AP-42 document, Chapter 13.2.4. This document provides a reasonable general estimate of emission rates in dry conditions. Material handling occurs at both the landfill and Carmeuse operations.

The required inputs into the AP-42 material handling equation are mean wind speed and moisture content of the material handled. An hourly emission rates file was generated using the hourly wind speed recorded in the London Airport meteorological data file, corresponding to the years of meteorological data modelled (see Section 7.5.2). This hourly emission rate file calculates a separate emission rate for each hour in the meteorological file. For landfill sources, an 11% moisture content was assumed for the material handled, based on the mean moisture content for “miscellaneous fill materials” from AP-42, while for Carmeuse, the moisture content was assumed to be 2.1%, based on the AP-42 value for “various limestone products”.

In addition to these inputs, the AP-42 equation requires the use of a “k” factor, adjusts the equation to represent the various particle sizes (TSP, PM<sub>10</sub>, and PM<sub>2.5</sub>). However, the maximum “k” factor published in AP-42 Chapter 13.2.4 is 0.74, which is representative of PM<sub>30</sub>. In Ontario, TSP is defined as PM<sub>44</sub>; therefore, the AP-42 “k” factor for TSP (PM<sub>44</sub>) scaled up logarithmically to 0.8 from the published k-factor of 0.74 which refers to PM<sub>30</sub>.

Material handling was assumed to occur only during the landfill and Carmeuse hours of operation; therefore, material handling emissions were only calculated between the following hours and were turned off for all other times:

- Landfill waste soil drop-off at waste soil pile – 7 am to 5 pm;
- Landfill construction material handling, including overburden handling – 7 am to 5 pm;
- Landfill transfer of material from the waste soil to the active face for daily cover – 5 pm to 7 pm; and
- Carmeuse material handling – 6 am to 4 pm.

The AP-42 calculations provide an emission factor in terms of kilogram of emissions per tonne of material handled. Hourly material handling rates for the landfill were based on the quantity of material received, assumed using the daily number of waste soil trucks and construction material trucks and their capacity. The amount of daily cover handled each day was assumed based on operations at the Walker South landfill. Hourly material handling rates for the Carmeuse sources were based on material handling rates in the ESDM tables provided for all sources, with the exception of overburden, which was calculated based on reasonable worst-case overburden handling rates as outlined in Section 7.4.1.2.1.



As a conservative approach, dry conditions were assumed for the entire modelling period and no control was applied to the calculated material handling emissions from the landfill. Some Carmeuse material handling emissions had control factors applied, as per the Carmeuse ESDM tables provided August 2019.

Further details regarding the material handling emission calculations and excerpts of the hourly emission rate files can be found in **Appendix D**.

#### **7.4.4 Wind Erosion**

Dust emissions from wind erosion are highly dependent on the physical characteristics of the surface being eroded, the magnitude of the wind, and the exposure of the surface to the wind. Wind erosion will cause both fine and sand sized particles to become airborne, but the fine particles are of greatest importance since they can travel much further from the site. One of the better compilations of field data on fine particulate matter emissions from wind erosion is by Nickling and Gillies. Their data were derived from desert soils and, therefore, represent conservative estimates of particulate matter emissions from wind erosion.

Nickling and Gillies investigated a variety of soils and developed an equation that gives an estimate of the particulate matter emission rate per unit area of exposed surface as a function of the wind drag force on the surface. This equation was used in the present analysis to estimate wind erosion emissions from the exposed areas and outdoor stockpiles at the landfill and Carmeuse.

The Nickling and Gillies wind erosion equation calculates the shear velocity ( $U_*$ ). The shear velocity is a measure of wind shear stress on the erodible surface, and it can be related to wind speed by assuming a logarithmic distribution for the wind speed profile. This flux rate equation was only applied under conditions when the wind speed was greater than a threshold velocity of 7.3 m/s. This threshold wind velocity was conservatively assumed to be the minimum required for wind erosion from a construction site tested in the Nickling and Gillies study, which is assumed to have similar characteristics to that of a landfill.

As the wind speed increases, the emission rate from exposed areas also increases. For the Nickling and Gillies approach, a threshold wind speed of 7.3 m/s was assumed, below which the wind is insufficiently strong to erode particulate from the exposed surface. A speed-up factor was applied to the measured wind speed, increasing it by 1.16 times in order to account for the increase in wind speed that occurs as the wind travels over a hill, in this case, the landfill mound. This speed up factor was developed based on guidance provided in the National Building Code of Canada and an assumed 4:1 slope of the landfill mound. When adjusted for the speed-up factor, the threshold wind speed becomes 6.3 m/s (7.3 m/s divided by 1.16).

Wind erosion occurs when fine particulate matter is present on the exposed areas and subjected to high wind speeds. Once the fine particulate has been removed from a surface through wind erosion, that surface is typically not subject to wind erosion until it is disturbed and fresh fine particulate matter is present at the exposed surface again.

At the proposed landfill, the exposed areas subject to wind erosion were assumed to be as follows:

- The waste soil stockpile, with a typical disturbed area of 2,500 m<sup>2</sup>,
- The clay storage pile, with a typical disturbed area of 1,000 m<sup>2</sup>,
- The landfill interim cover area, with a typical disturbed area of 4,000 m<sup>2</sup>,
- The construction area, with a conservative disturbed area of 75,000 m<sup>2</sup>.

In addition, Carmeuse includes some outdoor stockpiles of material subject to wind erosion, including the surge pile, coal storage pile, and various stockpiles of processed aggregate material.

Since wind erosion emissions are dependent on wind speed, an hourly emission rates file was generated using the hourly wind speed recorded in the London Airport meteorological data file, corresponding to the years of meteorological data modelled (see Section 7.5.2). This hourly emission rate file calculates a separate emission rate for each hour in the meteorological file.

As rainfall occurs, the moisture content in the soil is increased to such levels where soil particles hold water by adhesion and therefore are bound to other soil particles, resulting in limited occurrence of wind erosion. As snowfall occurs and covers the ground, the loose soil particles are no longer exposed and cannot be carried by the wind. However, as a conservative approach, dry conditions were assumed for the entire modelling period and no control was applied to the calculated wind erosion emissions.

Excerpts of the hourly emission rate files can be found in **Appendix D** (combined with material handling). Wind erosion emission calculations can be found in **Appendix D**.

### **7.4.5 Landfill Gas Flare**

All collected landfill gas is sent to the flare, where it is combusted. Combustion by-products, including particulate matter, are emitted during flare operation. Emission factors for landfill gas combustion are provided in the US EPA AP-42 guidance document, Chapter 2.4. In this chapter, emission factors are presented in kilograms of emission per million dry standard cubic metres of methane gas. Emission calculations conservatively used total landfill gas collected, not total methane, when determining emissions of combustion byproducts for each study period.

Please refer to **Appendix C** for full details on the emission calculations for the flare.



### 7.4.6 Carmeuse Processing Sources

Emissions and source parameters from the Carmeuse kilns, baghouses, and other process sources were obtained from Emission Summary and Dispersion Modelling Report tables dated January 13, 2017 provided by Carmeuse August 15, 2019. The source information was taken directly from these tables, with no alterations made by RWDI. A copy of the Carmeuse Source Summary Table is provided in **Appendix E**.

The particulate emissions presented in the Source Summary Table are for the TSP size fraction only. In order to include these sources in the assessment for PM<sub>10</sub> and PM<sub>2.5</sub>, emissions for the smaller size fractions were calculated from the TSP size fraction, based on AP-42 data and RWDI’s experience at other facilities.

### 7.4.7 Carmeuse Blasting

In addition to the processing sources, blasting emissions at the quarry working face were also considered. The blasting emissions had not previously been included in the Carmeuse summary tables. Blasting emissions were calculated based on emission factors from AP-42 Chapter 11.9 with the typical blast area and frequency of blasting provided through discussions with Carmeuse. Although blasting occurs typically once every 10 days, for the purposes of the assessment, blasting was assumed to occur on a daily basis. The blasting was assumed to take place between 12 and 1 pm.

Further details are provided in **Appendix D**.

### 7.4.8 Working Face Equipment, Constructions Equipment, and Off-Highway Trucks

Tailpipe emissions from the landfill working face equipment, construction equipment, and off-highway trucks were estimated using MOVES 2014b. MOVES 2014b has the ability to predict tailpipe emissions from non-road equipment for the specified sector and fuel type. **Table 10** provides the non-roads parameters used in MOVES 2014b.

**Table 10:** Non-Roads MOVES 2014b Input Parameters

Input Parameter	Value
Pollutants	Toluene, Formaldehyde, Benzene, SO <sub>2</sub> , CO, NO <sub>2</sub> , and B(a)P
Operating Years	2027 and 2037
Evaluation Month	January
Region	National
Fuel Type	Non-Road Diesel
Sectors	Construction and Industrial





Emission rates are generated in terms of equipment horsepower and equipment process. For this assessment only emissions from the running engine exhaust were considered. A summary of the MOVES 2014b outputs is provided in **Appendix C**.

Working face equipment is detailed in Section 3.10 of the Walker’s Environmental Facility Characteristics Assumptions Report, revision 03. Construction equipment estimates were provided by Walker’s Environmental. The horsepower ratings of the equipment were based on equipment used at Walker’s South Landfill. The horsepower and quantity of off-highway trucks was based on the typical quarry equipment as observed onsite. Off-highway trucks are used by the existing Carmeuse operation for overburden removal and quarry material transport. **Table 11** outlines the type, number and horsepower of the equipment used in this assessment.

**Table 11: Non-Roads Equipment Summary**

Activity	Equipment Type	MOVES Equipment ID	Horsepower (Hp)	Number of Units
<b>Working Face</b>	Bulldozer	Crawler	347	2
	Excavator	Excavator	303	1
	Compactor	Crawler	523	5
<b>Liner Construction</b>	Bulldozer	Crawler	347	2
	Excavator	Excavator	303	1
	Compactor	Crawler	523	2
	Loader	Tractors/Loaders/Backhoes	380	1
<b>Overburden Removal</b>	Off-Highway Trucks	Off-Highway Trucks	825	3
<b>Quarry Material Hauling</b>	Off-Highway Trucks	Off-Highway Trucks	825	3

All equipment was assumed to be operating simultaneously for the entire operating period of the landfill (0700 – 1900). Tailpipe emissions from the working face equipment, construction equipment, and off-highway trucks are summarized in **Appendix C**.

## 7.5 Dispersion Modelling

The dust impacts from the proposed landfill operations were determined using a dispersion model and reasonable worst-case emission rates. Dispersion modelling was performed using the U.S. EPA’s AERMOD dispersion model (AERMOD) to predict concentrations of dust emitted from the landfill operations as well as baseline operations (Carmeuse + background traffic on CR6) at various receptors in the vicinity. The AERMOD model is an advanced dispersion model that has been approved for use in Ontario by the MECP. AERMOD is a steady-state Gaussian model that is capable of handling multiple emission sources. Within the model, receptor grids as well as discrete receptor locations of interest can be considered. The modelling assessment was conducted in accordance with MECP Guideline A11: “Air Dispersion Modelling Guideline for Ontario”, February 2017.

For the purposes of this assessment, the particle deposition and plume depletion algorithms in AERMOD model was used in the dust assessment. Only the dry deposition and dry depletion algorithms were used. These algorithms, originally developed by Argonne National Laboratory (ANL) for use with the ISC3 model, have been adapted by the EPA for use in AERMOD. The use of these algorithms allows for the model to output particle deposition results, which were used to assess dustfall impacts.

Additional elements of the dispersion modelling assessment are discussed in the following sections.

### **7.5.1 Sources Modelled**

The sources included in the dispersion model were the on-site and off-site haul routes, idling vehicles, material handling, wind erosion, the landfill gas flare, the Carmeuse kilns and other processing sources, and blasting. The roadway sources were modelled as line volume sources; the material handling and blasting were modelled as individual volume sources; the flare, kilns, baghouses, and other Carmeuse processing sources were modelled as point sources; while the wind erosion sources were modelled as area sources. Many of the landfilling and quarry operations will move throughout the site over the course of the landfill life; however, all sources were modelled in their potential worst-case locations during each landfill stage. All modelled sources were assumed to emit reasonable worst-case emissions concurrently throughout the entire modelled period, with the exception of the material handling and wind erosion sources, where emissions varied hourly depending on the wind speed in the meteorological data file.

For the majority of the landfill life, landfilling operations will be occurring below grade although the final landfill mound will extend 15 m above grade. Sensitivity testing was conducted with landfill sources at grade, as well as at elevated heights of 15 m (top of landfill mound above grade) and 7.5 m (mid-height of landfill mound). The worst-case results occurred with the landfill at grade, so all landfill sources were modelled at grade. Landfill construction activities will be occurring at the base on the landfill, well below grade. Therefore; construction activities were modelled below grade.

The locations of all modelled sources are shown in **Figures 8** through **10** for the existing baseline, future 2027, and future 2037 time periods. A summary of modelled source parameters is presented in **Appendix F**.

### **7.5.2 Meteorological Data**

Five years of local meteorological data (2013-2017) were used in the AERMOD model. The meteorological data set was developed by the MECP's Environmental Monitoring and Reporting Branch (EMRB) and provided on January 21, 2019. The data set was based on wind-sector dependent land use specific to the landfill site, surface meteorological data collected from Environment and Climate Change Canada's London Airport station, and upper air meteorological data from the U.S. National

Weather Service's Detroit station. The data set provided by the EMBR was used directly in the model, with no changes or alterations conducted by RWDI.

### **7.5.3 Area of Modelling**

All common receptor points identified for the EA were included in this study, however, only receptors representing residential locations or other locations where human activity regularly occurs were used to assess compliance with the criteria. For all cases, humans were assumed to be present at these receptors for 24-hours per day. These discrete receptors were modelled at flagpole heights of 1.5 m above grade. The locations of these discrete receptors are shown on **Figure 7**.

In addition, the modelling was performed using a receptor grid covering the Site-Vicinity and Regional study areas to produce isopleths of predicted concentrations. The receptor grid covers the lands within approximately 3 to 5 kilometers from the proposed landfill site. The property line considered in the model included the proposed landfill facility as well as the Carmeuse site.

### **7.5.4 Terrain data**

Terrain information for the area surrounding the proposed landfill was obtained from the MECP Ontario Digital Elevation Model Data web site. The terrain data is based on the North American Datum 1983 (NAD83) horizontal reference datum. These data were run through the AERMAP terrain pre-processor to estimate base elevations for receptors and to help the model account for changes in elevation of the surrounding terrain.

The base elevations for the landfill sources were based on elevation drawings from the FCA report. The base elevations for the quarry extraction sources were obtained from figures provided by Carmeuse.

### **7.5.5 Building Information**

The Building Profile Input Program (BPIP) is used to calculate the effects of building downwash on point sources, such as stacks. The proposed leachate building, scale house, and maintenance shed, as well as existing Carmeuse buildings were included in the modelling, as these structures have the potential to affect emissions from the landfill flare and the Carmeuse kiln and baghouses. The BPIP model was run prior to running the AERMOD model in order to incorporate the potential building downwash effects.

The potential building downwash effects were only evaluated for the point sources within the dispersion model. Although the landfill mound may be considered as a "structure", dispersion modelling tests completed by RWDI for a different landfill facility found that the effects of mound downwash have insignificant impacts on the maximum off-site concentrations. The effects of the mound downwash are insignificant as the sloping features of the mound do not act as a solid block building.

### **7.5.6 Averaging Periods Used**

Emissions were modelled for 24-hour, 30-day, and annual averaging times, to correspond with the criteria for the various compounds, as listed in **Table 3**.

### **7.5.7 Particle Deposition and Plume Depletion**

Particulate matter plumes differ from gaseous plumes in that the particles can settle out due to gravity. Heavier particles will tend to settle out quickly, reducing the particulate concentration in the plume as it moves farther from the source. The AERMOD model allows the user to account for this settling through the use of deposition and plume depletion algorithms. The deposition results that are produced by the model represent the deposition flux rate, in grams per square metre ( $\text{g}/\text{m}^2$ ). With the deposition algorithm, the model does not reduce the plume size by the deposition flux rate; it merely predicts the amount of deposition that could occur from the plume at any receptor point. In order to decrease the plume by the deposited amount, the plume depletion algorithm must also be activated. For the purposes of this assessment, only the effects of dry deposition and dry plume depletion were considered.

This methodology of using dry deposition and dry plume depletion for ground-based fugitive emissions has been historically accepted by the MECP for the assessment of particulate matter emissions from landfills and quarries as part of the EA processes. The use of dry deposition and dry plume depletion algorithms were discussed with Mallory Jutzi from the EMRB.

In order to apply the deposition and depletion parameters, the modelling requires additional inputs; namely particle size ranges, mass fractions within each particle size category, and the density of the material. As requested by the MECP, surface samples from paved and unpaved roadways at the Carmeuse site as well as samples of overburden material from the Carmeuse site were collected and used to determine particle size distributions for use in the modelling. For other sources, default particle size data were derived from AP-42 or other references. The site-specific samples collected had a greater percentage of fine material, relative to AP-42 derived values, therefore, the use of the site-specific data represents a conservative approach. Further details regarding the particle size sampling are described in Section 8.2.

Additional details regarding the deposition parameters used in the assessment are provided in **Appendix G**.

### **7.5.8 Variable Emissions**

As mentioned in the emission rate development section, many sources were not constantly emitting particulate. All on-site haul routes and material handling sources were varied by the hour of day. These sources were assumed to be emitting while the facility was in operation and not emitting during other hours. In addition, the blasting source was assumed to be emitting for one hour, between noon and 1 pm, and not emitting during other hours. For the off-site haul route, CR6, variable emissions by





hour-of-day were used to adjust the emissions over the course of the day to reflect typical traffic patterns.

The variation in emissions throughout the day was accounted for using either the variable emission by hour-of-day portion of AERMOD (for on-site haul routes, blasting, and the off-site haul route) or an hourly emission file (for material handling). In addition, the material handling emissions were variable depending on the wind speed over each hour of the day. This was also accounted for through the use of the hourly emission file.

The wind erosion emissions, on the other hand, could occur at any time throughout the day or night. Wind erosion emissions occur when corrected wind speeds (accounting for the speed up factor) was above a threshold velocity of 6.3 m/s. As the wind speed increased, the emission rate from wind erosion would also increase. The variation of wind erosion emissions by wind speed was accounted for through the use of the hourly emission file.

The point source emissions from the landfill gas flare, Carmeuse kilns and processing sources were conservatively assumed to occur 24 hours per day, 365 days per year.

## 8 DATA COLLECTION

### 8.1 Background Data

#### 8.1.1 Proposed Landfill Sources

Data pertaining to the design and operation for the proposed landfill were predominantly obtained from the Walker Environmental Group Inc.'s Southwestern Landfill Environmental Assessment Facility Characteristics Assumptions Report (FCA), Revision 3, March 5, 2019 (now incorporated into the accompanying *Environmental Assessment Report*, Section 7.2). When specific data were not available from the FCA, reasonable assumptions were made in consultation with Walker staff. Where possible, any assumptions made were based on current operations at the Walker South Landfill in Niagara Falls, Ontario.

#### 8.1.2 Carmeuse Sources

Source information for Carmeuse operations were obtained from an Emission Summary and Dispersion modelling report conducted by Stantec (Stantec, 2010), with updated ESDM tables dated January 13, 2017. This information was used as input information for the Carmeuse Kiln, processing, and material handling sources. The data from these tables were used as is and no changes were made by RWDI.



Additional information on the Carmeuse operations was gathered through a site visit on August 1, 2019 as well as additional discussions and correspondence with Carmeuse staff. This information was used to quantify emissions for additional dust sources at Carmeuse, which were not included in the facility's ESDM report, such as vehicles on on-site and off-site haul routes, wind erosion sources, and blasting.

## 8.2 Field Data

### 8.2.1 Ambient Dust Monitoring

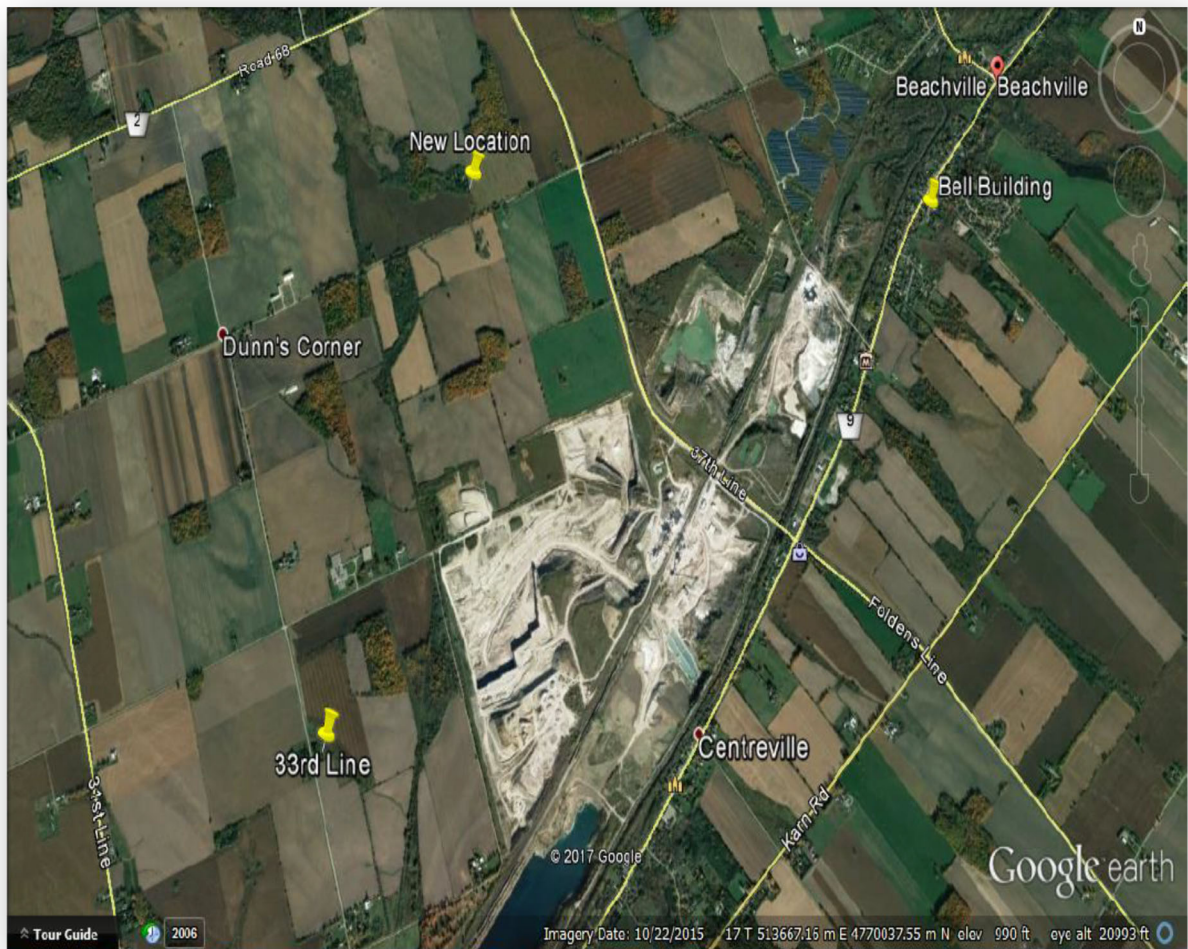
Historically, the area surrounding this proposed waste disposal facility has been monitored for particulate matter. The MECP currently operates four stations as outlined below in **Table 12**.



As discussed with the MECP, additional data was required for the various particulate evaluated under this project. The following parameters were added to the current MECP monitoring stations.

**Table 13:** MECP Stations and RWDI Monitoring Program

Station Number	Station Address	MECP Parameters	RWDI Additional Parameters
<b>17006/17506</b>	584454 Beachville Road West	TSP, PM <sub>10</sub> (including metals in PM <sub>10</sub> ), Meteorological Station	PM <sub>2.5</sub>
<b>17026</b>	334652 33 <sup>rd</sup> Line	TSP	PM <sub>10</sub> and PM <sub>2.5</sub>
<b>Carmeuse Property</b>	Road 66 and 37 <sup>th</sup> Line	None	TSP, PM <sub>10</sub> and PM <sub>2.5</sub>



**Figure 12:** RWDI Ambient Monitoring Locations





The ambient monitoring for particulate consisted of 24-hour duration samples (midnight to midnight, Eastern Standard Time, once every six days in concurrence with the National Air Pollution Surveillance (NAPS) and Environment and Climate Change Canada schedule. Therefore, the MECP samplers and the RWDI samplers operated concurrently. The monitoring program had a 1-year duration.

The samples were collected using General Metal Works standard High-Volume air samplers outfitted accordingly with PM<sub>10</sub> and PM<sub>2.5</sub> inlet heads. The sampling was completed according to the Operations Manual published by the MECP. When the sampling equipment was selected, priority was given to maintaining similar monitoring techniques as the MECP had historically been operating at the monitoring stations. This allowed for a direct comparison of the particulate fractions as well as a direct comparison for the data collected during this program to the MECP historical data.

The filter material consisted of Glass Fibre filters that were supplied and conditioned, including pre- and post-weighting, by an accredited laboratory. The filters were stored and analyzed in monthly batches during the 1-year program.

Further details are provided in the Southwestern Landfill Environmental Assessment Air Quality Monitoring Reports (Q2 2018 through Q1 & Q2 2019), RWDI.

A summary of the monitoring data results is provided in **Appendix H**.

#### *8.2.1.1 Particle Size Sampling*

Sampling was conducted to determine site-specific particle size information for on-site paved and unpaved roads as well as native soils for material handling, as requested by the MECP. RWDI staff collected the samples from the Carmeuse facility on August 1, 2019. The weather was clear, and conditions were dry during the sampling; no significant rainfall had occurred within the previous 48 hours.

Samples were collected using the U.S. EPA method outlined in the document "Appendix C-1 Procedure for Sampling Surface / Bulk Dust Loading". Three clod samples of the soils at the site were collected for particle size analysis to replace the U.S. EPA default values in the dispersion model, as requested by the MECP. In addition, two samples of surface material from roadway sweepings on paved roads and four samples of surface material from unpaved roads at the facility were also collected at the time and submitted for particle size analysis.

The laboratory results were used to develop particle size ranges and mass fractions for use in the AERMOD modelling. For unpaved roads and soils, values were taken directly from the laboratory results. For the paved road samples, the laboratory results had gaps and some sample noise, as indicated by laboratory staff. The paved road deposition parameters were calculated by fitting a curve to the available data to interpolate the missing values. Overall, the paved road samples resulted in a very high percentage of small particulate (in the PM<sub>2.5</sub> range), while the unpaved road and soil samples also resulted in increased quantities of small particulate relative to generic values. Using the site-specific deposition parameters results in more conservative modelled concentrations, when compared to the use of generic AP-42 based deposition parameters, since finer material will take longer to settle out of the plume and thus predicted off-site concentrations would be higher.

In addition, the on-site paved and unpaved roadway samples were used to replace generic AP-42 silt loading and silt content values for the calculation of roadway emissions.

## 9 ENVIRONMENT POTENTIALLY AFFECTED BY THE UNDERTAKING

Section 6.1(2)(c)(i) of the Act requires a “description of the environment that will be affected or might reasonably be expected to be affected, directly or indirectly”. Section 8.2 of the ToR describes the methodology by which the environment potentially affected by the proposed landfill is to be developed, notably including both the existing environment as well as the environment that would be expected to exist in the future without the proposed undertaking (i.e., the environmental baseline conditions, or the “do nothing” alternative).

### 9.1 Baseline Assumptions

#### 9.1.1 Land Use Forecast

A common set of assumptions were provided by MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) on behalf of Walker regarding the forecast land uses in the area, so that this study could reflect any reasonably foreseeable changes in the uses of the land on and around the proposed landfill site (including the expected ongoing operation of the quarries and lime plants in the vicinity of the site). These assumptions are detailed in Walker’s Environmental Assessment Report, while a brief summary of the aspects relevant to this study follows.



In order to address cumulative effects, in accordance with the methodology set out in Section 8.2 of the Approved Amended Terms of Reference, this study will compare the potential effects of the proposed landfill at its different stages of development to the forecast baseline conditions at that same period (i.e., the “do nothing” alternative). In order to guide the forecasting of future baseline conditions, MHBC has provided a set of working assumptions regarding future land uses (including community growth, other industrial activities such as quarrying, etc.) at the site, in the surrounding area and in the broader community (*Land Use Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January 2020).

- Existing Conditions (Section 4.0);
- Aggregate Operations (Section 5.0); and
- Land Use Forecast (Section 6.0).

### 9.1.2 Climate Change Forecast

Another set of common assumptions that were established for the purpose of this EA is the potential for climate change, so that these could be considered in the individual studies of the potential effects of the proposed landfill. These assumptions are detailed in Walker’s Environmental Assessment Report and basically adopt the guidance in the Ontario Ministry of Natural Resources and Forestry’s Climate change projections for Ontario: An updated synthesis for policymakers and planners.

Minister’s amendment #12 to the Approved Amended Terms of Reference required that climate change should be considered in this environmental assessment. The following table summarizes the mean climate change (temperature and precipitation) assumptions to be considered during this study, where relevant.

**Table 14:** Climate Change Forecast

	Temperature (°C)			Precipitation (mm)		
	Annual	Summer	Winter	Annual	Summer	Winter
<b>2011-2040</b>	+2.3	+2.0	+2.2	+52.0	-2.7	+28.3
<b>2041-2070</b>	+3.9	+3.2	+4.5	+87.0	-2.5	+34.9
<b>2071-2100+</b>	+4.8	+4.1	+5.5	+89.0	-4.4	+46.8

**Source:** McDermid, J., S. Fera and A. Hogg. 2015. Climate change projections for Ontario: An updated synthesis for policymakers and planners. Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, Ontario. Climate Change Research Report CCRR-44.

The Ministry of Natural Resources and Forestry document from which the data is sourced, includes other information that can be used if and where appropriate in this and other studies.



The modelling considers a five-year set of hourly meteorological data. Predicted impacts are based on the worst-case conditions within this data set. Furthermore, as a conservative approach, the particulate assessment did not consider the effects of precipitation. The future wind climate and meteorological conditions are not expected to change to a degree that would affect the particulate assessment.

## 9.2 Environmental Baseline Conditions

### 9.2.1 Existing Conditions

The existing conditions in the vicinity of the proposed landfill have been assessed through the ambient monitoring program, as described in Section 8.2.1. In addition, the existing Carmeuse operation and the existing background traffic levels along the off-site haul route CR6 were included in the modelling of the baseline (existing conditions) scenario.

Since the Carmeuse facility and background traffic on CR6 would influence the measured dust concentrations at the ambient monitoring stations, combining the baseline modelling results with the ambient background monitoring results could potentially lead to double counting, and an over prediction of baseline impacts. For this reason, the ambient monitoring results were reviewed along with the corresponding wind rose for the sampling period to determine which of the three monitoring locations was upwind of the Carmeuse operations and CR6 haul route for each sample day. The upwind station was not a fixed location; any of the three monitoring stations could become the upwind station on a given day, depending on wind conditions during the sample period. Only the upwind sample results were used to develop the background ambient concentrations that were applied to the modelled results.

For the 24-hour averaging period, the background ambient concentration was calculated as the 90<sup>th</sup> percentile of the 24-hour monitoring results across the upwind samples from the three monitoring stations. For the annual averaging period, the average of the 24-hour monitoring results from the upwind stations was used. Where sample results were found to be below the laboratory detection limit, a value representing half the detection limit was used in the calculation.

A summary of the ambient monitoring data is provided in **Appendix H**.





For the assessment of existing baseline conditions, the upwind ambient monitoring results were added to the maximum modelled concentration, resulting from modelling the Carmeuse and CR6 traffic sources. The dispersion modelling analysis was completed for each contaminant at each of the identified air quality receptors. Some of the receptors represented residential locations, while others represented other key points of interest, such as intersections, wetlands, etc. Some of these non-residential receptors often have residences in the vicinity, so they have been included in the modelling. The results for all modelled receptors for each contaminant for each scenario are presented in **Appendix I**. The maximum predicted concentration occurring at the worst-case residential receptor for the existing baseline scenario are presented in **Table 15**.

**Table 15:** Existing Conditions (2019) Model Results - Maximum Residential Receptor

Contaminant	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
TSP	120	24	44.0	136.2	180.2	150%	SWO-4
	60	Annual	19.3	20.5	39.8	66%	SWO-4
PM10	50	24	16.0	28.3	44.3	89%	SWO-4
PM2.5	25	24	11.0	5.4	16.4	66%	SWO-4
	8.8	Annual	2.9	0.8	3.8	43%	SWO-4
Dustfall	7	30-day	0.0	1.1	1.1	16%	SWO-4
	4.6	Annual	0.0	1.1	1.1	25%	SWO-4

**Notes:** [1] Ambient background concentration based on upwind ambient monitoring results.  
[2] Maximum modelled concentration based on background sources.

The results indicate that the following contaminants exceed the applicable criteria at a residential receptor off-site:

- TSP – 24-hour.

The results at the top 10 residential discrete receptors are summarized for this contaminant in **Table 16**, below. Although the maximum predicted concentrations are showing some exceedances, the frequency of exceedance is very low. **Table 16** also indicates the frequency of predicted exceedances of the criteria, based on modelling over the 5-year period. These frequencies are based on a conservative model, which assumes worst-case operations and dry conditions occurring in worst-case locations every day for the 5-year modelled period, which is not possible.



**Table 16:** Maximum Concentrations at Top 10 Residential Receptors – 24-hour TSP – Existing Conditions (2019)

Rank	Criteria (ug m <sup>-3</sup> )	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Receptor ID	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Frequency of Exceedance (%)	Exceedences Per Year
1	120	44.00	SWO-4	136.2	180.2	150%	0.028%	2.4
2	120	44.00	SWO-18	120.3	164.3	137%	0.016%	1.4
3	120	44.00	SWO-19	91.8	135.8	113%	0.021%	1.8
4	120	44.00	SWO-3	49.3	93.3	78%	0%	0
5	120	44.00	SWO-5	46.0	90.0	75%	0%	0
6	120	44.00	ZOR-9	45.7	89.7	75%	0%	0
7	120	44.00	SWO-1	43.5	87.5	73%	0%	0
8	120	44.00	SWO-17	42.1	86.1	72%	0%	0
9	120	44.00	SWO-2	39.2	83.2	69%	0%	0
10	120	44.00	SWO-13	34.8	78.8	66%	0%	0

**Notes:** [1] Ambient background concentration based on upwind ambient monitoring results.  
[2] Maximum modelled concentration based on background sources.

For 24-hour TSP, the maximum predicted concentration exceeds the AAQC at receptors SWO-4, SWO-18, and SWO-19, which represent residences at the intersections along CR6. The exceedences are largely driven by contributions from the background traffic along CR6. It is important to note that all three of these receptors are positioned in the middle of intersections along CR6, as such, they are very close to the emission source of vehicles travelling along the off-site haul route. Emissions drop off relatively quickly as one moves away from the source of emissions, therefore, predicted concentrations at residences set back from the end of the roadway will likely be significantly lower than those predicted in the center of the road.

The maximum concentrations at SWO-4, SWO-8 and SWO-19 are predicted to exceed criteria when considering only ambient background and background CR-6 traffic. Carmeuse's contribution is low relative to the contribution from these other sources. All predicted concentrations based on Carmeuse alone are well below criteria.

As shown in **Table 16**, the overall frequencies of exceedence are low.



## 9.2.2 Future Baseline Conditions

Future baseline conditions assume the landfill is not present. As with the existing baseline conditions scenario, the future baseline assessment included the combined contributions from the upwind ambient monitoring and the modelled Carmeuse and CR6 traffic sources. The future baseline conditions were assessed for the horizon years of 2027 and 2037, to match the periods modelled for landfill operation.

Future Carmeuse operations are assumed to be consistent with current operations, however, the location of the quarry extraction face and overburden stockpile move over time. For CR6 traffic, the future traffic volumes for 2033 were used for both horizon years.

**Table 17:** Future Baseline (2027) Model Results - Maximum Residential Receptor

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
TSP	TSP	120	24	44.0	163.3	207.3	173%	SWO-4
		60	Annual	19.3	23.6	42.9	71%	SWO-4
PM10	PM10	50	24	16.0	35.7	51.7	103%	SWO-4
PM2.5	PM2.5	25	24	11.0	7.5	18.5	74%	SWO-4
		8.8	Annual	2.9	1.1	4.0	46%	SWO-4
Dustfall	Dustfall	7	30-day	0.0	1.3	1.3	19%	SWO-4
		4.6	Annual	0.0	1.3	1.3	29%	SWO-4

**Notes:** [1] Background concentration based on upwind ambient monitoring results.  
[2] Maximum modelled concentration based on background sources.



**Table 18:** Future Baseline (2037) Model Results - Maximum Residential Receptor

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
TSP	TSP	120	24	44.0	170.7	214.7	179%	SWO-4
		60	Annual	19.3	23.9	43.1	72%	SWO-4
PM10	PM10	50	24	16.0	33.2	49.2	99%	SWO-4
PM2.5	PM2.5	25	24	11.0	7.2	18.2	73%	SWO-4
		8.8	Annual	2.9	1.0	4.0	45%	SWO-4
Dustfall	Dustfall	7	30-day	0.0	1.3	1.3	19%	SWO-4
		4.6	Annual	0.0	1.3	1.3	29%	SWO-4

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on background sources.

**Table 19:** Maximum Concentrations at Top 10 Residential Receptors – 24-hour TSP – Future Baseline (2027 and 2037)

Rank	Criteria (ug m <sup>-3</sup> )	Ambient Background Concentration (ug m <sup>-3</sup> )	Receptor ID	Stage 1 (2023-2027)			Receptor ID	Stage 3 (2033-2037)		
				Without Landfill				Without Landfill		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	120	44.0	SWO-4	163.3	207.3	173%	SWO-4	170.7	214.7	179%
2	120	44.0	SWO-18	147.4	191.4	160%	SWO-18	149.0	193.0	161%
3	120	44.0	SWO-19	103.7	147.7	123%	SWO-19	107.8	151.8	126%
4	120	44.0	SWO-3	68.3	112.3	94%	SWO-3	81.4	125.4	104%
5	120	44.0	SWO-17	51.9	95.9	80%	SWO-14	54.5	98.5	82%
6	120	44.0	SWO-5	49.1	93.1	78%	SWO-5	54.1	98.1	82%
7	120	44.0	SWO-2	46.3	90.3	75%	SWO-15	52.7	96.7	81%
8	120	44.0	ZOR-9	41.7	85.7	71%	SWO-17	51.2	95.2	79%
9	120	44.0	SWO-13	37.8	81.8	68%	ZOR-6	48.7	92.7	77%
10	120	44.0	SWO-14	37.0	81.0	68%	SWO-2	47.0	91.0	76%





**Table 20:** Maximum Concentrations at Top 10 Residential Receptors – 24-hour PM<sub>10</sub> – Future Baseline (2027 and 2037)

Rank	Criteria (ug m <sup>-3</sup> )	Background Concentration (ug m <sup>-3</sup> )	Receptor ID	Stage 1 (2023-2027)			Receptor ID	Stage 3 (2033-2037)		
				Future Baseline (Without Landfill)				Future Baseline (Without Landfill)		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	50	16.0	SWO-4	35.7	51.7	103%	SWO-4	33.3	49.3	99%
2	50	16.0	SWO-3	22.6	38.6	77%	SWO-3	26.8	42.8	86%
3	50	16.0	SWO-18	22.5	38.5	77%	SWO-18	22.9	38.9	78%
4	50	16.0	SWO-19	16.4	32.4	65%	ZOR-6	17.4	33.4	67%
5	50	16.0	ZOR-9	15.5	31.5	63%	SWO-2	17.1	33.1	66%
6	50	16.0	SWO-2	14.9	30.9	62%	SWO-19	16.2	32.2	64%
7	50	16.0	SWO-5	14.8	30.8	62%	SWO-14	15.8	31.8	64%
8	50	16.0	SWO-13	11.9	27.9	56%	SWO-5	15.6	31.6	63%
9	50	16.0	SWO-1	11.8	27.8	56%	ZOR-5	15.5	31.5	63%
10	50	16.0	SWO-16	11.5	27.5	55%	SWO-15	14.0	30.0	60%



In the future baseline scenarios, predicted concentrations (including ambient background) increase slightly, largely due to the increased background traffic on CR6. Predicted TSP concentrations are slightly lower in 2037 relative to 2027 due to changes in Carmeuse quarry operation locations. As with the existing baseline, the future baseline scenarios concentrations at SWO-4, SWO-18, and SWO-19 are dominated by background traffic along CR6.

Although the maximum predicted concentrations are showing some exceedances, the frequency of exceedance is very low. **Table 21** also indicates the frequency of predicted exceedances of the criteria, based on modelling over the 5-year period. These frequencies are based on a conservative model, which assumes worst-case operations and dry conditions occurring in worst-case locations every day for the 5-year modelled period, which is not possible.

**Table 21:** Frequency of Predicted Concentrations Above Criteria – Future Baseline (2027 and 2037)

Contaminant	Receptor	Stage 1 (2023-2027)		Stage 3 (2033-2037)	
		Frequency of Exceedance (%)	Exceedances per Year	Frequency of Exceedance (%)	Exceedances per Year m <sup>-3</sup>
TSP	SWO-4	0.072%	6.2	0.097%	8.4
	SWO-18	0.053%	4.6	0.053%	4.6
	SWO-19	0.025%	2.2	0.030%	2.6
	SWO-3	0%	0	0.002%	<1
PM10	SWO-4	0.002%	<1	0%	0
PM2.5	SWO-2	0%	0	0%	0

## 10 EVALUATION OF THE PROPOSED LANDFILL

Section 6.1 (2)(c) and (d) of the Act, and the ToR, require an evaluation of:

- The effects that will be caused on the environment;
- The actions necessary to prevent, change, mitigate or remedy the effects on the environment; and
- An evaluation of the advantages and disadvantages (net effects) to the environment.

This section presents the assessment of these matters as it relates to the dust study and for each of the EA criteria related to this study.

### 10.1 Effects Due to Exposure to Air Emissions

#### 10.1.1 Potential Effects

The dispersion modelling analysis was completed for each contaminant at each of the identified air quality receptors. Some of the receptors represented residential locations, while others represented other key points of interest, such as intersections, wetlands, etc. These non-residential receptors often have residences in the vicinity, so they have been included in the modelling. The results for all modelled receptors for each contaminant for each scenario are presented in **Appendix J**. The maximum predicted concentration occurring at the worst-case residential receptor for each contaminant for each stage are presented in **Tables 22** through **26**.



**Table 22:** Future Landfill Stage 1 Operations (2027) Model Results - Maximum Residential Receptor

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
TSP	TSP	120	24	44.0	185.6	229.6	191%	SWO-4
		60	Annual	19.3	27.3	46.5	78%	SWO-4
PM10	PM10	50	24	16.0	44.3	60.3	121%	SWO-4
PM2.5	PM2.5	25	24	11.0	17.1	28.1	112%	SWO-2
		8.8	Annual	2.9	1.4	4.3	49%	SWO-4
Dustfall	Dustfall	7	30-day	0.0	1.7	1.7	25%	SWO-4
		4.6	Annual	0.0	1.7	1.7	37%	SWO-4

**Notes:** [1] Background concentration based on upwind ambient monitoring results.  
[2] Maximum modelled concentration based on Landfill and background sources.

**Table 23:** Future Landfill Stage 3 Operations (2037) Model Results - Maximum Residential Receptor

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
TSP	TSP	120	24	44.0	212.2	256.2	213%	SWO-4
		60	Annual	19.3	27.5	46.7	78%	SWO-4
PM10	PM10	50	24	16.0	47.2	63.2	126%	SWO-4
PM2.5	PM2.5	25	24	11.0	8.1	19.1	77%	SWO-4
		8.8	Annual	2.9	1.3	4.2	48%	SWO-4
Dustfall	Dustfall	7	30-day	0.0	1.7	1.7	24%	SWO-4
		4.6	Annual	0.0	1.7	1.7	36%	SWO-4

**Notes:** [1] Background concentration based on upwind ambient monitoring results.  
[2] Maximum modelled concentration based on Landfill and background sources.



**Table 24:** Maximum Concentrations at Top 10 Residential Receptors – 24-hour TSP – Future Landfill Stage 1 and 3 (2027 and 2037)

Rank	Criteria (ug m <sup>-3</sup> )	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Receptor ID	Stage 1 (2023-2027)			Receptor ID	Stage 3 (2033-2037)		
				With Landfill				With Landfill		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	120	44.00	SWO-4	185.6	229.6	191%	SWO-4	212.2	256.2	213%
2	120	44.00	SWO-18	164.8	208.8	174%	SWO-18	166.4	210.4	175%
3	120	44.00	SWO-3	122.6	166.6	139%	ZOR-6	130.9	174.9	146%
4	120	44.00	ZOR-6	115.0	159.0	132%	SWO-3	130.7	174.7	146%
5	120	44.00	SWO-2	113.0	157.0	131%	SWO-2	121.8	165.8	138%
6	120	44.00	SWO-19	110.4	154.4	129%	ZOR-11	119.8	163.8	136%
7	120	44.00	ZOR-8	99.7	143.7	120%	ZOR-5	116.4	160.4	134%
8	120	44.00	SWO-1	92.5	136.5	114%	SWO-1	112.6	156.6	130%
9	120	44.00	SWO-13	89.2	133.2	111%	SWO-12	107.5	151.5	126%
10	120	44.00	ZOR-9	88.2	132.2	110%	ZOR-8	107.1	151.1	126%





**Table 25:** Maximum Concentrations at Top 10 Residential Receptors – 24-hour PM<sub>10</sub> – Future Landfill Stage 1 and 3 (2027 and 2037)

Rank	Criteria (ug m <sup>-3</sup> )	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Receptor ID	Stage 1 (2023-2027)			Receptor ID	Stage 3 (2033-2037)		
				With Landfill				With Landfill		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	50	16.00	SWO-4	44.3	60.3	121%	SWO-4	47.2	63.2	126%
2	50	16.00	SWO-3	33.2	49.2	98%	SWO-3	38.1	54.1	108%
3	50	16.00	SWO-2	32.9	48.9	98%	ZOR-6	37.0	53.0	106%
4	50	16.00	ZOR-6	32.4	48.4	97%	SWO-2	36.6	52.6	105%
5	50	16.00	ZOR-9	30.1	46.1	92%	SWO-1	35.7	51.7	103%
6	50	16.00	SWO-1	28.4	44.4	89%	ZOR-11	33.7	49.7	99%
7	50	16.00	SWO-13	28.3	44.3	89%	SWO-12	32.8	48.8	98%
8	50	16.00	ZOR-8	26.4	42.4	85%	SWO-18	31.9	47.9	96%
9	50	16.00	SWO-18	26.3	42.3	85%	ZOR-8	31.7	47.7	95%
10	50	16.00	SWO-12	25.8	41.8	84%	ZOR-5	30.6	46.6	93%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Landfill and background sources.



**Table 26:** Maximum Concentrations at Top 10 Residential Receptors – 24-hour PM<sub>2.5</sub> – Future Landfill Stage 1 and 3 (2027 and 2037)

Rank	Criteria (ug m <sup>-3</sup> )	Background Concentration [1] (ug m <sup>-3</sup> )	Receptor ID	With Landfill			Receptor ID	With Landfill		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	25	11.00	SWO-2	17.24	28.24	113%	SWO-4	9.21	20.21	81%
2	25	11.00	SWO-4	11.82	22.82	91%	SWO-3	6.57	17.57	70%
3	25	11.00	SWO-3	8.03	19.03	76%	SWO-18	6.50	17.50	70%
4	25	11.00	SWO-5	7.86	18.86	75%	ZOR-6	5.92	16.92	68%
5	25	11.00	ZOR-8	7.62	18.62	74%	SWO-1	5.47	16.47	66%
6	25	11.00	SWO-1	7.38	18.38	74%	ZOR-8	5.35	16.35	65%
7	25	11.00	ZOR-6	7.35	18.35	73%	SWO-2	5.19	16.19	65%
8	25	11.00	SWO-13	6.58	17.58	70%	SWO-12	5.02	16.02	64%
9	25	11.00	SWO-18	6.53	17.53	70%	ZOR-11	4.76	15.76	63%
10	25	11.00	ZOR-9	6.33	17.33	69%	SWO-19	4.65	15.65	63%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Landfill and background sources.

The modelling considers a five-year set of hourly meteorological data. Predicted impacts are based on the worst-case conditions within this data set. The future wind climate and meteorological conditions are not expected to change to a degree that would affect the particulate assessment.

### **10.1.2 Potential for Cumulative Effects**

The potential for cumulative effects has been addressed through the inclusion of the Carmeuse sources and background traffic on CR6 in the dispersion model and through the addition of upwind ambient background monitoring data to the modelled results when comparing to the criteria. The cumulative effects are included in the results presented in Section 10.1.

Overall, the presence of the landfill resulted in increased concentrations at residential receptors, with additional residential receptors having maximum predicted concentrations above criteria, relative to the future baseline conditions.

### **10.1.3 Additional Mitigation Recommendations**

The dust assessment considered several mitigation measures that are part of the design of the proposed landfill. These mitigation measures include the following:

- Development of a Dust Best Management Practices (BMP) Plan;
- Watering of on-site roadways during the spring, summer, and fall months;
- Paved roads will be controlled by regular flushing/wet sweeping of the roadway surface;
- Minimizing the exposed areas subject to wind erosion; and
- Weekly sweeping of on-site paved roadways.

These mitigation measures were considered in the assessment and, as such, the predicted impacts presented in Section 10.1.1 incorporate the effect of these measures. In addition to these above noted mitigation measures, the following additional mitigation strategies are recommended to further reduce dust impacts off-site. The recommended additional mitigation measures included the following:

- Paving the main haul route from CR6 (Line 37) to the landfill entrance;
- Unpaved landfill haul routes will be constructed of a material with a lower silt content (average of 6.2% silt used, based on AP-42); and
- Unpaved roads will be controlled by watering, with the capacity to apply up to 1.5 L/m<sup>2</sup>/hour of water on all main haul routes during dry days to achieve 95% control.

Updated calculations for the mitigated scenario are provided in **Appendix K**. Dispersion modelling was conducted to assess the net effects of implementing these additional mitigation strategies for dust reduction. The results from the modelling assessment are presented in Section 10.1.4.

## 10.1.4 Net Effects

The net effects with the additional mitigation applied are presented in the following tables and contour plots. The tables include the contribution from the landfill, Carmeuse, and background traffic on CR6 and the combined impacts from background ambient concentrations. Detailed results for all discrete receptors are presented in **Appendix L**.

Contour plots of maximum predicted concentrations across the entire receptor grid for all contaminants are presented in **Appendix M**.

**Table 27:** Maximum Residential Receptor Dust Concentrations - Stage 1 2027 – Mitigated

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
TSP	TSP	120	24	44.0	181.7	225.7	188%	SWO-4
		60	Annual	19.3	26.0	45.2	75%	SWO-4
PM10	PM10	50	24	16.0	39.0	55.0	110%	SWO-4
PM2.5	PM2.5	25	24	11.0	16.6	27.6	111%	SWO-2
		8.8	Annual	2.9	1.3	4.3	48%	SWO-4
Dustfall	Dustfall	7	30-day	0.0	1.6	1.6	22%	SWO-4
		4.6	Annual	0.0	1.6	1.6	34%	SWO-4

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Landfill and background sources.

**Table 28:** Maximum Residential Receptor Dust Concentrations - Stage 3 2027 – Mitigated

Contaminant	CAS	Criteria (ug m <sup>-3</sup> )	Averaging Period	Ambient Background Concentration [1] (ug m <sup>-3</sup> )	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Receptor ID
TSP	TSP	120	24	44.0	163.3	207.3	173%	SWO-4
		60	Annual	19.3	23.6	42.9	71%	SWO-4
PM10	PM10	50	24	16.0	35.7	51.7	103%	SWO-4
PM2.5	PM2.5	25	24	11.0	7.5	18.5	74%	SWO-4
		8.8	Annual	2.9	1.1	4.0	46%	SWO-4
Dustfall	Dustfall	7	30-day	0.0	1.3	1.3	19%	SWO-4
		4.6	Annual	0.0	1.3	1.3	29%	SWO-4

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Landfill and background sources.

Additionally, the results with the additional mitigation applied at the top 10 residential discrete receptors are summarized for each of these three contaminants in **Tables 29** through **34**, below. These tables include both the concentrations with and without the landfill operations so a direct comparison can be made.



**Table 29:** Maximum TSP Concentrations at Top 10 Residential Receptors – Stage 1 2027 - Mitigated

Rank	Criteria (ug m <sup>-3</sup> )	Ambient Background Concentration <sup>[1]</sup> (ug m <sup>-3</sup> )	Receptor ID	Stage 1 (2023-2027)			Receptor ID	Stage 1 (2023-2027)		
				With Landfill				Without Landfill		
				Maximum Modelled Concentration <sup>[2]</sup> (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration <sup>[3]</sup> (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	120	44.0	SWO-4	181.7	225.7	188%	SWO-4	163.3	207.3	173%
2	120	44.0	SWO-18	163.2	207.2	173%	SWO-18	147.4	191.4	160%
3	120	44.0	SWO-19	114.4	158.4	132%	SWO-19	103.7	147.7	123%
4	120	44.0	SWO-3	84.3	128.3	107%	SWO-3	68.3	112.3	94%
5	120	44.0	SWO-2	65.7	109.7	91%	SWO-17	51.9	95.9	80%
6	120	44.0	ZOR-6	63.0	107.0	89%	SWO-5	49.1	93.1	78%
7	120	44.0	SWO-17	61.0	105.0	88%	SWO-2	46.3	90.3	75%
8	120	44.0	SWO-13	60.2	104.2	87%	ZOR-9	41.7	85.7	71%
9	120	44.0	ZOR-8	59.4	103.4	86%	SWO-13	37.8	81.8	68%
10	120	44.0	ZOR-9	56.2	100.2	84%	SWO-14	37.0	81.0	68%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill and background sources.

[3] Maximum modelled concentration based on background sources.





**Table 30:** Maximum TSP Concentrations at Top 10 Residential Receptors – Stage 3 2037 - Mitigated

Rank	Criteria (ug m <sup>-3</sup> )	Background Concentration <sup>[1]</sup> (ug m <sup>-3</sup> )	Receptor ID	Stage 3 (2033-2037)			Receptor ID	Stage 3 (2033-2037)		
				With Landfill				Without Landfill		
				Maximum Modelled Concentration <sup>[2]</sup> (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration <sup>[3]</sup> (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	120	44.0	SWO-4	196.6	240.6	200%	SWO-4	170.7	214.7	179%
2	120	44.0	SWO-18	164.7	208.7	174%	SWO-18	149.0	193.0	161%
3	120	44.0	SWO-19	118.4	162.4	135%	SWO-19	107.8	151.8	126%
4	120	44.0	SWO-3	94.1	138.1	115%	SWO-3	81.4	125.4	104%
5	120	44.0	ZOR-6	79.3	123.3	103%	SWO-14	54.5	98.5	82%
6	120	44.0	ZOR-5	76.4	120.4	100%	SWO-5	54.1	98.1	82%
7	120	44.0	SWO-2	67.9	111.9	93%	SWO-15	52.7	96.7	81%
8	120	44.0	ZOR-3	66.2	110.2	92%	SWO-17	51.2	95.2	79%
9	120	44.0	SWO-14	64.8	108.8	91%	ZOR-6	48.7	92.7	77%
10	120	44.0	SWO-17	63.4	107.4	89%	SWO-2	47.0	91.0	76%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill and background sources.

[3] Maximum modelled concentration based on background sources.



**Table 31:** Maximum PM<sub>10</sub> Concentrations at Top 10 Residential Receptors – Stage 1 2027 – Mitigated

Rank	Criteria (ug m <sup>-3</sup> )	Background Concentration <sup>[1]</sup> (ug m <sup>-3</sup> )	Receptor ID	With Landfill			Receptor ID	Without Landfill		
				Maximum Modelled Concentration <sup>[2]</sup> (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration <sup>[3]</sup> (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	50	16.00	SWO-4	39.0	55.0	110%	SWO-4	35.7	51.7	103%
2	50	16.00	SWO-2	29.3	45.3	91%	SWO-3	22.6	38.6	77%
3	50	16.00	SWO-3	25.5	41.5	83%	SWO-18	22.5	38.5	77%
4	50	16.00	SWO-18	25.0	41.0	82%	SWO-19	16.4	32.4	65%
5	50	16.00	ZOR-9	18.7	34.7	69%	ZOR-9	15.5	31.5	63%
6	50	16.00	SWO-19	18.4	34.4	69%	SWO-2	14.9	30.9	62%
7	50	16.00	SWO-5	16.2	32.2	64%	SWO-5	14.8	30.8	62%
8	50	16.00	SWO-13	15.5	31.5	63%	SWO-13	11.9	27.9	56%
9	50	16.00	SWO-1	15.2	31.2	62%	SWO-1	11.8	27.8	56%
10	50	16.00	ZOR-6	15.1	31.1	62%	SWO-16	11.5	27.5	55%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill and background sources.

[3] Maximum modelled concentration based on background sources.



**Table 32:** Maximum PM<sub>10</sub> Concentrations at Top 10 Residential Receptors – Stage 3 2037 - Mitigated

Rank	Criteria (ug m <sup>-3</sup> )	Background Concentration [1] (ug m <sup>-3</sup> )	Receptor ID	Stage 3 (2033-2037) - With Landfill			Receptor ID	Stage 3 (2033-2037) - Without Landfill		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	50	16.00	SWO-4	37.1	53.1	106%	SWO-4	33.3	49.3	99%
2	50	16.00	SWO-3	29.0	45.0	90%	SWO-3	26.8	42.8	86%
3	50	16.00	SWO-18	26.1	42.1	84%	SWO-18	22.9	38.9	78%
4	50	16.00	ZOR-6	20.4	36.4	73%	SWO-19	17.4	33.4	67%
5	50	16.00	SWO-2	19.4	35.4	71%	SWO-14	17.1	33.1	66%
6	50	16.00	SWO-19	19.1	35.1	70%	SWO-5	16.2	32.2	64%
7	50	16.00	SWO-14	18.8	34.8	70%	SWO-15	15.8	31.8	64%
8	50	16.00	SWO-5	17.8	33.8	68%	SWO-2	15.6	31.6	63%
9	50	16.00	ZOR-5	17.8	33.8	68%	ZOR-6	15.5	31.5	63%
10	50	16.00	SWO-15	17.2	33.2	66%	SWO-16	14.0	30.0	60%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.  
 [2] Maximum modelled concentration based on proposed landfill and background sources.  
 [3] Maximum modelled concentration based on background sources.



**Table 33:** Maximum PM<sub>2.5</sub> Concentrations at Top 10 Residential Receptors – Stage 1 2027 - Mitigated

Rank	Criteria (ug m <sup>-3</sup> )	Background Concentration [1] (ug m <sup>-3</sup> )	Receptor ID	Stage 1 (2023-2027)			Receptor ID	Stage 1 (2023-2027)		
				With Landfill				Without Landfill		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	25	11.00	SWO-2	16.7	27.7	111%	SWO-4	7.5	18.5	74%
2	25	11.00	SWO-4	11.5	22.5	90%	SWO-18	5.8	16.8	67%
3	25	11.00	SWO-5	7.6	18.6	75%	SWO-19	4.1	15.1	60%
4	25	11.00	ZOR-8	7.5	18.5	74%	SWO-3	3.4	14.4	58%
5	25	11.00	SWO-3	7.4	18.4	74%	ZOR-9	2.6	13.6	54%
6	25	11.00	SWO-1	7.3	18.3	73%	SWO-5	2.5	13.5	54%
7	25	11.00	ZOR-6	7.1	18.1	72%	SWO-16	2.2	13.2	53%
8	25	11.00	SWO-18	6.4	17.4	70%	SWO-2	2.0	13.0	52%
9	25	11.00	SWO-13	6.2	17.2	69%	SWO-17	1.9	12.9	52%
10	25	11.00	ZOR-9	6.2	17.2	69%	SWO-14	1.7	12.7	51%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.  
 [2] Maximum modelled concentration based on proposed landfill and background sources.  
 [3] Maximum modelled concentration based on background sources.



**Table 34:** Maximum PM<sub>2.5</sub> Concentrations at Top 10 Residential Receptors – Stage 3 2037 - Mitigated

Rank	Criteria (ug m <sup>-3</sup> )	Background Concentration [1] (ug m <sup>-3</sup> )	Receptor ID	Stage 3 (2033-2037)			Receptor ID	Stage 3 (2033-2037)		
				With Landfill				Without Landfill		
				Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)		Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
1	25	11.00	SWO-4	7.9	18.9	76%	SWO-4	7.2	18.2	73%
2	25	11.00	SWO-18	6.0	17.0	68%	SWO-18	5.4	16.4	66%
3	25	11.00	SWO-1	5.3	16.3	65%	SWO-19	4.0	15.0	60%
4	25	11.00	SWO-3	4.4	15.4	61%	SWO-3	3.9	14.9	60%
5	25	11.00	SWO-19	4.3	15.3	61%	SWO-16	2.4	13.4	54%
6	25	11.00	SWO-2	4.0	15.0	60%	SWO-14	2.4	13.4	54%
7	25	11.00	ZOR-6	3.8	14.8	59%	SWO-5	2.3	13.3	53%
8	25	11.00	SWO-13	3.4	14.4	58%	ZOR-6	2.2	13.2	53%
9	25	11.00	ZOR-5	3.3	14.3	57%	SWO-15	2.1	13.1	53%
10	25	11.00	ZOR-8	3.2	14.2	57%	SWO-17	2.1	13.1	52%

**Notes:** [1] Background concentration based on upwind ambient monitoring results.  
 [2] Maximum modelled concentration based on proposed landfill and background sources.  
 [3] Maximum modelled concentration based on background sources.



With the additional mitigation measures applied, the landfill contributions are reduced, and the maximum predicted concentrations exceed the criteria at fewer off-site residential locations. The results indicate that the following contaminants exceed the applicable criteria at a residential receptor off-site:

- TSP – 24-hour Stage 1 and Stage 3;
- PM10 – 24-hour Stage 1 and Stage 3; and
- PM2.5 – Stage 1.

At many receptors, the results are exceeded both with and without the contribution of the proposed landfill.

For 24-hour PM<sub>10</sub>, the maximum predicted concentration exceeds the AAQC at receptor SWO-4, which represents residences at the intersection of Beachville Road and County Road 6. SWO-4 is located in the middle of the intersection, which results in elevated concentrations from traffic travelling along the haul route. Based on the location of the SWO-4 receptor, the modelling conservatively calculates the concentration at the middle of the road where they would be highest. However, the concentrations decrease significantly as one moves away from the road, and so the actual concentrations at the residences would be lower. The exceedances are largely driven by contributions from the background traffic on CR6 with a small contribution from Carmeuse operations; however, the landfill operations do result in an increase in the maximum predicted concentrations. At SWO-4, the landfill is increasing the maximum concentration by 7% of the criteria.

For TSP, the maximum predicted concentration exceeds the AAQC at residential receptors SWO-4, SWO-18, SWO-19, SWO-3, ZOR-5, and ZOR-6. As with PM<sub>10</sub>, the exceedances are largely driven by contributions from the background traffic on CR 6 with a small contribution from Carmeuse operations; however, the landfill operations do result in an increase in the maximum predicted concentrations. At SWO-4, the landfill is increasing the maximum concentration by 21% of the criteria in Stage 3.

Although the maximum predicted concentrations are showing some exceedances, the frequency of exceedance is very low. **Tables 35 and 36**, below, compare the frequency of predicted exceedances of the criteria, based on modelling over the 5-year period. At the most highly impacted receptor, predicted exceedances of the criteria increase by less than five instances per year relative to baseline conditions, with most other receptors having less than 2 additional exceedances per year.

The maximum predicted concentrations and frequencies are based on a conservative model, which assumes reasonable worst-case operations and dry conditions occurring in worst-case locations every day for the 5-year modelled period, which is not possible. These conservatisms include, but are not limited to, the following:

- Sources that move throughout the site have been positioned in a single worst-case location, closest to the property line and the nearest receptor;
- Source locations were also selected to maximize the potential on-site haul route distances;
- All operations were assumed to occur at their reasonable worst-case levels every day, including seasonal activities such as construction;
- When calculating emissions, conservative assumptions were made; and
- The assessment did not consider the effects of precipitation and snow cover, which would serve to reduce particulate emissions.



Overall, because of the conservatisms included in the assessment, the modelling likely over-predicts the impacts from the proposed landfill.

**Table 35:** Frequency of Predicted Concentrations Above Criteria – Stage 1 2027 - Mitigated

Contaminant	Receptor	With Landfill		Without Landfill		Net Change in Exceedances per Year
		Frequency of Exceedance (%)	Exceedances per Year	Frequency of Exceedance (%)	Exceedances per Year (m <sup>-3</sup> )	
TSP	SWO-4	0.113%	9.8	0.072%	6.2	<4
	SWO-18	0.072%	6.2	0.053%	4.6	<2
	SWO-19	0.032%	2.8	0.025%	2.2	<1
	SWO-3	0.002%	<1	0%	0	<1
PM10	SWO-4	0.002%	<1	0.002%	<1	0
PM2.5	SWO-2	0.002%	<1	0%	0	<1

**Table 36:** Frequency of Predicted Concentrations Above Criteria – Stage 3 2037 - Mitigated

Contaminant	Receptor	With Landfill		Without Landfill		Net Change in Exceedances per Year
		Frequency of Exceedance (%)	Exceedances per Year	Frequency of Exceedance (%)	Exceedances per Year (m <sup>-3</sup> )	
TSP	SWO-4	0.150%	13	0.097%	8.4	<5
	SWO-18	0.076%	6.6	0.053%	4.6	2
	SWO-19	0.035%	3	0.030%	2.6	<1
	SWO-3	0.002%	<1	0.002%	<1	0
	ZOR-5	0.002%	<1	0%	0	<1
	ZOR-6	0.002%	<1	0%	0	<1
PM10	SWO-4	0.007%	<1	0%	0	<1

Under Regulation 419/05 (Reg. 419), facilities are required to comply with MECP Standards and Guidelines at points at and beyond the property line of the facility. The impacts presented in this EA should not be used for direct comparison to the Reg. 419 limits, as there are key differences in the way the EA assessment is conducted versus a Reg. 419 assessment, most notably the inclusion of background concentrations but also relating to the sources considered and assumptions made. For instance, Reg. 419 excludes the contribution from motor vehicles when comparing to the standards and does not include consideration of cumulative effects. In addition, sources such as fugitive dust from on-site haul routes and wind erosion are typically excluded from modelling under a Reg. 419 assessment, instead these sources are typically managed through a Best Management Practices Plan (BMPP) for dust. For the landfill, the only identified sources of particulate of that would be modelled when assessing compliance with Reg. 419 requirements would be the landfill gas flare and material handling. For the dust assessment, neither the landfill gas flare nor the material handling were significant contributors to off-site concentrations; therefore, the landfill is considered to be capable of achieving Reg. 419 compliance. This will be confirmed when the detailed design is developed and applications for the Reg. 419 permits are being completed. At that time, additional design changes or mitigation measures may be incorporated to ensure that compliance under Regulation 419 is maintained at the property line under all scenarios.



# 11 MONITORING, CONTINGENCY & IMPACT MANAGEMENT RECOMMENDATIONS

## 11.1 Monitoring & Contingency Plans

Monitoring will aid in identifying and correcting problems before they cause off-site impacts. The following monitoring measures are recommended for the landfill facility:

- Monitoring of weather forecasts to determine dust control needs;
- Tracking of any visible dust sources noted on site. Document, address and investigate all dust complaints to determine dust source and prevent or minimize future off-site dust impacts.
- Curtailing handling of dusty materials during high wind events and/or handling the material in a sheltered location away from the property line and nearest receptors.

It is recommended that Walker develop a contingency plan to address any issues that may be detected. It is also recommended that Walker include possible process upsets due to unusually dusty conditions in their contingency plan..

## 11.2 Impact Management

This section provides recommendations for managing any residual negative effects of the proposed landfill that cannot be directly mitigated.

Additional mitigation measures were included in the dispersion model and were found to reduce the predicted landfill related dust impacts. Some measures that may further reduce the impact of landfill related dust emissions, include:

- Exposed areas should be kept as small as practical to reduce emissions.
- Development of a best management practices plan to set out standard operating procedures, contingency measures, and record keeping requirements.

Although these measures were not quantified in the dispersion model, it can be intuitively determined that the particulate impacts will likely be locally reduced by some amount through the implementation of these measures.

## 12 REFERENCES

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# APPENDIX A:

## GLOSSARY OF TERMS







## GLOSSARY OF TERMS USED IN AIR IMPACT ASSESSMENTS

ADT	Average daily traffic
AADT	Annual average daily traffic
AAQC	Ambient Air Quality Criteria as defined by the Ontario Ministry of the Environment, Conservation and Parks
AERMOD	An air dispersion model developed by AERMIC to support the US EPA's regulatory modelling programs. AERMOD is the next-generation air dispersion model that incorporates concepts such as planetary boundary layer theory and advanced methods for handling complex terrain.
Baseline	Refers to the existing air quality surrounding the landfill. The baseline is used to determine if there will be a change in the existing environment before the proposed landfill.
CO	Carbon monoxide; a regulated air pollutant and product of incomplete combustion
Conservative	Implementing a number of assumptions in an analysis that are intended to lead to a deliberate over-estimation of impacts
Clod Samples	Refer to the large clumps of native or typical soil at the landfill typically used for cover.
Deposition Routine	Refers to dust particles that travel downwind in a plume, larger particles fall out of the air through gravitational settling and other factors and are not replaced. Using this deposition routine provides a simulation of this process. By doing so, a more realistic prediction of dust impacts is produced.
Dustfall	Refers to larger particles that settle at a sufficient rate to produce a dust film on surfaces. Dustfall is a nuisance due to its soiling nature.
Flux Chamber	Is a stainless-steel vessel of volume 0.5 m <sup>2</sup> . It is used to measure minute emissions from near passive sources that do not have any mechanical fans to discharge the contaminants of interest.
g/veh/mi	Grams of emissions per vehicle per mile traveled
HC	Hydrocarbons; generally defined in terms of volatile organic compounds (VOC's) and semi-volatile compounds (SVOC's)
MECP	Ontario Ministry of the Environment, Conservation and Parks
NO	Nitric oxide; an air pollutant and constituent of NO <sub>x</sub> generated by combustion
NO <sub>2</sub>	Nitrogen dioxide; an air pollutant and regulated constituent of NO <sub>x</sub> generated by chemical or photochemical reactions generally involving NO



NOX	Total oxides of nitrogen; a generic air pollutant category that includes the sum of all NO and NO <sub>2</sub> concentrations
O <sub>3</sub>	Ozone; a photochemical oxidant generally formed in the presence of sunlight, oxides of nitrogen and reactive hydrocarbons
Odour	Odour can generally be described as a person's perception to a particular smell. This may be considered a "good" or "bad" smell as a subjective observation from a particular person. An odour is deemed as a nuisance, if it is detected and considered to be unpleasant. When odour levels are elevated and occur frequently, they can be construed as an adverse effect.
Odour Unit	One odour unit is the concentration at which 50% of a population will detect an odour.
PAHs	Polycyclic aromatic hydrocarbons; a class of airborne contaminants that exist with both solids and gaseous fractions; individual species include fluoranthene and benzo(a)pyrene
ppm, ppmv	Parts per million by volume; unit of concentration; mixing ratio
PM <sub>10</sub>	Inhalable particulate matter; airborne particles of aerodynamic diameter less than 10 microns
PM <sub>2.5</sub>	Respirable particulate matter; airborne particles of aerodynamic diameter less than 2.5 microns
SO <sub>2</sub>	Sulphur dioxide; an air pollutant usually associated with the combustion of sulphur-laden fuel
Tedlar Bags	A bag used to collect air samples that is comprised of a skin is made from inert materials like Teflon to minimize any chemical reactions that may compromise the sample
TSP	Total suspended particulates; airborne particulate matter that is generally small (less than about 44 microns in diameter) enough so as not to be greatly affected by gravitational forces
µg/m <sup>3</sup>	Micrograms per cubic metre; a unit of concentration
U.S. EPA	The United States Environmental Protection Agency
VMT	Vehicle miles traveled
VOCs	Volatile organic compounds; a class of airborne gaseous contaminants that includes individual chemical species such as vinyl chloride, benzene, xylenes, etc.

**APPENDIX B:**  
**ENVIRONMENTAL ASSESSMENT CRITERIA AND STUDIES**  
(FROM THE APPROVED AMENDED TERMS OF REFERENCE)



**Table B-a-EA Criteria Table**

	Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration				
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period	
	<b>Public Health &amp; Safety</b>																				
1	Explosive hazard due to combustible gas accumulation in confined spaces.	Gas produced within a waste disposal facility (e.g., methane) can move through the ground and accumulate in confined spaces (e.g., manholes, basements, etc.) on or immediately adjacent to the waste disposal facility. There is potential for the gas to combust, creating an explosion and fire hazard.						<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Effects due to exposure to air emissions.	Waste disposal facilities can produce gases containing contaminants that degrade air quality if they are emitted to the atmosphere. Other operations, such as leachate collection facilities, can also produce emissions that could degrade air quality in the vicinity of the site. Air quality in the vicinity of the site should meet regulated air quality standards in order to protect public health.		<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Effects due to fine particulate exposure.	Construction, operation, and truck haulage activities at a waste disposal facility can lead to increased levels of particulate (dust) in the air. Airborne fine particulate is a health concern in certain size ranges exposure durations.		<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	Effects due to contact with contaminated groundwater or surface water.	Contaminants associated with a waste disposal site have the potential to seep into the groundwater or surface water. This could pose a public health concern if it enters local drinking water supplies, or if it mixes with surface water.						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Flood hazard.	The construction of a waste disposal facility can disrupt natural surface water drainage patterns, causing a potential for increased flooding.						<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Disease transmission <i>via</i> insects or vermin.	Insects and vermin drawn to a waste disposal facility may have the potential to transmit diseases.																<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration		
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period	
<b>Public Health &amp; Safety</b>																				
<b>Public Health &amp; Safety (continued)</b>																				
7	Potential for traffic collisions.												<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	
8	Aviation impacts due to bird interference.					<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
<b>Social and Cultural</b>																				
9	• Displacement of residents from houses.												<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	Disruption to use and enjoyment of residential properties.												<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	Disruption to use and enjoyment of public facilities and institutions.												<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
12	Disruption to local traffic networks.													<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
13	Visual impact of the waste disposal facility.														<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	Nuisance associated with vermin.												<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	



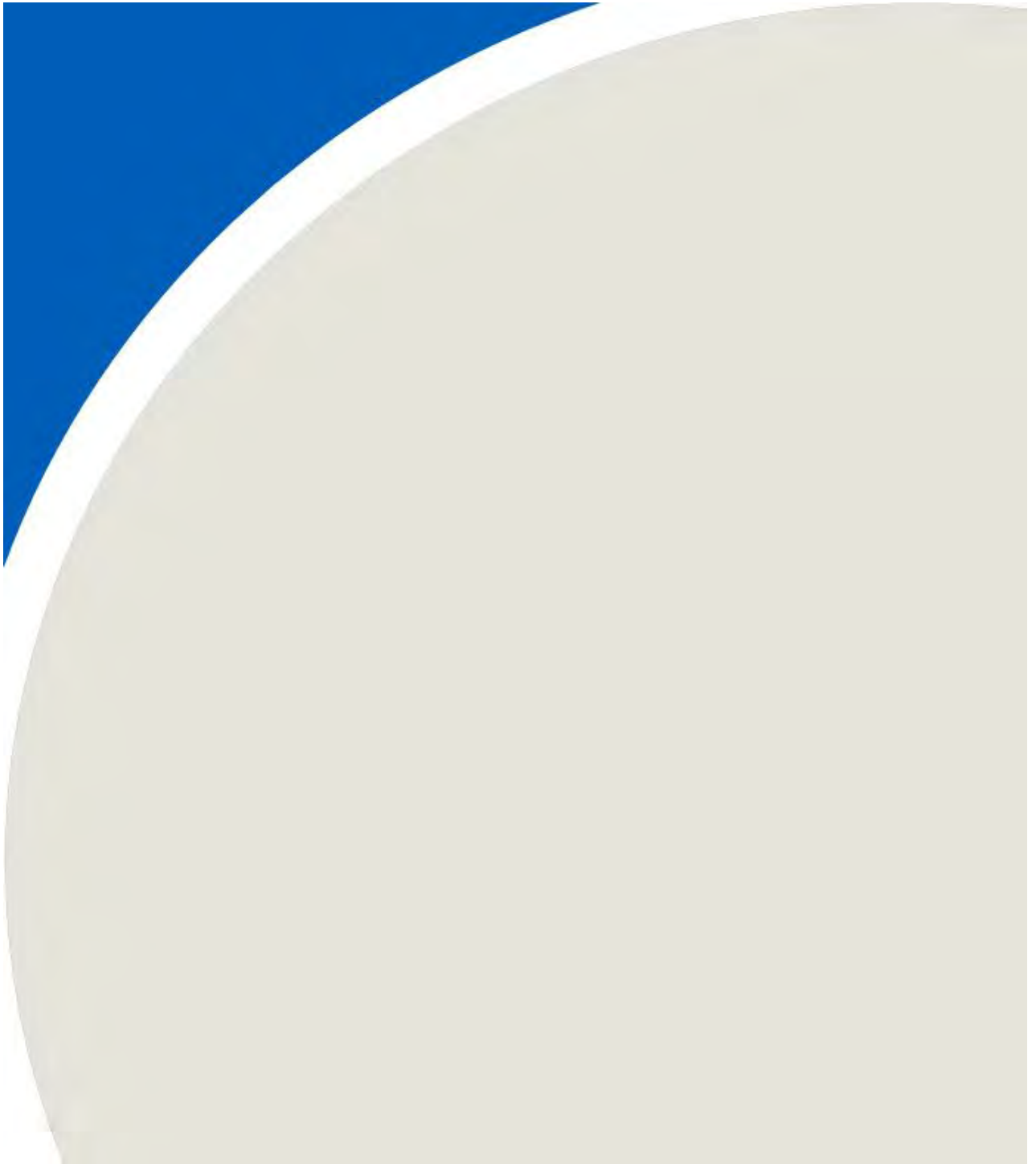
	Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration						
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period					
<b>Public Health &amp; Safety</b>																									
<b>Social and Cultural (continued)</b>																									
15	Displacement/disturbance of cultural/heritage resources.	Cultural resources (including heritage buildings, cemeteries and cultural landscapes) are an important component of human heritage. These non-renewable cultural resources may be displaced by the construction of a waste disposal facility. The use and enjoyment of cultural resources may also be disturbed by the ongoing operation and traffic. Disturbances could result from noise, dust, odour, visibility, birds, litter and traffic congestion.				<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
16	Effects on land resources, traditional activities or other interests of Aboriginal Communities.	Major new developments of any type may have positive or negative effects on the interests of Aboriginal Communities (i.e., businesses opportunities, joint ventures)												<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
17	Displacement/destruction of archaeological resources.	Archaeological resources are non-renewable cultural resources that can be destroyed by the construction and operation of a waste disposal facility.			<input checked="" type="checkbox"/>													<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				
18	Level of public service provided by the waste disposal facility.	The presence of a waste disposal operation within a municipality can provide an increased level of public service (e.g., convenient access to waste disposal services) to local residents and businesses, as well as those in the broader community(ies).																			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
19	Effects on other public services.	The presence of a waste disposal facility may have positive or negative spin-off effects on other public services in the community (e.g., leachate trucking, waste water treatment capacity, if there is discharge to the sewer system).																			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<b>Social and Cultural (continued)</b>																									
20	Changes to community character/cohesion.	Community character and cohesion refer to physical characteristics, social stability, attractiveness as a place to live and patterns of social interaction. A waste disposal facility may actually or perceptually interfere with these important community attributes.																			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



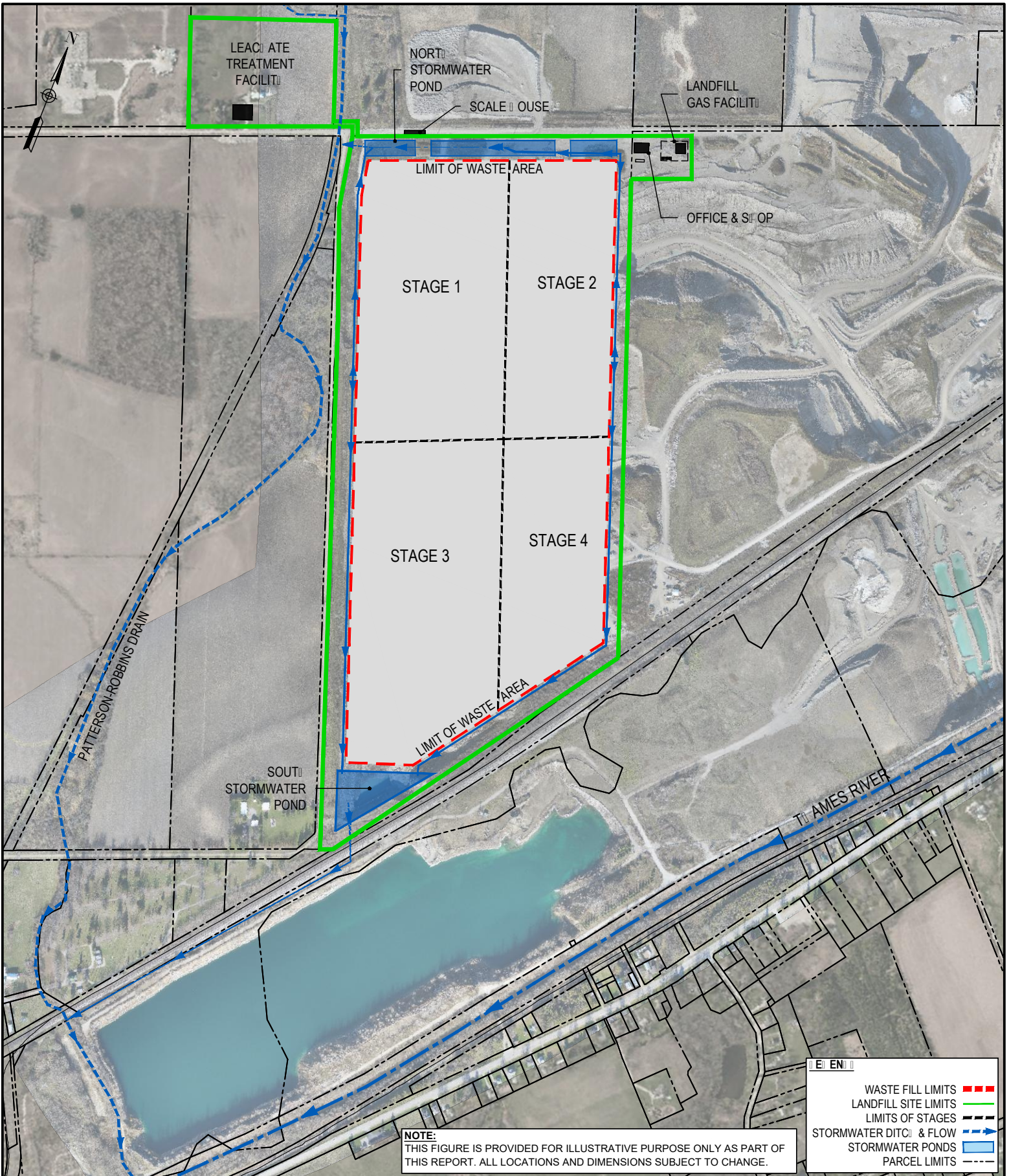
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<b>Public Health &amp; Safety</b>																			
27	New business opportunities in related industries and services.	New opportunities may be created for local businesses, or as secondary suppliers to industries working for the waste disposal facility (e.g., restaurants, gas stations, machine shops, repair shops, welding shops, equipment rentals, etc.).																	
28	Public costs for indirect liabilities.	Some public services may have to be upgraded to accommodate the establishment and operation of a waste disposal facility (e.g., snow removal, sewer and water connections, etc.).																	
29	Effects on the municipal tax base.	A waste disposal facility has the potential to affect municipal tax revenues from the site it occupies.																	
30	Effect on the cost of service to customers.	The costs of constructing a waste disposal facility will effect the price of tipping fees to the site. This affects the cost of service to customers in Oxford county and the province.																	
31	Effects on the provincial/ federal tax base.	A waste disposal facility has the potential to affect provincial/federal tax revenues.																	
<b>Natural Environment &amp; Resources</b>																			
32	Loss/displacement of surface water resources.	Construction of a waste disposal facility may cause the removal of all or part of a natural stream or pond.																	
33	Impact on the availability of groundwater supply to wells.	A waste disposal facility can impact the availability of groundwater supply if groundwater is pumped from aquifers or if recharge to aquifers is reduced.																	
34	Effects on stream baseflow quantity/quality.	The presence of a waste disposal facility has the potential to affect the quality or quantity of baseflow to surface water.																	

	Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration	
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																				
<b>Natural Environment &amp; Resources (Continued)</b>																				
35	Loss/disturbance of terrestrial ecosystems.	Terrestrial ecosystems refer to the land-based habitats connected through the vegetation cover; their protection and integration maintains and regulates ecological health. Waste disposal facility operations and/or traffic may remove or disturb the functioning of these systems.					<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	Loss/disturbance of aquatic ecosystems.	Aquatic ecosystems refer to the water-based habitats connected through the surface water; their protection and integration maintains and regulates ecological health. Waste disposal facility operations may remove or disturb the functioning of these systems.					<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
37	Displacement of agricultural land.	The establishment of a waste disposal facility has the potential to displace existing or potential agricultural resources, including the loss of prime agricultural land.	<input checked="" type="checkbox"/>															<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
38	Disruption of farm operations.	The establishment and operation of the waste disposal facility may affect agricultural crop or livestock production and related agriculture activities	<input checked="" type="checkbox"/>															<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	Sterilization of industrial mineral resources.	The establishment of a waste disposal facility may limit the opportunity to extract industrial mineral resources located beneath the site.									<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
40	Displacement of forestry resources.	The establishment of a waste disposal facility may limit the opportunity to utilize forestry resources on or near the site.									<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
41	Loss/disruption of recreational resources.	Waste disposal facility operations and traffic may displace/disrupt existing recreational resources in the area, which could adversely affect the community at large. Disturbances could result from noise, dust, odour, visibility, birds and traffic congestion. Recreational resources include naturalist and interpretive opportunities.												<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

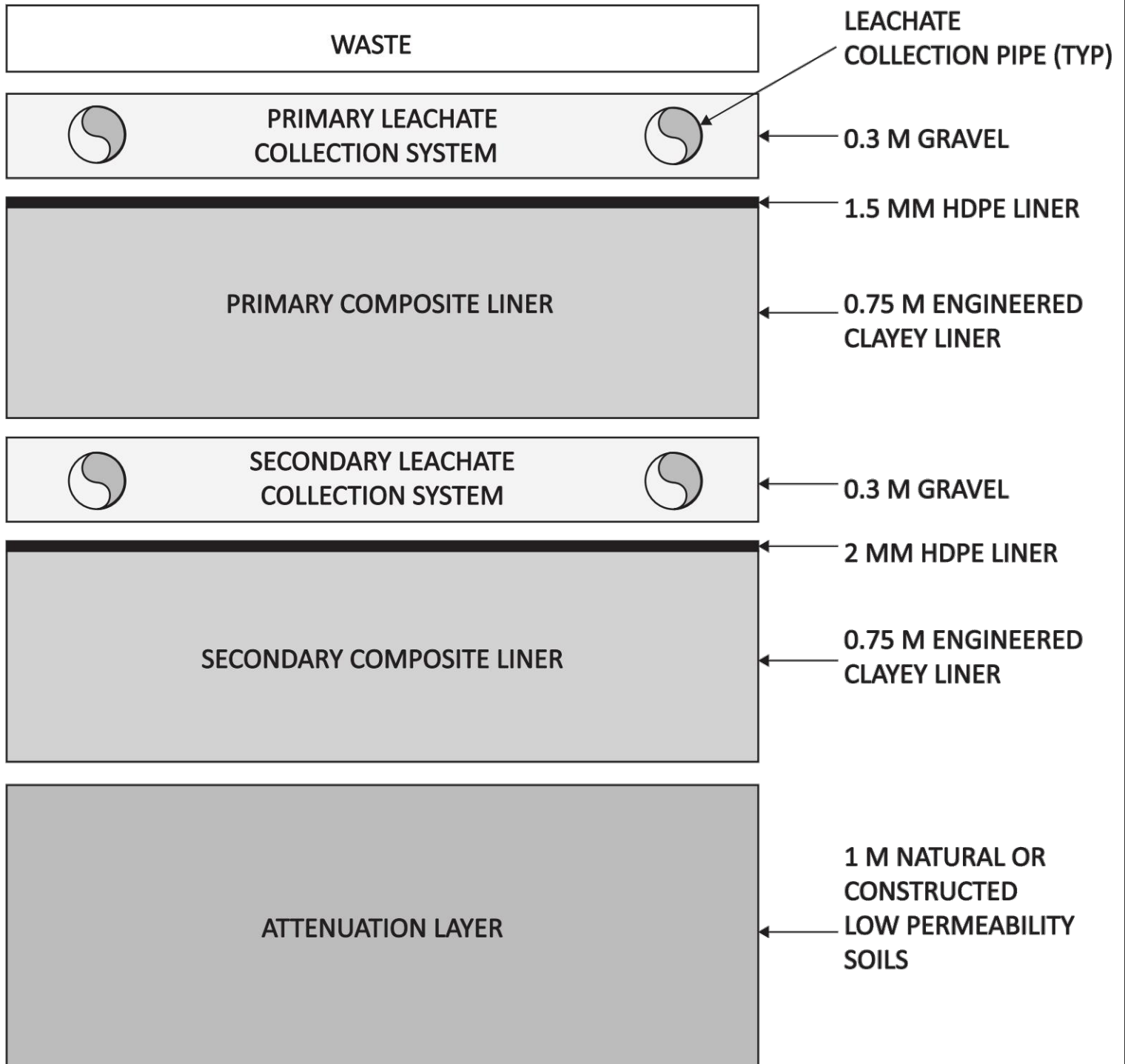
## FIGURES








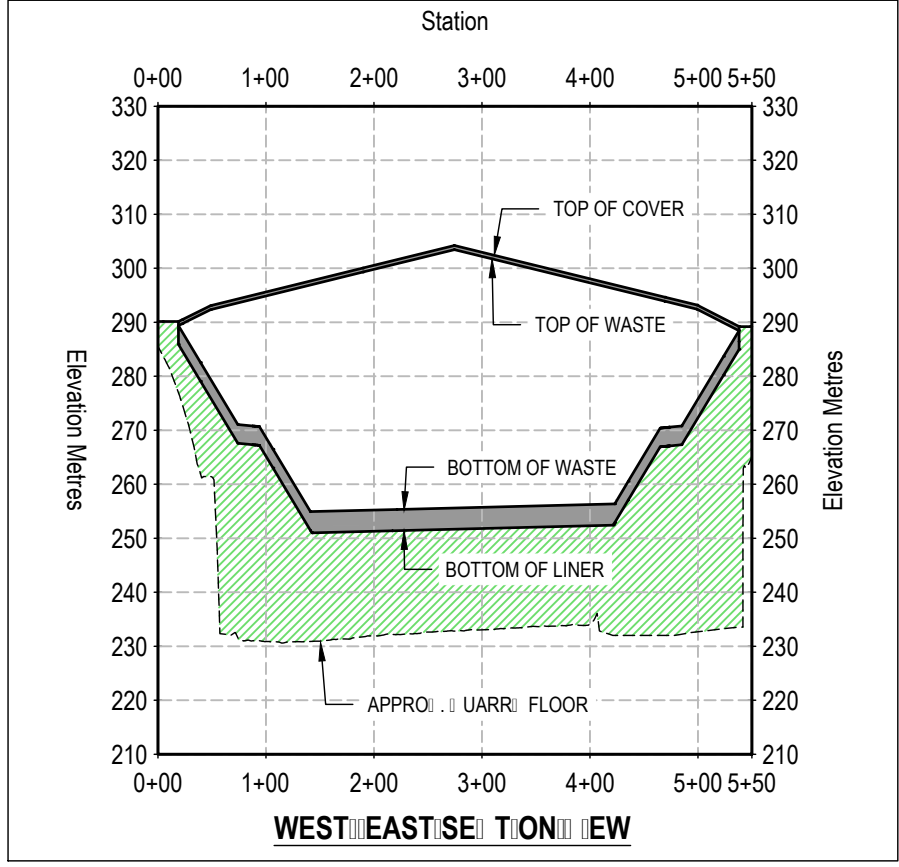
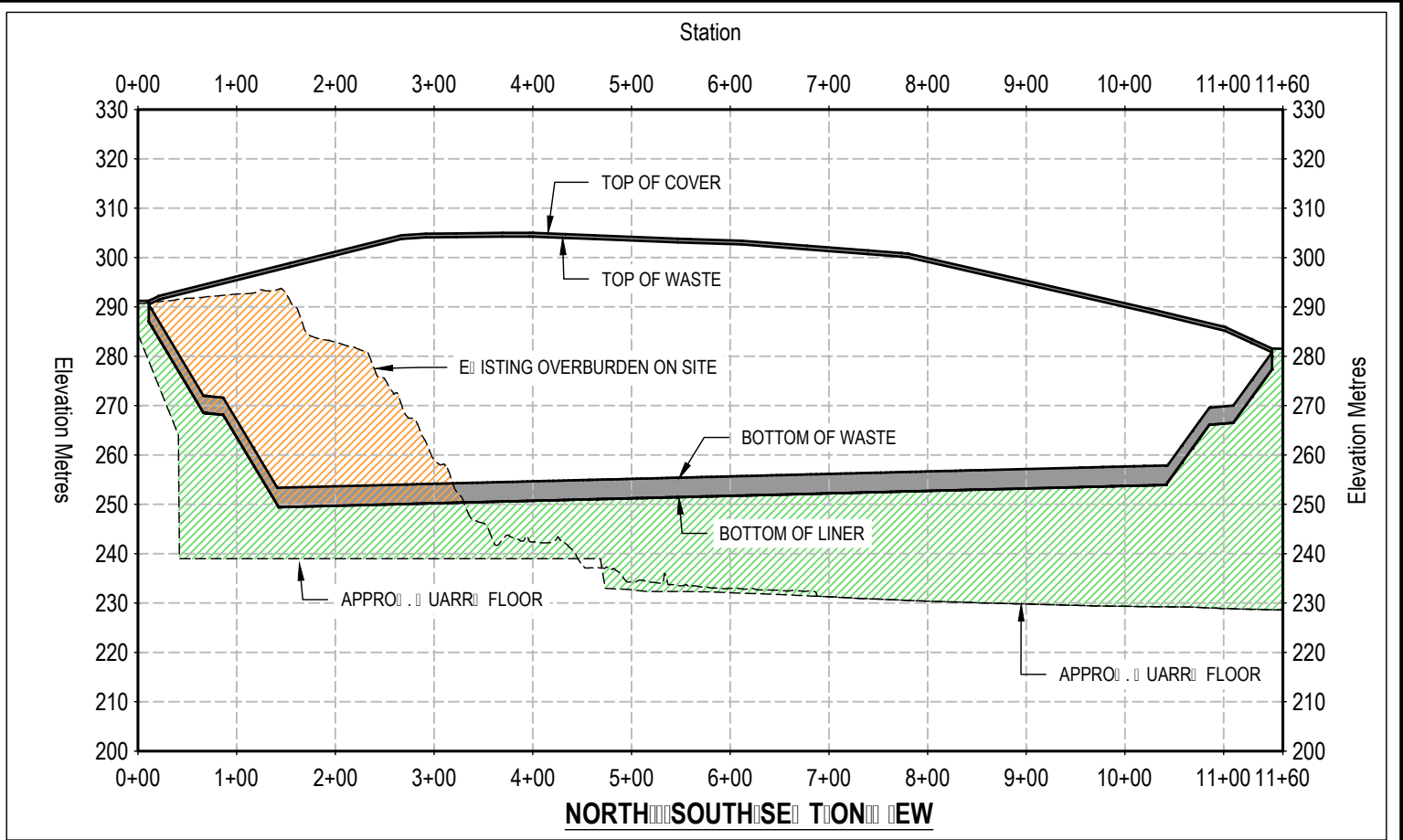
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	Drawing	SITE PLAN		Drawn	JThompson		Scale
				Approved	DFry		Date (DD/M/YY)
					1:10000		01 JAN 20
					Drawing No.		Revision No.
					Figure		G




**NOTE:**  
THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar
	Drawing	<b>LANDFILL LINER SYSTEM</b>		Drawn	TT	Scale	NTS
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						Revision No.	<b>C</b>

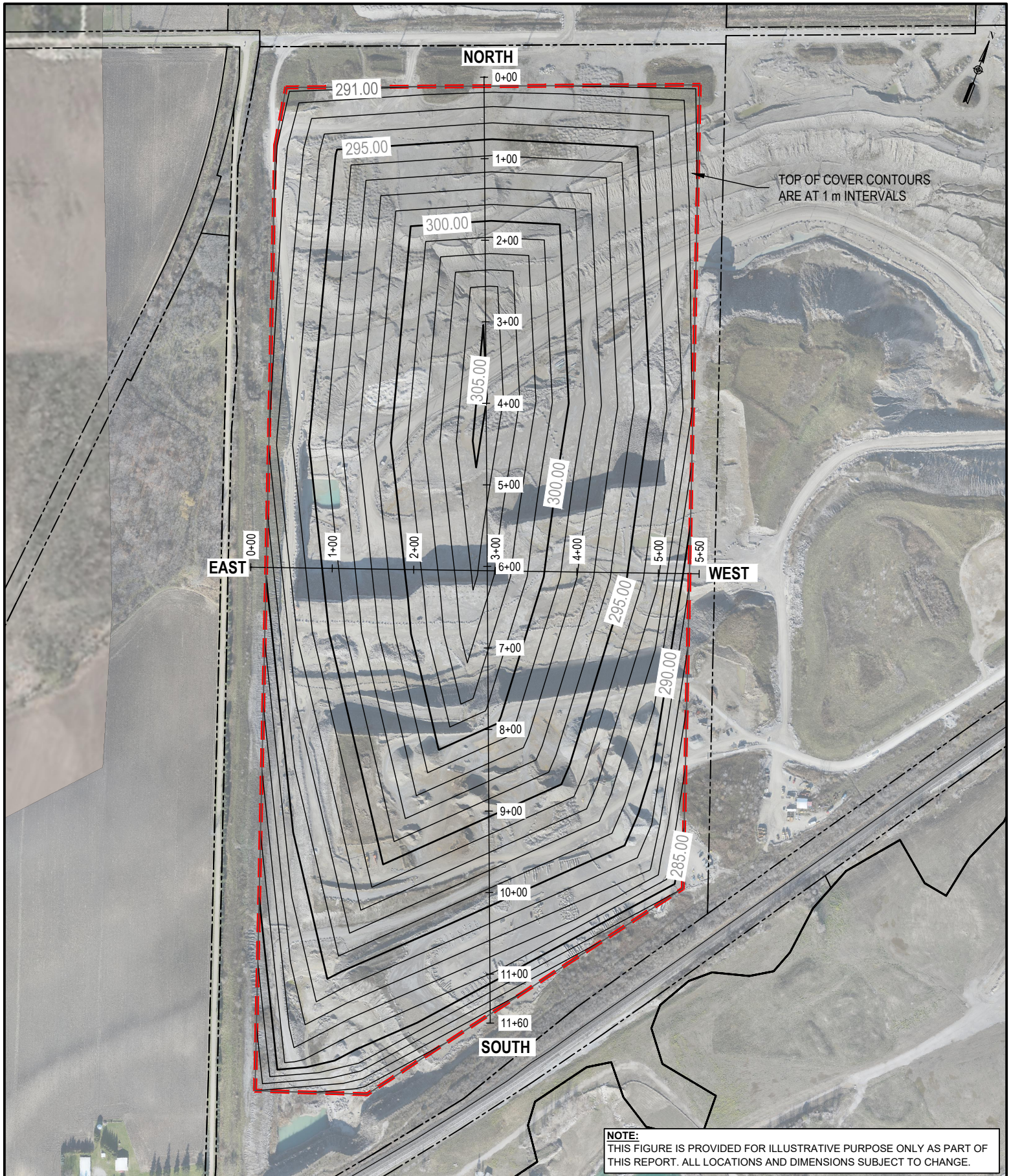




**NOTE:**  
THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

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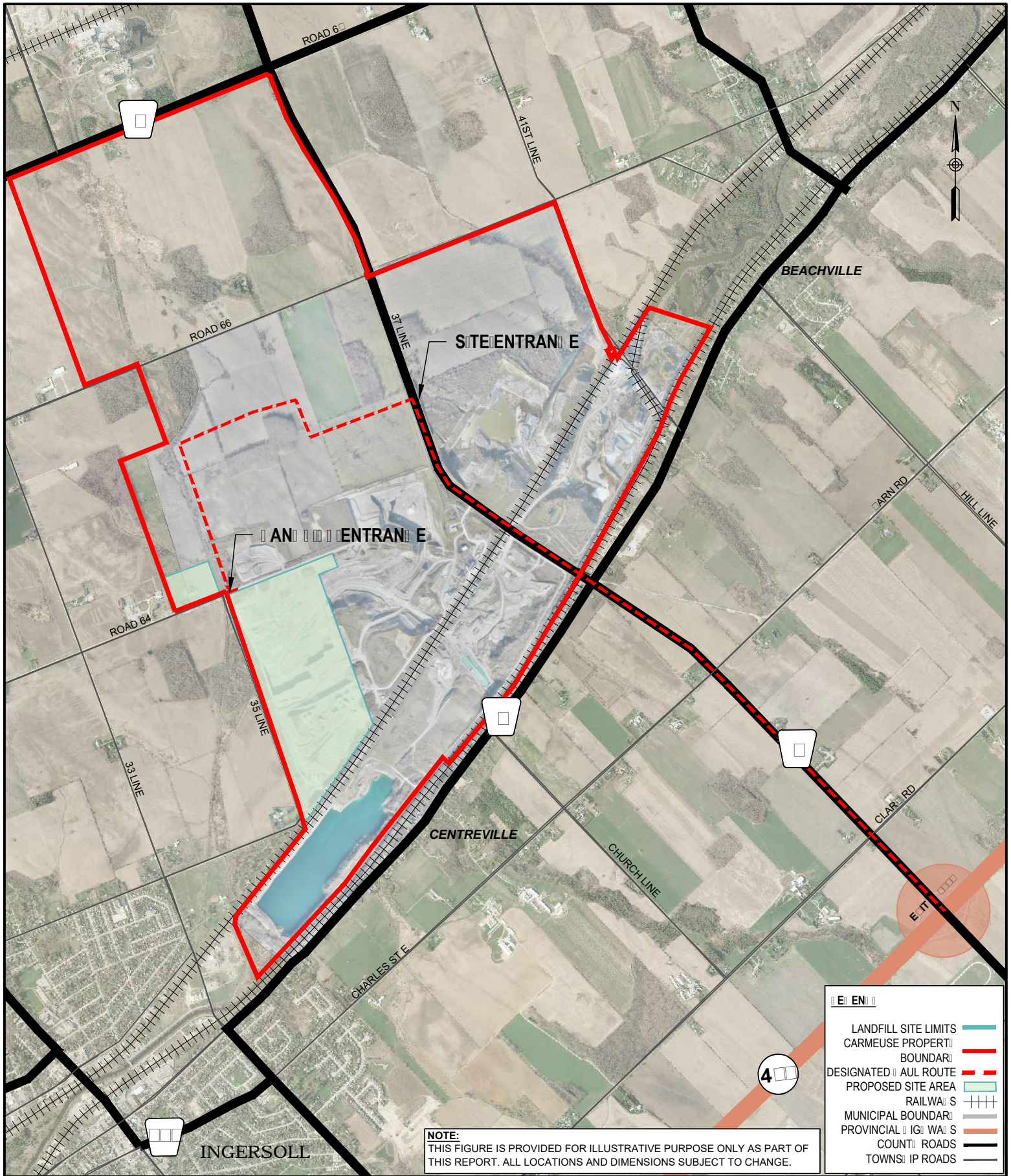




**NOTE:**  
 THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF  
 THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

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				Approved	DFry	Drawing No.	<b>Figure 4</b>	Revision No.	<b>E</b>





**NOTE:**  
 THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF  
 THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.

- LANDFILL SITE LIMITS
- CARMEUSE PROPERTY BOUNDARY
- DESIGNATED HAUL ROUTE
- PROPOSED SITE AREA
- RAILWAYS
- MUNICIPAL BOUNDARY
- PROVINCIAL HIGHWAYS
- COUNTY ROADS
- TOWNSHIP ROADS

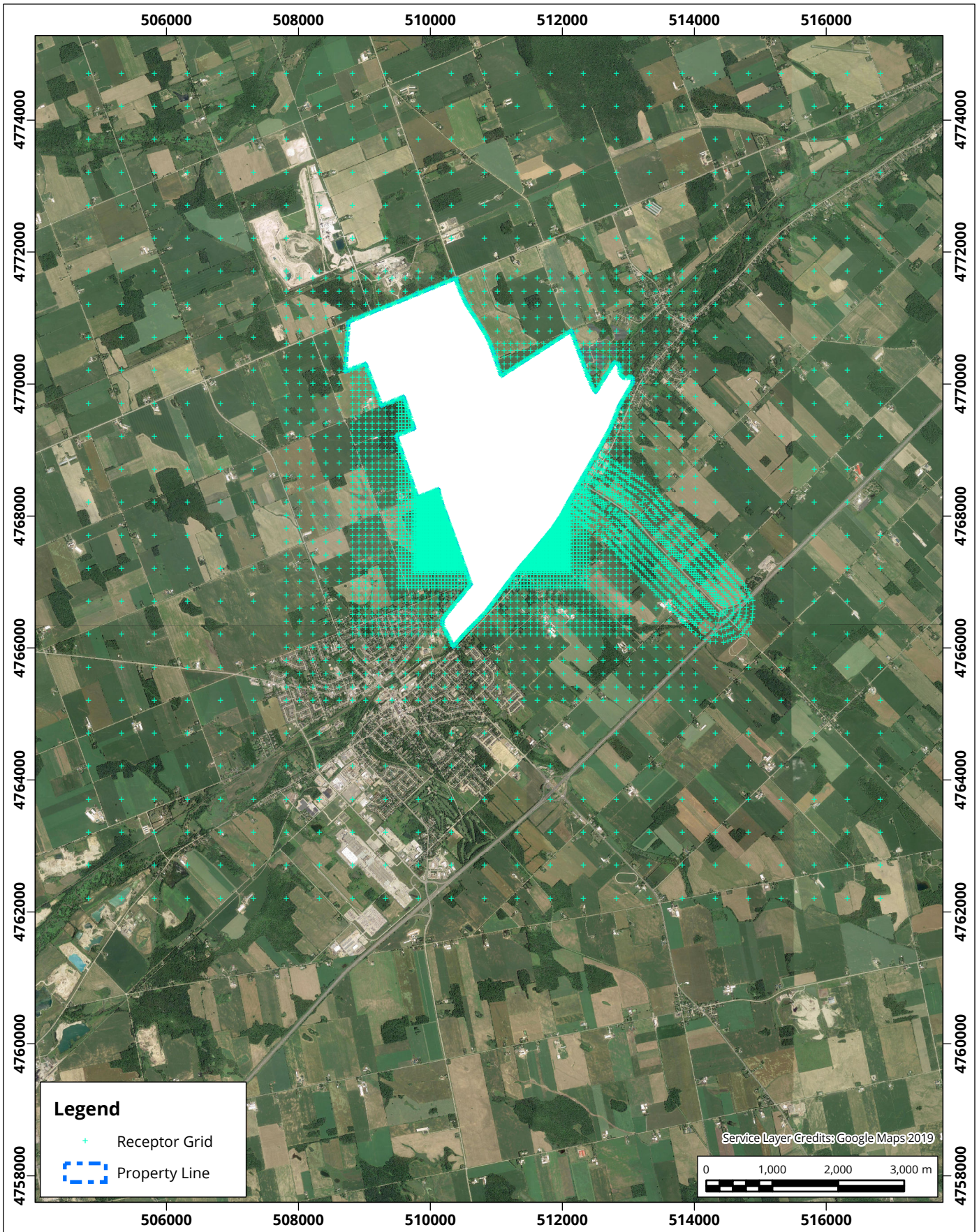


Owner  
 Project  
**SOUTHWESTERN LANDFILL**  
 Drawing  
**SITE LOCATION & HAUL ROUTE**

Project No.  
 967243  
 Drawn  
 JThompson  
 Approved  
 DFry

Scale Bar  
 0 500 1000 Meters  
 Scale  
 1:30000  
 Date  
 01 JAN 20  
 Drawing No.  
**Figure E**  
 Revision No.





## Modelled Receptor Grid

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario



Project #: 1800160

Drawn by: DJH	Figure: 6
Exact Scale:	1:80,000
Date Revised:	Dec 19, 2019







Map Document: C:\GIS\05 Walkers\_SWMLP02\_Work\Walkers\_SWMLP02.aprx

## Discrete Receptor Locations

Map Projection: NAD 1983 UTM Zone 17N  
WEG Southwestern Landfill- Beachville, Ontario

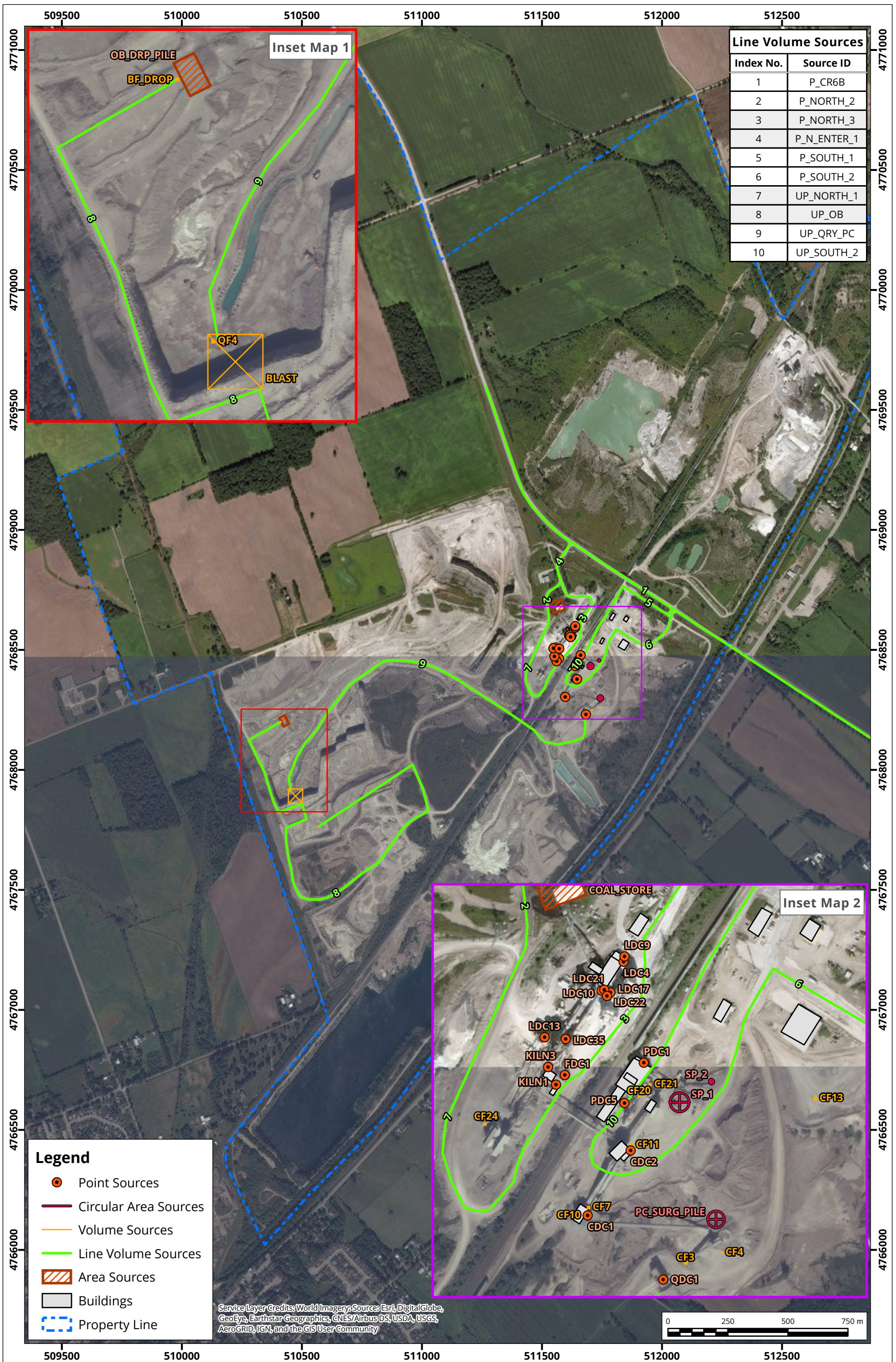


Project #: 1800160

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Date Revised: Dec 16, 2019	



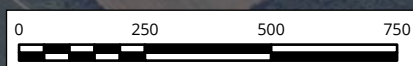




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3	P_NORTH_3
4	P_N_ENTER_1
5	P_SOUTH_1
6	P_SOUTH_2
7	UP_NORTH_1
8	UP_OB
9	UP_QRY_PC
10	UP_SOUTH_2

- Legend**
- Point Sources
  - Circular Area Sources
  - Volume Sources
  - Line Volume Sources
  - Area Sources
  - Buildings
  - Property Line

Service Layer Credits: World Imagery, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Site Plan Showing Significant Sources, Buildings, and Property Line  
Baseline 2019**

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

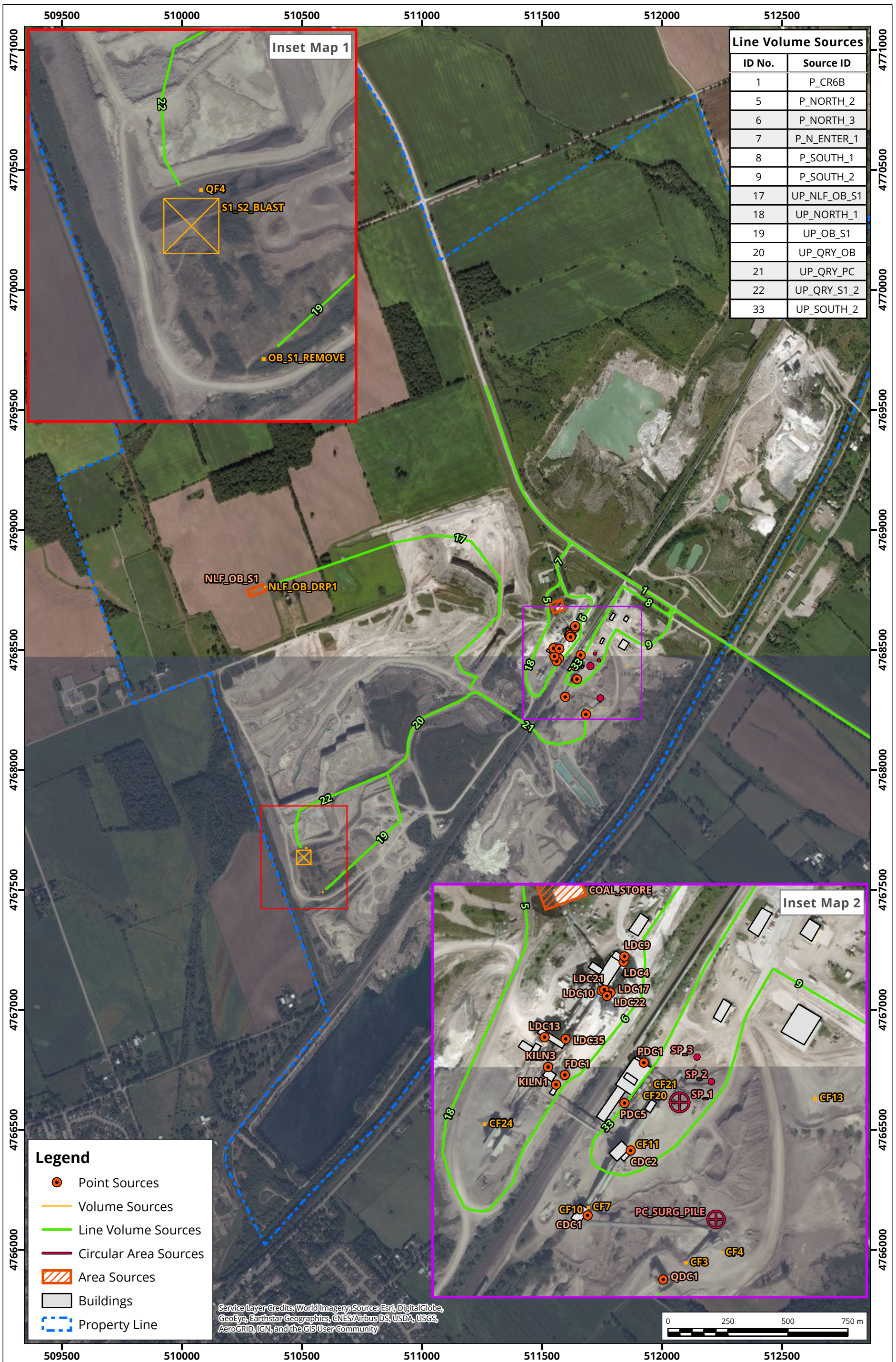


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Date Revised: Feb 19, 2020

Project #: 1800160





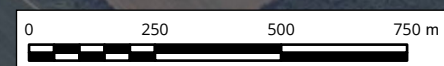


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17	UP_NLF_OB_S1
18	UP_NORTH_1
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20	UP_QRY_OB
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22	UP_QRY_S1_2
33	UP_SOUTH_2

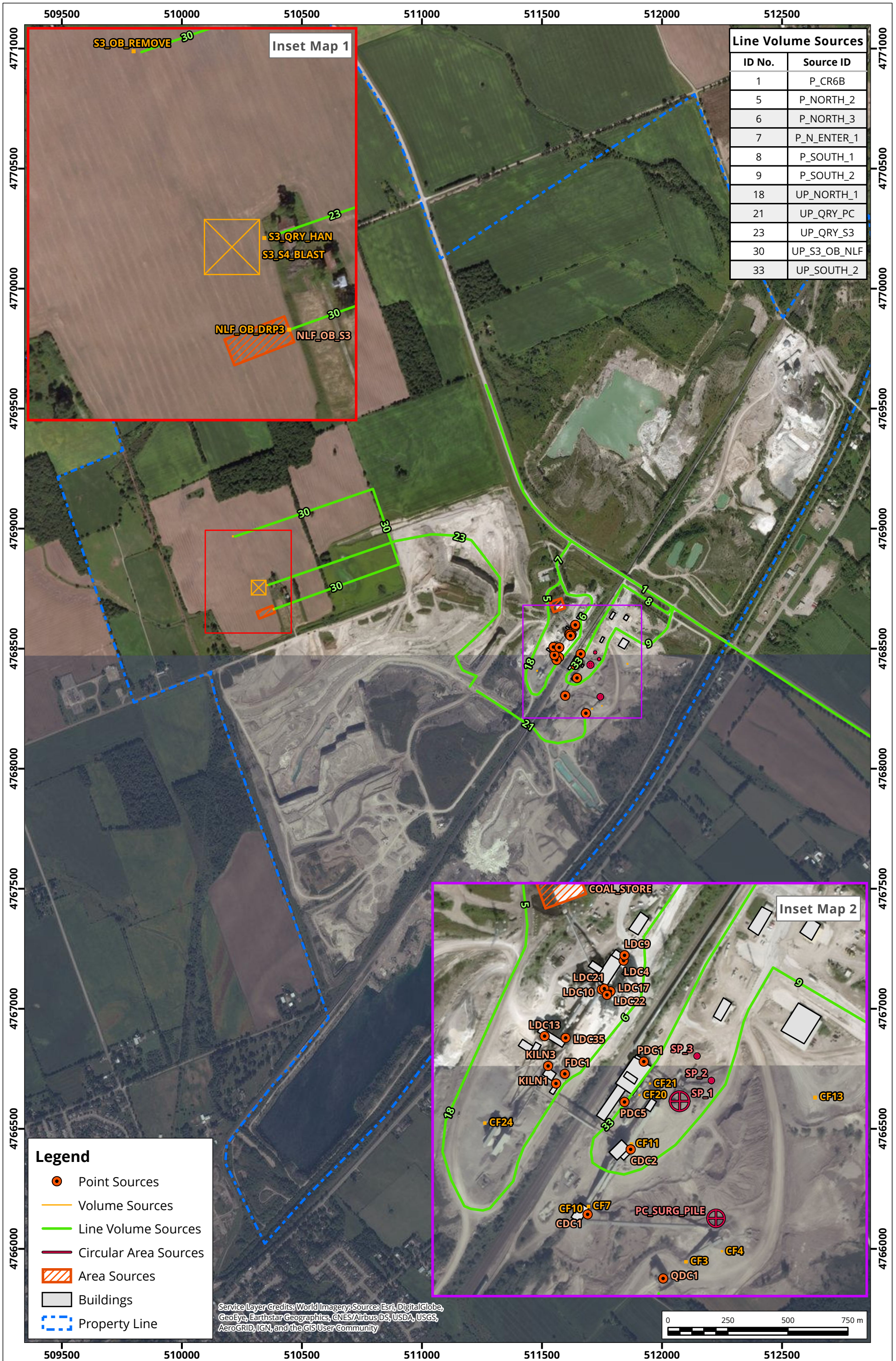
**Legend**

- Point Sources
- Volume Sources
- Line Volume Sources
- Circular Area Sources
- Area Sources
- Buildings
- Property Line

Service Layer Credits: World Imagery, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

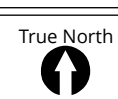






**Site Plan Showing Significant Sources, Buildings, and Property Line**  
**Stage 3 - 2033 - 2037, Future No Build**

Map Projection: NAD 1983 UTM Zone 17N  
 Walker's Southwest Landfill - Beachville, Ontario

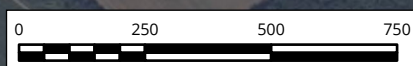


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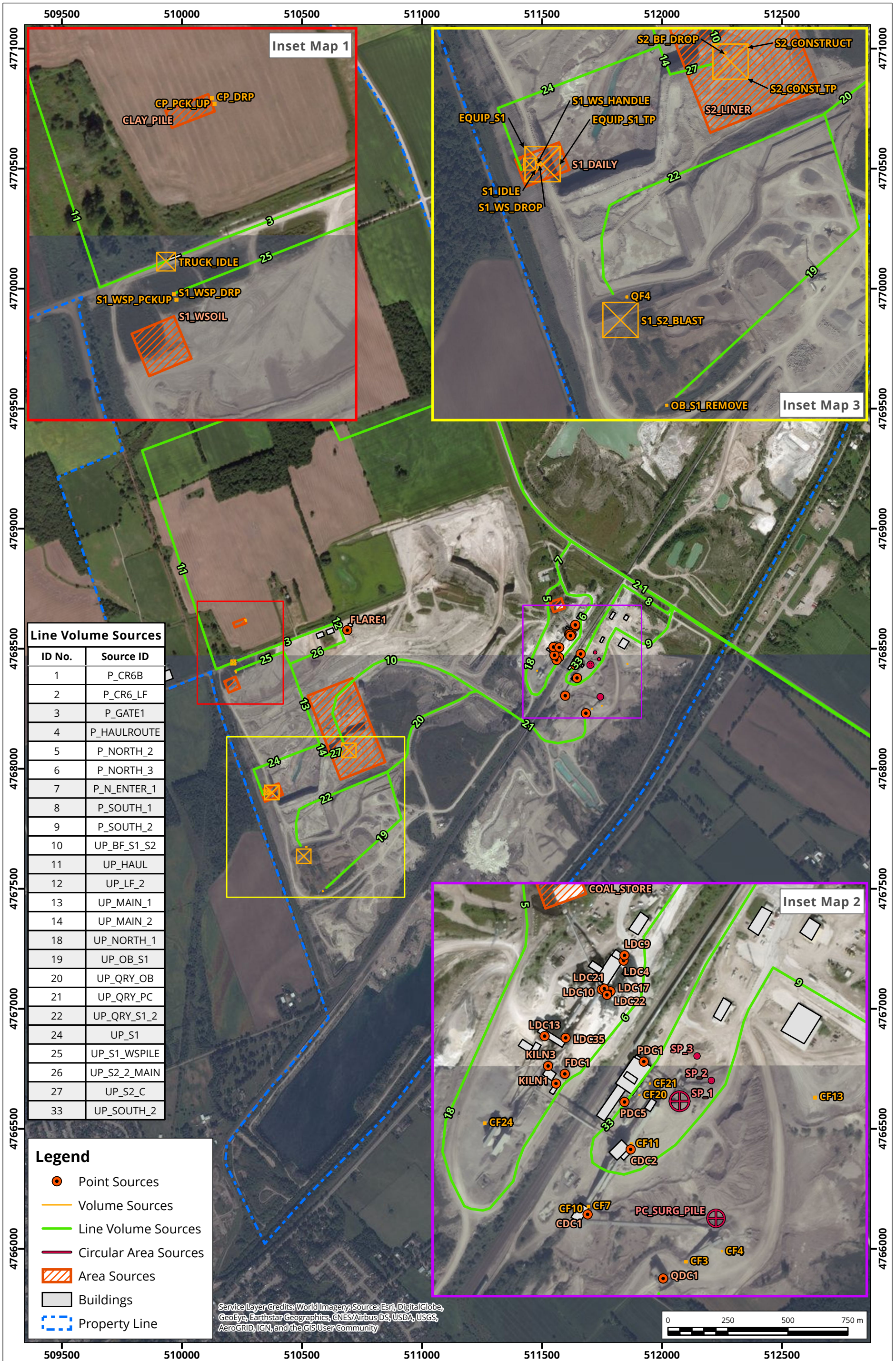
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Service Layer Credits: World Imagery, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community







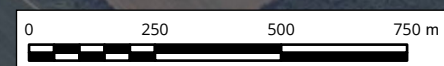
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6	P_NORTH_3
7	P_N_ENTER_1
8	P_SOUTH_1
9	P_SOUTH_2
10	UP_BF_S1_S2
11	UP_HAUL
12	UP_LF_2
13	UP_MAIN_1
14	UP_MAIN_2
18	UP_NORTH_1
19	UP_OB_S1
20	UP_QRY_OB
21	UP_QRY_PC
22	UP_QRY_S1_2
24	UP_S1
25	UP_S1_WSPILE
26	UP_S2_2_MAIN
27	UP_S2_C
33	UP_SOUTH_2

**Legend**

- Point Sources
- Volume Sources
- Line Volume Sources
- Circular Area Sources
- Area Sources
- Buildings
- Property Line

Service Layer Credits: World Imagery, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Site Plan Showing Significant Sources, Buildings, and Property Line  
Stage 1 - 2023 - 2027, Future Build**

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario

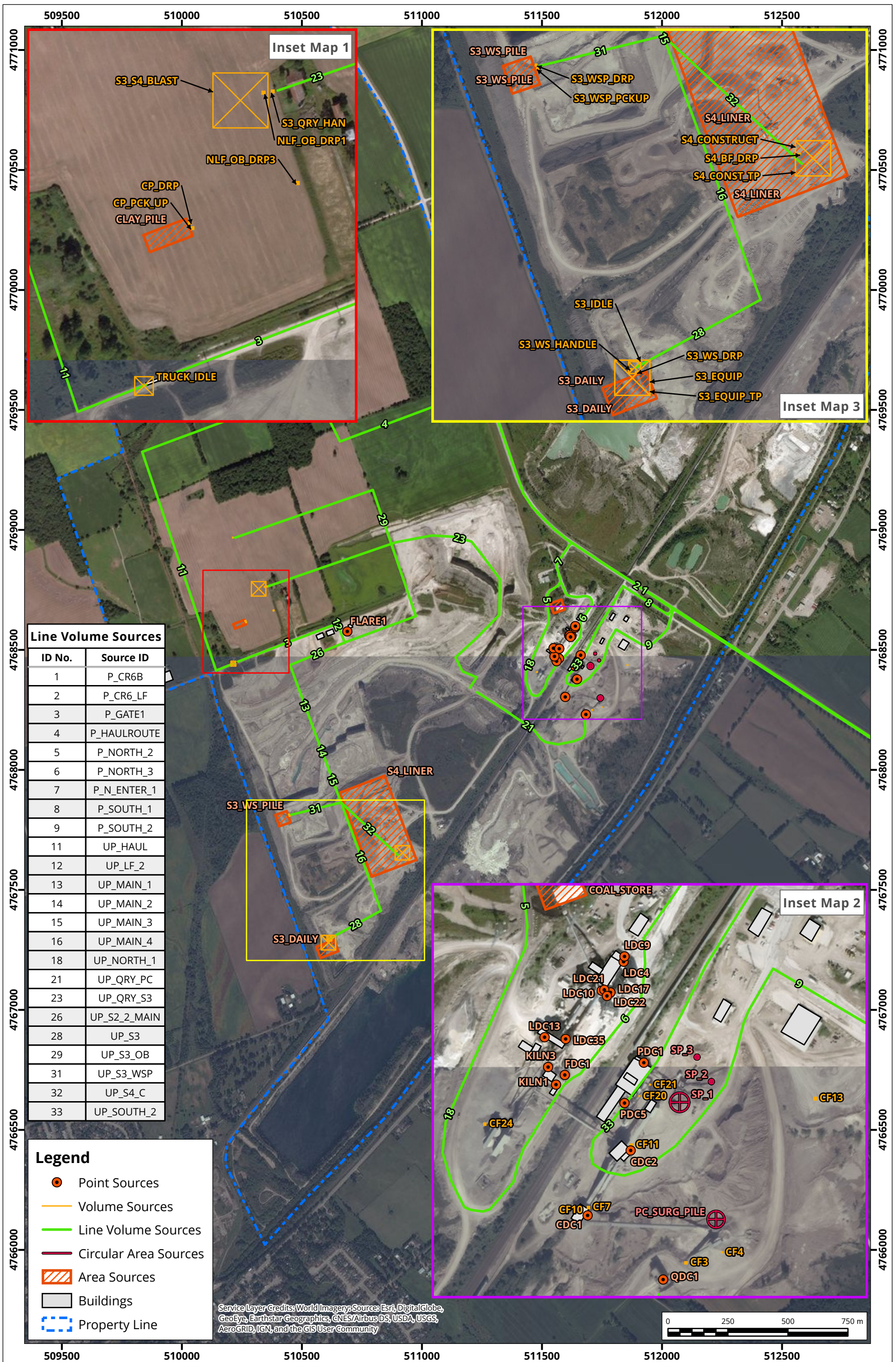


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Date Revised: Feb 19, 2020

Project #: 1800160







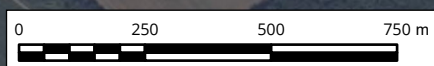
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6	P_NORTH_3
7	P_N_ENTER_1
8	P_SOUTH_1
9	P_SOUTH_2
11	UP_HAUL
12	UP_LF_2
13	UP_MAIN_1
14	UP_MAIN_2
15	UP_MAIN_3
16	UP_MAIN_4
18	UP_NORTH_1
21	UP_QRY_PC
23	UP_QRY_S3
26	UP_S2_2_MAIN
28	UP_S3
29	UP_S3_OB
31	UP_S3_WSP
32	UP_S4_C
33	UP_SOUTH_2

**Legend**

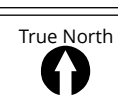
- Point Sources
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- Circular Area Sources
- Area Sources
- Buildings
- Property Line

Service Layer Credits: World Imagery, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Site Plan Showing Significant Sources, Buildings, and Property Line  
Stage 3 - 2033 - 2037, Future Build**

Map Projection: NAD 1983 UTM Zone 17N  
Walker's Southwest Landfill - Beachville, Ontario



Drawn by: DJH Figure: 8e  
Approx. Scale: 1:15,000  
Date Revised: Feb 19, 2020

Project #: 1800160





# APPENDIX A: GLOSSARY OF TERMS



## 13 GLOSSARY OF TERMS USED IN AIR IMPACT ASSESSMENTS

ADT	Average daily traffic
AADT	Annual average daily traffic
AAQC	Ambient Air Quality Criteria as defined by the Ontario Ministry of the Environment, Conservation and Parks
AERMOD	An air dispersion model developed by AERMIC to support the US EPA's regulatory modelling programs. AERMOD is the next-generation air dispersion model that incorporates concepts such as planetary boundary layer theory and advanced methods for handling complex terrain.
Baseline	Refers to the existing air quality surrounding the landfill. The baseline is used to determine if there will be a change in the existing environment before the proposed landfill.
CO	Carbon monoxide; a regulated air pollutant and product of incomplete combustion
Conservative	Implementing a number of assumptions in an analysis that are intended to lead to a deliberate over-estimation of impacts
Clod Samples	Refer to the large clumps of native or typical soil at the landfill typically used for cover.
Deposition Routine	Refers to dust particles that travel downwind in a plume, larger particles fall out of the air through gravitational settling and other factors and are not replaced. Using this deposition routine provides a simulation of this process. By doing so, a more realistic prediction of dust impacts is produced.
Dustfall	Refers to larger particles that settle at a sufficient rate to produce a dust film on surfaces. Dustfall is a nuisance due to its soiling nature.
Flux Chamber	Is a stainless-steel vessel of volume 0.5 m <sup>2</sup> . It is used to measure minute emissions from near passive sources that do not have any mechanical fans to discharge the contaminants of interest.
g/veh/mi	Grams of emissions per vehicle per mile traveled
HC	Hydrocarbons; generally defined in terms of volatile organic compounds (VOC's) and semi-volatile compounds (SVOC's)
MECP	Ontario Ministry of the Environment, Conservation and Parks
NO	Nitric oxide; an air pollutant and constituent of NO <sub>x</sub> generated by combustion
NO <sub>2</sub>	Nitrogen dioxide; an air pollutant and regulated constituent of NO <sub>x</sub> generated by chemical or photochemical reactions generally involving NO





NOX	Total oxides of nitrogen; a generic air pollutant category that includes the sum of all NO and NO <sub>2</sub> concentrations
O <sub>3</sub>	Ozone; a photochemical oxidant generally formed in the presence of sunlight, oxides of nitrogen and reactive hydrocarbons
Odour	Odour can generally be described as a person's perception to a particular smell. This may be considered a "good" or "bad" smell as a subjective observation from a particular person. An odour is deemed as a nuisance, if it is detected and considered to be unpleasant. When odour levels are elevated and occur frequently, they can be construed as an adverse effect.
Odour Unit	One odour unit is the concentration at which 50% of a population will detect an odour.
PAHs	Polycyclic aromatic hydrocarbons; a class of airborne contaminants that exist with both solids and gaseous fractions; individual species include fluoranthene and benzo(a)pyrene
ppm, ppmv	Parts per million by volume; unit of concentration; mixing ratio
PM <sub>10</sub>	Inhalable particulate matter; airborne particles of aerodynamic diameter less than 10 microns
PM <sub>2.5</sub>	Respirable particulate matter; airborne particles of aerodynamic diameter less than 2.5 microns
SO <sub>2</sub>	Sulphur dioxide; an air pollutant usually associated with the combustion of sulphur-laden fuel
Tedlar Bags	A bag used to collect air samples that is comprised of a skin is made from inert materials like Teflon to minimize any chemical reactions that may compromise the sample
TSP	Total suspended particulates; airborne particulate matter that is generally small (less than about 44 microns in diameter) enough so as not to be greatly affected by gravitational forces
µg/m <sup>3</sup>	Micrograms per cubic metre; a unit of concentration
U.S. EPA	The United States Environmental Protection Agency
VMT	Vehicle miles traveled
VOCs	Volatile organic compounds; a class of airborne gaseous contaminants that includes individual chemical species such as vinyl chloride, benzene, xylenes, etc.

# APPENDIX B:

## ENVIRONMENTAL ASSESSMENT CRITERIA AND STUDIES

(FROM THE APPROVED AMENDED TERMS OF REFERENCE)



Table B-a-EA Criteria Table

Criteria	Definition/ Rationale	Studies Addressing the Criteria												Study Areas			Duration		
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																			
1	Explosive hazard due to combustible gas accumulation in confined spaces.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Effects due to exposure to air emissions.		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Effects due to fine particulate exposure.		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Effects due to contact with contaminated groundwater or surface water.						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Flood hazard.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>





	Criteria	Definition/ Rationale	Studies Addressing the Criteria												Study Areas			Duration		
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																				
14	Nuisance associated with vermin.	Waste disposal facilities can attract vermin and birds, which can be a nuisance and lead to a decrease in property enjoyment by area residents. Vermin and birds can also be a nuisance to agricultural operations.																		
<b>Social and Cultural (continued)</b>																				
15	Displacement/disturbance of cultural/heritage resources.	Cultural resources (including heritage buildings, cemeteries and cultural landscapes) are an important component of human heritage. These non-renewable cultural resources may be displaced by the construction of a waste disposal facility. The use and enjoyment of cultural resources may also be disturbed by the ongoing operation and traffic. Disturbances could result from noise, dust, odour, visibility, birds, litter and traffic congestion.																		
16	Effects on land resources, traditional activities or other interests of Aboriginal Communities.	Major new developments of any type may have positive or negative effects on the interests of Aboriginal Communities (i.e., businesses opportunities, joint ventures)																		
17	Displacement/destruction of archaeological resources.	Archaeological resources are non-renewable cultural resources that can be destroyed by the construction and operation of a waste disposal facility.																		
18	Level of public service provided by the waste disposal facility.	The presence of a waste disposal operation within a municipality can provide an increased level of public service (e.g., convenient access to waste disposal services) to local residents and businesses, as well as those in the broader community(ies).																		
19	Effects on other public services.	The presence of a waste disposal facility may have positive or negative spin-off effects on other public services in the community (e.g., leachate trucking, waste water treatment capacity, if there is discharge to the sewer system).																		

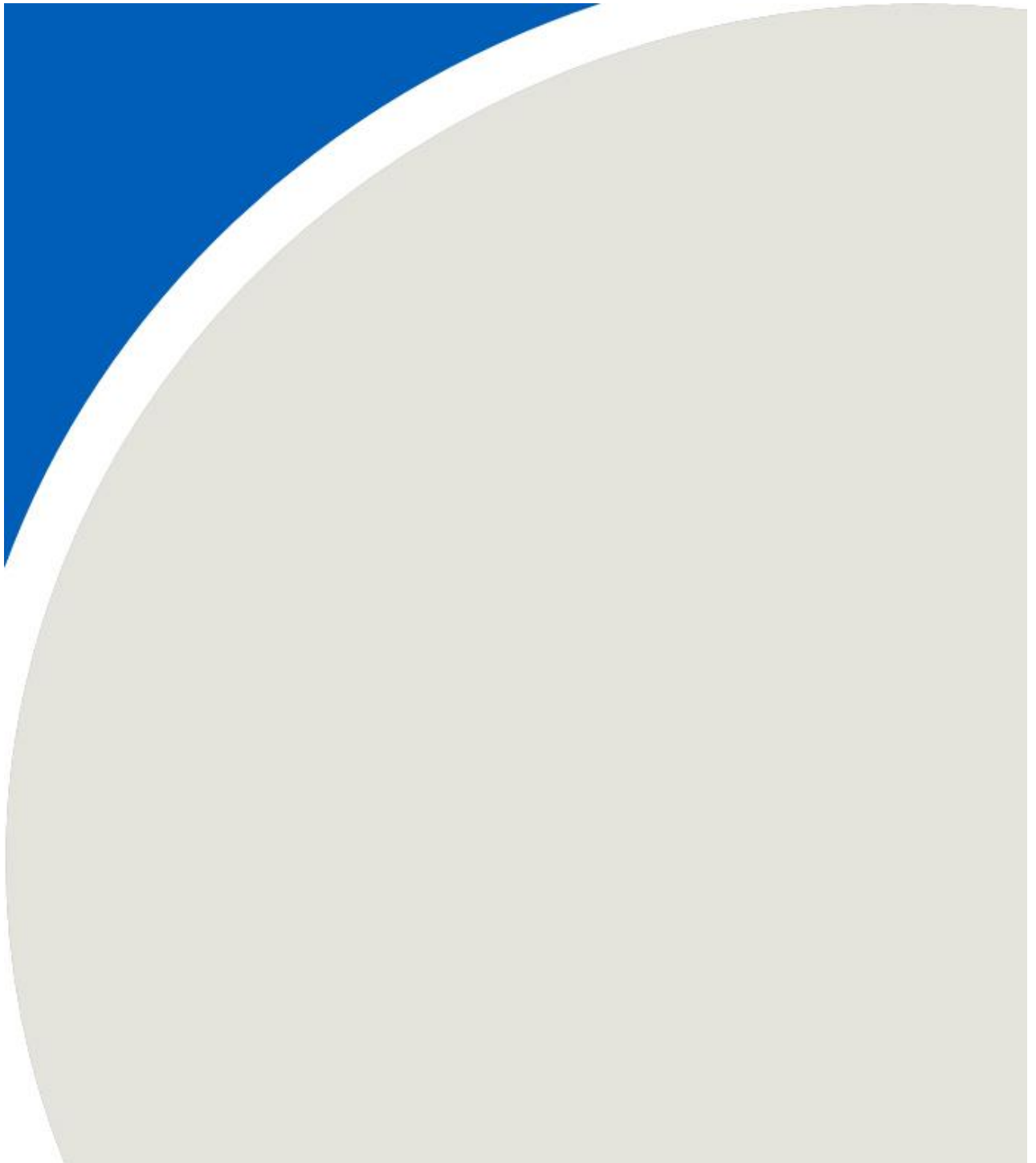
	Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration	
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																				
<b>Social and Cultural (continued)</b>																				
20	Changes to community character/cohesion.	Community character and cohesion refer to physical characteristics, social stability, attractiveness as a place to live and patterns of social interaction. A waste disposal facility may actually or perceptually interfere with these important community attributes.																		
21	Compatibility with municipal land use designations and official plans.	A waste disposal facility has the potential to affect the viability of present and future land uses, which may have an effect on planning decisions made in the surrounding community.																		
<b>Economics</b>																				
22	Displacement/disruption of businesses or farms.	Any on-site businesses or farms would be displaced by a waste disposal facility, and there could be financial losses as a result of relocation. Some types of businesses located in the site vicinity or along the haul routes may suffer financial losses due to the potential nuisance effects or perceived effects associated with the operation of a waste disposal facility such as noise, litter, dust, odour, visibility, birds, vermin and traffic congestion.																		
23	Property value impacts.	The establishment and operation of a waste disposal facility may adversely affect property values in the site vicinity or along the haul routes.																		
24	Direct employment in waste disposal facility construction and operation.	A waste disposal facility may create new employment opportunities both in the construction and day-to-day operation.																		
25	Indirect employment in related industries and services.	A waste disposal facility has the potential to have impacts on employment opportunities in local firms supplying products or services directly, or as secondary suppliers.																		

	Criteria	Definition/ Rationale	Studies Addressing the Criteria													Study Areas			Duration	
			Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																				
<b>Economics (continued)</b>																				
26	New business opportunities related directly to waste disposal facility construction and operation.	A large capital project, such as the construction and operation of a waste disposal facility, can create new opportunities for local businesses supplying products or services.																		
27	New business opportunities in related industries and services.	New opportunities may be created for local businesses, or as secondary suppliers to industries working for the waste disposal facility (e.g., restaurants, gas stations, machine shops, repair shops, welding shops, equipment rentals, etc.).																		
28	Public costs for indirect liabilities.	Some public services may have to be upgraded to accommodate the establishment and operation of a waste disposal facility (e.g., snow removal, sewer and water connections, etc.).																		
29	Effects on the municipal tax base.	A waste disposal facility has the potential to affect municipal tax revenues from the site it occupies.																		
30	Effect on the cost of service to customers.	The costs of constructing a waste disposal facility will effect the price of tipping fees to the site. This affects the cost of service to customers in Oxford county and the province.																		
31	Effects on the provincial/ federal tax base.	A waste disposal facility has the potential to affect provincial/federal tax revenues.																		
<b>Natural Environment &amp; Resources</b>																				
32	Loss/displacement of surface water resources.	Construction of a waste disposal facility may cause the removal of all or part of a natural stream or pond.																		
33	Impact on the availability of groundwater supply to wells.	A waste disposal facility can impact the availability of groundwater supply if groundwater is pumped from aquifers or if recharge to aquifers is reduced.																		
34	Effects on stream baseflow quantity/quality.	The presence of a waste disposal facility has the potential to affect the quality or quantity of baseflow to surface water.																		

Criteria	Definition/ Rationale	Studies Addressing the Criteria														Study Areas			Duration	
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period	
<b>Public Health &amp; Safety</b>																				
<b>Natural Environment &amp; Resources (Continued)</b>																				
35	Loss/disturbance of terrestrial ecosystems.					<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	Loss/disturbance of aquatic ecosystems.					<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
37	Displacement of agricultural land.	<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
38	Disruption of farm operations.	<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	Sterilization of industrial mineral resources.									<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
40	Displacement of forestry resources.									<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
41	Loss/disruption of recreational resources.													<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



# APPENDIX C



**Appendix C: Stage 1 - On-Site Mobile Equipment - No Mitigation**

UNPAVED ROAD SECTIONS - AP-42 Section 13.2.2  
PAVED ROAD SECTIONS - AP-42 Section 13.2.1

<b>Paved Roads:</b>	$E = k (sL)^{0.91} (W)^{1.02}$
<b>Unpaved Roads - Industrial:</b>	$E = 281.9 k (s / 12)^a (W / 3)^b$
<b>Unpaved Roads - Public:</b>	$E = 281.9 k (s / 12)^a (S / 30)^b / (M / 0.5)^c - C$

**E** particulate emission factor (g/VKT)      **W** average weight of the vehicles traveling the road (US short tons)      **M** surface material moisture content (%)  
**k** particle size multiplier (see below)      **s** surface material silt content (%)      **S** mean vehicle speed (mph)  
**sL** road surface silt loading (g/m<sup>2</sup>)      **C** emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear      **a,b,c,d** constants (see below)

Route ID [1]	Route Description	Traffic Passes [2]			Segment Length [2] (m)	Road Surface [3]	Roadway Type [4]	Mean Vehicle Speed		Average Vehicle Weight [5] (tons)	Surface Material Moisture Content [6] (%)	Surface Silt Content [7] (%)	Road Surface Silt Loading [8] (g/m <sup>2</sup> )	Base AP-42 Emission Factor				Base Emission Rate				Additional Control Efficiency Applied (%)	Final Controlled Emission Rate							
		Hourly (#/h)	Daily (#/d)	Annual (#/a)				(km/h)	(mph)					TSP (g/VKT)	PM <sub>10</sub> (g/VKT)	PM <sub>2.5</sub> (g/VKT)	Silica (g/VKT)	TSP (g/s)	PM <sub>10</sub> (g/s)	PM <sub>2.5</sub> (g/s)	Silica (g/s)		TSP (g/s)	Data Quality Rating	PM <sub>10</sub> (g/s)	Data Quality Rating	PM <sub>2.5</sub> (g/s)	Data Quality Rating	Silica (g/s)	Data Quality Rating
P_GATE1	Paved area at the weight scale entrance	1	1	1	443	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00	0.0E+00	2.8E-02	3.7E-03	8.8E-04	0.0E+00		2.8E-02		3.7E-03		8.8E-04		0.0E+00	
UP_LF_2	Unpaved road from gatehouse to BF int S3	1	1	1	85	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	2.0E-01	4.6E-02	4.6E-03	0.0E+00	90%	2.0E-02		4.6E-03		4.6E-04		0.0E+00	
UP_S2_2_MAIN	Road segment from stage 2 active face to main LF road	1	1	1	245	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	5.6E-01	1.3E-01	1.3E-02	0.0E+00	90%	5.6E-02		1.3E-02		1.3E-03		0.0E+00	
UP_S1	Unpaved road to stage 1 - Waste soil and waste	1	1	1	407	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	9.3E-01	2.2E-01	2.2E-02	0.0E+00	90%	9.3E-02		2.2E-02		2.2E-03		0.0E+00	
UP_S2_C	Unpaved road into stage 2 construction area	1	1	1	75	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	1.7E-01	4.0E-02	4.0E-03	0.0E+00	90%	1.7E-02		4.0E-03		4.0E-04		0.0E+00	
UP_MAIN_1	Main landfill haul route to active faces.	1	1	1	357	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	8.2E-01	1.9E-01	1.9E-02	0.0E+00	90%	8.2E-02		1.9E-02		1.9E-03		0.0E+00	
UP_S4_C	Unpaved road leading to stage 4 construction area	0	1	1	322	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	90%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_S3	Unpaved road leading to the stage 3 active face	0	1	1	241	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	90%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
P_N_ENTER_1	Paved Section of the north entrance for finished goods	1	1	1	181	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.5E-03	8.4E-04	2.0E-04			6.5E-03		8.4E-04		2.0E-04			
P_NORTH_2	Paved North Entrance second paved section	1	1	1	178	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.4E-03	8.2E-04	2.0E-04			6.4E-03		8.2E-04		2.0E-04			
UP_NORTH_1	North Entrance unpaved section	1	1	1	479	Unpaved	Industrial	35	22	20.8		25.2%		7.7E+03	2.0E+03	2.0E+02		1.0E+00	2.6E-01	2.6E-02		95%	5.1E-02		1.3E-02		1.3E-03			
P_NORTH_3	North Entrance Third Paved Section	1	1	1	539	Paved	Industrial	35	22	62.5			1.24	4.0E+02	5.1E+01	1.2E+01		5.9E-02	7.7E-03	1.9E-03			5.9E-02		7.7E-03		1.9E-03			
P_SOUTH_1	Paved south entrance	1	1	1	256	Paved	Industrial	35	22	13.7			1.24	8.4E+01	1.1E+01	2.6E+00		6.0E-03	7.7E-04	1.9E-04			6.0E-03		7.7E-04		1.9E-04			
UP_SOUTH_2	South entrance unpaved road in working area	1	1	1	758	Unpaved	Industrial	35	22	26.3		25.2%		8.6E+03	2.2E+03	2.2E+02		1.8E+00	4.6E-01	4.6E-02		95%	9.0E-02		2.3E-02		2.3E-03			
P_SOUTH_2	Paved road leading out of the working area and to CR6	1	1	1	396	Paved	Industrial	35	22	39.0			1.24	2.4E+02	3.2E+01	7.7E+00		2.7E-02	3.5E-03	8.4E-04			2.7E-02		3.5E-03		8.4E-04			
UP_S1_WSPILE	Unpaved Road to Stage 1 waste soil pile	1	1	1	270	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		6.2E-01	1.4E-01	1.4E-02		90%	6.2E-02		1.4E-02		1.4E-03			
UP_S3_WSP	Stage 3 Waste soil pile to active face haul route	0	1	1	83	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		0.0E+00	0.0E+00	0.0E+00		90%	0.0E+00		0.0E+00		0.0E+00			
UP_MAIN_2	Main haul route section 2, stage 1 to stage 2	1	1	1	51	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.2E-01	2.7E-02	2.7E-03		90%	1.2E-02		2.7E-03		2.7E-04			
UP_MAIN_3	Unpaved main haul route, stage 2 to stage 3	0	1	1	203	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		0.0E+00	0.0E+00	0.0E+00		90%	0.0E+00		0.0E+00		0.0E+00			
UP_MAIN_4	Unpaved main haul route stage 3 to stage 4	0	1	1	480	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		0.0E+00	0.0E+00	0.0E+00		90%	0.0E+00		0.0E+00		0.0E+00			
UP_QRY_PC	Unpaved road leading to the primary crusher	1	1	1	598	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.4E+00	3.2E-01	3.2E-02		95%	6.8E-02		1.6E-02		1.6E-03			
UP_QRY_OB	Stage 1 - Overburden removal and quarry hauling	1	1	1	541	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		1.8E+00	4.2E-01	4.2E-02		95%	9.0E-02		2.1E-02		2.1E-03			
UP_QRY_S1_2	Stage 1 - Quarry haul route	1	1	1	555	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		1.8E+00	4.3E-01	4.3E-02		95%	9.2E-02		2.1E-02		2.1E-03			
UP_OB_S1	Stage 1 - overburden removal	1	1	1	629	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		2.1E+00	4.9E-01	4.9E-02		95%	1.0E-01		2.4E-02		2.4E-03			
UP_BF_S1_S2	Stage 1 - overburden transfer to S2 for backfill	1	1	1	875	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		2.9E+00	6.8E-01	6.8E-02		95%	1.4E-01		3.4E-02		3.4E-03			
UP_QRY_S3	Stage 3 - Quarry haul route	0	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_S3_OB	Unpaved road for overburden removal	0	1	1	1480	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
P_CR6_LF	County road 6	1	1	1	4422	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01		1.1E-02	1.4E-03	3.4E-04			1.1E-02		1.4E-03		3.4E-04			
P_HAULROUTE	Paved section of the LF Haul route	1	1	1	1657	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00		1.1E-01	1.4E-02	3.3E-03			1.1E-01		1.4E-02		3.3E-03			
UP_HAUL	Unpaved portion of the haul route	1	1	1	1042	Unpaved	Industrial	35	22	36.6		18.5%	0.19	8.2E+03	1.9E+03	1.9E+02	0.0E+00	2.4E+00	5.6E-01	5.6E-02	0.0E+00	90%	2.4E-01		5.6E-02		5.6E-03		0.0E+00	
EQUIP_S1	Equipment at Stage 1 Active Face	1	1	1	30	Unpaved	Industrial	5	3	40.3		18.5%		8.6E+03	2.0E+03	2.0E+02	0.0E+00	7.2E-02	1.7E-02	1.7E-03	0.0E+00	90%	7.2E-03		1.7E-03		1.7E-04		0.0E+00	
S3_EQUIP	Equipment at Stage 3 Active Face	0	1	1	30	Unpaved	Industrial	5	3	40.3		18.5%		8.6E+03	2.0E+03	2.0E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	90%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_S3_OB_NLF	Unpaved road for OB removal for stage 3 no landfill	0	1	1	1494	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_NLF_OB_S1	Unpaved road for OB removal for stage 1 no landfill	1	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	5.5E+00	1.3E+00	1.3E-01	0.0E+00	95%	2.8E-01		6.4E-02		6.4E-03		0.0E+00	
P_CR6B	CR6 roadway background traffic only	1	1	1	4424	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01		1.1E-02	1.4E-03	3.4E-04			1.1E-02		1.4E-03		3.4E-04		0.0E+00	

**Constants for Mobile Emission Equations**

Roadway Type	Contaminant	k	a	b	c	d	Quality
Paved Roads:	PM <sub>2.5</sub>	0.15	-	-	-	-	-
	PM <sub>10</sub>	0.62	-	-	-	-	-
	TSP (44)	4.79	-	-	-	-	-
Unpaved Roads - Industrial:	PM <sub>2.5</sub>	0.15	0.9	0.45	-	-	C
	PM <sub>10</sub>	1.5	0.9	0.45	-	-	B
	TSP (44)	7.32	0.6	0.45	-	-	B
Unpaved Roads - Public:	PM <sub>2.5</sub>	0.18	1	-	0.2	0.5	C
	PM <sub>10</sub>	1.8	1	-	0.2	0.5	B
	TSP (44)	8.96	1	-	0.49	0.2	B

- [1] Route ID numbers provided on site plan.
- [2] Length of a specific road segment. A separate segment should be used whenever one or more parameters change.
- [3] Paved surfaces include asphalt, concrete, and recycled asphalt (if it forms a relatively consistent surface).
- [4] Publicly accessible and dominated by light vehicles, or industrial, and dominated by heavy vehicles.
- [5] The average vehicle weight reflects the average of the empty and loaded vehicle weight, for travel in both directions.
- [6] Required only for publicly accessible unpaved roads.
- [7] Required only for unpaved roads (public and industrial).
- [8] Required only for industrial paved roads.

Sample calculation for uncontrolled TSP emission factor for Source P\_GATE1: Paved area at the weight scale entrance

$$EF = 281.9 \times (4.9) \times [(0\% / 12)]^{0.91} \times [(36$$

Appendix C: Stage 3 - On-Site Mobile Equipment - No Mitigation

#REF!

UNPAVED ROAD SECTIONS - AP-42 Section 13.2.2  
PAVED ROAD SECTIONS - AP-42 Section 13.2.1

<b>Paved Roads:</b>	$E = k (sL)^{0.91} (W)^{1.02}$
<b>Unpaved Roads - Industrial:</b>	$E = 281.9 k (s / 12)^a (W / 3)^b$
<b>Unpaved Roads - Public:</b>	$E = 281.9 k (s / 12)^a (S / 30)^c / (M / 0.5)^d - C$

**E** particulate emission factor (g/VKT)      **W** average weight of the vehicles traveling the road (US short tons)      **M** surface material moisture content (%)  
**k** particle size multiplier (see below)      **s** surface material silt content (%)      **S** mean vehicle speed (mph)  
**sL** road surface silt loading (g/m<sup>2</sup>)      **C** emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear      **a,b,c,d** constants (see below)

Route ID [1]	Route Description	Traffic Passes [2]			Segment Length [2] (m)	Road Surface [3]	Roadway Type [4]	Mean Vehicle Speed		Average Vehicle Weight [5] (tons)	Surface Material Moisture Content [6] (%)	Surface Silt Content [7] (%)	Road Surface Silt Loading [8] (g/m <sup>2</sup> )	Base AP-42 Emission Factor				Base Emission Rate				Additional Control Efficiency Applied (%)	Final Controlled Emission Rate								
		Hourly (#/h)	Daily (#/d)	Annual (#/a)				(km/h)	(mph)					TSP	PM <sub>10</sub>	PM <sub>2.5</sub>	Silica	TSP	PM <sub>10</sub>	PM <sub>2.5</sub>	Silica		TSP	Data Quality Rating	PM <sub>10</sub>	Data Quality Rating	PM <sub>2.5</sub>	Data Quality Rating	Silica	Data Quality Rating	
														(g/VKT)	(g/VKT)	(g/VKT)	(g/VKT)	(g/s)	(g/s)	(g/s)	(g/s)		(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)
P_GATE1	Paved area at the weight scale entrance	1	1	1	443	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00	3.0E+00	2.8E-02	3.7E-03	8.8E-04	3.7E-04			2.8E-02		3.7E-03		8.8E-04		3.7E-04	
UP_LF_2	Unpaved road from gatehouse to BF int S3	1	1	1	85	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	2.0E-01	4.6E-02	4.6E-03	0.0E+00	90%		2.0E-02		4.6E-03		4.6E-04		0.0E+00	
UP_S2_2_MAIN	Road segment from stage 2 active face to main LF road	1	1	1	245	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	5.6E-01	1.3E-01	1.3E-02	0.0E+00	90%		5.6E-02		1.3E-02		1.3E-03		0.0E+00	
UP_S1	Unpaved road to stage 1 - Waste soil and waste	0	1	1	407	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	5.0E+00	0.0E+00	0.0E+00	0.0E+00	90%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_S2_C	Unpaved road into stage 2 construction area	0	1	1	75	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	90%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_MAIN_1	Main landfill haul route to active faces.	1	1	1	357	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	8.2E-01	1.9E-01	1.9E-02	0.0E+00	90%		8.2E-02		1.9E-02		1.9E-03		0.0E+00	
UP_S4_C	Unpaved road leading to stage 4 construction area	1	1	1	322	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	7.4E-01	1.7E-01	1.7E-02	0.0E+00	90%		7.4E-02		1.7E-02		1.7E-03		0.0E+00	
UP_S3	Unpaved road leading to the stage 3 active face	1	1	1	241	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02	0.0E+00	5.5E-01	1.3E-01	1.3E-02	0.0E+00	90%		5.5E-02		1.3E-02		1.3E-03		0.0E+00	
P_N_ENTER_1	Paved Section of the north entrance for finished goods	1	1	1	181	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.5E-03	8.4E-04	2.0E-04				6.5E-03		8.4E-04		2.0E-04			
P_NORTH_2	Paved North Entrance second paved section	1	1	1	178	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.4E-03	8.2E-04	2.0E-04				6.4E-03		8.2E-04		2.0E-04			
UP_NORTH_1	North Entrance unpaved section	1	1	1	479	Unpaved	Industrial	35	22	20.8		25.2%		7.7E+03	2.0E+03	2.0E+02		1.0E+00	2.6E-01	2.6E-02		95%		5.1E-02		1.3E-02		1.3E-03			
P_NORTH_3	North Entrance Third Paved Section	1	1	1	539	Paved	Industrial	35	22	62.5			1.24	4.0E+02	5.1E+01	1.2E+01		5.9E-02	7.7E-03	1.9E-03				5.9E-02		7.7E-03		1.9E-03			
P_SOUTH_1	Paved south entrance	1	1	1	256	Paved	Industrial	35	22	13.7			1.24	8.4E+01	1.1E+01	2.6E+00		6.0E-03	7.7E-04	1.9E-04				6.0E-03		7.7E-04		1.9E-04			
UP_SOUTH_2	South entrance unpaved road in working area	1	1	1	758	Unpaved	Industrial	35	22	26.3		25.2%		8.6E+03	2.2E+03	2.2E+02		1.8E+00	4.6E-01	4.6E-02		95%		9.0E-02		2.3E-02		2.3E-03			
P_SOUTH_2	Paved road leading out of the working area and to CR6	1	1	1	396	Paved	Industrial	35	22	39.0			1.24	2.4E+02	3.2E+01	7.7E+00		2.7E-02	3.5E-03	8.4E-04				2.7E-02		3.5E-03		8.4E-04			
UP_S1_WSPILE	Unpaved Road to Stage 1 waste soil pile	0	1	1	270	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		0.0E+00	0.0E+00	0.0E+00		90%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_S3_WSP	Stage 3 Waste soil pile to active face haul route	1	1	1	83	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.9E-01	4.4E-02	4.4E-03		90%		1.9E-02		4.4E-03		4.4E-04			
UP_MAIN_2	Main haul route section 2, stage 1 to stage 2	1	1	1	51	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.2E-01	2.7E-02	2.7E-03		90%		1.2E-02		2.7E-03		2.7E-04			
UP_MAIN_3	Unpaved main haul route, stage 2 to stage 3	1	1	1	203	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		4.6E-01	1.1E-01	1.1E-02		90%		4.6E-02		1.1E-02		1.1E-03			
UP_MAIN_4	Unpaved main haul route stage 3 to stage 4	1	1	1	480	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.1E+00	2.6E-01	2.6E-02		90%		1.1E-01		2.6E-02		2.6E-03			
UP_QRY_PC	Unpaved road leading to the primary crusher	1	1	1	598	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.4E+00	3.2E-01	3.2E-02		95%		6.8E-02		1.6E-02		1.6E-03			
UP_QRY_OB	Stage 1 - Overburden removal and quarry hauling	0	1	1	541	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_QRY_S1_2	Stage 1 - Quarry haul route	0	1	1	555	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_OB_S1	Stage 1 - overburden removal	0	1	1	629	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_BF_S1_S2	Stage 1 - overburden transfer to S2 for backfill	0	1	1	875	Unpaved	Industrial	35	22	83.0		6.4%		6.3E+03	1.1E+03	1.1E+02		0.0E+00	0.0E+00	0.0E+00		95%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_QRY_S3	Stage 3 - Quarry haul route	1	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		5.5E+00	1.3E+00	1.3E-01		95%		2.8E-01		6.4E-02		6.4E-03			
UP_S3_OB	Unpaved road for overburden removal	1	1	1	1480	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		4.9E+00	1.1E+00	1.1E-01		95%		2.4E-01		5.7E-02		5.7E-03			
P_CR6_LF	County road 6	1	1	1	4422	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01		1.1E-02	1.4E-03	3.4E-04				1.1E-02		1.4E-03		3.4E-04			
P_HAULROUTE	Paved section of the LF Haul route	1	1	1	1657	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00		1.1E-01	1.4E-02	3.3E-03				1.1E-01		1.4E-02		3.3E-03			
UP_HAUL	Unpaved portion of the haul route	1	1	1	1042	Unpaved	Industrial	35	22	36.6		18.5%	0.19	8.2E+03	1.9E+03	1.9E+02	0.0E+00	2.4E+00	5.6E-01	5.6E-02	0.0E+00	90%		2.4E-01		5.6E-02		5.6E-03		0.0E+00	
EQUIP_S1	Equipment at Stage 1 Active Face	0	1	1	30	Unpaved	Industrial	5	3	40.3		18.5%		8.6E+03	2.0E+03	2.0E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	90%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
S3_EQUIP	Equipment at Stage 3 Active Face	1	1	1	30	Unpaved	Industrial	5	3	40.3		18.5%		8.6E+03	2.0E+03	2.0E+02	0.0E+00	7.2E-02	1.7E-02	1.7E-03	0.0E+00	90%		7.2E-03		1.7E-03		1.7E-04		0.0E+00	
UP_S3_OB_NLF	Unpaved road for OB removal for stage 3 no landfill	1	1	1	1494	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	4.9E+00	1.2E+00	1.2E-01	0.0E+00	95%		2.5E-01		5.8E-02		5.8E-03		0.0E+00	
UP_NLF_OB_S1	Unpaved road for OB removal for stage 1 no landfill	0	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%		0.0E+00		0.0E+00		0.0E+00		0.0E+00	
P_CR6B	CR6 roadway background traffic only	1	1	1	4424	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01		1.1E-02	1.4E-03	3.4E-04				1.1E-02		1.4E-03		3.4E-04		0.0E+00	

Constants for Mobile Emission Equations

Roadway Type	Contaminant	k	a	b	c	d	Quality
Paved Roads:	PM <sub>2.5</sub>	0.15	-	-	-	-	-
	PM <sub>10</sub>	0.62	-	-	-	-	-
	TSP	4.79	-	-	-	-	-
Unpaved Roads - Industrial:	PM <sub>2.5</sub>	0.15	0.9	0.45	-	-	C
	PM <sub>10</sub>	1.5	0.9	0.45	-	-	B
	TSP	7.32	0.6	0.45	-	-	B
Unpaved Roads - Public:	PM <sub>2.5</sub>	0.18	1	-	0.2	0.5	C
	PM <sub>10</sub>	1.8	1	-	0.2</		

Appendix C: Stage 1: Tailpipe Emissions - No Mitigation

Source ID	Description	Gross Power Rating	Number Of Units	Traffic Passes [2]		Segment Length [3]	Mean Vehicle Speed	Load Factor [4]	Tailpipe Emission Factor [5]								Tailpipe Emission Rate				Fugitive Emission Rate [6]				Number of Volume Sources (Tailpipe)	Number of Volume Sources (Fugitive)	ER per volume source (Tailpipe)						
				Hourly	Daily				TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5										
				(#/h)	(#/d)				(g/vkt)	(g/kW-h)	(g/vkt)	(g/kW-h)	(g/vkt)	(g/kW-h)	(g/vkt)	(g/kW-h)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)			(g/s)	TSP	PM10	PM2.5			
On-Site Mobile Equipment																																	
P_GATE1	the weight scale entrance	n/a		1	1	443.3	35		0.35		0.35		0.16								4.35E-05	4.35E-05	1.98E-05	0.00E+00	2.83E-02	3.66E-03	8.85E-04	0.00E+00	14	14	3.10E-06	3.10E-06	1.41E-06
UP_LF_2	from gatehouse to BF int S3	n/a		1	1	85.4	35		0.35		0.35		0.16							8.37E-06	8.37E-06	3.81E-06	0.00E+00	1.96E-02	4.57E-03	4.57E-04	0.00E+00	3	3	2.79E-06	2.79E-06	1.27E-06	
UP_S2_2_MAIN	stage 2 active face to main LF road	n/a		1	1	245.4	35		0.35		0.35		0.16							2.41E-05	2.41E-05	1.09E-05	0.00E+00	5.62E-02	1.31E-02	1.31E-03	0.00E+00	8	8	3.01E-06	3.01E-06	1.37E-06	
UP_S1	stage 1 - Waste soil and waste	n/a		1	1	407.2	35		0.35		0.35		0.16							3.99E-05	3.99E-05	1.82E-05	0.00E+00	9.33E-02	2.18E-02	2.18E-03	0.00E+00	13	13	3.07E-06	3.07E-06	1.40E-06	
UP_S2_C	into stage 2 construction area	n/a		1	1	75.4	35		0.35		0.35		0.16							7.39E-06	7.39E-06	3.36E-06	0.00E+00	1.73E-02	4.03E-03	4.03E-04	0.00E+00	3	3	2.46E-06	2.46E-06	1.12E-06	
UP_MAIN_1	haul route to active faces.	n/a		1	1	356.5	35		0.35		0.35		0.16							3.49E-05	3.49E-05	1.59E-05	0.00E+00	8.17E-02	1.91E-02	1.91E-03	0.00E+00	11	11	3.18E-06	3.18E-06	1.45E-06	
UP_S4_C	into stage 4 construction area	n/a		0	1	322.1	35		0.00		0.00		0.00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	10	10	0.00E+00	0.00E+00	0.00E+00	
UP_S3	loading to the stage 3 active face	n/a		0	1	240.9	35		0.00		0.00		0.00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8	8	0.00E+00	0.00E+00	0.00E+00	
P_N_ENTER_1	north entrance for finished goods	n/a		1	1	181.4	35		0.49		0.49		0.25							2.49E-05	2.49E-05	1.26E-05	0.00E+00	6.49E-03	8.41E-04	2.03E-04	0.00E+00	6	6	4.15E-06	4.15E-06	2.10E-06	
P_NORTH_2	entrance second paved section	n/a		1	1	177.9	35		0.49		0.49		0.25							2.44E-05	2.44E-05	1.23E-05	0.00E+00	6.37E-03	8.24E-04	1.99E-04	0.00E+00	6	6	4.07E-06	4.07E-06	2.06E-06	
UP_NORTH_1	entrance unpaved section	n/a		1	1	478.6	35		0.49		0.49		0.25							6.57E-05	6.57E-05	3.32E-05	0.00E+00	5.12E-02	1.31E-02	1.31E-03	0.00E+00	15	15	4.38E-06	4.38E-06	2.21E-06	
P_NORTH_3	entrance Third Paved Section	n/a		1	1	539.2	35		0.49		0.49		0.25							7.40E-05	7.40E-05	3.74E-05	0.00E+00	5.93E-02	7.67E-03	1.86E-03	0.00E+00	17	17	4.35E-06	4.35E-06	2.20E-06	
P_SOUTH_1	entrance south entrance	n/a		1	1	256.2	35		0.21		0.21		0.07							1.51E-05	1.51E-05	5.07E-06	0.00E+00	5.98E-03	7.74E-04	1.87E-04	0.00E+00	8	8	1.88E-06	1.88E-06	6.33E-07	
UP_SOUTH_2	entrance unpaved road in working area	n/a		1	1	758.1	35		0.21		0.21		0.07							4.46E-05	4.46E-05	1.50E-05	0.00E+00	9.02E-02	2.31E-02	2.31E-03	0.00E+00	24	24	1.86E-06	1.86E-06	6.25E-07	
P_SOUTH_2	exit of the working area and to CR6	n/a		1	1	395.7	35		0.21		0.21		0.07							2.33E-05	2.33E-05	7.83E-06	0.00E+00	2.69E-02	3.48E-03	8.43E-04	0.00E+00	13	13	1.79E-06	1.79E-06	6.02E-07	
UP_S1_WSPILE	exit to Stage 1 waste soil pile	n/a		1	1	269.5	35		0.35		0.35		0.16							2.64E-05	2.64E-05	1.20E-05	0.00E+00	6.17E-02	1.44E-02	1.44E-03	0.00E+00	9	9	2.94E-06	2.94E-06	1.34E-06	
UP_S3_WSP	exit pile to active face haul route	n/a		0	1	82.7	35		0.00		0.00		0.00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7	7	0.00E+00	0.00E+00	0.00E+00	
UP_MAIN_2	entrance section 2, stage 1 to stage 2	n/a		1	1	51.2	35		0.35		0.35		0.16							5.02E-06	5.02E-06	2.28E-06	0.00E+00	1.17E-02	2.74E-03	2.74E-04	0.00E+00	2	2	2.51E-06	2.51E-06	1.14E-06	
UP_MAIN_3	haul route, stage 2 to stage 3	n/a		0	1	202.9	35		0.00		0.00		0.00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7	7	0.00E+00	0.00E+00	0.00E+00	
UP_MAIN_4	haul route stage 3 to stage 4	n/a		0	1	480.2	35		0.00		0.00		0.00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	15	15	0.00E+00	0.00E+00	0.00E+00	
UP_QRY_PC	loading to the primary crusher	615.2	3	1	0	541.1	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02						1.04E-02	1.04E-02	1.01E-02	0.00E+00	6.84E-02	1.60E-02	1.60E-03	0.00E+00	54	19	7.50E-06	7.50E-06	7.28E-06	
UP_QRY_OB	entrance removal and quarry hauling	615.2	3	1	0	554.8	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02						1.04E-02	1.04E-02	1.01E-02	0.00E+00	8.96E-02	2.09E-02	2.09E-03	0.00E+00	54	17	4.66E-06	4.66E-06	4.52E-06	
UP_QRY_S1_2	entrance - Quarry haul route	615.2	3	1	0	628.7	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02						1.04E-02	1.04E-02	1.01E-02	0.00E+00	9.18E-02	2.14E-02	2.14E-03	0.00E+00	54	18	7.50E-06	7.50E-06	7.28E-06	
UP_OB_S1	entrance overburden removal	615.2	3	1	0	875	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02						1.04E-02	1.04E-02	1.01E-02	0.00E+00	1.04E-01	2.43E-02	2.43E-03	0.00E+00	65	20	1.02E-05	1.02E-05	9.92E-06	
UP_BF_S1_S2	entrance transfer to S2 for backfill	615.2	3	1	0	1662.2	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02						1.04E-02	1.04E-02	1.01E-02	0.00E+00	1.45E-01	3.38E-02	3.38E-03	0.00E+00	65	28	1.02E-05	1.02E-05	9.92E-06	
UP_QRY_S3	entrance - Quarry haul route	615.2	3	0	0	1479.7	35	0.59	0.00	3.43E-02	0.00	3.43E-02	0.00	3.33E-02						0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	52	52	0.00E+00	0.00E+00	0.00E+00	
UP_S3_OB	entrance for overburden removal	615.2	3	0	0	4421.8	80	0.59	0.00	3.43E-02	0.00	3.43E-02	0.00	3.33E-02						0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	46	46	0.00E+00	0.00E+00	0.00E+00	
P_CR6_LF	entrance County road 6	n/a		1	1	4421.8	80		0.35		0.35		0.16							4.33E-04	4.33E-04	1.97E-04	0.00E+00	1.07E-02	1.39E-03	3.36E-04	0.00E+00	138	138	3.14E-06	3.14E-06	1.43E-06	
P_HAULROUTE	entrance of the LF Haul route	n/a		1	1	1657	35		0.35		0.35		0.16							1.62E-04	1.62E-04	7.39E-05	0.00E+00	1.06E-01	1.37E-02	3.31E-03	0.00E+00	52	52	3.12E-06	3.12E-06	1.42E-06	
UP_HAUL	entrance of the haul route	n/a		1	1	1042.1	35		0.35		0.35		0.16							1.02E-04	1.02E-04	4.65E-05	0.00E+00	2.39E-01	5.57E-02	5.57E-03	0.00E+00	33	33	3.10E-06	3.10E-06	1.41E-06	
EQUIP_S1	entrance at Stage 1 Active Face	n/a		1	1	30	5		0.00		0.00		0.00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.18E-03	1.67E-03	1.67E-04	0.00E+00	1	1	0.00E+00	0.00E+00	0.00E+00	
S3_EQUIP	entrance at Stage 3 Active Face	n/a		0	1	30	5		0.00		0.00		0.00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1	1	0.00E+00	0.00E+00	0.00E+00	
UP_S3_OB_NLF	entrance DB removal for stage 3 no landfill	615.2	3	0	0	1662.2	35	0.59	0.00	3.43E-02	0.00	3.43E-02	0.00	3.33E-02						0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	47	47	0.00E+00	0.00E+00	0.00E+00	
UP_NLF_OB_S1	entrance DB removal for stage 1 no landfill	615.2	3	1	0	4423.6	80	0.59	0.35	3.43E-02	0.35	3.43E-02	0.16	3.33E-02						1.04E-02	1.04E-02	1.01E-02	0.00E+00	2.75E-01	6.42E-02	6.42E-03	0.00E+00	100	52	6.65E-06	6.65E-06	6.45E-06	
P_CR6B	entrance background traffic only	n/a		1	1	4423.6	80		0.06		0.06		0.04							7.31E-05	7.31E-05	4.31E-05	0.00E+00	1.07E-02	1.39E-03	3.36E-04	0.00E+00	138	138	5.29E-07	5.29E-07	3.13E-07	

- [1] ID should reflect Source ID or Route ID, as appropriate.
- [2] Where applicable, this value reflects travel in both directions (e.g., 1 round-trip = 2 passes)
- [3] Length of a specific road segment. A separate segment should be used whenever one or more parameters change.
- [4] Load Factors from "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", EPA-420-R-10-016, NR-005d,



Appendix C: Stage 3: Tailpipe Emissions - No Mitigation

#REF! Source ID	Description	Gross Power Rating	Number Of Units	Eff Passes [2]		Segment Length [3]	Mean Vehicle Speed	Load Factor [4]	Tailpipe Emission Factor [5]								Tailpipe Emission Rate				Tailpipe + Fugitive Emission Rate [6]				Number of Volume Sources (Tailpipe)	Number of Volume Sources (Fugitive)	ER per volume source (Tailpipe)			ER per volume source (Fugitive)			
				Hourly	Daily				TSP	PM10	PM2.5	NOx	CO	CO2	CH4	N2O	TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5	NOx			TSP	PM10	PM2.5				
On-Site Mobile Equipment																																	
P_GATE1	Paved area at the weight scale entrance	n/a		1	1	443	35		0.23		0.23		0.05					2.8E-05	2.8E-05	5.8E-06	0.0E+00	2.8E-02	3.7E-03	8.8E-04	0.0E+00	14	14	2.01E-06	2.01E-06	4.11E-07	2.02E-03	2.61E-04	6.32E-05
UP_LF_2	Unpaved road from gatehouse to BF int S3	n/a		1	1	85	35		0.23		0.23		0.05					5.4E-06	5.4E-06	1.1E-06	0.0E+00	2.0E-02	4.6E-03	4.6E-04	0.0E+00	3	3	1.81E-06	1.81E-06	3.70E-07	6.52E-03	1.52E-03	1.52E-04
UP_S2_2_MAIN	Road segment from stage 2 active face to main LF road	n/a		1	1	245	35		0.23		0.23		0.05					1.6E-05	1.6E-05	3.2E-06	0.0E+00	5.6E-02	1.3E-02	1.3E-03	0.0E+00	8	8	1.95E-06	1.95E-06	3.98E-07	7.03E-03	1.64E-03	1.64E-04
UP_S1	Unpaved road to stage 1 - Waste soil and waste	n/a		0	1	407	35		0.23		0.23		0.05					0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	13	13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_S2_C	Unpaved road into stage 2 construction area	n/a		0	1	75	35		0.23		0.23		0.05					0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3	3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_MAIN_1	Main landfill haul route to active faces.	n/a		1	1	357	35		0.23		0.23		0.05					2.3E-05	2.3E-05	4.6E-06	0.0E+00	8.2E-02	1.9E-02	1.9E-03	0.0E+00	11	11	2.06E-06	2.06E-06	4.21E-07	7.42E-03	1.73E-03	1.73E-04
UP_S4_C	Unpaved road leading to stage 4 construction area	n/a		1	1	322	35		0.23		0.23		0.05					2.0E-05	2.0E-05	4.2E-06	0.0E+00	7.4E-02	1.7E-02	1.7E-03	0.0E+00	10	10	2.05E-06	2.05E-06	4.18E-07	7.38E-03	1.72E-03	1.72E-04
UP_S3	Unpaved road leading to the stage 3 active face	n/a		1	1	241	35		0.23		0.23		0.05					1.5E-05	1.5E-05	3.1E-06	0.0E+00	5.5E-02	1.3E-02	1.3E-03	0.0E+00	8	8	1.91E-06	1.91E-06	3.91E-07	6.90E-03	1.61E-03	1.61E-04
P_N_ENTER_1	Paved Section of the north entrance for finished goods	n/a		1	1	181	35		0.29		0.29		0.06					1.5E-05	1.5E-05	3.2E-06	0.0E+00	6.5E-03	8.4E-04	2.0E-04	0.0E+00	6	6	2.45E-06	2.45E-06	5.38E-07	1.08E-03	1.40E-04	3.39E-05
P_NORTH_2	Paved North Entrance second paved section	n/a		1	1	178	35		0.29		0.29		0.06					1.4E-05	1.4E-05	3.2E-06	0.0E+00	6.4E-03	8.2E-04	2.0E-04	0.0E+00	6	6	2.41E-06	2.41E-06	5.27E-07	1.06E-03	1.37E-04	3.32E-05
UP_NORTH_1	North Entrance unpaved section	n/a		1	1	479	35		0.29		0.29		0.06					3.9E-05	3.9E-05	8.5E-06	0.0E+00	5.1E-02	1.3E-02	1.3E-03	0.0E+00	15	15	2.59E-06	2.59E-06	5.67E-07	3.41E-03	8.74E-04	8.74E-05
P_NORTH_3	North Entrance Third Paved Section	n/a		1	1	539	35		0.29		0.29		0.06					4.4E-05	4.4E-05	9.6E-06	0.0E+00	5.9E-02	7.7E-03	1.9E-03	0.0E+00	17	17	2.57E-06	2.57E-06	5.64E-07	3.49E-03	4.51E-04	1.09E-04
P_SOUTH_1	Paved south entrance	n/a		1	1	256	35		0.17		0.17		0.03					1.2E-05	1.2E-05	2.1E-06	0.0E+00	6.0E-03	7.7E-04	1.9E-04	0.0E+00	8	8	1.47E-06	1.47E-06	2.62E-07	7.47E-04	9.67E-05	2.34E-05
UP_SOUTH_2	South entrance unpaved road in working area	n/a		1	1	758	35		0.17		0.17		0.03					3.5E-05	3.5E-05	6.2E-06	0.0E+00	9.0E-02	2.3E-02	2.3E-03	0.0E+00	24	24	1.45E-06	1.45E-06	2.59E-07	3.76E-03	9.63E-04	6.48E-05
P_SOUTH_2	Paved road leading out of the working area and to CR6	n/a		1	1	396	35		0.17		0.17		0.03					1.8E-05	1.8E-05	3.2E-06	0.0E+00	2.7E-02	3.5E-03	8.4E-04	0.0E+00	13	13	1.40E-06	1.40E-06	2.49E-07	2.07E-03	2.68E-04	6.48E-05
UP_S1_WSPILE	Unpaved Road to Stage 1 waste soil pile	n/a		0	1	270	35		0.23		0.23		0.05					0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	9	9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_S3_WSP	Stage 3 Waste soil pile to active face haul route	n/a		1	1	83	35		0.23		0.23		0.05					5.3E-06	5.3E-06	1.1E-06	0.0E+00	1.9E-02	4.4E-03	4.4E-04	0.0E+00	7	7	7.50E-07	7.50E-07	1.53E-07	2.71E-03	6.32E-04	6.32E-05
UP_MAIN_2	Main haul route section 2, stage 1 to stage 2	n/a		1	1	51	35		0.23		0.23		0.05					3.3E-06	3.3E-06	6.6E-07	0.0E+00	1.2E-02	2.7E-03	2.7E-04	0.0E+00	2	2	1.63E-06	1.63E-06	3.32E-07	5.86E-03	1.37E-03	1.37E-04
UP_MAIN_3	Unpaved main haul route, stage 2 to stage 3	n/a		1	1	203	35		0.23		0.23		0.05					1.3E-05	1.3E-05	2.6E-06	0.0E+00	4.6E-02	1.1E-02	1.1E-03	0.0E+00	7	7	1.84E-06	1.84E-06	3.76E-07	6.64E-03	1.55E-03	1.55E-04
UP_MAIN_4	Unpaved main haul route stage 3 to stage 4	n/a		1	1	480	35		0.23		0.23		0.05					3.1E-05	3.1E-05	6.2E-06	0.0E+00	1.1E-01	2.6E-02	2.6E-03	0.0E+00	15	15	2.03E-06	2.03E-06	4.16E-07	7.33E-03	1.71E-03	1.71E-04
UP_QRY_PC	Unpaved road leading to the primary crusher	615.2	3	1	1	598	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02				9.6E-03	9.6E-03	9.3E-03	0.0E+00	6.8E-02	1.6E-02	1.6E-03	0.0E+00	71	19	5.28E-06	5.28E-06	5.13E-06	3.60E-03	8.41E-04	8.41E-05
UP_QRY_PC	Stage 1 - Overburden removal and quarry hauling	615.2	3	0	1	541	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	54	17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_QRY_S1_2	Stage 1 - Quarry haul route	615.2	3	0	1	555	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	54	18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_OB_S1	Stage 1 - overburden removal	615.2	3	0	1	629	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	100	20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_BF_S1_S2	Stage 1 - overburden transfer to S2 for backfill	615.2	3	0	1	875	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	100	28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_QRY_S3	Stage 3 - Quarry haul route	615.2	3	1	1	1662	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02				9.6E-03	9.6E-03	9.3E-03	0.0E+00	2.8E-01	6.4E-02	6.4E-03	0.0E+00	71	52	5.28E-06	5.28E-06	5.13E-06	5.29E-03	1.23E-03	1.23E-04
UP_S3_OB	Unpaved road for overburden removal	615.2	3	1	1	1480	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02				9.6E-03	9.6E-03	9.3E-03	0.0E+00	2.4E-01	5.7E-02	5.7E-03	0.0E+00	84	46	7.33E-06	7.33E-06	7.11E-06	5.32E-03	1.24E-03	1.24E-04
P_CR6_LF	County road 6	n/a		1	1	4422	80		0.23		0.23		0.05					2.8E-04	2.8E-04	5.7E-05	0.0E+00	1.1E-02	1.4E-03	3.4E-04	0.0E+00	138	138	2.04E-06	2.04E-06	4.16E-07	7.78E-05	1.01E-05	2.44E-06
P_HAULROUTE	Paved section of the LF Haul route	n/a		1	1	1657	35		0.23		0.23		0.05					1.1E-04	1.1E-04	2.2E-05	0.0E+00	1.1E-01	1.4E-02	3.3E-03	0.0E+00	52	52	2.02E-06	2.02E-06	4.14E-07	2.03E-03	2.63E-04	6.36E-05
UP_HAUL	Unpaved portion of the haul route	n/a		1	1	1042	35		0.23		0.23		0.05					6.6E-05	6.6E-05	1.4E-05	0.0E+00	2.4E-01	5.6E-02	5.6E-03	0.0E+00	33	33	2.01E-06	2.01E-06	4.10E-07	7.23E-03	1.69E-03	1.69E-04
EQUIP_S1	Equipment at Stage 1 Active Face	n/a		0	0	30	5		0.00		0.00		0.00					0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
S3_EQUIP	Equipment at Stage 3 Active Face	n/a		1	1	30	5		0.00		0.00		0.00					0.0E+00	0.0E+00	0.0E+00	0.0E+00	7.2E-03	1.7E-03	1.7E-04	0.0E+00	1	1	0.00E+00	0.00E+00	0.00E+00	7.18E-03	1.67E-03	1.67E-04
UP_S3_OB_NLF	Unpaved road for OB removal for stage 3 no landfill	615.2	3	1	2	30	5	59%	0.23	3.18E-02	0.23	3.18E-02	0.05	3.08E-02				9.6E-03	9.6E-03	9.3E-03	0.0E+00	2.5E-01	5.8E-02	5.8E-03	0.0E+00	47	47	1.31E-05	1.31E-05	1.27E-05	5.26E-03	1.23E-03	1.23E-04
UP_NLF_OB_S1	Unpaved road for OB removal for stage 1 no landfill	615.2	3	0	3	1494	35	59%	0.23	3.18E-02	0.23	3.18E-02	0.05	3.08E-02				0.0E+00	0.0E+00	0.0E+00													

Appendix C: Stage Based Road Traffic Variations

Daily Operations:	Time of Day	Number of Trucks Per Hour	Source of Data
Soil Drop off needs to occur over the course of the entire day (10 hours). (0700-1700)	0700-1700	5.6	The FCA documents page 12, section 3.3 specifies that there will be a total of 28 trucks per day used for soil importing. (doubled for # of passes)
Landfill Waste is delivered to the active face of the landfill (0700-1700)	0700-1700	30.8	The FCA documents page 12, section 3.3 specifies that there will be a total of 154 trucks per day used for waste importing. (doubled for # of passes)
Construction vehicles are used in the construction of the next stage of the landfill (0700-1900) working on the next stage	0700-1900	2.4	The FCA documents page 12, section 3.3 specifies that there will be a total of 12 trucks per day used for construction material importing.
Soil Delivered at the working face for final cover (Last two hours of the day 1700-1900)	1700-1900	30	Based on the 800 MG required for daily cover the minimum number of loads would be 30. (doubled for # of passes)
North Entrance Trucks for Quarry finished goods pickup (Operate 5 days a week, 12 months a year)	0600-1600	2.4	Daily total from Consultation with Martin Christopher of Carmeuse. Blue Con and Oxford bring 12 trucks a day, 5 days a week and 12 months a year from 0600 - 1600. Haul route is a loop so overlap only occurs at the paved entrance. (doubled for # of passes) Email: K:\1800160V4_Analysis\14 AQ Analysis\08 Reference Material\11 180815 Updated Carmeuse Data from Chris
North route Trucks for Quarry finished goods pickup (Operate 5 days a week, 12 months a year)	0600-1600	1.2	This line accounts for the other 3 sections of the loop that only have a single pass.
South Entrance Trucks for Quarry finished goods pickup (Operate 5 days a week, 12 months a year)	0600-1600	9	Daily total from Consultation with Martin Christopher of Carmeuse. Federal White bring 90 trucks a day, 5 days a week and 12 months a year from 0600 - 1600. Haul route is a loop, no overlap occurs. Email: K:\1800160V4_Analysis\14 AQ Analysis\08 Reference Material\11 180815 Updated Carmeuse Data from Chris
Overburden Trucks	0600-1600	16	The number of overburden trucks was calculated based on the maximum permitted overburden removal of 700,000 cubic yards per year and the assumption of a 30 ton payload per truck. This results in approximately 78 loads per day.
Quarry Trucks	0600 - 1600	25.6	Daily total from consultation with Martin Christopher of Carmeuse. There is approximately 128 loads from the quarry to the primary crusher, Monday to Friday, 0600- 1600
CR6	All Day	Hourly Data Used	Hourly traffic data from a tube count sampling analysis was used. This study looked at daily traffic over the course of a week in May. For our assessment the day with the highest vehicle count was selected to ensure the worst case scenario was captured (May 8, 2019). Tube counts were conducted in 2018 so the values had to be scaled up to reflect growth in the future year 2033. 2033 was selected because it is the only future year that noise had peak hourly data for. In order to determine an appropriate growth factor we compared the 2019 light, medium, and heavy peak hour counts and the 2033 light, medium, and heavy peak hour projected values provided by the traffic consultant. It was assumed that this growth could be applied to the hourly traffic data in order to scale up the traffic passes. It was assumed that the hourly traffic distribution would remain the same in 2033 as in the 2018 tube counts. New values were determined by applying the calculated growth to the all hourly values for their appropriate vehicle classes. Details are available in the "hourly breakdown scaled" tab of this workbook.
Idling Trucks	0700 - 1700	2	It was assumed that during operating hours two trucks were idling at each of the idling sources (Gate and working face) at all times during landfilling activities from 0700 - 1700 each day.
Blasting	1200-1300	1	The Carmeuse contact indicated that blasting occurs every 10 days. To be conservative this model assumes 1 blast a day at 1200.
Working Face Equipment	0700 - 1900	180	Working face equipment passes were based on six pieces of equipment operating at once, completing a pass every two minutes. Operating 0700 - 1900.
For the preliminary assessment the operations will be assumed to occur 7 days a week during the operating hours specified above			

Stage 1:

Source ID	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM
P_GATE1	0	0	0	0	0	0	0	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	2.4	2.4	0	0	0	0	0
UP_LF_2	0	0	0	0	0	0	0	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	2.4	2.4	0	0	0	0	0
UP_S2_2_MAIN	0	0	0	0	0	0	0	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	2.4	2.4	0	0	0	0	0
UP_S1	0	0	0	0	0	0	0	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30	30	0	0	0	0	0
UP_S2_C	0	0	0	0	0	0	0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0	0	0	0	0
UP_MAIN_1	0	0	0	0	0	0	0	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	32.4	32.4	0	0	0	0	0
UP_S4_C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_S3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P_N_ENTER_1	0	0	0	0	0	0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0	0	0	0	0	0	0
P_NORTH_2	0	0	0	0	0	0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0	0	0	0	0	0	0	0
UP_NORTH_1	0	0	0	0	0	0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0	0	0	0	0	0	0	0
P_NORTH_3	0	0	0	0	0	0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0	0	0	0	0	0	0	0
P_SOUTH_1	0	0	0	0	0	0	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0
UP_SOUTH_2	0	0	0	0	0	0	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0
P_SOUTH_2	0	0	0	0	0	0	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0
UP_S1_WSPILE	0	0	0	0	0	0	0	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	30	30	0	0	0	0	0
UP_S3_WSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_MAIN_2	0	0	0	0	0	0	0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0	0	0	0	0
UP_MAIN_3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_MAIN_4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_QRY_PC	0	0	0	0	0	0	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	0	0	0	0	0	0	0	0
UP_QRY_OB	0	0	0	0	0	0	41	41	41	41	41	41	41	41	41	41	0	0	0	0	0	0	0	0
UP_QRY_S1_2	0	0	0	0	0	0	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	0	0	0	0	0	0	0	0
UP_OB_S1	0	0	0	0	0	0	16	16	16	16	16	16	16	16	16	16	0	0	0	0	0	0	0	0
UP_BF_S1_S2	0	0	0	0	0	0	16	16	16	16	16	16	16	16	16	16	0	0	0	0	0	0	0	0
UP_QRY_S3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_S3_OB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P_CR6_LF	0	0	0	0	0	0	0	39	39	39	39	39	39	39	39	39	39	2	2	0	0	0	0	0
P_HAULROUTE	0	0	0	0	0	0	0	39	39	39	39	39	39	39	39	39	39	2	2	0	0	0	0	0
UP_HAUL	0	0	0	0	0	0	0	39	39	39	39	39	39	39	39	39	39	2	2	0	0	0	0	0
P_CR6B	37	27	30	34	45	127	343	443	412	328	323	340	353	335	377	429	489	442	300	216	178	147	127	85
UP_S3_OB_NLF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_NLF_OB_S1	0	0	0	0	0	0	16	16	16	16	16	16	16	16	16	16	0	0	0	0	0	0	0	0
TRUCK_IDLE	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
S1_IDLE	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
S1_S2_BLAST	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
EQUIP_S1	0	0	0	0	0	0	0	180	180	180	180	180	180	180	180	180	180	180	180	0	0	0	0	0
	37	27	30	34	45	127	343	443	412	328	323	340	353	335	377	429	489	442	300	216	178	147	127	85

Stage 3:

Source ID	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM
P_GATE1	0	0	0	0	0	0	0	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	2.4	2.4	0	0	0	0	0
UP_LF_2	0	0	0	0	0	0	0	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	2.4	2.4	0	0	0	0	0
UP_S2_2_MAIN	0	0	0	0	0	0	16	54	54	54	54	54	54	54	54	54	38.8	2.4	2.4	0	0	0	0	0
UP_S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_S2_C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_MAIN_1	0	0	0	0	0	0	15.6	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	38.8	2.4	2.4	0	0	0	0	0
UP_S4_C	0	0	0	0	0	0	18	18	18	18	18	18	18	18	18	18	2.4	2.4	2.4	0	0	0	0	0
UP_S3	0	0	0	0	0	0	0	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30	30	0	0	0	0	0
P_N_ENTER_1	0	0	0	0	0	0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0	0	0	0	0	0	0	0
P_NORTH_2	0	0	0	0	0	0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0	0	0	0	0	0	0
UP_NORTH_1	0	0	0	0	0	0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0	0	0	0	0	0	0	0
P_NORTH_3	0	0	0	0	0	0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0	0	0	0	0	0	0	0
P_SOUTH_1	0	0	0	0	0	0	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0
UP_SOUTH_2	0	0	0	0	0	0	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0
P_SOUTH_2	0	0	0	0	0	0	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0
UP_S1_WSPILE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_S3_WSP	0	0	0	0	0	0	0	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	30	30	0	0	0	0	0
UP_MAIN_2	0	0	0	0	0	0	16	54	54	54	54	54	54	54	54	54	39	2.4	2.4	0	0	0	0	0
UP_MAIN_3	0	0	0	0	0	0	16	54	54	54	54	54	54	54	54	54	39	2.4	2.4	0	0	0	0	0
UP_MAIN_4	0	0	0	0	0	0	0	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30	30	0	0	0	0	0
UP_QRY_PC	0	0	0	0	0	0	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	0	0	0	0	0	0	0	0
UP_QRY_OB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_QRY_S1_2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_OB_S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_BF_S1_S2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP_QRY_S3	0	0	0	0	0	0	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	0	0	0	0	0	0	0	0
UP_S3_OB	0	0	0	0	0	0	16	16	16	16	16	16	16	16	16	16	0	0	0	0	0	0	0	0
P_CR6_LF	0	0	0	0	0	0	0	39	39	39	39	39	39	39	39	39	39	2	2	0	0	0	0	0
P_HAULROUTE	0	0	0	0	0	0	0	39	39	39	39	39	39	39	39	39	39	2	2	0	0	0	0	0
UP_HAUL	0	0	0	0	0	0	0	39	39	39	39	39	39	39	39	39	39	2	2	0	0	0	0	0
P_CR6B	37	27	30	34	45	127	343	443	412	328	323	340	353	335	377	429	489	442	300	216	178	147	127	85
UP_S3_OB_NLF	0	0	0	0	0	0	16	16	16	16	16	16	16	16	16	16	0	0	0	0	0	0	0	0
UP_NLF_OB_S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK_IDLE	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
S3_IDLE	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
S3_S4_BLAST	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
EQUIP_S3	0	0	0	0	0	0	0	180	180	180	180	180	180	180	180	180	180	180	180	0	0	0	0	0
	37	27	30	34	45	127	343	443	412	328	323	340	353	335	377	429	489	442	300	216	178	147	127	85

## Appendix C: Tailpipe Emissions

### Stage 1:

#### TSP

Speed (km/hr)		0	35	80	CR6 Traffic Distribution **
Vehicle Class	Moves Vehicle ID	Emissions			
		g/s	g/vkt	g/vkt	
light	PassengerCar	8.32E-06	4.60E-02	1.40E-02	63%
medium	LightCommercialTruck	1.00E-05	5.27E-02	1.65E-02	10%
heavy	CombinationLongHaulTruck	4.55E-04	4.94E-01	1.84E-01	27%
Triaxle	SingleUnitShortHaulTruck	1.88E-04	2.12E-01	7.50E-02	
Heavy/Triaxle for LF		3.21E-04	3.53E-01	1.29E-01	
CR6			5.95E-02 *		

\* CR6 Tailpipe ONLY

\*\* Distribution is indexed from the scaled hourly breakdown for 2033.

Km to Mile Conversion Factor	1.6 km per mile
Seconds per Hour	3600 s/hr

#### PM10

Speed (km/hr)		0	35	80	CR6 Traffic Distribution **
Vehicle Class	Moves Vehicle ID	Emissions			
		g/hour	g/vkt	g/vkt	
light	PassengerCar	8.32E-06	4.60E-02	1.40E-02	63%
medium	LightCommercialTruck	1.00E-05	5.27E-02	1.65E-02	10%
heavy	CombinationLongHaulTruck	4.55E-04	4.94E-01	1.84E-01	27%
Triaxle	SingleUnitShortHaulTruck	1.88E-04	2.12E-01	7.50E-02	
Heavy/Triaxle for LF		3.21E-04	3.53E-01	1.29E-01	
CR6			5.95E-02 *		

\* CR6 Tailpipe ONLY

\*\* Distribution is indexed from the scaled hourly breakdown for 2033.

#### PM2.5

Speed (km/hr)		0	35	80	CR6 Traffic Distribution **
Vehicle Class	Moves Vehicle ID	Emissions			
		g/hour	g/vkt	g/vkt	
light	PassengerCar	7.37E-06	8.32E-03	3.56E-03	63%
medium	LightCommercialTruck	9.03E-06	1.10E-02	5.24E-03	10%
heavy	CombinationLongHaulTruck	4.18E-04	2.50E-01	1.21E-01	27%
Triaxle	SingleUnitShortHaulTruck	1.72E-04	7.12E-02	3.74E-02	
Heavy/Triaxle for LF		2.95E-04	1.61E-01	7.93E-02	
CR6			3.51E-02 *		

\* CR6 Tailpipe ONLY

\*\* Distribution is indexed from the scaled hourly breakdown for 2033.



**Stage 3:**

**TSP**

Speed (km/hr)		0	35	80	CR6 Traffic Distribution **
Vehicle Class	Moves Vehicle ID	Emissions			
		g/hour	g/vkt	g/vkt	
light	PassengerCar	5.06E-06	4.46E-02	1.31E-02	63%
medium	LightCommercialTruck	6.12E-06	5.04E-02	1.50E-02	10%
heavy	CombinationLongHaulTruck	5.04E-05	2.92E-01	7.90E-02	27%
Triaxle	SingleUnitShortHaulTruck	3.59E-05	1.65E-01	4.80E-02	
Heavy/Triaxle for LF		4.32E-05	2.29E-01	6.35E-02	
CR6			3.09E-02 *		

Km to Mile Conversion Factor	1.6 km per mile
seconds per hour	3600 s/hr

\* CR6 Tailpipe ONLY

\*\* Distrubution is indexed from the scaled hourly breakdwon for 2033.

**PM10**

Speed (km/hr)		0	35	80	CR6 Traffic Distribution **
Vehicle Class	Moves Vehicle ID	Emissions			
		g/hour	g/vkt	g/vkt	
light	PassengerCar	5.06E-06	4.46E-02	1.31E-02	63%
medium	LightCommercialTruck	6.12E-06	5.04E-02	1.50E-02	10%
heavy	CombinationLongHaulTruck	5.04E-05	2.92E-01	7.90E-02	27%
Triaxle	SingleUnitShortHaulTruck	3.59E-05	1.65E-01	4.80E-02	
Heavy/Triaxle for LF		4.32E-05	2.29E-01	6.35E-02	
CR6			3.09E-02 *		

\* CR6 Tailpipe ONLY

\*\* Distrubution is indexed from the scaled hourly breakdwon for 2033.

**PM2.5**

Speed (km/hr)		0	35	80	CR6 Traffic Distribution **
Vehicle Class	Moves Vehicle ID	Emissions			
		g/hour	g/vkt	g/vkt	
light	PassengerCar	4.48E-06	7.15E-03	2.79E-03	63%
medium	LightCommercialTruck	5.51E-06	8.89E-03	3.84E-03	10%
heavy	CombinationLongHaulTruck	4.64E-05	6.40E-02	2.50E-02	27%
Triaxle	SingleUnitShortHaulTruck	3.29E-05	2.95E-02	1.27E-02	
Heavy/Triaxle for LF		3.97E-05	4.68E-02	1.89E-02	
CR6			8.80E-03 *		

\* CR6 Tailpipe ONLY

\*\* Distrubution is indexed from the scaled hourly breakdwon for 2033.

### Appendix C: Summary of MOVES 2014b Non-Roadway Outputs

2027 Non-Road Equipment Emission Rates		100		100		110		Seconds per hour		3600
Source Type	Hp	Total Particulate Matter (TSP)	Primary Exhaust PM10 - Total	Primary Exhaust PM2.5 - Total	Total Particulate Matter (TSP)	Primary Exhaust PM10 - Total	Primary Exhaust PM2.5 - Total			
		TSP	PM10	PM2.5	TSP	PM10	PM2.5			
		(g hp-hr <sup>-1</sup> )	(g hp-hr <sup>-1</sup> )	(g hp-hr <sup>-1</sup> )	(g s <sup>-1</sup> )	(g s <sup>-1</sup> )	(g s <sup>-1</sup> )			
Bulldozer	347	2.20E-02	2.20E-02	2.13E-02	2.12E-03	2.12E-03	2.06E-03			
Excavator	303	7.80E-03	7.80E-03	7.57E-03	6.57E-04	6.57E-04	6.37E-04			
Compactor	523	2.20E-02	2.20E-02	2.13E-02	3.19E-03	3.19E-03	3.10E-03			
Loader	379.6	8.99E-02	8.99E-02	8.72E-02	9.48E-03	9.48E-03	9.20E-03			
Off-Highway Trucks	825	2.56E-02	2.56E-02	2.48E-02	5.86E-03	5.86E-03	5.68E-03			

Equipment Type	EQUIP_S1_TP	S2_CONST_TP	S4_CONST_TP	S3_EQUIP_TP
Number of Bulldozers	2	2	2	2
Number of Excavators	1	1	1	1
Number of Compactors	5	2	2	5
Number of Loaders	0	1	1	0

Contaminant ID	CAS Number	EQUIP_S1_TP	S2_CONST_TP	S4_CONST_TP	S3_EQUIP_TP
Total Particulate Matter (g s <sup>-1</sup> )	TSP	2.09E-02	2.08E-02	0.00E+00	0.00E+00
Particulate Matter PM10 (g s <sup>-1</sup> )	PM10	2.09E-02	2.08E-02	0.00E+00	0.00E+00
Particulate Matter PM2.5 (g s <sup>-1</sup> )	PM2.5	2.02E-02	2.01E-02	0.00E+00	0.00E+00

2037 Non-Road Equipment Emission Rates		100		100		1.10E+02		Seconds per hour		3600
Source Type	Hp	Total Particulate Matter (TSP)	Primary Exhaust PM10 - Total	Primary Exhaust PM2.5 - Total	Total Particulate Matter (TSP)	Primary Exhaust PM10 - Total	Primary Exhaust PM2.5 - Total			
		TSP	PM10	PM2.5	TSP	PM10	PM2.5			
		(g hp-hr <sup>-1</sup> )	(g hp-hr <sup>-1</sup> )	(g hp-hr <sup>-1</sup> )	(g s <sup>-1</sup> )	(g s <sup>-1</sup> )	(g s <sup>-1</sup> )			
Bulldozer	347	7.17E-03	7.17E-03	6.95E-03	6.91E-04	6.91E-04	6.70E-04			
Excavator	303	6.59E-03	6.59E-03	6.39E-03	5.55E-04	5.55E-04	5.38E-04			
Compactor	523	7.17E-03	7.17E-03	6.95E-03	1.04E-03	1.04E-03	1.01E-03			
Loader	379.6	2.20E-02	2.20E-02	2.13E-02	2.32E-03	2.32E-03	2.25E-03			
Off-Highway Trucks	825	2.37E-02	2.37E-02	2.30E-02	5.43E-03	5.43E-03	5.26E-03			

Equipment Type	EQUIP_S1_TP	S2_CONST_TP	S4_CONST_TP	S3_EQUIP_TP
Number of Bulldozers	2	2	2	2
Number of Excavators	1	1	1	1
Number of Compactors	5	2	2	5
Number of Loaders	0	1	1	0

Contaminant ID	CAS Number	EQUIP_S1_TP	S2_CONST_TP	S4_CONST_TP	S3_EQUIP_TP
Total Particulate Matter (g s <sup>-1</sup> )	TSP	0.000	0.000	6.34E-03	7.14E-03
Particulate Matter PM10 (g s <sup>-1</sup> )	PM10	0.000	0.000	6.34E-03	7.14E-03
Particulate Matter PM2.5 (g s <sup>-1</sup> )	PM2.5	0.000	0.000	6.15E-03	6.93E-03

## Appendix C: Hourly Breakdown

Date 5/8/2019

Row Labels	Sum of Automobiles	Sum of Medium Trucks	Sum of Heavy Trucks	Sum of ALL
12 AM	13	3	16	32
1 AM	5	2	17	24
2 AM	9	6	11	26
3 AM	3	6	21	30
4 AM	14	11	14	39
5 AM	44	27	40	111
6 AM	129	94	76	299
7 AM	164	127	95	386
8 AM	129	101	130	360
9 AM	101	72	114	287
10 AM	88	84	111	283
11 AM	106	82	109	297
12 PM	93	98	119	310
1 PM	101	73	119	293
2 PM	120	92	118	330
3 PM	161	118	95	374
4 PM	221	121	82	424
5 PM	202	111	70	383
6 PM	136	70	54	260
7 PM	88	51	49	188
8 PM	76	27	52	155
9 PM	61	32	35	128
10 PM	58	20	32	110
11 PM	35	13	26	74
<b>Grand Total</b>	<b>2157</b>	<b>1441</b>	<b>1605</b>	<b>5203</b>

## Appendix C: Scaled Hourly Breakdown

Scaled from 2019 to 2033 hourly traffic volumes

Time of Day	Sum of Automobiles	Sum of Medium Trucks	Sum of Heavy Trucks	Sum of ALL
12 AM	15	3	18	37
1 AM	6	2	19	27
2 AM	11	7	12	30
3 AM	4	7	24	34
4 AM	17	12	16	45
5 AM	52	30	45	127
6 AM	152	106	85	343
7 AM	194	143	107	443
8 AM	152	113	146	412
9 AM	119	81	128	328
10 AM	104	94	125	323
11 AM	125	92	122	340
12 PM	110	110	134	353
1 PM	119	82	134	335
2 PM	142	103	132	377
3 PM	190	132	107	429
4 PM	261	136	92	489
5 PM	239	125	79	442
6 PM	161	79	61	300
7 PM	104	57	55	216
8 PM	90	30	58	178
9 PM	72	36	39	147
10 PM	68	22	36	127
11 PM	41	15	29.18	85
<b>Grand Total</b>	<b>2547</b>	<b>1617</b>	<b>1801</b>	<b>5966</b>



## Appendix C: Overburden - Passbys Per Hour

Cubic Yards of Overburden	700,000
Cubic Meters of Overburden	534,800
Density of Limestone Gravel with Sand (kg/m <sup>3</sup> )	1,200
Total Weight Per Year (kg)	641,760,000
Tonnes	641,760
Tons	582,195
Tons Per Truck	30
Truck Loads Per Year	19,407
Working Days Per Year	250
Average Loads Per Year	78
Passbys Per Hour (12 hr)	6.5

## Appendix C: Landfill Gas Flare Emission Rate Calculations

The Facility Characteristic Assumptions (FCA) report states that the initial landfill operation will only require a single landfill gas flare, with a potential for up to three flares as landfilling progresses. For the purpose of this assessment, it is conservatively assumed that all landfill gas will be combusted in a single flare.

### Landfill Gas Production

Study Period	Landfill Gas Collected (m <sup>3</sup> s <sup>-1</sup> )	Landfill Gas Collected (m <sup>3</sup> yr <sup>-1</sup> )
2023-2027	3.36E-01	1.06E+07
2028-2032	9.33E-01	2.94E+07
2033-2037	1.42E+00	4.48E+07
2038-2042	1.82E+00	5.74E+07
2043	2.13E+00	6.71E+07

Destruction Efficiency of VOCs	98%
--------------------------------	-----

[1] The destruction efficiency is based on the typical value recommended in AP-42 Chapter 2.4, Table 2.4-3 for Flares for NMOC and VOC compounds.

### Flare 1 Emission Rate Summary

Contaminant Name	CAS	AP-42 Emission Factor [1] (kg 10 <sup>-6</sup> dscm methane)	LFG Source Testing Concentration (mg m <sup>-3</sup> )	Flare Emission Rate (g s <sup>-1</sup> )	
				2023-2027	2033-2037
Nitrogen Oxides (NOx)	10102-44-0	631	--	2.12E-01	8.97E-01
Carbon Monoxide (CO)	630-08-0	737	--	2.48E-01	1.05E+00
Particulate Matter (PM)	TSP	238	--	8.00E-02	3.38E-01
Benzene	71-43-2	--	24.04	1.86E-04	7.86E-04
Toluene	108-88-3	--	148.00	1.14E-03	4.84E-03

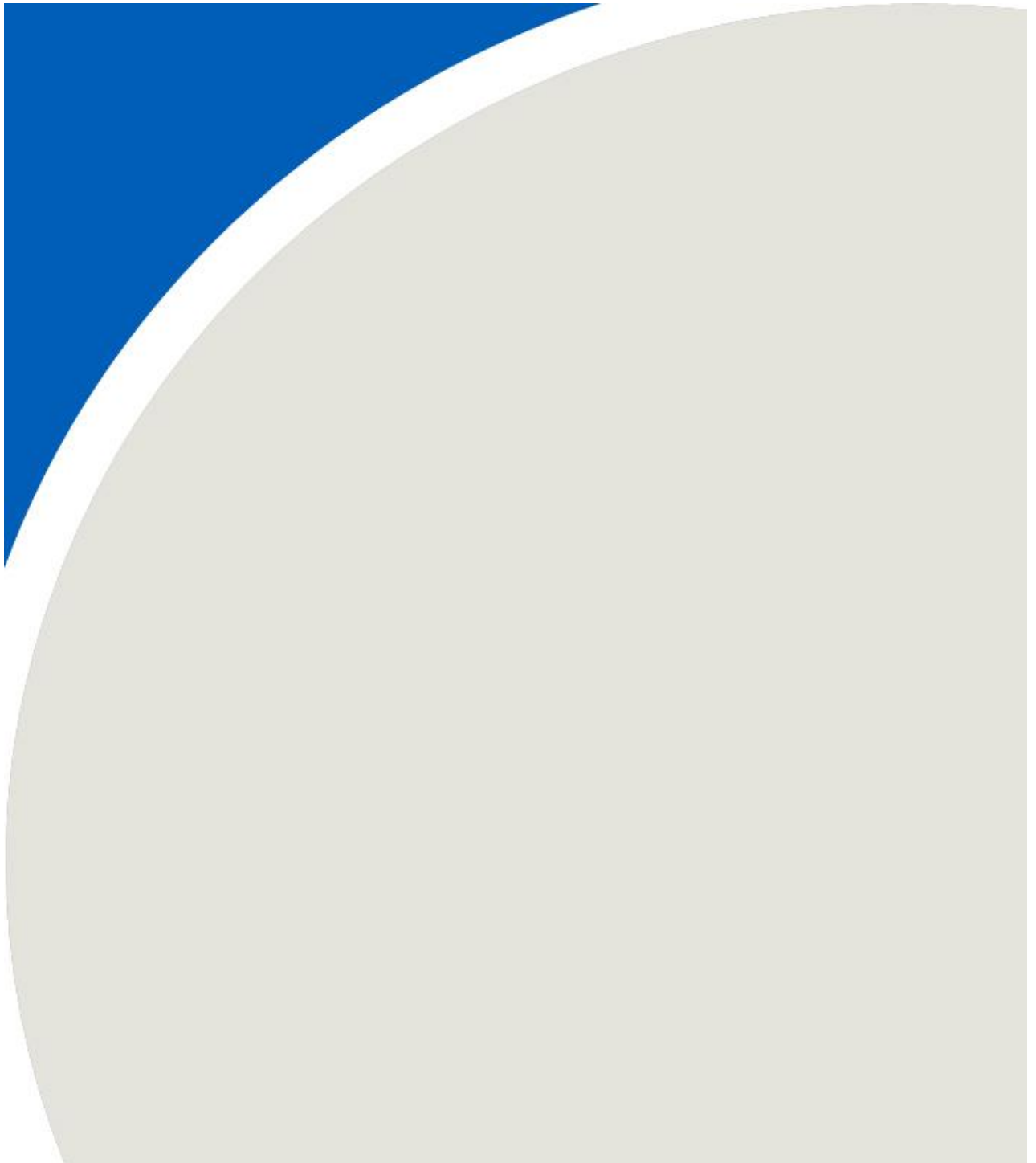
Contaminant Name	CAS	AP-42 Emission Factor [1] (kg 10 <sup>-6</sup> dscm methane)	LFG Source Testing Concentration (mg m <sup>-3</sup> )	Flare Emission Rate (g s <sup>-1</sup> )	
				2023-2027	2033-2037
Sulphur Dioxides [2]	7446-09-5	--	2,306.15	1.78E-02	7.54E-02

Notes:

[1] Emission based on AP-42 emission factors were conservatively based on total landfill gas produced, not Methane produced.

[2] Concentrations of sulphur dioxide were estimated using AP-42 Chapter 2.4, section 2.4.4.2 equation 6.

# APPENDIX D





**Appendix D: Bulk Material Handling - Stage 1**

**AGGREGATE HANDLING AND STORAGE PILES - AP-42 Section 13.2.4**

Average recorded hourly wind speed (m/s):  
(used for sample calculations & factor validation)

3.7

**Material handling emissions:**  $E = 0.0016 k (U / 2.2)^{1.3} / (M / 2)^{1.4}$

**E** emission factor  
**k** particle size multiplier (0.8, 0.74, 0.35 and 0.053 for TSP, PM<sub>30</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, respectively) [3]  
**U** mean wind speed, meters per second (m/s)  
**M** material moisture content (%)

Source ID [1]	Description	Processing Rate			Site Data				Base AP-42 Emission Factor				Base Emission Rate				Additional Control Efficiency Applied (%)	Final Controlled Emission Rate at 3.7 m/s							
		Hourly	Daily	Annual	Site Specific Data? (y/n)	Silt Content (%)	Moisture Content (%)	Source Conditions Valid [2]	TSP	PM <sub>10</sub>	PM <sub>2.5</sub>	Silica	TSP	PM <sub>10</sub>	PM <sub>2.5</sub>	Silica		TSP	Data Quality Rating	PM <sub>10</sub>	Data Quality Rating	PM <sub>2.5</sub>	Data Quality Rating	Silica	Data Quality Rating
		(Mg/h)	(Mg/d)	(Mg/y)					(kg/Mg)	(kg/Mg)	(kg/Mg)	(kg/Mg)	(g/s)	(g/s)	(g/s)	(g/s)		(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)
CF3	Crushed limestone transfer (loading) to surge pile (conveyor)	1268			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		8.3E-01	3.6E-01	5.5E-02		95%	4.1E-02	B	1.8E-02	B	2.7E-03	B		B
CF4	Crushed limestone transfer to trucks from surge pile	854			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		5.6E-01	2.4E-01	3.7E-02		95%	2.8E-02	B	1.2E-02	B	1.8E-03	B		B
CF7	Conveying and transferring limestone - 2ndry Crush and Mat Handle	413			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		2.7E-01	1.2E-01	1.8E-02		90%	2.7E-02	B	1.2E-02	B	1.8E-03	B		B
CF10	Truck loading from limestone bin in screening building	60			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		3.9E-02	1.7E-02	2.6E-03		50%	2.0E-02	B	8.6E-03	B	1.3E-03	B		B
CF11	Screening limestone transferring and loading in storage building	119			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		7.8E-02	3.4E-02	5.2E-03		90%	7.8E-03	B	3.4E-03	B	5.2E-04	B		B
CF13	Limestone handling and transferring -Store house to pulverizing pile	76			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		5.0E-02	2.2E-02	3.3E-03		50%	2.5E-02	B	1.1E-02	B	1.6E-03	B		B
CF20	Truck loading and pulverized limestone - B product.	43			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		2.8E-02	1.2E-02	1.8E-03		70%	8.3E-03	B	3.6E-03	B	5.5E-04	B		B
CF21	Truck loading pulverized limestone - F Product	22			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		1.4E-02	6.3E-03	9.5E-04		50%	7.2E-03	B	3.1E-03	B	4.8E-04	B		B
CF24	Stone handling (loading to piles) for offsite transfer	27			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		1.8E-02	7.7E-03	1.2E-03		50%	8.8E-03	B	3.8E-03	B	5.8E-04	B		B
QF4	Truck loading / material handling of large pieces of wet limestone	906			y	48.3%	2.1%	silt too high	2.3E-03	1.0E-03	1.6E-04		5.9E-01	2.6E-01	3.9E-02			5.9E-01	B	2.6E-01	B	3.9E-02	B		B
S1_WS_DROP	Stage 1 waste soil drop off for use at active face	800			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		5.1E-02	2.2E-02	3.4E-03			5.1E-02	B	2.2E-02	B	3.4E-03	B		B
S1_WS_HANDLE	Handling of waste soil at the stage 1 active face	800			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		5.1E-02	2.2E-02	3.4E-03			5.1E-02	B	2.2E-02	B	3.4E-03	B		B
S1_WSP_DRP	Drop off of waste soil at the waste soil pile - Stage 1	160			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		1.0E-02	4.5E-03	6.8E-04			1.0E-02	B	4.5E-03	B	6.8E-04	B		B
S1_WSP_PCKUP	Pick up of waste soil at the waste soil pile - Stage 1	800			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		5.1E-02	2.2E-02	3.4E-03			5.1E-02	B	2.2E-02	B	3.4E-03	B		B
S2_CONSTRUCT	Equipment for stage 2 liner constructions.	300			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		1.9E-02	8.4E-03	1.3E-03			1.9E-02	B	8.4E-03	B	1.3E-03	B		B
S2_BF_DROP	Backfill drop off at stage 2 construction	300			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		1.9E-02	8.4E-03	1.3E-03			1.9E-02	B	8.4E-03	B	1.3E-03	B		B
OB_S1_REMOVE	Stage 1 - Overburden pick up	300			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		1.9E-02	8.4E-03	1.3E-03			1.9E-02	B	8.4E-03	B	1.3E-03	B		B
NLF_OB_DRP1	Drop off of OB in the NO LF scenario stage1	300			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		1.9E-02	8.4E-03	1.3E-03			1.9E-02	B	8.4E-03	B	1.3E-03	B		B
CP_DRP	Drop off of clay at the clay pile	292			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		1.9E-02	8.2E-03	1.2E-03			1.9E-02	B	8.2E-03	B	1.2E-03	B		B
CP_PCK_UP	Pick up of clay at the clay pile	292			y	48.3%	11.0%	silt too high	2.3E-04	1.0E-04	1.5E-05		1.9E-02	8.2E-03	1.2E-03			1.9E-02	B	8.2E-03	B	1.2E-03	B		B

- [1] ID corresponds to process flow diagram for facility and / or material
- [2] Relates to AP-42 Section 13.2.4-4
- [3] k-factor for TSP (PM44) scaled up logarithmically to 0.8 from published k-factor of 0.74 which refers to PM30.

Sample calculation for uncontrolled TSP emission factor for Source CF3: Crushed limestone transfer (loading) to surge pile (conveyor), at a sample wind speed of 5 m/s

$$EF = 0.0016 \times (0.8) \times ((3.7 \text{ m/s}) / 2.2)^{1.3} / ((2.1\%) / 2)^{1.4} = 2.3E-03 \text{ kg TSP / Mg handled}$$

Sample calculation for TSP emission rate for Source CF3: Crushed limestone transfer (loading) to surge pile (conveyor), at a sample wind speed of 5 m/s

$$\frac{1268 \text{ Mg}_{\text{handled}}}{1 \text{ h}} \times \frac{2.2E-03 \text{ kg}_{\text{TSP}}}{1 \text{ Mg}_{\text{handled}}} \times \frac{1 \text{ h}}{3600 \text{ s}} \times \frac{1000 \text{ g}_{\text{TSP}}}{1 \text{ kg}_{\text{TSP}}} \times \frac{0.05 \text{ g}_{\text{TSP uncontrolled}}}{1 \text{ g}_{\text{TSP}}} = 3.8E-02 \text{ g}_{\text{TSP}} / \text{s}$$

Comments

## Appendix D: Wind Erosion

The Nickling and Gillies equation for mean vertical particulate matter flux is summarized below:

$$F = 2.33 * 10^{-11} * \left( \frac{ws * su}{\ln \frac{z}{z_0}} \right)^{1.899}$$

Where:

- F Vertical flux rate (g/cm<sup>2</sup>/sec);
- ws Wind Speed (cm/s);
- su Speed up factor. Points on a hill, particularly near a crest, may be subject to significantly higher wind speeds than points on level ground. This speed up factor was developed using equations presented in The National Building Code of Canada;
- z Wind speed measurement height (m); and,
- z<sub>0</sub> Surface roughness length (m).

The variables contained within the brackets in the wind erosion equation above calculate the shear velocity (U\*). The shear velocity is a measure of wind shear stress on the erodible surface, and it can be related to wind speed by assuming a logarithmic distribution for the wind speed profile. This flux rate equation was only applied under conditions when the wind speed was greater than a threshold velocity of 7.3 m/s. This threshold wind velocity was conservatively assumed to be the minimum required for wind erosion from a construction site tested in the Nickling and Gillies study, which is assumed to have similar characteristics to that of a landfill.

# Appendix D: Blasting Operations Emission Spreadsheet

## WESTERN SURFACE COAL MINING - AP-42 Section 11.9

**Blasting operation particulate emissions:**  $E = 0.00022 k * A^{1.5}$

**E** emission factor  
**k** particle size multiplier (1.13, 0.52 and 0.03 for TSP, PM<sub>10</sub> and PM<sub>2.5</sub>)  
**A** blast surface area (m<sup>2</sup>)

Source ID	Source Description	Total Blast Area (m <sup>2</sup> )	Number of Blasts			Base AP-42 Emission Factor			Base Emission Rate			Additional Control Efficiency Applied (%)	Final Controlled Emission Rate					
			Hourly	Daily	Annual	TSP (kg/blast)	PM <sub>10</sub> (kg/blast)	PM <sub>2.5</sub> (kg/blast)	TSP (g/s)	PM <sub>10</sub> (g/s)	PM <sub>2.5</sub> (g/s)		TSP (g/s)	Data Quality Rating	PM <sub>10</sub> (g/s)	Data Quality Rating	PM <sub>2.5</sub> (g/s)	Data Quality Rating
S1_S2_BLAST	Stage 1 and 2 Blasting Area	3600	1	1	40	5.4E+01	2.5E+01	1.4E+00	1.5E+01	6.9E+00	4.0E-01		1.5E+01	C	6.9E+00	C	4.0E-01	C
S3_S4_BLAST	Stage 3 and 4 Blasting Area	3600	1	1	40	5.4E+01	2.5E+01	1.4E+00	1.5E+01	6.9E+00	4.0E-01		1.5E+01	C	6.9E+00	C	4.0E-01	C

**[1]** NOx emission factor taken directly from AP-42 Chapter 13.3, based on type of explosive used. Provided in kg of NOx per Mg of explosive charge used.

Sample calculation for uncontrolled TSP emission factor for Source S1\_S2\_BLAST: Stage 1 and 2 Blasting Area.

$$EF = 0.00022 \times (1.13) \times (3600 \text{ m})^{1.5} = 5.4E+01 \text{ kg TSP / blast}$$

Sample calculation for TSP emission rate for Source S1\_S2\_BLAST: Stage 1 and 2 Blasting Area.

$$\frac{1 \text{ blast}}{1 \text{ h}} \times \frac{5.4E+01 \text{ kg}_{TSP}}{1 \text{ blast}} \times \frac{1 \text{ h}}{3600 \text{ s}} \times \frac{1000 \text{ g}_{TSP}}{1 \text{ kg}_{TSP}} \times \frac{1 \text{ g}_{TSP \text{ uncontrolled}}}{1 \text{ g}_{TSP}} = 1.5E+01 \text{ g}_{TSP} / \text{s}$$

Comments

## Appendix D: Soil Sampling Results

On August 1, 2019 RWDI staff travelled to the Carmeuse quarry site to obtain paved road, unpaved road, and native soil samples. These samples were transported by RWDI staff to ALS Environmental, who conducted a soil partial size analysis to determine fractions of particulate matter and roadway silt content. Below is a summary of the results.

### Results Summary L2321351

Job Reference	1800160
Report To	Brad Bergeron, RWDI AIR INC. (Guelph)
Date Received	1-Aug-2019 15:10
Report Date	20-Aug-2019 13:35
Report Version	1

Client Sample ID			PAVED 1	PAVED 2	UNPAVED 1	UNPAVED 2	UNPAVED 3	UNPAVED 4	SOIL 1	SOIL 2	SOIL 3
Date Sampled			1-Aug-2019	1-Aug-2019	1-Aug-2019	1-Aug-2019	1-Aug-2019	1-Aug-2019	1-Aug-2019	1-Aug-2019	1-Aug-2019
Time Sampled			10:30	11:00	10:45	11:30	13:00	14:00	13:20	13:25	13:30
ALS Sample ID			L2321351-1	L2321351-2	L2321351-3	L2321351-4	L2321351-5	L2321351-6	L2321351-7	L2321351-8	L2321351-9
Parameter	Lowest Detection Limit	Units	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
<b>Physical Tests (Soil)</b>											
Grain Size Curve		-	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED
<b>Particle Size (Soil)</b>											
Gravel (4.75mm - 3in.)	1.0	%	5.0	1.3	12.2	9.3	18.1	23.2	9.2	10.2	5.2
Medium Sand (0.425mm - 2.0mm)	1.0	%	42.1	54.4	36.5	20.9	25.1	22.7	10.1	8.6	12.4
Coarse Sand (2.0mm - 4.75mm)	1.0	%	8.6	10.0	22.8	16.1	19.2	25.3	6.7	3.8	6.2
Fine Sand (0.075mm - 0.425mm)	1.0	%	35.7	30.6	14.3	14.9	15.1	10.3	21.9	36.1	24.8
Silt (0.005mm - 0.075mm)	1.0	%	8.6	3.8	4.4	20.6	9.8	10.7	30.8	30.9	29.0
Clay (<0.005mm)	1.0	%	1	1	9.9	18.2	12.8	7.8	21.3	10.4	22.5
Total Fines			9.6	4.8	14.3	38.8	22.6	18.5	52.1	41.3	51.5

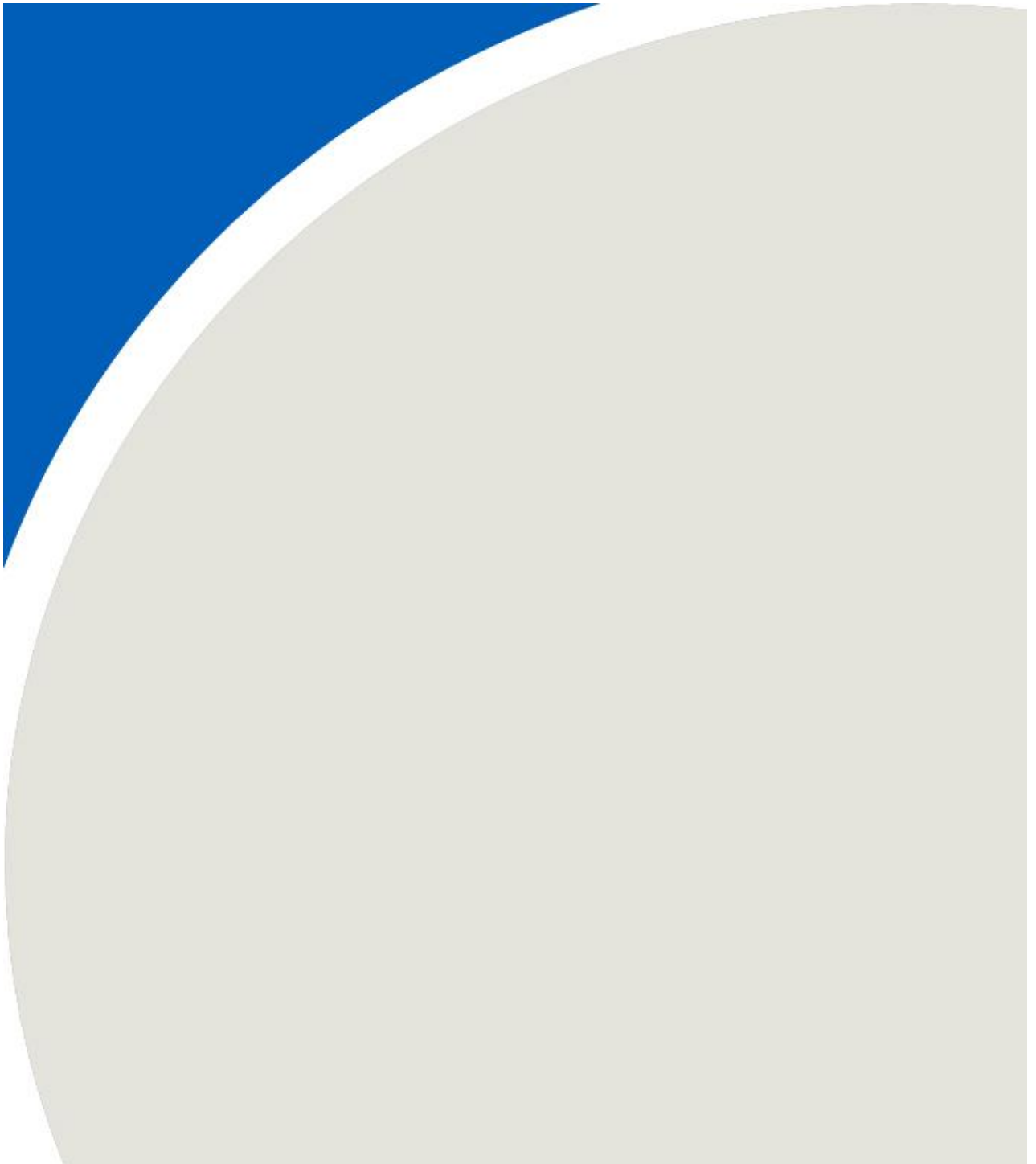
Sample Area (m2)		6.17805216	25.00020806
Sample Mass (g)		140	160
Paved Roads silt Load (gm-2)	1.2 gm-2	Paved	
Silt Content (%)	19% %	Unpaved	Haul Route
Silt Content (%)	25% %	Unpaved	Carmeuse Process
Soil Silt (%)	48.3 %		







# APPENDIX E



Appendix E: Source Summary Table (by contaminant)

Contaminant	CAS #	Source Data									Emissions Data				
		Source ID	Source Description	Stack Volumetric Flowrate (Am <sup>3</sup> /s)	Stack Exit Gas Temperature (degC)	Stack Inner Diameter (m)	Stack Height Above Grade (m)	Stack Height Above Roof (m)	UTM Easting (m)	UTM Northing (m)	Maximum Emission Rate (g/s)	Averaging Period (hours)	Emission Estimating Technique	Emissions Data Quality	% of Overall Emissions
NOx	10102-44-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	8.46E+00	1	ST	Above Average	41.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.13E+01	1	ST	Above Average	55.5
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.06	4	NA	511599	4768525	5.86E-01	1	EF	Uncertain	2.9
SO2	7446-09-5	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	9.32E-01	1	ST	Above Average	76.5
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	2.47E-01	1	ST	Above Average	20.3
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.058	4	NA	511599	4768525	3.87E-02	1	EF	Uncertain	3.2
CO	630-08-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	9.21E+00	1	ST	Above Average	49.2
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	9.39E+00	1	ST	Above Average	50.1
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.058	4	NA	511599	4768525	1.26E-01	1	EF	Uncertain	0.7
PM	NA-1	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	9.60E-01	1	ST	Above Average	12.8
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	3.78E+00	1	ST	Above Average	50.4
		DE3A	Diesel auxiliary engine to run the kiln drive on Kiln #1 during shut down	0.2	25	0.058	4	NA	511599	4768525	4.16E-02	1	EF	Uncertain	0.6
		HDC-3	Wet scrubber	4.6	71	0.56	27.4	<Bld Ht	512519	4769793	3.63E-02	1	ST	Uncertain	0.5
		QDC-1	Centre Plant - Primary Crusher	4.7	Amb	0.64 x 2.44	9.8	0.6	511683	4768231	4.70E-02	1	EF	Average	0.6
		CDC-1	Centre Plant - Secondary Crusher	10.8	Amb	0.64 x 2.44	20.4	=Bld Ht	511597	4768304	1.08E-01	1	EF	Average	1.4
		CDC-2	Centre Plant - Bin Building D/C	11.8	Amb	0.64 x 2.44	19.8	=Bld Ht	511646	4768378	1.18E-01	1	EF	Average	1.6
		PDC-5	Centre Plant - Pulveriser	25.9	Amb	1.10	5.7	NA	511639	4768432	5.18E-01	1	EF	Average	6.9
		LDC-13	Centre Plant - Kiln #3 Nuisance DC	3.3	Amb	0.25 x 0.36	21.3	<Bld Ht	511548	4768507	3.25E-02	1	EF	Average	0.4
		LDC-4	Centre Plant - Lime Bins DC	3.4	Amb	0.38 x 0.46	22.3	11.1	511638	4768593	3.40E-02	1	EF	Average	0.5
		LDC-10	Centre Plant - #1 Kiln Nuisance DC	4.3	Amb	0.49 x 0.63	8.6	<Bld Ht	511613	4768560	4.30E-02	1	EF	Average	0.6
		LDC-17	Centre Plant - Lime Loadout	9.9	Amb	0.36	11.1	N/A	511623	4768558	9.90E-02	1	EF	Average	1.3
		HDC-2	East Plant - Hydrator DC	7.0	Amb	0.46 x 0.61	22.9	<Bld Ht	512535	4769768	7.00E-02	1	EF	Average	0.9
		LDC-21	Center Plant - Lime Bins DC (RDC-302 from East Plant relocated to LDC-1)	13.3	Amb	0.66 x 0.76	23.8	9.8	511616	4768561	1.33E-01	1	EF	Average	1.8
		LDC-22	Center Plant - Lime Bins DC (RDC-202 from East Plant relocated to LDC-2)	13.3	Amb	0.66	33.8	1	511619	4768554	1.33E-01	1	EF	Average	1.8
		LDC-9	Centre Plant Lime Bins DC	3.35	Amb	0.30	26.5	3	511639	4768599	3.35E-02	1	EF	Average	0.4
		PDC-1	Centre Plant - Pulverizer plant dryer baghouse	26.00	Amb	1.22	23.3	3	511661	4768478	2.60E-01	1	EF	Average	3.5
		LDC-35	Centre plant Cal 85	3.35	Amb	0.46	13.7	NA	511572	4768505	3.35E-02	1	EF	Average	0.4
		FDC-1	Flyash dust collector	5.90	amb	0.84	7.3	NA	511571	4768464	5.90E-02	1	EF	Average	0.8
		CF3	Crushed limestone transfer (loading) to surge pile	NA	ambient	NA	NA	N/A	511709	4768250	5.16E-02	1	EF	Uncertain	0.7
		CF4	Crushed limestone transfer to trucks from surge pile	NA	ambient	NA	NA	N/A	511750	4768262	1.17E-01	1	EF	Above Average	1.6
		CF7	Conveying and transferring limestone - Secondary crusher to Screening bld, and material transfer inside the Screening building	NA	ambient	NA	NA	N/A	511598	4768313	4.59E-02	1	EF	Uncertain	0.6
		CF10	Truck loading from limestone bins in Screening building	NA	ambient	NA	NA	N/A	511594	4768304	8.24E-02	1	EF	Above Average	1.1
		CF11	Screened limestone transferring and loading in Storage building (Nordburg)	NA	ambient	NA	NA	N/A	511647	4768384	3.26E-02	1	EF	Above Average	0.4
		CF13	Limestone handling and transferring - Store House to pulverizing stock pile	NA	ambient	NA	NA	N/A	511856	4768437	1.03E-01	1	EF	Above Average	1.4
		CF20	Truck loading pulverized limestone - B Product	NA	ambient	NA	NA	N/A	511656	4768440	3.48E-02	1	EF	Above Average	0.5
		CF21	Truck loading pulverized limestone - F Product	NA	ambient	NA	NA	N/A	511668	4768453	3.00E-02	1	EF	Above Average	0.4
CF24	Stone handling (loading to piles) for offsite transfer	NA	ambient	NA	NA	N/A	511480	4768408	2.20E-01	1	EF	Above Average	2.9		
QF4	Truck loading / material handling of large pieces of wet limestone	NA	ambient	NA	NA	N/A	510692	4767635	2.42E-01	1	EF	Above Average	3.2		
CaO	1305-78-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	1.42E-01	1	ST	Above Average	8.4
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	9.44E-01	1	ST	Above Average	55.7
		HDC-3	Wet scrubber	4.6	71	0.56	27.4	<Bld Ht	512519	4769793	3.09E-02	1	ST	Uncertain	1.8
		LDC-13	Centre Plant - Kiln #3 Nuisance DC	3.25	Amb	0.25 x 0.36	21.3	<Bld Ht	511548	4768507	3.15E-02	1	EF	Average	1.9
		LDC-4	Centre Plant - Lime Bins DC	3.4	Amb	0.38 x 0.46	22.3	11.1	511638	4768593	3.30E-02	1	EF	Average	1.9
		LDC-10	Centre Plant - #1 Kiln Nuisance DC	4.3	Amb	0.49 x 0.63	8.6	<Bld Ht	511613	4768560	4.17E-02	1	EF	Average	2.5
		LDC-17	Centre Plant - Lime Loadout	9.9	Amb	0.36	11.1	N/A	511623	4768558	9.60E-02	1	EF	Average	5.7
		HDC-2	East Plant - Hydrator DC	7	Amb	0.46 x 0.61	22.9	<Bld Ht	512535	4769768	5.95E-02	1	EF	Average	3.5
		LDC-21	Center Plant - Lime Bins DC (RDC-302 from East Plant relocated to LDC-1)	13.25	Amb	0.66 x 0.76	23.8	9.8	511616	4768561	1.29E-01	1	EF	Average	7.6
		LDC-22	Center Plant - Lime Bins DC (RDC-202 from East Plant relocated to LDC-2)	13.25	Amb	0.66	33.8	1	511619	4768554	1.29E-01	1	EF	Average	7.6
		LDC-9	Centre Plant Lime Bins DC	3.35	Amb	0.3	26.5	3	511639	4768599	3.25E-02	1	EF	Average	1.9
		LDC-35	Centre plant Cal 85	3.35	Amb	0.46	13.72	NA	511572	4768505	2.56E-02	1	EF	Average	1.5



Contaminant	CAS #	Source Data									Emissions Data				
		Source ID	Source Description	Stack Volumetric Flowrate (Am <sup>3</sup> /s)	Stack Exit Gas Temperature (degC)	Stack Inner Diameter (m)	Stack Height Above Grade (m)	Stack Height Above Roof (m)	UTM Easting (m)	UTM Northing (m)	Maximum Emission Rate (g/s)	Averaging Period (hours)	Emission Estimating Technique	Emissions Data Quality	% of Overall Emissions
Arsenic	7440-38-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	2.18E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	8.09E-07	1	EF	Uncertain	97.4
Beryllium	7440-41-7	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	2.54E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	9.43E-07	1	EF	Uncertain	97.4
Cadmium	7440-43-9	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	6.16E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	2.29E-06	1	EF	Uncertain	97.4
Copper	7440-50-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	4.60E-09	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.71E-07	1	EF	Uncertain	97.4
Chromium	7440-47-3	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	3.14E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.17E-05	1	EF	Uncertain	97.4
Lead	7439-92-1	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	5.08E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.89E-05	1	EF	Uncertain	97.4
Manganese	7439-96-5	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	5.92E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	2.20E-05	1	EF	Uncertain	97.4
Mercury	7439-97-6	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	3.34E-05	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	3.73E-05	1	EF	Uncertain	52.7
Nickel	7440-02-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	3.38E-07	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.26E-05	1	EF	Uncertain	97.4
Selenium	7782-49-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	1.57E-06	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	5.84E-05	1	EF	Uncertain	97.4
Zinc	7440-66-6	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	1.23E-08	1	EF	Uncertain	2.6
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	4.58E-07	1	EF	Uncertain	97.4
HCl	7647-01-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	4.83E-01	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	5.39E-01	1	EF	Uncertain	52.7
Acenaphthylene	208-96-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	8.90E-07	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	9.93E-07	1	EF	Uncertain	52.7
Anthracene	120-12-7	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	8.46E-08	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	9.43E-08	1	EF	Uncertain	52.7
Benzene	71-43-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	5.24E-04	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	5.84E-04	1	EF	Uncertain	52.7
Benzo(a)pyrene	50-32-8	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	1.53E-08	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.71E-08	1	EF	Uncertain	52.7
Benzo(g,h,i)perylene	191-24-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	1.09E-08	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.21E-08	1	EF	Uncertain	52.7
Fluoranthene	206-44-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	2.86E-07	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	3.19E-07	1	EF	Uncertain	52.7
Formaldehyde	50-00-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	9.67E-05	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.08E-04	1	EF	Uncertain	52.7
Naphthalene	91-20-3	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	1.31E-05	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.46E-05	1	EF	Uncertain	52.7
Pyrene	129-00-0	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	1.33E-07	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.48E-07	1	EF	Uncertain	52.7
Chlorinated dibenzo-p-dioxins	NA-2	Kiln 3	Centre Plant - Kiln 3	38.8	291.1	2.13	36.6	NA	511552	4768473	9.76E-11	1	EF	Uncertain	47.3
		Kiln 1	Centre Plant - Kiln 1	73.3	311	2.5	30.5	NA	511561	4768453	1.09E-10	1	EF	Uncertain	52.7

**Appendix E: Baghouse Emission Rate Summary**

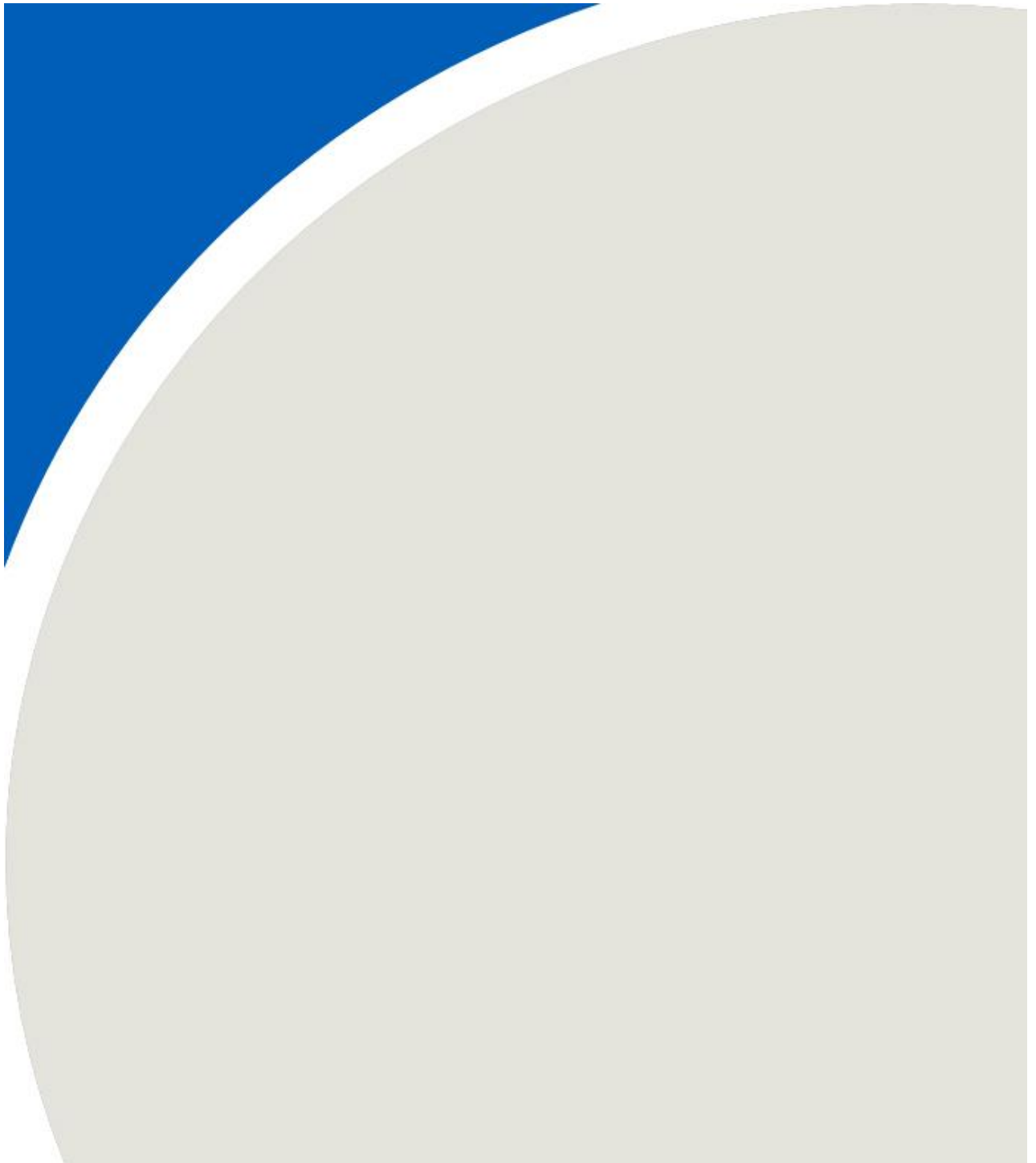
Source ID	Production Area/Source	Volumetric Flow Rate (Am <sup>3</sup> /s)	PM Emission Factor (g/m <sup>3</sup> )	PM 1-hour Average Emission Rate (g/s)	PM10 Emission Rate [1] (g/s)	PM2.5 Emission Rate [1] (g/s)	Data Quality	Notes	CaO wt%*	CaO 1-hour Average Emission Rate (g/s)	Comments	Operating Time or Time that Emissions Occur (hr/d)	Start	Finish
QDC1	Centre Plant - Primary Crusher	4.7	0.01	4.70E-02	1.91E-02	4.37E-03	Average	MOE Recommended BH Factor	0	0.00E+00		10	7:00	23:00
CDC1	Centre Plant - Secondary Crusher	10.8	0.01	1.08E-01	4.40E-02	1.00E-02	Average	MOE Recommended BH Factor	0	0.00E+00		8	7:00	23:00
CDC2	Centre Plant - Bin Building D/C	11.8	0.01	1.18E-01	4.80E-02	1.10E-02	Average	MOE Recommended BH Factor	0	0.00E+00		8	7:00	23:00
PDC5	Centre Plant - Pulveriser	25.9	0.02	5.18E-01	2.11E-01	4.82E-02	Average	MOE Recommended BH Factor	0	0.00E+00		19	7:00	7:00
LDC13	Centre Plant - Kiln #3 Nuisance DC	3.25	0.01	3.25E-02	1.32E-02	3.02E-03	Average	MOE Recommended BH Factor	0.97	3.15E-02		24	7:00	7:00
LDC3	Centre Plant - Lime Bins DC	0.9	0.01	9.00E-03	3.66E-03	8.37E-04	Average	MOE Recommended BH Factor	0.97	8.73E-03	LDC-3 and LDC-4 are used for both kilns, however only one of them run at any given time, so one of them will not be included in the emissions.	24	7:00	7:00
LDC4	Centre Plant - Lime Bins DC	3.4	0.01	3.40E-02	1.38E-02	3.16E-03	Average	MOE Recommended BH Factor	0.97	3.30E-02	LDC-3 and LDC-4 are used for both kilns, however only one of them run at any given time, so one of them will not be included in the emissions.	13	7:00	7:00
LDC8	Centre Plant - Lime Bins	1.7	0.01	1.70E-02	6.92E-03	1.58E-03	Average	MOE Recommended BH Factor	0.97	1.65E-02	insig for ESDM <5%	24	7:00	7:00
LDC10	Centre Plant - #1 Kiln Nuisance DC	4.3	0.01	4.30E-02	1.75E-02	4.00E-03	Average	MOE Recommended BH Factor	0.97	4.17E-02		24	7:00	7:00
LDC17	Centre Plant - Lime Loadout	9.9	0.01	9.90E-02	4.03E-02	9.21E-03	Average	MOE Recommended BH Factor	0.97	9.60E-02		24	7:00	7:00
HDC2	East Plant - Hydrator DC	7	0.01	7.00E-02	2.85E-02	6.51E-03	Average	MOE Recommended BH Factor	0.85	5.95E-02	Will be removed once HDC7 is installed in 2016.	18	7:00	7:00
LDC21	Center Plant - Lime Bins DC (RDC-302 from East Plant relocated to LDC-1)	13.25	0.01	1.33E-01	5.39E-02	1.23E-02	Average	MOE Recommended BH Factor	0.97	1.29E-01		24	7:00	7:00
LDC22	Center Plant - Lime Bins DC (RDC-202 from East Plant relocated to LDC-2)	13.25	0.01	1.33E-01	5.39E-02	1.23E-02	Average	MOE Recommended BH Factor	0.97	1.29E-01		24	7:00	7:00
Ilmeg DC	Centre Plant Quarry - Ilmeg DC on Drill (ingersoll Rand)	0.53	0.01	5.30E-03	2.16E-03	4.93E-04	Average	MOE Recommended BH Factor	0	0.00E+00	insig for ESDM - looks like DC on drill - how are we assessing drilling?	24	7:00	7:00
LDC9	Centre Plant Lime Bins DC	3.35	0.01	3.35E-02	1.36E-02	3.12E-03	Average	MOE Recommended BH Factor	0.97	3.25E-02		24	7:00	7:00
PDC1	Centre Plant - Pulverizer plant dryer baghouse	26	0.01	2.60E-01	1.06E-01	2.42E-02	Average	MOE Recommended BH Factor	0	0.00E+00		19	7:00	7:00
LDC35	Centre plant Cal 85	3.35	0.01	3.35E-02	1.36E-02	3.11E-03	Average	MOE Recommended BH Factor	0.764	2.56E-02		24	7:00	7:00
FDC1	Flyash dust collector	5.9	0.01	5.90E-02	2.40E-02	5.49E-03	Average	MOE Recommended BH Factor	0	0.00E+00		24	7:00	7:00

[1] PM10 and PM2.5 size fractions based on source testing conducted on baghouses as a similar facility. These calculations were added by RWDI.

\*2014 annual weighted average CaO composition analysis data for lime and waste lime was applied in the emission calculation for Centre Plant.

\*\* PDC-5 was determined to be the dust collector with most significant contribution to the off property concentration, based on low stack height and high flow rate. Therefore, an emission factor of 20 mg/m<sup>3</sup> is being applied. All other dust collectors use a 10 mg/m<sup>3</sup> emission factor. This is in accordance with MECP document "Procedure for Preparing an ESDM Report", Version 4.1, Table C-2.

# APPENDIX F



Appendix F: Dispersion Modelling Parameters for All Sources

Project #1800160

Walker's

**Suggested Volume and Line Source Model Parameters**

ID	Description	Base Elevation	Release Height	Physical Width or Length of Side	Initial Lateral Dimension	Elevated or Surface Based	On or Adjacent to Building?	Vertical Dimension or Building Height	Initial Vertical Dimension	Comments
CF3	Crushed limestone transfer (loading) to surge pile (conveyor)	269.97	1	-	0.581	elevated	no	-	0.233	
CF4	Crushed limestone transfer to trucks from surge pile	270.02	4.27	-	0.212	elevated	no	-	0.426	
CF7	Conveying and transferring limestone - 2ndry Crush and Mat Handle	269.94	2	-	0.581	elevated	no	-	9.302	
CF10	Truck loading from limestone bin in screening building	269.93	4.27	-	0.581	elevated	no	-	0.426	
CF11	Screening limestone transferring and loading in storage building	271.01	20	-	0.581	elevated	no	-	11.628	
CF13	Limestone handling and transferring -Store house to pulverizing pile	272	2	-	0.698	elevated	no	-	0.465	
CF20	Truck loading and pulverized limestone - B product.	271	4.27	-	0.581	elevated	no	-	0.426	
CF21	Truck loading pulverized limestone - F Product	271.17	4.27	-	0.581	elevated	no	-	0.426	
CF24	Stone handling (loading to piles) for offsite transfer	279.29	20	-	0.581	elevated	no	-	11.628	
QF4	Truck loading / material handling of large pieces of wet limestone.	289.28	7	-	0.7	elevated	no	-	0.41	
P_GATE1	Paved area at the weight scale entrance	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_LF_2	Unpaved road from gatehouse to BF int S3	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_S2_2_MAIN	Road segment from stage 2 active face to main LF road	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_S1	Unpaved road to stage 1 - Waste soil and waste	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_S2_C	Unpaved road into stage 2 construction area	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_MAIN_1	Main landfill haul route to active faces.	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_S4_C	Unpaved road leading to stage 4 construction area	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_S3	Unpaved road leading to the stage 3 active face	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
P_N_ENTER_1	Paved Section of the north entrance for finished goods	Varies	Varies	16	3.72	elevated	no	8.3	1.93	
P_NORTH_2	Paved North Entrance second paved section	Varies	Varies	16	3.72	elevated	no	8.3	1.93	
UP_NORTH_1	North Entrance unpaved section	Varies	Varies	16	3.72	elevated	no	8.3	1.93	
P_NORTH_3	North Entrance Third Paved Section	Varies	Varies	16	3.72	elevated	no	8.3	1.93	
P_SOUTH_1	Paved south entrance	Varies	Varies	16	3.72	elevated	no	7.3	1.7	
UP_SOUTH_2	South entrance unpaved road in working area	Varies	Varies	16	3.72	elevated	no	7.3	1.7	
P_SOUTH_2	Paved road leading out of the working area and to CR6	Varies	Varies	16	3.72	elevated	no	7.3	1.7	
UP_S1_WSPILE	Unpaved Road to Stage 1 waste soil pile	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_S3_WSP	Stage 3 Waste soil pile to active face haul route	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_MAIN_2	Main haul route section 2, stage 1 to stage 2	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_MAIN_3	Unpaved main haul route, stage 2 to stage 3	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_MAIN_4	Unpaved main haul route stage 3 to stage 4	Varies	Varies	16	3.72	elevated	no	6.8	1.58	
UP_QRY_PC	Unpaved road leading to the primary crusher	Varies	Varies	16	3.72	elevated	no	9	2.09	
UP_QRY_OB	Stage 1 - Overburden removal and quarry hauling	Varies	Varies	16	3.72	elevated	no	9	2.09	
UP_QRY_S1_2	Stage 1 - Quarry haul route	Varies	Varies	16	3.72	elevated	no	9	2.09	
UP_OB_S1	Stage 1 - overburden removal	Varies	Varies	16	3.72	elevated	no	9	2.09	
UP_BF_S1_S2	Stage 1 - overburden transfer to S2 for backfill	Varies	Varies	16	3.72	elevated	no	9	2.09	
UP_QRY_S3	Stage 3 - Quarry haul route	Varies	Varies	16	3.72	elevated	no	9	2.09	
UP_NLF_OB_S1	Unpaved road for OB removal for stage 1 no landfill	Varies	Varies	16	3.72	elevated	no	9	2.09	
UP_S3_OB	Unpaved road for overburden removal	Varies	Varies	16	3.72	elevated	no	9	2.09	
P_BG_CR6	County road 6	Varies	Varies	16	3.72	elevated	no	7	1.63	
P_HAULROUTE	Paved section of the LF Haul route	Varies	Varies	16	3.72	elevated	no	7	1.63	
UP_HAUL	Unpaved portion of the haul route	Varies	Varies	16	3.72	elevated	no	7	1.63	
P_CR6B	CR6 roadway background traffic only	Varies	Varies	16	3.72	elevated	no	7	1.63	
UP_S3_OB_NLF	Unpaved road for OB removal for stage 3 no landfill	Varies	Varies	16	3.72	elevated	no	9	2.09	

**Model Parameters for Point Sources**

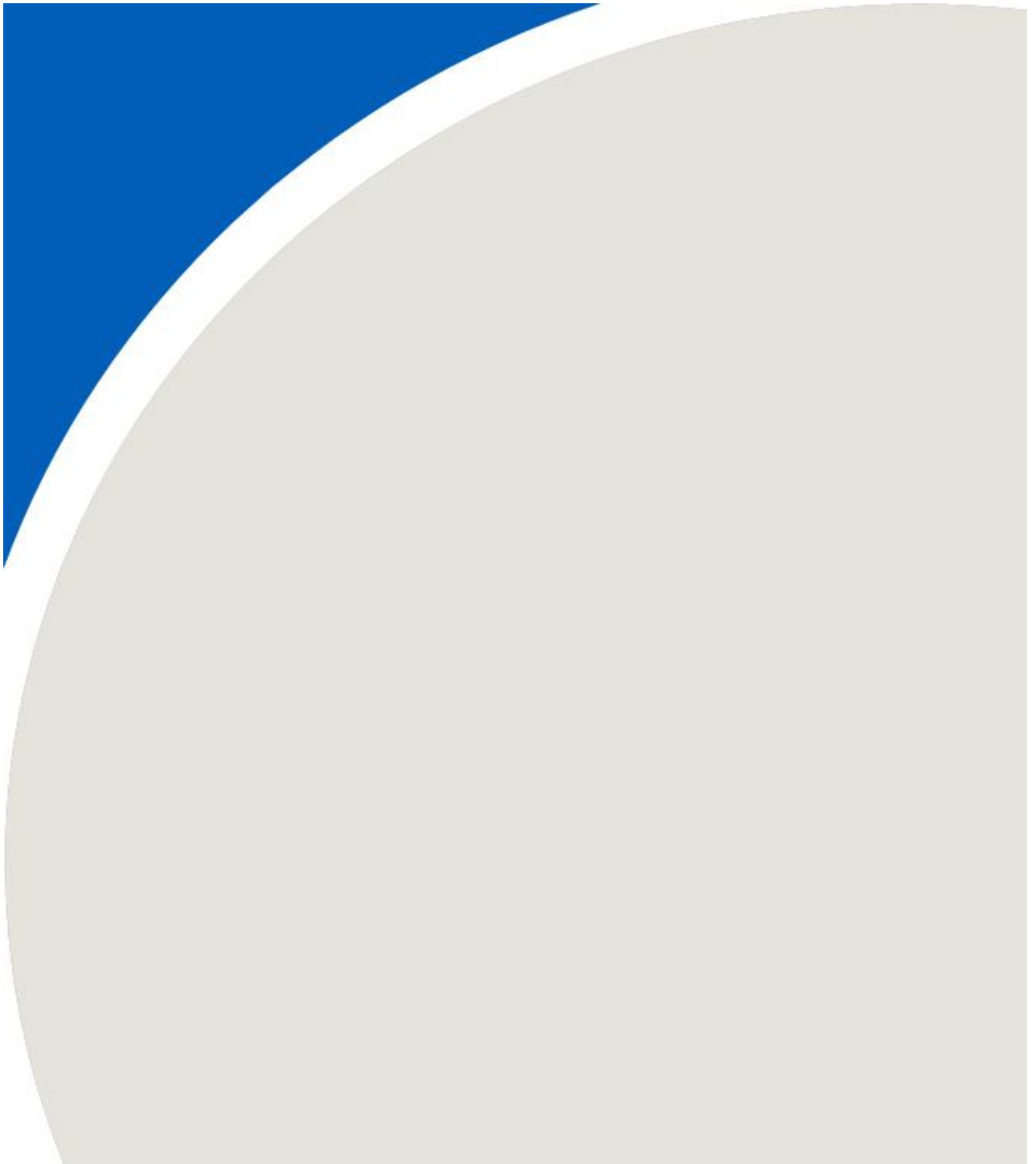
ID	Description	Base Elevation	Release Height	Stack Exit Temp.	Stack Exit Flow Rate	Stack Exit Velocity	Stack Exit Diameter	Comments
		(masl)	(m)	(K)	(m <sup>3</sup> /s)	(m/s)	(m)	
KILN1	Carmeuse Kiln 1	273.97	30.5	584.15		14.93255	2.50	
KILN3	Carmeuse Kiln 3 - Consolidated Stack	274.56	36.6	564.25		10.8466	2.13	
FLARE1	Landfill flare 1- modelled as flaring all LFG	290	15.2	1148.15		4.02759	4.20	
QDC1	Center Plant - Primary Crusher	269.1	9.8	0		3.01	1.41	
CDC1	Center Plant - Secondary Crusher	269.88	20.4	0		6.91596	1.41	
CDC2	Center Plant - Bin Building D/C	270.94	19.8	0		7.55633	1.41	
PDC5	Center Plant - Pulveriser B Bin DC	271.37	5.7	0		27.25364	1.10	
LDC13	Center Plant - Kiln #3 Nuisance DC	275.2	21.3	0		36.11191	0.34	
LDC4	Center Plant - Lime Bins DC	274.1	22.3	0		19.45039	0.47	
LDC10	Center Plant - #1 Kiln Nuisance DC	273.23	8.6	0		13.92921	0.63	
LDC17	Center Plant - Lime Loadout	272.99	11.1	0		97.26135	0.36	
LDC21	Center Plant - Lime Bins DC (RDC-302 from East Plant relocated)	273.16	23.8	0		26.41548	0.80	
LDC22	Center Plant - Lime Bins DC (RDC-202 from East Plant relocated)	273.03	33.8	0		38.72916	0.66	
LDC9	Center Plant Lime Bins DC	274.3	26.5	0		47.40473	0.30	
PDC1	Center Plant - Pulverizer plant dryer baghouse	271.63	23.3	0		22.24149	1.22	
LDC35	Center Plant Cal 85	273.6	13.7	0		19.84998	0.46	
FDC1	Flyash Dust Collector	273.63	7.3	0		10.65177	0.84	

**Model Parameters for Area Sources**

ID	Description	Base Elevation	Release Height	Source Length	Source Width	Angle	Initial Vertical Dimension	Comments
		(masl)	(m)	(m)	(m)	(degrees)		
S1_WSOIL	Stage 1 - waste soil storage pile	285	7.5	70	30	-21.177	3.49	
S1_DAILY	Stage 1 disturbed area	285	0	100	166	158.86	1.00	



## APPENDIX G







**ALS Environmental**

Waterloo, Ontario

**PARTICLE SIZE DISTRIBUTION CURVE**

Client Name: RWDI AIR INC. (Guelph)

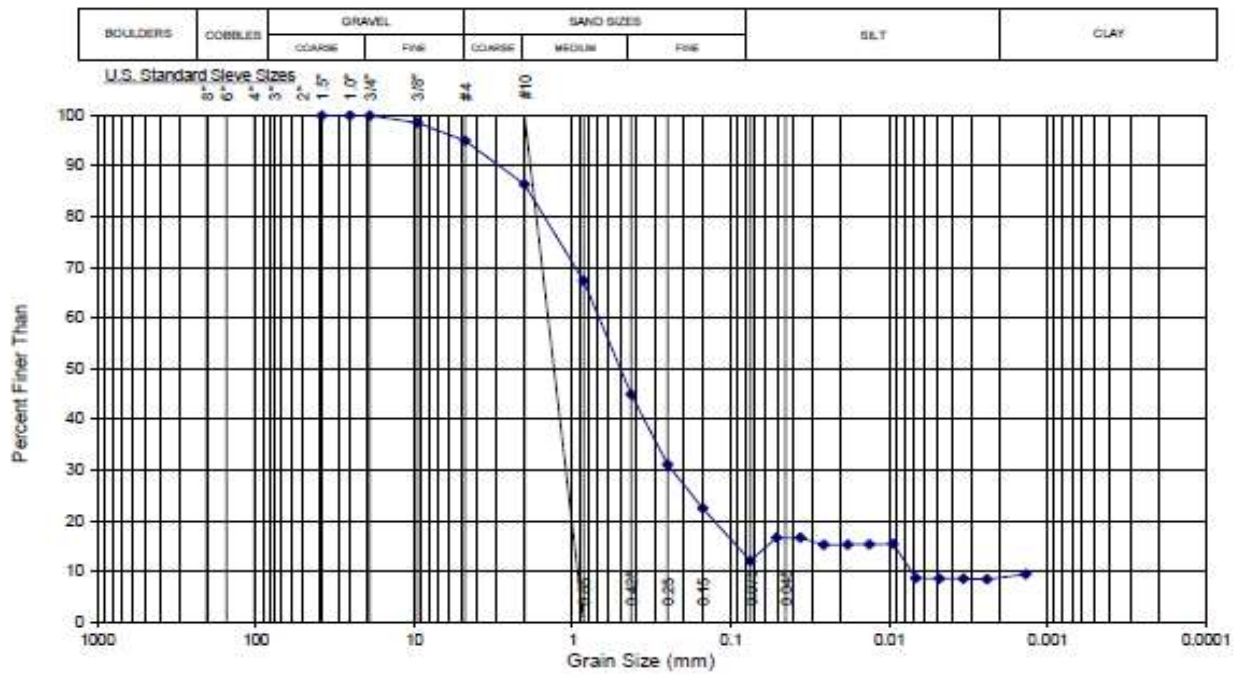
Client Sample ID: PAVED 1

Lab Sample ID: L2321351-1

Date Sample Received: 1-Aug-19

Test Completion Date: 13-Sep-19

Analyst: CMS



Particle Size	% Passing	Particle Size	% Passing	Particle Size	% Passing
38.1	100.00	0.2500	31.11	0.00937	15.46
25.4	100.00	0.1500	22.47	0.00676	8.70
19	100.00	0.0750	12.10	0.00479	8.58
9.5	98.57	0.0512	16.66	0.00338	8.58
4.75	95.00	0.0362	16.66	0.00240	8.45
2	86.43	0.0257	15.27	0.00137	9.46
0.85	67.41	0.0182	15.31		
0.425	44.94	0.0133	15.36		

**METHOD DESCRIPTION**

Method Reference: ASTM D422-63(2007)

Soil classification system used: ASTM D422-83 Classification

Dispersion method: Mechanical

Dispersion period: 1 minute

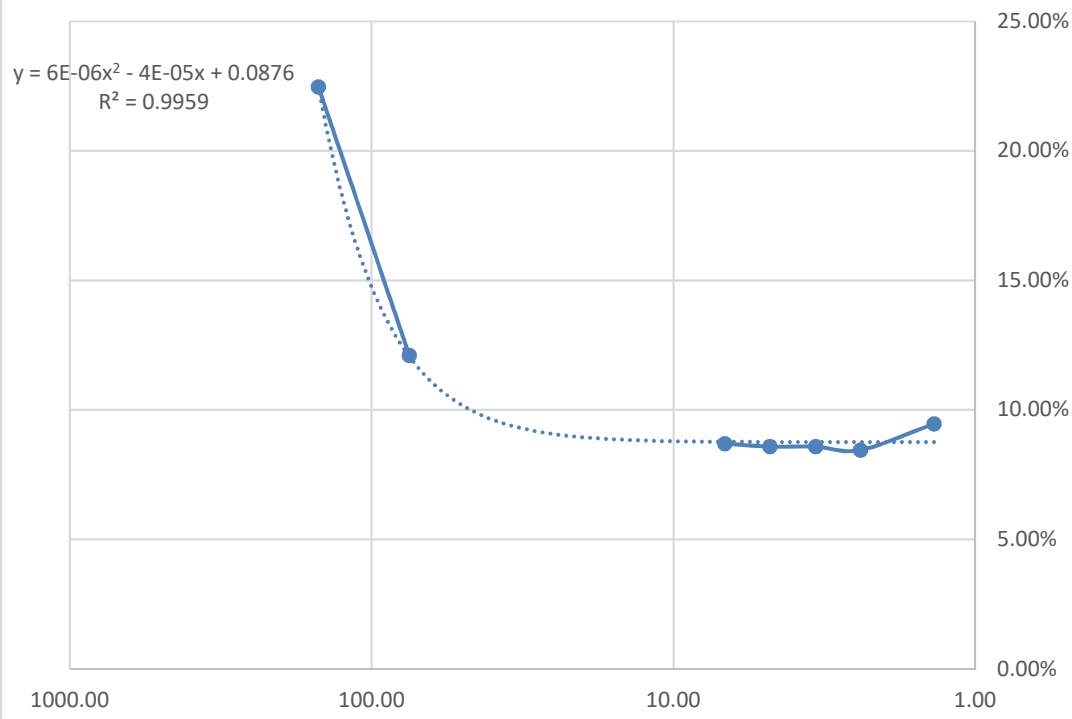
Hydrometer Type: 151H

Coarse Grained Hazen Estimated K (cm/s): 1.0E-06  
 Coarse: > 50% particles > 0.075mm % Pass/Susp: 9.46  
 Fine: < 50% particles > 0.075mm

**SUMMARY OF RESULTS**

GRAIN SIZE	WT %	DIA. RANGE (mm)
% GRAVEL :	5.00	> 4.75
% COARSE SAND :	8.57	4.75 - 2.0
% MEDIUM SAND :	41.49	2.0 - 0.425
% FINE SAND :	32.84	0.425 - 0.075
% SILT :	3.51	0.075 - 0.005
% CLAY :	8.59	< 0.005
% CLAY:	6.76	< 0.002

From Particle Size Distribution Curve for PAVED1 Sample













**Appendix G: Walker Southwest Landfill - Particle Size Data from Sampling at Carmeuse**

**Average Size Fractions used for Paved Roads**

**Calculating Size Fractions - PM44**

Midpoints			
Paved1	Paved2		Average
0.7	0.7		0.7
3.2	3.2		3.2
7.5	7.5		7.5
15.0	15.0		15.0
25.0	25.0		25.0
35.0	35.0		35.0
42.0	42.0		42.0
0.0	0.0		0.0

**Calculating Size Fractions - PM44**

Size Fractions			
Paved1	Paved2		Average
0.88	0.97		0.93
0.00	0.00		0.00
0.00	0.00		0.00
0.02	0.00		0.01
0.03	0.01		0.02
0.04	0.01		0.03
0.02	0.00		0.01
0.00	0.00		0.00
			1.00

**Calculating Size Fractions - PM10**

Midpoints			
Paved1	Paved2		Average
0.7	0.7		0.7
3.2	3.2		3.2
7.5	7.5		7.5

**Calculating Size Fractions - PM10**

Size Fractions			
Paved1	Paved2		Average
0.99	1.00		1.00
0.00	0.00		0.00
0.01	0.00		0.00
0.00	0.00		0.00
0.00	0.00		0.00
0.00	0.00		0.00
			1.00

**Calculating Size Fractions - PM2.5**

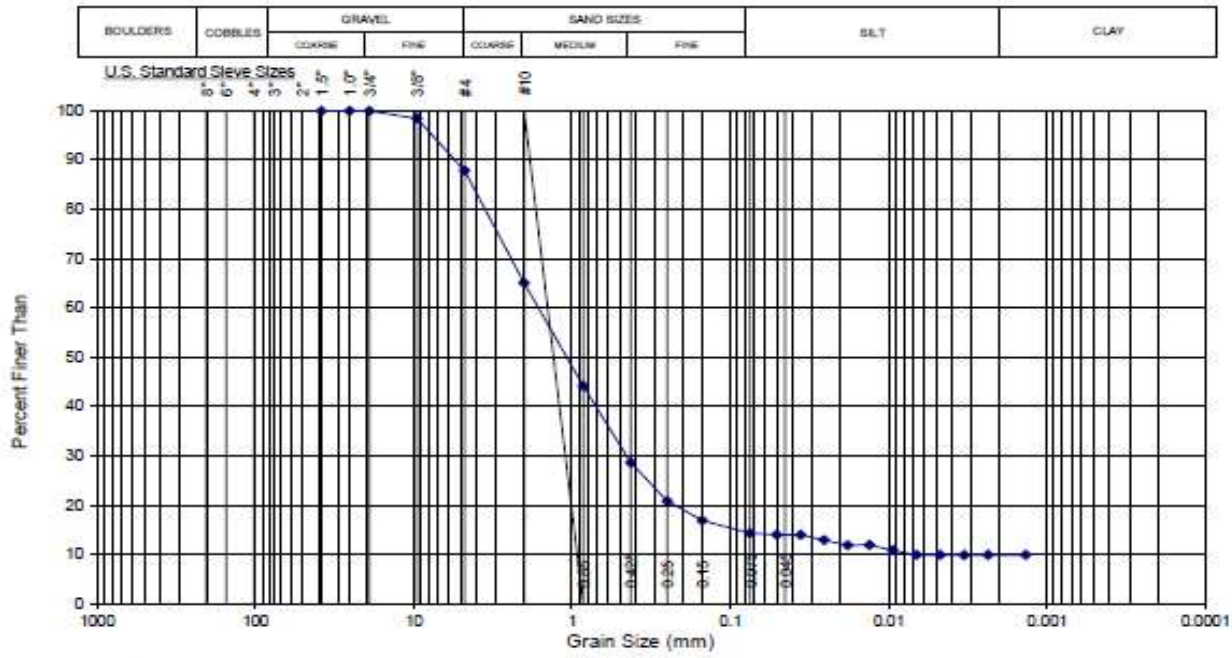
Midpoints			
Paved1	Paved2		Average
0.7	0.685		0.7
0.0	0		0.0

**Calculating Size Fractions - PM2.5**

Size Fractions			
Paved1	Paved2		Average
1.00	1.00		1.00
0.00	0.00		0.00
			1.00







Particle Size	% Passing	Particle Size	% Passing	Particle Size	% Passing
38.1	100.00	0.2500	20.83	0.00937	10.88
25.4	100.00	0.1500	16.93	0.00665	9.88
19	100.00	0.0750	14.32	0.00470	9.88
9.5	98.43	0.0507	13.97	0.00332	9.88
4.75	87.84	0.0358	13.97	0.00235	9.88
2	65.10	0.0254	12.92	0.00136	9.88
0.85	44.27	0.0181	11.89		
0.425	28.64	0.0132	11.90		

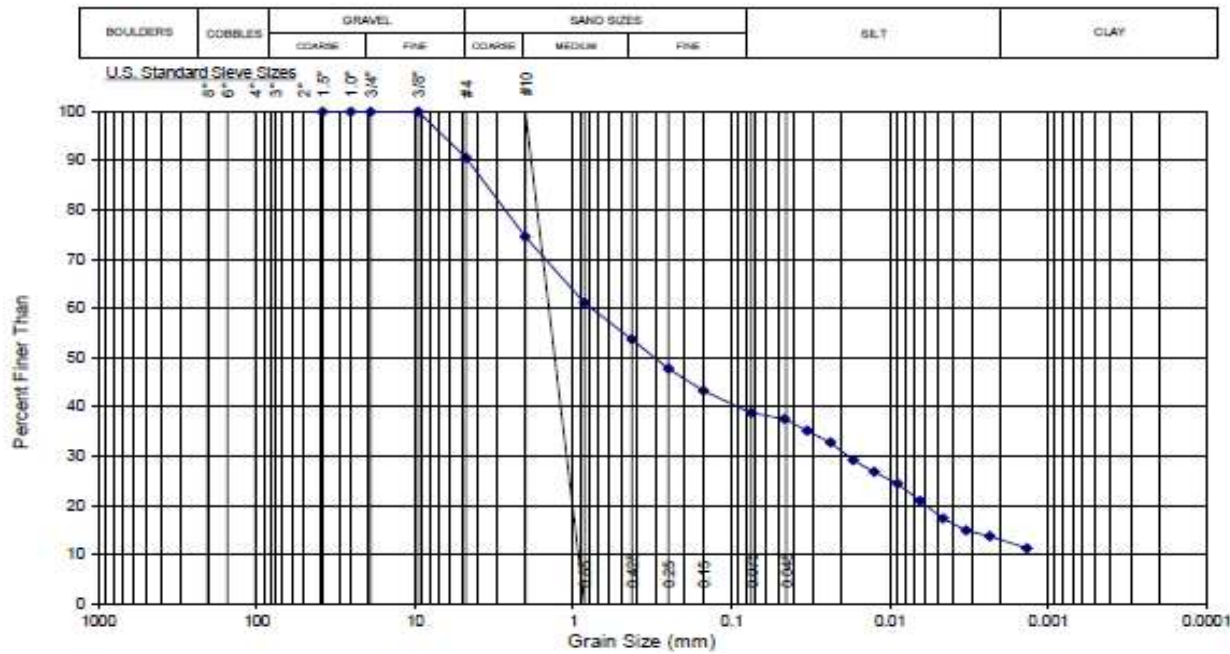
**METHOD DESCRIPTION**

Method Reference: ASTM D422-63(2007)  
 Soil classification system used: ASTM D422-63 Classification  
 Dispersion method: Mechanical  
 Dispersion period: 1 minute  
 Hydrometer Type: 151H  
 Coarse Grained Hazen Estimated K (cm/s): 4.8E-05  
 coarse: > 50% particles > 0.075mm % Pass/Susp: 9.88  
 Fine: < 50% particles > 0.075mm

**SUMMARY OF RESULTS**

GRAIN SIZE	WT %	DIA. RANGE (mm)
% GRAVEL :	12.16	> 4.75
% COARSE SAND :	22.75	4.75 - 2.0
% MEDIUM SAND :	36.45	2.0 - 0.425
% FINE SAND :	14.32	0.425 - 0.075
% SILT :	4.44	0.075 - 0.005
% CLAY :	9.88	< 0.005
% CLAY :	9.88	< 0.002





Particle Size	% Passing	Particle Size	% Passing	Particle Size	% Passing
38.1	100.00	0.2500	47.75	0.00894	24.45
25.4	100.00	0.1500	43.27	0.00641	20.91
19	100.00	0.0750	38.80	0.00460	17.32
9.5	100.00	0.0463	37.58	0.00328	14.92
4.75	90.67	0.0331	35.18	0.00233	13.72
2	74.61	0.0237	32.79	0.00136	11.33
0.85	61.18	0.0170	29.21		
0.425	53.72	0.0125	26.82		

**METHOD DESCRIPTION**

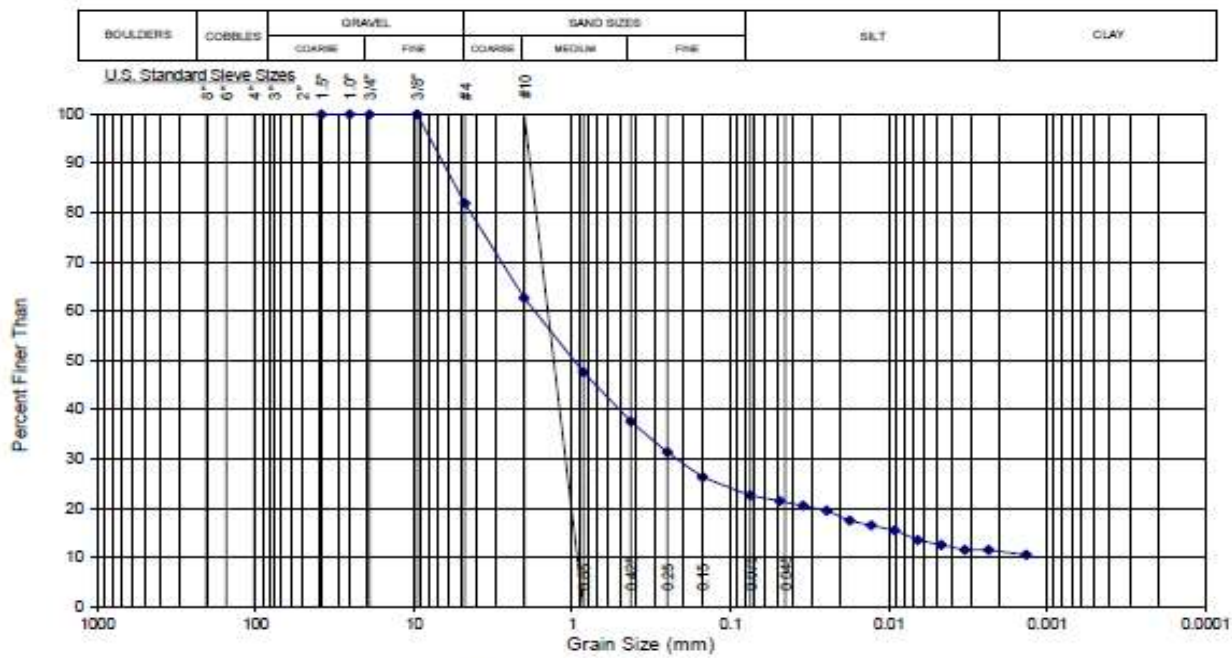
Method Reference: ASTM D422-63(2007)  
 Soil classification system used: ASTM D422-63 Classification  
 Dispersion method: Mechanical  
 Dispersion period: 1 minute  
 Hydrometer Type: 151H  
 Coarse Grained Hazen Estimated K (cm/s): 1.0E-06  
 Coarse: > 50% particles > 0.075mm % Pass/Susp: 11.33  
 Fine: < 50% particles > 0.075mm

**SUMMARY OF RESULTS**

GRAIN SIZE	WT %	DIA. RANGE (mm)
% GRAVEL :	9.33	> 4.75
% COARSE SAND :	16.06	4.75 - 2.0
% MEDIUM SAND :	20.89	2.0 - 0.425
% FINE SAND :	14.92	0.425 - 0.075
% SILT :	20.57	0.075 - 0.005
% CLAY :	18.23	< 0.005
% CLAY :	13.05	< 0.002







Particle Size	% Passing	Particle Size	% Passing	Particle Size	% Passing
38.1	100.00	0.2500	31.36	0.00916	15.52
25.4	100.00	0.1500	26.34	0.00653	13.55
19	100.00	0.0750	22.58	0.00464	12.54
9.5	100.00	0.0488	21.51	0.00329	11.53
4.75	81.92	0.0347	20.51	0.00233	11.53
2	62.71	0.0246	19.50	0.00135	10.53
0.85	47.66	0.0176	17.50		
0.425	37.63	0.0129	16.50		

METHOD DESCRIPTION		SUMMARY OF RESULTS		
Method Reference: ASTM D422-63(2007)		GRAIN SIZE		
Soil classification system used: ASTM D422-63 Classification		% GRAVEL :	16.08	> 4.75
Dispersion method: Mechanical		% COARSE SAND :	19.21	4.75 - 2.0
Dispersion period: 1 minute		% MEDIUM SAND :	25.08	2.0 - 0.425
Hydrometer Type: 151H		% FINE SAND :	15.05	0.425 - 0.075
Coarse Grained		% SILT :	9.61	0.075 - 0.005
Hazen Estimated K (cm/s): 1.0E-08		% CLAY :	12.76	< 0.005
coarse: > 50% particles > 0.075mm		% CLAY:	11.25	< 0.002
% Pass/Susp: 10.53				
Fine: < 50% particles > 0.075mm				







**Appendix G: Walker Southwest Landfill - Particle Size Data from Sampling at Carmeuse**

**Average Size Fractions used for Unpaved Roads**

**Calculating Size Fractions - PM100**

Midpoints				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
0.7	0.68	0.675	0.675	0.6775
1.9	1.85	1.84	1.84	1.85
2.8	2.81	2.81	2.81	2.82
4.0	3.94	3.97	3.97	3.97
5.7	5.51	5.59	5.59	5.59
8.0	7.68	7.85	7.85	7.84
11.3	10.72	11.03	11.03	11.02
15.7	14.75	15.25	15.25	15.23
21.8	20.35	21.10	21.10	21.08
30.6	28.40	29.65	29.65	29.58
43.3	39.70	41.75	41.75	41.61
62.9	60.65	61.90	61.90	61.83
112.5	112.50	112.50	112.50	112.50

**Calculating Size Fractions - PM100**

Size Fractions				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
0.58	0.26	0.40	0.38	0.41
0.00	0.06	0.04	0.00	0.02
0.00	0.03	0.00	0.00	0.01
0.00	0.06	0.04	0.00	0.02
0.00	0.08	0.04	0.00	0.03
0.06	0.08	0.07	0.08	0.07
0.06	0.05	0.04	0.08	0.06
0.00	0.06	0.04	0.12	0.05
0.06	0.08	0.08	0.08	0.07
0.06	0.06	0.04	0.08	0.06
0.00	0.06	0.04	0.08	0.04
0.02	0.03	0.04	0.00	0.02
0.15	0.10	0.14	0.10	0.13
				1.00

**Calculating Size Fractions - PM44**

Midpoints				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
0.7	0.7	0.7	0.7	0.7
1.9	1.8	1.8	1.8	1.8
2.835	2.805	2.810	2.810	2.8
4.010	3.940	3.965	3.965	4.0
5.7	5.5	5.585	5.585	5.6
8.0	7.7	7.845	7.845	7.8
11.3	10.7	11.030	11.030	11.0
15.7	14.8	15.250	15.250	15.2
21.8	20.4	21.100	21.100	21.1
30.6	28.4	29.650	29.650	29.6
43.3	39.7	41.750	41.750	41.6

**Calculating Size Fractions - PM44**

Size Fractions				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
0.71	0.30	0.49	0.42	0.48
0.00	0.06	0.05	0.00	0.03
0.00	0.03	0.00	0.00	0.01
0.00	0.06	0.05	0.00	0.03
0.00	0.10	0.05	0.00	0.04
0.07	0.09	0.09	0.09	0.09
0.07	0.06	0.05	0.09	0.07
0.00	0.06	0.05	0.13	0.06
0.07	0.10	0.09	0.09	0.09
0.08	0.06	0.05	0.09	0.07
0.00	0.06	0.05	0.09	0.05
				1.00

**Calculating Size Fractions - PM10**

Midpoints				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
0.7	0.7	0.7	0.7	0.7
1.9	1.8	1.8	1.8	1.8
2.8	2.8	2.8	2.8	2.8
4.0	3.9	4.0	4.0	4.0
5.7	5.5	5.6	5.6	5.6
8.0	7.7	7.8	7.8	7.8

**Calculating Size Fractions - PM10**

Size Fractions				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
0.91	0.46	0.68	0.83	0.72
0.00	0.10	0.06	0.00	0.04
0.00	0.05	0.00	0.00	0.01
0.00	0.10	0.07	0.00	0.04
0.00	0.15	0.07	0.00	0.05
0.09	0.14	0.13	0.17	0.13
				1.00

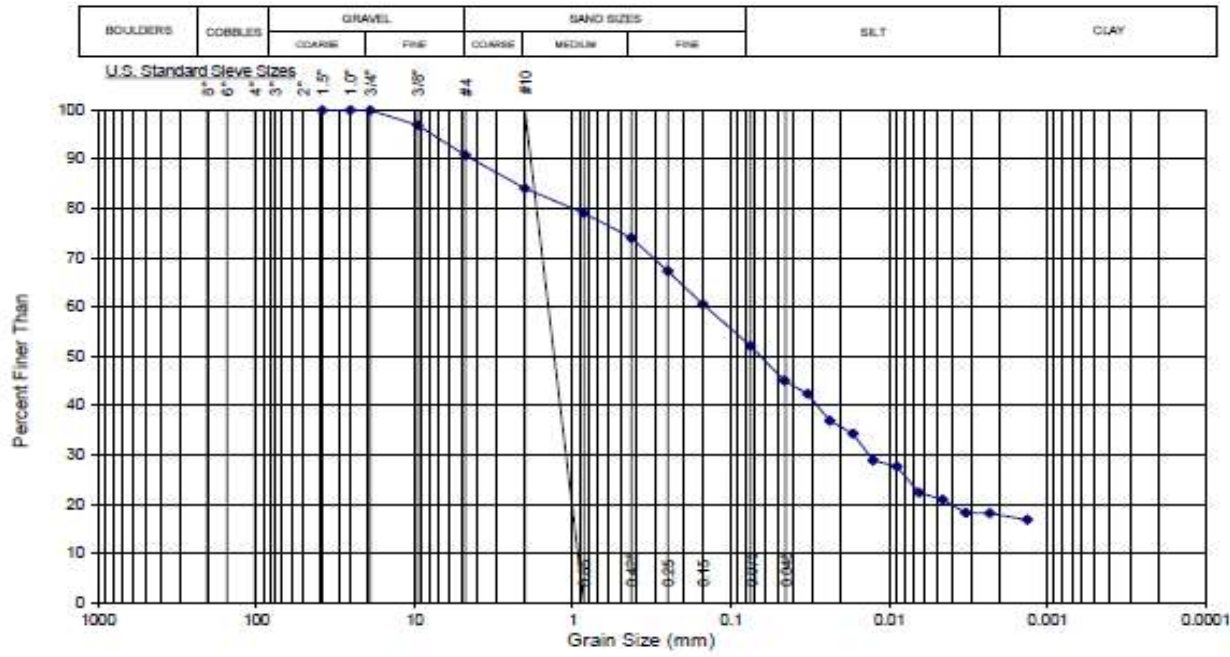
**Calculating Size Fractions - PM2.5**

Midpoints				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
0.7	0.7	0.7	0.7	0.7
1.9	1.8	1.8	1.8	1.8

**Calculating Size Fractions - PM2.5**

Size Fractions				
Unpaved1	Unpaved2	Unpaved3	Unpaved4	Average
1.00	0.83	0.91	1.00	0.93
0.00	0.17	0.09	0.00	0.07
				1.00





Particle Size	% Passing	Particle Size	% Passing	Particle Size	% Passing
38.1	100.00	0.2500	67.32	0.00894	27.64
25.4	100.00	0.1500	60.60	0.00643	22.35
19	100.00	0.0750	52.17	0.00457	20.94
9.5	96.95	0.0458	45.09	0.00326	18.24
4.75	90.85	0.0328	42.38	0.00231	18.18
2	84.15	0.0237	36.98	0.00134	16.83
0.85	79.10	0.0169	34.30		
0.425	74.05	0.0126	28.93		

**METHOD DESCRIPTION**

Method Reference: ASTM D422-63(2007)  
 Soil classification system used: ASTM D422-63 Classification  
 Dispersion method: Mechanical  
 Dispersion period: 1 minute  
 Hydrometer Type: 151H  
 Fine Grained  
 Hazen Estimated K (cm/s): 7.3E-09  
 coarse: > 50% particles > 0.075mm % Pass/Susp: 16.83  
 Fine: < 50% particles > 0.075mm

**SUMMARY OF RESULTS**

GRAIN SIZE	WT %	DIA. RANGE (mm)
% GRAVEL :	9.15	> 4.75
% COARSE SAND :	6.71	4.75 - 2.0
% MEDIUM SAND :	10.10	2.0 - 0.425
% FINE SAND :	21.88	0.425 - 0.075
% SILT :	30.86	0.075 - 0.005
% CLAY :	21.31	< 0.005
% CLAY:	17.82	< 0.002







**ALS Environmental**

Waterloo, Ontario

**PARTICLE SIZE DISTRIBUTION CURVE**

Client Name: RWDI AIR INC. (Guelph)

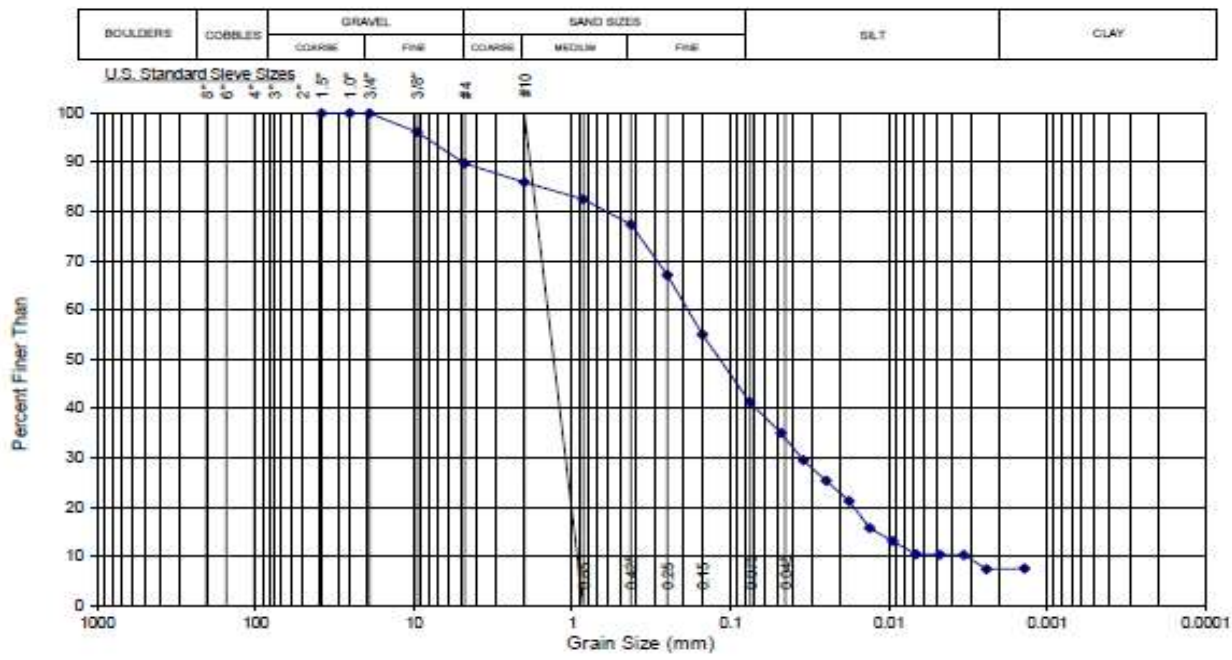
Client Sample ID: SOIL 2

Lab Sample ID: L2321351-8

Date Sample Received: 1-Aug-19

Test Completion Date: 19-Aug-19

Analyst: CMS



Particle Size	% Passing	Particle Size	% Passing	Particle Size	% Passing
38.1	100.00	0.2500	87.07	0.00940	13.05
25.4	100.00	0.1500	55.03	0.00670	10.42
19	100.00	0.0750	41.27	0.00474	10.29
9.5	96.18	0.0478	35.02	0.00335	10.29
4.75	89.81	0.0345	29.50	0.00240	7.40
2	85.99	0.0247	25.36	0.00138	7.53
0.85	82.55	0.0177	21.24		
0.425	77.39	0.0132	15.75		

**METHOD DESCRIPTION**

Method Reference: ASTM D422-63(2007)

Soil classification system used: ASTM D422-63 Classification

Dispersion method: Mechanical

Dispersion period: 1 minute

Hydrometer Type: 151H

Coarse Grained Hazen Estimated K (cm/s): 4.5E-06

coarse: > 50% particles > 0.075mm % Pass/Susp: 10.29

Fine: < 50% particles > 0.075mm

**SUMMARY OF RESULTS**

GRAIN SIZE	WT %	DIA. RANGE (mm)
% GRAVEL :	10.19	> 4.75
% COARSE SAND :	3.62	4.75 - 2.0
% MEDIUM SAND :	8.60	2.0 - 0.425
% FINE SAND :	36.11	0.425 - 0.075
% SILT :	30.96	0.075 - 0.005
% CLAY :	10.31	< 0.005
% CLAY:	7.44	< 0.002

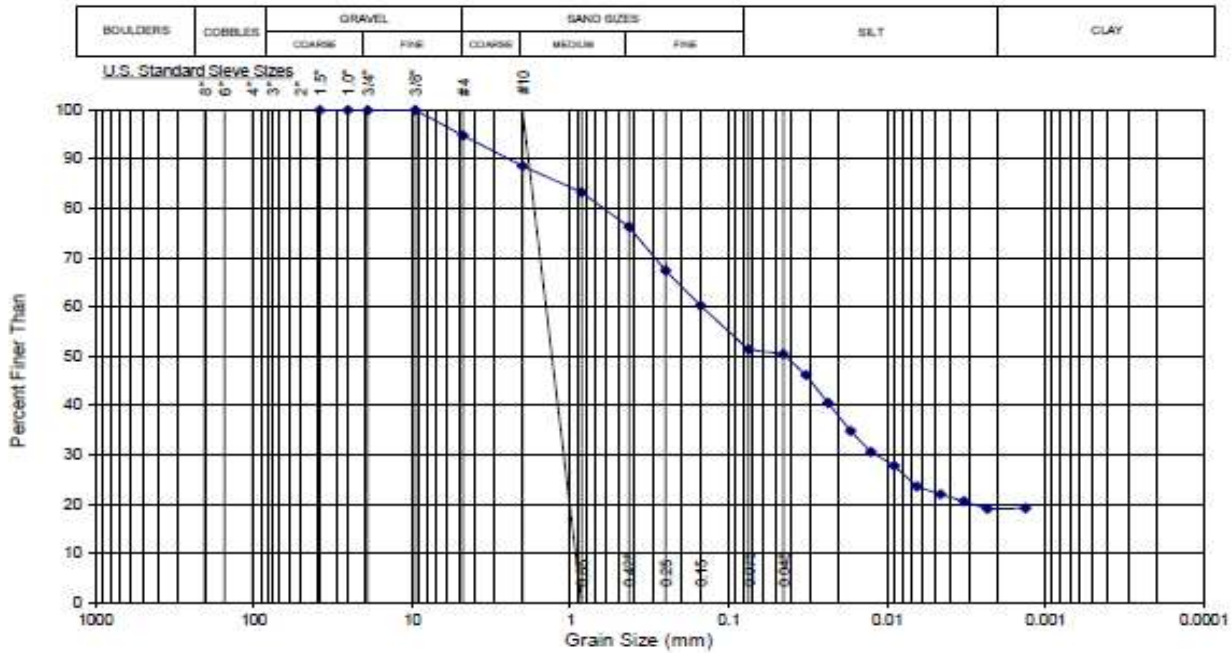




**ALS Environmental**  
Waterloo, Ontario

**PARTICLE SIZE DISTRIBUTION CURVE**

Client Name: RWDI AIR INC. (Guelph)  
Client Sample ID: SOIL 3  
Lab Sample ID: L2321351-9  
Date Sample Received: 1-Aug-19  
Test Completion Date: 19-Aug-19  
Analyst: CMS



Particle Size	% Passing	Particle Size	% Passing	Particle Size	% Passing
38.1	100.00	0.2500	67.38	0.00897	27.76
25.4	100.00	0.1500	60.29	0.00643	23.55
19	100.00	0.0750	51.42	0.00458	22.00
9.5	100.00	0.0452	50.48	0.00325	20.58
4.75	94.85	0.0325	46.21	0.00231	19.02
2	88.66	0.0235	40.51	0.00133	19.15
0.85	83.34	0.0170	34.83		
0.425	76.25	0.0126	30.58		

**METHOD DESCRIPTION**

Method Reference: ASTM D422-63(2007)

Soil classification system used: ASTM D422-83 Classification

Dispersion method: Mechanical

Dispersion period: 1 minute

Hydrometer Type: 151H

Fine Grained Hazen Estimated K (cm/s): 1.0E-07  
coarse: > 50% particles > 0.075mm % Pass/Susp: 19.02  
Fine: < 50% particles > 0.075mm

**SUMMARY OF RESULTS**

GRAIN SIZE WT % DIA. RANGE (mm)

% GRAVEL :	5.15	> 4.75
% COARSE SAND :	6.19	4.75 - 2.0
% MEDIUM SAND :	12.41	2.0 - 0.425
% FINE SAND :	24.82	0.425 - 0.075
% SILT :	29.02	0.075 - 0.005
% CLAY :	22.41	< 0.005
% CLAY:	19.06	< 0.002

## Appendix G: Walker Southwest Landfill - Particle Size Data from Sampling at Carmeuse

### Average Size Fractions used for Soil

#### Calculating Size Fractions - PM100

Midpoints			
Soil1	Soil2	Soil3	Average
0.7	0.69	0.665	0.676666667
1.8	1.89	1.82	1.85
2.8	2.875	2.78	2.82
4.0	4.045	3.915	3.98
5.6	5.72	5.505	5.60
7.8	8.05	7.7	7.87
11.0	11.3	10.785	11.04
15.3	15.45	14.8	15.17
21.1	21.2	20.25	20.85
29.7	29.6	28	29.08
41.8	41.15	38.85	40.58
61.9	61.4	60.1	61.13
112.5	112.5	112.5	112.50

#### Calculating Size Fractions - PM100

Size Fractions			
Soil1	Soil2	Soil3	Average
0.28	0.14	0.32	0.24
0.02	0.00	0.00	0.01
0.00	0.05	0.03	0.03
0.04	0.00	0.02	0.02
0.02	0.00	0.03	0.02
0.09	0.05	0.07	0.07
0.02	0.05	0.05	0.04
0.09	0.10	0.07	0.09
0.04	0.07	0.09	0.07
0.09	0.08	0.09	0.09
0.04	0.10	0.07	0.07
0.12	0.11	0.02	0.08
0.14	0.25	0.15	0.18
			1.00

#### Calculating Size Fractions - PM44

Midpoints			
Soil1	Soil2	Soil3	Average
0.7	0.69	0.665	0.7
1.8	1.89	1.82	1.9
2.8	2.875	2.78	2.8
4.0	4.045	3.915	4.0
5.6	5.72	5.505	5.6
7.8	8.05	7.7	7.9
11.0	11.3	10.785	11.0
15.3	15.45	14.8	15.2
21.1	21.2	20.25	20.9
29.7	29.6	28	29.1
41.8	41.15	38.85	40.6

#### Calculating Size Fractions - PM44

Size Fractions			
Soil1	Soil2	Soil3	Average
0.37	0.21	0.38	0.32
0.03	0.00	0.00	0.01
0.00	0.08	0.03	0.04
0.06	0.00	0.03	0.03
0.03	0.00	0.03	0.02
0.12	0.07	0.08	0.09
0.03	0.08	0.06	0.05
0.12	0.16	0.08	0.12
0.06	0.12	0.11	0.10
0.12	0.12	0.11	0.12
0.06	0.16	0.08	0.10
			1.00

#### Calculating Size Fractions - PM10

Midpoints			
Soil1	Soil2	Soil3	Average
0.7	0.69	0.665	0.7
1.8	1.89	1.82	1.9
2.8	2.875	2.78	2.8
4.0	4.045	3.915	4.0
5.6	5.72	5.505	5.6
7.8	8.05	7.7	7.9

#### Calculating Size Fractions - PM10

Size Fractions			
Soil1	Soil2	Soil3	Average
0.61	0.57	0.69	0.62
0.05	0.00	0.00	0.02
0.00	0.22	0.06	0.09
0.10	0.00	0.05	0.05
0.05	0.01	0.06	0.04
0.19	0.20	0.15	0.18
			1.00

#### Calculating Size Fractions - PM2.5

Midpoints			
Soil1	Soil2	Soil3	Average
0.7	0.69	0.665	0.7
1.8	1.89	1.82	1.9

#### Calculating Size Fractions - PM2.5

Size Fractions			
Soil1	Soil2	Soil3	Average
0.93	1.00	1.00	0.98
0.07	0.00	0.00	0.02
			1.00



# 1 Non-Site-Specific Deposition Parameters

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## 1.1.1 Stone Quarrying & Processing

The primary source of particle size distribution data used by RWDI is the background information for the U.S. EPA's AP-42 Chapter 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing<sup>1</sup>. Figure 1 is taken from the background document for Chapter 11.19.2 and provides the particle size distribution for sources specific to stone quarrying and processing operations, including tertiary crushing, screening, fines screening and conveyor transfer points. The actual values are provided in Tables 1 to 3.

Chapter 11.19.2 does not provide emission factors or particle size distribution for primary and secondary crushing. RWDI uses the emission factor and particle size distribution for tertiary crushing to estimate emissions from primary and secondary crushers. This is considered to be a conservative approach, as the material processed by primary and secondary crushers is larger than in tertiary crushers, resulting in less generation of fine dust particles.

It should be noted that the particle size distributions provided in Chapter 11.19.2 extend to particulate matter with an aerodynamic diameter up to 100µm, while the Ontario MOE standard for suspended particulate matter is based on PM44 (particulate matter with an aerodynamic diameter less than 44µm). This discrepancy is not significant however, as typically over 90% of the particulate emitted from these operations is less than 44µm.

Table 1 Particle Size Distribution for Tertiary Crushing Equipment

Crushers	Diameter (µm)	2.5	5	10	20	30	40	50	60	70	80	90	100
	Mass Fraction	0.08	0.12	0.29	0.26	0.1	0.07	0.03	0.02	0.015	0.005	0.005	0.005

Table 2 Particle Size Distribution for Screening Equipment

Screens	Diameter (µm)	2.5	5	10	20	30	40	50	60	70	80	90	100
	Mass Fraction	0.03	0.09	0.2	0.35	0.14	0.07	0.05	0.03	0.02	0.01	0.005	0.005

Table 3 Particle Size Distribution for Conveyor Transfer Points

Conveyor Transfers	Diameter (µm)	1.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	15	25	35	45	55	65	75	90
	Mass Fraction	0.14	0.08	0.06	0.07	0.07	0.05	0.04	0.04	0.04	0.23	0.09	0.05	0.03	0.02	0.01	0.005

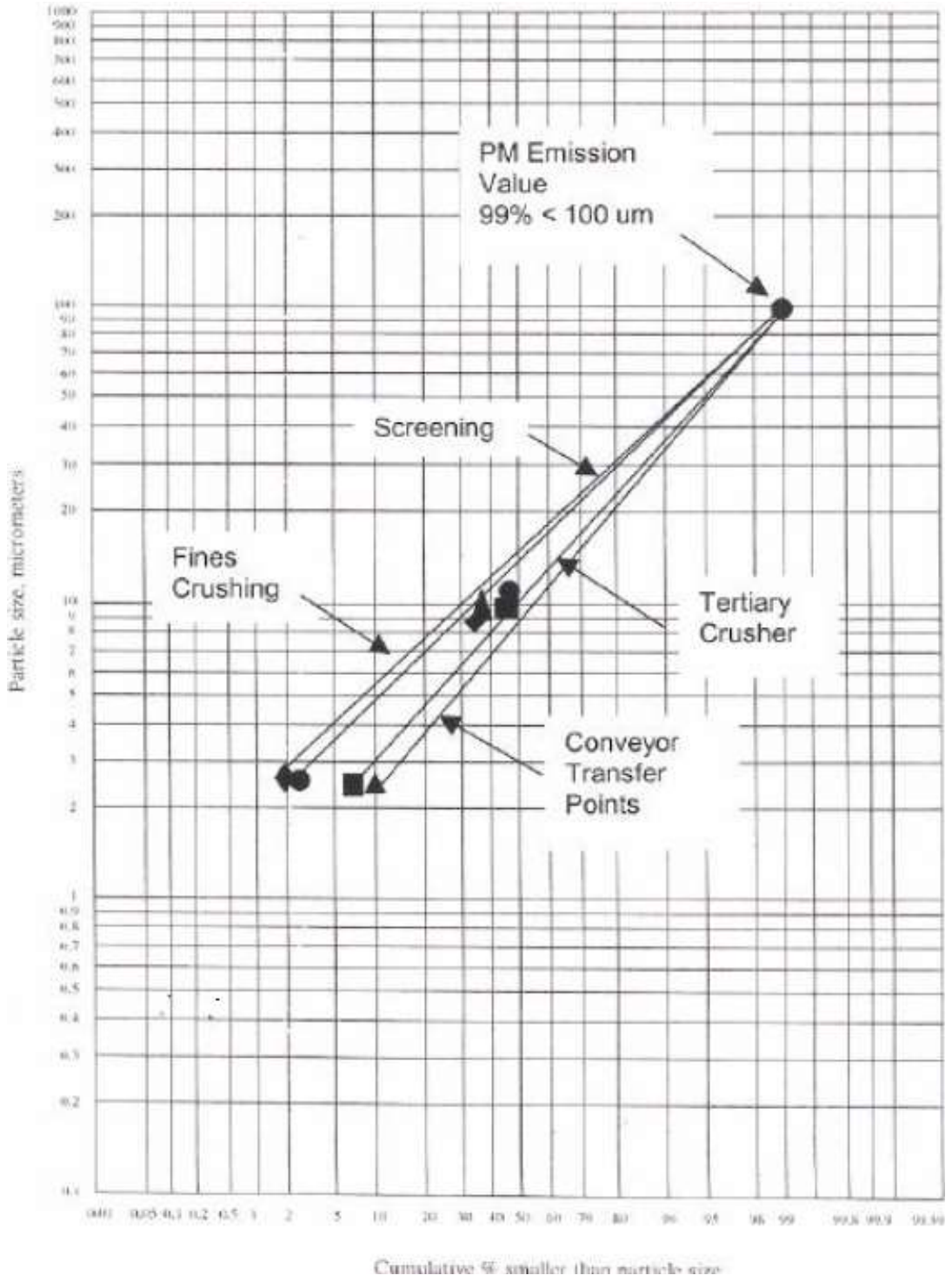


Figure 1 Particle Size Distribution for Stone Quarrying & Processing (AP-42, Chapter 11.19.2)

## 1.2 Aggregate Handling - Carmeuse

The primary source of particle size distribution data for aggregate handling is the Final Section for the U.S. EPA's AP-42 Chapter 13.2.4, Aggregate Handling and Storage Piles.<sup>2</sup> This chapter covers sources specific to bulk handling operations and provides particle size distributions for loader drops and truck

dumping. Although no specific curves are available, as with Chapter 11.19.2, the “k” factor associated with the emission factor for various particle diameters can be used as a reasonable approximation. Chapter 13.2.4 provides “k” factors for PM<sub>2.5</sub>, PM<sub>5</sub>, PM<sub>10</sub>, PM<sub>15</sub> and PM<sub>30</sub>, which were used to obtain the particle size distribution given below in Table 4.

These particle size distributions were used for Carmeuse aggregate material handling sources.

**Table 4 Particle Size Distribution for Drop Operations**

Drop Operations	Diameter (µm)	1.25	3.75	7.5	12.5	22.5
	Mass Fraction	0.07	0.20	0.20	0.18	0.35

### 1.3 Blasting

The primary sources of particle size distribution data for blasting operations are the Final Sections for the U.S. EPA’s AP-42 Chapter 11.9, Western Surface Coal Mining.<sup>3</sup> Although these factors are not specific to quarry operations, at this time, they represent the best available data.

No specific curves are available, therefore emission factors for PM<sub>2.5</sub>, PM<sub>10</sub> and PM<sub>30</sub> are provided, which can be used to develop a reasonable approximation for the particle distribution. Table 5 provides particle size distributions listed in Table 11.9. The particle diameter is based on the mid-point for each size bin (e.g., 1.25µm for particles in the PM<sub>2.5</sub> range and smaller, 6.25µm for particles between the PM<sub>2.5</sub> and PM<sub>10</sub> ranges, and 20µm for particles between PM<sub>10</sub> and PM<sub>30</sub>). As a simplification, the values in Table 11.12-3 and 11.12-4 were not used.

**Table 5 Particle Size Distribution for Blasting Operations**

Blasting	Diameter (µm)	1.25	6.25	20
	Mass Fraction	0.03	0.49	0.48

### 1.4 Combustion Sources

The particulate released from combustion sources is relatively small. Therefore, the particle size range for combustion sources was assumed to be less than 2.5 µm for all particulate released.

**Table 6 Particle Size Distribution for Combustion Sources**

Blasting	Diameter (µm)	1.25
	Mass Fraction	1

### 1.5 Deposition Parameters for PM<sub>10</sub> and PM<sub>2.5</sub> Modelling

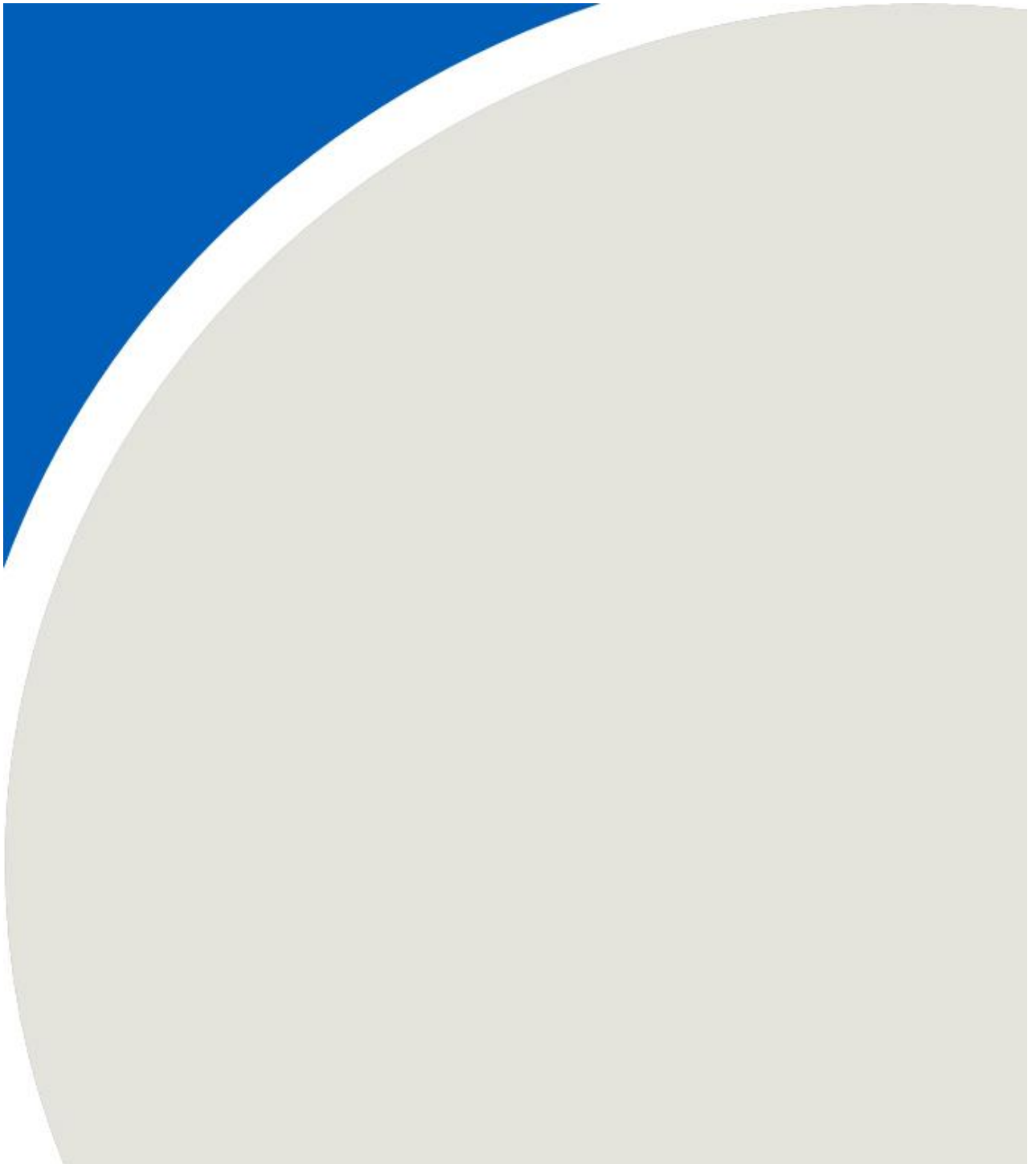
The particle size distributions, as presented in the preceding sections of this document, have been included in the AERMOD model for TSP. For the PM<sub>10</sub> model, the mass fractions were adjusted as only the particles with a diameter equal or less than 10 µm were included. Similarly, for the PM<sub>2.5</sub> model, the mass fractions were adjusted as only the particles with a diameter equal or less than 2.5 µm were included.

## 2 References

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- <sup>1</sup> Richards, John, Background Information for Revised AP-42 Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, Air Control Techniques, P.C. May 12, 2003.
- <sup>2</sup> AP-42 Section 13.4.4, Aggregate Handling and Storage Piles, Final Section, November, 2006.
- <sup>3</sup> AP-42 Section 11.9, Western Surface Coal Mining, Final Section, October 1998.

## APPENDIX H





**Appendix H: Summary of Ambient Monitoring Data - 2018 Q2**

Date	Rd. 66				Bell		33rd Line			17017		17027		17006/17506			17026	
	TSP	PM10	PM2.5	Wind	PM2.5	Wind	PM10	PM2.5	Wind	TSP	Wind	TSP	Wind	TSP	PM10	Wind	TSP	Wind
9-Mar	8	4	4	Upwind	3	Upwind	3	3	Upwind	16	Upwind	16	Downwind	11	5	Upwind	5	Upwind
15-Mar	20	13	7	Upwind	5	Upwind	7	5	Upwind	13	Upwind	40	Downwind	23	11	Upwind	15	Upwind
21-Mar	21	7	4	Upwind	3	Upwind	13	5	Downwind	13	Upwind	40	Upwind	22	9	Upwind	30	Downwind
27-Mar	18	11	6	Downwind	5	Upwind	6	4	Upwind	7	Upwind	9	Upwind	6	1	Upwind	7	Upwind
2-Apr	20	11	7	Upwind	6	Downwind	11	7	Upwind/Downwind	16	Upwind/Downwind	Invalid	Downwind	22	8	Downwind	17	Upwind/Downwind
8-Apr	10	6	4	Upwind	3	Upwind	4	3	Upwind	7	Upwind	30	Downwind	2	Invalid	Upwind	7	Upwind
14-Apr	6	4	3	Upwind	4	Upwind	9	5	Downwind	10	Upwind	10	Upwind	3	Invalid	Upwind	Invalid	Downwind
20-Apr	23	15	4	Upwind	4	Upwind	16	5	Upwind	15	Upwind	31	Downwind	4	4	Upwind	26	Upwind
26-Apr	Invalid	Invalid	Invalid	Upwind	6	Downwind	9	5	Upwind	18	Upwind	18	Downwind	21	10	Downwind	11	Upwind
2-May	Invalid	Invalid	Invalid	Downwind	14	Downwind	38	13	Upwind	80	Downwind	139	Upwind	114	56	Downwind	87	Upwind
8-May	Invalid	Invalid	Invalid	Downwind	8	Downwind	36	10	Downwind/Upwind	77	Downwind	61	Upwind	44	22	Upwind	60	Upwind/Downwind
14-May	59	23	16	Upwind	15	Downwind	21	15	Upwind	38	Upwind	58	Upwind	46	Invalid	Downwind	26	Upwind
20-May	32	15	9	Upwind	9	Upwind	9	8	Upwind	Invalid	Downwind	Invalid	Downwind	Invalid	Invalid	Upwind	Invalid	Upwind
26-May	117	36	19	Downwind	16	Downwind	35	18	Upwind	Invalid	Upwind	Invalid	Upwind	Invalid	Invalid	Downwind	Invalid	Upwind
1-Jun	39	16	9	Upwind	10	Upwind	19	9	Downwind	56	Upwind	65	Downwind	35	21	Upwind	34	Downwind
7-Jun	48	18	10	Downwind	9	Downwind	18	9	Upwind	Invalid	Upwind	38	Upwind	40	9	Downwind	27	Upwind
13-Jun	41	Invalid	12	Upwind	12	Downwind	Invalid	11	Upwind	69	Upwind	49	Downwind	70	26	Downwind	42	Upwind
19-Jun	29	14	10	Upwind	9	Upwind	15	10	Downwind	22	Upwind	22	Downwind	11	6	Upwind	25	Downwind
25-Jun	18	10	6	Upwind	7	Upwind	10	7	Downwind	16	Upwind	142	Upwind	18	12	Upwind	20	Downwind

<b>Limit</b>	120	50	28		28		50	28		120		120		120	50		120	
<b>No. &gt; Limit</b>	0	0	0	-	0	-	0	0	-	0	-	2	-	0	1	-	0	-
<b>Max. Concentration</b>	117	36	19	-	16	-	38	18	-	80	-	142	-	114	56	-	87	-
<b>Min. Concentration</b>	6	4	3	-	3	-	3	3	-	7	-	9	-	2	1	-	5	-

**Appendix H: Summary of Ambient Monitoring Data - 2018 Q3**

Date	Rd. 66				Bell		33rd Line			17017		17027		17006/17506			17026	
	TSP	PM10	PM2.5	Wind	PM2.5	Wind	PM10	PM2.5	Wind	TSP	Wind	TSP	Wind	TSP	PM10	Wind	TSP	Wind
1-Jul	28	22	17	Downwind	16	Downwind	Invalid	18	Upwind	21	Upwind	12	Upwind	25	17	Downwind	10	Upwind
7-Jul	Invalid	Invalid	Invalid	Upwind	7	Downwind	11	7	Upwind/Downwind	7	Upwind	16	Downwind/Upwind	20	9	Downwind	6	Upwind/Downwind
13-Jul	41	25	13	Upwind	11	Downwind	22	12	Upwind	47	Upwind	35	Upwind	35	Invalid	Downwind	60	Upwind
19-Jul	34	17	8	Upwind	7	Downwind	22	9	Upwind	47	Upwind	20	Upwind	32	Invalid	Downwind	28	Upwind
25-Jul	59	29	15	Upwind	13	Upwind	16	12	Upwind	109	Upwind	38	Downwind	28	16	Upwind	13	Upwind
31-Jul	31	20	13	Downwind/Upwind	13	Upwind	20	14	Downwind/Upwind	57	Downwind/Upwind	23	Downwind	28	14	Upwind/Downwind	23	Downwind
6-Aug	24	18	13	Upwind	15	Downwind	17	12	Upwind	49	Upwind	4	Upwind	37	19	Downwind	21	Upwind
12-Aug	27	16	11	Upwind/Downwind	10	Downwind/Upwind	14	Invalid	Upwind/Downwind	23	Upwind/Downwind	25	Downwind/Upwind	21	7	Downwind/Upwind	17	Upwind/Downwind
18-Aug	20	15	13	Upwind	10	Upwind	14	9	Downwind	18	Upwind	20	Upwind	19	9	Upwind	16	Downwind
24-Aug	34	23	16	Downwind	14	Downwind	20	15	Upwind	58	Upwind	37	Upwind	34	13	Downwind	19	Upwind
30-Aug	17	8	4	Upwind	4	Upwind	8	3	Upwind	2	Upwind	10	Downwind	Invalid	Invalid	Upwind	12	Upwind
5-Sep	31	18	11	Downwind	11	Downwind	16	11	Upwind	Invalid	Upwind	30	Upwind	37	Invalid	Downwind	32	Upwind
11-Sep	23	11	3	Upwind	3	Upwind	9	4	Upwind	12	Upwind	16	Downwind	9	1	Upwind	15	Upwind
17-Sep	34	18	6	Upwind	5	Downwind	11	6	Upwind	37	Upwind	18	Upwind	19	6	Downwind	12	Upwind
23-Sep	18	8	5	Upwind	6	Upwind	15	5	Downwind	Invalid	Upwind	20	Downwind	22	7	Upwind	28	Downwind
29-Sep	10	5	2	Upwind	3	Downwind	6	3	Upwind	24	Upwind	16	Downwind	Invalid	4	Downwind	10	Upwind

<b>Limit</b>	120	50	28		28		50	28		120		120		120	50		120	
<b>No. &gt; Limit</b>	0	0	0	-	0	-	0	0	-	0	-	0	-	0	0	-	0	-
<b>Max. Concentration</b>	59	29	17	-	16	-	22	18	-	109	-	38	-	37	19	-	60	-
<b>Min. Concentration</b>	10	5	2	-	3	-	6	3	-	2	-	4	-	9	1	-	6	-

**Appendix H: Summary of Ambient Monitoring Data - 2018 Q4**

Date	Rd. 66				Bell		33rd Line			17017		17027		17006/17506			17026	
	TSP	PM10	PM2.5	Wind	PM2.5	Wind	PM10	PM2.5	Wind	TSP	Wind	TSP	Wind	TSP	PM10	Wind	TSP	Wind
5-Oct	16	8	3	Upwind	3	Upwind	Invalid	4	Upwind	Invalid	Upwind	15	Upwind	13	2	Upwind	16	Upwind
11-Oct	31	12	4	Upwind	5	Downwind	10	5	Upwind	140	Upwind	40	Downwind	30	4	Downwind	18	Upwind
17-Oct	20	9	3	Upwind	4	Downwind	6	2	Upwind	25	Upwind	10	Downwind	18	5	Downwind	3	Upwind
23-Oct	32	Invalid	7	Upwind	5	Upwind	11	5	Upwind	Invalid	Upwind	Invalid	Downwind	Invalid	Invalid	Upwind	Invalid	Upwind
29-Oct	15	6	4	Upwind	4	Upwind	5	3	Upwind	47	Upwind	19	Downwind	Invalid	Invalid	Upwind	8	Upwind
4-Nov	11	7	5	Upwind	Invalid	Upwind	7	4	Downwind	3	Upwind	2	Upwind	15	Invalid	Upwind	7	Downwind
10-Nov	15	6	3	Upwind	5	Downwind	6	5	Upwind	91	Upwind	11	Downwind	11	3	Downwind	8	Upwind
16-Nov	20	13	11	Upwind	12	Downwind	13	10	Upwind	105	Upwind	13	Upwind	15	2	Downwind	1	Upwind
22-Nov	40	14	5	Upwind	6	Upwind	Invalid	Invalid	Upwind	34	Upwind	48	Downwind	37	13	Upwind	51	Upwind
28-Nov	7	3	3	Upwind	Invalid	Upwind	Invalid	3	Upwind	32	Upwind	Invalid	Downwind	14	4	Upwind	3	Upwind
4-Dec	20	8	2	Upwind	1	Upwind	7	3	Upwind	12	Upwind	80	Downwind	15	1	Upwind	4	Upwind
10-Dec	16	12	11	Upwind	11	Downwind	12	11	Upwind	42	Upwind	74	Upwind	29	12	Downwind	13	Upwind
16-Dec	18	11	9	Upwind	11	Upwind	12	11	Upwind	8	Upwind	12	Downwind	15	2	Upwind	3	Upwind
22-Dec	7	5	2	Upwind	2	Upwind	2	2	Upwind	5	Upwind	6	Downwind	4	1	Upwind	1	Upwind
28-Dec	7	4	4	Downwind	3	Downwind	4	2	Upwind	15	Upwind	1	Upwind	Invalid	Invalid	Downwind	1	Upwind
<b>Limit</b>	120	50	28		28		50	28		120		120		120	50		120	
<b>No. &gt; Limit</b>	0	0	0	-	0	-	0	0	-	1	-	0	-	0	0	-	0	-
<b>Max. Concentration</b>	40	14	11	-	12	-	13	11	-	140	-	80	-	37	13	-	51	-
<b>Min. Concentration</b>	7	3	2	-	1	-	2	2	-	3	-	1	-	4	1	-	1	-

**Appendix H: Summary of Ambient Monitoring Data - 2019 Q1**

Date	Rd. 66				Bell		33rd Line			17017		17027		17006/17506			17026	
	TSP	PM10	PM2.5	Wind	PM2.5	Wind	PM10	PM2.5	Wind	TSP	Wind	TSP	Wind	TSP	PM10	Wind	TSP	Wind
3-Jan	10	5	5	Upwind	7	Downwind	7	5	Upwind	38	Upwind	1	Upwind	18	2	Downwind	1	Upwind
9-Jan	12	8	8	Upwind	3	Upwind	5	5	Upwind	16	Upwind	1	Downwind	Invalid	Invalid	Upwind	3	Upwind
15-Jan	30	18	13	Upwind	17	Downwind	18	14	Upwind	65	Upwind	29	Upwind	53	Invalid	Downwind	27	Upwind
21-Jan	23	10	9	Upwind	5	Upwind	12	8	Upwind	102	Upwind	92	Downwind	Invalid	10	Upwind	34	Upwind
27-Jan	Invalid	11	Invalid	Upwind/Downwind	11	Downwind	12	12	Upwind	80	Upwind	12	Downwind	44	9	Downwind	13	Upwind
2-Feb	34	27	11	Upwind	25	Downwind	23	20	Upwind	20	Upwind	19	Upwind	57	17	Downwind	14	Upwind
8-Feb	15	11	Invalid	Upwind	11	Downwind	12	12	Upwind	138	Upwind	41	Downwind	39	21	Downwind	44	Upwind
14-Feb	Invalid	14	2	Downwind	12	Downwind	13	11	Upwind/Downwind	73	Downwind	15	Upwind	24	10	Downwind	12	Upwind
20-Feb	23	16	Invalid	Upwind	11	Upwind	21	13	Downwind	Invalid	Upwind	18	Upwind	17	6	Upwind	26	Downwind
26-Feb	21	16	4	Upwind	3	Upwind	8	6	Upwind/Downwind	Invalid	Upwind	37	Downwind	29	8	Upwind	28	Downwind
4-Mar	19	9	9	Upwind	11	Upwind	8	5	Upwind	Invalid	Upwind	14	Downwind	15	9	Upwind	10	Downwind
10-Mar	11	7	8	Downwind	9	Downwind	7	7	Upwind	Invalid	Upwind	4	Upwind	16	1	Downwind	4	Upwind
16-Mar	6	3	3	Upwind	3	Upwind	2	2	Upwind	Invalid	Upwind	3	Downwind	5	6	Upwind	1	Upwind
22-Mar	27	14	5	Upwind	6	Upwind	5	4	Upwind	Invalid	Upwind	46	Downwind	9	4	Upwind	5	Upwind
28-Mar	25	17	15	Downwind	12	Downwind	17	13	Upwind	Invalid	Upwind	23	Upwind	11	12	Downwind	14	Upwind
3-Apr	27	12	8	Upwind	6	Downwind	7	7	Upwind/Downwind	Invalid	Upwind	28	Downwind	Invalid	Invalid	Downwind	19	Upwind/Downwind
9-Apr	32	17	8	Upwind	6	Upwind	6	3	Upwind	1	Upwind	15	Downwind	12	4	Upwind	5	Upwind
<b>Limit</b>	120	50	28		28		50	28		120		120		120	50		120	
<b>No. &gt; Limit</b>	0	0	0	-	0	-	0	0	-	1	-	0	-	0	0	-	0	-
<b>Max. Concentration</b>	34	27	15	-	25	-	23	20	-	138	-	92	-	57	21	-	44	-
<b>Min. Concentration</b>	6	3	2	-	3	-	2	2	-	1	-	1	-	5	1	-	1	-

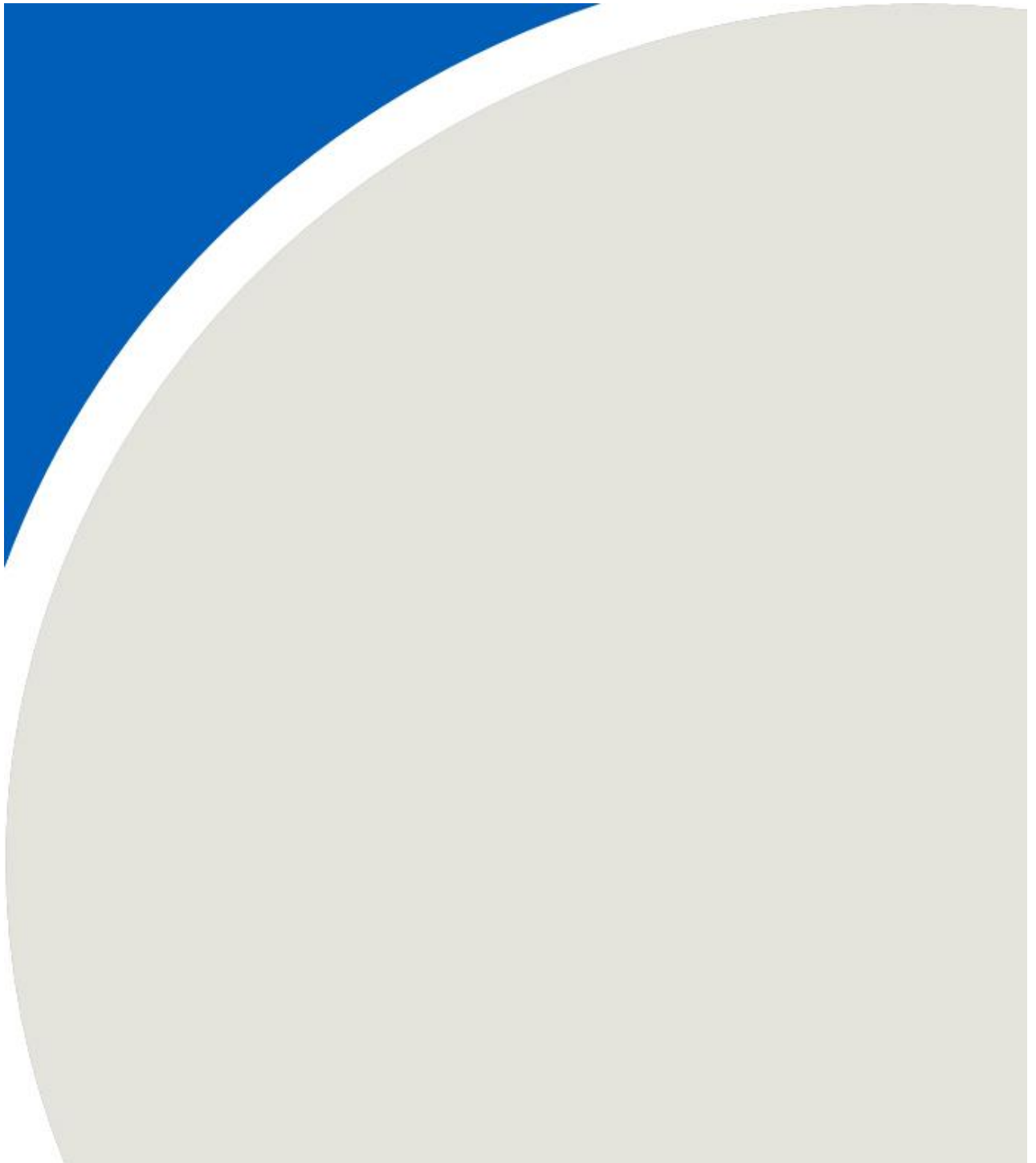
# Appendix H: Summary of Ambient Monitoring Data

90th Percentile	
TSP	44.0
PM10	16
PM2.5	11

Average	
TSP	19.2538462
PM10	4.5
PM2.5	2.93214286



# APPENDIX I



## Appendix I: Maximum Predicted Concentrations at All Discrete Receptors - Baseline (Existing Conditions)

PM 2.5  
24- Hour

Criteria ( $\mu\text{g m}^{-3}$ )	Receptor Information				Background Concentration [1] ( $\mu\text{g m}^{-3}$ )	Baseline		
	Receptor ID	Description	X	Y		Maximum Modelled Concentration [2] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration with Background ( $\mu\text{g m}^{-3}$ )	Percent of Criteria (%)
25	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	11.00	0.52	11.52	46%
25	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	11.00	0.72	11.72	47%
25	ZOR-3	Residence at 663951 Rd 66	510216	4770270	11.00	0.82	11.82	47%
25	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	11.00	0.61	11.61	46%
25	ZOR-5	Residence at 334789 33rd Line	508931	4768760	11.00	0.94	11.94	48%
25	ZOR-6	Residence at 334742 33rd Line	509185	4768350	11.00	1.09	12.09	48%
25	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	11.00	0.77	11.77	47%
25	ZOR-8	Residence at 643743 Road 64	508940	4767980	11.00	1.18	12.18	49%
25	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	11.00	1.68	12.68	51%
25	ZOR-10	Residence at 334578 33rd Line	509739	4766780	11.00	1.03	12.03	48%
25	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	11.00	1.32	12.32	49%
25	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	11.00	0.97	11.97	48%
25	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	11.00	0.42	11.42	46%
25	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	11.00	0.88	11.88	48%
25	ING-2	Laurie Hawkins Public School	509019	4765860	11.00	0.45	11.45	46%
25	ING-3	Ingersoll District Collegiate Institute	510512	4766230	11.00	0.59	11.59	46%
25	ING-4	On the river north of 209 County Road 9	509480	4765180	11.00	0.36	11.36	45%
25	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	11.00	0.31	11.31	45%
25	ING-6	Royal Road Public School	510337	4765360	11.00	0.38	11.38	46%
25	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	11.00	0.29	11.29	45%
25	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	11.00	0.27	11.27	45%
25	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	11.00	0.63	11.63	47%
25	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	11.00	0.47	11.47	46%
25	SWO-1	Residence at 584052 Beachville Road	511124	4766750	11.00	1.65	12.65	51%
25	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	11.00	1.43	12.43	50%
25	SWO-3	Residence at 584142 Beachville Road	511722	4767480	11.00	1.84	12.84	51%
25	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	11.00	5.42	16.42	66%
25	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	11.00	1.73	12.73	51%
25	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	11.00	0.85	11.85	47%
25	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	11.00	0.42	11.42	46%
25	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	11.00	0.29	11.29	45%
25	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	11.00	0.23	11.23	45%
25	SWO-10	Residence at 563977 Karn Road	510980	4765990	11.00	0.78	11.78	47%
25	SWO-11	Residence at 564028 Karn Road	511396	4766310	11.00	1.14	12.14	49%
25	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	11.00	1.15	12.15	49%
25	SWO-13	Centreville Pond and Conservation Area	511570	4766920	11.00	1.31	12.31	49%
25	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	11.00	0.97	11.97	48%
25	SWO-15	Residences at 564146 Karn Road	512251	4767100	11.00	0.80	11.80	47%
25	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	11.00	0.85	11.85	47%
25	SWO-17	Residence at 564226 Karn Road	512958	4767760	11.00	1.68	12.68	51%
25	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	11.00	4.85	15.85	63%
25	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	11.00	3.73	14.73	59%
25	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	11.00	0.33	11.33	45%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Carmeuse and CR6 sources.

## Appendix I: Maximum Predicted Concentrations at All Discrete Receptors - Baseline (Existing Conditions)

PM 2.5

Annual

Criteria ( $\mu\text{g m}^{-3}$ )	Receptor Information				Baseline			
	Receptor ID	Description	X	Y	Background Concentration [1] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration [2] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration with Background ( $\mu\text{g m}^{-3}$ )	Percent of Criteria (%)
8.8	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	2.93	0.03	2.96	34%
8.8	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	2.93	0.03	2.97	34%
8.8	ZOR-3	Residence at 663951 Rd 66	510216	4770270	2.93	0.04	2.97	34%
8.8	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	2.93	0.04	2.98	34%
8.8	ZOR-5	Residence at 334789 33rd Line	508931	4768760	2.93	0.05	2.98	34%
8.8	ZOR-6	Residence at 334742 33rd Line	509185	4768350	2.93	0.07	3.00	34%
8.8	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	2.93	0.07	3.00	34%
8.8	ZOR-8	Residence at 643743 Road 64	508940	4767980	2.93	0.06	2.99	34%
8.8	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	2.93	0.05	2.99	34%
8.8	ZOR-10	Residence at 334578 33rd Line	509739	4766780	2.93	0.03	2.96	34%
8.8	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	2.93	0.07	3.00	34%
8.8	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	2.93	0.04	2.97	34%
8.8	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	2.93	0.04	2.97	34%
8.8	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	2.93	0.03	2.96	34%
8.8	ING-2	Laurie Hawkins Public School	509019	4765860	2.93	0.02	2.95	34%
8.8	ING-3	Ingersoll District Collegiate Institute	510512	4766230	2.93	0.03	2.96	34%
8.8	ING-4	On the river north of 209 County Road 9	509480	4765180	2.93	0.01	2.95	33%
8.8	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	2.93	0.01	2.95	33%
8.8	ING-6	Royal Road Public School	510337	4765360	2.93	0.02	2.95	34%
8.8	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	2.93	0.01	2.94	33%
8.8	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	2.93	0.01	2.94	33%
8.8	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	2.93	0.02	2.96	34%
8.8	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	2.93	0.02	2.95	34%
8.8	SWO-1	Residence at 584052 Beachville Road	511124	4766750	2.93	0.06	2.99	34%
8.8	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	2.93	0.12	3.05	35%
8.8	SWO-3	Residence at 584142 Beachville Road	511722	4767480	2.93	0.15	3.08	35%
8.8	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	2.93	0.84	3.77	43%
8.8	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	2.93	0.15	3.08	35%
8.8	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	2.93	0.05	2.98	34%
8.8	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	2.93	0.03	2.96	34%
8.8	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	2.93	0.02	2.95	33%
8.8	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	2.93	0.01	2.94	33%
8.8	SWO-10	Residence at 563977 Karn Road	510980	4765990	2.93	0.03	2.96	34%
8.8	SWO-11	Residence at 564028 Karn Road	511396	4766310	2.93	0.04	2.97	34%
8.8	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	2.93	0.05	2.98	34%
8.8	SWO-13	Centreville Pond and Conservation Area	511570	4766920	2.93	0.08	3.01	34%
8.8	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	2.93	0.08	3.01	34%
8.8	SWO-15	Residences at 564146 Karn Road	512251	4767100	2.93	0.09	3.02	34%
8.8	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	2.93	0.10	3.03	34%
8.8	SWO-17	Residence at 564226 Karn Road	512958	4767760	2.93	0.22	3.15	36%
8.8	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	2.93	0.69	3.63	41%
8.8	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	2.93	0.61	3.54	40%
8.8	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	2.93	0.02	2.96	34%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Carmeuse and CR6 sources.

## Appendix I: Maximum Predicted Concentrations at All Discrete Receptors - Baseline (Existing Conditions)

PM 10

24-Hour

Criteria ( $\mu\text{g m}^{-3}$ )	Receptor Information				Baseline			
	Receptor ID	Description	X	Y	Background Concentration [1] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration [2] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration with Background ( $\mu\text{g m}^{-3}$ )	Percent of Criteria (%)
50	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	16.00	3.79	19.79	40%
50	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	16.00	5.35	21.35	43%
50	ZOR-3	Residence at 663951 Rd 66	510216	4770270	16.00	5.60	21.60	43%
50	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	16.00	4.17	20.17	40%
50	ZOR-5	Residence at 334789 33rd Line	508931	4768760	16.00	7.42	23.42	47%
50	ZOR-6	Residence at 334742 33rd Line	509185	4768350	16.00	8.40	24.40	49%
50	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	16.00	5.16	21.16	42%
50	ZOR-8	Residence at 643743 Road 64	508940	4767980	16.00	9.00	25.00	50%
50	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	16.00	13.00	29.00	58%
50	ZOR-10	Residence at 334578 33rd Line	509739	4766780	16.00	8.18	24.18	48%
50	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	16.00	10.30	26.30	53%
50	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	16.00	7.53	23.53	47%
50	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	16.00	2.60	18.60	37%
50	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	16.00	6.99	22.99	46%
50	ING-2	Laurie Hawkins Public School	509019	4765860	16.00	3.54	19.54	39%
50	ING-3	Ingersoll District Collegiate Institute	510512	4766230	16.00	4.86	20.86	42%
50	ING-4	On the river north of 209 County Road 9	509480	4765180	16.00	2.81	18.81	38%
50	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	16.00	2.42	18.42	37%
50	ING-6	Royal Road Public School	510337	4765360	16.00	2.73	18.73	37%
50	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	16.00	2.04	18.04	36%
50	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	16.00	1.80	17.80	36%
50	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	16.00	4.86	20.86	42%
50	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	16.00	3.62	19.62	39%
50	SWO-1	Residence at 584052 Beachville Road	511124	4766750	16.00	13.25	29.25	59%
50	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	16.00	11.80	27.80	56%
50	SWO-3	Residence at 584142 Beachville Road	511722	4767480	16.00	14.05	30.05	60%
50	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	16.00	28.30	44.30	89%
50	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	16.00	11.91	27.91	56%
50	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	16.00	6.27	22.27	45%
50	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	16.00	2.90	18.90	38%
50	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	16.00	2.15	18.15	36%
50	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	16.00	1.64	17.64	35%
50	SWO-10	Residence at 563977 Karn Road	510980	4765990	16.00	6.24	22.24	44%
50	SWO-11	Residence at 564028 Karn Road	511396	4766310	16.00	8.85	24.85	50%
50	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	16.00	8.89	24.89	50%
50	SWO-13	Centreville Pond and Conservation Area	511570	4766920	16.00	10.30	26.30	53%
50	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	16.00	7.35	23.35	47%
50	SWO-15	Residences at 564146 Karn Road	512251	4767100	16.00	5.74	21.74	43%
50	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	16.00	6.49	22.49	45%
50	SWO-17	Residence at 564226 Karn Road	512958	4767760	16.00	8.14	24.14	48%
50	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	16.00	17.85	33.85	68%
50	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	16.00	14.80	30.80	62%
50	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	16.00	2.28	18.28	37%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Carmeuse and CR6 sources.

## Appendix I: Maximum Predicted Concentrations at All Discrete Receptors - Baseline (Existing Conditions)

TSP

24-Hour

Criteria ( $\mu\text{g m}^{-3}$ )	Receptor Information				Baseline			
	Receptor ID	Description	X	Y	Background Concentration [1] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration [2] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration with Background ( $\mu\text{g m}^{-3}$ )	Percent of Criteria (%)
120	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	44.00	12.51	56.51	47%
120	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	44.00	17.98	61.98	52%
120	ZOR-3	Residence at 663951 Rd 66	510216	4770270	44.00	20.57	64.57	54%
120	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	44.00	15.53	59.53	50%
120	ZOR-5	Residence at 334789 33rd Line	508931	4768760	44.00	25.26	69.26	58%
120	ZOR-6	Residence at 334742 33rd Line	509185	4768350	44.00	29.02	73.02	61%
120	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	44.00	20.33	64.33	54%
120	ZOR-8	Residence at 643743 Road 64	508940	4767980	44.00	32.24	76.24	64%
120	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	44.00	45.67	89.67	75%
120	ZOR-10	Residence at 334578 33rd Line	509739	4766780	44.00	27.38	71.38	59%
120	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	44.00	34.06	78.06	65%
120	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	44.00	24.87	68.87	57%
120	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	44.00	9.38	53.38	44%
120	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	44.00	23.52	67.52	56%
120	ING-2	Laurie Hawkins Public School	509019	4765860	44.00	11.60	55.60	46%
120	ING-3	Ingersoll District Collegiate Institute	510512	4766230	44.00	16.31	60.31	50%
120	ING-4	On the river north of 209 County Road 9	509480	4765180	44.00	9.10	53.10	44%
120	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	44.00	7.98	51.98	43%
120	ING-6	Royal Road Public School	510337	4765360	44.00	9.30	53.30	44%
120	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	44.00	6.83	50.83	42%
120	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	44.00	6.35	50.35	42%
120	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	44.00	16.02	60.02	50%
120	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	44.00	11.87	55.87	47%
120	SWO-1	Residence at 584052 Beachville Road	511124	4766750	44.00	43.48	87.48	73%
120	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	44.00	39.25	83.25	69%
120	SWO-3	Residence at 584142 Beachville Road	511722	4767480	44.00	49.26	93.26	78%
120	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	44.00	136.15	180.15	150%
120	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	44.00	45.99	89.99	75%
120	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	44.00	22.03	66.03	55%
120	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	44.00	10.65	54.65	46%
120	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	44.00	7.10	51.10	43%
120	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	44.00	5.49	49.49	41%
120	SWO-10	Residence at 563977 Karn Road	510980	4765990	44.00	21.48	65.48	55%
120	SWO-11	Residence at 564028 Karn Road	511396	4766310	44.00	28.76	72.76	61%
120	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	44.00	29.74	73.74	61%
120	SWO-13	Centreville Pond and Conservation Area	511570	4766920	44.00	34.81	78.81	66%
120	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	44.00	25.68	69.68	58%
120	SWO-15	Residences at 564146 Karn Road	512251	4767100	44.00	21.29	65.29	54%
120	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	44.00	22.42	66.42	55%
120	SWO-17	Residence at 564226 Karn Road	512958	4767760	44.00	42.12	86.12	72%
120	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	44.00	120.30	164.30	137%
120	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	44.00	91.82	135.82	113%
120	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	44.00	7.67	51.67	43%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Carmeuse and CR6 sources.



## Appendix I: Maximum Predicted Concentrations at All Discrete Receptors - Baseline (Existing Conditions)

TSP  
Annual

Criteria ( $\mu\text{g m}^{-3}$ )	Receptor Information				Baseline			
	Receptor ID	Description	X	Y	Background Concentration [1] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration [2] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration with Background ( $\mu\text{g m}^{-3}$ )	Percent of Criteria (%)
60	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	19.25	0.61	19.86	33%
60	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	19.25	0.75	20.01	33%
60	ZOR-3	Residence at 663951 Rd 66	510216	4770270	19.25	0.84	20.09	33%
60	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	19.25	0.93	20.19	34%
60	ZOR-5	Residence at 334789 33rd Line	508931	4768760	19.25	1.07	20.32	34%
60	ZOR-6	Residence at 334742 33rd Line	509185	4768350	19.25	1.52	20.77	35%
60	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	19.25	1.32	20.57	34%
60	ZOR-8	Residence at 643743 Road 64	508940	4767980	19.25	1.23	20.49	34%
60	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	19.25	1.33	20.58	34%
60	ZOR-10	Residence at 334578 33rd Line	509739	4766780	19.25	0.76	20.01	33%
60	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	19.25	1.80	21.05	35%
60	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	19.25	0.87	20.13	34%
60	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	19.25	0.78	20.03	33%
60	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	19.25	0.71	19.96	33%
60	ING-2	Laurie Hawkins Public School	509019	4765860	19.25	0.35	19.61	33%
60	ING-3	Ingersoll District Collegiate Institute	510512	4766230	19.25	0.76	20.01	33%
60	ING-4	On the river north of 209 County Road 9	509480	4765180	19.25	0.33	19.58	33%
60	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	19.25	0.29	19.54	33%
60	ING-6	Royal Road Public School	510337	4765360	19.25	0.42	19.68	33%
60	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	19.25	0.21	19.46	32%
60	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	19.25	0.28	19.53	33%
60	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	19.25	0.56	19.82	33%
60	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	19.25	0.36	19.62	33%
60	SWO-1	Residence at 584052 Beachville Road	511124	4766750	19.25	1.61	20.86	35%
60	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	19.25	3.06	22.31	37%
60	SWO-3	Residence at 584142 Beachville Road	511722	4767480	19.25	3.68	22.93	38%
60	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	19.25	20.54	39.79	66%
60	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	19.25	3.09	22.35	37%
60	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	19.25	0.93	20.19	34%
60	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	19.25	0.58	19.84	33%
60	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	19.25	0.24	19.50	32%
60	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	19.25	0.16	19.42	32%
60	SWO-10	Residence at 563977 Karn Road	510980	4765990	19.25	0.74	20.00	33%
60	SWO-11	Residence at 564028 Karn Road	511396	4766310	19.25	1.04	20.29	34%
60	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	19.25	1.26	20.51	34%
60	SWO-13	Centreville Pond and Conservation Area	511570	4766920	19.25	2.00	21.25	35%
60	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	19.25	1.93	21.18	35%
60	SWO-15	Residences at 564146 Karn Road	512251	4767100	19.25	2.07	21.32	36%
60	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	19.25	2.31	21.57	36%
60	SWO-17	Residence at 564226 Karn Road	512958	4767760	19.25	5.18	24.44	41%
60	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	19.25	17.18	36.43	61%
60	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	19.25	15.16	34.41	57%
60	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	19.25	0.45	19.71	33%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Carmeuse and CR6 sources.

## Appendix I: Maximum Predicted Concentrations at All Discrete Receptors - Baseline (Existing Conditions)

### Dustfall Annual

Criteria [3] ( $\mu\text{g m}^{-3}$ )	Receptor Information				Baseline			
	Receptor ID	Description	X	Y	Background Concentration [1] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration [2] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration with Background ( $\mu\text{g m}^{-3}$ )	Percent of Criteria (%)
4.6	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.00	0.03	0.03	1%
4.6	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.00	0.03	0.03	1%
4.6	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.00	0.05	0.05	1%
4.6	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.00	0.07	0.07	1%
4.6	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.00	0.06	0.06	1%
4.6	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.00	0.11	0.11	2%
4.6	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.00	0.12	0.12	3%
4.6	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.00	0.10	0.10	2%
4.6	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.00	0.12	0.12	3%
4.6	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.00	0.05	0.05	1%
4.6	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.00	0.12	0.12	3%
4.6	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.00	0.05	0.05	1%
4.6	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.00	0.07	0.07	1%
4.6	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.00	0.04	0.04	1%
4.6	ING-2	Laurie Hawkins Public School	509019	4765860	0.00	0.02	0.02	0%
4.6	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.00	0.04	0.04	1%
4.6	ING-4	On the river north of 209 County Road 9	509480	4765180	0.00	0.01	0.01	0%
4.6	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.00	0.01	0.01	0%
4.6	ING-6	Royal Road Public School	510337	4765360	0.00	0.02	0.02	0%
4.6	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.00	0.01	0.01	0%
4.6	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.00	0.01	0.01	0%
4.6	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.00	0.03	0.03	1%
4.6	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.00	0.02	0.02	0%
4.6	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.00	0.10	0.10	2%
4.6	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.00	0.22	0.22	5%
4.6	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.00	0.31	0.31	7%
4.6	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.00	1.15	1.15	25%
4.6	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.00	0.40	0.40	9%
4.6	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.00	0.09	0.09	2%
4.6	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.00	0.04	0.04	1%
4.6	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.00	0.02	0.02	0%
4.6	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.00	0.01	0.01	0%
4.6	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.00	0.05	0.05	1%
4.6	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.00	0.06	0.06	1%
4.6	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.00	0.08	0.08	2%
4.6	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.00	0.13	0.13	3%
4.6	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.00	0.13	0.13	3%
4.6	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.00	0.14	0.14	3%
4.6	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.00	0.16	0.16	4%
4.6	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.00	0.16	0.16	4%
4.6	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.00	0.31	0.31	7%
4.6	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.00	0.25	0.25	6%
4.6	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.00	0.04	0.04	1%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Carmeuse and CR6 sources.

[3] Annual dustfall concentrations are the arithmetic mean of the monthly dustfall results.

## Appendix I: Maximum Predicted Concentrations at All Discrete Receptors - Baseline (Existing Conditions)

Dustfall  
30-Day

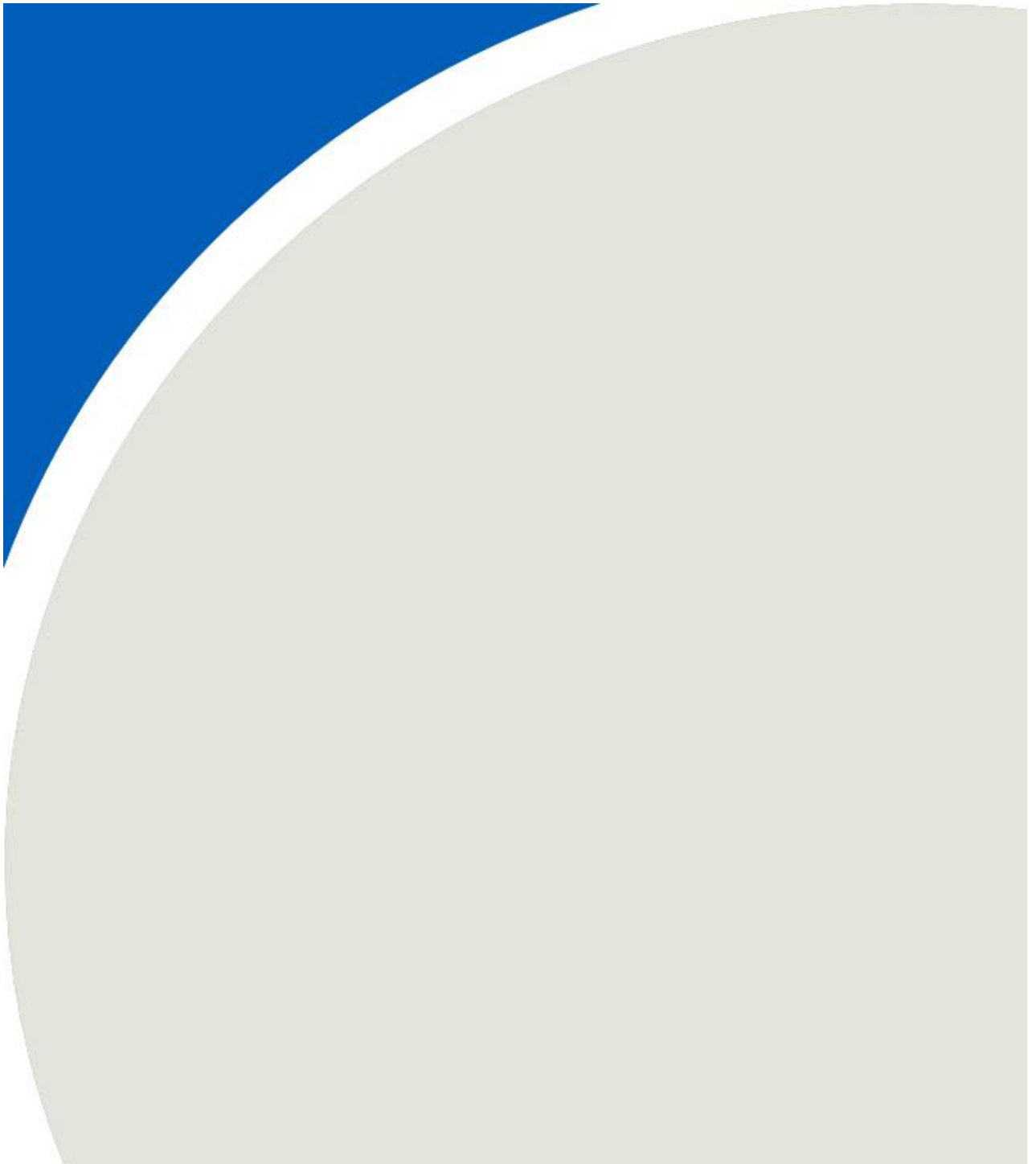
Criteria ( $\mu\text{g m}^{-3}$ )	Receptor Information				Baseline			
	Receptor ID	Description	X	Y	Background Concentration [1] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration [2] ( $\mu\text{g m}^{-3}$ )	Maximum Modelled Concentration with Background ( $\mu\text{g m}^{-3}$ )	Percent of Criteria (%)
7	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.00	0.03	0.03	0%
7	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.00	0.03	0.03	0%
7	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.00	0.05	0.05	1%
7	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.00	0.07	0.07	1%
7	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.00	0.06	0.06	1%
7	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.00	0.11	0.11	2%
7	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.00	0.12	0.12	2%
7	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.00	0.10	0.10	1%
7	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.00	0.12	0.12	2%
7	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.00	0.05	0.05	1%
7	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.00	0.12	0.12	2%
7	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.00	0.05	0.05	1%
7	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.00	0.07	0.07	1%
7	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.00	0.04	0.04	1%
7	ING-2	Laurie Hawkins Public School	509019	4765860	0.00	0.02	0.02	0%
7	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.00	0.04	0.04	1%
7	ING-4	On the river north of 209 County Road 9	509480	4765180	0.00	0.01	0.01	0%
7	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.00	0.01	0.01	0%
7	ING-6	Royal Road Public School	510337	4765360	0.00	0.02	0.02	0%
7	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.00	0.01	0.01	0%
7	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.00	0.01	0.01	0%
7	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.00	0.03	0.03	0%
7	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.00	0.02	0.02	0%
7	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.00	0.10	0.10	1%
7	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.00	0.22	0.22	3%
7	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.00	0.31	0.31	4%
7	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.00	1.15	1.15	16%
7	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.00	0.40	0.40	6%
7	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.00	0.09	0.09	1%
7	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.00	0.04	0.04	1%
7	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.00	0.02	0.02	0%
7	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.00	0.01	0.01	0%
7	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.00	0.05	0.05	1%
7	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.00	0.06	0.06	1%
7	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.00	0.08	0.08	1%
7	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.00	0.13	0.13	2%
7	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.00	0.13	0.13	2%
7	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.00	0.14	0.14	2%
7	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.00	0.16	0.16	2%
7	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.00	0.16	0.16	2%
7	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.00	0.31	0.31	4%
7	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.00	0.25	0.25	4%
7	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.00	0.04	0.04	1%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on Carmeuse and CR6 sources.

## APPENDIX J



**Appendix J: Maximum Predicted Concentrations at All Discrete Receptors**

**PM 2.5  
24- Hour**

Criteria (ug m <sup>-3</sup> )	Receptor Information					Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
25	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	11.00	2.01	13.01	52%	0.60	11.60	46%	1.93	12.93	52%	0.95	11.95	48%
25	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	11.00	2.79	13.79	55%	1.27	12.27	49%	3.32	14.32	57%	1.73	12.73	51%
25	ZOR-3	Residence at 663951 Rd 66	510216	4770270	11.00	3.33	14.33	57%	1.22	12.22	49%	2.82	13.82	55%	1.77	12.77	51%
25	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	11.00	3.34	14.34	57%	1.13	12.13	49%	2.31	13.31	53%	1.28	12.28	49%
25	ZOR-5	Residence at 334789 33rd Line	508931	4768760	11.00	3.84	14.84	59%	1.06	12.06	48%	3.94	14.94	60%	1.66	12.66	51%
25	ZOR-6	Residence at 334742 33rd Line	509185	4768350	11.00	7.31	18.31	73%	1.52	12.52	50%	4.74	15.74	63%	2.21	13.21	53%
25	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	11.00	3.94	14.94	60%	1.06	12.06	48%	2.41	13.41	54%	1.13	12.13	49%
25	ZOR-8	Residence at 643743 Road 64	508940	4767980	11.00	7.58	18.58	74%	1.39	12.39	50%	4.51	15.51	62%	1.40	12.40	50%
25	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	11.00	6.26	17.26	69%	2.60	13.60	54%	3.47	14.47	58%	1.95	12.95	52%
25	ZOR-10	Residence at 334578 33rd Line	509739	4766780	11.00	1.59	12.59	50%	1.04	12.04	48%	2.48	13.48	54%	0.81	11.81	47%
25	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	11.00	4.97	15.97	64%	1.20	12.20	49%	4.51	15.51	62%	1.08	12.08	48%
25	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	11.00	2.07	13.07	52%	0.83	11.83	47%	2.11	13.11	52%	0.85	11.85	47%
25	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	11.00	2.25	13.25	53%	0.71	11.71	47%	1.68	12.68	51%	0.68	11.68	47%
25	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	11.00	1.53	12.53	50%	0.85	11.85	47%	2.07	13.07	52%	0.75	11.75	47%
25	ING-2	Laurie Hawkins Public School	509019	4765860	11.00	0.89	11.89	48%	0.46	11.46	46%	0.91	11.91	48%	0.42	11.42	46%
25	ING-3	Ingersoll District Collegiate Institute	510512	4766230	11.00	3.17	14.17	57%	0.92	11.92	48%	1.82	12.82	51%	0.81	11.81	47%
25	ING-4	On the river north of 209 County Road 9	509480	4765180	11.00	0.71	11.71	47%	0.38	11.38	46%	1.00	12.00	48%	0.49	11.49	46%
25	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	11.00	0.74	11.74	47%	0.46	11.46	46%	0.80	11.80	47%	0.41	11.41	46%
25	ING-6	Royal Road Public School	510337	4765360	11.00	1.59	12.59	50%	0.56	11.56	46%	1.19	12.19	49%	0.51	11.51	46%
25	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	11.00	0.56	11.56	46%	0.35	11.35	45%	0.58	11.58	46%	0.30	11.30	45%
25	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	11.00	1.05	12.05	48%	0.43	11.43	46%	0.70	11.70	47%	0.39	11.39	46%
25	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	11.00	2.29	13.29	53%	0.69	11.69	47%	2.41	13.41	54%	0.66	11.66	47%
25	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	11.00	1.46	12.46	50%	0.48	11.48	46%	1.35	12.35	49%	0.48	11.48	46%
25	SWO-1	Residence at 584052 Beachville Road	511124	4766750	11.00	7.35	18.35	73%	1.31	12.31	49%	5.51	16.51	66%	1.25	12.25	49%
25	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	11.00	17.09	28.09	112%	1.96	12.96	52%	4.46	15.46	62%	1.99	12.99	52%
25	SWO-3	Residence at 584142 Beachville Road	511722	4767480	11.00	7.58	18.58	74%	3.44	14.44	58%	4.68	15.68	63%	3.90	14.90	60%
25	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	11.00	11.67	22.67	91%	7.53	18.53	74%	8.15	19.15	77%	7.17	18.17	73%
25	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	11.00	7.69	18.69	75%	2.53	13.53	54%	3.33	14.33	57%	2.32	13.32	53%
25	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	11.00	5.61	16.61	66%	1.39	12.39	50%	2.42	13.42	54%	1.41	12.41	50%
25	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	11.00	2.18	13.18	53%	0.79	11.79	47%	1.39	12.39	50%	0.90	11.90	48%
25	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	11.00	1.16	12.16	49%	0.38	11.38	46%	0.72	11.72	47%	0.39	11.39	46%
25	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	11.00	1.05	12.05	48%	0.35	11.35	45%	0.56	11.56	46%	0.33	11.33	45%
25	SWO-10	Residence at 563977 Karn Road	510980	4765990	11.00	2.96	13.96	56%	0.82	11.82	47%	2.77	13.77	55%	0.82	11.82	47%
25	SWO-11	Residence at 564028 Karn Road	511396	4766310	11.00	4.90	15.90	64%	1.10	12.10	48%	3.28	14.28	57%	1.09	12.09	48%
25	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	11.00	4.14	15.14	61%	1.12	12.12	48%	4.55	15.55	62%	1.27	12.27	49%
25	SWO-13	Centreville Pond and Conservation Area	511570	4766920	11.00	6.46	17.46	70%	1.46	12.46	50%	3.81	14.81	59%	1.49	12.49	50%
25	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	11.00	6.06	17.06	68%	1.74	12.74	51%	3.12	14.12	56%	2.39	13.39	54%
25	SWO-15	Residences at 564146 Karn Road	512251	4767100	11.00	4.71	15.71	63%	1.46	12.46	50%	3.12	14.12	56%	2.14	13.14	53%
25	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	11.00	4.76	15.76	63%	2.20	13.20	53%	3.05	14.05	56%	2.45	13.45	54%
25	SWO-17	Residence at 564226 Karn Road	512958	4767760	11.00	4.18	15.18	61%	1.92	12.92	52%	3.05	14.05	56%	2.07	13.07	52%
25	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	11.00	6.45	17.45	70%	5.76	16.76	67%	6.03	17.03	68%	5.39	16.39	66%
25	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	11.00	4.71	15.71	63%	4.12	15.12	60%	4.43	15.43	62%	3.97	14.97	60%
25	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	11.00	1.61	12.61	50%	0.42	11.42	46%	0.89	11.89	48%	0.46	11.46	46%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.



PM 2.5  
Annual

Criteria (ug m <sup>-3</sup> )	Receptor Information				Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)			
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
8.8	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	2.93	0.10	3.03	34%	0.05	2.98	34%	0.11	3.05	35%	0.05	2.99	34%
8.8	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	2.93	0.13	3.06	35%	0.07	3.00	34%	0.17	3.10	35%	0.09	3.02	34%
8.8	ZOR-3	Residence at 663951 Rd 66	510216	4770270	2.93	0.19	3.12	35%	0.08	3.01	34%	0.21	3.14	36%	0.09	3.03	34%
8.8	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	2.93	0.21	3.14	36%	0.08	3.01	34%	0.22	3.15	36%	0.10	3.03	34%
8.8	ZOR-5	Residence at 334789 33rd Line	508931	4768760	2.93	0.21	3.15	36%	0.09	3.03	34%	0.28	3.21	37%	0.10	3.03	34%
8.8	ZOR-6	Residence at 334742 33rd Line	509185	4768350	2.93	0.31	3.25	37%	0.11	3.05	35%	0.35	3.28	37%	0.12	3.05	35%
8.8	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	2.93	0.24	3.18	36%	0.13	3.06	35%	0.23	3.16	36%	0.14	3.07	35%
8.8	ZOR-8	Residence at 643743 Road 64	508940	4767980	2.93	0.29	3.22	37%	0.09	3.02	34%	0.21	3.14	36%	0.09	3.02	34%
8.8	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	2.93	0.21	3.14	36%	0.09	3.02	34%	0.19	3.12	35%	0.08	3.01	34%
8.8	ZOR-10	Residence at 334578 33rd Line	509739	4766780	2.93	0.09	3.02	34%	0.05	2.98	34%	0.13	3.06	35%	0.05	2.98	34%
8.8	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	2.93	0.18	3.11	35%	0.09	3.02	34%	0.28	3.21	36%	0.08	3.01	34%
8.8	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	2.93	0.10	3.03	34%	0.06	2.99	34%	0.13	3.06	35%	0.05	2.99	34%
8.8	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	2.93	0.14	3.07	35%	0.07	3.00	34%	0.14	3.08	35%	0.08	3.01	34%
8.8	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	2.93	0.08	3.01	34%	0.05	2.98	34%	0.11	3.05	35%	0.05	2.98	34%
8.8	ING-2	Laurie Hawkins Public School	509019	4765860	2.93	0.05	2.98	34%	0.05	2.96	34%	0.06	2.99	34%	0.03	2.96	34%
8.8	ING-3	Ingersoll District Collegiate Institute	510512	4766230	2.93	0.10	3.03	34%	0.05	2.98	34%	0.11	3.04	35%	0.05	2.98	34%
8.8	ING-4	On the river north of 209 County Road 9	509480	4765180	2.93	0.04	2.97	34%	0.03	2.96	34%	0.05	2.98	34%	0.03	2.96	34%
8.8	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	2.93	0.04	2.97	34%	0.03	2.96	34%	0.04	2.98	34%	0.02	2.96	34%
8.8	ING-6	Royal Road Public School	510337	4765360	2.93	0.05	2.98	34%	0.03	2.96	34%	0.06	3.00	34%	0.03	2.96	34%
8.8	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	2.93	0.03	2.96	34%	0.02	2.95	34%	0.03	2.96	34%	0.02	2.95	34%
8.8	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	2.93	0.03	2.97	34%	0.02	2.96	34%	0.04	2.98	34%	0.02	2.96	34%
8.8	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	2.93	0.08	3.01	34%	0.04	2.97	34%	0.09	3.02	34%	0.04	2.97	34%
8.8	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	2.93	0.05	2.99	34%	0.03	2.96	34%	0.06	3.00	34%	0.03	2.96	34%
8.8	SWO-1	Residence at 584052 Beachville Road	511124	4766750	2.93	0.23	3.16	36%	0.11	3.04	35%	0.30	3.23	37%	0.09	3.03	34%
8.8	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	2.93	0.44	3.37	38%	0.19	3.13	36%	0.46	3.39	39%	0.17	3.10	35%
8.8	SWO-3	Residence at 584142 Beachville Road	511722	4767480	2.93	0.54	3.47	39%	0.27	3.20	36%	0.54	3.47	39%	0.24	3.18	36%
8.8	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	2.93	1.37	4.30	49%	1.08	4.01	46%	1.25	4.18	48%	1.04	3.97	45%
8.8	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	2.93	0.48	3.42	39%	0.29	3.22	37%	0.43	3.37	38%	0.29	3.22	37%
8.8	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	2.93	0.18	3.11	35%	0.09	3.02	34%	0.17	3.10	35%	0.09	3.02	34%
8.8	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	2.93	0.11	3.04	35%	0.06	2.99	34%	0.10	3.04	35%	0.06	2.99	34%
8.8	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	2.93	0.05	2.98	34%	0.02	2.96	34%	0.05	2.98	34%	0.03	2.96	34%
8.8	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	2.93	0.03	2.97	34%	0.02	2.95	34%	0.03	2.96	34%	0.02	2.95	34%
8.8	SWO-10	Residence at 563977 Karn Road	510980	4765990	2.93	0.10	3.03	34%	0.05	2.99	34%	0.12	3.06	35%	0.05	2.99	34%
8.8	SWO-11	Residence at 564028 Karn Road	511396	4766310	2.93	0.16	3.09	35%	0.07	3.00	34%	0.18	3.11	35%	0.07	3.00	34%
8.8	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	2.93	0.19	3.13	36%	0.09	3.03	34%	0.22	3.15	36%	0.09	3.02	34%
8.8	SWO-13	Centreville Pond and Conservation Area	511570	4766920	2.93	0.28	3.21	37%	0.14	3.07	35%	0.32	3.25	37%	0.12	3.05	35%
8.8	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	2.93	0.27	3.20	36%	0.14	3.07	35%	0.27	3.20	36%	0.13	3.06	35%
8.8	SWO-15	Residences at 564146 Karn Road	512251	4767100	2.93	0.28	3.21	36%	0.15	3.08	35%	0.28	3.21	37%	0.14	3.08	35%
8.8	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	2.93	0.28	3.22	37%	0.17	3.10	35%	0.30	3.23	37%	0.16	3.09	35%
8.8	SWO-17	Residence at 564226 Karn Road	512958	4767760	2.93	0.44	3.37	38%	0.31	3.24	37%	0.43	3.36	38%	0.30	3.23	37%
8.8	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	2.93	0.97	3.90	44%	0.80	3.73	42%	0.89	3.82	43%	0.75	3.68	42%
8.8	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	2.93	0.74	3.67	42%	0.65	3.58	41%	0.69	3.62	41%	0.60	3.54	40%
8.8	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	2.93	0.07	3.00	34%	0.04	2.97	34%	0.07	3.00	34%	0.04	2.97	34%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

PM 10  
24-Hour

Criteria (ug m <sup>-3</sup> )	Receptor Information					Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
50	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	16.00	10.23	26.23	52%	3.87	19.87	40%	12.27	28.27	57%	6.88	22.88	46%
50	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	16.00	21.39	37.39	75%	8.25	24.25	49%	25.24	41.24	82%	12.03	28.03	56%
50	ZOR-3	Residence at 663951 Rd 66	510216	4770270	16.00	16.19	32.19	64%	7.96	23.96	48%	20.32	36.32	73%	13.62	29.62	59%
50	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	16.00	11.31	27.31	55%	6.44	22.44	45%	18.29	34.29	69%	8.08	24.08	48%
50	ZOR-5	Residence at 334789 33rd Line	508931	4768760	16.00	20.98	36.98	74%	6.61	22.61	45%	26.56	42.56	85%	13.57	29.57	59%
50	ZOR-6	Residence at 334742 33rd Line	509185	4768350	16.00	32.89	48.89	98%	9.20	25.20	50%	38.10	54.10	108%	15.47	31.47	63%
50	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	16.00	13.70	29.70	59%	6.59	22.59	45%	18.27	34.27	69%	8.96	24.96	50%
50	ZOR-8	Residence at 643743 Road 64	508940	4767980	16.00	26.27	42.27	85%	10.49	26.49	53%	30.59	46.59	93%	10.86	26.86	54%
50	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	16.00	28.45	44.45	89%	15.50	31.50	63%	22.49	38.49	77%	9.81	25.81	52%
50	ZOR-10	Residence at 334578 33rd Line	509739	4766780	16.00	11.73	27.73	55%	7.45	23.45	47%	18.38	34.38	69%	5.48	21.48	43%
50	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	16.00	21.75	37.75	76%	8.78	24.78	50%	36.97	52.97	106%	6.70	22.70	45%
50	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	16.00	9.57	25.57	51%	5.48	21.48	43%	17.07	33.07	66%	5.79	21.79	44%
50	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	16.00	8.23	24.23	48%	3.97	19.97	40%	9.48	25.48	51%	4.73	20.73	41%
50	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	16.00	11.43	27.43	55%	5.93	21.93	44%	15.89	31.89	64%	5.09	21.09	42%
50	ING-2	Laurie Hawkins Public School	509019	4765860	16.00	6.97	22.97	46%	2.76	18.76	38%	7.39	23.39	47%	2.70	18.70	37%
50	ING-3	Ingersoll District Collegiate Institute	510512	4766230	16.00	11.65	27.65	55%	6.03	22.03	44%	13.42	29.42	59%	4.64	20.64	41%
50	ING-4	On the river north of 209 County Road 9	509480	4765180	16.00	4.91	20.91	42%	2.37	18.37	37%	7.53	23.53	47%	3.28	19.28	39%
50	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	16.00	5.78	21.78	44%	2.56	18.56	37%	6.41	22.41	45%	2.31	18.31	37%
50	ING-6	Royal Road Public School	510337	4765360	16.00	6.47	22.47	45%	4.08	20.08	40%	8.38	24.38	49%	2.97	18.97	38%
50	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	16.00	3.14	19.14	38%	2.27	18.27	37%	4.72	20.72	41%	2.00	18.00	36%
50	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	16.00	3.66	19.66	39%	2.87	18.87	38%	4.92	20.92	42%	2.22	18.22	36%
50	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	16.00	11.68	27.68	55%	5.73	21.73	43%	17.58	33.58	67%	5.13	21.13	42%
50	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	16.00	8.41	24.41	49%	3.70	19.70	39%	10.72	26.72	53%	3.63	19.63	39%
50	SWO-1	Residence at 584052 Beachville Road	511124	4766750	16.00	30.10	46.10	92%	11.76	27.76	56%	35.74	51.74	103%	9.45	25.45	51%
50	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	16.00	33.22	49.22	98%	14.92	30.92	62%	31.87	47.87	96%	15.55	31.55	63%
50	SWO-3	Residence at 584142 Beachville Road	511722	4767480	16.00	32.43	48.43	97%	22.64	38.64	77%	32.84	48.84	98%	26.84	42.84	86%
50	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	16.00	44.34	60.34	121%	35.73	51.73	103%	47.16	63.16	126%	33.28	49.28	99%
50	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	16.00	19.70	35.70	71%	14.82	30.82	62%	22.62	38.62	77%	16.16	32.16	64%
50	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	16.00	12.42	28.42	57%	9.56	25.56	51%	16.61	32.61	65%	9.33	25.33	51%
50	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	16.00	8.15	24.15	48%	4.88	20.88	42%	10.23	26.23	52%	5.54	21.54	43%
50	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	16.00	4.46	20.46	41%	2.49	18.49	37%	5.77	21.77	44%	3.53	19.53	39%
50	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	16.00	4.17	20.17	40%	2.27	18.27	37%	4.38	20.38	41%	2.51	18.51	37%
50	SWO-10	Residence at 563977 Karn Road	510980	4765990	16.00	17.24	33.24	66%	5.83	21.83	44%	22.38	38.38	77%	5.52	21.52	43%
50	SWO-11	Residence at 564028 Karn Road	511396	4766310	16.00	20.69	36.69	73%	9.49	25.49	51%	26.52	42.52	85%	8.29	24.29	49%
50	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	16.00	26.37	42.37	85%	9.52	25.52	51%	36.61	52.61	105%	11.22	27.22	54%
50	SWO-13	Centreville Pond and Conservation Area	511570	4766920	16.00	25.82	41.82	84%	11.94	27.94	56%	33.69	49.69	99%	12.88	28.88	58%
50	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	16.00	20.32	36.32	73%	11.40	27.40	55%	27.53	43.53	87%	17.11	33.11	66%
50	SWO-15	Residences at 564146 Karn Road	512251	4767100	16.00	20.12	36.12	72%	9.67	25.67	51%	25.18	41.18	82%	15.84	31.84	64%
50	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	16.00	20.01	36.01	72%	11.53	27.53	55%	21.93	37.93	76%	14.02	30.02	60%
50	SWO-17	Residence at 564226 Karn Road	512958	4767760	16.00	21.78	37.78	76%	9.59	25.59	51%	22.05	38.05	76%	12.79	28.79	58%
50	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	16.00	28.29	44.29	89%	22.55	38.55	77%	31.74	47.74	95%	22.85	38.85	78%
50	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	16.00	21.23	37.23	74%	16.43	32.43	65%	20.66	36.66	73%	17.44	33.44	67%
50	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	16.00	4.30	20.30	41%	2.73	18.73	37%	5.15	21.15	42%	3.51	19.51	39%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

TSP  
24-Hour

Criteria (ug m <sup>-3</sup> )	Receptor Information					Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
120	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	44.00	34.16	78.16	65%	11.61	55.61	46%	40.19	84.19	70%	21.07	65.07	54%
120	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	44.00	70.48	114.48	95%	24.56	68.56	57%	83.28	127.28	106%	37.07	81.07	68%
120	ZOR-3	Residence at 663951 Rd 66	510216	4770270	44.00	66.27	110.27	92%	30.38	74.38	62%	78.31	122.31	102%	46.85	90.85	76%
120	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	44.00	46.52	90.52	75%	23.80	67.80	56%	66.74	110.74	92%	29.29	73.29	61%
120	ZOR-5	Residence at 334789 33rd Line	508931	4768760	44.00	82.09	126.09	105%	21.01	65.01	54%	100.59	144.59	120%	46.95	90.95	76%
120	ZOR-6	Residence at 334742 33rd Line	509185	4768350	44.00	115.00	159.00	132%	28.55	72.55	60%	130.89	174.89	146%	48.68	92.68	77%
120	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	44.00	52.22	96.22	80%	22.91	66.91	56%	63.93	107.93	90%	31.60	75.60	63%
120	ZOR-8	Residence at 643743 Road 64	508940	4767980	44.00	92.50	136.50	114%	35.67	79.67	66%	102.55	146.55	122%	35.45	79.45	66%
120	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	44.00	89.16	133.16	111%	41.67	85.67	71%	66.27	110.27	92%	23.09	67.09	56%
120	ZOR-10	Residence at 334578 33rd Line	509739	4766780	44.00	41.68	85.68	71%	22.61	66.61	56%	64.80	108.80	91%	16.30	60.30	50%
120	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	44.00	77.35	121.35	101%	30.12	74.12	62%	130.70	174.70	146%	20.60	64.60	54%
120	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	44.00	32.73	76.73	64%	17.56	61.56	51%	56.79	100.79	84%	17.37	61.37	51%
120	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	44.00	29.48	73.48	61%	13.66	57.66	48%	33.04	77.04	64%	16.46	60.46	50%
120	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	44.00	38.36	82.36	69%	18.01	62.01	52%	56.86	100.86	84%	15.26	59.26	49%
120	ING-2	Laurie Hawkins Public School	509019	4765860	44.00	23.74	67.74	56%	8.88	52.88	44%	24.42	68.42	57%	8.72	52.72	44%
120	ING-3	Ingersoll District Collegiate Institute	510512	4766230	44.00	41.17	85.17	71%	18.93	62.93	52%	46.65	90.65	76%	13.08	57.08	48%
120	ING-4	On the river north of 209 County Road 9	509480	4765180	44.00	16.93	60.93	51%	7.07	51.07	43%	25.31	69.31	58%	9.71	53.71	45%
120	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	44.00	20.03	64.03	53%	7.44	51.44	43%	21.40	65.40	54%	7.46	51.46	43%
120	ING-6	Royal Road Public School	510337	4765360	44.00	22.33	66.33	55%	13.35	57.35	48%	27.14	71.14	45%	9.56	53.56	45%
120	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	44.00	10.80	54.80	46%	7.13	51.13	43%	15.89	59.89	50%	6.44	50.44	42%
120	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	44.00	12.55	56.55	47%	9.08	53.08	44%	16.36	60.36	50%	7.07	51.07	43%
120	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	44.00	39.94	83.94	70%	18.08	62.08	52%	58.40	102.40	85%	16.35	60.35	50%
120	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	44.00	28.50	72.50	60%	11.57	55.57	46%	35.03	79.03	66%	11.37	55.37	46%
120	SWO-1	Residence at 584052 Beachville Road	511124	4766750	44.00	99.75	143.75	120%	32.39	76.39	64%	116.41	160.41	134%	28.34	72.34	60%
120	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	44.00	113.02	157.02	131%	46.33	90.33	75%	107.52	151.52	126%	46.96	90.96	76%
120	SWO-3	Residence at 584142 Beachville Road	511722	4767480	44.00	110.39	154.39	129%	68.34	112.34	94%	107.12	151.12	126%	81.39	125.39	104%
120	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	44.00	185.63	229.63	191%	163.28	207.28	173%	212.18	256.18	213%	170.72	214.72	179%
120	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	44.00	66.52	110.52	92%	49.07	93.07	78%	74.98	118.98	99%	54.13	98.13	82%
120	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	44.00	39.53	83.53	70%	27.34	71.34	59%	53.03	97.03	81%	28.60	72.60	61%
120	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	44.00	29.71	73.71	61%	14.73	58.73	49%	35.73	79.73	66%	14.96	58.96	49%
120	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	44.00	14.06	58.06	48%	7.44	51.44	43%	16.58	60.58	50%	8.28	52.28	44%
120	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	44.00	11.73	55.73	46%	6.18	50.18	42%	12.48	56.48	47%	5.90	49.90	42%
120	SWO-10	Residence at 563977 Karn Road	510980	4765990	44.00	57.73	101.73	85%	17.26	61.26	51%	76.51	120.51	100%	16.31	60.31	50%
120	SWO-11	Residence at 564028 Karn Road	511396	4766310	44.00	69.84	113.84	95%	26.05	70.05	58%	87.92	131.92	110%	26.29	70.29	59%
120	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	44.00	88.18	132.18	110%	30.27	74.27	62%	119.80	163.80	136%	33.54	77.54	65%
120	SWO-13	Centreville Pond and Conservation Area	511570	4766920	44.00	87.82	131.82	110%	37.75	81.75	68%	112.55	156.55	130%	38.64	82.64	69%
120	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	44.00	69.61	113.61	95%	37.03	81.03	68%	93.71	137.71	115%	54.45	98.45	82%
120	SWO-15	Residences at 564146 Karn Road	512251	4767100	44.00	69.75	113.75	95%	33.44	77.44	65%	83.68	127.68	106%	52.72	96.72	81%
120	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	44.00	70.44	114.44	95%	33.69	77.69	65%	72.61	116.61	97%	41.48	85.48	71%
120	SWO-17	Residence at 564226 Karn Road	512958	4767760	44.00	80.58	124.58	104%	51.88	95.88	80%	81.24	125.24	104%	51.24	95.24	79%
120	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	44.00	164.76	208.76	174%	147.40	191.40	160%	166.36	210.36	175%	149.01	193.01	161%
120	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	44.00	122.62	166.62	139%	103.72	147.72	123%	121.80	165.80	138%	107.79	151.79	126%
120	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	44.00	14.06	58.06	48%	8.47	52.47	44%	17.23	61.23	51%	11.87	55.87	47%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

TSP  
Annual

Criteria (ug m <sup>-3</sup> )	Receptor Information				Stage 1 (2023-2027)				Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
60	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	19.25	1.59	20.84	35%	0.71	19.97	33%	1.83	21.08	35%	0.82	20.07	33%
60	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	19.25	2.66	21.91	37%	1.03	20.29	34%	3.24	22.50	37%	1.51	20.76	35%
60	ZOR-3	Residence at 663951 Rd 66	510216	4770270	19.25	3.53	22.78	38%	1.20	20.46	34%	4.11	23.37	39%	1.79	21.04	35%
60	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	19.25	3.31	22.56	38%	1.32	20.57	34%	3.82	23.08	38%	1.85	21.10	35%
60	ZOR-5	Residence at 334789 33rd Line	508931	4768760	19.25	3.85	23.10	38%	1.33	20.58	34%	4.39	23.64	39%	1.68	20.93	35%
60	ZOR-6	Residence at 334742 33rd Line	509185	4768350	19.25	4.59	23.85	40%	1.61	20.86	35%	4.90	24.15	40%	1.73	20.98	35%
60	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	19.25	3.06	22.32	37%	1.84	21.09	35%	3.50	22.75	38%	2.14	21.40	36%
60	ZOR-8	Residence at 643743 Road 64	508940	4767980	19.25	3.23	22.48	37%	1.25	20.51	34%	3.23	22.49	37%	1.23	20.49	34%
60	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	19.25	2.99	22.24	37%	1.33	20.58	34%	3.13	22.38	37%	1.06	20.32	34%
60	ZOR-10	Residence at 334578 33rd Line	509739	4766780	19.25	1.76	21.02	35%	0.82	20.07	33%	2.23	21.48	36%	0.75	20.01	33%
60	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	19.25	3.52	22.77	38%	1.56	20.82	35%	5.98	25.23	42%	1.18	20.43	34%
60	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	19.25	1.85	21.11	35%	0.90	20.15	34%	2.43	21.68	36%	0.81	20.07	33%
60	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	19.25	1.93	21.19	35%	1.05	20.31	34%	2.29	21.54	36%	1.30	20.56	34%
60	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	19.25	1.64	20.90	35%	0.75	20.00	33%	2.02	21.27	35%	0.71	19.97	33%
60	ING-2	Laurie Hawkins Public School	509019	4765860	19.25	0.81	20.07	33%	0.41	19.66	33%	0.94	20.19	34%	0.41	19.67	33%
60	ING-3	Ingersoll District Collegiate Institute	510512	4766230	19.25	1.70	20.95	35%	0.83	20.08	33%	2.03	21.29	35%	0.76	20.01	33%
60	ING-4	On the river north of 209 County Road 9	509480	4765180	19.25	0.70	19.95	33%	0.37	19.62	33%	0.84	20.10	33%	0.38	19.63	33%
60	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	19.25	0.65	19.90	33%	0.34	19.60	33%	0.74	20.00	33%	0.34	19.59	33%
60	ING-6	Royal Road Public School	510337	4765360	19.25	0.94	20.20	34%	0.50	19.75	33%	1.09	20.35	34%	0.50	19.75	33%
60	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	19.25	0.46	19.71	33%	0.25	19.50	32%	0.52	19.77	33%	0.26	19.51	33%
60	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	19.25	0.60	19.85	33%	0.34	19.59	33%	0.71	19.96	33%	0.34	19.60	33%
60	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	19.25	1.29	20.55	34%	0.65	19.91	33%	1.52	20.78	35%	0.64	19.89	33%
60	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	19.25	0.86	20.11	34%	0.44	19.69	33%	0.99	20.25	34%	0.44	19.70	33%
60	SWO-1	Residence at 584052 Beachville Road	511124	4766750	19.25	3.73	22.99	38%	1.72	20.98	35%	5.64	24.89	41%	1.36	20.62	34%
60	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	19.25	6.64	25.89	43%	3.32	22.57	38%	8.45	27.70	46%	2.45	21.70	36%
60	SWO-3	Residence at 584142 Beachville Road	511722	4767480	19.25	8.04	27.30	45%	4.48	23.73	40%	9.17	28.42	47%	3.62	22.88	38%
60	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	19.25	27.26	46.51	78%	23.62	42.88	71%	27.48	46.74	78%	23.88	43.13	72%
60	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	19.25	6.48	25.73	43%	4.39	23.65	39%	6.83	26.08	43%	4.77	24.02	40%
60	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	19.25	2.21	21.47	36%	1.25	20.50	34%	2.41	21.67	36%	1.43	20.69	34%
60	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	19.25	1.34	20.59	34%	0.76	20.01	33%	1.48	20.74	35%	0.85	20.11	34%
60	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	19.25	0.57	19.82	33%	0.30	19.55	33%	0.62	19.88	33%	0.35	19.60	33%
60	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	19.25	0.37	19.63	33%	0.20	19.45	32%	0.41	19.66	33%	0.22	19.48	32%
60	SWO-10	Residence at 563977 Karn Road	510980	4765990	19.25	1.69	20.94	35%	0.84	20.09	33%	2.13	21.38	36%	0.80	20.05	33%
60	SWO-11	Residence at 564028 Karn Road	511396	4766310	19.25	2.53	21.79	36%	1.20	20.45	34%	3.29	22.54	38%	1.06	20.32	34%
60	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	19.25	3.10	22.35	37%	1.46	20.71	35%	3.95	23.20	39%	1.29	20.55	34%
60	SWO-13	Centreville Pond and Conservation Area	511570	4766920	19.25	4.34	23.60	39%	2.18	21.43	36%	6.12	25.38	42%	1.76	21.01	35%
60	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	19.25	4.25	23.50	39%	2.31	21.57	36%	4.91	24.16	40%	2.08	21.34	36%
60	SWO-15	Residences at 564146 Karn Road	512251	4767100	19.25	4.59	23.85	40%	2.58	21.84	36%	5.09	24.35	41%	2.37	21.63	36%
60	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	19.25	4.95	24.20	40%	2.93	22.18	37%	5.41	24.67	41%	2.74	21.99	37%
60	SWO-17	Residence at 564226 Karn Road	512958	4767760	19.25	8.31	27.56	46%	6.51	25.76	43%	8.77	28.02	47%	6.61	25.86	43%
60	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	19.25	22.73	41.98	70%	20.17	39.42	66%	23.09	42.35	71%	20.28	39.53	66%
60	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	19.25	18.68	37.93	63%	17.06	36.31	61%	18.88	38.14	64%	17.08	36.33	61%
60	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	19.25	0.90	20.16	34%	0.57	19.82	33%	0.98	20.24	34%	0.59	19.84	33%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

Dustfall  
Annual

Criteria (ug m <sup>-3</sup> )	Receptor Information				Stage 1 (2023-2027)				Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
4.6	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.00	0.10	0.10	2%	0.04	0.04	1%	0.11	0.11	2%	0.04	0.04	1%
4.6	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.00	0.16	0.16	3%	0.06	0.06	1%	0.21	0.21	5%	0.10	0.10	2%
4.6	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.00	0.27	0.27	6%	0.08	0.08	2%	0.29	0.29	6%	0.13	0.13	3%
4.6	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.00	0.39	0.39	9%	0.11	0.11	2%	0.43	0.43	9%	0.20	0.20	4%
4.6	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.00	0.29	0.29	6%	0.09	0.09	2%	0.31	0.31	7%	0.14	0.14	3%
4.6	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.00	0.49	0.49	11%	0.12	0.12	3%	0.42	0.42	9%	0.15	0.15	3%
4.6	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.00	0.42	0.42	9%	0.17	0.17	4%	0.37	0.37	8%	0.22	0.22	5%
4.6	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.00	0.41	0.41	9%	0.11	0.11	2%	0.23	0.23	5%	0.09	0.09	2%
4.6	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.00	0.37	0.37	8%	0.14	0.14	3%	0.25	0.25	5%	0.08	0.08	2%
4.6	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.00	0.11	0.11	2%	0.07	0.07	1%	0.12	0.12	3%	0.04	0.04	1%
4.6	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.00	0.26	0.26	6%	0.14	0.14	3%	0.28	0.28	6%	0.07	0.07	1%
4.6	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.00	0.12	0.12	3%	0.07	0.07	1%	0.12	0.12	3%	0.03	0.03	1%
4.6	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.00	0.26	0.26	6%	0.10	0.10	2%	0.25	0.25	6%	0.13	0.13	3%
4.6	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.00	0.09	0.09	2%	0.06	0.06	1%	0.10	0.10	2%	0.03	0.03	1%
4.6	ING-2	Laurie Hawkins Public School	509019	4765860	0.00	0.04	0.04	1%	0.02	0.02	1%	0.04	0.04	1%	0.02	0.02	0%
4.6	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.00	0.13	0.13	3%	0.05	0.05	1%	0.11	0.11	2%	0.03	0.03	1%
4.6	ING-4	On the river north of 209 County Road 9	509480	4765180	0.00	0.03	0.03	1%	0.02	0.02	0%	0.04	0.04	1%	0.02	0.02	0%
4.6	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.00	0.03	0.03	1%	0.02	0.02	0%	0.03	0.03	1%	0.01	0.01	0%
4.6	ING-6	Royal Road Public School	510337	4765360	0.00	0.06	0.06	1%	0.02	0.02	1%	0.05	0.05	1%	0.02	0.02	0%
4.6	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.00	0.02	0.02	0%	0.01	0.01	0%	0.02	0.02	1%	0.01	0.01	0%
4.6	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.00	0.03	0.03	1%	0.01	0.01	0%	0.03	0.03	1%	0.01	0.01	0%
4.6	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.00	0.07	0.07	2%	0.03	0.03	1%	0.08	0.08	2%	0.03	0.03	1%
4.6	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.00	0.04	0.04	1%	0.02	0.02	0%	0.05	0.05	1%	0.02	0.02	0%
4.6	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.00	0.26	0.26	6%	0.11	0.11	2%	0.31	0.31	7%	0.07	0.07	1%
4.6	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.00	0.51	0.51	11%	0.25	0.25	6%	0.52	0.52	11%	0.17	0.17	4%
4.6	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.00	0.60	0.60	13%	0.39	0.39	9%	0.62	0.62	14%	0.31	0.31	7%
4.6	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.00	1.72	1.72	37%	1.35	1.35	29%	1.66	1.66	36%	1.33	1.33	29%
4.6	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.00	0.77	0.77	17%	0.50	0.50	11%	0.80	0.80	17%	0.55	0.55	12%
4.6	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.00	0.29	0.29	6%	0.13	0.13	3%	0.23	0.23	5%	0.12	0.12	3%
4.6	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.00	0.17	0.17	4%	0.06	0.06	1%	0.16	0.16	3%	0.08	0.08	2%
4.6	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.00	0.08	0.08	2%	0.02	0.02	1%	0.06	0.06	1%	0.03	0.03	1%
4.6	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.00	0.05	0.05	1%	0.02	0.02	0%	0.04	0.04	1%	0.02	0.02	0%
4.6	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.00	0.11	0.11	2%	0.05	0.05	1%	0.12	0.12	3%	0.04	0.04	1%
4.6	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.00	0.16	0.16	4%	0.07	0.07	1%	0.17	0.17	4%	0.05	0.05	1%
4.6	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.00	0.22	0.22	5%	0.09	0.09	2%	0.22	0.22	5%	0.07	0.07	2%
4.6	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.00	0.34	0.34	7%	0.16	0.16	3%	0.32	0.32	7%	0.10	0.10	2%
4.6	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.00	0.31	0.31	7%	0.16	0.16	4%	0.28	0.28	6%	0.15	0.15	3%
4.6	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.00	0.27	0.27	6%	0.18	0.18	4%	0.29	0.29	6%	0.16	0.16	4%
4.6	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.00	0.29	0.29	6%	0.20	0.20	4%	0.31	0.31	7%	0.18	0.18	4%
4.6	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.00	0.31	0.31	7%	0.20	0.20	4%	0.30	0.30	7%	0.21	0.21	5%
4.6	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.00	0.52	0.52	11%	0.37	0.37	8%	0.48	0.48	11%	0.38	0.38	8%
4.6	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.00	0.35	0.35	8%	0.30	0.30	7%	0.36	0.36	8%	0.30	0.30	7%
4.6	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.00	0.09	0.09	2%	0.05	0.05	1%	0.10	0.10	2%	0.05	0.05	1%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.



**Dustfall  
30-Day**

Criteria (ug m <sup>-3</sup> )	Receptor Information				Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)			
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
7	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.00	0.10	0.10	1%	0.04	0.04	1%	0.11	0.11	2%	0.04	0.04	1%
7	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.00	0.16	0.16	2%	0.06	0.06	1%	0.21	0.21	3%	0.21	0.24	3%
7	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.00	0.27	0.27	4%	0.08	0.08	1%	0.29	0.29	4%	0.29	0.33	5%
7	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.00	0.39	0.39	6%	0.11	0.11	2%	0.43	0.43	6%	0.43	0.48	7%
7	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.00	0.29	0.29	4%	0.09	0.09	1%	0.31	0.31	4%	0.31	0.36	5%
7	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.00	0.49	0.49	7%	0.12	0.12	2%	0.42	0.42	6%	0.42	0.49	7%
7	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.00	0.42	0.42	6%	0.17	0.17	2%	0.37	0.37	5%	0.37	0.43	6%
7	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.00	0.41	0.41	6%	0.11	0.11	2%	0.23	0.23	3%	0.23	0.29	4%
7	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.00	0.37	0.37	5%	0.14	0.14	2%	0.25	0.25	4%	0.25	0.30	4%
7	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.00	0.11	0.11	2%	0.07	0.07	1%	0.12	0.12	2%	0.12	0.13	2%
7	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.00	0.26	0.26	4%	0.14	0.14	2%	0.28	0.28	4%	0.28	0.32	5%
7	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.00	0.12	0.12	2%	0.07	0.07	1%	0.12	0.12	2%	0.12	0.14	2%
7	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.00	0.26	0.26	4%	0.10	0.10	1%	0.25	0.25	4%	0.25	0.29	4%
7	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.00	0.09	0.09	1%	0.06	0.06	1%	0.10	0.10	1%	0.10	0.11	2%
7	ING-2	Laurie Hawkins Public School	509019	4765860	0.00	0.04	0.04	1%	0.02	0.02	0%	0.04	0.04	1%	0.04	0.05	1%
7	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.00	0.13	0.13	2%	0.05	0.05	1%	0.11	0.11	2%	0.11	0.13	2%
7	ING-4	On the river north of 209 County Road 9	509480	4765180	0.00	0.03	0.03	0%	0.02	0.02	0%	0.04	0.04	1%	0.04	0.05	1%
7	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.00	0.03	0.03	0%	0.02	0.02	0%	0.03	0.03	0%	0.03	0.04	1%
7	ING-6	Royal Road Public School	510337	4765360	0.00	0.06	0.06	1%	0.02	0.02	0%	0.05	0.05	1%	0.05	0.06	1%
7	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.00	0.02	0.02	0%	0.01	0.01	0%	0.02	0.02	0%	0.02	0.03	0%
7	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.00	0.03	0.03	0%	0.01	0.01	0%	0.03	0.03	0%	0.03	0.03	0%
7	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.00	0.07	0.07	1%	0.03	0.03	0%	0.08	0.08	1%	0.08	0.09	1%
7	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.00	0.04	0.04	1%	0.02	0.02	0%	0.05	0.05	1%	0.05	0.05	1%
7	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.00	0.26	0.26	4%	0.11	0.11	2%	0.31	0.31	4%	0.31	0.35	5%
7	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.00	0.51	0.51	7%	0.25	0.25	4%	0.52	0.52	7%	0.52	0.59	8%
7	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.00	0.60	0.60	9%	0.39	0.39	6%	0.62	0.62	9%	0.62	0.71	10%
7	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.00	1.72	1.72	25%	1.35	1.35	19%	1.66	1.66	24%	1.66	1.91	27%
7	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.00	0.77	0.77	11%	0.50	0.50	7%	0.80	0.80	11%	0.80	0.91	13%
7	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.00	0.29	0.29	4%	0.13	0.13	2%	0.23	0.23	3%	0.23	0.27	4%
7	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.00	0.17	0.17	2%	0.06	0.06	1%	0.16	0.16	2%	0.16	0.18	3%
7	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.00	0.08	0.08	1%	0.02	0.02	0%	0.06	0.06	1%	0.06	0.07	1%
7	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.00	0.05	0.05	1%	0.02	0.02	0%	0.04	0.04	1%	0.04	0.04	1%
7	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.00	0.11	0.11	2%	0.05	0.05	1%	0.12	0.12	2%	0.12	0.13	2%
7	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.00	0.16	0.16	2%	0.07	0.07	1%	0.17	0.17	2%	0.17	0.19	3%
7	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.00	0.22	0.22	3%	0.09	0.09	1%	0.22	0.22	3%	0.22	0.25	4%
7	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.00	0.34	0.34	5%	0.16	0.16	2%	0.32	0.32	5%	0.32	0.37	5%
7	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.00	0.31	0.31	4%	0.16	0.16	2%	0.28	0.28	4%	0.28	0.32	5%
7	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.00	0.27	0.27	4%	0.18	0.18	3%	0.29	0.29	4%	0.29	0.33	5%
7	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.00	0.29	0.29	4%	0.20	0.20	3%	0.31	0.31	4%	0.31	0.36	5%
7	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.00	0.31	0.31	4%	0.20	0.20	3%	0.30	0.30	4%	0.30	0.35	5%
7	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.00	0.52	0.52	7%	0.37	0.37	5%	0.48	0.48	7%	0.48	0.56	8%
7	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.00	0.35	0.35	5%	0.30	0.30	4%	0.36	0.36	5%	0.36	0.41	6%
7	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.00	0.09	0.09	1%	0.05	0.05	1%	0.10	0.10	1%	0.10	0.11	2%

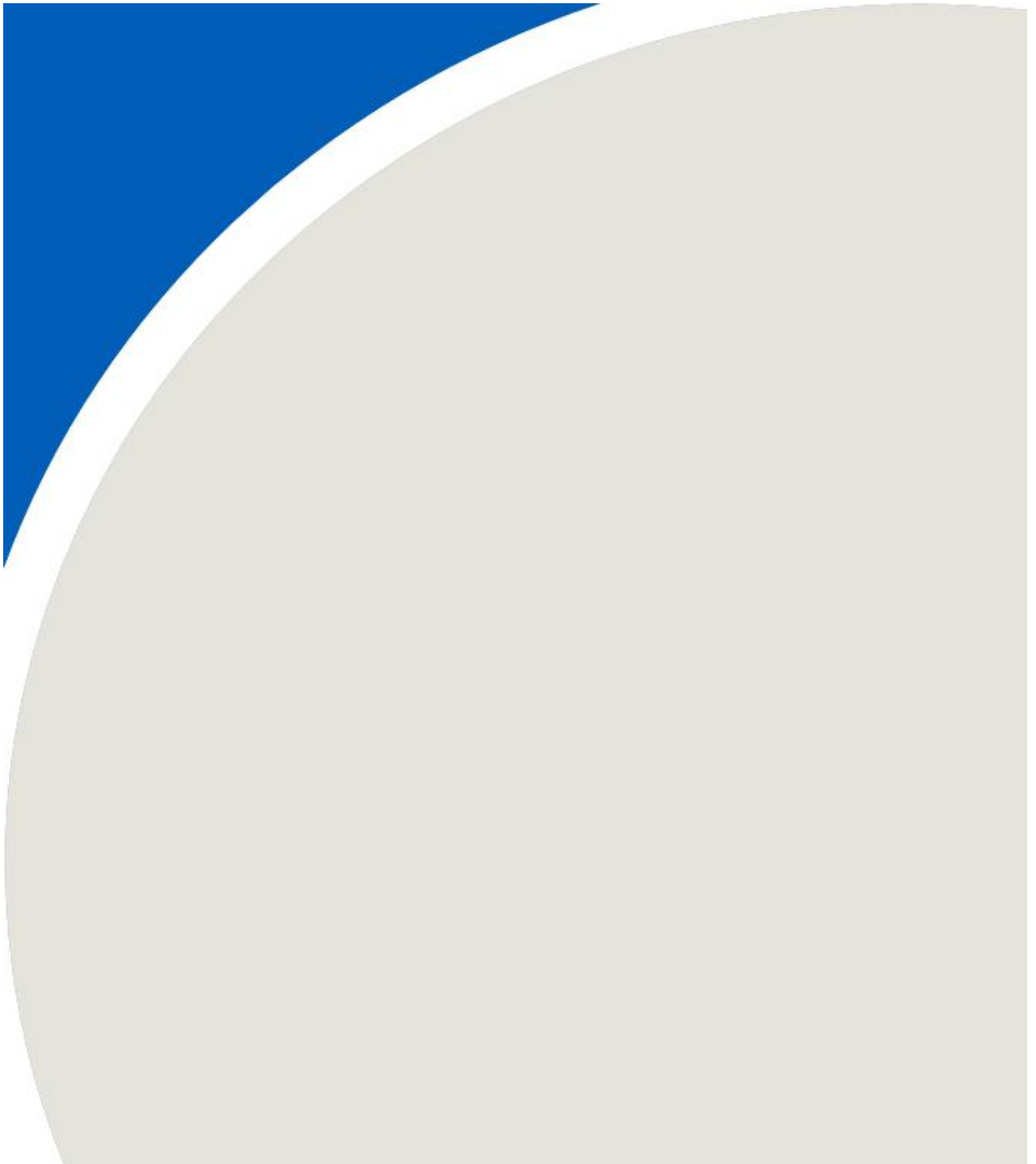
\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

## APPENDIX K



**Appendix K: Stage 1: On-Site Mobile Equipment - Mitigated**

UNPAVED ROAD SECTIONS - AP-42 Section 13.2.2  
PAVED ROAD SECTIONS - AP-42 Section 13.2.1

<b>Paved Roads:</b>	$E = k (sL)^{0.91} (W)^{1.02}$
<b>Unpaved Roads - Industrial:</b>	$E = 281.9 k (s / 12)^a (W / 3)^b$
<b>Unpaved Roads - Public:</b>	$E = 281.9 k (s / 12)^a (S / 30)^c / (M / 0.5)^d - C$

**E** particulate emission factor (g/VKT)      **W** average weight of the vehicles traveling the road (US short tons)      **M** surface material moisture content (%)  
**k** particle size multiplier (see below)      **s** surface material silt content (%)      **S** mean vehicle speed (mph)  
**sL** road surface silt loading (g/m<sup>2</sup>)      **C** emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear      **a,b,c,d** constants (see below)

Route ID [1]	Route Description	Traffic Passes [2]			Segment Length [2] (m)	Road Surface [3]	Roadway Type [4]	Mean Vehicle Speed		Average Vehicle Weight [5] (tons)	Surface Material Moisture Content [6] (%)	Surface Silt Content [7] (%)	Road Surface Silt Loading [8] (g/m <sup>2</sup> )	Base AP-42 Emission Factor				Base Emission Rate				Additional Control Efficiency Applied (%)	Final Controlled Emission Rate							
		Hourly (#/h)	Daily (#/d)	Annual (#/a)				(km/h)	(mph)					TSP (g/VKT)	PM <sub>10</sub> (g/VKT)	PM <sub>2.5</sub> (g/VKT)	Silica (g/VKT)	TSP (g/s)	PM <sub>10</sub> (g/s)	PM <sub>2.5</sub> (g/s)	Silica (g/s)		TSP (g/s)	Data Quality Rating	PM <sub>10</sub> (g/s)	Data Quality Rating	PM <sub>2.5</sub> (g/s)	Data Quality Rating	Silica (g/s)	Data Quality Rating
P_GATE1	Paved area at the weight scale entrance	1	1	1	443	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00	0.0E+00	2.8E-02	3.7E-03	8.8E-04	0.0E+00		2.8E-02		3.7E-03		8.8E-04		0.0E+00	
UP_LF_2	Unpaved road from gatehouse to BF int S3	1	1	1	85	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	1.0E-01	1.8E-02	1.8E-03	0.0E+00	95%	5.2E-03		8.8E-04		8.8E-05		0.0E+00	
UP_S2_2_MAIN	Road segment from stage 2 active face to main LF road	1	1	1	245	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	3.0E-01	5.0E-02	5.0E-03	0.0E+00	95%	1.5E-02		2.5E-03		2.5E-04		0.0E+00	
UP_S1	Unpaved road to stage 1 - Waste soil and waste	1	1	1	407	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	4.9E-01	8.4E-02	8.4E-03	0.0E+00	95%	2.5E-02		4.2E-03		4.2E-04		0.0E+00	
UP_S2_C	Unpaved road into stage 2 construction area	1	1	1	75	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	9.1E-02	1.6E-02	1.6E-03	0.0E+00	95%	4.6E-03		7.8E-04		7.8E-05		0.0E+00	
UP_MAIN_1	Main landfill haul route to active faces.	1	1	1	357	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	4.3E-01	7.3E-02	7.3E-03	0.0E+00	95%	2.2E-02		3.7E-03		3.7E-04		0.0E+00	
UP_S4_C	Unpaved road leading to stage 4 construction area	0	1	1	322	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_S3	Unpaved road leading to the stage 3 active face	0	1	1	241	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
P_N_ENTER_1	Paved Section of the north entrance for finished goods	1	1	1	181	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.5E-03	8.4E-04	2.0E-04			6.5E-03		8.4E-04		2.0E-04			
P_NORTH_2	Paved North Entrance second paved section	1	1	1	178	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.4E-03	8.2E-04	2.0E-04			6.4E-03		8.2E-04		2.0E-04			
UP_NORTH_1	North Entrance unpaved section	1	1	1	479	Unpaved	Industrial	35	22	20.8		25.2%		7.7E+03	2.0E+03	2.0E+02		1.0E+00	2.6E-01	2.6E-02		95%	5.1E-02		1.3E-02		1.3E-03			
P_NORTH_3	North Entrance Third Paved Section	1	1	1	539	Paved	Industrial	35	22	62.5			1.24	4.0E+02	5.1E+01	1.2E+01		5.9E-02	7.7E-03	1.9E-03			5.9E-02		7.7E-03		1.9E-03			
P_SOUTH_1	Paved south entrance	1	1	1	256	Paved	Industrial	35	22	13.7			1.24	8.4E+01	1.1E+01	2.6E+00		6.0E-03	7.7E-04	1.9E-04			6.0E-03		7.7E-04		1.9E-04			
UP_SOUTH_2	South entrance unpaved road in working area	1	1	1	758	Unpaved	Industrial	35	22	26.3		25.2%		8.6E+03	2.2E+03	2.2E+02		1.8E+00	4.6E-01	4.6E-02		95%	9.0E-02		2.3E-02		2.3E-03			
P_SOUTH_2	Paved road leading out of the working area and to CR6	1	1	1	396	Paved	Industrial	35	22	39.0			1.24	2.4E+02	3.2E+01	7.7E+00		2.7E-02	3.5E-03	8.4E-04			2.7E-02		3.5E-03		8.4E-04			
UP_S1_WSPILE	Unpaved Road to Stage 1 waste soil pile	1	1	1	270	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		3.3E-01	5.5E-02	5.5E-03		95%	1.6E-02		2.8E-03		2.8E-04			
UP_S3_WSP	Stage 3 Waste soil pile to active face haul route	0	1	1	83	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_MAIN_2	Main haul route section 2, stage 1 to stage 2	1	1	1	51	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		6.2E-02	1.1E-02	1.1E-03		95%	3.1E-03		5.3E-04		5.3E-05			
UP_MAIN_3	Unpaved main haul route, stage 2 to stage 3	0	1	1	203	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_MAIN_4	Unpaved main haul route stage 3 to stage 4	0	1	1	480	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_QRY_PC	Unpaved road leading to the primary crusher	1	1	1	598	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.4E+00	3.2E-01	3.2E-02		95%	6.8E-02		1.6E-02		1.6E-03			
UP_QRY_OB	Stage 1 - Overburden removal and quarry hauling	1	1	1	541	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		1.8E+00	4.2E-01	4.2E-02		95%	9.0E-02		2.1E-02		2.1E-03			
UP_QRY_S1_2	Stage 1 - Quarry haul route	1	1	1	555	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		1.8E+00	4.3E-01	4.3E-02		95%	9.2E-02		2.1E-02		2.1E-03			
UP_OB_S1	Stage 1 - overburden removal	1	1	1	629	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		2.1E+00	4.9E-01	4.9E-02		95%	1.0E-01		2.4E-02		2.4E-03			
UP_BF_S1_S2	Stage 1 - overburden transfer to S2 for backfill	1	1	1	875	Unpaved	Industrial	35	22	83.0		6.4%		6.3E+03	1.1E+03	1.1E+02		1.5E+00	2.6E-01	2.6E-02		95%	7.7E-02		1.3E-02		1.3E-03			
UP_QRY_S3	Stage 3 - Quarry haul route	0	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_S3_OB	Unpaved road for overburden removal	0	1	1	1480	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
P_CR6_LF	County road 6	1	1	1	4422	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01		1.1E-02	1.4E-03	3.4E-04			1.1E-02		1.4E-03		3.4E-04			
P_HAULROUTE	Paved section of the LF Haul route	1	1	1	1657	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00		1.1E-01	1.4E-02	3.3E-03			1.1E-01		1.4E-02		3.3E-03			
UP_HAUL	Unpaved portion of the haul route	1	1	1	1042	Paved	Industrial	35	22	36.6		6.4%	1.24	2.3E+02	3.0E+01	7.2E+00	0.0E+00	6.6E-02	8.6E-03	2.1E-03	0.0E+00		6.6E-02		8.6E-03		2.1E-03		0.0E+00	
EQUIP_S1	Equipment at Stage 1 Active Face	1	1	1	30	Unpaved	Industrial	5	3	40.3		6.4%		4.6E+03	7.7E+02	7.7E+01	0.0E+00	3.8E-02	6.4E-03	6.4E-04	0.0E+00	95%	1.9E-03		3.2E-04		3.2E-05		0.0E+00	
S3_EQUIP	Equipment at Stage 3 Active Face	0	1	1	30	Unpaved	Industrial	5	3	40.3		6.4%		4.6E+03	7.7E+02	7.7E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_S3_OB_NLF	Unpaved road for OB removal for stage 3 no landfill	0	1	1	1494	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_NLF_OB_S1	Unpaved road for OB removal for stage 1 no landfill	1	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	5.5E+00	1.3E+00	1.3E-01	0.0E+00	95%	2.8E-01		6.4E-02		6.4E-03		0.0E+00	
P_CR6B	CR6 roadway background traffic only	1	1	1	4424	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01	0.0E+00	1.1E-02	1.4E-03	3.4E-04	0.0E+00		1.1E-02		1.4E-03		3.4E-04		0.0E+00	

**Constants for Mobile Emission Equations**

Roadway Type	Contaminant	k	a	b	c	d	Quality
Paved Roads:	PM <sub>2.5</sub>	0.15	-	-	-	-	-
	PM <sub>10</sub>	0.62	-	-	-	-	-
	TSP (44)	4.79	-	-	-	-	-
Unpaved Roads - Industrial:	PM <sub>2.5</sub>	0.15	0.9	0.45	-	-	C
	PM <sub>10</sub>	1.5	0.9	0.45	-	-	B
	TSP (44)	7.32	0.6	0.45	-	-	B
Unpaved Roads - Public:	PM <sub>2.5</sub>	0.18	1	-	0.2	0.5	C
	PM <sub>10</sub>	1.8	1	-	0.2	0.5	B
	TSP (44)	8.96	1	-	0.49	0.2	B

- [1] Route ID numbers provided on site plan.
- [2] Length of a specific road segment. A separate segment should be used whenever one or more parameters change.
- [3] Paved surfaces include asphalt, concrete, and recycled asphalt (if it forms a relatively consistent surface).
- [4] Publicly accessible and dominated by light vehicles, or industrial, and dominated by heavy vehicles.
- [5] The average vehicle weight reflects the average of the empty and loaded vehicle weight, for travel in both directions.
- [6] Required only for publicly accessible unpaved roads.
- [7] Required only for unpaved roads (public and industrial).
- [8] Required only for

**Appendix K: Stage 3: On-Site Mobile Equipment - Mitigated**

UNPAVED ROAD SECTIONS - AP-42 Section 13.2.2  
PAVED ROAD SECTIONS - AP-42 Section 13.2.1

<b>Paved Roads:</b>	$E = k (sL)^{0.91} (W)^{1.02}$
<b>Unpaved Roads - Industrial:</b>	$E = 281.9 k (s / 12)^a (W / 3)^b$
<b>Unpaved Roads - Public:</b>	$E = 281.9 k (s / 12)^a (S / 30)^c / (M / 0.5)^d - C$

**E** particulate emission factor (g/VKT)      **W** average weight of the vehicles traveling the road (US short tons)      **M** surface material moisture content (%)  
**k** particle size multiplier (see below)      **s** surface material silt content (%)      **S** mean vehicle speed (mph)  
**sL** road surface silt loading (g/m<sup>2</sup>)      **C** emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear      **a,b,c,d** constants (see below)

Route ID [1]	Route Description	Traffic Passes [2]			Segment Length [2] (m)	Road Surface [3]	Roadway Type [4]	Mean Vehicle Speed		Average Vehicle Weight [5] (tons)	Surface Material Moisture Content [6] (%)	Surface Silt Content [7] (%)	Road Surface Silt Loading [8] (g/m <sup>2</sup> )	Base AP-42 Emission Factor				Base Emission Rate				Additional Control Efficiency Applied (%)	Final Controlled Emission Rate							
		Hourly (#/h)	Daily (#/d)	Annual (#/a)				(km/h)	(mph)					TSP (g/VKT)	PM <sub>10</sub> (g/VKT)	PM <sub>2.5</sub> (g/VKT)	Silica (g/VKT)	TSP (g/s)	PM <sub>10</sub> (g/s)	PM <sub>2.5</sub> (g/s)	Silica (g/s)		TSP (g/s)	Data Quality Rating	PM <sub>10</sub> (g/s)	Data Quality Rating	PM <sub>2.5</sub> (g/s)	Data Quality Rating	Silica (g/s)	Data Quality Rating
P_GATE1	Paved area at the weight scale entrance	1	1	1	443	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00	0.0E+00	2.8E-02	3.7E-03	8.8E-04	0.0E+00		2.8E-02		3.7E-03		8.8E-04		0.0E+00	
UP_LF_2	Unpaved road from gatehouse to BF int S3	1	1	1	85	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	1.0E-01	1.8E-02	1.8E-03	0.0E+00	95%	5.2E-03		8.8E-04		8.8E-05		0.0E+00	
UP_S2_2_MAIN	Road segment from stage 2 active face to main LF road	1	1	1	245	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	3.0E-01	5.0E-02	5.0E-03	0.0E+00	95%	1.5E-02		2.5E-03		2.5E-04		0.0E+00	
UP_S1	Unpaved road to stage 1 - Waste soil and waste	0	1	1	407	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_S2_C	Unpaved road into stage 2 construction area	0	1	1	75	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
UP_MAIN_1	Main landfill haul route to active faces.	1	1	1	357	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	4.3E-01	7.3E-02	7.3E-03	0.0E+00	95%	2.2E-02		3.7E-03		3.7E-04		0.0E+00	
UP_S4_C	Unpaved road leading to stage 4 construction area	1	1	1	322	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	3.9E-01	6.6E-02	6.6E-03	0.0E+00	95%	2.0E-02		3.3E-03		3.3E-04		0.0E+00	
UP_S3	Unpaved road leading to the stage 3 active face	1	1	1	241	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01	0.0E+00	2.9E-01	5.0E-02	5.0E-03	0.0E+00	95%	1.5E-02		2.5E-03		2.5E-04		0.0E+00	
P_N_ENTER_1	Paved Section of the north entrance for finished goods	1	1	1	181	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.5E-03	8.4E-04	2.0E-04			6.5E-03		8.4E-04		2.0E-04			
P_NORTH_2	Paved North Entrance second paved section	1	1	1	178	Paved	Industrial	35	22	20.8			1.24	1.3E+02	1.7E+01	4.0E+00		6.4E-03	8.2E-04	2.0E-04			6.4E-03		8.2E-04		2.0E-04			
UP_NORTH_1	North Entrance unpaved section	1	1	1	479	Unpaved	Industrial	35	22	20.8		25.2%		7.7E+03	2.0E+03	2.0E+02		1.0E+00	2.6E-01	2.6E-02		95%	5.1E-02		1.3E-02		1.3E-03			
P_NORTH_3	North Entrance Third Paved Section	1	1	1	539	Paved	Industrial	35	22	62.5			1.24	4.0E+02	5.1E+01	1.2E+01		5.9E-02	7.7E-03	1.9E-03			5.9E-02		7.7E-03		1.9E-03			
P_SOUTH_1	Paved south entrance	1	1	1	256	Paved	Industrial	35	22	13.7			1.24	8.4E+01	1.1E+01	2.6E+00		6.0E-03	7.7E-04	1.9E-04			6.0E-03		7.7E-04		1.9E-04			
UP_SOUTH_2	South entrance unpaved road in working area	1	1	1	758	Unpaved	Industrial	35	22	26.3		25.2%		8.6E+03	2.2E+03	2.2E+02		1.8E+00	4.6E-01	4.6E-02		95%	9.0E-02		2.3E-02		2.3E-03			
P_SOUTH_2	Paved road leading out of the working area and to CR6	1	1	1	396	Paved	Industrial	35	22	39.0			1.24	2.4E+02	3.2E+01	7.7E+00		2.7E-02	3.5E-03	8.4E-04			2.7E-02		3.5E-03		8.4E-04			
UP_S1_WSPILE	Unpaved Road to Stage 1 waste soil pile	0	1	1	270	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_S3_WSP	Stage 3 Waste soil pile to active face haul route	1	1	1	83	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		1.0E-01	1.7E-02	1.7E-03		95%	5.0E-03		8.5E-04		8.5E-05			
UP_MAIN_2	Main haul route section 2, stage 1 to stage 2	1	1	1	51	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		6.2E-02	1.1E-02	1.1E-03		95%	3.1E-03		5.3E-04		5.3E-05			
UP_MAIN_3	Unpaved main haul route, stage 2 to stage 3	1	1	1	203	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		2.5E-01	4.2E-02	4.2E-03		95%	1.2E-02		2.1E-03		2.1E-04			
UP_MAIN_4	Unpaved main haul route stage 3 to stage 4	1	1	1	480	Unpaved	Industrial	35	22	36.6		6.4%		4.4E+03	7.4E+02	7.4E+01		5.8E-01	9.9E-02	9.9E-03		95%	2.9E-02		4.9E-03		4.9E-04			
UP_QRY_PC	Unpaved road leading to the primary crusher	1	1	1	598	Unpaved	Industrial	35	22	36.6		18.5%		8.2E+03	1.9E+03	1.9E+02		1.4E+00	3.2E-01	3.2E-02		95%	6.8E-02		1.6E-02		1.6E-03			
UP_QRY_OB	Stage 1 - Overburden removal and quarry hauling	0	1	1	541	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_QRY_S1_2	Stage 1 - Quarry haul route	0	1	1	555	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_OB_S1	Stage 1 - overburden removal	0	1	1	629	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_BF_S1_S2	Stage 1 - overburden transfer to S2 for backfill	0	1	1	875	Unpaved	Industrial	35	22	83.0		6.4%		6.3E+03	1.1E+03	1.1E+02		0.0E+00	0.0E+00	0.0E+00		95%	0.0E+00		0.0E+00		0.0E+00			
UP_QRY_S3	Stage 3 - Quarry haul route	1	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		5.5E+00	1.3E+00	1.3E-01		95%	2.8E-01		6.4E-02		6.4E-03			
UP_S3_OB	Unpaved road for overburden removal	1	1	1	1480	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02		4.9E+00	1.1E+00	1.1E-01		95%	2.4E-01		5.7E-02		5.7E-03			
P_CR6_LF	County road 6	1	1	1	4422	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01		1.1E-02	1.4E-03	3.4E-04			1.1E-02		1.4E-03		3.4E-04			
P_HAULROUTE	Paved section of the LF Haul route	1	1	1	1657	Paved	Industrial	35	22	36.6			1.24	2.3E+02	3.0E+01	7.2E+00		1.1E-01	1.4E-02	3.3E-03			1.1E-01		1.4E-02		3.3E-03			
UP_HAUL	Unpaved portion of the haul route	1	1	1	1042	Paved	Industrial	35	22	36.6		6.4%	1.24	2.3E+02	3.0E+01	7.2E+00	0.0E+00	6.6E-02	8.6E-03	2.1E-03	0.0E+00		6.6E-02		8.6E-03		2.1E-03		0.0E+00	
EQUIP_S1	Equipment at Stage 1 Active Face	0	1	1	30	Unpaved	Industrial	5	3	40.3		6.4%		4.6E+03	7.7E+02	7.7E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
S3_EQUIP	Equipment at Stage 3 Active Face	1	1	1	30	Unpaved	Industrial	5	3	40.3		6.4%		4.6E+03	7.7E+02	7.7E+01	0.0E+00	3.8E-02	6.4E-03	6.4E-04	0.0E+00	95%	1.9E-03		3.2E-04		3.2E-05		0.0E+00	
UP_S3_OB_NLF	Unpaved road for OB removal for stage 3 no landfill	1	1	1	1494	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	4.9E+00	1.2E+00	1.2E-01	0.0E+00	95%	2.5E-01		5.8E-02		5.8E-03		0.0E+00	
UP_NLF_OB_S1	Unpaved road for OB removal for stage 1 no landfill	0	1	1	1662	Unpaved	Industrial	35	22	83.0		18.5%		1.2E+04	2.8E+03	2.8E+02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	95%	0.0E+00		0.0E+00		0.0E+00		0.0E+00	
P_CR6B	CR6 roadway background traffic only	1	1	1	4424	Paved	Public	80	50	7.58			0.20	8.7E+00	1.1E+00	2.7E-01		1.1E-02	1.4E-03	3.4E-04			1.1E-02		1.4E-03		3.4E-04		0.0E+00	

**Constants for Mobile Emission Equations**

Roadway Type	Contaminant	k	a	b	c	d	Quality
Paved Roads:	PM <sub>2.5</sub>	0.15	-	-	-	-	-
	PM <sub>10</sub>	0.62	-	-	-	-	-
	TSP	4.79	-	-	-	-	-
Unpaved Roads - Industrial:	PM <sub>2.5</sub>	0.15	0.9	0.45	-	-	C
	PM <sub>10</sub>	1.5	0.9	0.45	-	-	B
	TSP	7.32	0.6	0.45	-	-	B
Unpaved Roads - Public:	PM <sub>2.5</sub>	0.18	1	-	0.2	0.5	C
	PM <sub>10</sub>	1.8	1	-	0.2	0.5	B
	TSP	8.96	1	-	0.49	0.2	B

- [1] Route ID numbers provided on site plan.
- [2] Length of a specific road segment. A separate segment should be used whenever one or more parameters change.
- [3] Paved surfaces include asphalt, concrete, and recycled asphalt (if it forms a relatively consistent surface).
- [4] Publicly accessible and dominated by light vehicles, or industrial, and dominated by heavy vehicles.
- [5] The average vehicle weight reflects the average of the empty and loaded vehicle weight, for travel in both directions.
- [6] Required only for publicly accessible unpaved roads.
- [7] Required only for unpaved roads (public and industrial).
- [8] Required only for industrial paved roads.

Appendix K: Stage 1: Tailpipe Emissions - Mitigated

Source ID	Description	Gross Power Rating	Number Of Units	Traffic Passes [2]		Segment Length [3]	Mean Vehicle Speed	Load Factor [4]	Tailpipe Emission Factor [5]								Tailpipe Emission Rate				Fugitive Emission Rate [6]				Number of Volume Sources (Tailpipe)	Number of Volume Sources (Fugitive)	ER per volume source (Tailpipe)			
				Hourly	Daily				TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5							
				(#/h)	(#/d)				(g/vkt)	(g/KW-h)	(g/vkt)	(g/KW-h)	(g/vkt)	(g/KW-h)	(g/vkt)	(g/KW-h)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)			(g/s)	(g/s)	(g/s)	(g/s)
On-Site Mobile Equipment																														
P_GATE1	the weight scale entrance	n/a		1	1	443.3	35		0.35		0.35		0.16					4.35E-05	4.35E-05	1.98E-05	0.00E+00	2.83E-02	3.66E-03	8.85E-04	0.00E+00	14	14	3.10E-06	3.10E-06	1.41E-06
UP_LF_2	from gatehouse to BF int S3	n/a		1	1	85.4	35		0.35		0.35		0.16					8.37E-06	8.37E-06	3.81E-06	0.00E+00	5.17E-03	8.78E-04	8.78E-05	0.00E+00	3	3	2.79E-06	2.79E-06	1.27E-06
UP_S2_2_MAIN	stage 2 active face to main LF road	n/a		1	1	245.4	35		0.35		0.35		0.16					2.41E-05	2.41E-05	1.09E-05	0.00E+00	1.49E-02	2.52E-03	2.52E-04	0.00E+00	8	8	3.01E-06	3.01E-06	1.37E-06
UP_S1	stage 1 - Waste soil and waste	n/a		1	1	407.2	35		0.35		0.35		0.16					3.99E-05	3.99E-05	1.82E-05	0.00E+00	2.47E-02	4.19E-03	4.19E-04	0.00E+00	13	13	3.07E-06	3.07E-06	1.40E-06
UP_S2_C	into stage 2 construction area	n/a		1	1	75.4	35		0.35		0.35		0.16					7.39E-06	7.39E-06	3.36E-06	0.00E+00	4.57E-03	7.75E-04	7.75E-05	0.00E+00	3	3	2.46E-06	2.46E-06	1.12E-06
UP_MAIN_1	haul route to active faces.	n/a		1	1	356.5	35		0.35		0.35		0.16					3.49E-05	3.49E-05	1.59E-05	0.00E+00	2.16E-02	3.67E-03	3.67E-04	0.00E+00	11	11	3.18E-06	3.18E-06	1.45E-06
UP_S4_C	ing to stage 4 construction area	n/a		0	1	322.1	35		0.00		0.00		0.00					0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	10	10	0.00E+00	0.00E+00	0.00E+00
UP_S3	ading to the stage 3 active face	n/a		0	1	240.9	35		0.00		0.00		0.00					0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8	8	0.00E+00	0.00E+00	0.00E+00
P_N_ENTER_1	north entrance for finished goods	n/a		1	1	181.4	35		0.49		0.49		0.25					2.49E-05	2.49E-05	1.26E-05	0.00E+00	6.49E-03	8.41E-04	2.03E-04	0.00E+00	6	6	4.15E-06	4.15E-06	2.10E-06
P_NORTH_2	trance second paved section	n/a		1	1	177.9	35		0.49		0.49		0.25					2.44E-05	2.44E-05	1.23E-05	0.00E+00	6.37E-03	8.24E-04	1.99E-04	0.00E+00	6	6	4.07E-06	4.07E-06	2.06E-06
UP_NORTH_1	rance unpaved section	n/a		1	1	478.6	35		0.49		0.49		0.25					6.57E-05	6.57E-05	3.32E-05	0.00E+00	5.12E-02	1.31E-02	1.31E-03	0.00E+00	15	15	4.38E-06	4.38E-06	2.21E-06
P_NORTH_3	nce Third Paved Section	n/a		1	1	539.2	35		0.49		0.49		0.25					7.40E-05	7.40E-05	3.74E-05	0.00E+00	5.93E-02	7.67E-03	1.86E-03	0.00E+00	17	17	4.35E-06	4.35E-06	2.20E-06
P_SOUTH_1	nd south entrance	n/a		1	1	256.2	35		0.21		0.21		0.07					1.51E-05	1.51E-05	5.07E-06	0.00E+00	5.98E-03	7.74E-04	1.87E-04	0.00E+00	8	8	1.88E-06	1.88E-06	6.33E-07
UP_SOUTH_2	inpaved road in working area	n/a		1	1	758.1	35		0.21		0.21		0.07					4.46E-05	4.46E-05	1.50E-05	0.00E+00	9.02E-02	2.31E-02	2.31E-03	0.00E+00	24	24	1.86E-06	1.86E-06	6.25E-07
P_SOUTH_2	ut of the working area and to CR6	n/a		1	1	395.7	35		0.21		0.21		0.07					2.33E-05	2.33E-05	7.83E-06	0.00E+00	2.69E-02	3.48E-03	8.43E-04	0.00E+00	13	13	1.79E-06	1.79E-06	6.02E-07
UP_S1_WSPILE	d to Stage 1 waste soil pile	n/a		1	1	269.5	35		0.35		0.35		0.16					2.64E-05	2.64E-05	1.20E-05	0.00E+00	1.63E-02	2.77E-03	2.77E-04	0.00E+00	9	9	2.94E-06	2.94E-06	1.34E-06
UP_S3_WSPILE	il pile to active face haul route	n/a		0	1	82.7	35		0.00		0.00		0.00					0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7	7	0.00E+00	0.00E+00	0.00E+00
UP_MAIN_2	section 2, stage 1 to stage 2	n/a		1	1	51.2	35		0.35		0.35		0.16					5.02E-06	5.02E-06	2.28E-06	0.00E+00	3.10E-03	5.26E-04	5.26E-05	0.00E+00	2	2	2.51E-06	2.51E-06	1.14E-06
UP_MAIN_3	haul route, stage 2 to stage 3	n/a		0	1	202.9	35		0.00		0.00		0.00					0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7	7	0.00E+00	0.00E+00	0.00E+00
UP_MAIN_4	haul route stage 3 to stage 4	n/a		0	1	480.2	35		0.00		0.00		0.00					0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	15	15	0.00E+00	0.00E+00	0.00E+00
UP_QRY_PC	ading to the primary crusher	615.2	3	1	0	541.1	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02				1.04E-02	1.04E-02	1.01E-02	0.00E+00	6.84E-02	1.60E-02	1.60E-03	0.00E+00	54	19	7.50E-06	7.50E-06	7.28E-06
UP_QRY_OB	en removal and quarry hauling	615.2	3	1	0	554.8	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02				1.04E-02	1.04E-02	1.01E-02	0.00E+00	8.96E-02	2.09E-02	2.09E-03	0.00E+00	54	17	4.66E-06	4.66E-06	4.52E-06
UP_QRY_S1_2	- Quarry haul route	615.2	3	1	0	628.7	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02				1.04E-02	1.04E-02	1.01E-02	0.00E+00	9.18E-02	2.14E-02	2.14E-03	0.00E+00	54	18	7.50E-06	7.50E-06	7.28E-06
UP_OB_S1	overburden removal	615.2	3	1	0	875	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02				1.04E-02	1.04E-02	1.01E-02	0.00E+00	1.04E-01	2.43E-02	2.43E-03	0.00E+00	65	20	1.02E-05	1.02E-05	9.92E-06
UP_BF_S1_S2	den transfer to S2 for backfill	615.2	3	1	0	1662.2	35	0.59	0.49	3.43E-02	0.49	3.43E-02	0.25	3.33E-02				1.04E-02	1.04E-02	1.01E-02	0.00E+00	7.66E-02	1.30E-02	1.30E-03	0.00E+00	65	28	1.02E-05	1.02E-05	9.92E-06
UP_QRY_S3	- Quarry haul route	615.2	3	0	0	1479.7	35	0.59	0.00	3.43E-02	0.00	3.43E-02	0.00	3.33E-02				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	52	52	0.00E+00	0.00E+00	0.00E+00
UP_S3_OB	d for overburden removal	615.2	3	0	0	4421.8	80	0.59	0.00	3.43E-02	0.00	3.43E-02	0.00	3.33E-02				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	46	46	0.00E+00	0.00E+00	0.00E+00
P_CR6_LF	county road 6	n/a		1	1	4421.8	80		0.35		0.35		0.16					4.33E-04	4.33E-04	1.97E-04	0.00E+00	1.07E-02	1.39E-03	3.36E-04	0.00E+00	138	138	3.14E-06	3.14E-06	1.43E-06
P_HAULROUTE	ion of the LF Haul route	n/a		1	1	1657	35		0.35		0.35		0.16					1.62E-04	1.62E-04	7.39E-05	0.00E+00	1.06E-01	1.37E-02	3.31E-03	0.00E+00	52	52	3.12E-06	3.12E-06	1.42E-06
UP_HAUL	ortion of the haul route	n/a		1	1	1042.1	35		0.35		0.35		0.16					1.02E-04	1.02E-04	4.65E-05	0.00E+00	6.64E-02	8.60E-03	2.08E-03	0.00E+00	33	33	3.10E-06	3.10E-06	1.41E-06
EQUIP_S1	t at Stage 1 Active Face	n/a		1	1	30	5		0.00		0.00		0.00					0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-03	3.22E-04	3.22E-05	0.00E+00	1	1	0.00E+00	0.00E+00	0.00E+00
S3_EQUIP	t at Stage 3 Active Face	n/a		0	1	30	5		0.00		0.00		0.00					0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1	1	0.00E+00	0.00E+00	0.00E+00
UP_S3_OB_NLF	DB removal for stage 3 no landfill	615.2	3	0	0	1662.2	35	0.59	0.00	3.43E-02	0.00	3.43E-02	0.00	3.33E-02				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	47	47	0.00E+00	0.00E+00	0.00E+00
UP_NLF_OB_S1	DB removal for stage 1 no landfill	615.2	3	1	0	4423.6	80	0.59	0.35	3.43E-02	0.35	3.43E-02	0.16	3.33E-02				1.04E-02	1.04E-02	1.01E-02	0.00E+00	2.75E-01	6.42E-02	6.42E-03	0.00E+00	100	52	6.65E-06	6.65E-06	6.45E-06
P_CR6B	y background traffic only	n/a		1	1	4423.6	80		0.06		0.06		0.04					7.31E-05	7.31E-05	4.31E-05	0.00E+00	1.07E-02	1.39E-03	3.36E-04	0.00E+00	138	138	5.29E-07	5.29E-07	3.13E-07

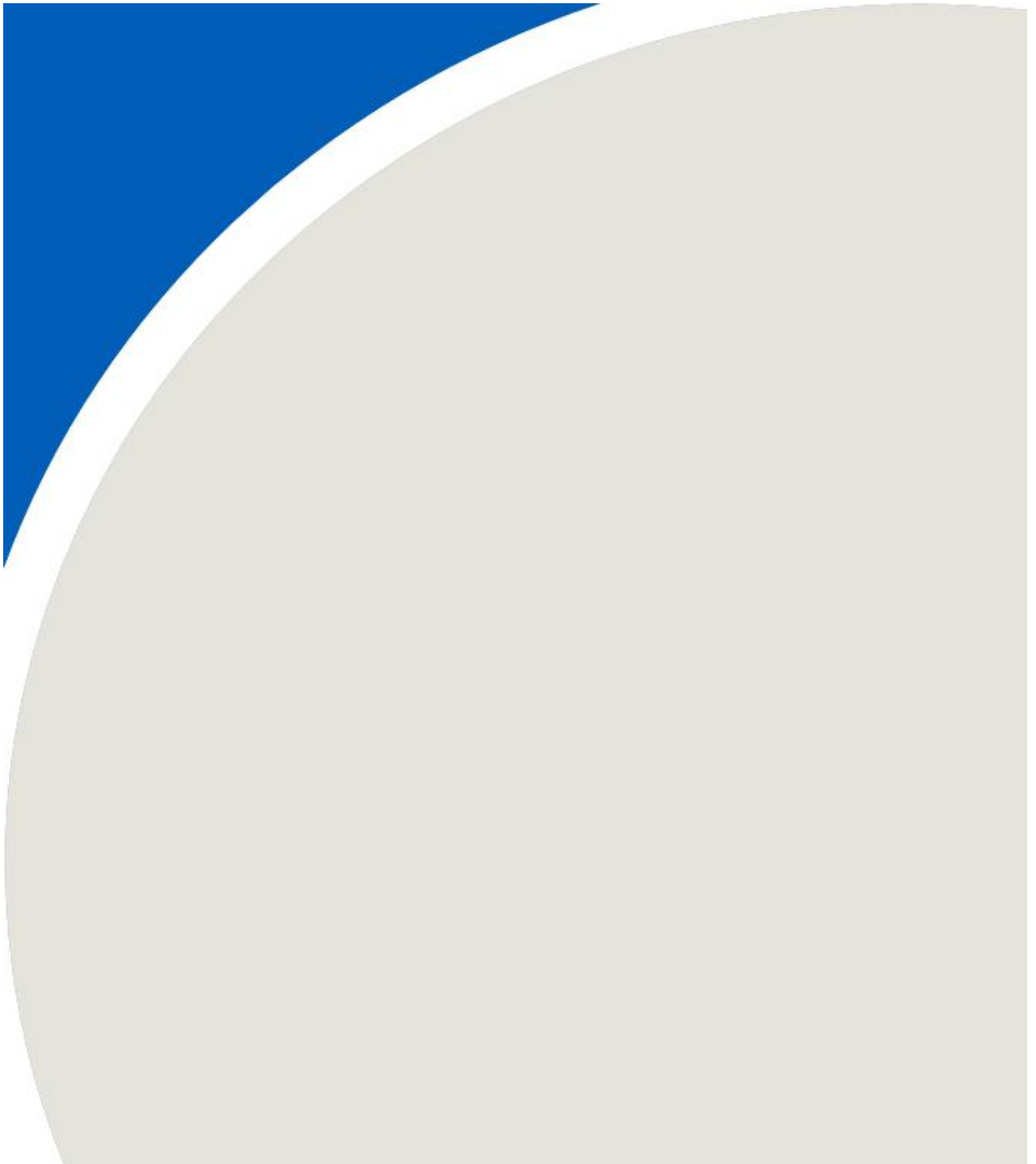
[1] ID should reflect Source ID or Route ID, as appropriate.  
 [2] Where applicable, this value reflects travel in both directions (e.g., 1 round-trip = 2 passes)  
 [3] Length of a specific road segment. A separate segment should be used whenever one or more parameters change.  
 [4] Load Factors from "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling", EPA-420-R-10-016, NR-005d, July 2010  
 [5] Emissions are input on either a vehicle distance or power rating basis. Load factor applies only to emissions based on power ratings.  
 [6] Applicable only for TSP, PM10 and PM2.5 emissions from mobile equipment. Emissions rates for NOx and stationary sources do not change.



Appendix K: Stage 3: Tailpipe Emissions - Mitigated

#REF! Source ID	Description	Gross Power Rating	Number Of Units	Traffic Passes [2]		Segment Length [3]	Mean Vehicle Speed	Load Factor [4]	Tailpipe Emission Factor [5]								Tailpipe Emission Rate				Tailpipe + Fugitive Emission Rate [6]				Number of Volume Sources (Tailpipe)	Number of Volume Sources (Fugitive)	ER per volume source (Tailpipe)			ER per volume source (Fugitive)				
				Hourly	Daily				TSP	PM10	PM2.5	NOx	CO	CO2	CH4	N2O	TSP	PM10	PM2.5	NOx	TSP	PM10	PM2.5	NOx			TSP	PM10	PM2.5					
On-Site Mobile Equipment																																		
P_GATE1	Paved area at the weight scale entrance	n/a		1	1	443	35		0.23		0.23		0.05				2.8E-05	2.8E-05	5.8E-06	0.0E+00	2.8E-02	3.7E-03	8.8E-04	0.0E+00			14	14	2.01E-06	2.01E-06	4.11E-07	2.02E-03	2.61E-04	6.32E-05
UP_LF_2	Unpaved road from gatehouse to BF int S3	n/a		1	1	85	35		0.23		0.23		0.05				5.4E-06	5.4E-06	1.1E-06	0.0E+00	5.2E-03	8.8E-04	8.8E-05	0.0E+00			3	3	1.81E-06	1.81E-06	3.70E-07	1.72E-03	2.93E-04	2.93E-05
UP_S2_2_MAIN	Road segment from stage 2 active face to main LF road	n/a		1	1	245	35		0.23		0.23		0.05				1.6E-05	1.6E-05	3.2E-06	0.0E+00	1.5E-02	2.5E-03	2.5E-04	0.0E+00			8	8	1.95E-06	1.95E-06	3.98E-07	1.86E-03	3.15E-04	3.15E-05
UP_S1	Unpaved road to stage 1 - Waste soil and waste	n/a		0	1	407	35		0.23		0.23		0.05				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			13	13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_S2_C	Unpaved road into stage 2 construction area	n/a		0	1	75	35		0.23		0.23		0.05				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			3	3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_MAIN_1	Main landfill haul route to active faces.	n/a		1	1	357	35		0.23		0.23		0.05				2.3E-05	2.3E-05	4.6E-06	0.0E+00	2.2E-02	3.7E-03	3.7E-04	0.0E+00			11	11	2.06E-06	2.06E-06	4.21E-07	1.96E-03	3.33E-04	3.33E-05
UP_S4_C	Unpaved road leading to stage 4 construction area	n/a		1	1	322	35		0.23		0.23		0.05				2.0E-05	2.0E-05	4.2E-06	0.0E+00	2.0E-02	3.3E-03	3.3E-04	0.0E+00			10	10	2.05E-06	2.05E-06	4.18E-07	1.95E-03	3.31E-04	3.31E-05
UP_S3	Unpaved road leading to the stage 3 active face	n/a		1	1	241	35		0.23		0.23		0.05				1.5E-05	1.5E-05	3.1E-06	0.0E+00	1.5E-02	2.5E-03	2.5E-04	0.0E+00			8	8	1.91E-06	1.91E-06	3.91E-07	1.82E-03	3.10E-04	3.10E-05
P_N_ENTER_1	Paved Section of the north entrance for finished goods	n/a		1	1	181	35		0.29		0.29		0.06				1.5E-05	1.5E-05	3.2E-06	0.0E+00	6.5E-03	8.4E-04	2.0E-04	0.0E+00			6	6	2.45E-06	2.45E-06	5.38E-07	1.08E-03	1.40E-04	3.39E-05
P_NORTH_2	Paved North Entrance second paved section	n/a		1	1	178	35		0.29		0.29		0.06				1.4E-05	1.4E-05	3.2E-06	0.0E+00	6.4E-03	8.2E-04	2.0E-04	0.0E+00			6	6	2.41E-06	2.41E-06	5.27E-07	1.06E-03	1.37E-04	3.32E-05
UP_NORTH_1	North Entrance unpaved section	n/a		1	1	479	35		0.29		0.29		0.06				3.9E-05	3.9E-05	8.5E-06	0.0E+00	5.1E-02	1.3E-02	1.3E-03	0.0E+00			15	15	2.59E-06	2.59E-06	5.67E-07	3.41E-03	8.74E-04	8.74E-05
P_NORTH_3	North Entrance Third Paved Section	n/a		1	1	539	35		0.29		0.29		0.06				4.4E-05	4.4E-05	9.6E-06	0.0E+00	5.9E-02	7.7E-03	1.9E-03	0.0E+00			17	17	2.57E-06	2.57E-06	5.64E-07	3.49E-03	4.51E-04	1.09E-04
P_SOUTH_1	Paved south entrance	n/a		1	1	256	35		0.17		0.17		0.03				1.2E-05	1.2E-05	2.1E-06	0.0E+00	6.0E-03	7.7E-04	1.9E-04	0.0E+00			8	8	1.47E-06	1.47E-06	2.62E-07	7.47E-04	9.67E-05	2.34E-05
UP_SOUTH_2	South entrance unpaved road in working area	n/a		1	1	758	35		0.17		0.17		0.03				3.5E-05	3.5E-05	6.2E-06	0.0E+00	9.0E-02	2.3E-02	2.3E-03	0.0E+00			24	24	1.45E-06	1.45E-06	2.59E-07	3.76E-03	9.63E-04	9.63E-05
P_SOUTH_2	Paved road leading out of the working area and to CR6	n/a		1	1	396	35		0.17		0.17		0.03				1.8E-05	1.8E-05	3.2E-06	0.0E+00	2.7E-02	3.5E-03	8.4E-04	0.0E+00			13	13	1.40E-06	1.40E-06	2.49E-07	2.07E-03	2.68E-04	6.48E-05
UP_S1_WSPILE	Unpaved Road to Stage 1 waste soil pile	n/a		0	1	270	35		0.23		0.23		0.05				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			9	9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_S3_WSP	Stage 3 Waste soil pile to active face haul route	n/a		1	1	83	35		0.23		0.23		0.05				5.3E-06	5.3E-06	1.1E-06	0.0E+00	5.0E-03	8.5E-04	8.5E-05	0.0E+00			7	7	7.50E-07	7.50E-07	1.53E-07	7.16E-04	1.21E-04	1.21E-05
UP_MAIN_2	Main haul route section 2, stage 1 to stage 2	n/a		1	1	51	35		0.23		0.23		0.05				3.3E-06	3.3E-06	6.6E-07	0.0E+00	3.1E-03	5.3E-04	5.3E-05	0.0E+00			2	2	1.63E-06	1.63E-06	3.32E-07	1.55E-03	2.63E-04	2.63E-05
UP_MAIN_3	Unpaved main haul route, stage 2 to stage 3	n/a		1	1	203	35		0.23		0.23		0.05				1.3E-05	1.3E-05	2.6E-06	0.0E+00	1.2E-02	2.1E-03	2.1E-04	0.0E+00			7	7	1.84E-06	1.84E-06	3.76E-07	1.76E-03	2.98E-04	2.98E-05
UP_MAIN_4	Unpaved main haul route stage 3 to stage 4	n/a		1	1	480	35		0.23		0.23		0.05				3.1E-05	3.1E-05	6.2E-06	0.0E+00	2.9E-02	4.9E-03	4.9E-04	0.0E+00			15	15	2.03E-06	2.03E-06	4.16E-07	1.94E-03	3.29E-04	3.29E-05
UP_QRY_PC	Unpaved road leading to the primary crusher	615.2	3	1	1	598	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02			9.6E-03	9.6E-03	9.3E-03	0.0E+00	6.8E-02	1.6E-02	1.6E-03	0.0E+00			71	19	5.28E-06	5.28E-06	5.13E-06	3.60E-03	8.41E-04	8.41E-05
UP_QRY_PC	Stage 1 - Overburden removal and quarry hauling	615.2	3	0	1	541	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02			0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			54	17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_QRY_S1_2	Stage 1 - Quarry haul route	615.2	3	0	1	555	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02			0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			54	18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_OB_S1	Stage 1 - overburden removal	615.2	3	0	1	629	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02			0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			100	20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_BF_S1_S2	Stage 1 - overburden transfer to S2 for backfill	615.2	3	0	1	875	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02			0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			100	28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
UP_QRY_S3	Stage 3 - Quarry haul route	615.2	3	1	1	1662	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02			9.6E-03	9.6E-03	9.3E-03	0.0E+00	2.8E-01	6.4E-02	6.4E-03	0.0E+00			71	52	5.28E-06	5.28E-06	5.13E-06	5.29E-03	1.23E-03	1.23E-04
UP_S3_OB	Unpaved road for overburden removal	615.2	3	1	1	1480	35	59%	0.29	3.18E-02	0.29	3.18E-02	0.06	3.08E-02			9.6E-03	9.6E-03	9.3E-03	0.0E+00	2.4E-01	5.7E-02	5.7E-03	0.0E+00			84	46	7.33E-06	7.33E-06	7.11E-06	5.32E-03	1.24E-03	1.24E-04
P_CR6_LF	County road 6	n/a		1	1	4422	80		0.23		0.23		0.05				2.8E-04	2.8E-04	5.7E-05	0.0E+00	1.1E-02	1.4E-03	3.4E-04	0.0E+00			138	138	2.04E-06	2.04E-06	4.16E-07	7.78E-05	1.01E-05	2.44E-06
P_HAULROUTE	Paved section of the LF Haul route	n/a		1	1	1657	35		0.23		0.23		0.05				1.1E-04	1.1E-04	2.2E-05	0.0E+00	1.1E-01	1.4E-02	3.3E-03	0.0E+00			52	52	2.02E-06	2.02E-06	4.14E-07	2.03E-03	2.63E-04	6.36E-05
UP_HAUL	Unpaved portion of the haul route	n/a		1	1	1042	35		0.23		0.23		0.05				6.6E-05	6.6E-05	1.4E-05	0.0E+00	6.6E-02	8.6E-03	2.1E-03	0.0E+00			33	33	2.01E-06	2.01E-06	4.10E-07	2.01E-03	2.60E-04	6.30E-05
EQUIP_S1	Equipment at Stage 1 Active Face	n/a		0	0	30	5		0.00		0.00		0.00				0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
S3_EQUIP	Equipment at Stage 3 Active Face	n/a		1	1	30	5		0.00		0.00		0.00				0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.9E-03	3.2E-04	3.2E-05	0.0E+00			1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-04	3.22E-05
UP_S3_OB_NLF	Unpaved road for OB removal for stage 3 no landfill	615.2	3	1	2	30	5	59%	0.23	3.18E-02	0.23	3.18E-02	0.05	3.08E-02			9.6E-03	9.6E-03	9.3E-03	0.0E+00	2.5E-01	5.8E-02	5.8E-03	0.0E+00			47	47	1.31E-05	1.31E-05	1.27E-05	5.26E-03	1.23E-03	1.23E-04
UP_NLF_OB_S1	Unpaved road for OB removal for stage 1 no landfill	615.2	3	0</																														

# APPENDIX L



**Maximum Predicted Concentrations at All Discrete Receptors - Additional Mitigation**

PM 2.5  
24- Hour

Criteria (ug m <sup>-3</sup> )	Receptor Information					Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
25	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	11.00	1.91	12.91	52%	0.60	11.60	46%	1.62	12.62	50%	0.95	11.95	48%
25	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	11.00	1.92	12.92	52%	1.27	12.27	49%	2.43	13.43	54%	1.73	12.73	51%
25	ZOR-3	Residence at 663951 Rd 66	510216	4770270	11.00	3.24	14.24	57%	1.22	12.22	49%	2.41	13.41	54%	1.77	12.77	51%
25	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	11.00	3.25	14.25	57%	1.13	12.13	49%	2.01	13.01	52%	1.28	12.28	49%
25	ZOR-5	Residence at 334789 33rd Line	508931	4768760	11.00	3.73	14.73	59%	1.06	12.06	48%	3.30	14.30	57%	1.66	12.66	51%
25	ZOR-6	Residence at 334742 33rd Line	509185	4768350	11.00	7.10	18.10	72%	1.52	12.52	50%	3.84	14.84	59%	2.21	13.21	53%
25	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	11.00	3.89	14.89	60%	1.06	12.06	48%	1.92	12.92	52%	1.13	12.13	49%
25	ZOR-8	Residence at 643743 Road 64	508940	4767980	11.00	7.52	18.52	74%	1.39	12.39	50%	3.23	14.23	57%	1.40	12.40	50%
25	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	11.00	6.19	17.19	69%	2.60	13.60	54%	2.44	13.44	54%	1.95	12.95	52%
25	ZOR-10	Residence at 334578 33rd Line	509739	4766780	11.00	1.29	12.29	49%	1.04	12.04	48%	1.46	12.46	50%	0.81	11.81	47%
25	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	11.00	4.79	15.79	63%	1.20	13.20	49%	2.40	13.40	54%	1.08	12.08	48%
25	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	11.00	2.04	13.04	52%	0.83	11.83	47%	1.30	12.30	49%	0.85	11.85	47%
25	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	11.00	2.19	13.19	53%	0.71	11.71	47%	1.34	12.34	49%	0.68	11.68	47%
25	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	11.00	1.19	12.19	49%	0.85	11.85	47%	1.46	12.46	50%	0.75	11.75	47%
25	ING-2	Laurie Hawkins Public School	509019	4765860	11.00	0.57	11.57	46%	0.46	11.46	46%	0.62	11.62	46%	0.42	11.42	46%
25	ING-3	Ingersoll District Collegiate Institute	510512	4766230	11.00	3.09	14.09	56%	0.92	11.92	48%	1.47	12.47	50%	0.81	11.81	47%
25	ING-4	On the river north of 209 County Road 9	509480	4765180	11.00	0.50	11.50	46%	0.38	11.38	46%	0.73	11.73	47%	0.49	11.49	46%
25	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	11.00	0.51	11.51	46%	0.46	11.46	46%	0.51	11.51	46%	0.41	11.41	46%
25	ING-6	Royal Road Public School	510337	4765360	11.00	1.55	12.55	50%	0.56	11.56	46%	0.77	11.77	47%	0.51	11.51	46%
25	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	11.00	0.55	11.55	46%	0.35	11.35	45%	0.38	11.38	46%	0.30	11.30	45%
25	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	11.00	1.03	12.03	48%	0.43	11.43	46%	0.48	11.48	46%	0.39	11.39	46%
25	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	11.00	2.22	13.22	53%	0.69	11.69	47%	2.28	13.28	53%	0.66	11.66	47%
25	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	11.00	1.45	12.45	50%	0.48	11.48	46%	1.25	12.25	49%	0.48	11.48	46%
25	SWO-1	Residence at 584052 Beachville Road	511124	4766750	11.00	7.29	18.29	73%	1.31	12.31	49%	5.31	16.31	65%	1.25	12.25	49%
25	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	11.00	16.71	27.71	111%	1.96	12.96	52%	3.99	14.99	60%	1.99	12.99	52%
25	SWO-3	Residence at 584142 Beachville Road	511722	4767480	11.00	7.41	18.41	74%	3.44	14.44	58%	4.37	15.37	61%	3.90	14.90	60%
25	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	11.00	11.54	22.54	90%	7.53	18.53	74%	7.93	18.93	76%	7.17	18.17	73%
25	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	11.00	7.63	18.63	75%	2.53	13.53	54%	2.78	13.78	55%	2.32	13.32	53%
25	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	11.00	5.58	16.58	66%	1.39	12.39	50%	1.88	12.88	52%	1.41	12.41	50%
25	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	11.00	2.16	13.16	53%	0.79	11.79	47%	1.03	12.03	48%	0.90	11.90	48%
25	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	11.00	1.14	12.14	49%	0.38	11.38	46%	0.55	11.55	46%	0.39	11.39	46%
25	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	11.00	1.04	12.04	48%	0.35	11.35	45%	0.42	11.42	46%	0.33	11.33	45%
25	SWO-10	Residence at 563977 Karn Road	510980	4765990	11.00	2.93	13.93	56%	0.82	11.82	47%	2.03	13.03	52%	0.82	11.82	47%
25	SWO-11	Residence at 564028 Karn Road	511396	4766310	11.00	4.85	15.85	63%	1.10	12.10	48%	2.84	13.84	55%	1.09	12.09	48%
25	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	11.00	4.01	15.01	60%	1.12	12.12	48%	2.59	13.59	54%	1.27	12.27	49%
25	SWO-13	Centreville Pond and Conservation Area	511570	4766920	11.00	6.22	17.22	69%	1.46	12.46	50%	3.41	14.41	58%	1.49	12.49	50%
25	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	11.00	5.80	16.80	67%	1.74	12.74	51%	2.81	13.81	55%	2.39	13.39	54%
25	SWO-15	Residences at 564146 Karn Road	512251	4767100	11.00	4.62	15.62	62%	1.46	12.46	50%	2.45	13.45	54%	2.14	13.14	53%
25	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	11.00	4.66	15.66	63%	2.20	13.20	53%	2.73	13.73	55%	2.45	13.45	54%
25	SWO-17	Residence at 564226 Karn Road	512958	4767760	11.00	3.89	14.89	60%	1.92	12.92	52%	2.54	13.54	54%	2.07	13.07	52%
25	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	11.00	6.40	17.40	70%	5.76	16.76	67%	5.98	16.98	68%	5.39	16.39	66%
25	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	11.00	4.59	15.59	62%	4.12	15.12	60%	4.35	15.35	61%	3.97	14.97	60%
25	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	11.00	1.59	12.59	50%	0.42	11.42	46%	0.86	11.86	47%	0.46	11.46	46%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

**Maximum Predicted Concentrations at All Discrete Receptors - Additional Mitigation**

**PM 2.5**

**Annual**

Criteria (ug m <sup>-3</sup> )	Receptor Information					Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y	Background Concentration [1] (ug m <sup>-3</sup> )	With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
8.8	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	2.93	0.08	3.01	34%	0.05	2.98	34%	0.10	3.03	34%	0.05	2.99	34%
8.8	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	2.93	0.11	3.04	35%	0.07	3.00	34%	0.14	3.07	35%	0.09	3.02	34%
8.8	ZOR-3	Residence at 663951 Rd 66	510216	4770270	2.93	0.16	3.09	35%	0.08	3.01	34%	0.18	3.11	35%	0.09	3.03	34%
8.8	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	2.93	0.19	3.12	35%	0.08	3.01	34%	0.19	3.12	36%	0.10	3.03	34%
8.8	ZOR-5	Residence at 334789 33rd Line	508931	4768760	2.93	0.09	3.10	35%	0.09	3.03	34%	0.24	3.17	36%	0.10	3.03	34%
8.8	ZOR-6	Residence at 334742 33rd Line	509185	4768350	2.93	0.26	3.19	36%	0.11	3.05	35%	0.30	3.23	37%	0.12	3.05	35%
8.8	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	2.93	0.23	3.16	36%	0.13	3.06	35%	0.21	3.15	36%	0.14	3.07	35%
8.8	ZOR-8	Residence at 643743 Road 64	508940	4767980	2.93	0.26	3.19	36%	0.09	3.02	34%	0.18	3.11	35%	0.09	3.02	34%
8.8	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	2.93	0.18	3.11	35%	0.09	3.02	34%	0.15	3.08	35%	0.08	3.01	34%
8.8	ZOR-10	Residence at 334578 33rd Line	509739	4766780	2.93	0.07	3.00	34%	0.05	2.98	34%	0.10	3.03	34%	0.05	2.98	34%
8.8	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	2.93	0.14	3.07	35%	0.09	3.02	34%	0.18	3.12	35%	0.08	3.01	34%
8.8	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	2.93	0.08	3.01	34%	0.06	2.99	34%	0.10	3.03	34%	0.05	2.99	34%
8.8	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	2.93	0.13	3.06	35%	0.07	3.00	34%	0.13	3.06	35%	0.08	3.01	34%
8.8	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	2.93	0.06	3.00	34%	0.05	2.98	34%	0.09	3.02	34%	0.05	2.98	34%
8.8	ING-2	Laurie Hawkins Public School	509019	4765860	2.93	0.04	2.97	34%	0.03	2.96	34%	0.05	2.98	34%	0.03	2.96	34%
8.8	ING-3	Ingersoll District Collegiate Institute	510512	4766230	2.93	0.08	3.01	34%	0.05	2.98	34%	0.09	3.02	34%	0.05	2.98	34%
8.8	ING-4	On the river north of 209 County Road 9	509480	4765180	2.93	0.03	2.96	34%	0.03	2.96	34%	0.04	2.97	34%	0.03	2.96	34%
8.8	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	2.93	0.03	2.96	34%	0.03	2.96	34%	0.04	2.97	34%	0.02	2.96	34%
8.8	ING-6	Royal Road Public School	510337	4765360	2.93	0.04	2.97	34%	0.03	2.96	34%	0.05	2.98	34%	0.03	2.96	34%
8.8	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	2.93	0.02	2.95	34%	0.02	2.95	34%	0.03	2.96	34%	0.02	2.95	34%
8.8	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	2.93	0.03	2.96	34%	0.02	2.96	34%	0.04	2.97	34%	0.02	2.96	34%
8.8	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	2.93	0.07	3.00	34%	0.04	2.97	34%	0.08	3.01	34%	0.04	2.97	34%
8.8	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	2.93	0.05	2.98	34%	0.03	2.96	34%	0.05	2.99	34%	0.03	2.96	34%
8.8	SWO-1	Residence at 584052 Beachville Road	511124	4766750	2.93	0.20	3.13	36%	0.11	3.04	35%	0.21	3.14	36%	0.09	3.03	34%
8.8	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	2.93	0.38	3.31	38%	0.19	3.13	36%	0.34	3.27	37%	0.17	3.10	35%
8.8	SWO-3	Residence at 584142 Beachville Road	511722	4767480	2.93	0.48	3.41	39%	0.27	3.20	36%	0.43	3.36	38%	0.24	3.18	36%
8.8	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	2.93	1.33	4.26	48%	1.08	4.01	46%	1.21	4.14	47%	1.04	3.97	45%
8.8	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	2.93	0.46	3.39	39%	0.29	3.22	37%	0.40	3.33	38%	0.29	3.22	37%
8.8	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	2.93	0.17	3.10	35%	0.09	3.02	34%	0.15	3.09	35%	0.09	3.02	34%
8.8	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	2.93	0.10	3.04	34%	0.06	2.99	34%	0.09	3.03	34%	0.06	2.99	34%
8.8	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	2.93	0.05	2.98	34%	0.02	2.96	34%	0.04	2.97	34%	0.03	2.96	34%
8.8	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	2.93	0.03	2.96	34%	0.02	2.95	34%	0.03	2.96	34%	0.02	2.95	34%
8.8	SWO-10	Residence at 563977 Karn Road	510980	4765990	2.93	0.08	3.02	34%	0.05	2.99	34%	0.10	3.03	34%	0.05	2.99	34%
8.8	SWO-11	Residence at 564028 Karn Road	511396	4766310	2.93	0.14	3.07	35%	0.07	3.00	34%	0.14	3.07	35%	0.07	3.00	34%
8.8	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	2.93	0.17	3.10	35%	0.09	3.03	34%	0.17	3.10	35%	0.09	3.02	34%
8.8	SWO-13	Centreville Pond and Conservation Area	511570	4766920	2.93	0.25	3.18	36%	0.14	3.07	35%	0.23	3.17	36%	0.12	3.05	35%
8.8	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	2.93	0.23	3.16	36%	0.14	3.07	35%	0.21	3.14	36%	0.13	3.06	35%
8.8	SWO-15	Residences at 564146 Karn Road	512251	4767100	2.93	0.24	3.18	36%	0.15	3.08	35%	0.23	3.16	36%	0.14	3.08	35%
8.8	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	2.93	0.25	3.18	36%	0.17	3.10	35%	0.25	3.18	36%	0.16	3.09	35%
8.8	SWO-17	Residence at 564226 Karn Road	512958	4767760	2.93	0.41	3.34	38%	0.31	3.24	37%	0.39	3.32	38%	0.30	3.23	37%
8.8	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	2.93	0.94	3.88	44%	0.80	3.73	42%	0.86	3.79	43%	0.75	3.68	42%
8.8	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	2.93	0.73	3.66	42%	0.65	3.58	41%	0.67	3.60	41%	0.60	3.54	40%
8.8	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	2.93	0.07	3.00	34%	0.04	2.97	34%	0.06	2.99	34%	0.04	2.97	34%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

**Maximum Predicted Concentrations at All Discrete Receptors - Additional Mitigation**

**PM 10**

**24-Hour**

Criteria (ug m <sup>-3</sup> )	Receptor Information				Background Concentration [1] (ug m <sup>-3</sup> )	Stage 1 (2023-2027) With Landfill			Stage 1 (2023-2027) Without Landfill			Stage 3 (2033-2037) With Landfill			Stage 3 (2033-2037) Without Landfill		
	Receptor ID	Description	X	Y		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
50	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	16.00	4.78	20.78	42%	3.87	19.87	40%	8.63	24.63	49%	6.88	22.88	46%
50	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	16.00	11.30	27.30	55%	8.25	24.25	49%	14.99	30.99	62%	12.03	28.03	56%
50	ZOR-3	Residence at 663951 Rd 66	510216	4770270	16.00	10.39	26.39	53%	7.96	23.96	48%	16.02	32.02	64%	13.62	29.62	59%
50	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	16.00	8.92	24.92	50%	6.44	22.44	45%	11.23	27.23	54%	8.08	24.08	48%
50	ZOR-5	Residence at 334789 33rd Line	508931	4768760	16.00	10.27	26.27	53%	6.61	22.61	45%	17.75	33.75	68%	13.57	29.57	59%
50	ZOR-6	Residence at 334742 33rd Line	509185	4768350	16.00	15.09	31.09	62%	9.20	25.20	50%	20.45	36.45	73%	15.47	31.47	63%
50	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	16.00	9.31	25.31	51%	6.59	22.59	45%	11.73	27.73	55%	8.96	24.96	50%
50	ZOR-8	Residence at 643743 Road 64	508940	4767980	16.00	14.50	30.50	61%	10.49	26.49	53%	16.76	32.76	66%	10.86	26.86	54%
50	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	16.00	18.66	34.66	69%	15.50	31.50	63%	12.63	28.63	57%	9.81	25.81	52%
50	ZOR-10	Residence at 334578 33rd Line	509739	4766780	16.00	8.79	24.79	50%	7.45	23.45	47%	7.39	23.39	47%	5.48	21.48	43%
50	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	16.00	10.36	26.36	53%	8.78	24.78	50%	13.27	29.27	59%	6.70	22.70	45%
50	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	16.00	6.48	22.48	45%	5.48	21.48	43%	8.17	24.17	48%	5.79	21.79	44%
50	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	16.00	6.74	22.74	45%	3.97	19.97	40%	6.26	22.26	45%	4.73	20.73	41%
50	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	16.00	7.45	23.45	47%	5.93	21.93	44%	7.43	23.43	47%	5.09	21.09	42%
50	ING-2	Laurie Hawkins Public School	509019	4765860	16.00	3.89	19.89	40%	2.76	18.76	38%	3.84	18.70	37%	2.70	18.70	37%
50	ING-3	Ingersoll District Collegiate Institute	510512	4766230	16.00	6.39	22.39	45%	6.03	22.03	44%	5.64	21.64	43%	4.64	20.64	41%
50	ING-4	On the river north of 209 County Road 9	509480	4765180	16.00	2.82	18.82	38%	2.37	18.37	37%	4.17	20.17	40%	3.28	19.28	39%
50	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	16.00	3.10	19.10	38%	2.56	18.56	37%	3.37	19.37	39%	2.31	18.31	37%
50	ING-6	Royal Road Public School	510337	4765360	16.00	4.32	20.32	41%	4.08	20.08	40%	4.23	20.23	40%	2.97	18.97	38%
50	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	16.00	2.48	18.48	37%	2.27	18.27	37%	2.45	18.45	37%	2.00	18.00	36%
50	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	16.00	3.04	19.04	38%	2.87	18.87	38%	2.50	18.50	37%	2.22	18.22	36%
50	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	16.00	7.23	23.23	46%	5.73	21.73	43%	7.36	23.36	47%	5.13	21.13	42%
50	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	16.00	5.09	21.09	42%	3.70	19.70	39%	5.29	21.29	43%	3.63	19.63	39%
50	SWO-1	Residence at 584052 Beachville Road	511124	4766750	16.00	15.23	31.23	62%	11.76	27.76	56%	14.11	30.11	60%	9.45	25.45	51%
50	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	16.00	29.27	45.27	91%	14.92	30.92	62%	19.36	35.36	71%	15.55	31.55	63%
50	SWO-3	Residence at 584142 Beachville Road	511722	4767480	16.00	25.47	41.47	83%	22.64	38.64	77%	28.97	44.97	90%	26.84	42.84	86%
50	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	16.00	39.03	55.03	110%	35.73	51.73	103%	37.06	53.06	106%	33.28	49.28	99%
50	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	16.00	16.24	32.24	64%	14.82	30.82	62%	17.79	33.79	68%	16.16	32.16	64%
50	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	16.00	10.26	26.26	53%	9.56	25.56	51%	11.24	27.24	54%	9.33	25.33	51%
50	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	16.00	5.68	21.68	43%	4.88	20.88	42%	6.76	22.76	46%	5.54	21.54	43%
50	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	16.00	3.05	19.05	38%	2.49	18.49	37%	4.28	20.28	41%	3.53	19.53	39%
50	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	16.00	2.78	18.78	38%	2.27	18.27	37%	3.10	19.10	38%	2.51	18.51	37%
50	SWO-10	Residence at 563977 Karn Road	510980	4765990	16.00	8.18	24.18	48%	5.83	21.83	44%	9.14	25.14	50%	5.52	21.52	43%
50	SWO-11	Residence at 564028 Karn Road	511396	4766310	16.00	12.14	28.14	56%	9.49	25.49	51%	11.67	27.67	55%	8.29	24.29	49%
50	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	16.00	12.46	28.46	57%	9.52	25.52	51%	13.85	29.85	60%	11.22	27.22	54%
50	SWO-13	Centreville Pond and Conservation Area	511570	4766920	16.00	15.50	31.50	63%	11.94	27.94	56%	15.89	31.89	64%	12.88	28.88	58%
50	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	16.00	13.37	29.37	59%	11.40	27.40	55%	18.81	34.81	70%	17.11	33.11	66%
50	SWO-15	Residences at 564146 Karn Road	512251	4767100	16.00	10.97	26.97	54%	9.67	25.67	51%	17.23	33.23	66%	15.84	31.84	64%
50	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	16.00	12.62	28.62	57%	11.53	27.53	55%	15.30	31.30	63%	14.02	30.02	60%
50	SWO-17	Residence at 564226 Karn Road	512958	4767760	16.00	12.66	28.66	57%	9.59	25.59	51%	14.20	30.20	60%	12.79	28.79	58%
50	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	16.00	24.99	40.99	82%	22.55	38.55	77%	26.15	42.15	84%	22.85	38.85	78%
50	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	16.00	18.37	34.37	69%	16.43	32.43	65%	19.07	35.07	70%	17.44	33.44	67%
50	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	16.00	3.32	19.32	39%	2.73	18.73	37%	3.97	19.97	40%	3.51	19.51	39%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.



**Maximum Predicted Concentrations at All Discrete Receptors - Additional Mitigation**

**TSP**

**24-Hour**

Criteria (ug m <sup>-3</sup> )	Receptor Information				Background Concentration [1] (ug m <sup>-3</sup> )	Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
						With Landfill			Without Landfill			With Landfill			Without Landfill		
	Receptor ID	Description	X	Y		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
120	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	44.00	19.43	63.43	53%	11.61	55.61	46%	28.65	72.65	61%	21.07	65.07	54%
120	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	44.00	43.77	87.77	73%	24.56	68.56	57%	55.56	99.56	83%	37.07	81.07	68%
120	ZOR-3	Residence at 663951 Rd 66	510216	4770270	44.00	49.77	93.77	78%	30.38	74.38	62%	66.24	110.24	92%	46.85	90.85	76%
120	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	44.00	40.53	84.53	70%	23.80	67.80	56%	45.77	89.77	75%	29.29	73.29	61%
120	ZOR-5	Residence at 334789 33rd Line	508931	4768760	44.00	52.15	96.15	80%	21.01	65.01	54%	76.39	120.39	100%	46.95	90.95	76%
120	ZOR-6	Residence at 334742 33rd Line	509185	4768350	44.00	63.03	107.03	89%	28.55	72.55	60%	79.33	123.33	103%	48.68	92.68	77%
120	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	44.00	39.76	83.76	70%	22.91	66.91	56%	45.81	89.81	75%	31.60	75.60	63%
120	ZOR-8	Residence at 643743 Road 64	508940	4767980	44.00	59.44	103.44	86%	35.67	79.67	66%	62.59	106.59	89%	35.45	79.45	66%
120	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	44.00	56.24	100.24	84%	41.67	85.67	71%	35.44	79.44	66%	23.09	67.09	56%
120	ZOR-10	Residence at 334578 33rd Line	509739	4766780	44.00	30.09	74.09	62%	22.61	66.61	56%	29.43	73.43	61%	16.30	60.30	50%
120	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	44.00	37.50	81.50	68%	30.12	74.12	62%	51.02	95.02	79%	20.60	64.60	54%
120	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	44.00	20.72	64.72	54%	17.56	61.56	51%	28.47	72.47	60%	17.37	61.37	51%
120	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	44.00	22.50	66.50	55%	13.66	57.66	48%	26.32	70.32	59%	16.46	60.46	50%
120	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	44.00	26.07	70.07	58%	18.01	62.01	52%	27.31	71.31	59%	15.26	59.26	49%
120	ING-2	Laurie Hawkins Public School	509019	4765860	44.00	14.75	52.88	49%	8.88	52.88	44%	14.30	52.72	49%	8.72	52.72	44%
120	ING-3	Ingersoll District Collegiate Institute	510512	4766230	44.00	23.60	67.60	56%	18.93	62.93	52%	21.82	65.82	55%	13.08	57.08	48%
120	ING-4	On the river north of 209 County Road 9	509480	4765180	44.00	10.72	54.72	46%	7.07	51.07	43%	14.69	58.69	49%	9.71	53.71	45%
120	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	44.00	11.44	55.44	46%	7.44	51.44	43%	12.95	56.95	47%	7.46	51.46	43%
120	ING-6	Royal Road Public School	510337	4765360	44.00	14.49	58.49	49%	13.35	57.35	48%	14.63	58.63	49%	9.56	53.56	45%
120	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	44.00	8.18	52.18	43%	7.13	51.13	43%	8.91	52.91	44%	6.44	50.44	42%
120	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	44.00	9.89	53.89	45%	9.08	53.08	44%	9.39	53.39	44%	7.07	51.07	43%
120	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	44.00	26.42	70.42	59%	18.08	62.08	52%	28.29	72.29	60%	16.35	60.35	50%
120	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	44.00	19.60	63.60	53%	11.57	55.57	46%	20.48	64.48	54%	11.37	55.37	46%
120	SWO-1	Residence at 584052 Beachville Road	511124	4766750	44.00	53.92	97.92	82%	32.39	76.39	64%	53.61	97.61	81%	28.34	72.34	60%
120	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	44.00	65.72	109.72	91%	46.33	90.33	75%	67.89	111.89	93%	46.96	90.96	76%
120	SWO-3	Residence at 584142 Beachville Road	511722	4767480	44.00	84.28	128.28	107%	68.34	112.34	94%	94.14	138.14	115%	81.39	125.39	104%
120	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	44.00	181.73	225.73	188%	163.28	207.28	173%	196.56	240.56	200%	170.72	214.72	179%
120	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	44.00	55.90	99.90	83%	49.07	93.07	78%	62.60	106.60	89%	54.13	98.13	82%
120	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	44.00	33.10	77.10	64%	27.34	71.34	59%	37.55	81.55	68%	28.60	72.60	61%
120	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	44.00	19.30	63.30	53%	14.73	58.73	49%	25.27	69.27	58%	14.96	58.96	49%
120	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	44.00	10.15	54.15	45%	7.44	51.44	43%	12.60	56.60	47%	8.28	52.28	44%
120	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	44.00	7.83	51.83	43%	6.18	50.18	42%	9.06	53.06	44%	5.90	49.90	42%
120	SWO-10	Residence at 563977 Karn Road	510980	4765990	44.00	30.62	74.62	62%	17.26	61.26	51%	35.37	79.37	66%	16.31	60.31	50%
120	SWO-11	Residence at 564028 Karn Road	511396	4766310	44.00	40.56	84.56	70%	26.05	70.05	58%	41.78	85.78	71%	26.29	70.29	59%
120	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	44.00	51.63	95.63	80%	30.27	74.27	62%	55.56	99.56	83%	33.54	77.54	65%
120	SWO-13	Centreville Pond and Conservation Area	511570	4766920	44.00	60.19	104.19	87%	37.75	81.75	68%	55.33	99.33	83%	38.64	82.64	69%
120	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	44.00	48.82	92.82	77%	37.03	81.03	68%	64.80	108.80	91%	54.45	98.45	82%
120	SWO-15	Residences at 564146 Karn Road	512251	4767100	44.00	43.53	87.53	73%	33.44	77.44	65%	61.89	105.89	88%	52.72	96.72	81%
120	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	44.00	44.05	88.05	73%	33.69	77.69	65%	49.83	93.83	78%	41.48	85.48	71%
120	SWO-17	Residence at 564226 Karn Road	512958	4767760	44.00	61.00	105.00	88%	51.88	95.88	80%	63.39	107.39	89%	51.24	95.24	79%
120	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	44.00	163.18	207.18	173%	147.40	191.40	160%	164.70	208.70	174%	149.01	193.01	161%
120	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	44.00	114.42	158.42	132%	103.72	147.72	123%	118.43	162.43	135%	107.79	151.79	126%
120	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	44.00	10.57	54.57	45%	8.47	52.47	44%	14.38	58.38	49%	11.87	55.87	47%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

**Maximum Predicted Concentrations at All Discrete Receptors - Additional Mitigation**

**TSP**

**Annual**

Criteria (ug m <sup>-3</sup> )	Receptor Information				Background Concentration [1] (ug m <sup>-3</sup> )	Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y		With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
60	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	19.25	1.10	20.36	34%	0.71	19.97	33%	1.26	20.51	34%	0.82	20.07	33%
60	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	19.25	1.81	21.06	35%	1.03	20.29	34%	1.51	21.56	36%	1.51	20.76	35%
60	ZOR-3	Residence at 663951 Rd 66	510216	4770270	19.25	2.61	21.87	36%	1.20	20.46	34%	3.17	22.42	37%	1.79	21.04	35%
60	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	19.25	2.57	21.82	36%	1.32	20.57	34%	3.05	22.30	37%	1.85	21.10	35%
60	ZOR-5	Residence at 334789 33rd Line	508931	4768760	19.25	2.44	21.69	36%	1.33	20.58	34%	2.89	22.14	37%	1.68	20.93	35%
60	ZOR-6	Residence at 334742 33rd Line	509185	4768350	19.25	2.89	22.14	37%	1.61	20.86	35%	3.09	22.34	37%	1.73	20.98	35%
60	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	19.25	2.59	21.85	36%	1.84	21.09	35%	2.90	22.15	37%	2.14	21.40	36%
60	ZOR-8	Residence at 643743 Road 64	508940	4767980	19.25	2.27	21.52	36%	1.25	20.51	34%	2.02	21.27	35%	1.23	20.49	34%
60	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	19.25	2.06	21.31	36%	1.33	20.58	34%	1.82	21.08	35%	1.06	20.32	34%
60	ZOR-10	Residence at 334578 33rd Line	509739	4766780	19.25	1.18	20.43	34%	0.82	20.07	33%	1.30	20.55	34%	0.75	20.01	33%
60	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	19.25	2.30	21.56	36%	1.56	20.82	35%	2.72	21.97	37%	1.18	20.43	34%
60	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	19.25	1.28	20.53	34%	0.90	20.15	34%	1.37	20.62	34%	0.81	20.07	33%
60	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	19.25	1.57	20.82	35%	1.05	20.31	34%	1.82	21.07	35%	1.30	20.56	34%
60	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	19.25	1.09	20.34	34%	0.75	20.00	33%	1.20	20.45	34%	0.71	19.97	33%
60	ING-2	Laurie Hawkins Public School	509019	4765860	19.25	0.58	19.84	33%	0.41	19.66	33%	0.62	19.88	33%	0.41	19.67	33%
60	ING-3	Ingersoll District Collegiate Institute	510512	4766230	19.25	1.16	20.42	34%	0.83	20.08	33%	1.20	20.46	34%	0.76	20.01	33%
60	ING-4	On the river north of 209 County Road 9	509480	4765180	19.25	0.51	19.76	33%	0.37	19.62	33%	0.56	19.81	33%	0.38	19.63	33%
60	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	19.25	0.47	19.73	33%	0.34	19.60	33%	0.50	19.76	33%	0.34	19.59	33%
60	ING-6	Royal Road Public School	510337	4765360	19.25	0.67	19.92	33%	0.50	19.75	33%	0.73	19.98	33%	0.50	19.75	33%
60	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	19.25	0.34	19.59	33%	0.25	19.50	32%	0.36	19.61	33%	0.26	19.51	33%
60	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	19.25	0.45	19.70	33%	0.34	19.59	33%	0.49	19.74	33%	0.34	19.60	33%
60	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	19.25	0.94	20.20	34%	0.65	19.91	33%	0.98	20.23	34%	0.64	19.89	33%
60	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	19.25	0.63	19.89	33%	0.44	19.69	33%	0.67	19.92	33%	0.44	19.70	33%
60	SWO-1	Residence at 584052 Beachville Road	511124	4766750	19.25	2.57	21.82	36%	1.72	20.98	35%	2.79	22.04	37%	1.36	20.62	34%
60	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	19.25	4.77	24.03	40%	3.32	22.57	38%	4.43	23.68	39%	2.45	21.70	36%
60	SWO-3	Residence at 584142 Beachville Road	511722	4767480	19.25	6.14	25.39	42%	4.48	23.73	40%	5.63	24.88	41%	3.62	22.88	38%
60	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	19.25	25.99	45.24	75%	23.62	42.88	71%	25.96	45.21	75%	23.88	43.13	72%
60	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	19.25	5.63	24.89	41%	4.39	23.65	39%	5.86	25.11	42%	4.77	24.02	40%
60	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	19.25	1.82	21.08	35%	1.25	20.50	34%	1.94	21.20	35%	1.43	20.69	34%
60	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	19.25	1.08	20.33	34%	0.76	20.01	33%	1.18	20.44	34%	0.85	20.11	34%
60	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	19.25	0.46	19.71	33%	0.30	19.55	33%	0.49	19.74	33%	0.35	19.60	33%
60	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	19.25	0.30	19.55	33%	0.20	19.45	32%	0.32	19.57	33%	0.22	19.48	32%
60	SWO-10	Residence at 563977 Karn Road	510980	4765990	19.25	1.20	20.46	34%	0.84	20.09	33%	1.29	20.55	34%	0.80	20.05	33%
60	SWO-11	Residence at 564028 Karn Road	511396	4766310	19.25	1.77	21.02	35%	1.20	20.45	34%	1.85	21.10	35%	1.06	20.32	34%
60	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	19.25	2.16	21.42	36%	1.46	20.71	35%	2.23	21.48	36%	1.29	20.55	34%
60	SWO-13	Centreville Pond and Conservation Area	511570	4766920	19.25	3.13	22.38	37%	2.18	21.43	36%	3.19	22.45	37%	1.76	21.01	35%
60	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	19.25	3.17	22.42	37%	2.31	21.57	36%	3.10	22.35	37%	2.08	21.34	36%
60	SWO-15	Residences at 564146 Karn Road	512251	4767100	19.25	3.44	22.69	38%	2.58	21.84	36%	3.38	22.63	38%	2.37	21.63	36%
60	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	19.25	3.80	23.06	38%	2.93	22.18	37%	3.77	23.03	38%	2.74	21.99	37%
60	SWO-17	Residence at 564226 Karn Road	512958	4767760	19.25	7.51	26.77	45%	6.51	25.76	43%	7.64	26.89	45%	6.61	25.86	43%
60	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	19.25	21.98	41.23	69%	20.17	39.42	66%	22.05	41.31	69%	20.28	39.53	66%
60	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	19.25	18.26	37.52	63%	17.06	36.31	61%	18.32	37.58	63%	17.08	36.33	61%
60	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	19.25	0.75	20.00	33%	0.57	19.82	33%	0.77	20.02	33%	0.59	19.84	33%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

**Maximum Predicted Concentrations at All Discrete Receptors - Additional Mitigation**

**Dustfall**

**Annual**

Criteria (ug m <sup>-3</sup> )	Receptor Information				Background Concentration [1] (ug m <sup>-3</sup> )	Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
	Receptor ID	Description	X	Y		With Landfill			Without Landfill			With Landfill			Without Landfill		
						Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
4.6	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.00	0.06	0.06	1%	0.04	0.04	1%	0.06	0.06	1%	0.04	0.04	1%
4.6	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.00	0.07	0.07	2%	0.06	0.06	1%	0.12	0.12	3%	0.10	0.10	2%
4.6	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.00	0.15	0.15	3%	0.08	0.08	2%	0.18	0.18	4%	0.13	0.13	3%
4.6	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.00	0.27	0.27	6%	0.11	0.11	2%	0.29	0.29	6%	0.20	0.20	4%
4.6	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.00	0.19	0.19	4%	0.09	0.09	2%	0.20	0.20	4%	0.14	0.14	3%
4.6	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.00	0.37	0.37	8%	0.12	0.12	3%	0.27	0.27	6%	0.15	0.15	3%
4.6	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.00	0.35	0.35	8%	0.17	0.17	4%	0.29	0.29	6%	0.22	0.22	5%
4.6	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.00	0.35	0.35	8%	0.11	0.11	2%	0.14	0.14	3%	0.09	0.09	2%
4.6	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.00	0.32	0.32	7%	0.14	0.14	3%	0.16	0.16	3%	0.08	0.08	2%
4.6	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.00	0.08	0.08	2%	0.07	0.07	1%	0.07	0.07	2%	0.04	0.04	1%
4.6	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.00	0.20	0.20	4%	0.14	0.14	3%	0.13	0.13	3%	0.07	0.07	1%
4.6	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.00	0.09	0.09	2%	0.07	0.07	1%	0.06	0.06	1%	0.03	0.03	1%
4.6	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.00	0.20	0.20	4%	0.10	0.10	2%	0.18	0.18	4%	0.13	0.13	3%
4.6	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.00	0.07	0.07	1%	0.06	0.06	1%	0.06	0.06	1%	0.03	0.03	1%
4.6	ING-2	Laurie Hawkins Public School	509019	4765860	0.00	0.03	0.03	1%	0.02	0.02	1%	0.02	0.02	1%	0.02	0.02	0%
4.6	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.00	0.10	0.10	2%	0.05	0.05	1%	0.07	0.07	1%	0.03	0.03	1%
4.6	ING-4	On the river north of 209 County Road 9	509480	4765180	0.00	0.02	0.02	0%	0.02	0.02	0%	0.02	0.02	0%	0.02	0.02	0%
4.6	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.00	0.02	0.02	1%	0.02	0.02	0%	0.02	0.02	0%	0.01	0.01	0%
4.6	ING-6	Royal Road Public School	510337	4765360	0.00	0.04	0.04	1%	0.02	0.02	1%	0.03	0.03	1%	0.02	0.02	0%
4.6	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.00	0.01	0.01	0%	0.01	0.01	0%	0.01	0.01	0%	0.01	0.01	0%
4.6	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.00	0.02	0.02	1%	0.01	0.01	0%	0.02	0.02	0%	0.01	0.01	0%
4.6	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.00	0.06	0.06	1%	0.03	0.03	1%	0.05	0.05	1%	0.03	0.03	1%
4.6	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.00	0.03	0.03	1%	0.02	0.02	0%	0.03	0.03	1%	0.02	0.02	0%
4.6	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.00	0.23	0.23	5%	0.11	0.11	2%	0.17	0.17	4%	0.07	0.07	1%
4.6	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.00	0.42	0.42	9%	0.25	0.25	6%	0.28	0.28	6%	0.17	0.17	4%
4.6	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.00	0.51	0.51	11%	0.39	0.39	9%	0.41	0.41	9%	0.31	0.31	7%
4.6	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.00	1.57	1.57	34%	1.35	1.35	29%	1.47	1.47	32%	1.33	1.33	29%
4.6	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.00	0.67	0.67	14%	0.50	0.50	11%	0.67	0.67	15%	0.55	0.55	12%
4.6	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.00	0.26	0.26	6%	0.13	0.13	3%	0.17	0.17	4%	0.12	0.12	3%
4.6	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.00	0.14	0.14	3%	0.06	0.06	1%	0.12	0.12	3%	0.08	0.08	2%
4.6	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.00	0.06	0.06	1%	0.02	0.02	1%	0.04	0.04	1%	0.03	0.03	1%
4.6	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.00	0.04	0.04	1%	0.02	0.02	0%	0.03	0.03	1%	0.02	0.02	0%
4.6	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.00	0.09	0.09	2%	0.05	0.05	1%	0.06	0.06	1%	0.04	0.04	1%
4.6	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.00	0.14	0.14	3%	0.07	0.07	1%	0.10	0.10	2%	0.05	0.05	1%
4.6	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.00	0.19	0.19	4%	0.09	0.09	2%	0.13	0.13	3%	0.07	0.07	2%
4.6	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.00	0.29	0.29	6%	0.16	0.16	3%	0.19	0.19	4%	0.10	0.10	2%
4.6	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.00	0.25	0.25	5%	0.16	0.16	4%	0.18	0.18	4%	0.15	0.15	3%
4.6	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.00	0.22	0.22	5%	0.18	0.18	4%	0.20	0.20	4%	0.16	0.16	4%
4.6	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.00	0.24	0.24	5%	0.20	0.20	4%	0.22	0.22	5%	0.18	0.18	4%
4.6	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.00	0.26	0.26	6%	0.20	0.20	4%	0.24	0.24	5%	0.21	0.21	5%
4.6	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.00	0.45	0.45	10%	0.37	0.37	8%	0.42	0.42	9%	0.38	0.38	8%
4.6	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.00	0.33	0.33	7%	0.30	0.30	7%	0.33	0.33	7%	0.30	0.30	7%
4.6	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.00	0.07	0.07	2%	0.05	0.05	1%	0.07	0.07	2%	0.05	0.05	1%

\*Values shown in green represent residential receptors.

[1] Background concentration based on upwind ambient monitoring results.

[2] Maximum modelled concentration based on proposed landfill, Carmeuse, and CR6 sources.

[3] Maximum modelled concentration based on Carmeuse and CR6 sources.

**Maximum Predicted Concentrations at All Discrete Receptors - Additional Mitigation**

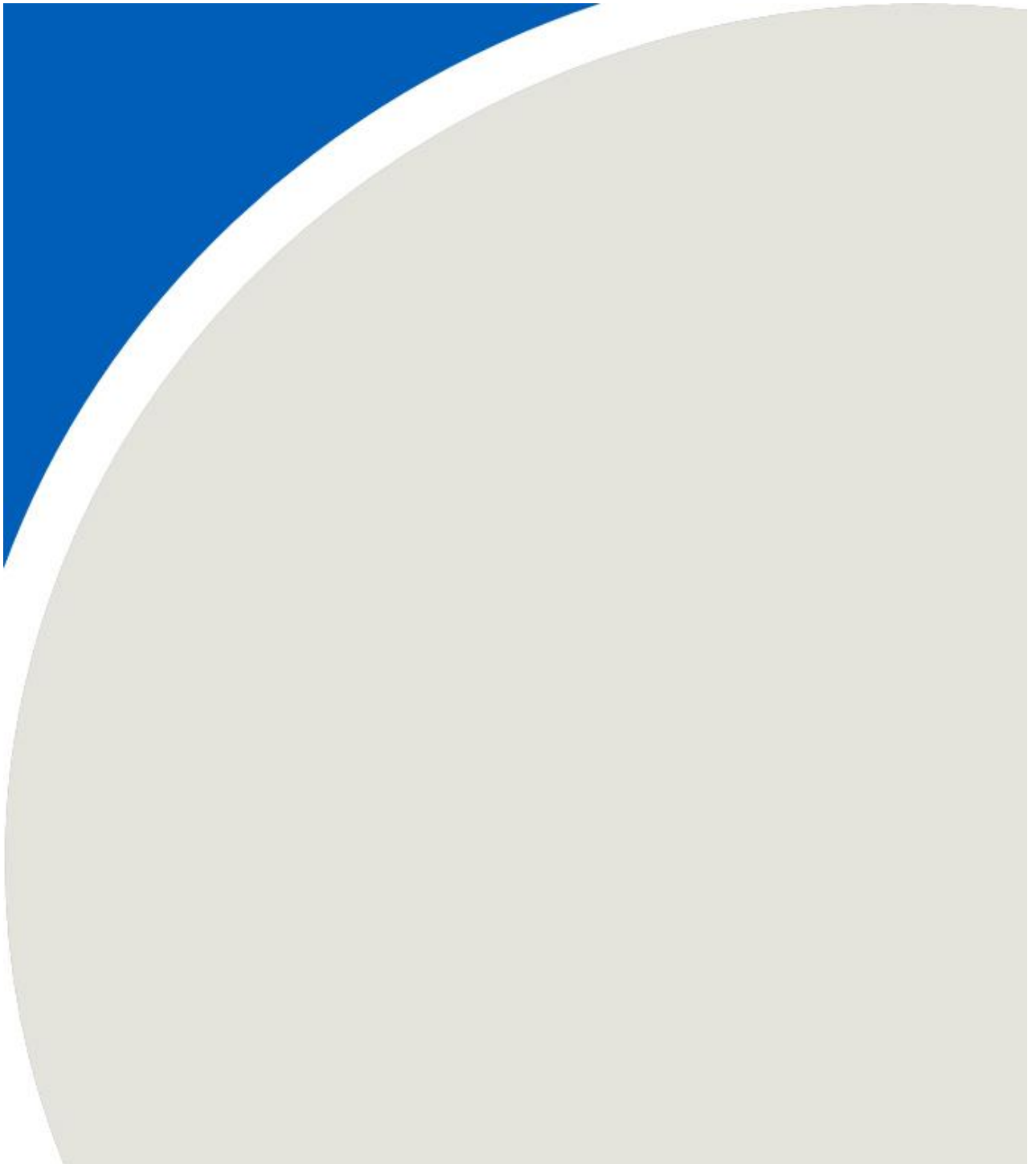
**Dustfall**

**30-Day**

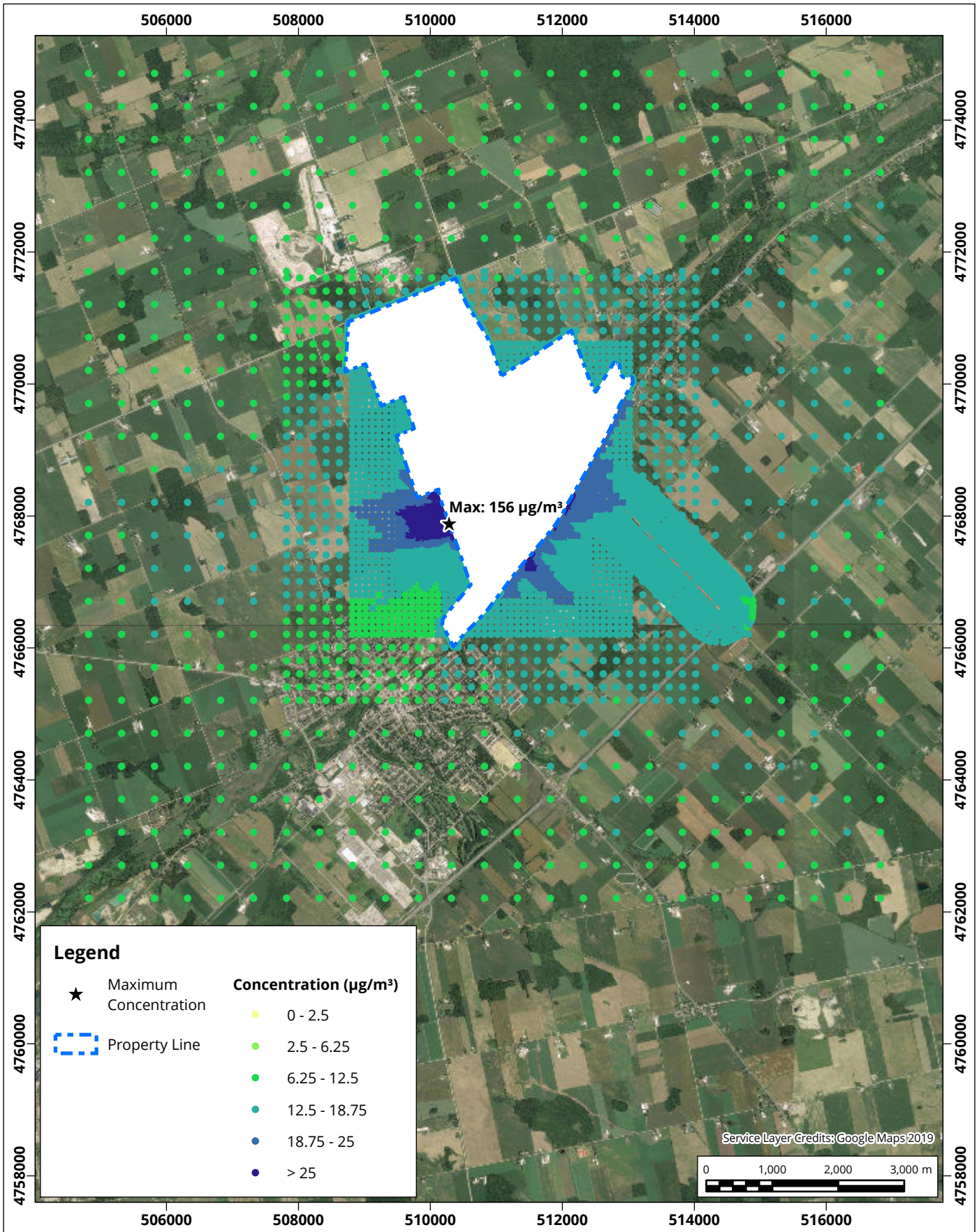
Criteria (ug m <sup>-3</sup> )	Receptor Information				Background Concentration [1] (ug m <sup>-3</sup> )	Stage 1 (2023-2027)			Stage 1 (2023-2027)			Stage 3 (2033-2037)			Stage 3 (2033-2037)		
						With Landfill			Without Landfill			With Landfill			Without Landfill		
	Receptor ID	Description	X	Y		Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [2] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)	Maximum Modelled Concentration [3] (ug m <sup>-3</sup> )	Maximum Modelled Concentration with Background (ug m <sup>-3</sup> )	Percent of Criteria (%)
7	ZOR-1	Intersection of 31st Line and Rd 66	507552	4768980	0.00	0.06	0.06	1%	0.04	0.04	1%	0.06	0.06	1%	0.04	0.04	1%
7	ZOR-2	Intersection of 33rd Line and Rd 66	508703	4769450	0.00	0.07	0.07	1%	0.06	0.06	1%	0.12	0.12	2%	0.12	0.13	2%
7	ZOR-3	Residence at 663951 Rd 66	510216	4770270	0.00	0.15	0.15	2%	0.08	0.08	1%	0.18	0.18	3%	0.18	0.20	3%
7	ZOR-4	Intersection of 37th Line and Rd 66	511004	4770360	0.00	0.27	0.27	4%	0.11	0.11	2%	0.29	0.29	4%	0.29	0.33	5%
7	ZOR-5	Residence at 334789 33rd Line	508931	4768760	0.00	0.19	0.19	3%	0.09	0.09	1%	0.20	0.20	3%	0.20	0.22	3%
7	ZOR-6	Residence at 334742 33rd Line	509185	4768350	0.00	0.37	0.37	5%	0.12	0.12	2%	0.27	0.27	4%	0.27	0.32	5%
7	ZOR-7	Residence at 414774 41st Line (Domtar Line)	512505	4770060	0.00	0.35	0.35	5%	0.17	0.17	2%	0.29	0.29	4%	0.29	0.34	5%
7	ZOR-8	Residence at 643743 Road 64	508940	4767980	0.00	0.35	0.35	5%	0.11	0.11	2%	0.14	0.14	2%	0.14	0.19	3%
7	ZOR-9	Residence at 334647, 334652 and 334655 33rd Line	509437	4767450	0.00	0.32	0.32	5%	0.14	0.14	2%	0.16	0.16	2%	0.16	0.20	3%
7	ZOR-10	Residence at 334578 33rd Line	509739	4766780	0.00	0.08	0.08	1%	0.07	0.07	1%	0.07	0.07	1%	0.07	0.09	1%
7	ZOR-11	Residence at 623851 Rd62/ North Town	510446	4767010	0.00	0.20	0.20	3%	0.14	0.14	2%	0.13	0.13	2%	0.13	0.16	2%
7	ZOR-12	Cemetery - 603806 Cemetery Ln	510224	4766570	0.00	0.09	0.09	1%	0.07	0.07	1%	0.06	0.06	1%	0.06	0.07	1%
7	ZOR-13	Intersection of 41st Line and Road 66	512141	4770850	0.00	0.20	0.20	3%	0.10	0.10	1%	0.18	0.18	3%	0.18	0.21	3%
7	ING-1	Intersection of North Town Line E and Pemberton Street	509757	4766670	0.00	0.07	0.07	1%	0.06	0.06	1%	0.06	0.06	1%	0.06	0.07	1%
7	ING-2	Laurie Hawkins Public School	509019	4765860	0.00	0.03	0.03	0%	0.02	0.02	0%	0.02	0.02	0%	0.02	0.03	0%
7	ING-3	Ingersoll District Collegiate Institute	510512	4766230	0.00	0.10	0.10	1%	0.05	0.05	1%	0.07	0.07	1%	0.07	0.08	1%
7	ING-4	On the river north of 209 County Road 9	509480	4765180	0.00	0.02	0.02	0%	0.02	0.02	0%	0.02	0.02	0%	0.02	0.03	0%
7	ING-5	Intersection of Thames Road and Charles St. W	508623	4765540	0.00	0.02	0.02	0%	0.02	0.02	0%	0.02	0.02	0%	0.02	0.02	0%
7	ING-6	Royal Road Public School	510337	4765360	0.00	0.04	0.04	1%	0.02	0.02	0%	0.03	0.03	0%	0.03	0.04	1%
7	ING-7	Intersection of Holcroft St.W and Whiting St.	509587	4763660	0.00	0.01	0.01	0%	0.01	0.01	0%	0.01	0.01	0%	0.01	0.02	0%
7	ING-8	Alexandra Hospital (Noxon St and Thames St S)	510135	4764360	0.00	0.02	0.02	0%	0.01	0.01	0%	0.02	0.02	0%	0.02	0.02	0%
7	ING-9	Intersection of Walker Road and Fuller Drive	511353	4765370	0.00	0.06	0.06	1%	0.03	0.03	0%	0.05	0.05	1%	0.05	0.05	1%
7	ING-10	Intersection of Clark Rod and Park Line	511429	4764360	0.00	0.03	0.03	0%	0.02	0.02	0%	0.03	0.03	0%	0.03	0.03	0%
7	SWO-1	Residence at 584052 Beachville Road	511124	4766750	0.00	0.23	0.23	3%	0.11	0.11	2%	0.17	0.17	2%	0.17	0.20	3%
7	SWO-2	Hi-Way Pentecostal Church (584118 Beachville Road)	511535	4767260	0.00	0.42	0.42	6%	0.25	0.25	4%	0.28	0.28	4%	0.28	0.34	5%
7	SWO-3	Residence at 584142 Beachville Road	511722	4767480	0.00	0.51	0.51	7%	0.39	0.39	6%	0.41	0.41	6%	0.41	0.48	7%
7	SWO-4	Intersection of Beachville Road and 37th Line	512361	4768470	0.00	1.57	1.57	22%	1.35	1.35	19%	1.47	1.47	21%	1.47	1.70	24%
7	SWO-5	On Beachville Road approximately located in front of 584331 Beachville Road	512702	4769030	0.00	0.67	0.67	10%	0.50	0.50	7%	0.67	0.67	10%	0.67	0.77	11%
7	SWO-6	Intersection of W Hill Line and Spruce Road	513588	4770070	0.00	0.26	0.26	4%	0.13	0.13	2%	0.17	0.17	2%	0.17	0.21	3%
7	SWO-7	Intersection of Hook St and Zorra Line	513672	4771030	0.00	0.14	0.14	2%	0.06	0.06	1%	0.12	0.12	2%	0.12	0.14	2%
7	SWO-8	On Beachville Road in front of 584844 Beachville Road	516009	4772770	0.00	0.06	0.06	1%	0.02	0.02	0%	0.04	0.04	1%	0.04	0.05	1%
7	SWO-9	On Beachville Road in front of 585076 Beachville Road	517966	4774070	0.00	0.04	0.04	1%	0.02	0.02	0%	0.03	0.03	0%	0.03	0.03	0%
7	SWO-10	Residence at 563977 Karn Road	510980	4765990	0.00	0.09	0.09	1%	0.05	0.05	1%	0.06	0.06	1%	0.06	0.08	1%
7	SWO-11	Residence at 564028 Karn Road	511396	4766310	0.00	0.14	0.14	2%	0.07	0.07	1%	0.10	0.10	1%	0.10	0.12	2%
7	SWO-12	Residences at 564047, 564058, 564062 Karn Road	511616	4766520	0.00	0.19	0.19	3%	0.09	0.09	1%	0.13	0.13	2%	0.13	0.16	2%
7	SWO-13	Centreville Pond and Conservation Area	511570	4766920	0.00	0.29	0.29	4%	0.16	0.16	2%	0.19	0.19	3%	0.19	0.23	3%
7	SWO-14	Residences at 564120 and 564128 Karn Road	512109	4766980	0.00	0.25	0.25	4%	0.16	0.16	2%	0.18	0.18	3%	0.18	0.22	3%
7	SWO-15	Residences at 564146 Karn Road	512251	4767100	0.00	0.22	0.22	3%	0.18	0.18	3%	0.20	0.20	3%	0.20	0.23	3%
7	SWO-16	Residences at 564162, 564164 and 564168 Karn Road	512389	4767250	0.00	0.24	0.24	3%	0.20	0.20	3%	0.22	0.22	3%	0.22	0.25	4%
7	SWO-17	Residence at 564226 Karn Road	512958	4767760	0.00	0.26	0.26	4%	0.20	0.20	3%	0.24	0.24	3%	0.24	0.27	4%
7	SWO-18	Intersection of Karn Road and Foldens Line	513114	4767940	0.00	0.45	0.45	6%	0.37	0.37	5%	0.42	0.42	6%	0.42	0.49	7%
7	SWO-19	Intersection of Clarke Road and Foldens Line	514069	4766910	0.00	0.33	0.33	5%	0.30	0.30	4%	0.33	0.33	5%	0.33	0.38	5%
7	SWO-20	Intersection of Clarke Road and E Hill Line	516680	4769480	0.00	0.07	0.07	1%	0.05	0.05	1%	0.07	0.07	1%	0.07	0.08	1%

\*Values shown in green represent residential receptors.

## APPENDIX M







## 24-hour PM<sub>2.5</sub> Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background = 11  $\mu\text{g}/\text{m}^3$

Limit = 25  $\mu\text{g}/\text{m}^3$

Project #: 1800160

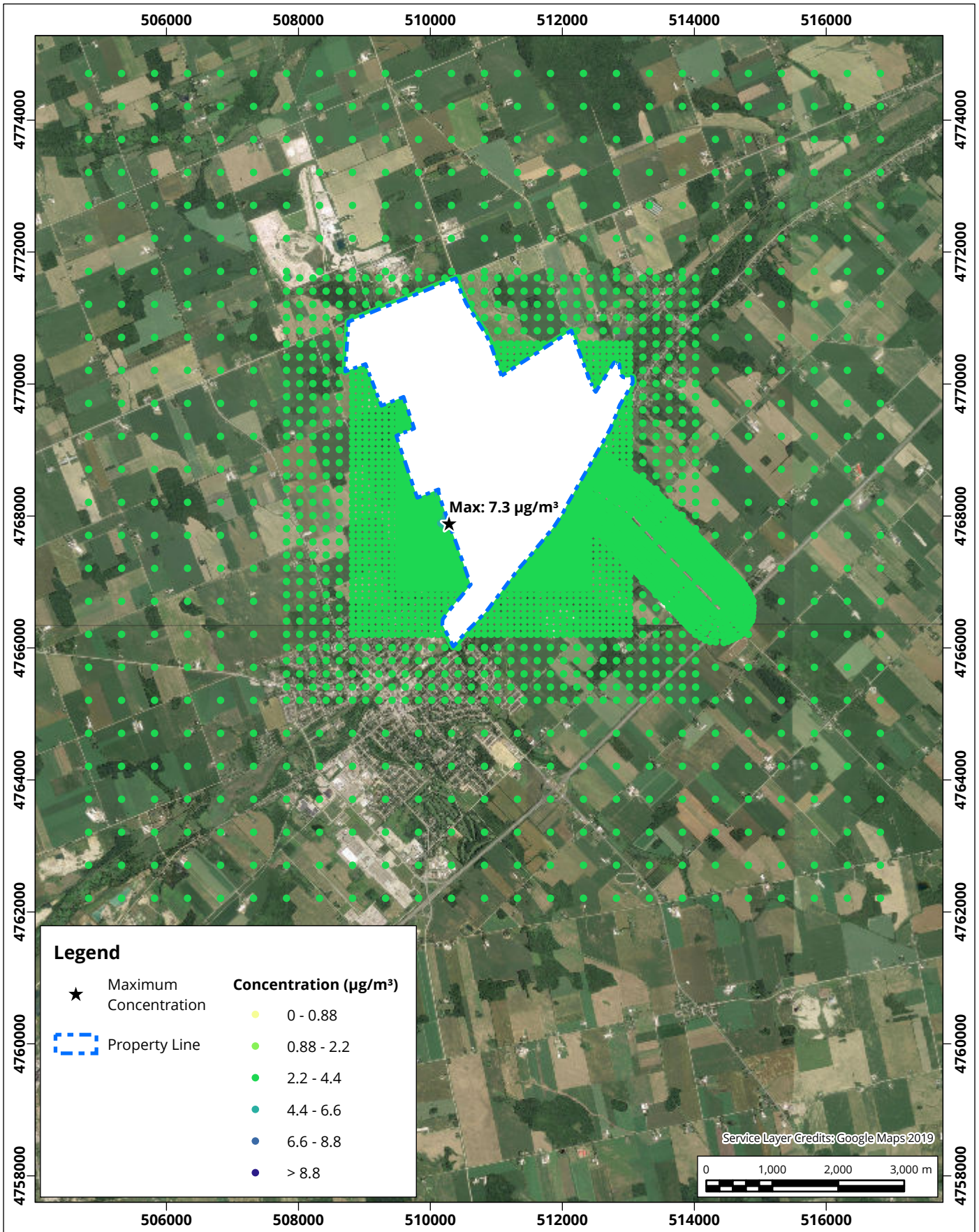
Drawn by: DJH | Figure: M1

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







## Annual PM<sub>2.5</sub> Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background = 2.93  $\mu\text{g}/\text{m}^3$

Limit = 8.8  $\mu\text{g}/\text{m}^3$

Project #: 1800160

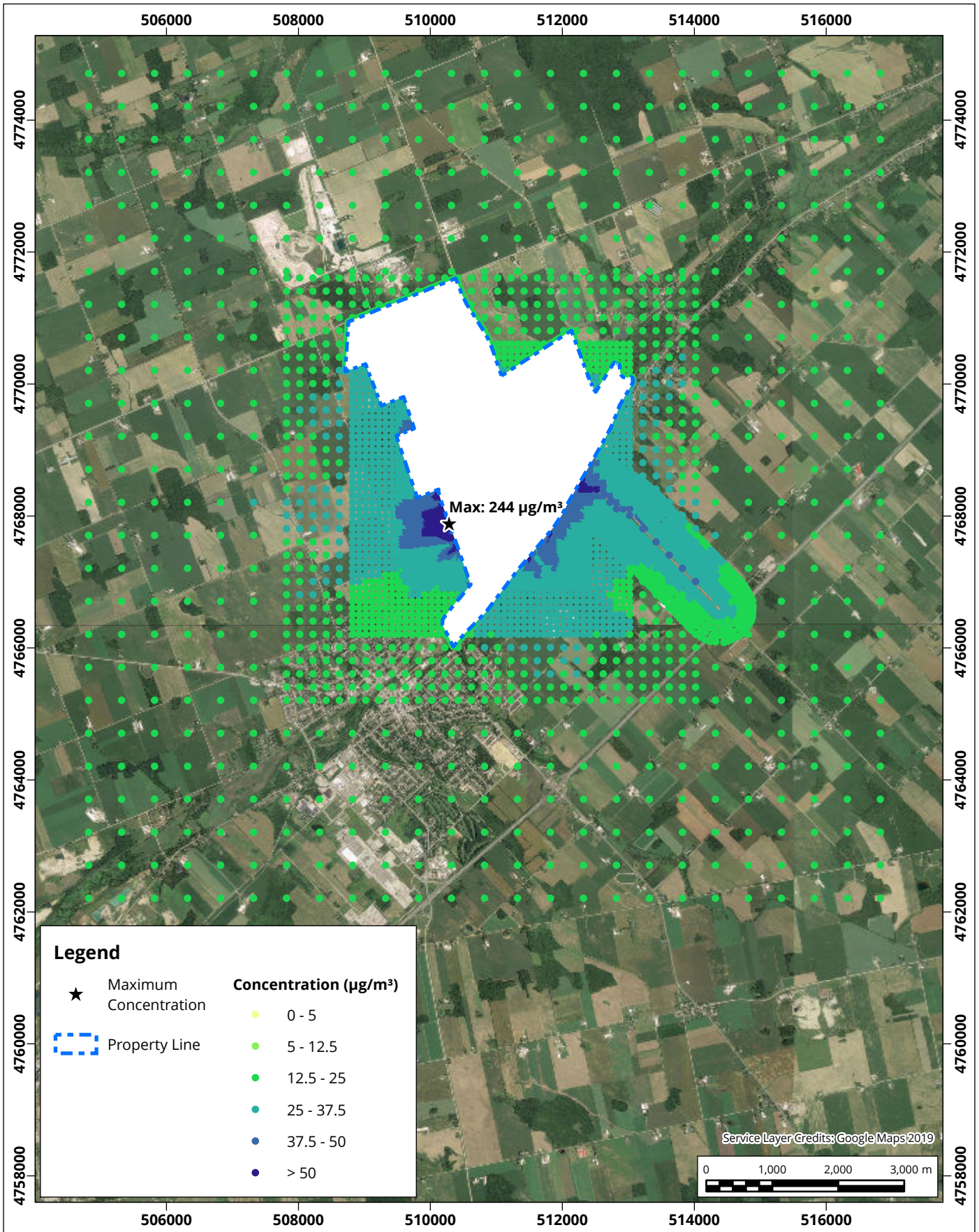
Drawn by: DJH | Figure: M2

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







## 24-hour PM<sub>10</sub> Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $16 \mu\text{g}/\text{m}^3$

Limit =  $50 \mu\text{g}/\text{m}^3$

Project #: 1800160

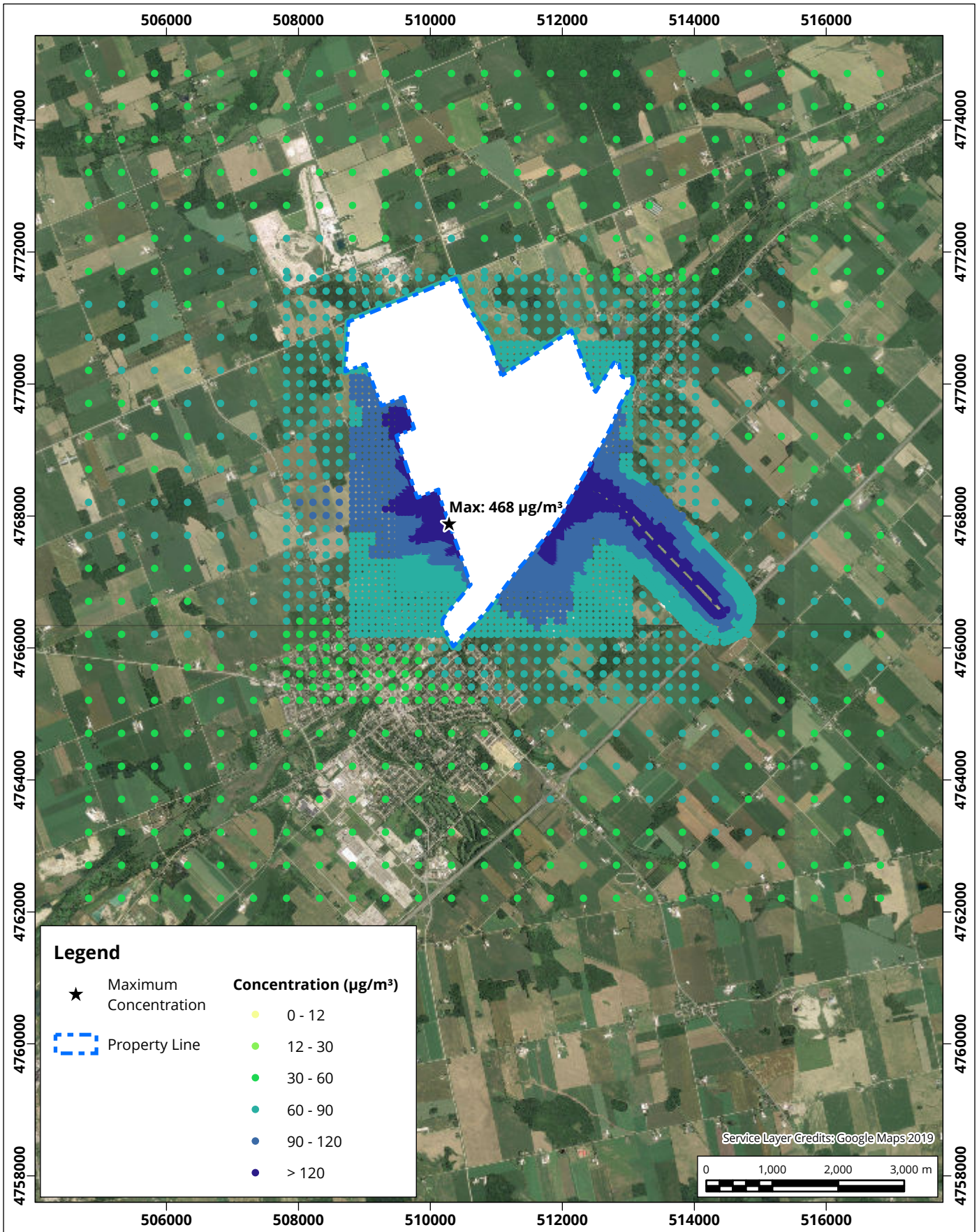
Drawn by: DJH | Figure: M3

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







## 24-hour TSP Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background = 44 µg/m³

Limit = 120 µg/m³

Project #: 1800160

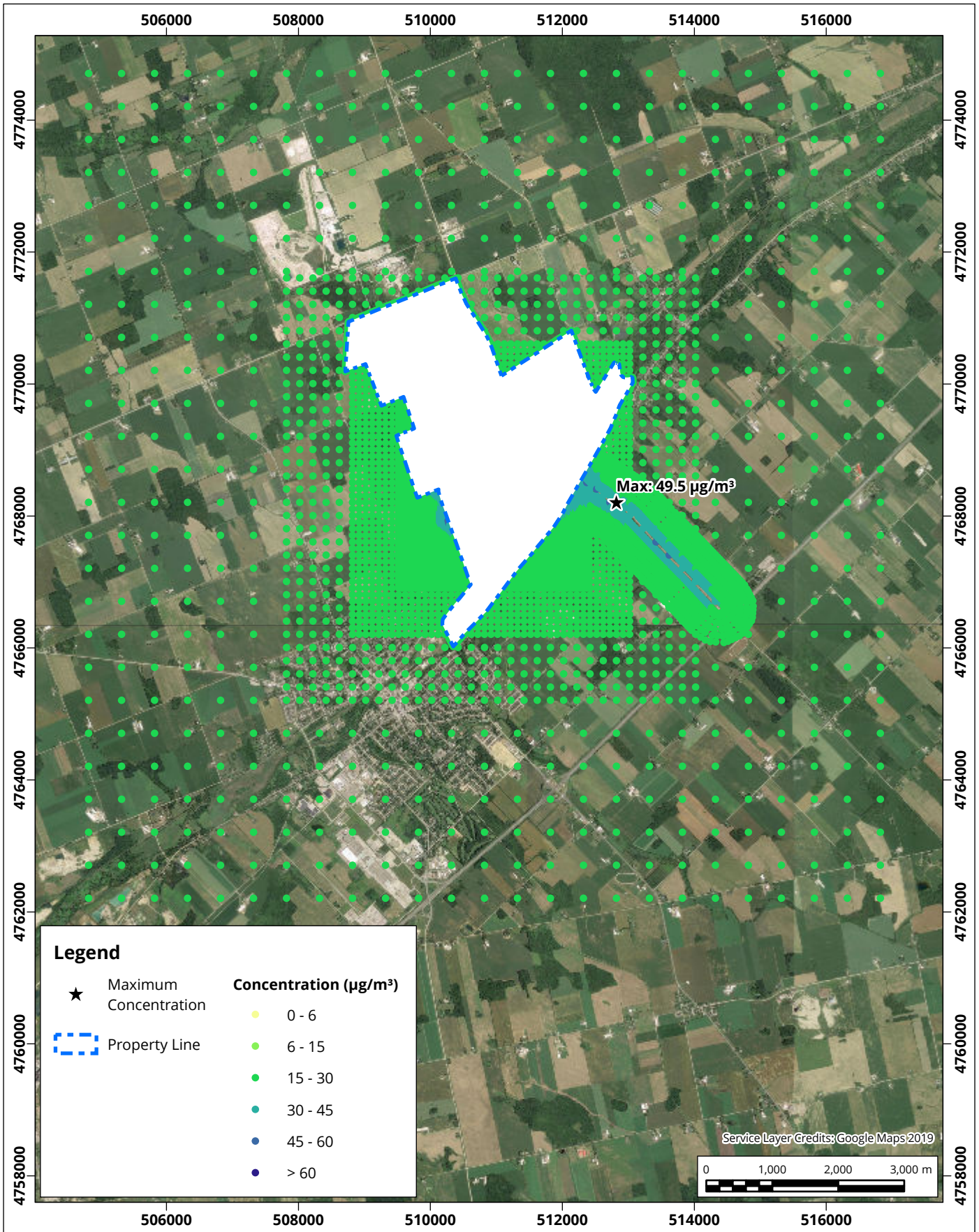
Drawn by: DJH | Figure: M4

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







## Annual TSP Concentration Contours

### Stage 1 - 2023 to 2027

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $19.25 \mu\text{g}/\text{m}^3$

Limit =  $60 \mu\text{g}/\text{m}^3$

Project #: 1800160

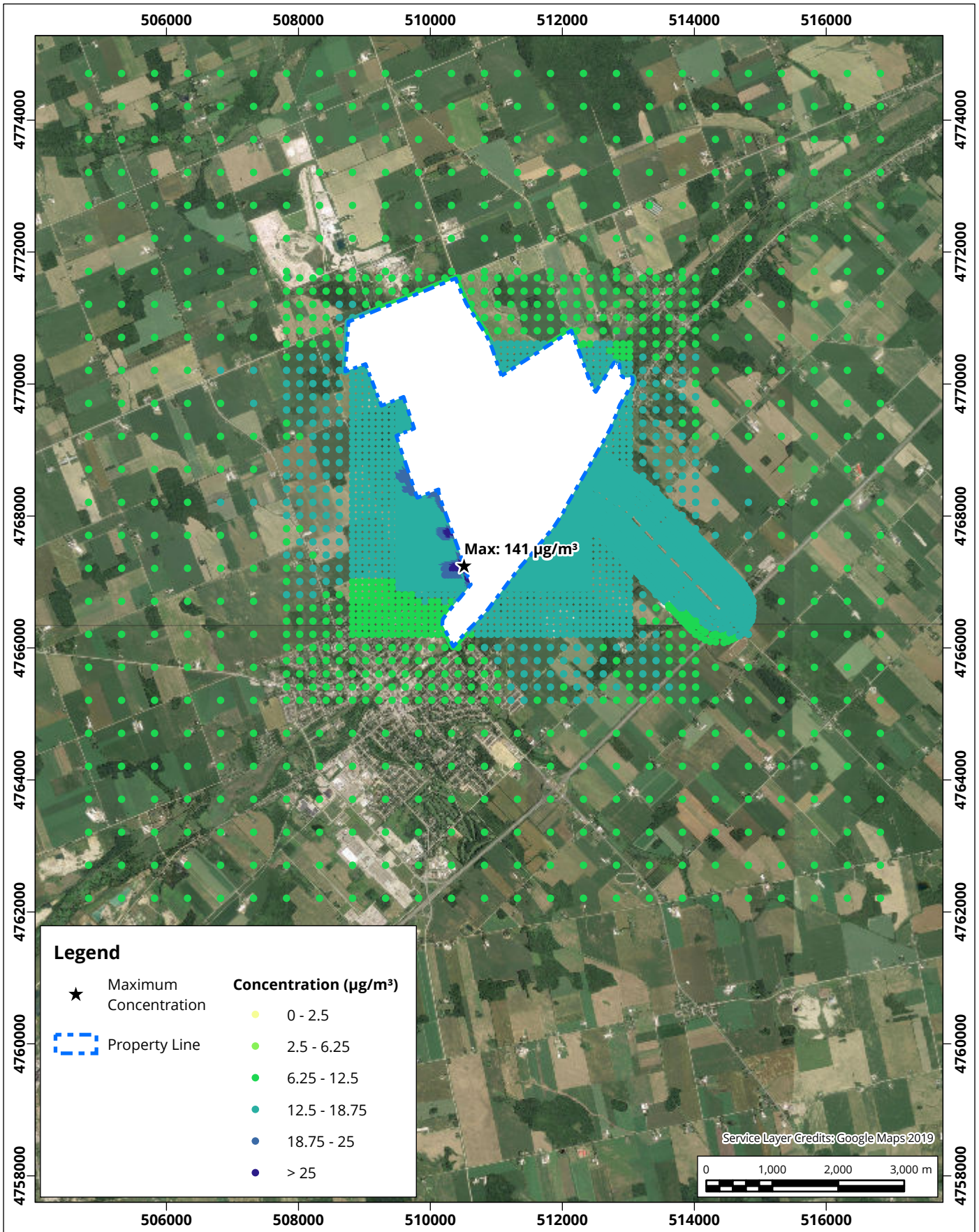
Drawn by: DJH | Figure: M5

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







## 24-hour PM<sub>2.5</sub> Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background = 11  $\mu\text{g}/\text{m}^3$

Limit = 25  $\mu\text{g}/\text{m}^3$

Project #: 1800160

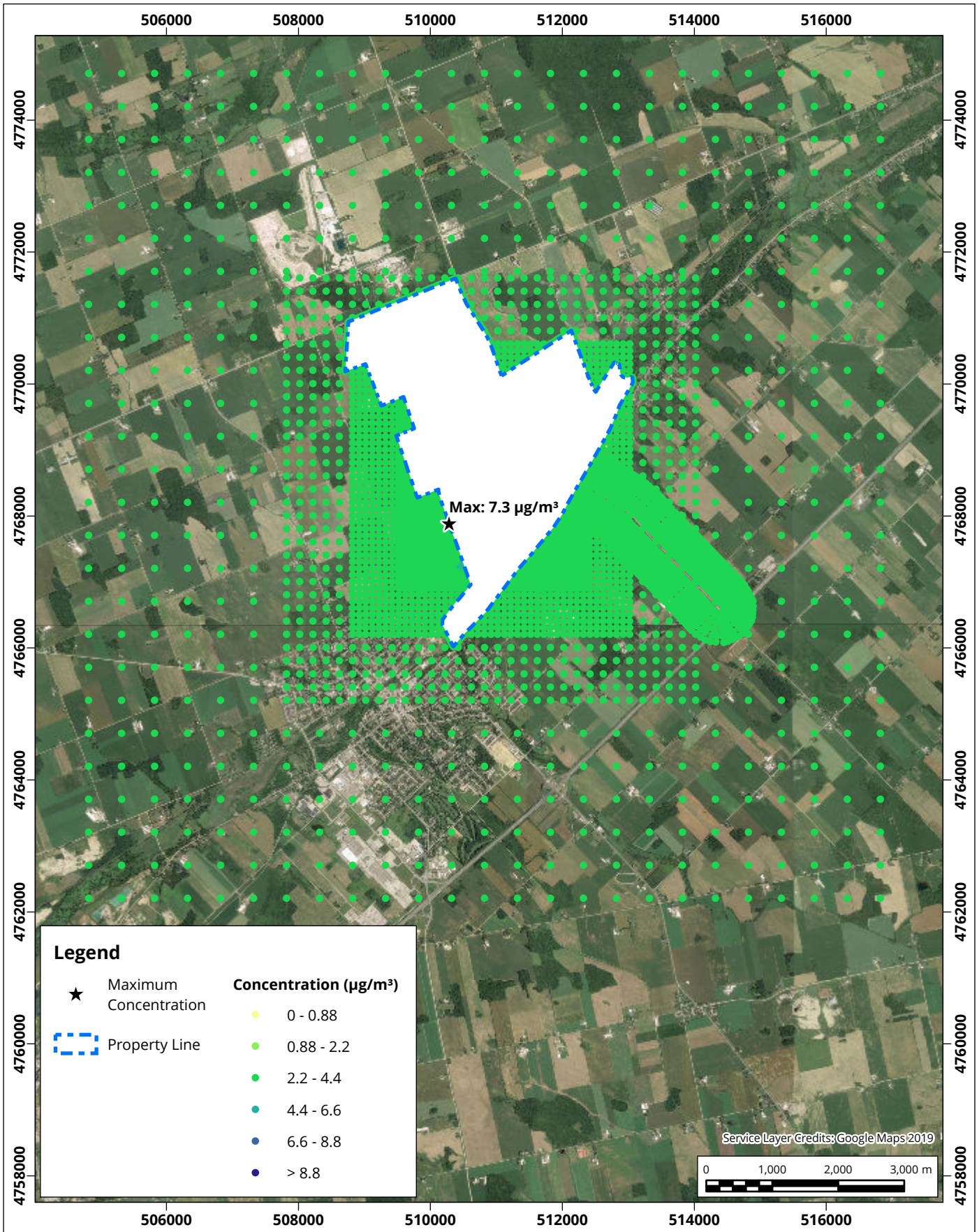
Drawn by: DJH | Figure: M6

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







## Annual PM<sub>2.5</sub> Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background = 2.93  $\mu\text{g}/\text{m}^3$

Limit = 8.8  $\mu\text{g}/\text{m}^3$

Project #: 1800160

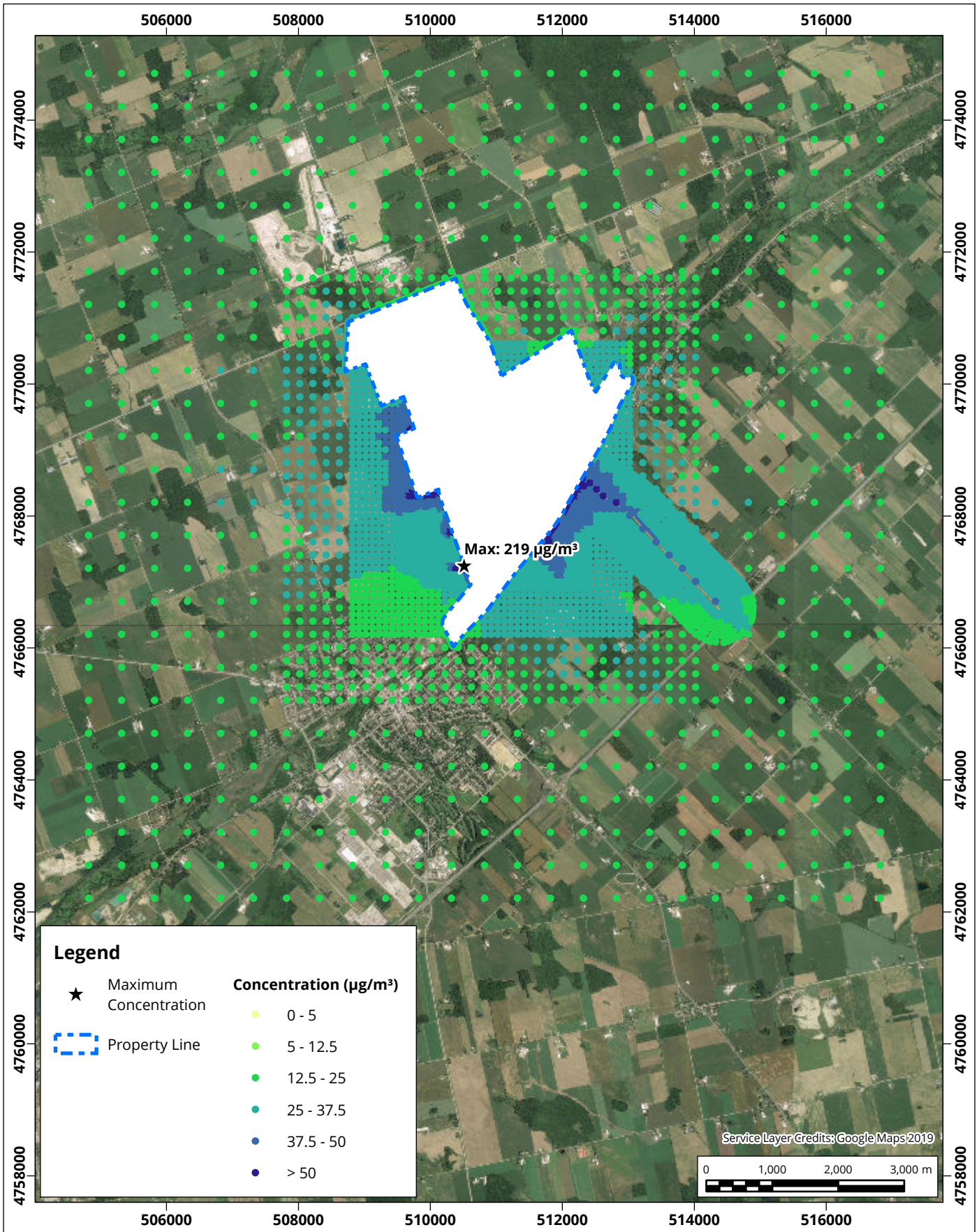
Drawn by: DJH | Figure: M7

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







**Legend**

- ★ Maximum Concentration
- Property Line

Concentration ( $\mu\text{g}/\text{m}^3$ )	
Yellow	0 - 5
Light Green	5 - 12.5
Green	12.5 - 25
Teal	25 - 37.5
Blue	37.5 - 50
Dark Blue	> 50

## 24-hour PM<sub>10</sub> Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $16 \mu\text{g}/\text{m}^3$

Limit =  $50 \mu\text{g}/\text{m}^3$

Project #: 1800160

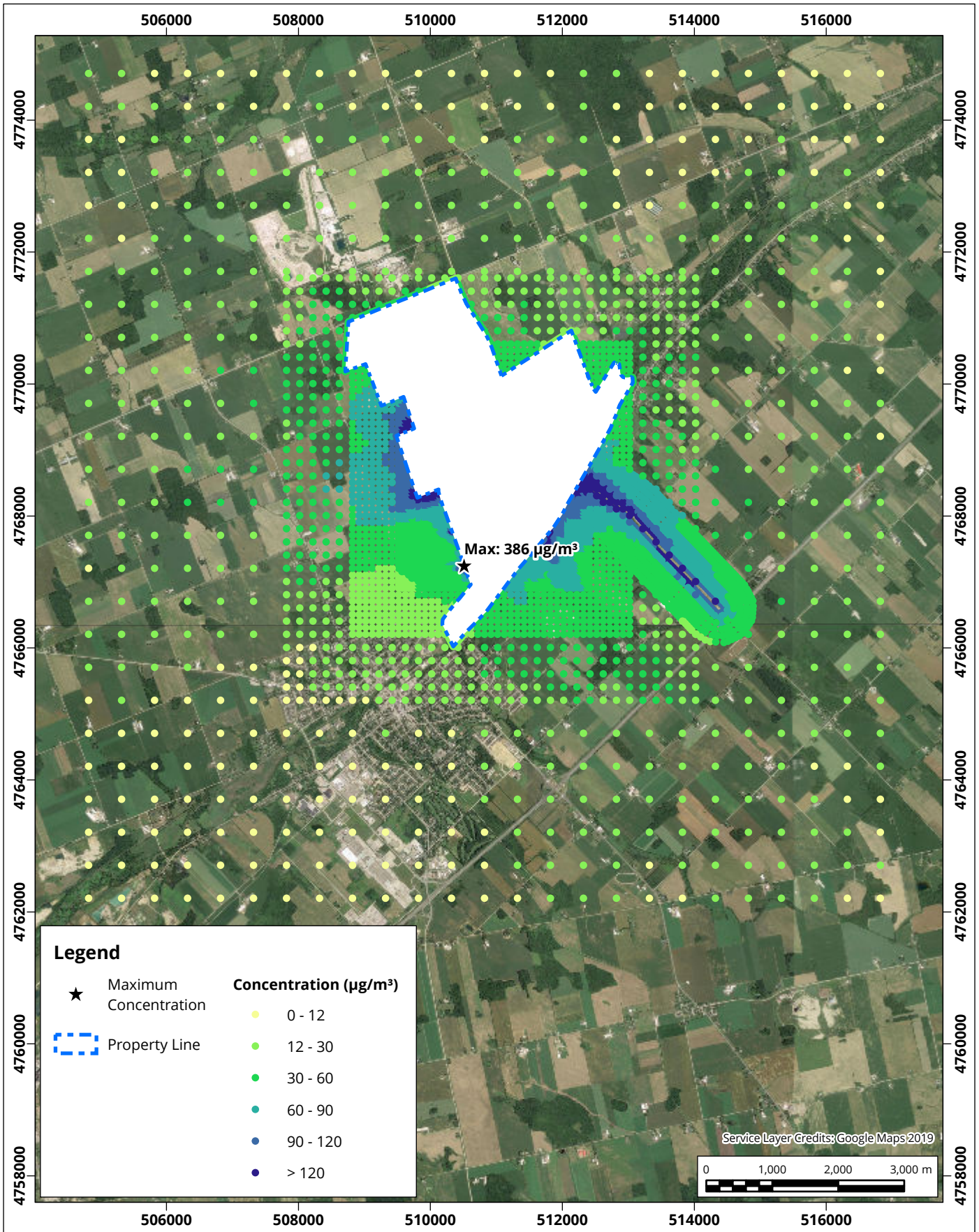
Drawn by: DJH | Figure: M8

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







**Legend**

★ Maximum Concentration

--- Property Line

**Concentration ( $\mu\text{g}/\text{m}^3$ )**

● 0 - 12

● 12 - 30

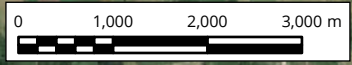
● 30 - 60

● 60 - 90

● 90 - 120

● > 120

Service Layer Credits: Google Maps 2019



**24-hour TSP Concentration Contours**

**Stage 3 - 2033 to 2037**

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $44 \mu\text{g}/\text{m}^3$

Limit =  $120 \mu\text{g}/\text{m}^3$

Project #: 1800160

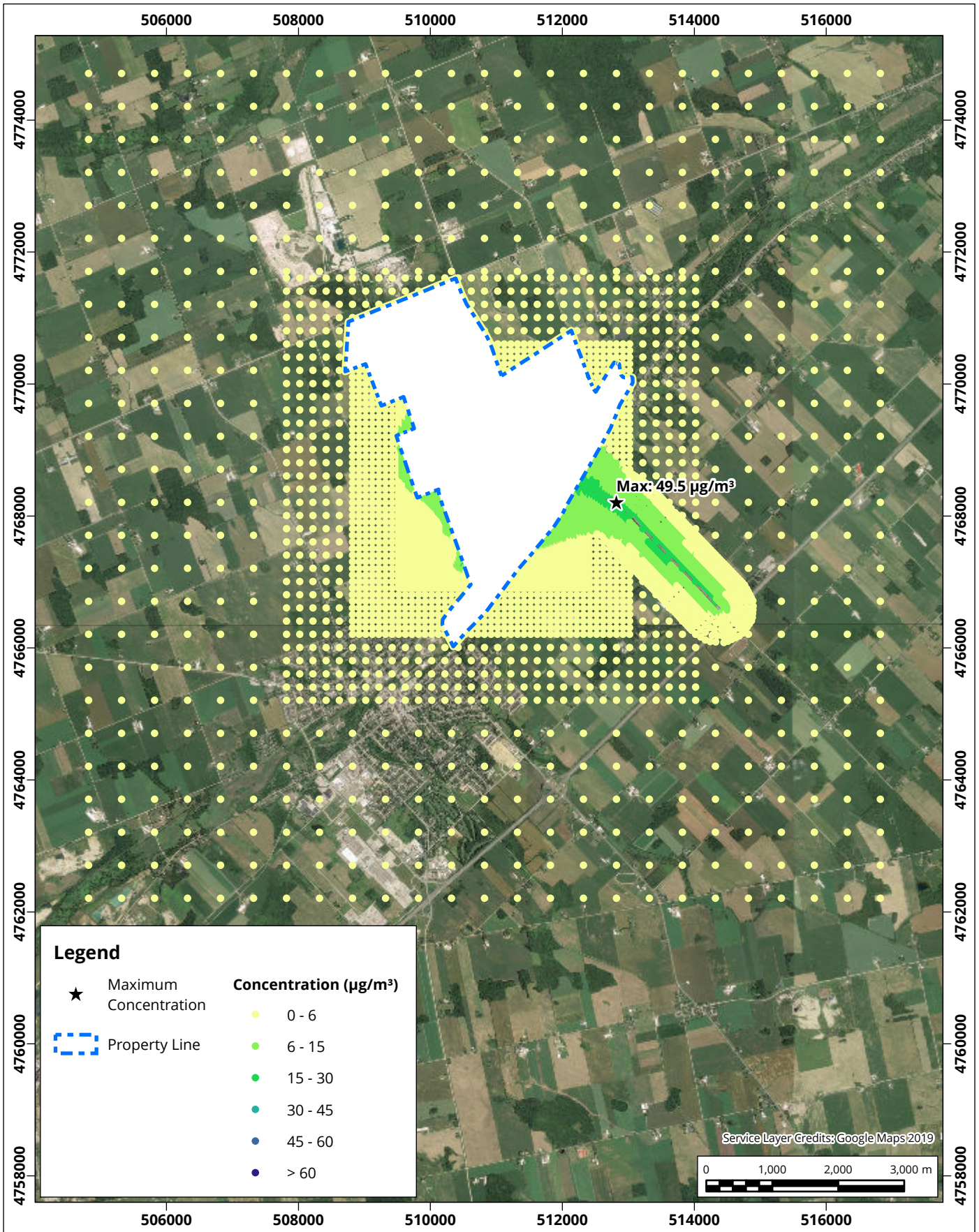
Drawn by: DJH | Figure: M9

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020







## Annual TSP Concentration Contours

### Stage 3 - 2033 to 2037

Map Projection: NAD 1983 UTM Zone 17N

Walker's Southwest Landfill - Beachville, Ontario

True North



Background =  $19.25 \mu\text{g}/\text{m}^3$

Limit =  $60 \mu\text{g}/\text{m}^3$

Project #: 1800160

Drawn by: DJH | Figure: M10

Exact Scale: 1:80,000

Date Revised: Feb 13, 2020

