

Supporting Document 3-2

Noise Effects Assessment Report

Twin Creeks Environmental Centre Landfill
Optimization Project Environmental Assessment

WM Canada

Watford, Ontario



May 2026

Prepared by:

RWDI AIR Inc.
600 Southgate Drive,
Guelph, Ontario, N1G 4P6





Revision History

Revision	Date
1	November 2024
2	September 2025
3	May 2026

Executive Summary

RWDI AIR Inc. (RWDI) was contracted by HDR Corporation on behalf of WM Canada (WM) to prepare this Noise Effects Assessment Report as part of the Twin Creeks Environmental Centre (TCEC) Landfill Optimization Project Environmental Assessment (EA). The EA is being carried out in accordance with the requirements of the *Environmental Assessment Act (EAA)* and the EA Terms of Reference (ToR), which was approved by the Ministry of Environment, Conservation and Parks (MECP) on December 13, 2022. The Noise Effects Assessment considers off-site noise impacts from operation of the landfill, existing and approved ancillary sources, and off-site haul route. The noise impacts are evaluated against noise regulations and guidelines.

The purpose of this Effects Assessment Report is to present the:

- Potential environmental effects of the alternative methods on Noise;
- Comparison of the net effects of each alternative method;
- Selection of a Preferred Alternative;
- Assessment of the environmental effects of the Preferred Alternative; and
- Commitments and monitoring.

There are approximately 5 years of approved landfill airspace capacity remaining at the TCEC (i.e., capacity will be reached in approximately 2031). The proposed optimization would provide additional airspace of approximately 14.3 million cubic metres (m³), which could extend the site life by approximately 12 years (from 2031 to 2043) and may be achieved through alternative landfill configurations (alternative methods) within the existing 301-hectare TCEC site area. No changes are proposed to the size of the TCEC site area, approved service area, or annual fill rate.

Three alternative methods for carrying out the optimization were developed to a preliminary conceptual design level in the Conceptual Design Report (CDR). Each of the alternative methods presented for the landfill optimization will reintroduce landfilling equipment along the perimeter of the approved Expansion Landfill footprint, while also elevating sound level sources. This will reintroduce noise at Points of Reception (PORs) located off site and is the primary mechanism for future noise. Landfilling equipment types and quantities will not change; therefore, locations of the landfilling mobile equipment are the main consideration for off-site noise.

Off-site haul vehicle traffic is expected to remain constant with existing conditions as defined in the CDR since the annual tonnage limit is unchanged. Therefore, off-site noise levels due to off-site haul vehicles along the haul route are expected to be equal to current existing conditions for each of the alternative methods. The CDR provided conceptual details used in the review of the proposed alternative methods, selection of the Preferred Alternative, and the evaluation of the net effects.

Key inputs from the CDR for the alternative methods were:

- Landfilling equipment
- Operational Stages of each alternative method
 - Setbacks from the approved landfill limits
 - Elevations and slopes of the Stages
 - On-site hauling volumes

The study areas for Noise are as follows:

- On-site Study Area: the existing TCEC.
- Off-site Study Area: the lands within the vicinity of the TCEC extending approximately 1 km out from the On-site Study Area.
- Off-site Haul Route Area: within 1 km of the primary haul route from Highway 402 to the site entrance.

A qualitative net effects assessment was carried out for the three alternative methods following the methods outlined in the approved ToR incorporating the information contained in the CDR, and the Noise Existing Conditions Report. The results of the net effects assessment were used in a comparative evaluation of the three alternative methods. Noise impacts from standard landfilling are considered, as well as potential high impact scenarios such as redeveloping the side slopes.

The net effects assessment for the three alternative methods focused on compliance with the MECP Noise Guidelines for Landfill Sites sound level limits. Identified net effects were the potential to exceed sound level limits at Points of Reception (PORs) even after efforts to mitigate sound level have been made. Sound levels are driven by proximity of the landfilling sources and on-site hauling.

The three alternative methods generally have the same potential net effects, as landfilling equipment, quantities, and on-site hauling traffic will remain the same. Each of the Alternative Methods proposed different elevation profiles which had different setback distances from the approved limit of the landfill. Reducing the setback from the approved landfill limit would potentially increase off-site noise and was a key consideration in the potential off-site impacts.

Alternative Methods 2 and 3 are identified as having “No Substantial Difference”, having the same approximate setback from the approved limit of the landfill. The two alternative methods will have the same approximate off-site noise emission.

Alternative Method 1 is identified as a “Not Preferred” alternative of the three considered alternative methods, as it would potentially have the greatest off-site impacts. Cross sectional drawings from the CDR indicate landfilling will occur closest to the approved limit of the landfill.

Alternative Methods 2 and 3 are considered to the Preferred Alternative for Noise; however, Alternative Method 2 has been chosen as the overall Preferred Alternative

for the EA based on the results of the other discipline assessments. The effects assessment of the Preferred Alternative indicates that net effects for noise can be minimized with the implementation of mitigation for identified PORs. Specified mitigation includes:

- Restricting landfilling equipment types and quantities in specific areas of the Preferred Alternative; and
- Implementing operational berms for specific landfilling locations.

The net effects assessment indicates that the sound levels at PORs will vary during the life of the Preferred Alternative as the landfilling equipment moved through the various Stages. As the elevations increase, off-site sound levels are predicted to be less than at lower elevations as equipment will be further set-back from the landfill limit.

Changes in sound levels from the approved Expansion Landfill to the Preferred Alternative are predicted to be rated as insignificant with implemented mitigations, with a change less than or equal to 3 dB. This is supported by the fact that there are no equipment changes from the approved Expansion Landfill to the Preferred Alternative, and that on-site hauling volumes will not change.

Changes in off-site haul route volumes are predicted to be the same for the Preferred Alternative, resulting in an insignificant change of noise levels along the haul route.

Comparison of the Preferred Alternative to the 'Do Nothing' Alternative predicts that sound levels will be less when landfilling occurs, but that certain periods will result in no difference in sound levels at PORs dependent on the landfilling locations.

Commitments for compliance monitoring have been recommended to ensure the effectiveness of the mitigation and to establish sound levels on a yearly basis:

- Yearly (once per year) acoustic audits at critical identified POR locations.
- When landfilling operations trigger a mitigation requirement an acoustic audit will be conducted. This audit, when completed, will satisfy the yearly requirement.

In addition to EA approval, the Waste Environmental Compliance Approval (ECA) and Air ECA will require amendment to address the updated noise monitoring protocols. This will require review and approval from the MECP.

Acronyms, Units and Glossary

Acronyms

Acronym	Definition
CDR	Conceptual Design Report
D&O	Development & Operations
EA	Environmental Assessment
EAA	<i>Environmental Assessment Act</i>
L _{A eq, 1-hr}	One-hour A-weighted Equivalent Level
L _{LM, 1-hr}	One-hour Logarithmic Mean Impulse Level
MECP	Ministry of Environment, Conservation and Parks
NPC-300	Noise Pollution Control 300 – Environmental Noise Guideline – Stationary and Transportation Sources
OLA	Outdoor Living Area
ORNAMENT	Ontario Road Noise Analysis Method for Environment and Transportation
POR	Point of Reception
PWL	Sound Power Level
TCEC	Twin Creeks Environmental Centre
ToR	Terms of Reference
VLR	Vacant Lot Receptor
WM	WM Canada

Units

Unit	Definition
dB	Decibel
dBA	Decibel, weighted to reflect human sensitivity to sound using the A-weighting scale.
ha	Hectare
km	Kilometre
m	Metre
m ³	Cubic metres

Glossary

Term	Definition
Approval	Permission granted by an authorized individual or organization for a project to proceed. This may be in the form of program approval, certificate of approval or provisional certificate of approval.

Glossary

Term	Definition
Capacity (Disposal Volume)	The total volume of air space available for disposal of waste at a landfill site for a particular design (typically in m ³); includes both waste and daily cover materials but excludes the final cover.
Composting	The controlled microbial decomposition of organic matter, such as food and yard wastes, in the presence of oxygen, into finished compost (humus), a soil-like material. Humus can be used in vegetable and flower gardens, hedges, etc.
Composting facility	A facility designed to compost organic matter either in the presence of oxygen (aerobic) or absence of oxygen (anaerobic).
'Do Nothing' Alternative	The 'Do Nothing' Alternative represents the Expansion Landfill as currently approved. For the 'Do Nothing' Alternative, beyond the currently approved operations, active landfilling will cease. Ancillary source noise contributions will remain. The ancillary sources include the flares, the renewable natural gas (RNG) facility, and the leachate treatment facility. Ancillary sources will continue to operate once landfilling ceases.
Environment	As defined by the <i>Environmental Assessment Act</i> , environment means: <ul style="list-style-type: none"> • air, land or water; • plant and animal life, including human life; • the social, economic and cultural conditions that influence the life of humans or a community; • any building, structure, machine or other device or thing made by humans; • any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities; or • any part or combination of the foregoing and the interrelationships between any two or more of them (ecosystem approach).
Environmental Assessment (EA)	A systematic planning process that is conducted in accordance with applicable laws or regulations aimed at assessing the effects of a proposed project on the environment.
Evaluation criteria	Evaluation criteria are considerations or factors taken into account in assessing the advantages and disadvantages of various alternatives being considered.
Impulsive Sound	Short-duration sounds can often be described as impulsive. Examples are rail car shunting, metal scrap bin drops, and gun shots. A more technical definition is found in NPC-101 (MOE, 1997a).
Indicators	Indicators are specific characteristics of the evaluation criteria that can be measured or determined in some way, as opposed to the actual criteria, which are fairly general.
Landfill gas (LFG)	The gases produced from the wastes disposed in a landfill; the main constituents are typically carbon dioxide and methane, with small amounts of other organic and odour-causing compounds.
Landfill site	An approved engineered site/facility used for the final disposal of waste. Landfills are waste disposal sites where waste is spread in layers, compacted to the smallest practical volume, and typically covered by soil.
Mitigation	Measures taken to reduce adverse impacts on the environment.
Net effects	Negative environmental effects of a project and related activities that are expected even when mitigation and impact management measures have been applied.

Glossary

Term	Definition
Point of Reception (POR)	<p>A location where noise from landfill operations, ancillary facilities, pest control devices or haul route is received which is:</p> <ul style="list-style-type: none"> • on the façade of a dwelling; • on the property of, and within 30 m of a dwelling; • on the façade of a noise-sensitive commercial-purpose building (e.g., hotel, motel); or • on the façade of a noise-sensitive institutional-purpose building (e.g., hospital, day nursery, educational facility, place of worship not on commercially or industrially zoned land); • on a vacant lot zoned for noise-sensitive use that is accessible by road or navigable waterway.
Project	<p>Is defined in the <i>Environmental Assessment Act</i> as: one or more enterprises or activities or a proposal, plan or program in respect of an enterprise or activity.</p>
Proponent	<p>A person who:</p> <ul style="list-style-type: none"> • carries out or proposes to carry out a project; or • is the owner or person having charge, management or control of a project.
Quasi-steady Impulsive Sound	<p>Occurs when a number of impulsive sounds are emitted in quick succession. A more technical definition is found in NPC-101 (MOE, 1997a).</p>
Renewable Natural Gas (RNG)	<p>Product of the decomposition of organic matter that is collected from the landfill site, as opposed to traditional natural gas, which is collected from deep wells.</p>
Terms of Reference (ToR)	<p>A terms of reference is a document that sets out detailed requirements for the preparation of an Environmental Assessment.</p>
Waste	<p>Refuse from places of human or animal habitation; unwanted materials left over from a manufacturing process.</p>



Contents

Executive Summary	i
Acronyms, Units and Glossary	iv
1 Introduction	1
1.1 Project and Alternative Methods	2
1.1.1 Alternative Method 1	2
1.1.2 Alternative Method 2	4
1.1.3 Alternative Method 3	6
2 Effects Assessment Methods	8
2.1 Predict Potential Environmental Effects for Alternative Methods	8
2.1.1 Study Areas	9
2.1.2 Noise-Sensitive POR Locations	11
2.1.3 Evaluation Criteria, Indicators, and Data Sources	13
2.1.4 Key Considerations and Assumptions	16
2.2 Comparative Evaluation and Identification of the Preferred Alternative	21
2.3 Effects Assessment of the Preferred Alternative	21
2.4 Comparison of the Preferred Alternative against the ‘Do Nothing’ Alternative	21
3 Net Effects Assessment	22
3.1 Future Baseline Conditions	22
3.1.1 Noise - Future Background Baseline Conditions Due to Traffic	22
3.1.2 Noise - Ancillary Facilities Contributions	24
3.1.3 Cumulative Future Baseline Conditions	25
3.2 Alternative Method 1	27
3.2.1 Landfilling Related Off-Site Noise and Change in Sound Levels	27
3.2.2 Summary	28
3.3 Alternative Method 2	30
3.3.1 Landfilling Related Off-Site Noise and Change in Sound Levels	30
3.3.2 Summary	30
3.4 Alternative Method 3	32
3.4.1 Landfilling Related Off-Site Noise and Change in Sound Levels	32
3.4.2 Summary	32
4 Comparative Evaluation of Net Effects and Identification of the Preferred Alternative	34
5 Effects Assessment of the Preferred Alternative	36
5.1 Noise – Landfilling	36
5.1.1 Modelling Scenario Considerations	37
5.1.2 Modelling Notes	37
5.1.3 Operational Period - Stage 1	38
5.1.4 Operational Period - Stage 2	49
5.1.5 Operational Period - Stage 3	64
5.1.6 Net Effects Assessment	68
5.2 Noise – Ancillary Facilities	70
5.3 Noise – Pest Control	70
5.3.1 Net Effects Summary	73
5.4 Change in Sound Levels	73

5.4.1	Cumulative Change in Noise Levels	73
5.4.2	Change Due to Haul Route Traffic	78
6	Comparison of the Preferred Alternative against the 'Do Nothing' Alternative	80
6.1	Effects of the 'Do Nothing' Alternative.....	80
6.2	Comparison of the Preferred Alternative against the 'Do Nothing' Alternative	81
6.3	Advantages and Disadvantages of the Preferred Alternative compared to the 'Do Nothing' Alternative	83
7	Commitments and Monitoring	84
7.1	Noise Commitments	85
7.2	Environmental Effects Monitoring for Noise	85
7.3	Noise Compliance Monitoring	85
8	Noise Approvals	86
9	References	87

Tables

Table 1-1.	Environmental Aspects, Components, and Evaluation Criteria	1
Table 2-1.	POR Descriptions and Locations	13
Table 2-2.	Evaluation Criteria, Indicators, and Data Sources for Noise	13
Table 2-3.	Default Landfill Noise Guidelines Sound Level Limits	14
Table 2-4.	Default Ancillary Sound Level Limits	15
Table 2-5.	Landfill Noise Guidelines Noise Level Limits for Pest Control Devices	15
Table 2-6.	Change in Sound Effects Qualitative Rating	16
Table 2-7.	Locations of Noise-sensitive Receptors in Audit	17
Table 2-8.	Summary of Compliance Status in Audit	19
Table 3-1.	Modelled Quietest Background Sound Level Due to Traffic.....	23
Table 3-2.	Applicable Landfilling and Ancillary Facility Sound Level Limits	24
Table 3-3.	Predicted Future Cumulative Traffic / Landfill Sound Levels for 'Do Nothing' Alternative.....	26
Table 3-4.	Net Effects Assessment – Alternative Method 1	29
Table 3-5.	Net Effects Assessment – Alternative Method 2	31
Table 3-6.	Net Effects Assessment – Alternative Method 3	33
Table 4-1.	Comparative Evaluation of the Net Effects of the Alternative Methods for Noise	35
Table 5-1.	Operational Stage POR Selection and Applicable Landfilling Noise Guideline Sound Level Limit	36
Table 5-2.	Predicted Noise Levels for Stage 1 - Typical Landfilling Lower Elevation	38
Table 5-3.	Predicted Noise Levels for Stage 1 - Side Slope Redevelopment	42
Table 5-4.	Predicted Noise Levels for Stage 1 - Typical Landfilling Upper Elevation	46
Table 5-5.	Predicted Noise Levels for Stage 2 - Typical Landfilling Lower Elevation	49
Table 5-6.	Predicted Noise Levels for Stage 2 - Typical Landfilling Upper Elevation with Operational Berm Mitigation	52
Table 5-7.	Predicted Noise Levels for Stage 2 - Side Slope Redevelopment	55
Table 5-8.	Predicted Noise Levels for Stage 2 - Side Slope Redevelopment with Equipment Limiting Mitigation	58
Table 5-9.	Predicted Noise Levels for Stage 2 - Typical Landfilling Upper Elevation	61

Table 5-10. Predicted Noise Levels for Stage 3 - Typical Landfilling	64
Table 5-11. Net Effects Assessment – Noise - Landfilling	68
Table 5-12. Predicted Maximum Pest Control Device Sound Levels	71
Table 5-13. Net Effect Assessment – Pest Control Devices.....	73
Table 5-14. Potential Change in Sound Levels Assessing All Noise Contributing Sources	76
Table 5-15. Net Effect Assessment – Change in Sound Due to Landfilling	77
Table 5-16. Predicted Change in Sound Levels on Nauvoo Road North of Site Entrance Due to Site Traffic at a Representative POR (R22) at a Distance of 40 m	78
Table 5-17. Net Effect Assessment – Change in Sound Due to Haul Route Traffic.....	80
Table 6-1. Change in Sound Levels between the Preferred Alternative and the ‘Do Nothing’ Alternative	81
Table 6-2. Change in Haul Route Sound Levels against the ‘Do Nothing’ Alternative at a Representative POR (R22) at a Distance of 40 m	83
Table 6-3. Advantages and Disadvantages of the Preferred Alternative compared to the ‘Do Nothing’ Alternative	84
Table 7-1. Environmental Effects and Compliance Monitoring for the Preferred Alternative	86

Figures

Figure 1-1. Alternative Method 1	3
Figure 1-2. Alternative Method 2.....	5
Figure 1-3. Alternative Method 3.....	7
Figure 2-1. On-site and Off-site Study Areas for Environmental Noise	10
Figure 2-2. Key Representative Noise-Sensitive POR Locations	12
Figure 2-3. Audit Measurement Locations	18
Figure 5-1. Stage 1 - Typical Landfilling Lower Elevation Contour Height 1.5 m	40
Figure 5-2. Stage 1 - Typical Landfilling Lower Elevation Contour Height 4.5 m	41
Figure 5-3. Stage 1 – Side Slope Redevelopment Contour Height 1.5 m	44
Figure 5-4. Stage 1 – Side Slope Redevelopment Contour Height 4.5 m	45
Figure 5-5. Stage 1 - Typical Landfilling Upper Elevation Contour Height 1.5 m	47
Figure 5-6. Stage 1 - Typical Landfilling Upper Elevation Contour Height 4.5 m	48
Figure 5-7. Stage 2 - Typical Landfilling Lower Elevation Contour Height 1.5 m	50
Figure 5-8. Stage 2 - Typical Landfilling Lower Elevation Contour Height 4.5 m	51
Figure 5-9. Stage 2 - Typical Landfilling Lower Elevation with Berm Mitigation Contour Height 1.5 m	53
Figure 5-10. Stage 2 - Typical Landfilling Lower Elevation with Berm Mitigation Contour Height 4.5 m	54
Figure 5-11. Stage 2 – Side Slope Redevelopment Contour Height 1.5 m	56
Figure 5-12. Stage 2 – Side Slope Redevelopment Contour Height 4.5 m	57
Figure 5-13. Stage 2 – Side Slope Redevelopment with Equipment Restriction Mitigation Contour Height 1.5 m.....	59
Figure 5-14. Stage 2 – Side Slope Redevelopment with Equipment Restriction Mitigation Contour Height 4.5 m.....	60
Figure 5-15. Stage 2 - Typical Landfilling Upper Elevation Contour Height 1.5 m	62
Figure 5-16. Stage 2 - Typical Landfilling Upper Elevation Contour Height 4.5 m	63
Figure 5-17. Stage 3 - Typical Landfilling Contour Height 1.5 m	66

Figure 5-18. Stage 3 - Typical Landfilling Contour Height 4.5 m 67
Figure 5-19. Stage 1 and 2 - Required Mitigation Areas 69
Figure 5-20. Location of Assessed Pest Control Devices..... 72
Figure 5-21. Location of Original EA Noise Receptors 75

Appendices

Appendix A. Traffic Data and Sample Calculations

Appendix B. Landfilling Source Sound Power Levels and Sample Calculations

1 Introduction

RWDI AIR Inc. (RWDI) was contracted by HDR Corporation on behalf of WM Canada (WM) to prepare this Noise Effects Assessment Report as part of the Twin Creeks Environmental Centre (TCEC) Landfill Optimization Project Environmental Assessment (EA). The EA is being carried out in accordance with the requirements of the *Environmental Assessment Act (EAA)* and the EA Terms of Reference (ToR), which was approved by the Ministry of Environment, Conservation and Parks (MECP) on December 13, 2022.

The *EAA* defines the environment in a broad, general sense that comprises physical, biological, and human considerations. In this EA, the environment has been separated broadly into the natural, socio-economic, cultural, and built aspects, with environmental components and evaluation criteria identified within each aspect as listed in **Table 1-1**, consistent with the approved ToR. The organization of the Effects Assessment Reports is also provided in **Table 1-1**.

Table 1-1. Environmental Aspects, Components, and Evaluation Criteria

Environmental Aspect	Environmental Component	Evaluation Criteria	Effects Assessment Report
Natural Environment	Atmospheric Environment	<ul style="list-style-type: none"> • Air Quality – Dust • Air Quality – Landfill Gas and Combustion By-Products • Air Quality – Blowing Litter • Odour 	• Air Quality
		• Noise	• Noise
	Hydrogeology	<ul style="list-style-type: none"> • Groundwater Quality • Groundwater Quantity 	• Hydrogeology
	Surface Water Environment	• Surface Water Quality	• Surface Water Quality
		• Surface Water Quantity	• Surface Water Quantity
	Ecological Environment	<ul style="list-style-type: none"> • Terrestrial Ecosystems • Aquatic Ecosystems 	• Ecological Environment
Socio-Economic Environment	Social Environment	• Human Health	• Human Health
		• Effects on Local Community	• Socio-Economic Environment
	Economic Environment	• Economic Effects on Local Community	
Visual Landscape	• Visual Impact of Facility	• Visual Landscape	
Cultural Environment	Cultural Environment	• Cultural Heritage Resources	• Cultural Heritage Resources
		• Archaeological Resources	• Archaeological Resources
Built Environment	Transportation	• Traffic Operations	• Transportation
	Current and Planned Future Land Use	• Effects on Current and Future Land Uses	• Land Use

The Noise effects assessment considers unwanted sound contributions from various noise sources attributed to the current landfill, proposed future landfill, and other existing sources such as existing and future traffic through predicted site-related noise levels and changes in off-site sound levels. The purpose of this Effects Assessment Report is to present the potential environmental effects of the alternative methods on Noise, a comparison of the net effects relative to the guideline of each alternative method (identified in **Section 2.1.3**), the selection of a preferred alternative, the assessment of the environmental effects of the preferred alternative, and commitments and monitoring.

This Noise Effects Assessment Report is one component of the EA. The EA Study Report will incorporate the information presented herein as appropriate, and this report will be included with the EA Study Report as a supporting document.

1.1 Project and Alternative Methods

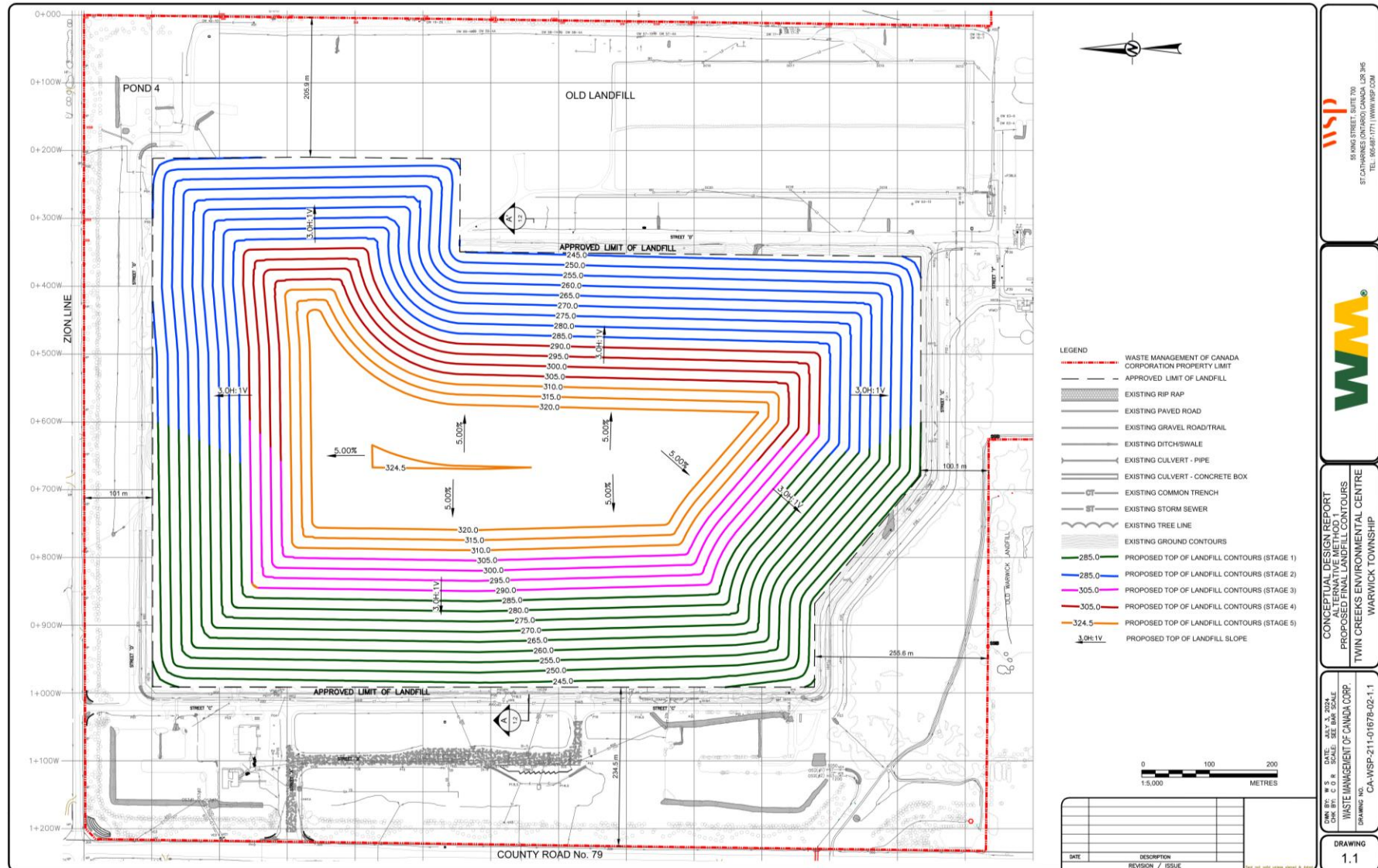
There are approximately 5 years of approved landfill airspace capacity remaining at the TCEC (i.e., capacity will be reached in approximately 2031). The proposed landfill optimization would provide additional airspace of approximately 14.3 million cubic metres (m³), which could extend the site life by approximately 12 years (from 2031 to 2043) and may be achieved through alternative landfill configurations (alternative methods) within the existing 301-hectare TCEC site area. No changes are proposed to the size of the TCEC site area, approved service area, haul route, or annual fill rate.

Three alternative methods for carrying out the landfill optimization were developed to a preliminary conceptual design level in the Conceptual Design Report (CDR) and are described below as they are relevant to Noise.

1.1.1 Alternative Method 1

A layout of Alternative Method 1 is shown in **Figure 1-1**. Alternative Method 1 includes the increase of final landfill side slopes from 4H:1V to 3H:1V between the original grade and elevation 320 metres above sea level (masl), transitioning to a 20H:1V upper slope and peaking at elevation 324.5 masl over the Expansion Landfill, compared with the current approved peak elevation of 280 masl. The slope will be adjusted to the extents of the approved landfill limit. The landfill optimization will reintroduce landfilling equipment along the perimeter of the approved Expansion Landfill extents, while also moving sound sources to higher elevations. This will reintroduce noise at Points of Reception (PORs) located off site.

Figure 1-1. Alternative Method 1



Alternative Method 1 has the potential to generate off-site noise due to landfilling sources as the modifications to the existing side slope extend to the landfill limits in some areas. The CDR shows that the new slope will require modifications up to the existing landfill limit in some areas, which will require construction sources such as dozers and compactors to work the area. This will reduce the separation distance to PORs compared with the existing conditions, resulting in potentially greater off-site sound levels. Off-site noise is expected to be greatest at the beginning of the optimization, and reducing as the height increases, as the landfilling noise sources will move towards the centre of the landfill.

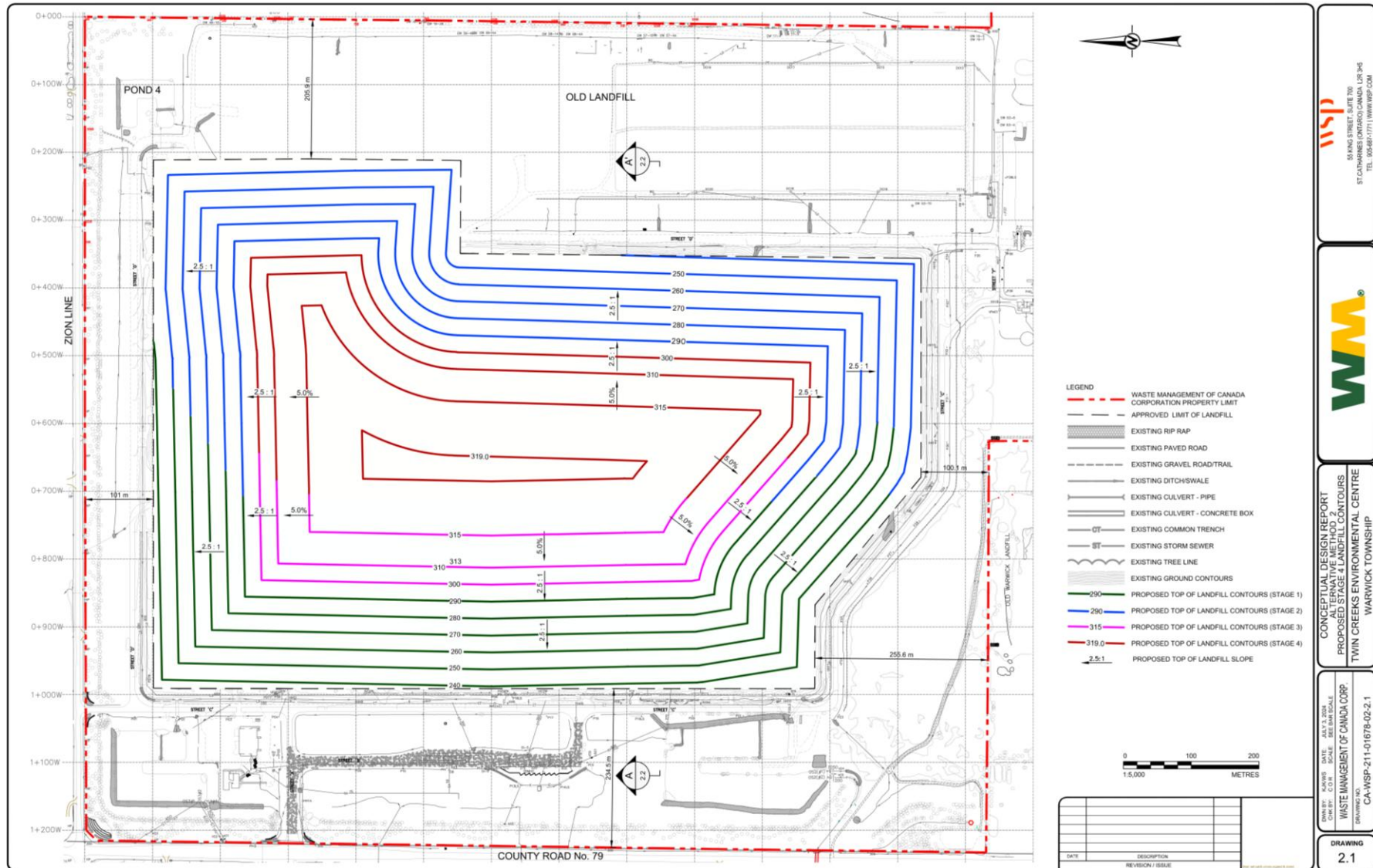
Timeline development of the Alternative Method 1 will not have a significant impact on the assessment of the landfill as the worst-case locations and operating scenarios will be assessed.

Off-site haul vehicle traffic is expected to remain constant with existing conditions as defined in the CDR since the annual tonnage limit is unchanged. Therefore, off-site noise levels due to off-site haul vehicles along the haul route are expected to be equal to current existing conditions for Alternative Method 1.

1.1.2 Alternative Method 2

A layout of Alternative Method 2 is shown in **Figure 1-2**. Alternative Method 2 includes the increase of final landfill side slopes from 4H:1V to 2.5H:1V between elevation 250 masl and elevation 313 masl, about 60 m in grade change, transitioning to a 20H:1V upper slope and peaking at elevation 319 masl over the Expansion Landfill, compared with the current approved peak elevation of 280 masl. The change in slope does not extend all of the way to the landfill limit. The landfill optimization will reintroduce landfilling equipment along the perimeter of the approved Expansion Landfill extents, while also elevating sound sources. This will reintroduce noise at Points of Reception (PORs) located off site.

Figure 1-2. Alternative Method 2



Alternative Method 2 has the potential to generate off-site noise due to landfilling sources as the modifications to the existing side slope extend to the landfill limits in some areas. The CDR shows that the new slope will require modifications set back approximately 50 m from the landfill limit as compared to Alternative Method 1. This will reduce the separation distance to PORs compared with the existing conditions, resulting in potentially greater off-site sound levels. Off-site noise is expected to be greatest at the beginning of the optimization, and reducing as the height increases, as the landfilling noise sources will move towards the centre of the landfill.

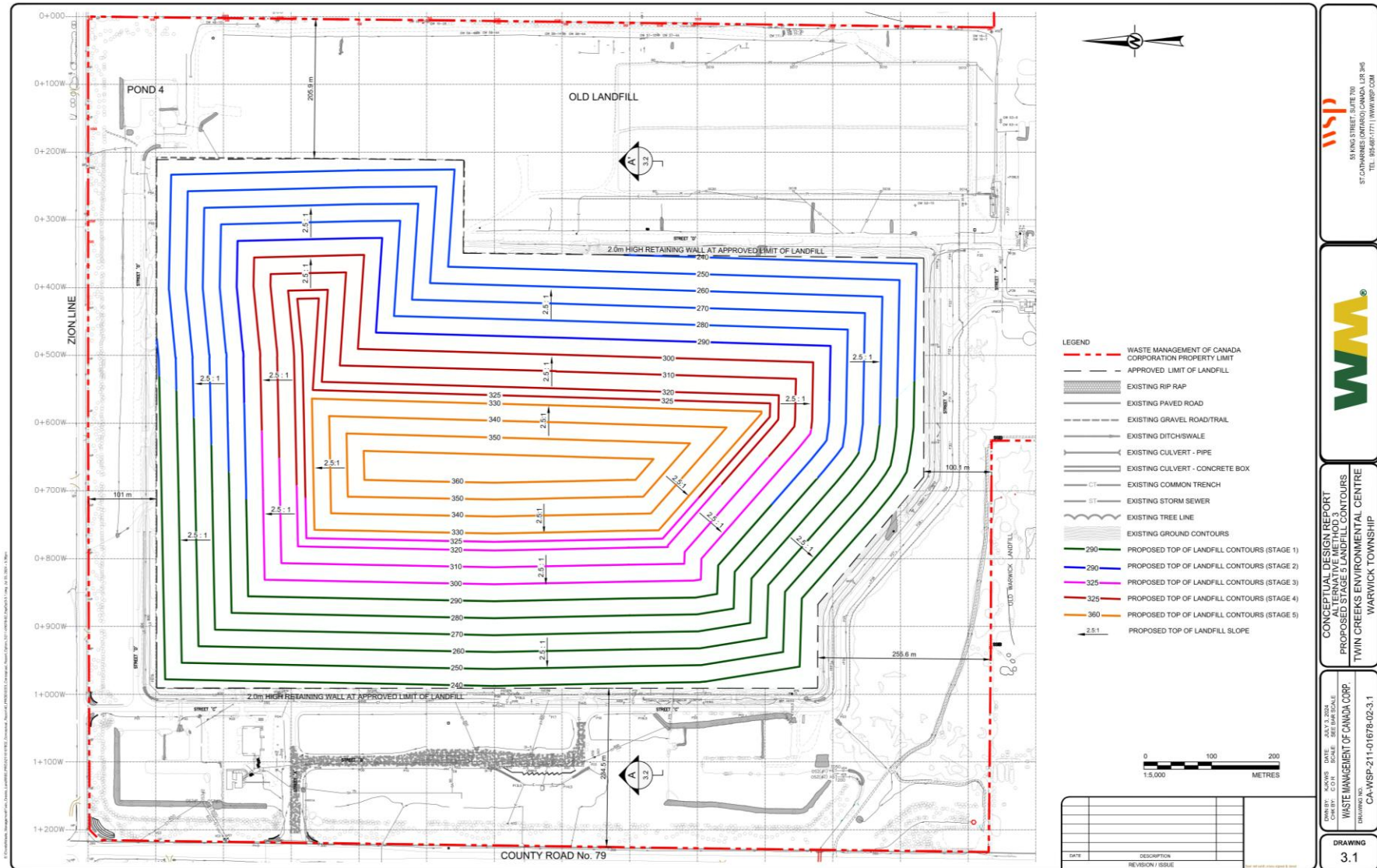
Timeline development of the Alternative Method 2 will not have a significant impact on the assessment of the landfill as the worst-case locations and operating scenarios will be assessed.

Off-site haul vehicle traffic is expected to remain constant with existing conditions as defined in the CDR since the annual tonnage limit is unchanged. Therefore, off-site noise levels due to off-site haul vehicles along the haul route are expected to be equal to current existing conditions for Alternative Method 2.

1.1.3 Alternative Method 3

A layout of Alternative Method 3 is shown in **Figure 1-3**. Alternative Method 3 includes the increase of final landfill side slopes from 4H:1V to 2.5H:1V between elevation 260 masl and elevation 360 masl, about 100 m in grade change, peaking at elevation 360 masl over the Expansion Landfill, compared with the current approved peak elevation of 280 masl. As with Alternative Method 2, the change in slope does not extend all of the way to the landfill limit. The landfill optimization will reintroduce landfilling equipment along the perimeter of the approved Expansion Landfill extents, while also elevating sound level sources. This will reintroduce noise at Points of Reception (PORs) located off site.

Figure 1-3. Alternative Method 3



Alternative Method 3 has the potential to generate off-site noise due to landfilling sources as the modifications to the existing side slope extend to the landfill limits. The CDR shows that the new slope will require modifications set back approximately 50 m from the landfill limit as compared to Alternative Method 1. This will reduce the separation distance to PORs compared with the existing conditions, resulting in potentially greater off-site sound levels. Off-site noise is expected to be greatest at the beginning of the optimization, and reducing as the height increases, as the landfilling noise sources will move towards the centre of the landfill.

Timeline development of Alternative Method 3 will not have a significant impact on the assessment of the landfill as the worst-case locations and operating scenarios will be assessed.

Off-site haul vehicle traffic is expected to remain constant with existing conditions as defined in the CDR since the annual tonnage limit is unchanged. Therefore, off-site noise levels due to off-site haul vehicles along the haul route are expected to be equal to current existing conditions for Alternative Method 3.

2 Effects Assessment Methods

Using the evaluation criteria, indicators, rationale and data sources from the approved ToR and the existing conditions from the Noise Existing Conditions Report, the effects assessment is carried out as follows:

- Qualitatively predict the potential environmental effects for each alternative method (**Section 2.1**);
- Identify the Preferred Alternative based on a comparative evaluation of the potential environmental effects of each alternative method (**Section 2.2**);
- Conduct an effects assessment on the Preferred Alternative, including the identification of mitigation measures and monitoring programs (**Section 2.3**); and
- Compare the effects of the Preferred Alternative to those of the 'Do Nothing' Alternative (i.e., the Expansion Landfill as approved) (**Section 2.4**).

2.1 Predict Potential Environmental Effects for Alternative Methods

The potential environmental effects for each alternative method are identified within the study areas based on the application of the evaluation criteria, indicators and data sources in the approved ToR and based on the maximum allowable waste receipt level for the TCEC landfill. The potential effects can be positive or negative, direct or indirect, and short- or long-term as defined below:

- **Direct Noise:** This refers to noise generated by activities directly occurring on the Project site. This assessment considered all identified direct noise activities such as landfilling and on-site material hauling.

- Indirect Noise: This refers to noise generated by secondary activities connected to the operation of the Project but not forming a direct part of it. This assessment considered all identified indirect noise activities, including construction and rehabilitation activities.
- Short-Term Noise: This refers to noise emissions that will cease upon the completion of Project operations and are not anticipated to have long-term health impacts. For this Project short-term noise activities include land fill activities, and construction and rehabilitation activities, which are all considered in this assessment.
- Long-Term Noise: This refers to a permanent or irreversible increase in the background noise level or noise emissions that could result in long-term health impacts. No long-term noise emissions above the 'Do Nothing' Alternative have been identified for this Project since the flare and leachate system is required whether or not the landfill is expanded. These sources have been previously considered in the Existing Conditions Report and are included in the results presented in this report.

Mitigation measures are identified to minimize or mitigate the potential effects and then the net effects are evaluated taking into consideration the application of mitigation measures. The study areas, evaluation criteria, indicators, data source, and key design considerations and assumptions for Noise are provided below.

2.1.1 Study Areas

The TCEC landfill is located within the Township of Warwick, in the County of Lambton, approximately 1 km north of the Village of Watford. The TCEC is situated south of Highway 402 and southeast of the intersection of Nauvoo Road and Zion Line. The municipal street address of the TCEC is 5768 Nauvoo Road, Watford, Ontario. The area being considered for the landfill optimization is within the approved Expansion Landfill footprint located within the northern portion of the 301 ha TCEC site.

The study areas include the existing TCEC site as well as the potentially affected surrounding areas. The general On-site and Off-site Study Areas identified for the EA in the approved ToR are as follows:

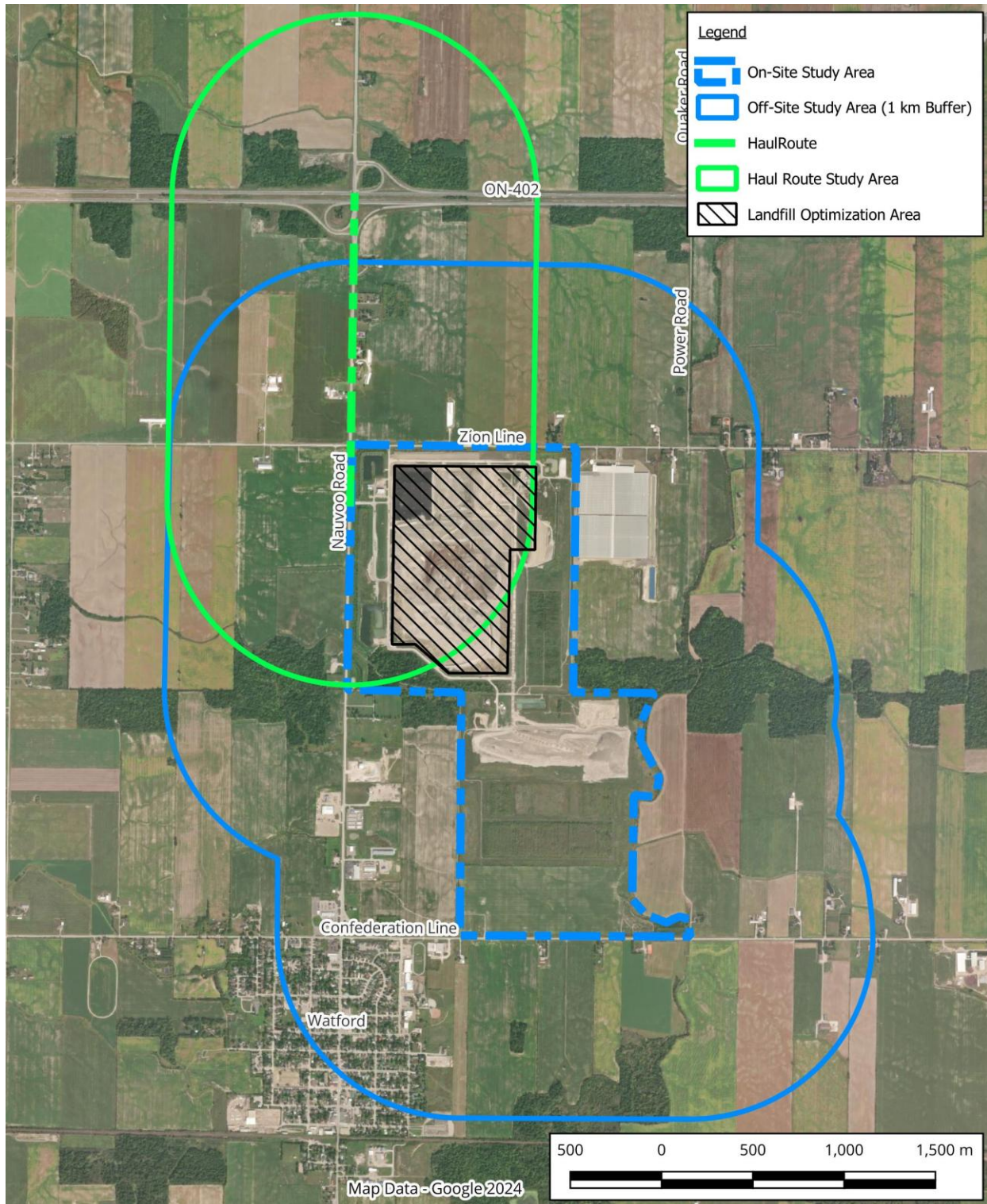
- On-site Study Area: the existing TCEC.
- Off-site Study Area: the lands within the vicinity of the TCEC extending approximately 1 km out from the On-site Study Area.

For the Noise effects assessment, the general Off-site Study Area has been modified to include an additional off-site study area that incorporates haul traffic, with the area specified as:

- Off-site Haul Route Study Area: within 1 km of the primary haul route from Highway 402 to the site entrance.

Figure 2-1 shows the study areas for Noise, and the location of the landfill optimization area.

Figure 2-1. On-site and Off-site Study Areas for Environmental Noise



2.1.2 Noise-Sensitive POR Locations

As identified in the Noise Existing Conditions Report, critical PORs have been identified for assessment. A POR is defined as a location where noise from landfill operations, ancillary facilities, pest control devices or haul route is received. Guidance for the selection of PORs follows the Ministry of the Environment, Conservation and Parks (MECP) Publication NPC-300: Environmental Noise Guideline — Stationary and Transportation Sources — Approval and Planning (NPC-300) (MOE 2013). Per NPC-300, these are:

- On the façade of a dwelling;
- On the property of, and within 30 m of a dwelling;
- On the façade of a noise-sensitive commercial-purpose building (e.g., hotel, motel);
- On the façade of a noise-sensitive institutional-purpose building (e.g., hospital, day nursery, educational facility, place of worship not on commercially or industrially zoned land); or
- On a vacant lot zoned for noise-sensitive use that is accessible by public road or navigable waterway.

Over 500 POR locations were identified in the Noise Existing Conditions Report for the identified study areas (Off-site Study Area and Off-site Haul Route Study Area). Of these POR locations, the locations closest to the landfill site in all cardinal directions were identified as key representative noise-sensitive POR locations. Thirteen POR locations were identified and evaluated. In the interim time since the Noise Existing Conditions Report, an additional receptor-based POR has been constructed (farm worker residence) along Zion Line and is identified as POR R14. As this location could have potential noise impacts from the landfill it has been included. Key representative locations are shown in **Figure 2-2**.

The POR locations have been modelled at two distinct heights; 1.5 m and 4.5 m which represent single and two storey structures respectively. The 1.5 m height is used to assess outdoor living areas (OLAs) noise levels during the day and evening periods. Plane-of-window noise levels for two-storey houses and vacant lots are evaluated at a 4.5 m height, covering day, evening, and night periods. The two heights are not applicable to all PORs considered, such as R1, R7, R11 and R14 which are single storey homes and only have results presented at 1.5 m. POR locations are presented as discrete points within each property identified as a POR. To aid the reader in assessing predicted noise conditions at all areas of the properties, sound level contours are provided at heights of 1.5 m and 4.5 m that can be used to determine the sound levels for the areas around the discrete POR locations. A description of the assessed PORs, the identified number of storeys, and the locations are shown in **Table 2-1**.

When relevant later in the assessment, the evaluation height is specified for the individual PORs.

In the assessment for the potential change of sound levels from the haul route noise, the individual PORs have been evaluated and the results are presented in **Appendix A**.

Figure 2-2. Key Representative Noise-Sensitive POR Locations



Table 2-1. POR Descriptions and Locations

POR Location	Description	Number of Storeys	Coordinates NAD 83 UTM 17N ^[3]	
			X (m)	Y (m)
R1	Residential Home	Single Storey	429920	4758857
R2	Residential Home	Two Storey	429380	4758997
R3	Vacant Lot Receptor (VLR)	-	429120	4759001
R4	Vacant Lot Receptor (VLR)	-	428506	4759005
R5 ^[2]	Vacant Lot Receptor (VLR)	-	428317	4758975
R6	Vacant Lot Receptor (VLR)	-	428209	4758884
R7	Residential Home	Single Storey	428206	4758402
R8	Vacant Lot Receptor (VLR)	-	428204	4758089
R9 ^[1]	Commercial Building	Two Storey	428205	4757780
R10	Vacant Lot Receptor (VLR)	-	428293	4757278
R11 ^[2]	Residential Home	Single Storey	428827	4756305
R12	Residential Home	Two Storey	429334	4756201
R13	Residential Home	Two Storey	430146	4756372
R14	Residential Homes (Temporary Workers)	Single Storey	429609	4758996

Notes:

[1] R9 currently is used for commercial purposes and is retained in this assessment for consistency with the Noise Existing Conditions Report.

[2] Location is under the ownership of WM.

[3] These coordinates represent discrete points where sound levels are calculated for reporting purposes. For PORs with dwellings, the coordinates generally represent the closest facades to landfilling activities. For VLR PORs, the coordinates were selected based on vacant lot guidance provided in NPC-300. Sound levels outside these points can be reviewed in the sound level contours provided at heights of 1.5 m and 4.5 m.

‘-’ Indicates that VLRS have no associated number of storeys and are evaluated at 4.5 m.

2.1.3 Evaluation Criteria, Indicators, and Data Sources

The evaluation criteria, rationale, indicators, and data sources used for the noise environmental assessment as per the approved ToR are provided in **Table 2-2**.

Table 2-2. Evaluation Criteria, Indicators, and Data Sources for Noise

Evaluation Criteria	Rationale	Indicators	Data Sources
Natural Environment			
Atmospheric Environment			
Noise	Activities related to construction/rehabilitation, operation of the landfill and ancillary sources, and the off-site haul route can result in an	<ul style="list-style-type: none"> Predicted site-related noise levels (measured in dBA or dBA1) Change in sound levels (dB) 	<ul style="list-style-type: none"> Annual on-site noise monitoring data. Off-site noise monitoring. Manufacturer noise specifications Noise measurement of on-site sources. Applicable MECP guidelines, technical standards, and models Aerial mapping and field reconnaissance to confirm off-site receptors.

Table 2-2. Evaluation Criteria, Indicators, and Data Sources for Noise

Evaluation Criteria	Rationale	Indicators	Data Sources
	increase in off-site noise levels		<ul style="list-style-type: none"> • Topographic and land-use mapping • Land use zoning plans. • Proposed facility characteristics. • Landfill design and operations data. • Traffic counting, characterization, and modelling studies

2.1.3.1 Noise - Landfilling Operations

The applicable sound level limit for existing landfilling activities is provided by the MECP Noise Guidelines for Landfill Sites (Landfill Noise Guidelines) (MOE 1998), as presented in **Table 2-3**. The Landfilling Noise Guidelines define landfilling operations as construction and rehabilitation as well as conveyance activities. The guideline specifies that the sound level limits do not apply to ancillary facilities and off-site haul roads; therefore, these sources are not included in the assessment of existing conditions of the landfill operations.

When elevated background, or ambient, sound levels are assessed, Landfill Standards: A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfilling Sites (MOE 2012) states that if “the environment [is] dominated by noise sources of man-made activities, such as industry, commerce or road transportation, which produce sound in excess of the above limits, the higher sound levels may be used as the limit, provided that the noise sources are not under consideration for noise abatement by the Municipality or the MECP” (MOE 2012, p. 60). This definition indicates that noise from nearby roadways can be considered as part of the existing background sound levels. An investigation of background sound levels and their implications on the sound level limits in **Table 2-3** can be considered as part of the EA.

Table 2-3. Default Landfill Noise Guidelines Sound Level Limits

Landfill Limit ^[1]	
Day (07:00 – 19:00)	Night (19:00 – 07:00)
55	45

Source: Noise Guidelines for Landfill Sites (Landfill Noise Guidelines) (MOE 1998)

[1] Higher limits may apply when existing background sound levels are above the limits shown.

2.1.3.2 Noise - Stationary Sources

The sound level limits that will be applicable for ancillary activities are provided in NPC-300. The default or exclusion limits are based on a description of the acoustic environment at the receptor. The term “Class” is used to describe similar acoustic environments, where Class 3 is a very rural acoustic environment, while Class 2 has

the sounds of nature and limited anthropogenic noise. The exclusion, or default, limits that would apply to the receptors are those that correspond to Class 2 or Class 3 limits. These are presented in **Table 2-4**. Where background sound levels are above the exclusion limits, the background sound levels become the limits.

As in the case of landfill operations, for stationary sources, NPC-300 stipulates that the sound level limit at a POR is the higher of the default limit or the minimum background sound level. The most common driver of elevated background sound levels is traffic noise. Consequently, to accurately model background sound levels, an accounting for noise from nearby roadways will be included in the EA.

Table 2-4. Default Ancillary Sound Level Limits

Receptor Class	Ancillary Equipment Exclusion Limit (Outdoor Living Area/Façade) ^{[1][2]}		
	Day (07:00 – 19:00)	Evening (19:00 – 23:00)	Night (23:00 – 07:00)
2	50 / 50	50 / 45	- / 45
3	45 / 45	40 / 40	- / 40

Source: NPC-300

[1] Limits presented for outdoor living area and façade of Point of Reception per NPC-300.

[2] Higher limits may apply when existing background sound levels are above the limits shown.

"-" indicates no applicable limits for OLAs during period

2.1.3.3 Noise - Pest Control Devices

Pest control devices can include impulsive sources (e.g., propane cannons), and quasi-steady impulsive sources (e.g., whistles). Sound level limits for pest control devices at off-site receptors are defined in Landfilling Noise Guidelines and are presented in **Table 2-5**.

Pest control devices are subject to limits provided in the Landfill Guideline. Pest control devices relevant to noise can include a propane cannon, and pyrotechnics described as bangers, crackers, whistlers, and screamers. The guideline sets the sound level limit for pest control devices at off-site POR locations as a one-hour logarithmic mean impulse level, $L_{LM, 1-hr}$ of 70 dBAI.

Table 2-5. Landfill Noise Guidelines Noise Level Limits for Pest Control Devices

Type of Pest Control Noise	Applicable Guideline Limit
Impulsive Noise	70 dBAI, $L_{LM, 1-hr}$
Quasi-Steady Impulsive Noise	60 dBA, $L_{EQ, 1-hr}$

Source: Landfill Noise Guidelines

L_{LM} - Logarithmic Mean Impulse Level

L_{EQ} - sound energy over a given time period.

2.1.3.4 Change in Sound Levels

Landfilling noise and ancillary facilities noise are first assessed separately, as above, and then cumulatively. The goal of the cumulative approach is to evaluate the magnitude of change in noise levels at PORs due to the on-site noise contributions.

Changes in noise levels are calculated by comparing the environmental noise levels that would exist if the landfill were no longer operating with the expected future noise levels due to the proposed landfill, ancillary sources, and construction activities. The change is then assessed based on the increase in sound level at the point of reception from the existing condition to the proposed condition:

Table 2-6. Change in Sound Effects Qualitative Rating

Sound Level Increase ^[1] (dB)	Qualitative Rating
1 to 3	Insignificant
3 to 5	Noticeable
5 to 10	Significant
>10 and over	Very Significant

Note:

[1] At the POR between the existing and proposed conditions.

2.1.4 Key Considerations and Assumptions

The key existing conditions elements, design considerations, and assumptions for the environmental noise effects assessment are described below.

2.1.4.1 Key Elements of Existing Conditions

The Existing Conditions Report identifies fourteen PORs that fit the required assessment locations as specified in the Landfilling Noise Guideline and NPC-300. The PORs are a mixture of homes and vacant lot receptors that will have the greatest potential for residual net effects. The potential for residual net effects is greatest at these areas since they are all located adjacent to the On-Site Study Area within the Off-site Study Area. The selection of these PORs is based on review of the previous Warwick Landfill EA (2005), site visits, and acoustic audits for the landfill. All POR locations have been evaluated and modelled at 1.5 m and 4.5 m above grade. A height of 4.5 m is used for residences up to two stories in height and for vacant lots. In accordance with NPC-300, all POR locations were identified as having a Class 2 acoustic environment.

Background sound levels from existing non-landfill related traffic were assessed following the requirements of Sound Levels Due to Road Traffic (MOE 1995b) NPC-206. The background sound has been calculated by modelling using the ORNAMENT algorithms (MOE, 1989), following the requirements of Publication NPC-206.

PORs R5 through R10 that are located along Nauvoo Road were found to have elevated sound levels compared to the Landfilling Noise Guideline and NPC-300, resulting in updated sound level limits.

The Existing Conditions Report describes the existing acoustic environment at the PORs and evaluated them against the criteria and indicators identified in **Section 2.1.3**. The results indicated that all sound level limits were being met at the receptors within the study area, resulting in no net effects from current operations.

In summary, the Noise Existing Conditions Report found sound levels from:

- Landfilling operations ranged from 36 – 53 dBA;
- Stationary sources (ancillary facilities) ranged from 29 – 42 dBA;
- Emergency sources were less than 25 dBA; and
- Pest control devices ranged from 20 – 55 dBAI.

Haul route modelling of existing sound levels was completed at the PORs within the haul route study area. The haul route modelled sound levels ranged from 30 – 65 dBA.

The existing acoustic environment surrounding the landfill has also been quantified during an acoustic audit performed by RWDI dated March 20, 2023. The locations of the audit receptors are shown in **Table 2-7** and **Figure 2-3**, while the audit results are shown in **Table 2-8**. The landfill sound levels were predicted to comply with the noise limits at all of the observed locations.

Table 2-7. Locations of Noise-sensitive Receptors in Audit

Receptor ID	Receptor Description
R1	House on east side of Nauvoo Road, north of landfill
R2	House on north side of Zion Line, north of landfill
R3	House on south side of Zion Line, east of landfill
R4	House on north side of Confederation Line, south of landfill
R5	House on north side of Confederation Line, south of landfill
R6	Parking lot on Nauvoo Road, south of landfill
R7	House on west side of Nauvoo Road, west of landfill
R8	House on south side of Zion Line, west of landfill
R9	Cemetery fence line, south of landfill

Figure 2-3. Audit Measurement Locations

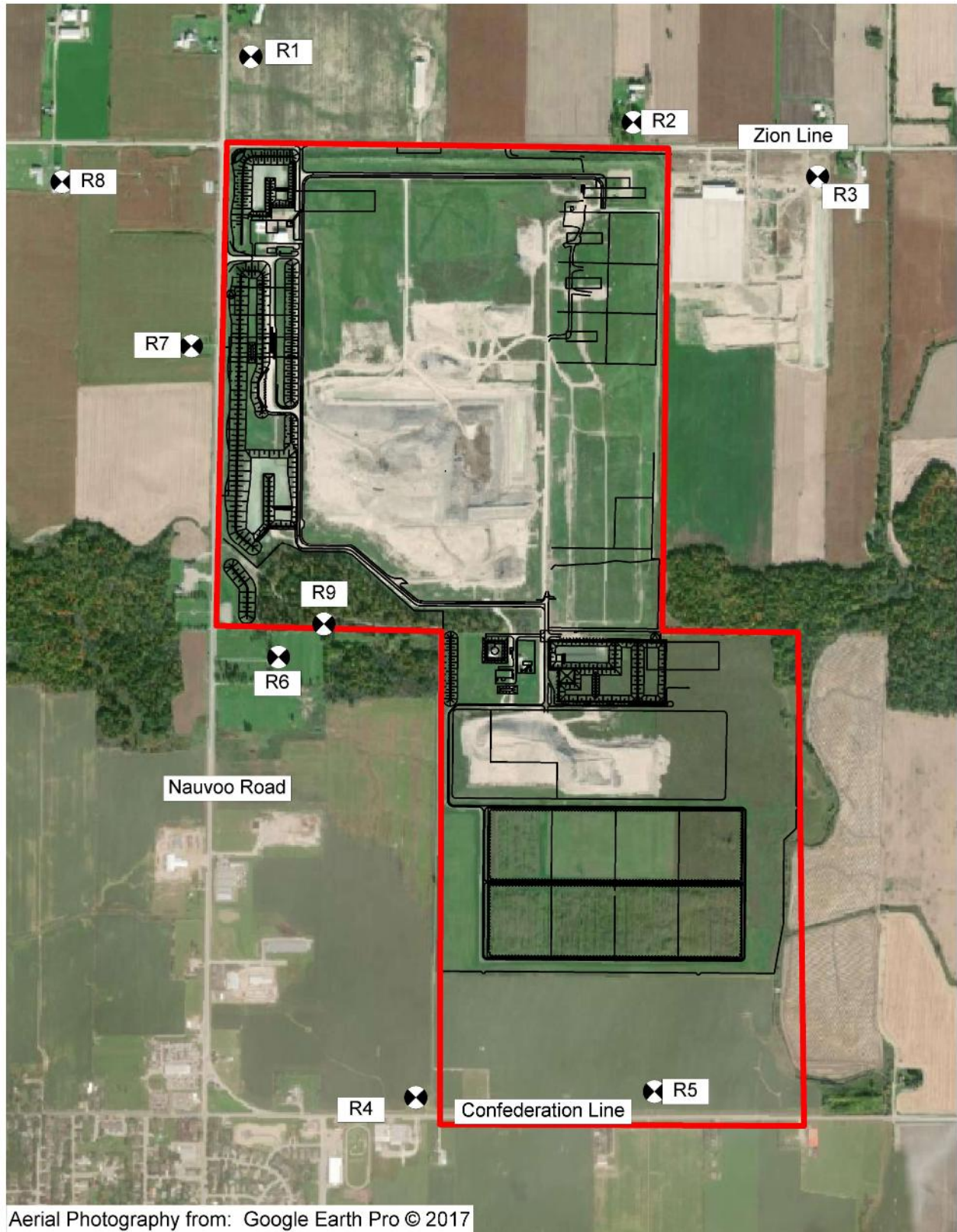


Table 2-8. Summary of Compliance Status in Audit

Receptor	Measured L_{EQ} (20 min) (dBA)	Calculated Background Level (dBA) ^[1]	Predicted Landfill Level (dBA)	Sound Level Limit (dBA)	Within Limits?
R1	69	70	Less than Background ^[2]	55	Yes
R2	55	-	Less than Background ^[2]	55	Yes
R3	50	-	Less than Background ^[2]	55	Yes
R4	54	47	53	55	Yes
R5	62	62	Less than Background ^[2]	55	Yes
R6	52	48	49	55	Yes
R7	56	55	49	55	Yes
R8	50	51	Less than Background ^[2]	55	Yes
R9	53	44	53	55	Yes

Notes:

[1] Estimated based on road traffic modelling; “-” indicates that the background sound level was not dominated by road traffic.

[2] Estimated to be “Less than Background” based on on-site observations and/or modelled road traffic level higher than measured level. See above receptor-specific descriptions for further details.

2.1.4.2 Key Design Considerations

Key design considerations from the CDR that will impact noise are the landfill optimization footprint and landfill height. Other design considerations such as equipment types and quantities, on-site hauling, and stationary sources are assumed to be the same from existing conditions and are described in **Section 2.1.4.3**.

The expansion of the landfill will reintroduce landfilling equipment close to the perimeter of the approved landfill extents. This will reduce the separation distance to the PORs and has the greatest potential to change and increase off-site noise.

The new landfilling heights will potentially affect the propagation of noise as experienced at PORs. These two considerations will be approximately equivalent for the three alternative methods. The assessment will therefore consider the worst-case locations of landfilling equipment with respect to the identified PORs.

Site traffic for the landfill will not change from the current volumes and is valid for both on-site and off-site traffic. From a noise perspective, the off-site haul route noise will not change. Future changes in noise along the off-site haul route are expected to be driven by other sources of local traffic. Origin-destination patterns will not change as well, resulting in no change to the off-site haul route.

On-site traffic is also expected to remain the same, with changes in off-site noise being related to the location of the internal haul routes.

2.1.4.3 Key Assumptions

The following assumptions have been identified for the future development of the TCEC. Each assumption has specific effects with respect to the applicable regulations and guidelines:

1. Landfilling sources:
 - a. The type and quantities of mobile landfilling and construction equipment will be the same as those in the Existing Conditions Report and are the same for each alternative method.
 - b. The quantity of haul trucks arriving at the Project will remain approximately the same as existing conditions. On-site hauling volumes represent the greatest number of vehicles in any given hour.
 - c. The on-site traffic to the working face will follow the same starting route, entering the landfill from Nauvoo Road, proceeding to the scale facility.
 - d. On-site hauling of daily cover material and for construction of the final cover will follow the same route from the soil stockpile south of the landfilling area.
 - e. Operating hours for the receiving of waste and on-site hauling will not change.
2. Stationary Sources:
 - a. Stationary ancillary sources considered in the Existing Conditions Report will remain in operation for the life of all three alternative methods as well as the 'Do Nothing' Alternative. The stationary ancillary sources include the flares, the Renewable Natural Gas (RNG) Facility, and the leachate treatment facility, which will operate for the remainder of the landfill's operational life and will be part of future 'Do Nothing' Alternative. The sound levels from all non-landfilling sources of noise such as public waste drop-off and generators used for non-emergency purposes were included in the evaluation of ancillary sources in the Existing Conditions Report. Their contributions to the ancillary source sound level are conservatively included in this report although their activities may be reduced or eliminated once landfilling ends.
 - b. Emergency sources considered in the existing conditions will not change including for the life of all three alternative methods as well as the 'Do Nothing' Alternative. As these sources operate during emergency scenarios only and have been found to meet the noise requirements of NPC-300, no additional assessment of these sources is required.
3. Pest Control:
 - a. The types of pest control used at the landfill will remain the same for all three alternative methods while landfilling is active. Impacts from pest control are assumed to be equivalent for all alternative methods.

4. Off-Site Haul Route:

- a. Off-site haul traffic volumes attributed to the landfill will remain the same for the optimization as detailed in the CDR. Origin-destination patterns will not change as well, resulting in no change to the off-site haul route.

Based on the above assumptions, only landfilling sources will have an effect at PORs for the three alternative methods, as the stationary and pest control noise sources will not change. Therefore, only the landfilling sources will be considered in the qualitative analysis of the alternative methods, selection of the Preferred Alternative, and net effects assessment.

2.2 Comparative Evaluation and Identification of the Preferred Alternative

The three alternative methods are comparatively assessed relative to each other and evaluated using the criteria and indicators to determine the Preferred Alternative. The differences in the potential environmental effects remaining following the implementation of potential mitigation/management measures (i.e., net effects) are used to identify and compare each alternative method.

The net environmental effects are used to compare the three alternative methods to one another at the criteria and indicator level for each discipline. The following two step methodology was applied to carry out the comparative evaluation for Noise:

1. Identify the predicted net effect(s) associated with each alternative method for each indicator and assign a preference rating (i.e., Preferred, Not Preferred, No Substantial Difference); and
2. Rate each alternative method at the criteria level (i.e., Preferred, Not Preferred, No Substantial Difference) based on the identified preference rating for each indicator and provide a rationale.

2.3 Effects Assessment of the Preferred Alternative

An assessment of the environmental effects of the Preferred Alternative is carried out considering the same criteria, indicators, and data sources, considering potential mitigation/management measures and cumulative effects. The effects assessment of the Preferred Alternative will be compiled and presented in the EA Study Report.

2.4 Comparison of the Preferred Alternative against the 'Do Nothing' Alternative

The effects of the Preferred Alternative are compared against the predicted effects of the currently approved Expansion Landfill based on similar environmental criteria and indicators, with the understanding that the criteria and indicators used in the current effects assessment may differ from those used for the effects assessment of the Expansion Landfill. The effects are compared against each other in terms of magnitude, extent, and duration. The advantages and disadvantages of the Preferred

Alternative compared to the 'Do Nothing' Alternative are identified. The comparison of the effects of the Preferred Alternative and the 'Do Nothing' Alternative will be compiled and presented in the EA Study Report.

3 Net Effects Assessment

To identify the potential effects of the Project on Noise, the conceptual design of each alternative method for the landfill optimization is qualitatively assessed to determine if it will have an effect on the following indicators when compared to the future baseline conditions:

- Predicted site-related noise levels (measured in dBA or dBAI) evaluated off-site at PORs; and
- Change in sound levels (dB) evaluated off-site at PORs.

The above indicators will be evaluated by reviewing the following inputs:

- Noise from landfilling operations, on-site haul traffic, ancillary stationary sources and pest control devices through changes in landfilling locations, and topography.
- Noise from haul route traffic off-site.

The results of the qualitative net effects assessment for each alternative method are provided in **Section 3.2** through **3.4**, below.

3.1 Future Baseline Conditions

Future baseline noise conditions for identified PORs are determined by examining the surrounding Project area and considering known and quantifiable future noise sources. The two main primary drivers for future baseline noise are as follows:

- Traffic volumes unrelated to the Project (future background traffic); and
- The existing ancillary sources of the landfill which will remain in operation and into the remaining years of the 'Do Nothing' Alternative.

3.1.1 Noise - Future Background Baseline Conditions Due to Traffic

The acoustic environment has road traffic noise that elevates the background sound. The future background sound has been calculated by modelling using the ORNAMENT following the requirements of Publication NPC-206. These sound levels have been predicted at the Noise-sensitive POR Locations as detailed in **Section 2.1.2**.

This road traffic noise includes only the contribution of vehicles from non-landfilling activities. The haul route traffic is not included in the traffic noise modelling for background sound. The modelling took into account the following factors:

- Road traffic parameters including traffic volume and speed limits; and
- Source-receptor characteristics, including heights, distances, and ground type.

Road segments that have the potential to influence POR background levels have been modelled, and only the two closest roads for each POR have been modelled. Therefore, roads that are outside the haul route have been included as the contributions from these roads can potentially have influence on the background levels.

The following road segments were modelled:

- Nauvoo Road from Highway 402 to Confederation Line;
- Zion Line east and west of Nauvoo Road; and
- Confederation Line east of Nauvoo Road.

Future traffic volumes were obtained from the traffic information provided by HDR, and is provided in **Appendix A**. Speed limits were confirmed during the July 18, 2023 site visit. Only daytime hours were considered in the modelling as future landfilling activities will only occur during daytime hours.

The modelled sound levels during the quietest 1-hour periods of daytime traffic noise are tabulated in **Table 3-1**. Traffic volumes provided by HDR and the ORNAMENT calculations are provided in **Appendix A**.

Table 3-1. Modelled Quietest Background Sound Level Due to Traffic

POR Location	Future Daytime (07:00 - 19:00) Background Sound Level Due to Traffic (dBA)		
	Current (1.5 m / 4.5 m)	2032 (1.5 m / 4.5 m)	2043 (1.5 m / 4.5 m)
R1 ^[1]	37 / -	37 / -	38 / -
R2	40 / 41	41 / 41	42 / 42
R3	41 / 41	41 / 42	42 / 43
R4	45 / 46	46 / 47	47 / 48
R5	57 / 57	58 / 59	59 / 60
R6	53 / 54	55 / 55	56 / 56
R7 ^[1]	54 / -	56 / -	56 / -
R8	55 / 55	56 / 57	57 / 58
R9	56 / 57	57 / 58	58 / 59
R10	55 / 56	57 / 57	58 / 58
R11 ^[1]	47 / -	48 / -	48 / -
R12	46 / 47	47 / 47	47 / 48
R13	40 / 41	41 / 42	41 / 42
R14 ^[1]	43 / -	40 / -	41 / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is presented.

3.1.1.1 Applicable Sound Level Limits

Where background ambient sound levels are elevated due to sources such as road traffic, higher limits that match the elevated background sound levels can be used.

The quietest hours of background ambient sound level unrelated to landfilling or ancillary sources were modelled, as presented in **Section 3.1.1**. The updated applicable landfilling and ancillary facility sound level limits are provided in **Table 3-2**. Modified limits are bolded for ease of review.

Table 3-2. Applicable Landfilling and Ancillary Facility Sound Level Limits

POR	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)			Applicable Daytime (07:00 - 19:00) Ancillary Facility Sound Level Limits (dBA)		
	Current (1.5 m / 4.5 m)	2032 (1.5 m / 4.5 m)	2043 (1.5 m / 4.5 m)	Current (1.5 m / 4.5 m)	2032 (1.5 m / 4.5 m)	2043 (1.5 m / 4.5 m)
R1 ^[2]	55 / -	55 / -	55 / -	50 / -	50 / -	50 / -
R2	55 / 55	55 / 55	55 / 55	50 / 50	50 / 50	50 / 50
R3	55 / 55	55 / 55	55 / 55	50 / 50	50 / 50	50 / 50
R4	55 / 55	55 / 55	55 / 55	50 / 50	50 / 50	50 / 50
R5 ^[1]	57 / 57	58 / 59	59 / 60	57 / 57	58 / 59	59 / 60
R6 ^[1]	55 / 55	55 / 55	56 / 56	53 / 54	55 / 55	56 / 56
R7 ^{[1][2]}	55 / -	56 / -	56 / -	54 / -	56 / -	56 / -
R8 ^[1]	55 / 55	56 / 57	57 / 58	55 / 55	56 / 57	57 / 58
R9 ^[1]	56 / 57	57 / 58	58 / 59	56 / 57	57 / 58	58 / 59
R10 ^[1]	55 / 56	57 / 57	58 / 58	55 / 56	57 / 57	58 / 58
R11 ^[2]	55 / -	55 / -	55 / -	50 / -	50 / -	50 / -
R12	55 / 55	55 / 55	55 / 55	50 / 50	50 / 50	50 / 50
R13	55 / 55	55 / 55	55 / 55	50 / 50	50 / 50	50 / 50
R14 ^[2]	55 / -	55 / -	55 / -	50 / -	50 / -	50 / -

Notes:

[1] Indicates sound level limits have been adjusted based on predicted background sound levels due to traffic.

[2] POR is a single storey residence. Only the 1.5 m reception point is presented.

3.1.2 Noise - Ancillary Facilities Contributions

Future baseline noise conditions will include contributions from the ancillary sources at the landfill which will operate into the years of the 'Do Nothing' Alternative. These include the approved RNG Facility and existing flares that are used to control landfill gases from existing waste (RWDI 2023b), along with the leachate treatment facility.

Noise impacts from the ancillary sources have been previously assessed in the Noise Existing Conditions Report. The sound levels from all non-landfilling sources of noise such as public waste drop-off and generators used for non-emergency purposes were included in the evaluation of ancillary sources in the Existing Conditions Report. Their

contributions to the ancillary source sound level are conservatively included in this report although their activities may be reduced or eliminated once landfilling ends. Noise from the ancillary sources have all been found to comply with NPC-300 stationary sound level limits at all identified PORs for the standard Class 2 limits. A sample calculation is included in **Appendix B**.

3.1.3 Cumulative Future Baseline Conditions

Table 3-3 shows the predicted cumulative sound level, which is the logarithmic addition of the predicted future baseline sound levels and the contributions from the existing and approved ancillary sources which will operate into the future years.

All predicted future ambient sound levels meet landfilling and stationary source noise guidelines. Ancillary noise levels are generally also compliant with the Class 3 nighttime exclusion limits, with the exception of receptor R10, located east of Nauvoo Road, where the predicted levels exceed the applicable limit by 2 dB. Accordingly, it is anticipated that ancillary noise would meet Class 3 exclusion limits at all receptors situated west of Nauvoo Road, where ambient sound levels drop below the exclusion criteria.

Table 3-3. Predicted Future Cumulative Traffic / Landfill Sound Levels for 'Do Nothing' Alternative

POR	Future Daytime (07:00 - 19:00) Background Sound Level Due to Traffic ^[1] (dBA)			Existing Ancillary Sources ^[2] (1.5 m / 4.5 m)	Future Daytime (07:00 - 19:00) Cumulative Sound Level Due to Traffic and TCEC Ancillary Sources ^[3] (dBA)		
	Current (1.5 m / 4.5 m)	2032 (1.5 m / 4.5 m)	2043 (1.5 m / 4.5 m)		Current (1.5 m / 4.5 m)	2032 (1.5 m / 4.5 m)	2043 (1.5 m / 4.5 m)
R1 ^[4]	37 / -	37 / -	38 / -	31 / -	38 / -	38 / -	39 / -
R2	40 / 41	41 / 41	42 / 42	32 / 33	41 / 42	41 / 42	42 / 43
R3	41 / 41	41 / 42	42 / 43	30 / 32	41 / 42	41 / 42	42 / 43
R4	45 / 46	46 / 47	47 / 48	31 / 33	46 / 47	47 / 48	48 / 49
R5	57 / 57	58 / 59	59 / 60	29 / 34	57 / 58	58 / 59	59 / 60
R6	53 / 54	55 / 55	56 / 56	32 / 34	53 / 54	55 / 56	56 / 56
R7 ^[4]	54 / -	56 / -	56 / -	35 / -	54 / -	56 / -	57 / -
R8	55 / 55	56 / 57	57 / 58	37 / 39	55 / 56	56 / 57	57 / 58
R9	56 / 57	57 / 58	58 / 59	38 / 39	56 / 57	57 / 58	58 / 59
R10	55 / 56	57 / 57	58 / 58	40 / 42	55 / 56	57 / 57	58 / 58
R11 ^[4]	47 / -	48 / -	48 / -	32 / -	47 / -	48 / -	48 / -
R12	46 / 47	47 / 47	47 / 48	32 / 32	46 / 47	47 / 47	47 / 48
R13	40 / 41	41 / 42	41 / 42	30 / 31	41 / 41	41 / 42	42 / 42
R14 ^[4]	43 / -	40 / -	41 / -	32 / -	43 / -	41 / -	42 / -

Notes:

[1] Based on lowest hour non-landfill related traffic provided by HDR. Modelled in ORNAMENT.

[2] The Project Stationary sources including flares and RNG Facility along with the leachate treatment facility which will remain in operation for each Alternative Method and the 'Do Nothing' Alternative. The sound levels from sources such as public waste drop-off and generators used for non-emergency purposes were included in the Existing Conditions Report and their contributions are conservatively included in this report although their activities may be reduced or eliminated once landfilling ends.

[3] Future baseline conditions are the logarithmic sum of the calculated background ambient sound levels from non-landfill related road traffic and landfill stationary source contributions. Representative of the future 'Do Nothing' Alternative.

[4] POR is a single storey residence. Only the 1.5 m reception point is presented.

3.2 Alternative Method 1

The assessment of effects for Alternative Method 1 is described below for the environmental criteria and indicators of noise and is summarized in **Table 3-4**.

3.2.1 Landfilling Related Off-Site Noise and Change in Sound Levels

As discussed in the Key Design Considerations (**Section 2.1.4.2**) the greatest potential change in off-site noise levels is the reintroduction of landfilling equipment along the perimeter of the approved landfill extents. Noise levels at PORs will potentially exceed the daytime landfilling guideline noise levels along the west and north portions of the landfill, when landfilling equipment is closest.

Alternative Method 1 has the greatest potential for increased off-site noise due to landfilling sources as the modifications to the existing side slope extend to the landfill limits. Cross sectional drawings of the proposed Alternative Method 1 from the CDR indicate that the new slope will require modifications up to the existing landfill limit. Therefore, Alternative Method 1 has the least amount of potential separation distance from landfilling noise sources to PORs when compared to the Alternative Methods 2 and 3 which show an additional 50 m setback on cross sectional drawings. The northeast area of the landfill illustrates the potential impact well. For Alternative Method 1, slope redevelopment would occur at a worst-case setback of 190 m from receptor R2. For Alternative Methods 2 and 3, slope redevelopment would occur at a worst-case setback of 250 m from receptor R2, due to the combination of the 50 m setback from the north and east boundaries. Based on distance propagation (i.e., $SPL_2 = SPL_1 + 20 * \log[D_1/D_2]$) and modelling in CadnaA, the reduced setback of 190 m for Alternative Method 1 compared with a setback of 250 m for Alternative Methods 2 and 3 results in a predicted 2 dB higher sound level at receptor R2 for Alternative Method 1. Slope redevelopment requires heavy equipment to be located on the outside of the berm. The only way to mitigate noise outside of the berm is to limit operations (i.e., times or amount of equipment). The 2 dB increase would need to be mitigated by either reducing the amount of equipment or the operating time by approximately 40% relative to Alternative Methods 2 or 3. Although Alternative Method 1 has a more gradual slope (3H:1V) than Alternative Methods 2 and 3 (2.5H:1V), its slope redevelopment begins at the landfill limit. As a result, Method 1 maintains a higher ground elevation for at least the first 100 m from the perimeter. This relatively higher elevation near the perimeter makes mitigating any potential noise exceedance more challenging.

Mitigation measures are to either construct temporary operational berms or limit the amount of equipment near the perimeter of the landfill. Temporary operational berms were proposed in the original Warwick Landfill EA (AEL, 2007) and are discussed in the CDR Section 2.10.5.4.

The operational berms from the previous EA were recommended to be 4 m in height and were required when working along the perimeter of the landfill. Similar berm mitigations would be required for Alternative Method 1 to result in no net effects by meeting daytime landfilling guideline limits.

Limiting the number of equipment will be required for the change in slope for Alternative Method 1. The CDR indicates that the increased slope will require additional waste be placed along the existing landfill perimeter profile. This will put

equipment near PORs, potentially exceeding daytime landfilling guideline limits. Limiting the number of equipment (compactors and dozers) filling in the new slope would be required for Alternative Method 1 to result in no net effects by meeting daytime landfilling guideline limits.

Changes in sound levels will be driven proportionally by the impacts of off-site noise levels for Alternative Method 1.

3.2.2 Summary

A summary of the effects assessment of Alternative Method 1 is summarized below in **Table 3-4**. Following the implementation of mitigation measures the sound level limits are achieved for the receptors within the Off-site Study Area.

Table 3-4. Net Effects Assessment – Alternative Method 1

Evaluation Criteria	Indicator	Key Design Considerations and Assumptions	Potential Effects	Mitigation Measures	Net Effects
Noise	<ul style="list-style-type: none"> • Predicted site-related noise levels (measured in dBA or dBAI) • Changes in sound levels (dB) 	<ul style="list-style-type: none"> • Landfilling equipment working the perimeter of the landfill potentially increasing off site noise levels. • The quantity of haul trucks arriving at the Project will remain approximately the same. On-site hauling volumes represent the greatest number of vehicles in any given hour. • The on-site traffic to the working face will follow the same starting route, entering the landfill from Nauvoo Road, proceeding to the scale facility. • Operating hours for the receiving of waste and on-site hauling will not change. 	<ul style="list-style-type: none"> • Noise level may exceed applicable landfilling noise guidelines during daytime hours. • Changes in Sound Levels may be rated as significant. 	<ul style="list-style-type: none"> • Construction of localized berms along the perimeter of the landfill. • Limit the number of active equipment near the perimeter of the landfill. 	<ul style="list-style-type: none"> • Landfill and construction equipment will be positioned significantly closer to the site perimeter and at marginally higher ground elevations compared to the other Alternative Methods, resulting in a comparatively greater impact at the nearest POR. Noise levels to meet applicable landfilling noise guidelines during daytime hours, with considerable mitigation measures.

3.3 Alternative Method 2

The assessment of effects for Alternative Method 2 is described below for the environmental criteria and indicators of Noise and is summarized in **Table 3-5**.

3.3.1 Landfilling Related Off-Site Noise and Change in Sound Levels

As discussed in the Key Design Considerations (**Section 2.1.4.2**) the greatest potential change in off-site noise levels is the reintroduction of landfilling equipment along the perimeter of the approved landfill extents, specifically to the north and west. Noise levels at PORs will potentially exceed the daytime landfilling guideline noise levels along the west and north portions of the landfill, when landfilling equipment is closest.

Alternative Method 2 has the potential for increased off-site noise due to landfilling sources as the modifications to the existing side slope extend to the landfill limits. Cross sectional drawings of the proposed Alternative Method 2 from the CDR indicate that the new slope will require modifications set back approximately 50 m from the existing landfill limit. Although Alternative Method 2 has a steeper slope (2.5H:1V) than Alternative Method 1 (3H:1V), its slope redevelopment begins farther from the landfill limit. As a result, Method 2 maintains a marginally lower ground elevation than Method 1 for at least the first 100 m from the perimeter, making noise mitigation less challenging than in Method 1.

Mitigation measures are to either construct temporary working berms or limit the amount of equipment near the perimeter of the landfill. Temporary working berms were proposed in the original Warwick Landfill EA (AEL, 2007). The berms were recommended to be 4 m in height and were required when working along the perimeter of the landfill. Similar berm mitigations would be required for Alternative Method 2 to result in no net effects by meeting daytime landfilling guideline limits.

Limiting the number of equipment will be required for the change in slope for Alternative Method 2. Drawing 2.2 from the CDR indicates that the increased slope will require additional waste be placed along the existing landfill perimeter profile. This will put equipment near PORs, potentially exceeding daytime Landfilling Noise Guideline limits. Limiting the number of equipment (compactors and dozers) filling in the new slope would be required for Alternative Method 2 to result in no net effects by meeting daytime landfilling guideline limits.

Changes in sound levels will be driven proportionally by the impacts of off-site noise levels for Alternative Method 2.

3.3.2 Summary

A summary of the effects assessment of Alternative Method 2 is summarized below in **Table 3-5**. Following the implementation of mitigation measures the sound level limits are achieved for the receptors within the Off-site Study Area.

Table 3-5. Net Effects Assessment – Alternative Method 2

Evaluation Criteria	Indicator	Key Design Considerations and Assumptions	Potential Effects	Mitigation Measures	Net Effects
Noise	<ul style="list-style-type: none"> • Predicted site-related noise levels (measured in dBA or dBA1) • Changes in sound levels (dB) 	<ul style="list-style-type: none"> • Landfilling equipment working within 50m of the perimeter of the landfill potentially increasing off site noise levels. • The quantity of haul trucks arriving at the Project will remain approximately the same. On-site hauling volumes represent the greatest number of vehicles in any given hour. • The on-site traffic to the working face will follow the same starting route, entering the landfill from Nauvoo Road, proceeding to the scale facility. • Operating hours for the receiving of waste and on-site hauling will not change. 	<ul style="list-style-type: none"> • Noise level may exceed applicable landfilling noise guidelines during daytime hours. • Changes in Sound Levels may be rated as significant. 	<ul style="list-style-type: none"> • Construction of localized berms along the perimeter of the landfill. • Limit the number of active equipment near the perimeter of the landfill. 	<ul style="list-style-type: none"> • Noise levels meeting applicable landfilling noise guidelines during daytime hours, with some mitigation measures.

3.4 Alternative Method 3

The assessment of effects for Alternative Method 3 is described below for the environmental criteria and indicators of Noise and is summarized in **Table 3-6**.

3.4.1 Landfilling Related Off-Site Noise and Change in Sound Levels

As discussed in the Key Design Considerations (**Section 2.1.4.2**) the greatest potential change in off-site noise levels is the reintroduction of landfilling equipment along the perimeter of the approved landfill extents. Noise levels at PORs will potentially exceed the daytime landfilling guideline noise levels along the west and north portions of the landfill, when landfilling equipment is closest.

Alternative Method 3 has the potential for increased off-site noise due to landfilling sources as the modifications to the existing side slope extend to the landfill limits. Cross sectional drawings of the proposed Alternative Method 3 from the CDR indicate that the new slope will require modifications set back approximately 50 m from the existing landfill limit. Although Alternative Method 3 has a steeper slope (2.5H:1V) than Alternative Method 1 (3H:1V), its slope redevelopment begins farther from the landfill limit. As a result, Method 3 maintains a marginally lower ground elevation than Method 1 for at least the first 100 m from the perimeter, making noise mitigation less challenging than in Method 1.

Mitigation measures are to either construct temporary working berms or limit the amount of equipment near the perimeter of the landfill. Temporary working berms were proposed in the original Warwick Landfill EA (AEL, 2007). The berms were recommended to be 4 m in height and were required when working along the perimeter of the landfill. Similar berm mitigations would be required for Alternative Method 3 to result in no net effects by meeting daytime landfilling guideline limits.

Limiting the number of equipment will be required for the change in slope for Alternative Method 3. Drawing 3.2 from the CDR indicates that the increased slope will require additional waste be placed along the existing landfill perimeter profile. This will put equipment near PORs, potentially exceeding daytime Landfilling Noise Guideline limits. Limiting the number of equipment (compactors and dozers) filling in the new slope would be required for Alternative Method 3 to result in no net effects by meeting daytime landfilling guideline limits.

Changes in sound levels will be driven proportionally by the impacts of off-site noise levels for Alternative Method 3.

3.4.2 Summary

A summary of the effects assessment of Alternative Method 3 is summarized below in **Table 3-6**. Following the implementation of mitigation measures the sound level limits are achieved for the receptors within the Off-site Study Area.

Table 3-6. Net Effects Assessment – Alternative Method 3

Evaluation Criteria	Indicator	Key Design Considerations and Assumptions	Potential Effects	Mitigation Measures	Net Effects
Noise	<ul style="list-style-type: none"> • Predicted site-related noise levels (measured in dBA or dBAI) • Changes in sound levels (dB) 	<ul style="list-style-type: none"> • Landfilling equipment working within 50m of the perimeter of the landfill potentially increasing off site noise levels. • The quantity of haul trucks arriving at the Project will remain approximately the same. On-site hauling volumes represent the greatest number of vehicles in any given hour. • The on-site traffic to the working face will follow the same starting route, entering the landfill from Nauvoo Road, proceeding to the scale facility. • Operating hours for the receiving of waste and on-site hauling will not change. 	<ul style="list-style-type: none"> • Noise level may exceed applicable landfilling noise guidelines during daytime hours. • Changes in Sound Levels may be rated as significant. 	<ul style="list-style-type: none"> • Construction of localized berms along the perimeter of the landfill. • Limit the number of active equipment near the perimeter of the landfill. 	<ul style="list-style-type: none"> • Noise levels meeting applicable landfilling noise guidelines during daytime hours, with some mitigation measures.

4 Comparative Evaluation of Net Effects and Identification of the Preferred Alternative

The comparative evaluation of the net effects relative to the guideline limits of each alternative method and the identification of a Preferred Alternative are carried out in accordance with the methods described in **Section 2.2**. The three alternative methods are comparatively assessed relative to each other and evaluated using the criteria and indicators to determine the Preferred Alternative. The differences in the potential environmental effects remaining following the implementation of potential mitigation/management measures (i.e., net effects) are used to identify and compare each alternative method. The comparative evaluation of the alternative methods for Noise is provided in **Table 4-1**, below.

Proximity of landfilling noise sources to identified PORs is the primary driver of off-site noise and is the primary net effect compared with the guideline limits in determining the Preferred Alternative. From a qualitative noise perspective, Alternative Method 1 would potentially result in greater off-site impacts as landfilling will be closer to PORs, whereas Alternative Methods 2 and 3 have the same equivalent setbacks which are less than that of Alternative Method 1. Consequently, Alternative Methods 2 and 3 are considered to be preferred.



Table 4-1. Comparative Evaluation of the Net Effects of the Alternative Methods for Noise

Evaluation Criteria	Indicator	Net Effects of Alternative Methods		
		Alternative Method 1	Alternative Method 2	Alternative Method 3
Noise	<ul style="list-style-type: none"> • Predicted site-related noise levels (due to change in location and height of landfilling noise sources) • Change in sound levels (dB) 	Landfill and construction equipment will be positioned significantly closer to the site perimeter and at marginally higher ground elevations compared to other alternative methods, resulting in a comparatively greater impact at the nearest POR (up to 2 dB higher than existing based on reduced setback). Noise levels to meet applicable landfilling noise guidelines during daytime hours, with considerable mitigation measures.	Noise levels are expected to meet applicable landfilling noise guidelines during daytime hours, with some mitigation measures	Noise levels are expected to meet applicable landfilling noise guidelines during daytime hours, with some mitigation measures.
	Criteria Rating & Rationale	Not Preferred	No Substantial Difference	No Substantial Difference
		<p><i>There is no substantial difference between the Alternative Methods 2 and 3 for Environmental Noise. Alternative Method 1 may have greater potential off-site noise impacts as landfill operations will be nearer PORs, with new side slope and increased ground elevation extending to the landfill limit. Alternative Methods 2 and 3 show a greater setback of approximately 50 m.</i></p> <p>Each alternative method will require the same landfilling equipment and quantities at critical locations in the landfill that will result in equivalent sound levels. Any proposed mitigation to meet landfilling guidelines will be equivalent, with the requirements for Alternative Method 1 requiring more. While noise levels are predicted to remain within applicable limits at all PORs, Alternative Method 1 would require additional mitigation compared to Alternative Methods 2 and 3. Any residual effects would be managed through continued implementation of the site's nuisance impact payment framework.</p>		
<p>Preferred Alternative: Alternative Methods 2 and 3. Each Alternative Method results in the same mitigations and net effects relative to the guideline limits with the exception of Alternative Method 1, which potentially will have greater net effects due to proximity.</p>				

5 Effects Assessment of the Preferred Alternative

Alternative Methods 2 and 3 are considered to the Preferred Alternative for Noise; however, Alternative Method 2 has been chosen as the overall Preferred Alternative for the EA based on the results of the other discipline assessments. Consequently, the effects assessment of the Preferred Alternative presented below is based on Alternative Method 2.

5.1 Noise – Landfilling

The future noise impacts from landfilling are assessed and characterized by modelling three operational periods, as defined in the Noise Work Plan in the approved ToR. The selection of the operational periods is based primarily on the Stages of the Preferred Alternative (Alternative Method 2) as presented in the CDR and considering the potential off-site noise impacts per the Stage.

The Preferred Alternative, Alternative Method 2, has four (4) primary Stages indicated. These Stages determine where landfilling and construction equipment will be present, and at which elevations the stages begin and end.

Landfilling at the TCEC is generally confined to a region for a given amount of time, working in small areas to complete a cell in lifts of 2 to 3 m. As such the landfilling equipment will have the greatest impact when working in a cell near a POR.

Of the fourteen PORs considered, two of the existing residences (R2 and R7) were found to have the greatest potential for impacts from noise and warrant mitigation. Therefore, construction and landfill activities are modeled at the closest locations to these two POR (R2 and R7) to maximize the predicted noise impact from the Preferred Alternative. Modeling locations for each stage are described below in **Table 5-1**, which highlights the closest residential POR.

Table 5-1. Operational Stage POR Selection and Applicable Landfilling Noise Guideline Sound Level Limit

Operational Stage	Closest Resident POR	Applicable Sound Level Limit for Operational Stage (dBA)	Descriptive Location
1	R7	55	Western Edge in the Middle of Landfill Footprint
2	R2	55	Northeast Corner of Landfill Footprint
3	R7	55	Western Edge in the Middle of Landfill Footprint

Stage 4 is not assessed in this effects assessment. RWDI conducted sensitivity studies at the higher elevations for Stage 4 and found no mitigation requirements, with results less than the Stage 3 analysis, meeting the Landfilling Noise Guidelines sound level limits. Sound Powers used in the modelling are provided in **Appendix B**.

5.1.1 Modelling Scenario Considerations

As discussed, proximity to PORs is the primary mechanism for elevated off-site landfilling noise as equipment, equipment quantities, and hauling volumes will remain constant for the entirety of the Preferred Alternative and remain consistent with the current operations.

The figures for Alternative Method 2 provided in the CDR were used to define the locations of future landfilling activities in the various stages.

WM has indicated that the approximate current height of the landfill is 270 m, which was assumed to be the starting elevation of the stages. This elevation defines the boundary where typical landfilling operations will occur for the Preferred Alternative. As detailed in the CDR, landfilling will occur west to east.

For operational Stages 1 and 2 of the Preferred Alternative, two elevations were considered for the assessment:

- 270 m elevation (Current landfill height); and
- 290 m elevation (Elevation at the end of Stages 1 and 2).

Therefore the 270 m elevation contour defines a bounding area where typical landfilling operations will occur within and operate on flat ground for the Stages, while also being the closest to the assessed PORs.

Additionally, for Stages 1 and 2 of the Preferred Alternative, construction work will be done along the perimeter to increase the landfill side slopes.

This will require the existing cover to be removed prior to waste placement for the redevelopment of the side slopes. This will place equipment at the closest proximity to PORs. Side slope redevelopment will require dozers (Assumed D8R) and compactors (Assumed 836G) to modify the existing ground. As landfilling progresses, the final cover will need to be constructed over the area where landfilling occurs.

Stage 3 has been considered to demonstrate the effects of sound propagation at a significantly higher elevation in later stages of the landfill development.

5.1.2 Modelling Notes

Sound from landfilling will not always be at the predicted sound levels but will be quieter at times due to the temporal and spatial variability of landfilling. Nighttime landfilling is not allowed, and only daytime levels were assessed.

The landfill equipment quantities, types, hours of operation and overall sound level were provided in Noise Impact Assessment for the Warwick Landfill EA (AEL, 2007).

On-site truck traffic was also modelled in expected worst-case routes with respect to the assessed stages. Construction of the final cover and the redevelopment of the side slopes was included in the model of the landfilling activities. A sample calculation is included in **Appendix B**.

5.1.3 Operational Period - Stage 1

5.1.3.1 Stage 1 - Typical Landfilling Lower Elevation

The typical landfilling noise model assessed a southern haul route consistent with what was modelled in the Noise Existing Conditions Report and included on-site hauling of daily cover. Landfilling was assessed as a single area source, incorporating all of the landfilling equipment in a single area. This accounts for some variation in the movements of the equipment within the area. The area source is 125 m x 125 m and was modelled at 270 m elevation and directly east of POR R7. Construction of the final cover was assessed as a single area source, incorporating a D8R and D6R dozer, along with on-site hauling of the final cover. The area source is 250 m x 125 m beside the landfilling area and was assumed to operate at the same time as the landfilling activity.

Table 5-2 shows the predicted levels for the fourteen PORs against the Landfilling Noise Guidelines limits. Figures showing the modelled noise sources and predicted noise isopleths at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-1** and **Figure 5-2**.

Table 5-2. Predicted Noise Levels for Stage 1 - Typical Landfilling Lower Elevation

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	1.5 m / 4.5 m	1.5 m / 4.5 m	
R1 ^[1]	41 / -	55 / -	Y / -
R2 ^[2]	45 / 46	55 / 55	Y / Y
R3	47 / 48	55 / 55	Y / Y
R4	49 / 50	55 / 55	Y / Y
R5	49 / 50	58 / 59	Y / Y
R6	49 / 50	55 / 55	Y / Y
R7 ^[1]	53 / -	56 / -	Y / -
R8	52 / 53	56 / 57	Y / Y
R9	49 / 50	57 / 58	Y / Y
R10	44 / 46	57 / 57	Y / Y
R11 ^[1]	37 / -	55 / -	Y / -
R12 ^[2]	36 / 38	55 / 55	Y / Y

Table 5-2. Predicted Noise Levels for Stage 1 - Typical Landfilling Lower Elevation

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	1.5 m / 4.5 m	1.5 m / 4.5 m	
R13 ^[2]	35 / 36	55 / 55	Y / Y
R14 ^[1]	43 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions Report.

The results indicate that at this elevation and setback all PORs will have landfilling noise contributions less than the guideline sound level limits.

Figure 5-1. Stage 1 - Typical Landfilling Lower Elevation Contour Height 1.5 m

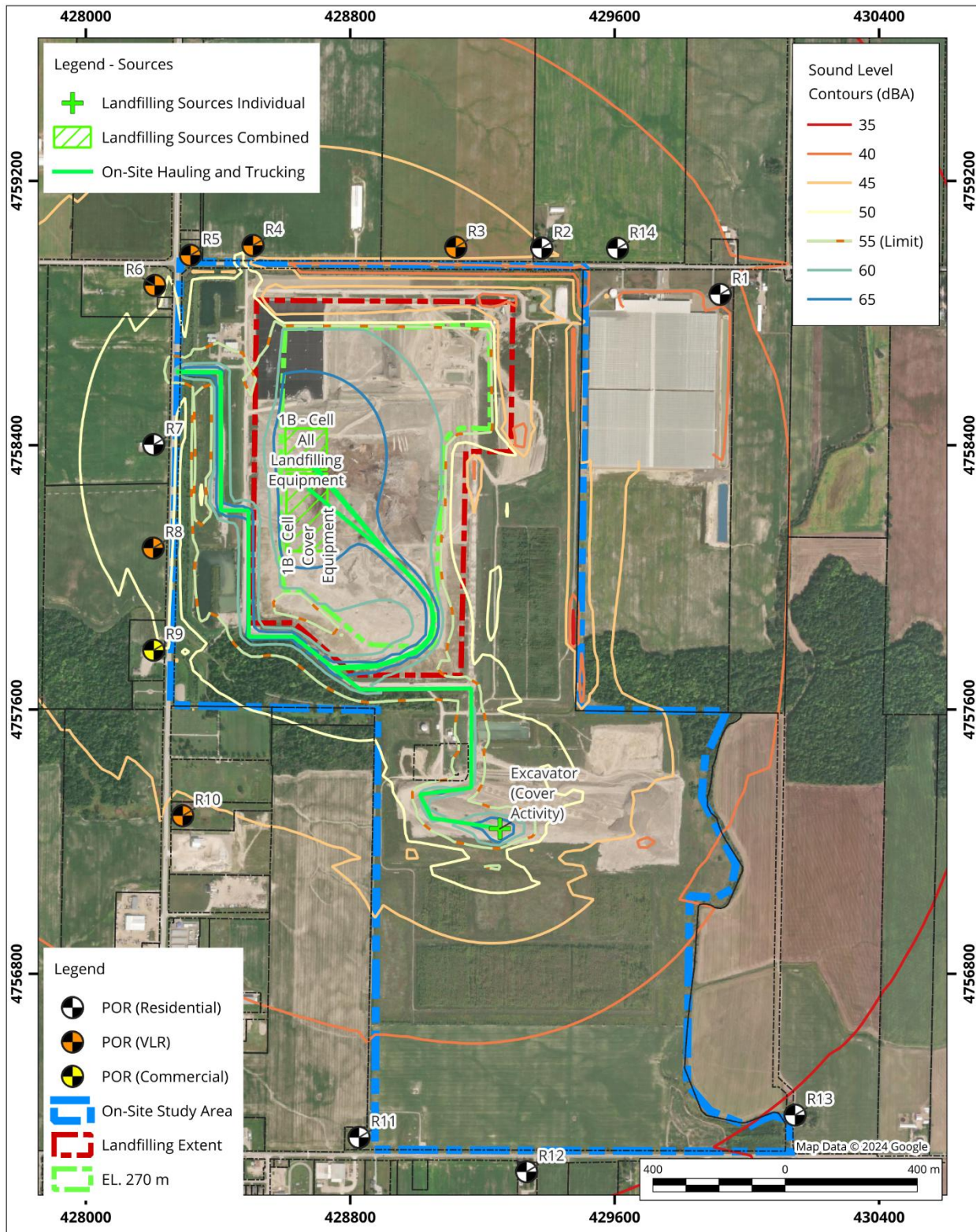
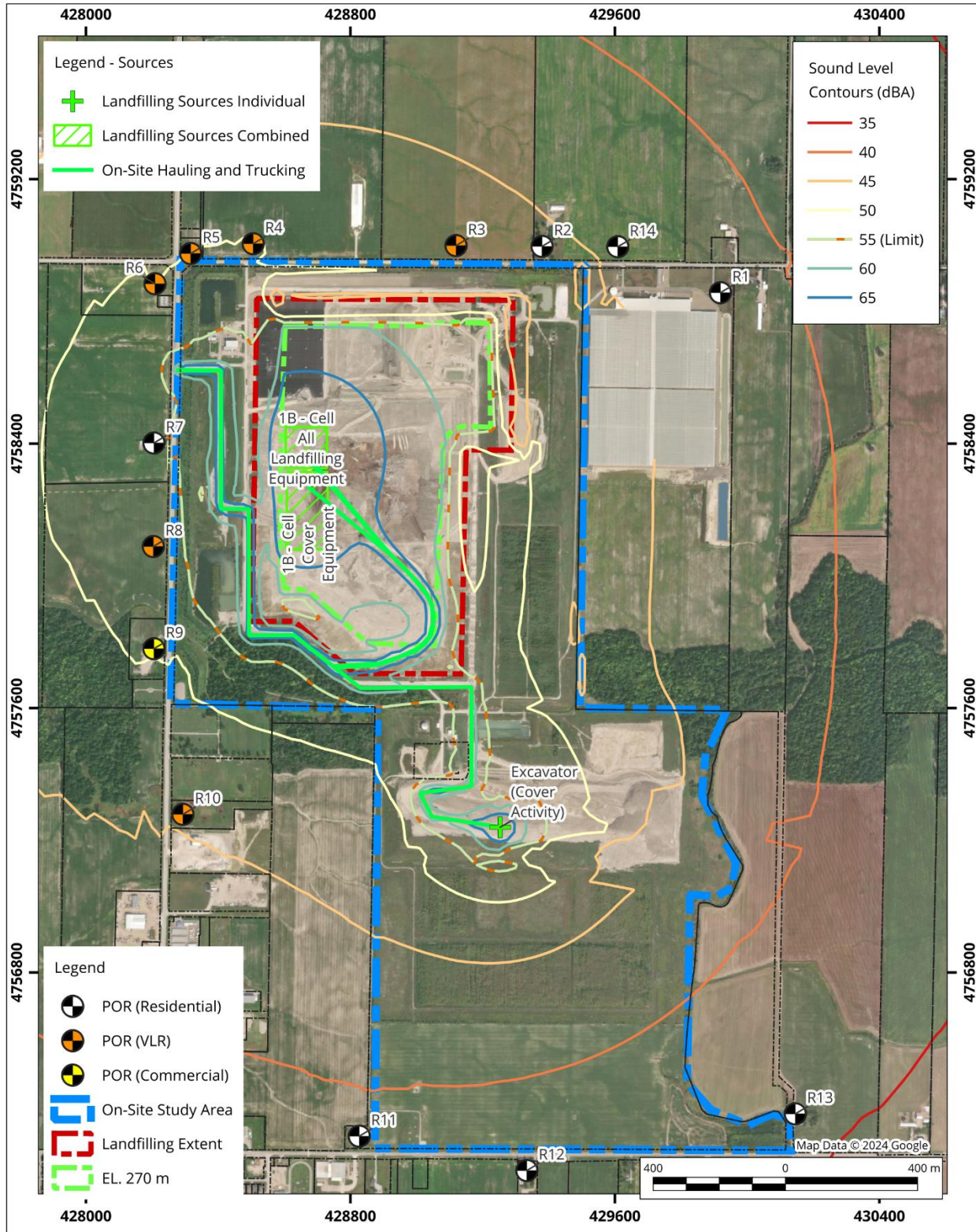


Figure 5-2. Stage 1 - Typical Landfilling Lower Elevation Contour Height 4.5 m



5.1.3.2 Stage 1 – Side Slope Redevelopment

The side slope noise model considered the same haul route as that in **Section 5.1.3.1**. Two landfilling point sources were added to the side slope in the direction of the POR R7; a CAT D8R dozer and a CAT 836G. The landfilling area source was modified to omit the contributions of the above point sources. Construction of the final cover was assessed as a single area source, incorporating a D8R and D6R dozer, along with on-site hauling of the final cover. The area source is 250 m x 125 m beside the landfilling area and was assumed to operate at the same time as the landfilling activity.

Table 5-3 shows the predicted levels for the fourteen most impacted PORs against the Landfilling Noise Guidelines limits. Figures showing the predicted noise isopleths at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-3** and **Figure 5-4**.

Table 5-3. Predicted Noise Levels for Stage 1 - Side Slope Redevelopment

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R1 ^[1]	39 / -	55 / -	Y / -
R2 ^[2]	43 / 44	55 / 55	Y / Y
R3	45 / 46	55 / 55	Y / Y
R4	49 / 52	55 / 55	Y / Y
R5	49 / 52	58 / 59	Y / Y
R6	50 / 53	55 / 55	Y / Y
R7 ^[1]	55 / -	56 / -	Y / -
R8	53 / 56	56 / 57	Y / Y
R9	50 / 52	57 / 58	Y / Y
R10	45 / 47	57 / 57	Y / Y
R11 ^[1]	37 / -	55 / -	Y / -
R12 ^[2]	36 / 38	55 / 55	Y / Y
R13 ^[2]	34 / 36	55 / 55	Y / Y
R14 ^[1]	42 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions Report.

The results indicate that at this elevation and setback all PORs will have landfilling noise contributions less than or equal to the guideline sound level limits. An exceedance at the 4.5 m elevation for POR R7 is predicted but is not applicable as the residence is a single storey residence as is evaluated at 1.5 m.

It is noted that the predicted sound level for R7 (at the evaluation height of 1.5 m) is at the landfilling limit of 55 dBA. Any additional equipment working on the face would potentially result in exceeding the Landfilling Noise Guidelines sound level limits. Therefore, a required mitigation is to limit the amount of equipment on the western slope in proximity to PORs to the following:

- A CAT 836G compactor; and
- A CAT D8R dozer.

RWDI conducted a sensitivity study on the west side of the landfill perimeter to determine the areas where equipment quantities are required to be limited and are detailed in **Section 5.1.6**.

Figure 5-3. Stage 1 – Side Slope Redevelopment Contour Height 1.5 m

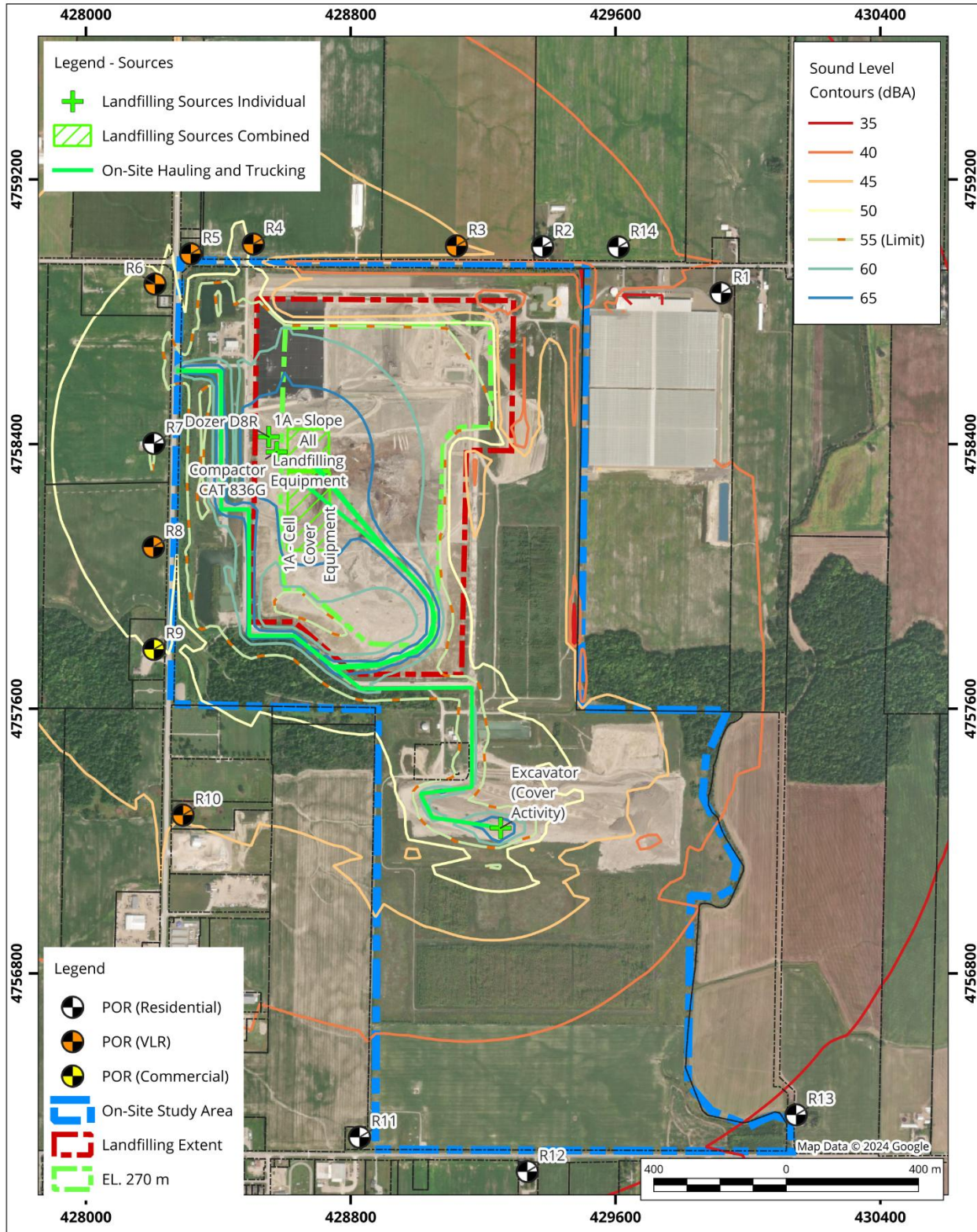
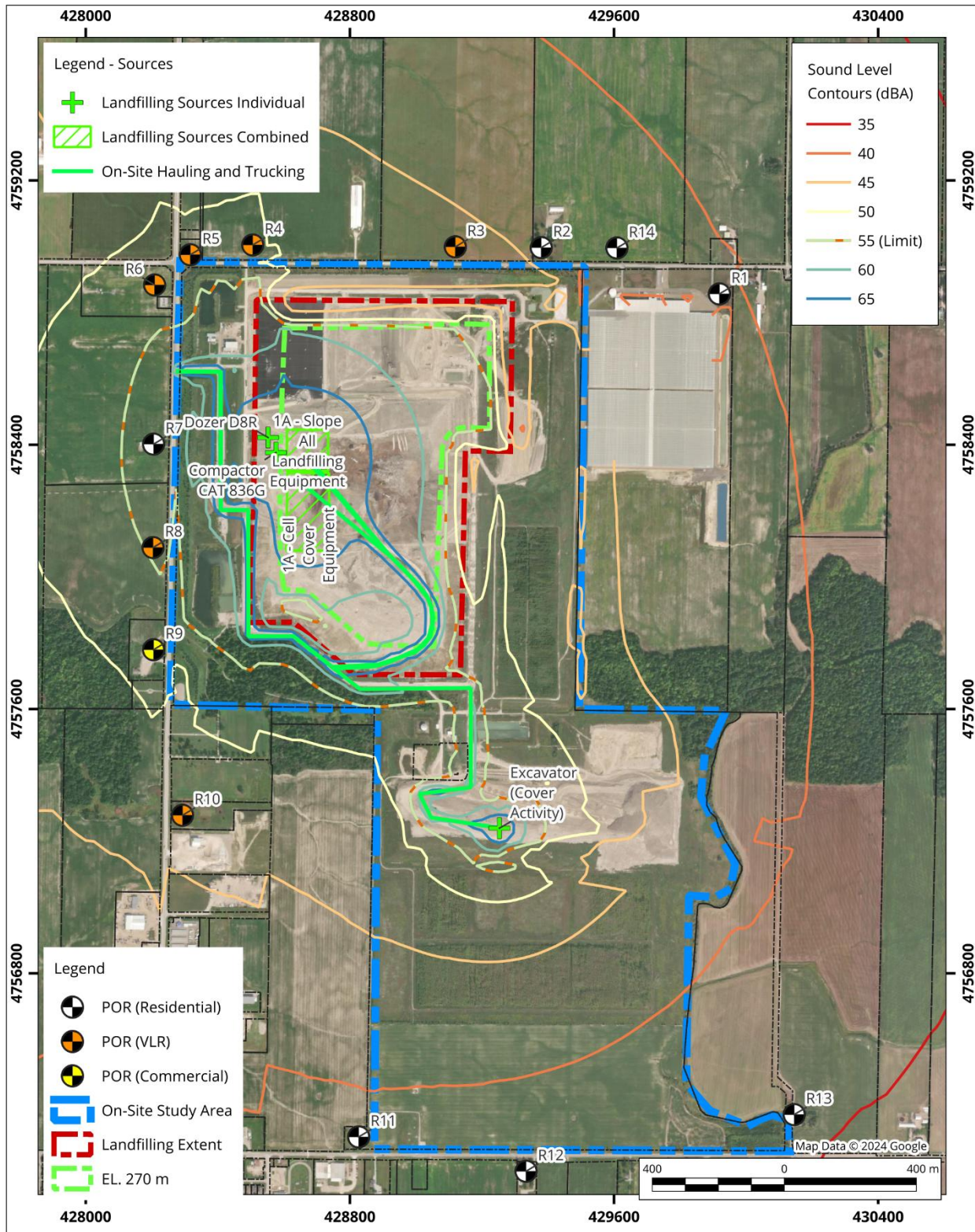


Figure 5-4. Stage 1 – Side Slope Redevelopment Contour Height 4.5 m



5.1.3.3 Stage 1 - Typical Landfilling Upper Elevation

The upper elevation noise model considered the same haul route as that in **Section 5.1.3.1**. Landfilling was assessed as a single area source. The area source was modelled at 290 m elevation and directly east of POR R7. The 290 m elevation marks the top of the Stage 1 development. Construction of the final cover was assessed as a single area source, incorporating a D8R and D6R dozer, along with on-site hauling of the final cover. The area source is 250 m x 125 m beside the landfilling area and was assumed to operate at the same time as the landfilling activity.

Table 5-4 shows the predicted levels for the fourteen most impacted PORs against the Landfilling Noise Guidelines limits. Figures showing the predicted noise isopleths at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-5** and **Figure 5-6**.

Table 5-4. Predicted Noise Levels for Stage 1 - Typical Landfilling Upper Elevation

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R1 ^[1]	41 / -	55 / -	Y / -
R2 ^[2]	45 / 46	55 / 55	Y / Y
R3	47 / 48	55 / 55	Y / Y
R4	48 / 49	55 / 55	Y / Y
R5	50 / 50	58 / 59	Y / Y
R6	49 / 50	55 / 55	Y / Y
R7 ^[1]	53 / -	56 / -	Y / -
R8	51 / 53	56 / 57	Y / Y
R9	49 / 50	57 / 58	Y / Y
R10	44 / 46	57 / 57	Y / Y
R11 ^[1]	37 / -	55 / -	Y / -
R12 ^[2]	36 / 38	55 / 55	Y / Y
R13 ^[2]	36 / 37	55 / 55	Y / Y
R14 ^[1]	43 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable. Results at 4.5 m are presented for consistency with the Existing Conditions Report.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions Report.

The results indicate that at this elevation and setback all PORs will have landfilling noise contributions less than the guideline sound level limits, requiring no mitigation.

Figure 5-5. Stage 1 - Typical Landfilling Upper Elevation Contour Height 1.5 m

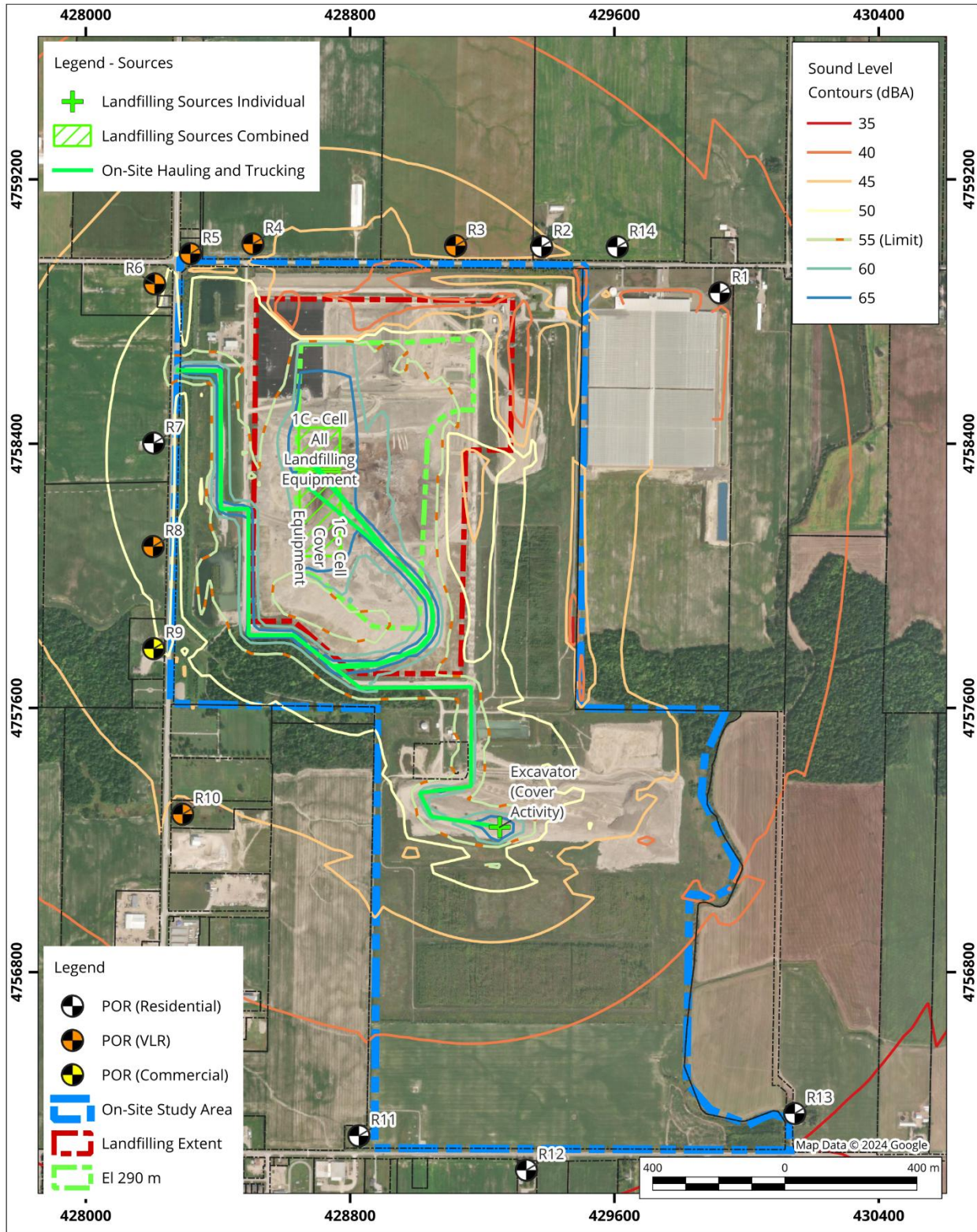
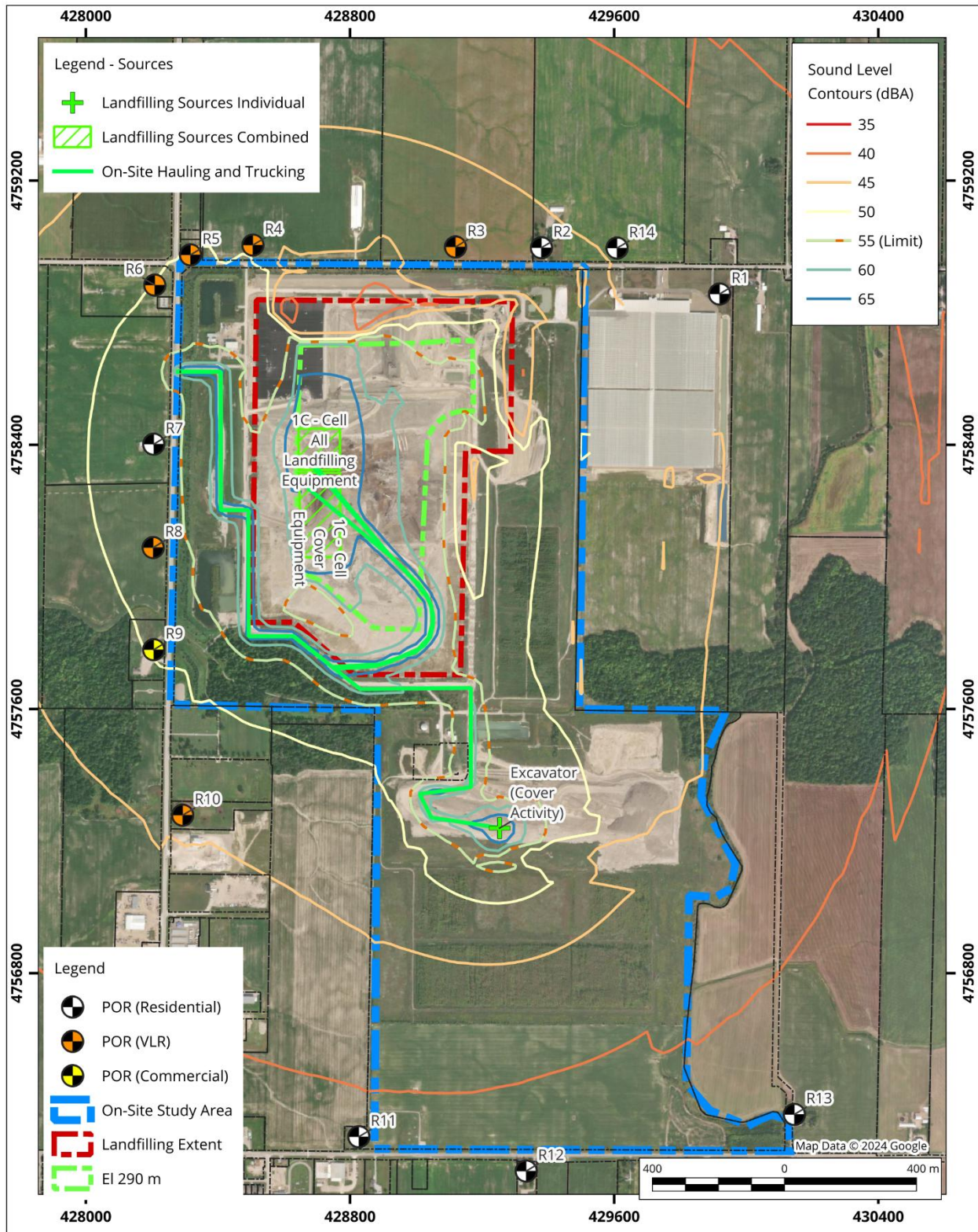


Figure 5-6. Stage 1 - Typical Landfilling Upper Elevation Contour Height 4.5 m



5.1.4 Operational Period - Stage 2

5.1.4.1 Stage 2 - Typical Landfilling Lower Elevation

The typical landfilling noise model assessed a northern haul route consistent with what was considered in the original Warwick Landfill EA (AEL 2007) and included on-site hauling of daily cover. Landfilling was assessed as a single area source. The Area source was modelled at the 270 m elevation and directly southwest of POR R2. Construction of the final cover was assessed as a single area source, incorporating a D8R and D6R dozer, along with on-site hauling of the final cover. The area source is 250 m x 125 m beside the landfilling area and was assumed to operate at the same time as the landfilling activity.

Table 5-5 shows the predicted levels for the fourteen most impacted PORs against the Landfilling Noise Guidelines limits. Figures showing the predicted noise isopleths at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-7** and **Figure 5-8**.

Table 5-5. Predicted Noise Levels for Stage 2 - Typical Landfilling Lower Elevation

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R1 ^[1]	46 / -	55 / -	Y / -
R2 ^[2]	55 / 56	55 / 55	Y / N
R3	56 / 59	55 / 55	N / N
R4	49 / 50	55 / 55	Y / Y
R5	47 / 48	58 / 59	Y / Y
R6	46 / 47	55 / 55	Y / Y
R7 ^[1]	46 / -	56 / -	Y / -
R8	45 / 47	56 / 57	Y / Y
R9	44 / 46	57 / 58	Y / Y
R10	42 / 44	57 / 57	Y / Y
R11 ^[1]	37 / -	55 / -	Y / -
R12 ^[2]	36 / 37	55 / 55	Y / Y
R13 ^[2]	36 / 38	55 / 55	Y / Y
R14 ^[1]	52 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions Report.

Figure 5-7. Stage 2 - Typical Landfilling Lower Elevation Contour Height 1.5 m

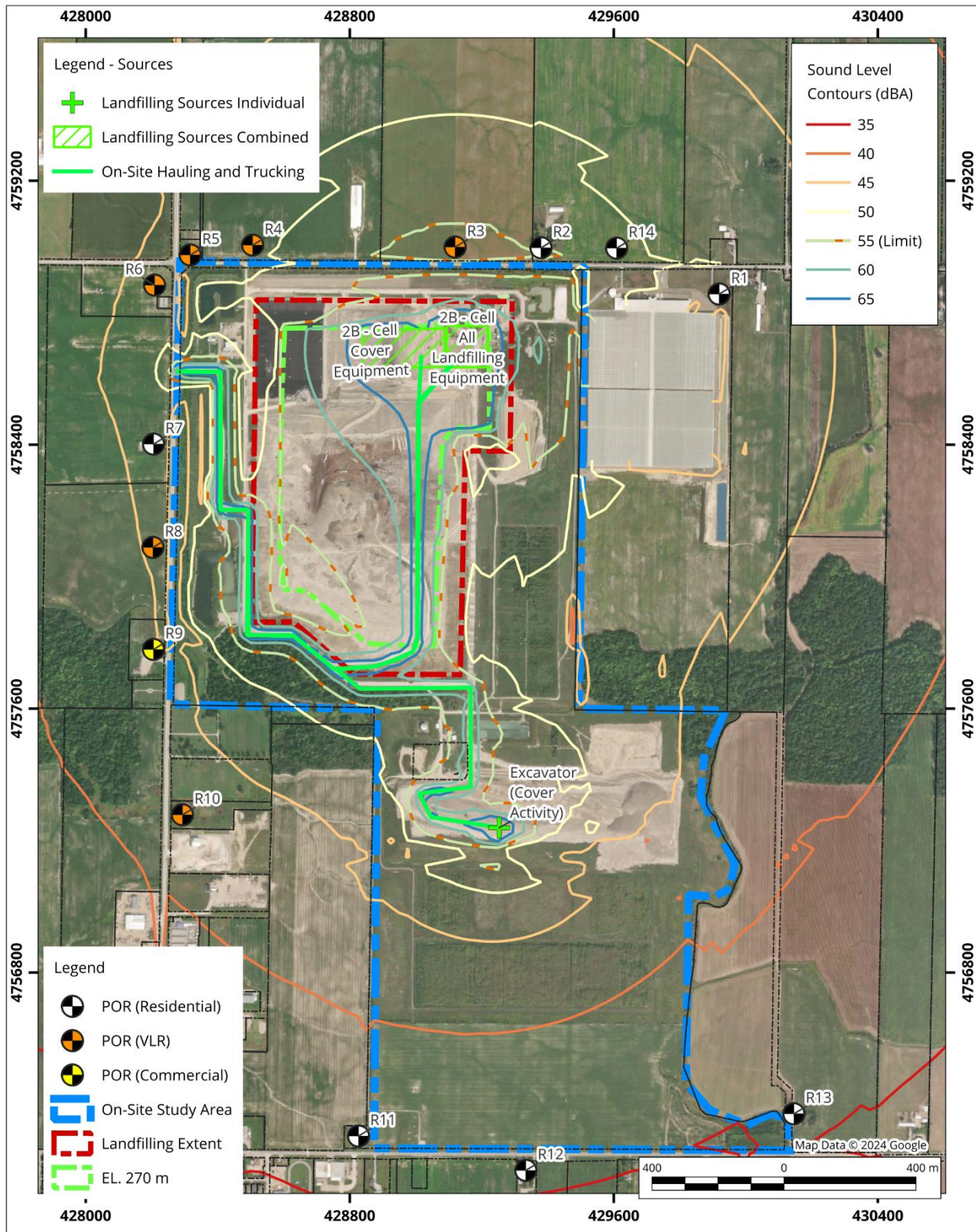
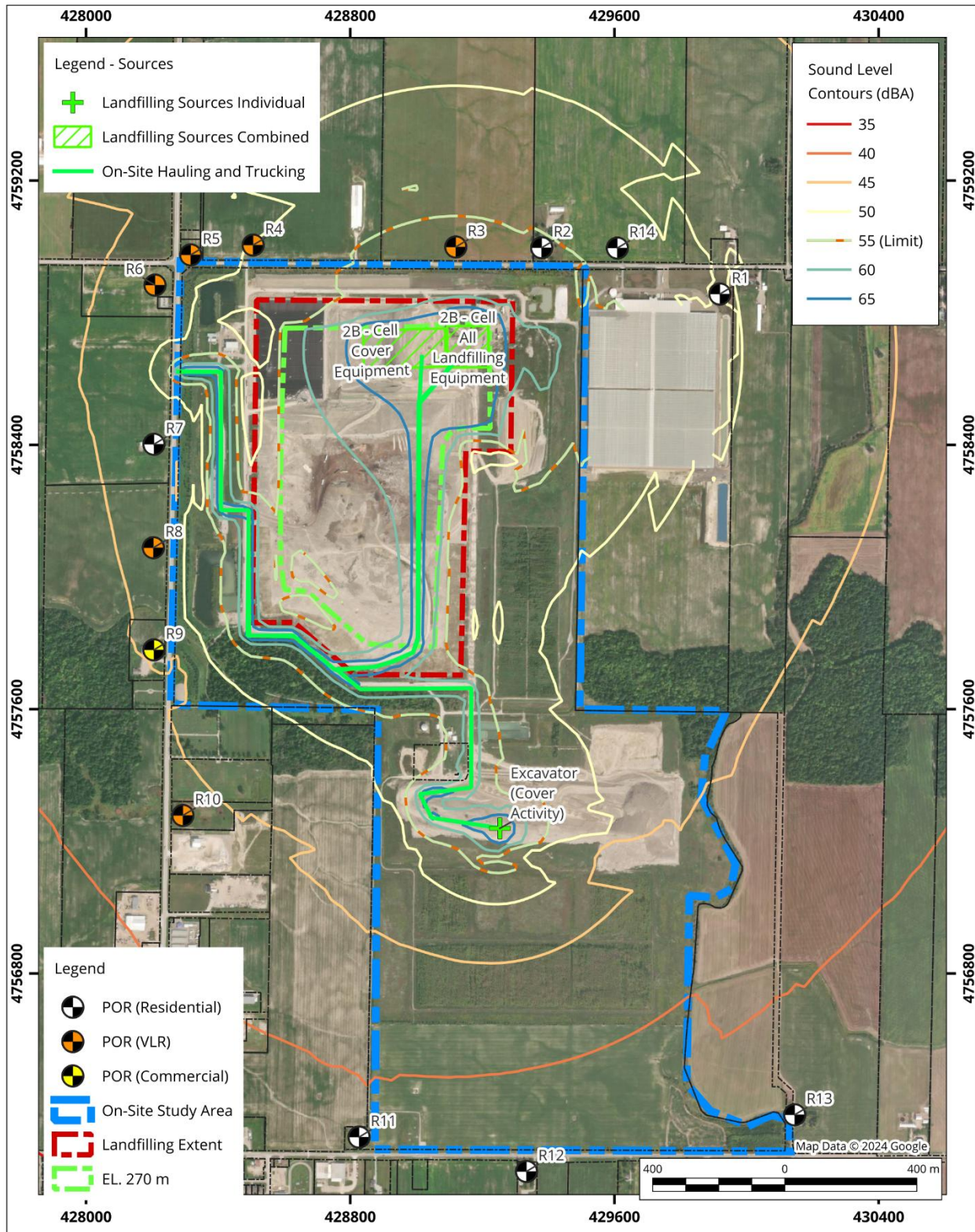


Figure 5-8. Stage 2 - Typical Landfilling Lower Elevation Contour Height 4.5 m



The results indicate that at this elevation and setback PORs R2 and R3 will exceed the Landfilling Noise Guidelines sound level limits and will require mitigation.

Recommended mitigation is the use of operational berms when landfilling occurs in this portion of the landfill. The use of operational berms was proposed in the original Warwick Landfill EA for noise (AEL, 2007), and is consistent with current operation, specifically to address noise near receptors. The CDR report indicates that temporary berms between lateral phases will be constructed to control surface water (CDR Section 2.4.1), the design of which could be used to incorporate reduction in noise impacts.

The model was re-run with a 3.0 m operational berm placed at the edge of the Stage 2 270 m elevation perimeter, such that it had the same slope as the Preferred Alternative side slopes. **Table 5-6** shows the predicted noise results at the effected PORs.

Table 5-6. Predicted Noise Levels for Stage 2 - Typical Landfilling Upper Elevation with Operational Berm Mitigation

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R2 ^[1]	51 / 52	55 / 55	Y / Y
R3	51 / 52	55 / 55	Y / Y

Notes:

[1] POR R2 is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions Report.

The results indicate that with the implementation of operational berms landfilling noises off-site can be mitigated to be below landfilling sound level limits. RWDI conducted a sensitivity study in the northwest corner of the landfill to determine the areas where operational berms are required and are detailed in **Section 5.1.6**. Applying the berms along the entire north edge of the 270 m elevation during Stage 2 is predicted to mitigate sound levels at VLR PORs.

Figures showing the predicted noise isopleths with the application of the mitigation at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-9** and **Figure 5-10**.

Figure 5-9. Stage 2 - Typical Landfilling Lower Elevation with Berm Mitigation Contour Height 1.5 m

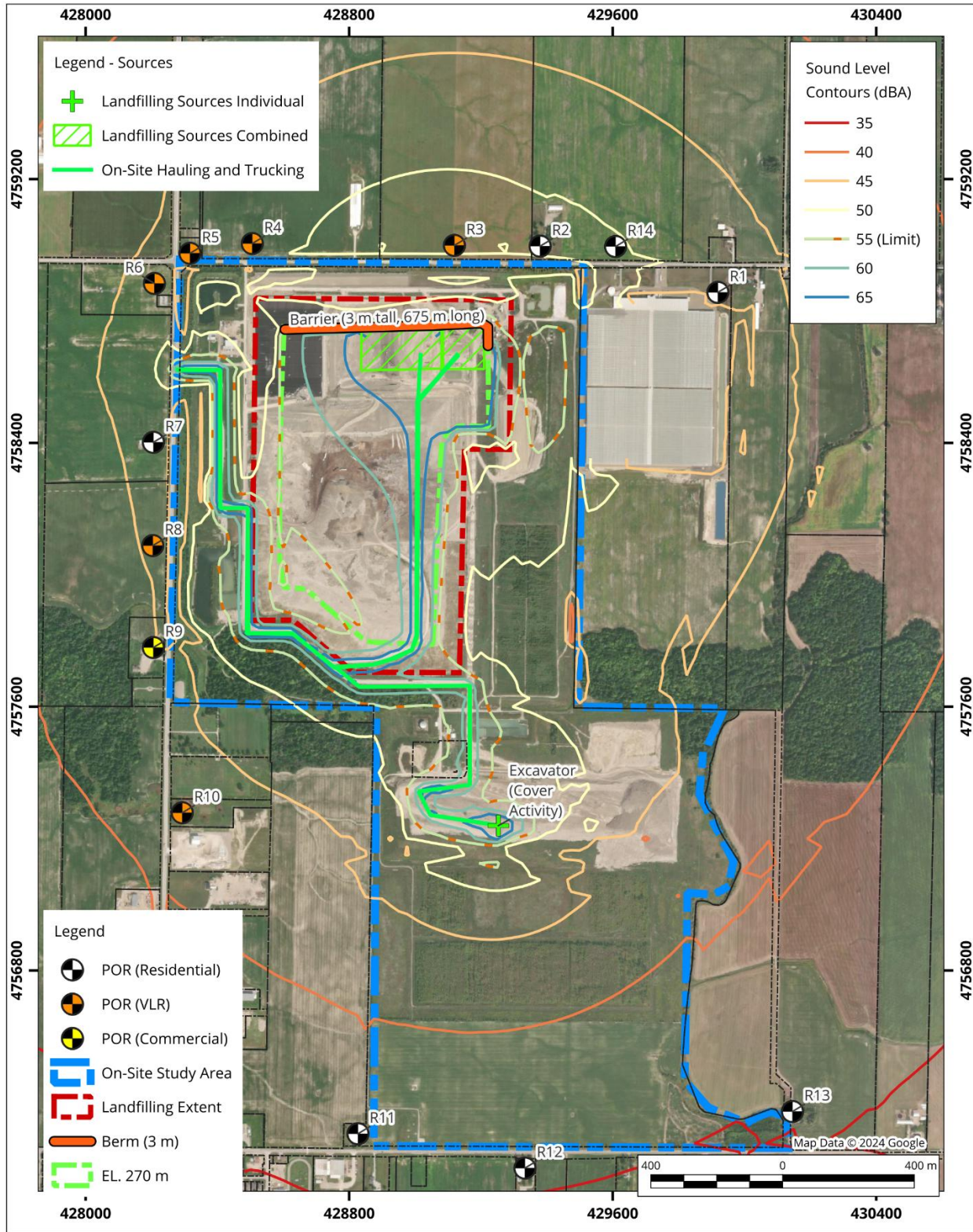
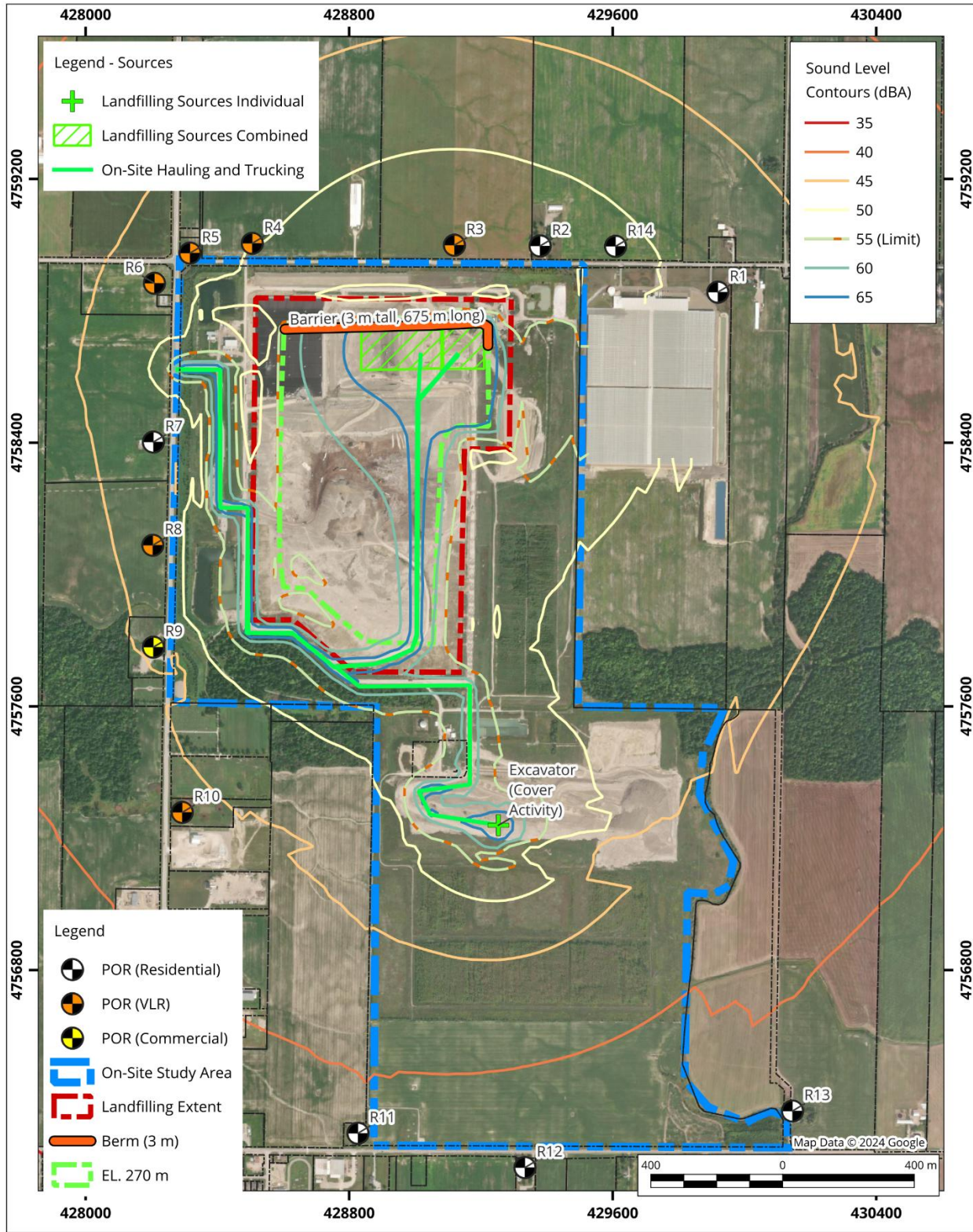


Figure 5-10. Stage 2 - Typical Landfilling Lower Elevation with Berm Mitigation Contour Height 4.5 m



5.1.4.2 Stage 2 – Side Slope Redevelopment

The side slope noise model considered the same haul route as that in **Section 5.1.4.1**. Two landfilling point sources were added to the side slope in the direction of the POR R2; a CAT D8R dozer and a CAT 836G. The landfilling area source was modified to omit the contributions of the above point sources. Construction of the final cover was assessed as a single area source, incorporating a D8R and D6R dozer, along with on-site hauling of the final cover. The area source is 250 m x 125 m beside the landfilling area and was assumed to operate at the same time as the landfilling activity.

Table 5-3 shows the predicted levels for the fourteen most impacted PORs against the landfilling guideline limits. Figures showing the predicted noise isopleths at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-11** and **Figure 5-12**.

Table 5-7. Predicted Noise Levels for Stage 2 - Side Slope Redevelopment

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R1 ^[1]	48 / -	55 / -	Y / -
R2 ^[2]	59 / 60	55 / 55	N / N
R3	58 / 59	55 / 55	N / N
R4	50 / 51	55 / 55	Y / Y
R5	47 / 49	58 / 59	Y / Y
R6	46 / 48	55 / 55	Y / Y
R7 ^[1]	46 / -	56 / -	Y / -
R8	45 / 47	56 / 57	Y / Y
R9	44 / 46	57 / 58	Y / Y
R10	42 / 44	57 / 57	Y / Y
R11 ^[1]	37 / -	55 / -	Y / -
R12 ^[2]	36 / 38	55 / 55	Y / Y
R13 ^[2]	36 / 38	55 / 55	Y / Y
R14 ^[1]	55 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions Report.

Figure 5-11. Stage 2 – Side Slope Redevelopment Contour Height 1.5 m

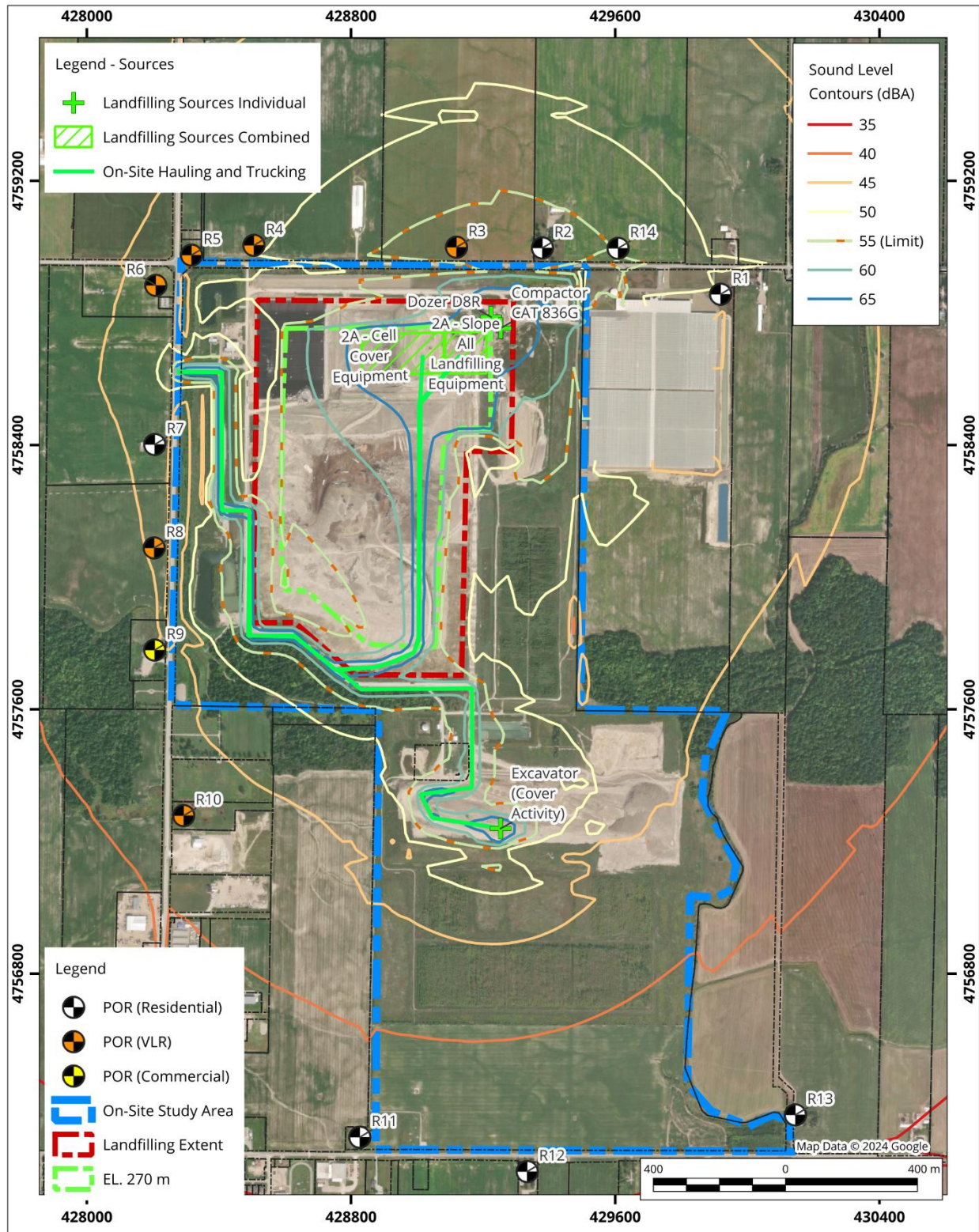
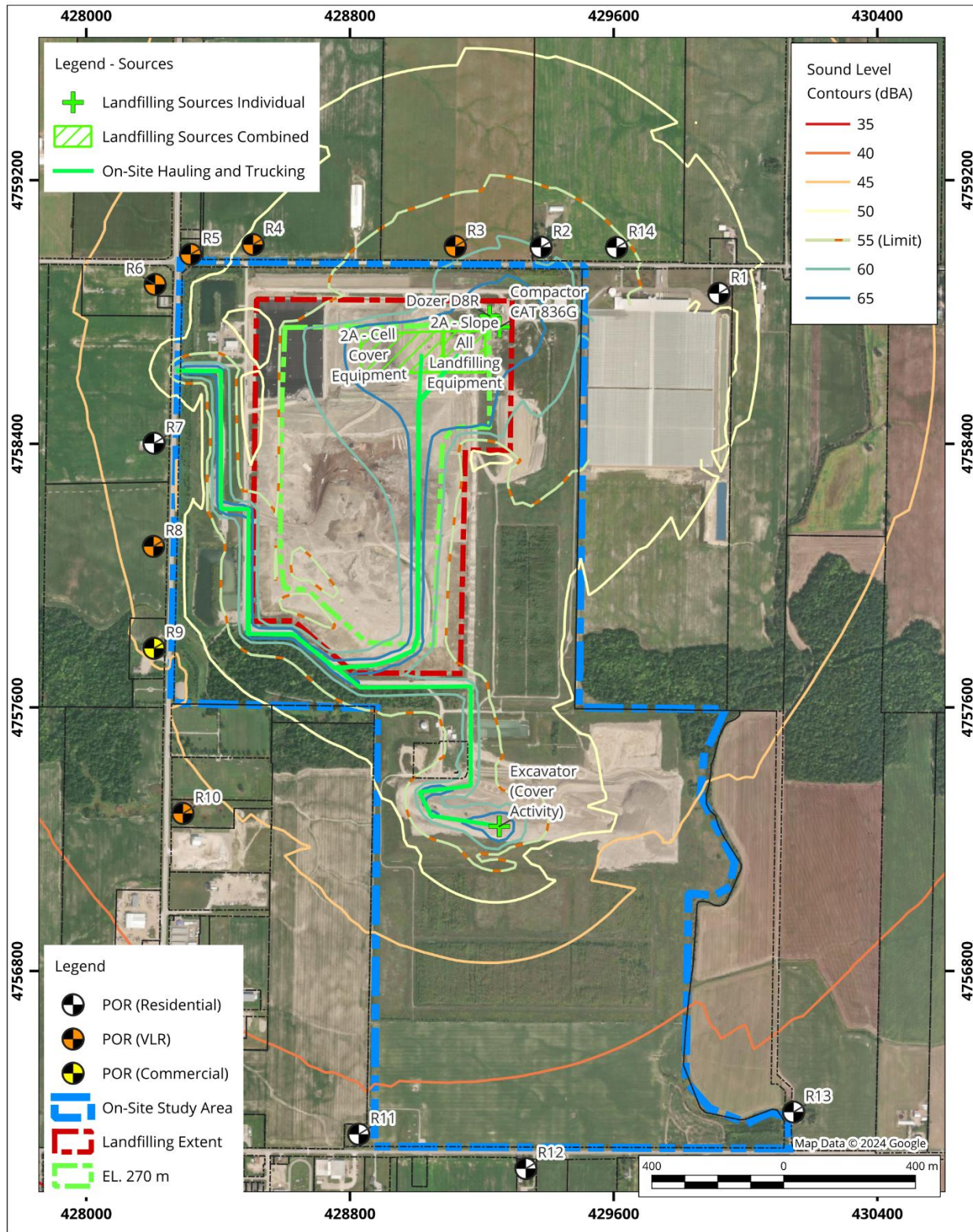


Figure 5-12. Stage 2 – Side Slope Redevelopment Contour Height 4.5 m



The results indicate that at this elevation and setback PORs R2 and R3 will potentially exceed the Landfilling Noise Guidelines sound level limits and will require mitigation. An exceedance at the 4.5 m elevation for POR R14 is predicted but is not applicable as the residence is a single storey residence and is evaluated at 1.5 m.

As the work here is on a slope, the construction of temporary berms may not be achievable and will require limiting the equipment that can work in this area. Compliance can be achieved with the combination of a barrier as recommended in **Section 5.1.4.1** and by limiting side slope operations to specific equipment.

RWDI reviewed the various equipment used and has identified one piece of equipment that can work in this area while being compliant with the landfilling guidelines:

- A CAT D6R dozer.

RWDI conducted a sensitivity study on the northeast landfill perimeter to determine the areas where equipment quantities are required to be limited and are detailed in **Section 5.1.6**.

Table 5-8 shows the predicted landfilling noise levels at PORs R2 and R3 with an operational 3 m berm and limiting the equipment to a single D6R operating on the side slopes. The results indicate that Landfilling Noise Guidelines sound level limits can be met at the critical POR receptor locations.

Figures showing the predicted noise isopleths with the application of the mitigations at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-13** and **Figure 5-14**.

Table 5-8. Predicted Noise Levels for Stage 2 - Side Slope Redevelopment with Equipment Limiting Mitigation

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R2 ^[2]	52 / 54	55 / 55	Y / Y
R3	53 / 54	55 / 55	Y / Y
R14 ^[1]	51 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions report.

Figure 5-13. Stage 2 – Side Slope Redevelopment with Equipment Restriction Mitigation Contour Height 1.5 m

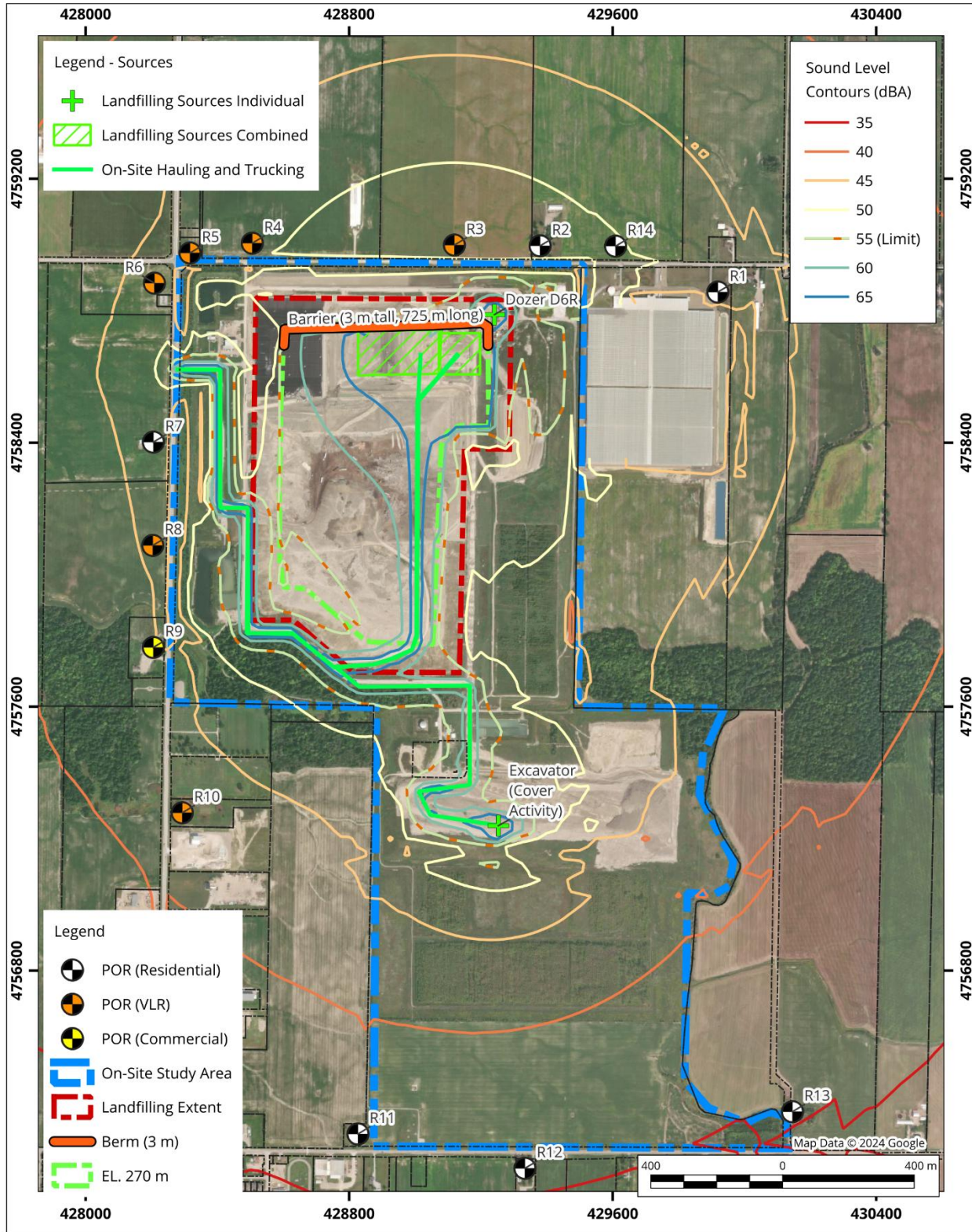
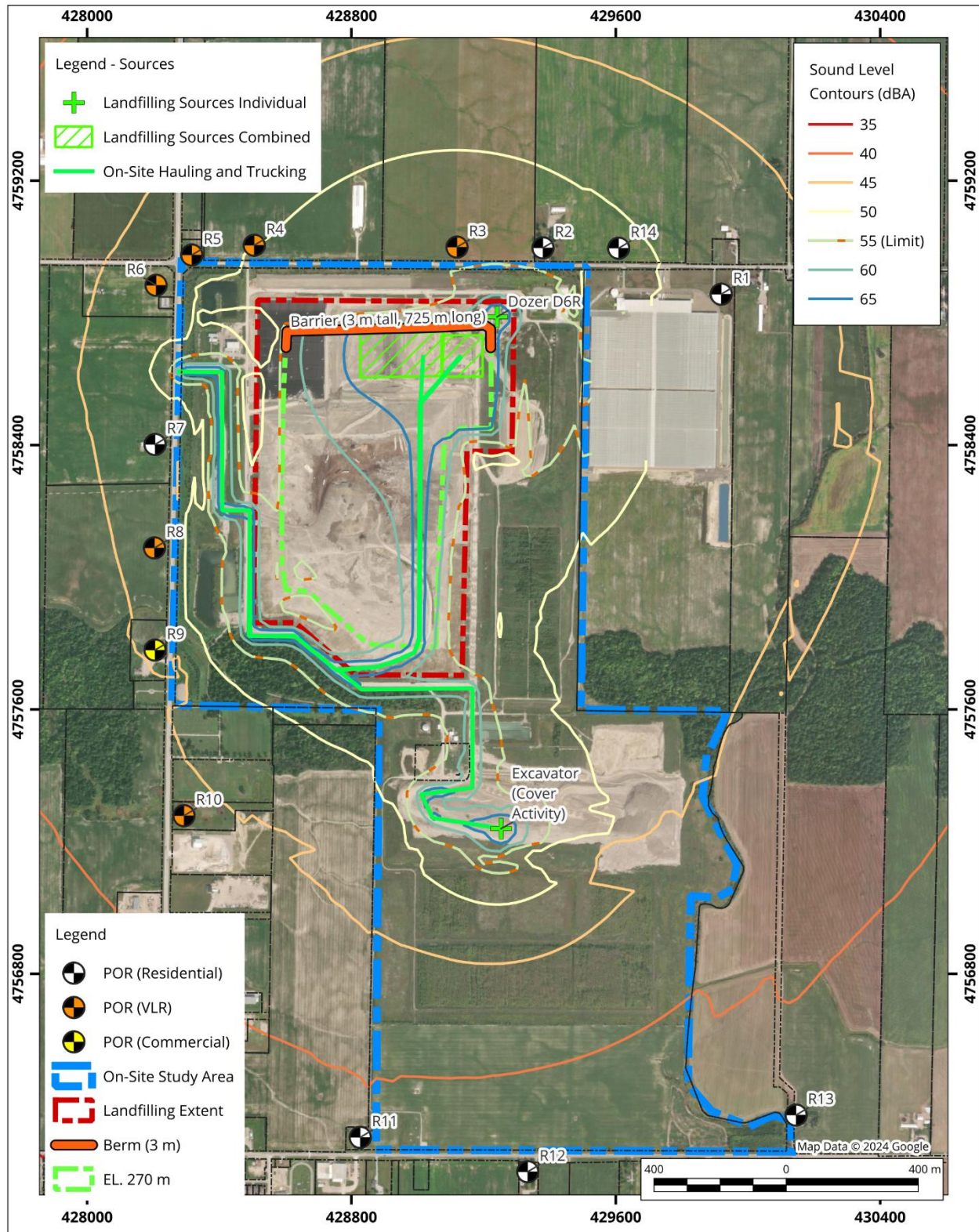


Figure 5-14. Stage 2 – Side Slope Redevelopment with Equipment Restriction Mitigation Contour Height 4.5 m



5.1.4.3 Stage 2 - Typical Landfilling Upper Elevation

The upper elevation noise model considered the same haul route as that in **Section 5.1.4.1**. Landfilling was assessed as a single area source. The area source was modelled at 290 m elevation and directly southwest of POR R2. The 290 m elevation marks the top of the Stage 2 development. Construction of the final cover was assessed as a single area source, incorporating a D8R and D6R dozer, along with on-site hauling of the final cover. The area source is 250 m x 125 m beside the landfilling area and was assumed to operate at the same time as the landfilling activity.

Table 5-9 shows the predicted levels for the fourteen most impacted PORs against the Landfilling Noise Guidelines limits.

Figures showing the predicted noise isopleths at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-15** and **Figure 5-16**.

Table 5-9. Predicted Noise Levels for Stage 2 - Typical Landfilling Upper Elevation

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R1 ^[1]	47 / -	55 / -	Y / -
R2 ^[2]	52 / 53	55 / 55	Y / Y
R3	52 / 53	55 / 55	Y / Y
R4	49 / 50	55 / 55	Y / Y
R5	47 / 48	58 / 59	Y / Y
R6	47 / 48	55 / 55	Y / Y
R7 ^[1]	46 / -	56 / -	Y / -
R8	46 / 47	56 / 57	Y / Y
R9	45 / 46	57 / 58	Y / Y
R10	42 / 44	57 / 57	Y / Y
R11 ^[1]	37 / -	55 / -	Y / -
R12 ^[2]	36 / 38	55 / 55	Y / Y
R13 ^[2]	35 / 37	55 / 55	Y / Y
R14 ^[1]	50 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions report.

The results indicate that at this elevation and setback all PORs will have landfilling noise contributions less than the guideline sound level limits requiring no mitigation.

Figure 5-15. Stage 2 - Typical Landfilling Upper Elevation Contour Height 1.5 m

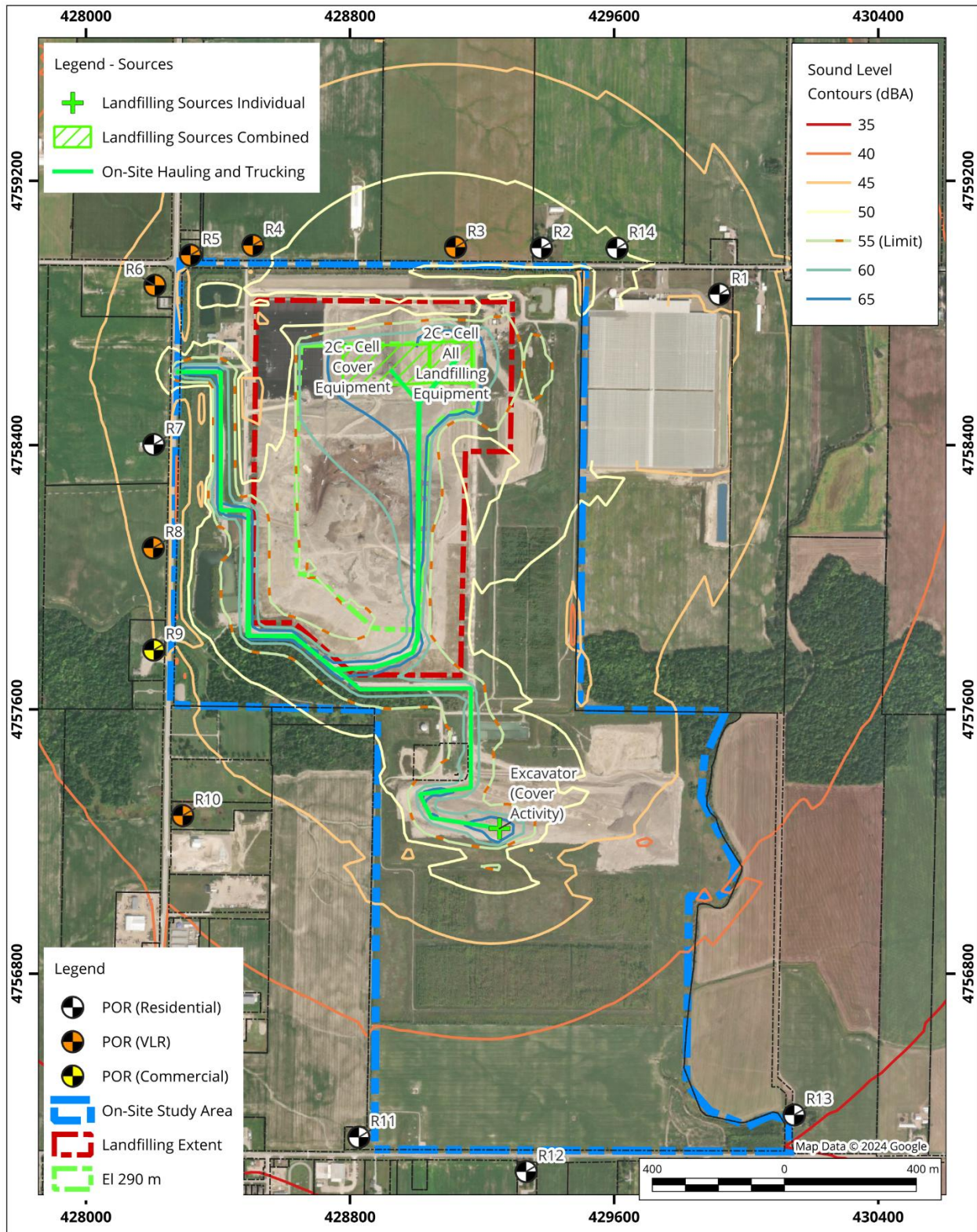
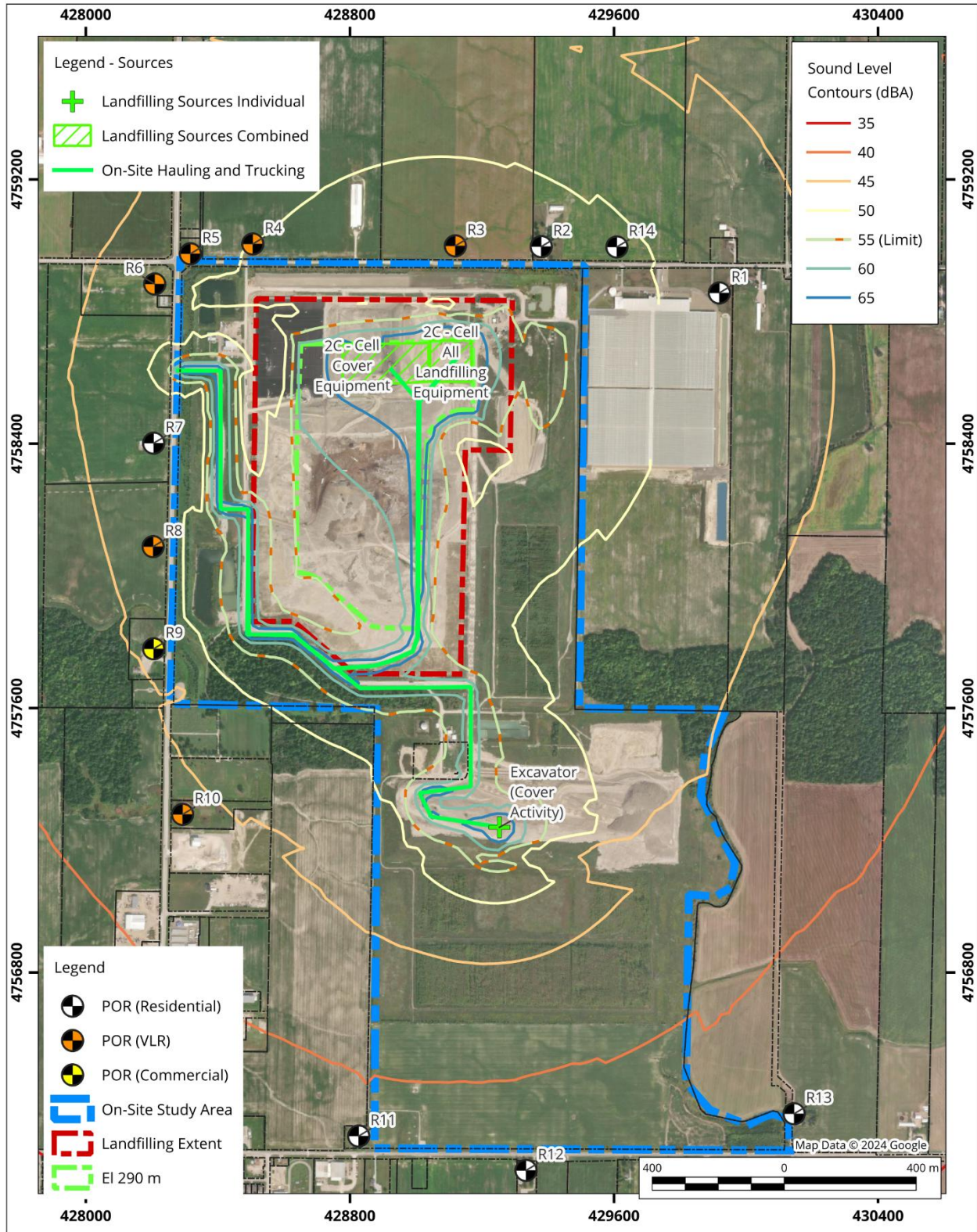


Figure 5-16. Stage 2 - Typical Landfilling Upper Elevation Contour Height 4.5 m



5.1.5 Operational Period - Stage 3

5.1.5.1 Stage 3 - Typical Landfilling

The typical landfilling noise model assessed a northern haul route consistent with what was considered in the original Warwick Landfill EA (AEL 2007) and included on-site hauling of daily cover. Landfilling was assessed as a single area source. The area source was modelled at the 315 m elevation and east of POR R7. Construction of the final cover was assessed as a single area source, incorporating a D8R and D6R dozer, along with on-site hauling of the final cover. The area source is 250 m x 125 m beside the landfilling area and was assumed to operate at the same time as the landfilling activity.

This location marks the most western elevated location nearest to R7 and was selected to determine if the elevated landfilling would result in greater off-site noise levels. Due to the slope of the landfill, the greater the elevation, the further set back from the perimeter the landfilling activities are.

Table 5-10 shows the predicted levels for the fourteen most impacted PORs against the Landfilling Noise Guidelines limits. Figures showing the predicted noise isopleths at the modelled heights of 1.5 m and 4.5 m are provided in **Figure 5-17** and **Figure 5-18**.

Table 5-10. Predicted Noise Levels for Stage 3 - Typical Landfilling

POR Location	Predicted Landfilling Noise Levels (dBA)	Applicable Daytime (07:00 - 19:00) Landfilling Sound Level Limits (dBA)	Meets Sound Level Limits? (Y / N)
	(1.5 m / 4.5 m)	(1.5 m / 4.5 m)	
R1 ^[1]	42 / -	55 / -	Y / -
R2 ^[2]	42 / 44	55 / 55	Y / Y
R3	41 / 43	55 / 55	Y / Y
R4	43 / 45	55 / 55	Y / Y
R5	47 / 48	58 / 59	Y / Y
R6	47 / 48	55 / 55	Y / Y
R7 ^[1]	49 / -	56 / -	Y / -
R8	49 / 50	56 / 57	Y / Y
R9	48 / 49	57 / 58	Y / Y
R10	44 / 45	57 / 57	Y / Y
R11 ^[1]	37 / -	55 / -	Y / -
R12 ^[2]	37 / 38	55 / 55	Y / Y
R13 ^[2]	35 / 37	55 / 55	Y / Y
R14 ^[1]	44 / -	55 / -	Y / -

Notes:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

[2] POR is a two-storey residence. Only the 4.5 m reception point is applicable. Results at 1.5 m are presented for consistency with the Existing Conditions Report.

The results indicate that at this elevation and setback all PORs will have landfilling noise contributions less than the guideline sound level limits. As previously discussed, landfilling at the outer proximity of the landfill is the primary driver for off-site noise levels.

As noted previously, Stage 4 was not assessed in this effects assessment as the higher elevations would constrain the landfilling equipment to the centre of the landfill. The results presented for Stage 3 demonstrate that this assumption is supported.

Figure 5-17. Stage 3 - Typical Landfilling Contour Height 1.5 m

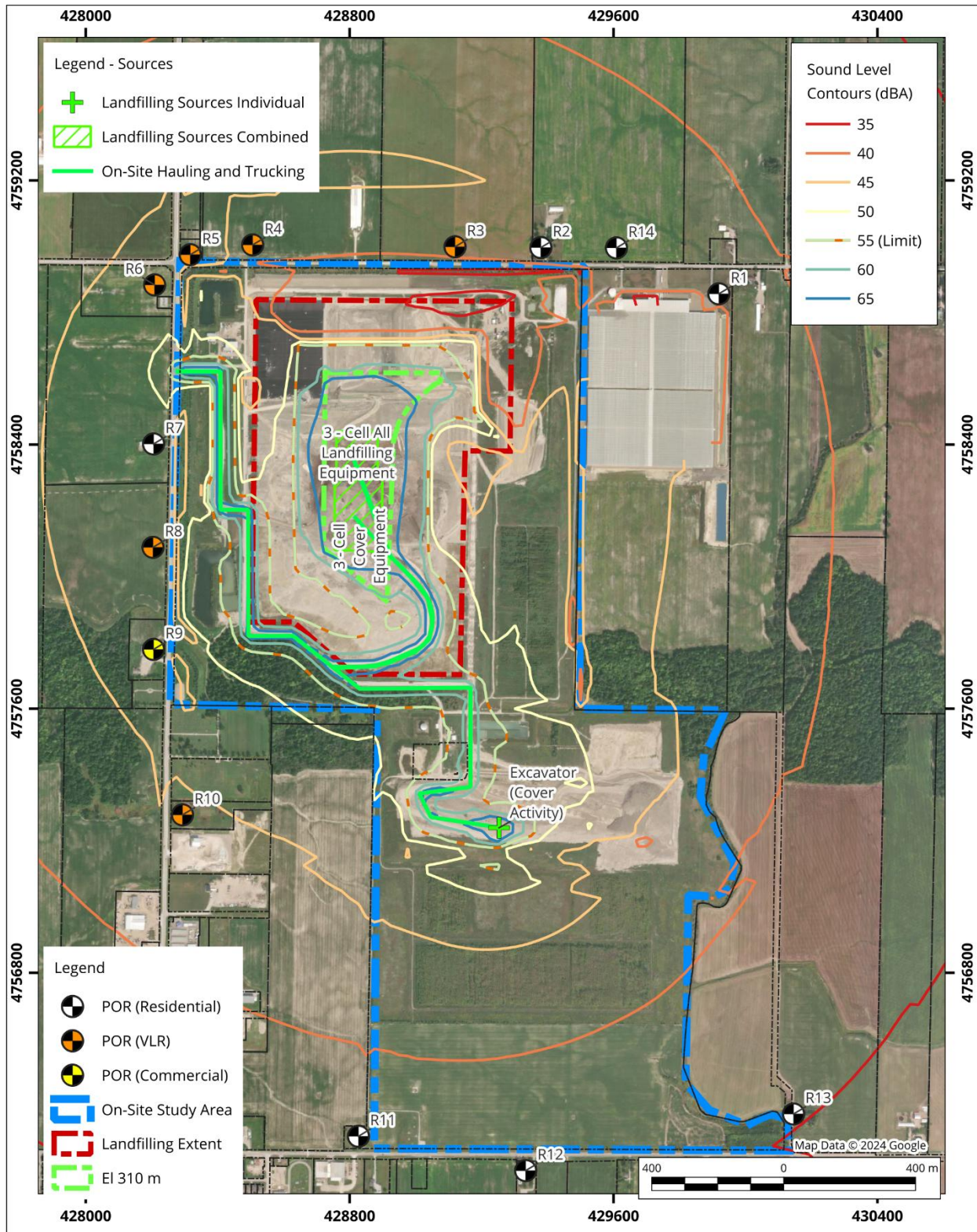
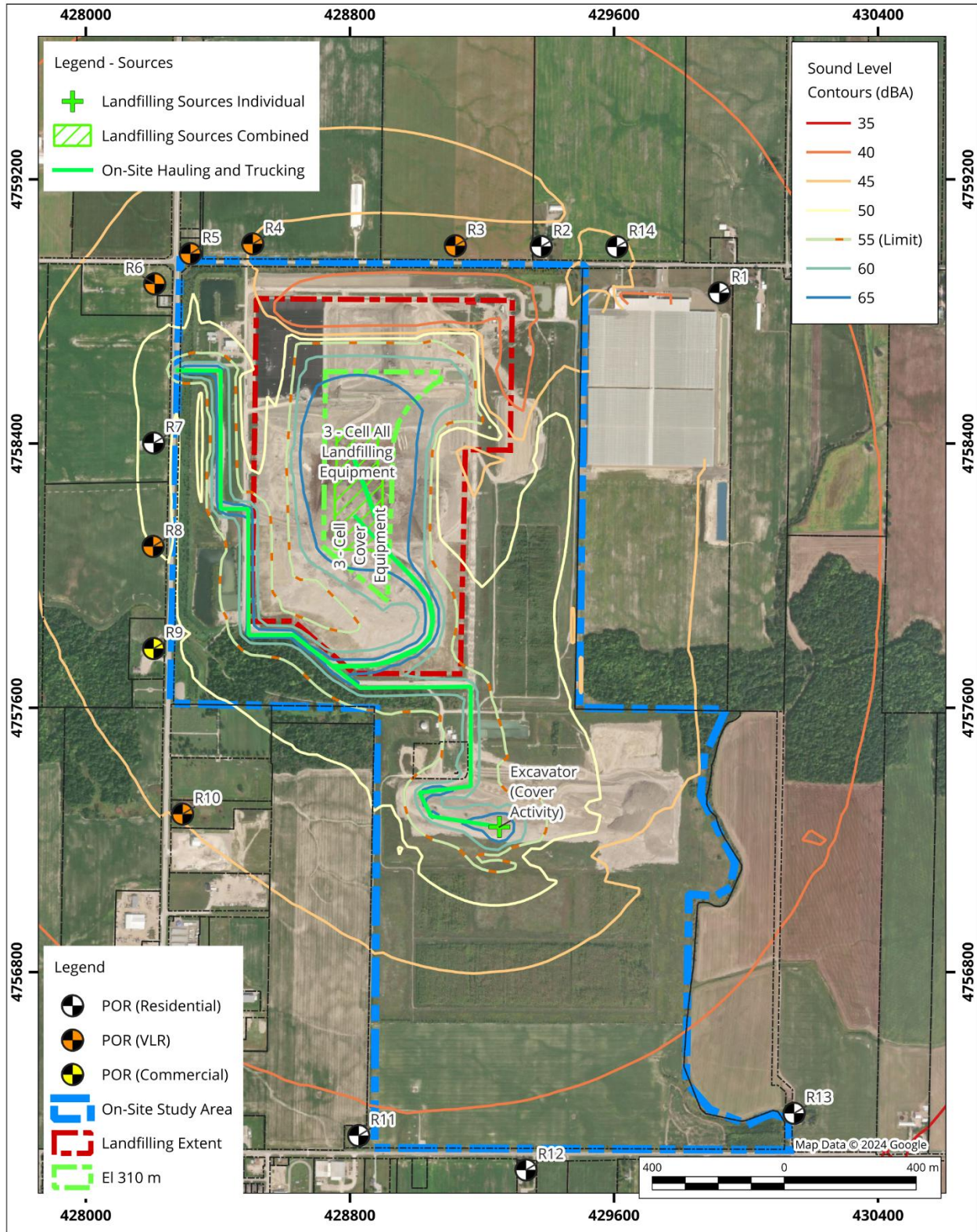


Figure 5-18. Stage 3 - Typical Landfilling Contour Height 4.5 m



5.1.6 Net Effects Assessment

Noise modelling of various landfilling scenarios for all of the operational periods was assessed, incorporating changes in location, equipment, and heights for the Preferred Alternative.

The analysis indicates a potential for Landfilling Noise Guidelines sound level limits to be exceeded. Mitigation was suggested such that landfilling sound level limits can be met and are summarized below:

- Restricting equipment and quantities in specific critical locations with respect to residential PORs.
- Construction of operational berms for typical landfilling activities to block off-site sound.

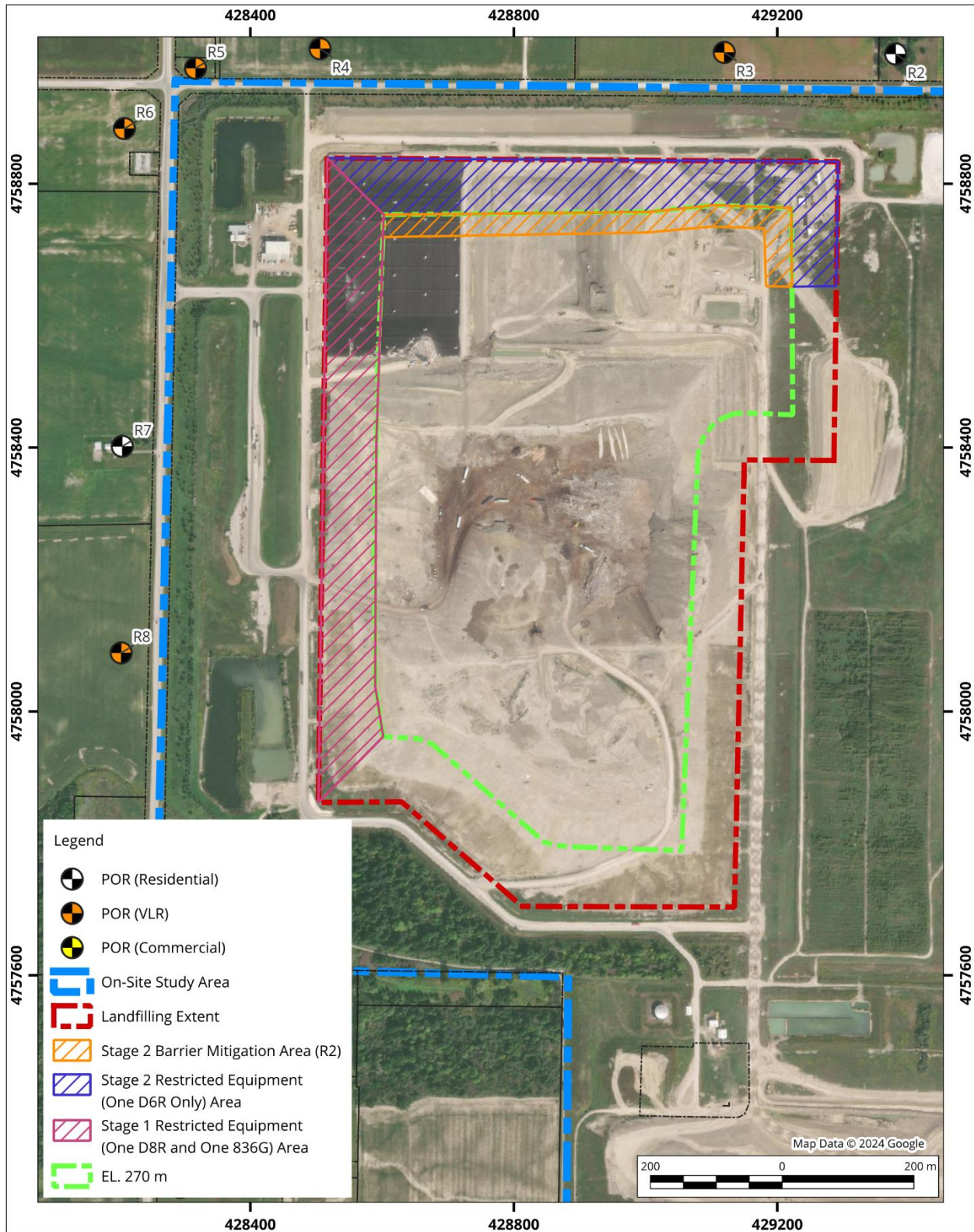
RWDI conducted area-specific sensitivity studies for the above two mitigative approaches. The sensitivity study identifies the critical areas that the mitigations are required. **Figure 5-19** shows the specific areas where equipment restrictions or operational berms are required to meet Landfilling Noise Guidelines sound level limits.

Table 5-11 lists the net effects assessment for landfilling, considering the above mitigative strategies. Following the implementation of mitigation measures the sound level limits are achieved for the receptors within the Off-site Study Area.

Table 5-11. Net Effects Assessment – Noise - Landfilling

Evaluation Criteria	Indicator	Key Design Considerations and Assumptions	Potential Effects	Mitigation Measures	Net Effects
Noise	Predicted site-related noise levels (due to change in location and height of landfilling noise sources) (measured in dBA)	<ul style="list-style-type: none"> • Potential locations of landfilling equipment near to critical PORs • Consideration on the existing geometry of the existing landfill and required. • Consideration of the noise propagation effects of height for the Preferred Alternative. 	Noise level may exceed applicable landfilling noise guidelines during daytime hours (55 – 60 dBA).	<ul style="list-style-type: none"> • Limiting the types and quantities of landfilling equipment at key locations along the perimeter of the landfill limits. • Construction of operational berms at key locations for general landfilling activities along the perimeter of the landfill. 	With the application of mitigation strategies noise levels are predicted to meet applicable landfilling noise guidelines during daytime hours

Figure 5-19. Stage 1 and 2 - Required Mitigation Areas



5.2 Noise – Ancillary Facilities

No changes in ancillary sources or levels are indicated and off-site sound levels are expected to meet the applicable sound levels as presented in **Table 3-3** for the Preferred Alternative. The sound level limits are achieved and no further net effects assessment is required. A sample calculation is included in **Appendix B**.

Ancillary noise levels are generally compliant with the Class 3 nighttime exclusion limits, with the exception of receptor R10, located east of Nauvoo Road, where the predicted levels exceed the applicable limit by 2 dB. Accordingly, it is anticipated that ancillary noise would meet Class 3 exclusion limits at all receptors situated west of Nauvoo Road, where ambient sound levels drop below the exclusion criteria.

It is noted that noise levels from ancillary sources may be reduced as the height of the landfill increases, potentially shielding PORs to the north.

5.3 Noise – Pest Control

The pest control devices available to WM were modelled using data from the Warwick Landfill EA Noise Impact Assessment (AEL, 2007), with supplementary acoustic description taken from RWDI audits on August 2, 2018, August 25, 2022, and August 26, 2022. Modelled sound power levels are consistent with the Noise Existing Conditions Report. Pest control devices were established as impulsive control devices and therefore the limit of 70 dBAI applies.

Each of the pest control devices were modelled at worst case locations around the perimeter of the landfill where new landfilling activities may require pest deterrents. Fourteen pest control point sources were modelled around the perimeter of the landfill at a height of approximately 30 m above current grade. These locations are considered conservative as the pest control devices are placed in close proximity to PORs resulting in the greatest potential noise levels.

Table 5-12 lists the predicted maximum sound levels for each type of pest control device. **Figure 5-20** shows the locations of the assessed pest control devices at the perimeter of the landfill, with the corresponding POR locations. A sample calculation is included in **Appendix B**.

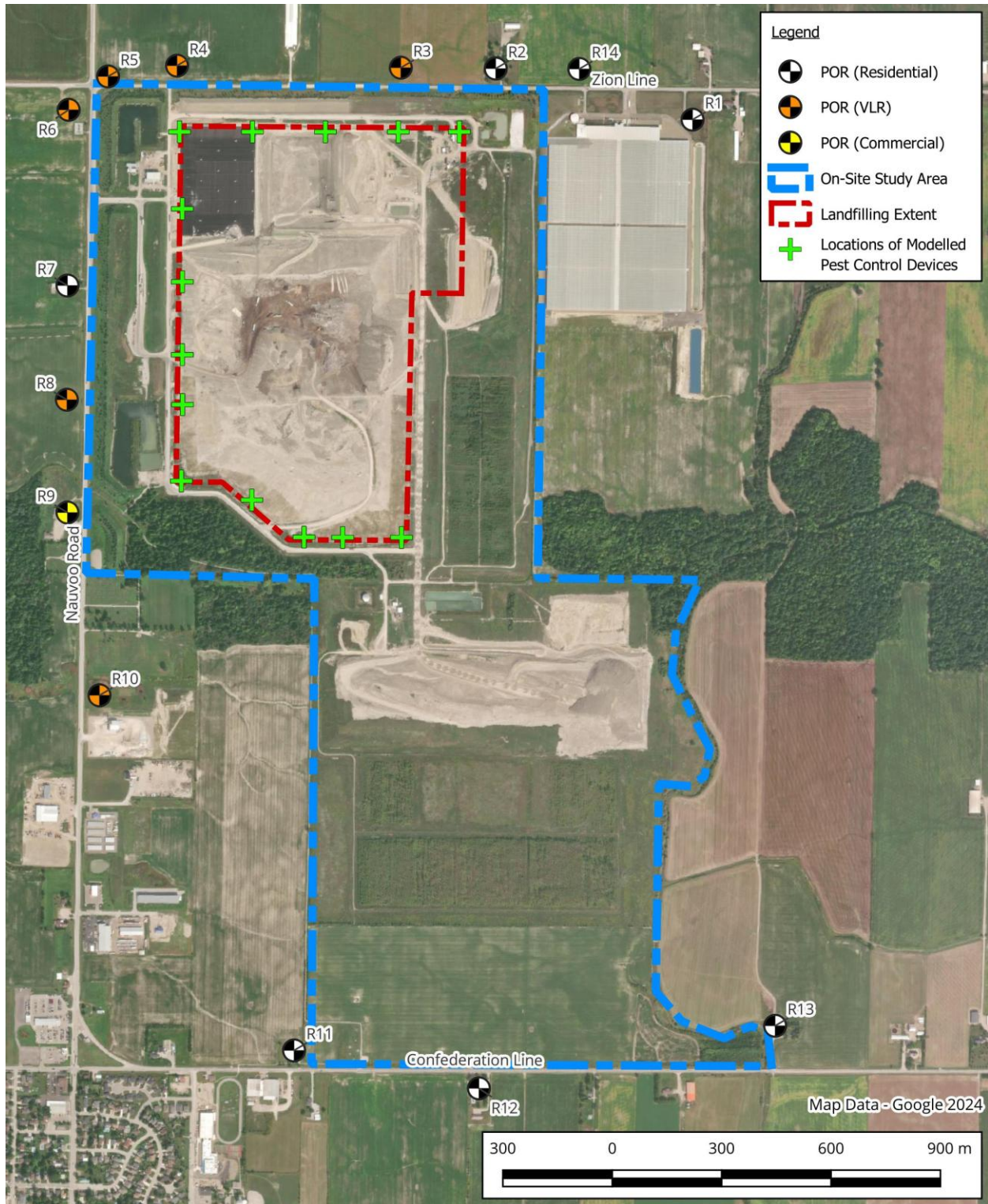
Table 5-12. Predicted Maximum Pest Control Device Sound Levels

POR Location	Predicted Pest Control Sound Level for Impulsive Sources (dBAI)				Pest Control Device Limit (dBAI)	Meets Sound Level Limits? (Y / N)
	Propane Cannon (1.5 m / 4.5 m)	Whistler Cartridge (1.5 m / 4.5 m)	Cracker Cartridge (1.5 m / 4.5 m)	Electronic Distress (1.5 m / 4.5 m)		
R1 ^[1]	48 / -	50 / -	54 / -	49 / -	70	Y
R2	60 / 62	63 / 63	68 / 68	60 / 65	70	Y
R3	61 / 62	63 / 64	68 / 69	60 / 65	70	Y
R4	60 / 62	63 / 64	68 / 68	60 / 65	70	Y
R5	59 / 59	61 / 61	66 / 65	60 / 63	70	Y
R6	56 / 57	58 / 59	63 / 63	56 / 61	70	Y
R7 ^[1]	55 / -	58 / -	62 / -	55 / -	70	Y
R8	55 / 57	57 / 58	62 / 63	55 / 60	70	Y
R9	55 / 57	58 / 58	62 / 62	56 / 60	70	Y
R10	48 / 49	49 / 50	53 / 54	49 / 54	70	Y
R11 ^[1]	38 / -	38 / -	40 / -	40 / -	70	Y
R12	37 / 39	37 / 38	38 / 39	39 / 45	70	Y
R13	35 / 38	35 / 36	36 / 37	38 / 43	70	Y
R14 ^[1]	54 / -	57 / -	61 / -	55 / -	70	Y

Note:

[1] POR is a single storey residence. Only the 1.5 m reception point is applicable.

Figure 5-20. Location of Assessed Pest Control Devices



5.3.1 Net Effects Summary

The effects of noise control for pests using impulsive sound sources were assessed. The analysis showed that the use of propane cannons, whistler cartridges, cracker cartridges, and electronic devices can be used throughout the landfill and meet landfilling guideline sound level limits without the use of mitigation.

Table 5-13 presents the net effects assessment from the guideline limits for noise from pest control devices.

Table 5-13. Net Effect Assessment – Pest Control Devices

Indicator	Indicator	Key Design Considerations and Assumptions	Potential Effects	Mitigation Measures	Net Effects
Noise	<ul style="list-style-type: none"> Predicted site-related noise levels (due to change in location and height of landfilling noise sources) (measured in dBA) 	<ul style="list-style-type: none"> Assessment of available impulsive type pest control devices. Sources modelled in worst case locations and heights. 	<ul style="list-style-type: none"> Predicted noise levels will meet Landfilling Noise Guidelines. 	<ul style="list-style-type: none"> None Required 	<ul style="list-style-type: none"> Predicted sound levels meet guideline criteria without the use of mitigation.

5.4 Change in Sound Levels

5.4.1 Cumulative Change in Noise Levels

Landfilling noise and ancillary facilities noise were first assessed separately, as above, and then cumulatively. The goal of the cumulative approach was to evaluate the magnitude of change in noise levels at receptors. Changes in noise levels were calculated by comparing the existing and approved environmental noise levels, including other sound sources such as existing landfilling operations, existing ancillary facilities, with the expected future noise levels due to the proposed landfill, ancillary sources, and construction activities. The change was then assessed based on the increase in sound level at the point of reception from the various existing conditions to the proposed conditions of the Preferred Alternative:

- A sound level increase of 1 – 3 dB is qualitatively rated as insignificant;
- A sound level increase of 3 – 5 dB is qualitatively rated as noticeable;
- A sound level increase of 5 – 10 dB is qualitatively rated as significant; and
- A sound level increase of greater than 10 dB is qualitatively rated as very significant.

5.4.1.1 Existing and Approved Conditions

The existing landfill will be in operation for an additional 5 years (until 2031). The locations of landfilling equipment and on-site haul routes will have significant changes dependent on the active cells and phases. This implies that the existing approved conditions will change and vary and require an assessment of not just current conditions, but also future approved conditions. This will result in sound levels that can vary at PORs for the remaining landfill life, as detailed in the original Warwick Landfill EA noise assessment (AER 2007).

The landfilling noise contributions have been previously assessed and approved for the remaining landfill life. The first was in the original Warwick Landfill EA (AER 2007), and then levels were updated in the Twin Creeks Landfill Site: Noise Evaluation | Proposed Increase To Annual Fill Rate (RWDI 2017) report.

The Warwick Landfill EA and the increase to the annual fill rate noise evaluation report consider different receptor points from those considered in this effects assessment due to different evaluation requirements. This makes it challenging to compare the predictions presented in this effects assessment to the results previously predicted.

To aid in the comparison of various valid existing and future approved sound levels with those predicted for the Preferred Alternative, the POR points considered in the original Warwick Landfill EA have been added to the noise models and the contributions predicted for ancillary sources and the Preferred Alternative.

Table 5-14 shows the summary of the inputs to the change in sound level modelling, and the assessment results. It is noted that residential POR locations R2 and R7 are the same locations and IDs as considered in this assessment. As the worst-case analysis from **Section 5.1** was focused on these PORs, the results presented below show the greatest potential for change for the closest residential PORs. **Figure 5-21** shows the locations of the original Warwick Landfill EA PORs used in assessing change in sound levels.

The ancillary source contributions use the noise model from the Noise Existing Conditions report at the EA POR locations and show compliance with NPC-300 sound level limits.

Existing landfilling contributions were taken from the Twin Creeks Landfill Site: Noise Evaluation | Proposed Increase To Annual Fill Rate (RWDI 2017) report, Attachment C Table 7. Table 7 of that report presents the logarithmic addition of the landfilling contributions assessed in the original Warwick Landfill EA (AER 2007) and the modelled haul route change contributions. Phases 8 and 9 are presented as they correspond to the final years of the approved landfill.

Figure 5-21. Location of Original EA Noise Receptors



Table 5-14. Potential Change in Sound Levels Assessing All Noise Contributing Sources

Original EA POR Locations ^[1]	Ancillary Source Contributions (dBA)	Landfilling Contributions Landfilling Sources and On-Site Hauling and Truck Movements (dBA)				Cumulative Sound Level Ancillary Sources + Landfilling + On-Site Hauling + Truck Movements (dBA)			Change in Sound Level from Preferred Alternative (dBA)	
		Existing and Approved Sound Levels Per Phase ^[2] (dBA)		PA Greatest Predicted Sound Level ^[3] (dBA)	PA Phase of Greatest Predicted Sound Level ^[3] (dBA)	P8	P9	PA	P8	P9
		P8	P9							
EA-R1	30	51	50	48	1 - Side Slope Redevelopment	51	50	48	-	-
EA-R2 ^[6]	33	55	55	54	2 - Side Slope Redevelopment	55	55	54	-	-
EA-R3	31	51	50	47	2 - Typical Landfilling Upper Elevation	51	50	47	-	-
EA-R4	32	36	40	37	All Phases Similar	41	41	38	-	-
EA-R5	32	39	39	37	1 - All Phases, 2 - Typical Landfilling Upper Elevation, & 3 - Typical Landfilling	40	40	38	-	-
EA-R7 ^[6]	35	53	52	55	1 - Side Slope Redevelopment	53	52	55	2	3
EA-R8	30	47	46	47	1 - Side Slope Redevelopment	47	46	47	-	1

Notes:

[1] As assessed in the original Warwick Landfill EA (AER 2007).

[2] Prediction as presented in (RWDI 2017) Twin Creeks Landfill Site: Noise Evaluation | Proposed Increase To Annual Fill Rate Attachment C, Table 7. Table 7 is the presents the logarithmic addition of the landfilling contributions assessed in the original EA (AER 2007) and the modelled haul route change contributions. Phases 8 and 9 (P8 and P9) are presented as they correspond to the final years of the approved landfill.

[3] Preferred Alternative (PA). The greatest predicted sound level at each of the EA PORs from the Preferred Alternative landfilling model (with applied mitigation), as assessed in **Section 5.1**.

[4] Cumulative sound level is the logarithmic addition of ancillary sources, and landfilling contributions.

[5] Change in sound level is the difference between the cumulative sound levels from the Preferred Alternative to the P8 or P9 scenario.

[6] PORs R2 and R7 are the same location and ID as those considered in this report.

‘-’ Indicates that with specific mitigation measures as specified in **Sections 5.1.3, 5.1.4, 5.1.5**, changes can potentially be lower or equal to existing and approved sound levels.

The results in **Table 5-14** show that the change in sound level can be qualitatively rated as insignificant from existing and approved sound levels with the use of specific mitigations. The magnitude of the change in sound levels for the Preferred Alternative will range from 0 dB to 3 dB. The greatest change occurs during Stage 1 and 2 when equipment is nearer to the landfill approved limits. Stage 3 and 4 will be constrained from the landfill approved limits and are predicted to result in changes less than 3 dB.

The change in sound level is expected considering the assumptions outlined in the CDR and understanding what mechanism is driving the sound levels. First, equipment and quantities will remain the same, only locations will drive sound levels. Secondly, sound levels are limited by the Landfilling Guideline limit. Consequently, the Preferred Alternative cannot be louder than the existing landfill, making geometry and proximity the primary mechanism for different sound levels as highlighted in the previous sections.

Due to how the Preferred Alternative will be approached in adjusting for the new slopes, mitigations and restriction are different from those considered in the original EA resulting in different net effects.

5.4.1.2 Net Effects Summary

The net effects compared with the guideline limits of cumulative change in noise levels were assessed for the modelled stages of the Preferred Alternative. The analysis highlights that the changes in sound levels are proportional to the proximity of landfilling noise sources. The qualitative rating ranges from decreases and increases in sound levels that are insignificant, to increases that can be temporarily significant compared to existing conditions without mitigation.

Table 5-15. Net Effect Assessment – Change in Sound Due to Landfilling

Evaluation Criteria	Indicator	Key Design Considerations and Assumptions	Potential Effects	Mitigation Measures	Net Effects
Noise	<ul style="list-style-type: none"> Change in sound levels (dB). 	<ul style="list-style-type: none"> Landfilling contributions from existing, and worst-case future Inclusion of ancillary sources 	<ul style="list-style-type: none"> Changes in sound levels may increase 0 dB – 3 dB. 	<ul style="list-style-type: none"> Application of landfilling mitigations to be compliant with landfilling guidelines sound level limits as proposed in Section 5.1, specifically: <ul style="list-style-type: none"> Limiting the types and quantities of landfilling equipment at key locations along the perimeter of the landfill limits. Construction of operational berms at key locations for general landfilling activities along the perimeter of the landfill. 	<ul style="list-style-type: none"> Increases in sound levels are qualitatively rated as insignificant.

5.4.2 Change Due to Haul Route Traffic

The changes in sound levels due to haul traffic on Nauvoo Road north of the TCEC entrance were assessed. Traffic was obtained from the traffic consultant HDR and is provided in **Appendix A**. Noise modelling for the off-site haul route was completed using a spreadsheet model of the ORNAMENT algorithms, following the requirements of NPC-206.

The modelling took into account the following factors:

- Road traffic parameters including traffic volume and speed limits, as provided by HDR; and
- Source-receptor characteristics, including heights, distances and ground type.

ORNAMENT calculations are provided in **Appendix A**, along with the receptor locations in **Figure B.1**.

For the analysis, the change in sound levels were assessed for the all of the points of reception within the Off-site Haul Route Study Area, and the results are shown in **Appendix A**. Receptor R22 which has a 40 m setback distance from Nauvoo Road was selected for presentation as it was the most common setback distance from Nauvoo Road for the receptors. **Table 5-16** shows the results of the analysis.

Table 5-16. Predicted Change in Sound Levels on Nauvoo Road North of Site Entrance Due to Site Traffic at a Representative POR (R22) at a Distance of 40 m

Hour	Background Sound Level Due to Non-Site Traffic (dBA)			Sound Level Due to Site Traffic (dBA)	Cumulative Sound Level Background + Site Traffic (dBA)			Change in Sound Levels from Current Levels (dB)	
	Current	2032	2043	All Years	Current	2032	2043	2032	2043
0:00	40	42	43	0	40	42	43	2	3
1:00	48	50	50	0	48	50	50	2	2
2:00	49	50	51	0	49	50	51	1	2
3:00	45	47	47	0	45	47	47	2	2
4:00	50	50	52	0	50	50	52	0	2
5:00	53	54	55	0	53	54	55	1	2
6:00	57	58	59	56	60	60	61	0	1
7:00	59	60	61	61	63	64	64	1	1
8:00	62	63	64	60	64	65	65	1	1
9:00	61	62	63	59	63	64	65	1	2
10:00	60	61	62	60	63	63	64	0	1
11:00	63	64	65	60	65	65	66	0	1
12:00	60	61	62	60	63	63	64	0	1

Table 5-16. Predicted Change in Sound Levels on Nauvoo Road North of Site Entrance Due to Site Traffic at a Representative POR (R22) at a Distance of 40 m

Hour	Background Sound Level Due to Non-Site Traffic (dBA)			Sound Level Due to Site Traffic (dBA)	Cumulative Sound Level Background + Site Traffic (dBA)			Change in Sound Levels from Current Levels (dB)	
	Current	2032	2043	All Years	Current	2032	2043	2032	2043
13:00	63	64	65	59	64	65	66	1	2
14:00	61	62	63	58	63	64	64	1	1
15:00	61	62	63	54	62	63	64	1	2
16:00	61	62	63	51	61	62	63	1	2
17:00	59	61	61	0	59	61	61	2	2
18:00	57	58	59	0	57	58	59	1	2
19:00	51	52	53	0	51	52	53	1	2
20:00	53	54	55	0	53	54	55	1	2
21:00	51	53	54	0	51	53	54	2	3
22:00	50	52	52	0	50	52	52	2	2
23:00	51	53	54	0	51	53	54	2	3

Source: Traffic data obtained from HDR traffic consultant. Volumes used in the analysis are provided in **Appendix A**.

Note: **Bolded** values correspond to hours with site traffic.

5.4.2.1 Net Effects Summary

The effects of haul route noise have been assessed for the years provided by the traffic consultant (HDR). The haul route truck traffic is planned to be unchanged from the currently approved operations at the site, so the noise impact from haul vehicles on the haul route will be unchanged between present day and future.

As volumes for haul traffic from the Preferred Alternative will be the same as is currently approved, there is no change in haul route sound levels. The predicted changes in road noise are attributed entirely to the future growth in the area resulting in greater non-landfill vehicle volumes.

Table 5-17 presents the net effects assessment from the existing approval for the change in noise from the haul route.

Table 5-17. Net Effect Assessment – Change in Sound Due to Haul Route Traffic

Indicator	Indicator	Key Design Considerations and Assumptions	Potential Effects	Mitigation Measures	Net Effects
Noise	<ul style="list-style-type: none"> Change in sound levels (dB). 	<ul style="list-style-type: none"> Predicted background noise levels based on traffic volumes for assessed years Predicted noise levels due to haul route traffic volumes are the same for all assessed years. 	<ul style="list-style-type: none"> Potential changes in sound levels due to haul route trucks to be rated as insignificant because they are unchanged from the currently approved operations at the site. 	<ul style="list-style-type: none"> None applicable. 	<ul style="list-style-type: none"> Changes in noise levels due to haul route traffic are rated as insignificant.

6 Comparison of the Preferred Alternative against the ‘Do Nothing’ Alternative

The effects of the Preferred Alternative are compared against the predicted effects of the currently approved Expansion Landfill based on similar environmental criteria and indicators, with the understanding that the criteria and indicators used in the current effects assessment may differ from those used for the effects assessment of the Expansion Landfill. The effects are compared against each other in terms of magnitude, extent, and duration below. The advantages and disadvantages of the Preferred Alternative compared to the ‘Do Nothing’ Alternative are identified.

6.1 Effects of the ‘Do Nothing’ Alternative

Generally, the effects of the ‘Do Nothing’ Alternative are summarized in the future baseline **Section 3.1**, such that future levels are comprised of background traffic and the contribution of the landfill ancillary sources. The ‘Do Nothing’ Alternative is the Expansion Landfill as currently approved in the 2005 EA and 2017 Environmental Screening, with the addition of the stationary sources from the RNG Facility.

For the ‘Do Nothing’ Alternative, active landfilling will cease. Ancillary source noise contributions will remain; however, the sound levels will be dominated by local traffic noise contributions. Ancillary source contributions may be audible during very quiet periods of the day and night. With the predicted growth of background traffic volumes and their dominant effect on the sound environment, sound levels will gradually increase by 1 to 2 dB at all considered PORs to the considered year of 2043..

6.2 Comparison of the Preferred Alternative against the ‘Do Nothing’ Alternative

The Preferred Alternative and the ‘Do Nothing’ Alternative are compared below in **Table 6-1**, which shows the potential future change if the Preferred Alternative was not selected.

The results summarize the findings from **Table 3-3** for the future ambient sound levels analysis, and worst-case impacts for the cumulative sound levels from the Preferred Alternative Stages (**Section 5.1**). As the exact timing of the Stages for the Preferred Alternative may vary, the change in sound level is completed for each year assessed for background traffic and each considered Stage. The maximum future daytime cumulative sound level is the logarithmic addition of the future daytime (‘Do Nothing’ Alternative) and the maximum predicted sound levels for each of the three assessed Stages including mitigations.

It is important to note that the results present single snapshots in space and time, and that contributions at other locations may be greater as the landfilling works in various areas. **Table 6-1** shows the potential difference in sound levels for the Preferred Alternative and the ‘Do Nothing’ Alternative.

Table 6-1. Change in Sound Levels between the Preferred Alternative and the ‘Do Nothing’ Alternative

POR Location	Modelled Height (m)	Future Daytime (07:00 - 19:00) Background Sound Level Due to Traffic ^[1] (dBA)		Future Daytime (07:00 - 19:00) Sound Level Due to TCEC Ancillary Sources (‘Do Nothing’ Alternative) ^[5] (dBA)	Maximum Future Daytime (07:00 - 19:00) Cumulative Sound Level Due to Ancillary Sources, and Preferred Alternative ^[2] (dBA)			Difference in Sound Levels ^[3] (dBA) Stage 1 / 2 / 3
		2032	2043		1	2	3	
R1 ^[4]	1.5	37	37	31	41	47	41	10 / 16 / 10
R2	1.5	41	41	32	45	52	42	13 / 20 / 10
	4.5	41	41	33	46	53	43	13 / 20 / 10
R3	1.5	41	41	30	47	53	41	17 / 23 / 11
	4.5	42	42	32	48	54	42	16 / 22 / 10
R4	1.5	46	46	31	49	50	43	18 / 19 / 12
	4.5	47	47	33	52	51	44	19 / 18 / 11
R5	1.5	58	58	29	49	47	47	20 / 18 / 18
	4.5	59	59	34	51	48	48	17 / 14 / 14
R6	1.5	55	55	32	50	47	47	18 / 15 / 15
	4.5	55	55	34	53	48	48	19 / 14 / 14
R7 ^[4]	1.5	56	56	35	55	45	48	20 / 10 / 13
R8	1.5	56	56	37	53	45	48	16 / 8 / 11

Table 6-1. Change in Sound Levels between the Preferred Alternative and the ‘Do Nothing’ Alternative

POR Location	Modelled Height (m)	Future Daytime (07:00 - 19:00) Background Sound Level Due to Traffic ^[1] (dBA)		Future Daytime (07:00 - 19:00) Sound Level Due to TCEC Ancillary Sources (‘Do Nothing’ Alternative) ^[5] (dBA)	Maximum Future Daytime (07:00 - 19:00) Cumulative Sound Level Due to Ancillary Sources, and Preferred Alternative ^[2] (dBA)			Difference in Sound Levels ^[3] (dBA) Stage 1 / 2 / 3
		2032	2043		1	2	3	
	4.5	57	57	39	55	47	49	16 / 8 / 10
R9	1.5	57	57	38	49	44	48	11 / 6 / 10
	4.5	58	58	39	52	45	49	13 / 6 / 10
R10	1.5	57	57	40	46	43	45	6 / 3 / 5
	4.5	57	57	42	47	45	46	5 / 3 / 4
R11 ^[4]	1.5	48	48	32	38	37	38	6 / 5 / 6
R12	1.5	47	47	32	37	37	37	5 / 5 / 5
	4.5	47	47	32	38	38	39	6 / 6 / 7
R13	1.5	41	41	30	36	36	36	6 / 6 / 6
	4.5	42	42	31	38	38	37	7 / 7 / 6
R14 ^[4]	1.5	40	40	32	43	51	44	11 / 19 / 12

Notes:

[1] As determined in **Table 3-3**.

[2] Cumulative sound levels comprised of the worst-case Preferred Alternative and ancillary sources sound levels.

[3] Difference in sound levels for the Preferred Alternative and the ‘Do Nothing’ Alternative.

[4] POR is a single storey residence. Only the 1.5 m reception point is presented.

[5] The Project stationary sources including flares and RNG Facility along with the leachate treatment facility which will remain in operation for the ‘Do Nothing’ Alternative. The sound levels from sources such as public waste drop-off and generators used for non-emergency purposes were included in the Existing Conditions Report and their contributions are conservatively included in this report although their activities may be reduced or eliminated once landfilling ends.

The results show that there is an increase in the sound levels due to differences in the sound levels between the site only operating the ancillary sources in the ‘Do Nothing’ Alternative compared with active operation in the Preferred Alternative. However, the sound levels due to the ancillary sources are significantly below the traffic background levels, so the change in the cumulative noise impact at receptors in the area will be less than the direct difference in noise impacts between the ‘Do Nothing’ and Preferred Alternative.

The magnitude as discussed before, is dependent on the proximity of the landfilling sources as the Preferred Alternative progresses. The period of greatest magnitude is temporary in nature, as the landfilling in one specific area can only occur for so long before the equipment must move to a new lift or location.

When the Preferred Alternative reaches end of life, and the final cover placed, noise effects from the landfilling will cease and the ‘Do Nothing’ Alternative will become the dominant source of noise.

Table 6-2 shows the change in sound levels along the haul route at a representative POR (R22) at a distance of 40 m due to the haul route traffic. With the exception of the hour of 07:00, the change is qualitatively rated as insignificant.

Table 6-2. Change in Haul Route Sound Levels against the ‘Do Nothing’ Alternative at a Representative POR (R22) at a Distance of 40 m.

Hour	Background Sound Level Due to Non-Site Traffic (dBA)			Sound Level Due to Site Traffic (dBA)	Cumulative Sound Level Background + Site Traffic (dBA)			Change in Sound Levels from Predicted Background (dB)	
	Current	2032	2043	All Years	Current	2032	2043	2032	2043
6:00	50	51	52	50	53	54	54	3	2
7:00	52	54	55	55	57	58	58	4	3
8:00	55	56	57	54	58	58	59	2	2
9:00	54	56	56	53	57	58	58	2	2
10:00	53	54	55	53	56	57	57	3	2
11:00	56	57	58	53	58	58	59	1	1
12:00	54	55	56	53	57	57	58	2	2
13:00	56	57	58	52	57	58	59	1	1
14:00	54	56	56	52	56	57	57	1	1
15:00	54	55	56	48	55	56	57	1	1
16:00	54	55	56	44	54	55	56	0	0

Source: Traffic data obtained from HDR traffic consultant. Volumes used in the analysis is provided in **Appendix A**.

6.3 Advantages and Disadvantages of the Preferred Alternative compared to the ‘Do Nothing’ Alternative

The differences in net effects between the Preferred Alternative and the ‘Do Nothing’ Alternative are used to determine the advantages and disadvantages of the Preferred Alternative. The advantages and disadvantages of the Preferred Alternative are listed in **Table 6-3**.

Table 6-3. Advantages and Disadvantages of the Preferred Alternative compared to the 'Do Nothing' Alternative

Evaluation Criteria	Advantages	Disadvantages
Noise	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Cumulative noise levels for portions of the Preferred Alternative Stages at PORs will be the dominant noise source.
	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • One hour of off-site haul route noise shows a potential for being rated as noticeable with a potential difference of 4 dB for the hour of 07:00, with respect to future background noise levels of the 'Do Nothing' Alternative.

The 'Do Nothing' Alternative has the advantage that noise levels will be less than those of the Preferred Alternative, by acknowledging that there will be no active landfilling equipment contributing additional noise. This is a temporary condition that is influenced by the location of landfilling equipment as there will be periods of the Preferred Alternative that will result in no difference in sound levels when landfilling activities are at distance from PORs, and the future background sound levels will be the dominant source of noise.

As off-site noise level limits are fixed or change with noise from traffic conditions, and landfilling equipment and quantities remain unchanged, sound levels will be consistent with what has already occurred in the past with the application of mitigation.

7 Commitments and Monitoring

To confirm that the commitments related to Noise are carried out, and that the proposed mitigation measures will address the predicted effects for Noise, monitoring is proposed for Stages 1 and 2 of the Preferred Alternative. As shown in Stages 1 and 2 of the effects assessment, elevated off-site noise is driven by proximity to PORs. Additionally, Stages 1 and 2 require the application of mitigation to meet compliance with sound level limits. Monitoring for compliance will be undertaken to confirm that the Project complies with the commitments and mitigation measures identified in the effects assessment.

The commitments associated with Noise are listed in **Section 7.1**. The proposed environmental effects monitoring is provided in **Section 7.2**. Compliance monitoring for Noise is described in **Section 7.3**.

7.1 Noise Commitments

As outlined in **Section 5.1**, some operational mitigations are required to meet Landfilling Guidelines. These include the following:

- Operational berms are required to be constructed before landfilling occurs in Stage 2 along the northern portion of the Preferred Alternative:
 - Operational berms are required to be a minimum of 3 m in height and block line of site from landfilling equipment to PORs as shown in **Figure 5-19**.
- Restricting landfilling equipment types and quantities in specific areas of the Preferred Alternative is required. Restrictions are related to slope redevelopment, and must be in place at all times during the redevelopment (construction) of the side slopes during Stages 1 and 2. The locations and equipment types are detailed in **Figure 5-19**, and follow the general outline:
 - Stage 1 – west side slope redevelopment in proximity to PORs is limited to:
 - One CAT D8R dozer; and
 - One CAT 836G;
 - Stage 1 and 2 – northern side slope redevelopment in proximity to PORs is limited to:
 - One CAT D6R dozer; and
 - Must be used with the 3 m operational berm.

7.2 Environmental Effects Monitoring for Noise

Monitoring plans are developed as part of the detailed effects assessments carried out for the Preferred Alternative to confirm:

- The net effects are as predicted;
- Unanticipated negative effects are addressed; and
- The effectiveness of the proposed mitigation measures.

Table 7-1 contains the environmental effects monitoring for the Preferred Alternative.

7.3 Noise Compliance Monitoring

Compliance monitoring will be undertaken to confirm that the construction, operation, and maintenance of the Project are carried out in accordance with the mitigation measures and commitments identified in the effects assessment.

Compliance monitoring is summarized in **Table 7-1**. The results of compliance monitoring, including details of the effectiveness of mitigation measures and fulfillment of commitments, will be provided to the MECP and as per Environmental Compliance Approval (ECA) conditions.

Table 7-1. Environmental Effects and Compliance Monitoring for the Preferred Alternative

Evaluation Criteria	Potential Effect	Commitment for Mitigation	Commitment for Monitoring	Compliance Monitoring
Noise	Exceeding Landfill Guideline sound level limits.	<ul style="list-style-type: none"> Restricting specific equipment and quantities when redeveloping the side slopes in proximity to residential PORs R2 and R7 during Stages 1 and 2. Operational berms are required before landfilling occurs in the Stage 2 – northeast corner in proximity to POR R2 	<ul style="list-style-type: none"> Yearly (once per year) acoustic audits at critical POR locations R2 and R7. When landfilling operations trigger a mitigation requirement an acoustic audit will be conducted. This audit will meet the yearly requirement. 	<ul style="list-style-type: none"> Compliance monitoring will verify that the Landfilling Noise Guidelines are being met. If levels are found to exceed sound level limits operations will be modified or additional mitigation measures employed.

8 Noise Approvals

In addition to EA approval, the Waste ECA and Air ECA will require amendment to address the updated noise monitoring protocols outlined in **Section 7**. This will require review and approval from the MECP.

9 References

Aercoustics Engineering Limited (AEL)

- 2007 Proposed Expansion of WM Warwick Landfill: Noise Impact Assessment

Henderson Paddon & Associates Limited (HPAL)

- 2008 Development & Operations Report Warwick Landfill Expansion

Ministry of the Environment (MOE)

- 1977a Publication NPC-101: Technical Definitions, originally published as part of the Model Municipal Noise Control By-Law
- 1977b Publication NPC-102: Instrumentation, originally published as part of the Model Municipal Noise Control By-Law
- 1977c Publication NPC-103: Procedures, originally published as part of the Model Municipal Noise Control By-Law
- 1977d Publication NPC-104: Sound Level Adjustments, originally published as part of the Model Municipal Noise Control By-Law
- 1995a Publication NPC-205: Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)
- 1995b Publication NPC-206: Sound Levels Due to Road Traffic
- 1995c Publication NPC-232: Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)
- 1995d Publication NPC-233: Information to be Submitted for Approval of Stationary Sources of Sound
- 1998 Noise Guidelines for Landfill Sites (October 1998 Draft)
- 2012 Landfill Standards: A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfilling Sites
- 2013 Publication NPC-300: Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning

RWDI

- 2017 Twin Creeks Landfill Site: Noise Evaluation | Proposed Increase To Annual Fill Rate
- 2023a Noise Assessment for the Twin Creeks Environmental Centre Renewable Natural Gas Facility
- 2023b Volume 2C of the 2022 Compliance Monitoring Report
- 2026 Noise Existing Conditions Report - Twin Creeks Environmental Centre Landfill Optimization Project Environmental Assessment

Waste Management of Canada Corporation (WM)

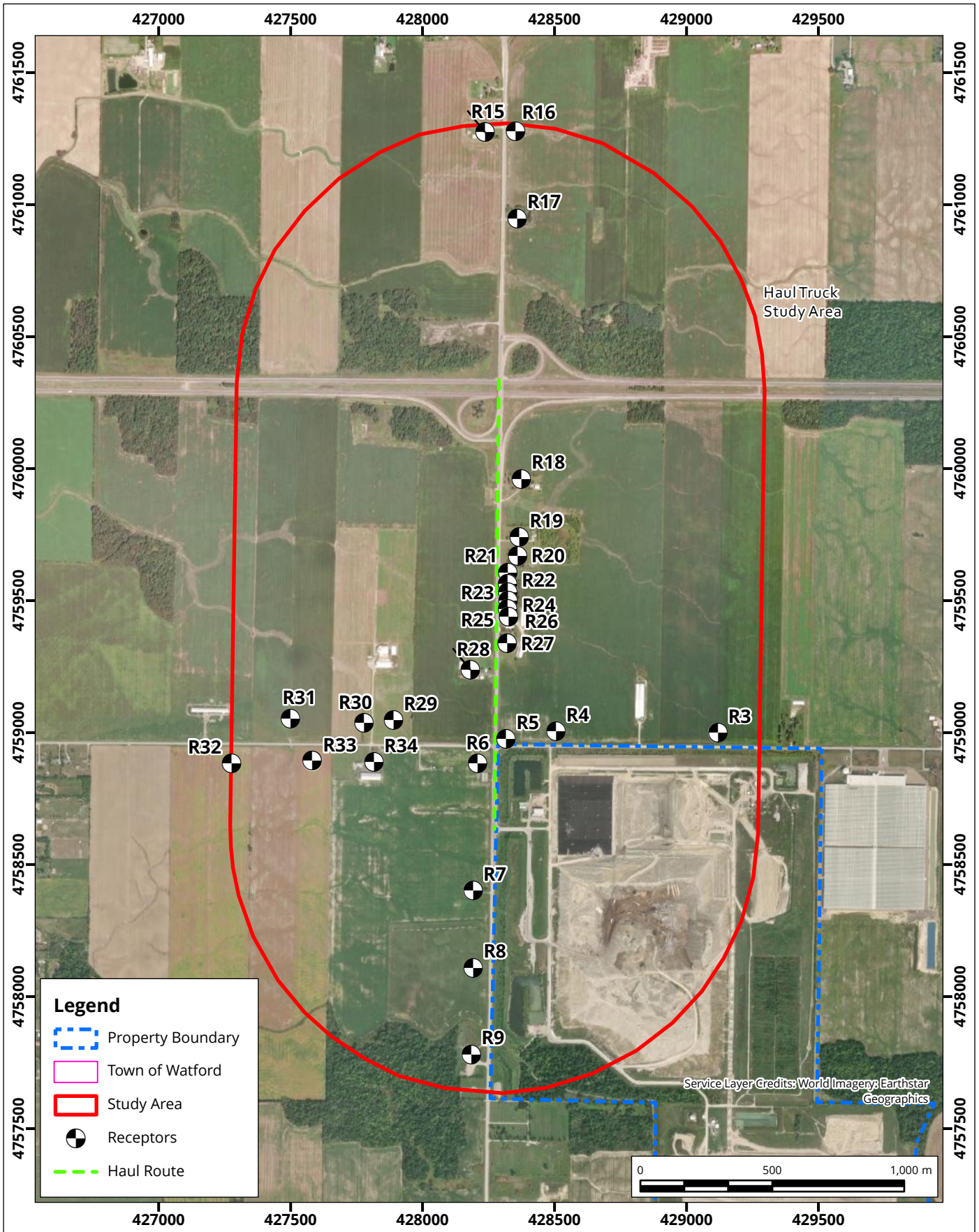
- 2022 Terms of Reference: Twin Creeks Environmental Centre Landfill Optimization Project Environmental Assessment

WSP

- 2023 Landfill Base Preparation Cell 6B

A

Traffic Data and Sample Calculations



Haul Route Receptor Locations



Drawn by: ACCL	Figure: A1
Approx. Scale: 1:20,000	
Date Revised: Jul 10, 2025	

Map Projection: NAD 1983 UTM Zone 17N
 Twin Creeks Landfill Optimization - Watford, Ontario

Project #: 2101750





ORNAMENT

Ontario Road Noise Analysis Method for ENvironment and Transportation

version 2.09

Job No. 2101750
Job Name Twin Creeks

Scenario 2019 Background Traffic

Notes:

1. Topography Type "A" means Flat or Gently Sloping (ORNAMENT types 1, 2, 6 and 7)

ROAD CHARACTERISTICS

SOURCE-RECEIVER-BARRIER-TOPOGRAPHY CHARACTERISTICS

ID	Description	Time Period	Number of Vehicles			Speed (km/h)	Road Gradient (%)	Two Way? (y/n)	Pavement Type	Road Viewable Angle		Source-Receiver Distance (m)	Ground Type (Hard/S oft)	Topo- graphy Type	Source Height (m)	Road Elevation (m asl)	Receptor Height (m)	Receptor Elevation (m asl)	Adjustment (dB)	Reason For Adjustment	Total Segment L _{eq} (dBA)
			Autos	Medium	Heavy					θ ₁	θ ₂										
2019 Background Traffic Haul Route North of TCEC (0:00)	R3, 843m away	4	11	0	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			16
2019 Background Traffic Haul Route North of TCEC (1:00)	R3, 843m away	5	4	0	2	80	0	y	1	-61	23	842.6	Soft	A	2.4	0.0	1.5	0.0			24
2019 Background Traffic Haul Route North of TCEC (2:00)	R3, 843m away	5	7	1	2	80	0	y	1	-61	23	842.6	Soft	A	2.1	0.0	1.5	0.0			25
2019 Background Traffic Haul Route North of TCEC (3:00)	R3, 843m away	4	10	2	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			21
2019 Background Traffic Haul Route North of TCEC (4:00)	R3, 843m away	4	10	2	2	80	0	y	1	-61	23	842.6	Soft	A	1.9	0.0	1.5	0.0			25
2019 Background Traffic Haul Route North of TCEC (5:00)	R3, 843m away	1	72	4	3	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			29
2019 Background Traffic Haul Route North of TCEC (6:00)	R3, 843m away	1	173	2	10	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			32
2019 Background Traffic Haul Route North of TCEC (7:00)	R3, 843m away	1	269	9	16	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			35
2019 Background Traffic Haul Route North of TCEC (8:00)	R3, 843m away	1	247	25	32	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			37
2019 Background Traffic Haul Route North of TCEC (9:00)	R3, 843m away	1	230	10	31	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			37
2019 Background Traffic Haul Route North of TCEC (10:00)	R3, 843m away	1	216	11	21	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			35
2019 Background Traffic Haul Route North of TCEC (11:00)	R3, 843m away	1	240	9	49	80	0	y	1	-61	23	842.6	Soft	A	2.0	0.0	1.5	0.0			38
2019 Background Traffic Haul Route North of TCEC (12:00)	R3, 843m away	1	208	7	26	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			36
2019 Background Traffic Haul Route North of TCEC (13:00)	R3, 843m away	1	223	12	50	80	0	y	1	-61	23	842.6	Soft	A	2.0	0.0	1.5	0.0			38
2019 Background Traffic Haul Route North of TCEC (14:00)	R3, 843m away	1	238	9	31	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			37
2019 Background Traffic Haul Route North of TCEC (15:00)	R3, 843m away	1	263	15	27	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			36
2019 Background Traffic Haul Route North of TCEC (16:00)	R3, 843m away	1	311	16	26	80	0	y	1	-61	23	842.6	Soft	A	1.6	0.0	1.5	0.0			37
2019 Background Traffic Haul Route North of TCEC (17:00)	R3, 843m away	1	269	6	19	80	0	y	1	-61	23	842.6	Soft	A	1.6	0.0	1.5	0.0			35
2019 Background Traffic Haul Route North of TCEC (18:00)	R3, 843m away	1	177	2	10	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			32
2019 Background Traffic Haul Route North of TCEC (19:00)	R3, 843m away	1	115	1	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			26
2019 Background Traffic Haul Route North of TCEC (20:00)	R3, 843m away	1	79	0	4	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			28
2019 Background Traffic Haul Route North of TCEC (21:00)	R3, 843m away	1	58	0	3	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			27
2019 Background Traffic Haul Route North of TCEC (22:00)	R3, 843m away	1	54	0	2	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			26
2019 Background Traffic Haul Route North of TCEC (23:00)	R3, 843m away	4	28	2	3	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			27
2019 Background Traffic Haul Route North of TCEC (0:00)	R4, 229m away	4	11	0	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			27
2019 Background Traffic Haul Route North of TCEC (1:00)	R4, 229m away	4	4	0	2	80	0	y	1	-82	58	228.8	Soft	A	2.4	0.0	1.5	0.0			35
2019 Background Traffic Haul Route North of TCEC (2:00)	R4, 229m away	4	7	1	2	80	0	y	1	-82	58	228.8	Soft	A	2.1	0.0	1.5	0.0			36
2019 Background Traffic Haul Route North of TCEC (3:00)	R4, 229m away	4	10	2	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			32
2019 Background Traffic Haul Route North of TCEC (4:00)	R4, 229m away	4	10	2	2	80	0	y	1	-82	58	228.8	Soft	A	1.9	0.0	1.5	0.0			36
2019 Background Traffic Haul Route North of TCEC (5:00)	R4, 229m away	1	72	4	3	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			40
2019 Background Traffic Haul Route North of TCEC (6:00)	R4, 229m away	1	173	2	10	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			43
2019 Background Traffic Haul Route North of TCEC (7:00)	R4, 229m away	1	269	9	16	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			46
2019 Background Traffic Haul Route North of TCEC (8:00)	R4, 229m away	1	247	25	32	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			48
2019 Background Traffic Haul Route North of TCEC (9:00)	R4, 229m away	1	230	10	31	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			47
2019 Background Traffic Haul Route North of TCEC (10:00)	R4, 229m away	1	216	11	21	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			47
2019 Background Traffic Haul Route North of TCEC (11:00)	R4, 229m away	1	240	9	49	80	0	y	1	-82	58	228.8	Soft	A	2.0	0.0	1.5	0.0			49
2019 Background Traffic Haul Route North of TCEC (12:00)	R4, 229m away	1	208	7	26	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			47
2019 Background Traffic Haul Route North of TCEC (13:00)	R4, 229m away	1	223	12	50	80	0	y	1	-82	58	228.8	Soft	A	2.0	0.0	1.5	0.0			50
2019 Background Traffic Haul Route North of TCEC (14:00)	R4, 229m away	1	238	9	31	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			48
2019 Background Traffic Haul Route North of TCEC (15:00)	R4, 229m away	1	263	15	27	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			48
2019 Background Traffic Haul Route North of TCEC (16:00)	R4, 229m away	1	311	16	26	80	0	y	1	-82	58	228.8	Soft	A	1.6	0.0	1.5	0.0			48
2019 Background Traffic Haul Route North of TCEC (17:00)	R4, 229m away	1	269	6	19	80	0	y	1	-82	58	228.8	Soft	A	1.6	0.0	1.5	0.0			46
2019 Background Traffic Haul Route North of TCEC (18:00)	R4, 229m away	1	177	2	10	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			44
2019 Background Traffic Haul Route North of TCEC (19:00)	R4, 229m away	1	115	1	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			37
2019 Background Traffic Haul Route North of TCEC (20:00)	R4, 229m away	1	79	0	4	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			40
2019 Background Traffic Haul Route North of TCEC (21:00)	R4, 229m away	1	58	0	3	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			39
2019 Background Traffic Haul Route North of TCEC (22:00)	R4, 229m away	1	54	0	2	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			37
2019 Background Traffic Haul Route North of TCEC (23:00)	R4, 229m away	4	28	2	3	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			38
2019 Background Traffic Haul Route North of TCEC (0:00)	R5, 40m away	4	11	0	0	80	0	y	1	-89	83	40.2	Soft	A	0.1	0.0	1.5	0.0			40
2019 Background Traffic Haul Route North of TCEC (1:00)	R5, 40m away	4	4	0	2	80	0	y	1	-89	83	40.2	Soft	A	2.4	0.0	1.5	0.0			48
2019 Background Traffic Haul Route North of TCEC (2:00)	R5, 40m away	4	7	1	2	80	0	y	1	-89	83	40.2	Soft	A	2.1	0.0	1.5	0.0			49
2019 Background Traffic Haul Route North of TCEC (3:00)	R5, 40m away	4	10	2	0	80	0	y	1	-89	83	40.2	Soft	A	0.1	0.0	1.5	0.0			45
2019 Background Traffic Haul Route North of TCEC (4:00)	R5, 40m away	4	10	2	2	80	0	y	1	-89	83	40.2	Soft	A	1.9	0.0	1.5	0.0			49
2019 Background Traffic Haul Route North of TCEC (5:00)	R5, 40m away	1	72	4	3	80	0	y	1	-89	83	40.2	Soft	A	1.4	0.0	1.5	0.0			53
2019 Background Traffic Haul Route North of TCEC (6:00)	R5, 40m away	1	173	2	10	80	0	y	1	-89	83	40.2	Soft	A	1.5	0.0	1.5	0.0			56
2019 Background Traffic Haul Route North of TCEC (7:00)	R5, 40m away	1	269	9	16	80	0	y	1	-89	83	40.2	Soft	A	1.5	0.0	1.5	0.0			59
2019 Background Traffic Haul Route North of TCEC (8:00)	R5, 40m away	1	247	25	32	80	0	y	1	-89	83	40.2	Soft	A	1.8	0.0	1.5	0.0			61
2019 Background Traffic Haul Route North of TCEC (9:00)	R5, 40m away	1	230	10	31	80	0	y	1	-89	83	40.2	Soft	A	1.8	0.0	1.5	0.0			61
2019 Background Traffic Haul Route North of TCEC (10:00)	R5, 40m away	1	216	11	21	80	0	y	1	-89	83	40.2	Soft	A	1.7	0.0	1.5	0.0			59
2019 Background Traffic Haul Route North of TCEC (11:00)	R5, 40m away	1	240	9	49	80	0	y	1	-89	83	40.2	Soft	A	2.0	0.0	1.5	0.0			62

2019 Background Traffic Haul Route North of TCEC (17:00)	R33, 693m away	1	269	6	19	80	0	y	1	-20	66	693.4	Soft	A	1.6	0.0	1.5	0.0						36
2019 Background Traffic Haul Route North of TCEC (18:00)	R33, 693m away	1	177	2	10	80	0	y	1	-20	66	693.4	Soft	A	1.5	0.0	1.5	0.0						34
2019 Background Traffic Haul Route North of TCEC (19:00)	R33, 693m away	1	115	1	0	80	0	y	1	-20	66	693.4	Soft	A	0.1	0.0	1.5	0.0						28
2019 Background Traffic Haul Route North of TCEC (20:00)	R33, 693m away	1	79	0	4	80	0	y	1	-20	66	693.4	Soft	A	1.5	0.0	1.5	0.0						30
2019 Background Traffic Haul Route North of TCEC (21:00)	R33, 693m away	1	58	0	3	80	0	y	1	-20	66	693.4	Soft	A	1.5	0.0	1.5	0.0						29
2019 Background Traffic Haul Route North of TCEC (22:00)	R33, 693m away	1	54	0	2	80	0	y	1	-20	66	693.4	Soft	A	1.4	0.0	1.5	0.0						27
2019 Background Traffic Haul Route North of TCEC (23:00)	R33, 693m away	4	28	2	3	80	0	y	1	-20	66	693.4	Soft	A	1.7	0.0	1.5	0.0						28
2019 Background Traffic Haul Route North of TCEC (0:00)	R34, 459m away	4	11	0	0	80	0	y	1	-29	73	459.4	Soft	A	0.1	0.0	1.5	0.0						21
2019 Background Traffic Haul Route North of TCEC (1:00)	R34, 459m away	4	4	0	2	80	0	y	1	-29	73	459.4	Soft	A	2.4	0.0	1.5	0.0						29
2019 Background Traffic Haul Route North of TCEC (2:00)	R34, 459m away	4	7	1	2	80	0	y	1	-29	73	459.4	Soft	A	2.1	0.0	1.5	0.0						30
2019 Background Traffic Haul Route North of TCEC (3:00)	R34, 459m away	4	10	2	0	80	0	y	1	-29	73	459.4	Soft	A	0.1	0.0	1.5	0.0						25
2019 Background Traffic Haul Route North of TCEC (4:00)	R34, 459m away	4	10	2	2	80	0	y	1	-29	73	459.4	Soft	A	1.9	0.0	1.5	0.0						30
2019 Background Traffic Haul Route North of TCEC (5:00)	R34, 459m away	1	72	4	3	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0						33
2019 Background Traffic Haul Route North of TCEC (6:00)	R34, 459m away	1	173	2	10	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0						37
2019 Background Traffic Haul Route North of TCEC (7:00)	R34, 459m away	1	269	9	16	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0						40
2019 Background Traffic Haul Route North of TCEC (8:00)	R34, 459m away	1	247	25	32	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0						42
2019 Background Traffic Haul Route North of TCEC (9:00)	R34, 459m away	1	230	10	31	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0						42
2019 Background Traffic Haul Route North of TCEC (10:00)	R34, 459m away	1	216	11	21	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0						40
2019 Background Traffic Haul Route North of TCEC (11:00)	R34, 459m away	1	240	9	49	80	0	y	1	-29	73	459.4	Soft	A	2.0	0.0	1.5	0.0						43
2019 Background Traffic Haul Route North of TCEC (12:00)	R34, 459m away	1	208	7	26	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0						41
2019 Background Traffic Haul Route North of TCEC (13:00)	R34, 459m away	1	223	12	50	80	0	y	1	-29	73	459.4	Soft	A	2.0	0.0	1.5	0.0						43
2019 Background Traffic Haul Route North of TCEC (14:00)	R34, 459m away	1	238	9	31	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0						42
2019 Background Traffic Haul Route North of TCEC (15:00)	R34, 459m away	1	263	15	27	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0						41
2019 Background Traffic Haul Route North of TCEC (16:00)	R34, 459m away	1	311	16	26	80	0	y	1	-29	73	459.4	Soft	A	1.6	0.0	1.5	0.0						41
2019 Background Traffic Haul Route North of TCEC (17:00)	R34, 459m away	1	269	6	19	80	0	y	1	-29	73	459.4	Soft	A	1.6	0.0	1.5	0.0						40
2019 Background Traffic Haul Route North of TCEC (18:00)	R34, 459m away	1	177	2	10	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0						37
2019 Background Traffic Haul Route North of TCEC (19:00)	R34, 459m away	1	115	1	0	80	0	y	1	-29	73	459.4	Soft	A	0.1	0.0	1.5	0.0						31
2019 Background Traffic Haul Route North of TCEC (20:00)	R34, 459m away	1	79	0	4	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0						33
2019 Background Traffic Haul Route North of TCEC (21:00)	R34, 459m away	1	58	0	3	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0						32
2019 Background Traffic Haul Route North of TCEC (22:00)	R34, 459m away	1	54	0	2	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0						31
2019 Background Traffic Haul Route North of TCEC (23:00)	R34, 459m away	4	28	2	3	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0						32



ORNAMENT

Ontario Road Noise Analysis Method for ENvironment and Transportation

version 2.09

Job No. 2101750
Job Name Twin Creeks

Scenario 2032 Background Traffic

Notes:

1. Topography Type "A" means Flat or Gently Sloping (ORNAMENT types 1, 2, 6 and 7)

ROAD CHARACTERISTICS

SOURCE-RECEIVER-BARRIER-TOPOGRAPHY CHARACTERISTICS

ID	Description	Time Period	Number of Vehicles			Speed (km/h)	Road Gradient (%)	Two Way? (y/n)	Pavement Type	Road Viewable Angle		Source-Receiver Distance (m)	Ground Type (Hard/Soft)	Topography Type	Source Height (m)	Road Elevation (m asl)	Receptor Height (m)	Receptor Elevation (m asl)	Adjustment (dB)	Reason For Adjustment	Total Segment L _{eq} (dBA)
			Autos	Medium	Heavy					θ ₁	θ ₂										
2032 Background Traffic Haul Route North of TCEC (0:00)	R3, 843m away	4	18	0	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			18
2032 Background Traffic Haul Route North of TCEC (1:00)	R3, 843m away	4	8	0	3	80	0	y	1	-61	23	842.6	Soft	A	2.3	0.0	1.5	0.0			26
2032 Background Traffic Haul Route North of TCEC (2:00)	R3, 843m away	4	10	1	3	80	0	y	1	-61	23	842.6	Soft	A	2.2	0.0	1.5	0.0			26
2032 Background Traffic Haul Route North of TCEC (3:00)	R3, 843m away	4	16	3	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			22
2032 Background Traffic Haul Route North of TCEC (4:00)	R3, 843m away	4	19	3	2	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			26
2032 Background Traffic Haul Route North of TCEC (5:00)	R3, 843m away	1	107	6	4	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			30
2032 Background Traffic Haul Route North of TCEC (6:00)	R3, 843m away	1	258	3	13	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			34
2032 Background Traffic Haul Route North of TCEC (7:00)	R3, 843m away	1	419	11	21	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			36
2032 Background Traffic Haul Route North of TCEC (8:00)	R3, 843m away	1	373	33	41	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			39
2032 Background Traffic Haul Route North of TCEC (9:00)	R3, 843m away	1	334	13	40	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			38
2032 Background Traffic Haul Route North of TCEC (10:00)	R3, 843m away	1	318	14	27	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			37
2032 Background Traffic Haul Route North of TCEC (11:00)	R3, 843m away	1	350	12	63	80	0	y	1	-61	23	842.6	Soft	A	2.0	0.0	1.5	0.0			39
2032 Background Traffic Haul Route North of TCEC (12:00)	R3, 843m away	1	300	9	34	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			37
2032 Background Traffic Haul Route North of TCEC (13:00)	R3, 843m away	1	322	16	65	80	0	y	1	-61	23	842.6	Soft	A	2.0	0.0	1.5	0.0			40
2032 Background Traffic Haul Route North of TCEC (14:00)	R3, 843m away	1	345	12	40	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			38
2032 Background Traffic Haul Route North of TCEC (15:00)	R3, 843m away	1	381	20	35	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			38
2032 Background Traffic Haul Route North of TCEC (16:00)	R3, 843m away	1	462	20	33	80	0	y	1	-61	23	842.6	Soft	A	1.6	0.0	1.5	0.0			38
2032 Background Traffic Haul Route North of TCEC (17:00)	R3, 843m away	1	398	8	25	80	0	y	1	-61	23	842.6	Soft	A	1.6	0.0	1.5	0.0			36
2032 Background Traffic Haul Route North of TCEC (18:00)	R3, 843m away	1	270	2	13	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			34
2032 Background Traffic Haul Route North of TCEC (19:00)	R3, 843m away	1	179	1	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			28
2032 Background Traffic Haul Route North of TCEC (20:00)	R3, 843m away	1	129	0	5	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			30
2032 Background Traffic Haul Route North of TCEC (21:00)	R3, 843m away	1	95	0	4	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			29
2032 Background Traffic Haul Route North of TCEC (22:00)	R3, 843m away	1	79	0	3	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			28
2032 Background Traffic Haul Route North of TCEC (23:00)	R3, 843m away	1	42	3	4	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			28
2032 Background Traffic Haul Route North of TCEC (0:00)	R4, 229m away	4	18	0	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			29
2032 Background Traffic Haul Route North of TCEC (1:00)	R4, 229m away	4	8	0	3	80	0	y	1	-82	58	228.8	Soft	A	2.3	0.0	1.5	0.0			37
2032 Background Traffic Haul Route North of TCEC (2:00)	R4, 229m away	4	10	1	3	80	0	y	1	-82	58	228.8	Soft	A	2.2	0.0	1.5	0.0			37
2032 Background Traffic Haul Route North of TCEC (3:00)	R4, 229m away	4	16	3	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			33
2032 Background Traffic Haul Route North of TCEC (4:00)	R4, 229m away	4	19	3	2	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			37
2032 Background Traffic Haul Route North of TCEC (5:00)	R4, 229m away	1	107	6	4	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			41
2032 Background Traffic Haul Route North of TCEC (6:00)	R4, 229m away	1	258	3	13	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			45
2032 Background Traffic Haul Route North of TCEC (7:00)	R4, 229m away	1	419	11	21	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			47
2032 Background Traffic Haul Route North of TCEC (8:00)	R4, 229m away	1	373	33	41	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			50
2032 Background Traffic Haul Route North of TCEC (9:00)	R4, 229m away	1	334	13	40	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			49
2032 Background Traffic Haul Route North of TCEC (10:00)	R4, 229m away	1	318	14	27	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			48
2032 Background Traffic Haul Route North of TCEC (11:00)	R4, 229m away	1	350	12	63	80	0	y	1	-82	58	228.8	Soft	A	2.0	0.0	1.5	0.0			51
2032 Background Traffic Haul Route North of TCEC (12:00)	R4, 229m away	1	300	9	34	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			48
2032 Background Traffic Haul Route North of TCEC (13:00)	R4, 229m away	1	322	16	65	80	0	y	1	-82	58	228.8	Soft	A	2.0	0.0	1.5	0.0			51
2032 Background Traffic Haul Route North of TCEC (14:00)	R4, 229m away	1	345	12	40	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			49
2032 Background Traffic Haul Route North of TCEC (15:00)	R4, 229m away	1	381	20	35	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			49
2032 Background Traffic Haul Route North of TCEC (16:00)	R4, 229m away	1	462	20	33	80	0	y	1	-82	58	228.8	Soft	A	1.6	0.0	1.5	0.0			49
2032 Background Traffic Haul Route North of TCEC (17:00)	R4, 229m away	1	398	8	25	80	0	y	1	-82	58	228.8	Soft	A	1.6	0.0	1.5	0.0			47
2032 Background Traffic Haul Route North of TCEC (18:00)	R4, 229m away	1	270	2	13	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			45
2032 Background Traffic Haul Route North of TCEC (19:00)	R4, 229m away	1	179	1	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			39
2032 Background Traffic Haul Route North of TCEC (20:00)	R4, 229m away	1	129	0	5	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			41
2032 Background Traffic Haul Route North of TCEC (21:00)	R4, 229m away	1	95	0	4	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			41
2032 Background Traffic Haul Route North of TCEC (22:00)	R4, 229m away	1	79	0	3	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			39
2032 Background Traffic Haul Route North of TCEC (23:00)	R4, 229m away	1	42	3	4	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			40
2032 Background Traffic Haul Route North of TCEC (0:00)	R5, 40m away	4	18	0	0	80	0	y	1	-89	83	40.2	Soft	A	0.1	0.0	1.5	0.0			42
2032 Background Traffic Haul Route North of TCEC (1:00)	R5, 40m away	4	8	0	3	80	0	y	1	-89	83	40.2	Soft	A	2.3	0.0	1.5	0.0			50
2032 Background Traffic Haul Route North of TCEC (2:00)	R5, 40m away	4	10	1	3	80	0	y	1	-89	83	40.2	Soft	A	2.2	0.0	1.5	0.0			50
2032 Background Traffic Haul Route North of TCEC (3:00)	R5, 40m away	4	16	3	0	80	0	y	1	-89	83	40.2	Soft	A	0.1	0.0	1.5	0.0			46
2032 Background Traffic Haul Route North of TCEC (4:00)	R5, 40m away	4	19	3	2	80	0	y	1	-89	83	40.2	Soft	A	1.7	0.0	1.5	0.0			50
2032 Background Traffic Haul Route North of TCEC (5:00)	R5, 40m away	1	107	6	4	80	0	y	1	-89	83	40.2	Soft	A	1.4	0.0	1.5	0.0			54
2032 Background Traffic Haul Route North of TCEC (6:00)	R5, 40m away	1	258	3	13	80	0	y	1	-89	83	40.2	Soft	A	1.5	0.0	1.5	0.0			58
2032 Background Traffic Haul Route North of TCEC (7:00)	R5, 40m away	1	419	11	21	80	0	y	1	-89	83	40.2	Soft	A	1.5	0.0	1.5	0.0			60
2032 Background Traffic Haul Route North of TCEC (8:00)	R5, 40m away	1	373	33	41	80	0	y	1	-89	83	40.2	Soft	A	1.7	0.0	1.5	0.0			63
2032 Background Traffic Haul Route North of TCEC (9:00)	R5, 40m away	1	334	13	40	80	0	y	1	-89	83	40.2	Soft	A	1.8	0.0	1.5	0.0			62
2032 Background Traffic Haul Route North of TCEC (10:00)	R5, 40m away	1	318	14	27	80	0	y	1	-89	83	40.2	Soft	A	1.7	0.0	1.5	0.0			61
2032 Background Traffic Haul Route North of TCEC (11:00)	R5, 40m away	1	350	12	63	80	0	y	1	-89	83	40.2	Soft	A	2.0	0.0	1.5	0.0			63
2032 Background Traffic Haul Route North of TCEC (12:00)	R5, 40m away	1	300	9	34	80	0	y	1	-89	83	40.2	Soft	A	1.8	0.0	1.5	0.0			61
2032 Background Traffic Haul Route North of TCEC (13:00)	R5, 40m away	1	322	16	65	80	0	y	1	-89	83	40.2	Soft	A	2.0	0.0	1.5	0.0			64

2032 Background Traffic Haul Route North of TCEC (2:00)	R34, 459m away	4	10	1	3	80	0	y	1	-29	73	459.4	Soft	A	2.2	0.0	1.5	0.0			31
2032 Background Traffic Haul Route North of TCEC (3:00)	R34, 459m away	4	16	3	0	80	0	y	1	-29	73	459.4	Soft	A	0.1	0.0	1.5	0.0			27
2032 Background Traffic Haul Route North of TCEC (4:00)	R34, 459m away	4	19	3	2	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0			31
2032 Background Traffic Haul Route North of TCEC (5:00)	R34, 459m away	1	107	6	4	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0			35
2032 Background Traffic Haul Route North of TCEC (6:00)	R34, 459m away	1	258	3	13	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0			39
2032 Background Traffic Haul Route North of TCEC (7:00)	R34, 459m away	1	419	11	21	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0			41
2032 Background Traffic Haul Route North of TCEC (8:00)	R34, 459m away	1	373	33	41	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0			43
2032 Background Traffic Haul Route North of TCEC (9:00)	R34, 459m away	1	334	13	40	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0			43
2032 Background Traffic Haul Route North of TCEC (10:00)	R34, 459m away	1	318	14	27	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0			42
2032 Background Traffic Haul Route North of TCEC (11:00)	R34, 459m away	1	350	12	63	80	0	y	1	-29	73	459.4	Soft	A	2.0	0.0	1.5	0.0			44
2032 Background Traffic Haul Route North of TCEC (12:00)	R34, 459m away	1	300	9	34	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0			42
2032 Background Traffic Haul Route North of TCEC (13:00)	R34, 459m away	1	322	16	65	80	0	y	1	-29	73	459.4	Soft	A	2.0	0.0	1.5	0.0			45
2032 Background Traffic Haul Route North of TCEC (14:00)	R34, 459m away	1	345	12	40	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0			43
2032 Background Traffic Haul Route North of TCEC (15:00)	R34, 459m away	1	381	20	35	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0			43
2032 Background Traffic Haul Route North of TCEC (16:00)	R34, 459m away	1	462	20	33	80	0	y	1	-29	73	459.4	Soft	A	1.6	0.0	1.5	0.0			43
2032 Background Traffic Haul Route North of TCEC (17:00)	R34, 459m away	1	398	8	25	80	0	y	1	-29	73	459.4	Soft	A	1.6	0.0	1.5	0.0			41
2032 Background Traffic Haul Route North of TCEC (18:00)	R34, 459m away	1	270	2	13	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0			39
2032 Background Traffic Haul Route North of TCEC (19:00)	R34, 459m away	1	179	1	0	80	0	y	1	-29	73	459.4	Soft	A	0.1	0.0	1.5	0.0			33
2032 Background Traffic Haul Route North of TCEC (20:00)	R34, 459m away	1	129	0	5	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0			35
2032 Background Traffic Haul Route North of TCEC (21:00)	R34, 459m away	1	95	0	4	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0			34
2032 Background Traffic Haul Route North of TCEC (22:00)	R34, 459m away	1	79	0	3	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0			33
2032 Background Traffic Haul Route North of TCEC (23:00)	R34, 459m away	1	42	3	4	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0			33

**ORNAMENT**

Ontario Road Noise Analysis Method for ENvironment and Transportation

version 2.09

Job No. 2101750
Job Name Twin Creeks

Scenario 2043 background traffic

Notes:

1. Topography Type "A" means Flat or Gently Sloping (ORNAMENT types 1, 2, 6 and 7)

ROAD CHARACTERISTICS**SOURCE-RECEIVER-BARRIER-TOPOGRAPHY CHARACTERISTICS**

ID	Description	Time Period	Number of Vehicles			Speed (km/h)	Road Gradient (%)	Two Way? (y/n)	Pavement Type	Road Viewable Angle		Source-Receiver Distance (m)	Ground Type (Hard/Soft)	Topography Type	Source Height (m)	Road Elevation (m asl)	Receptor Height (m)	Receptor Elevation (m asl)	Adjustment (dB)	Reason For Adjustment	Total Segment L _{eq} (dBA)
			Autos	Medium	Heavy					θ ₁	θ ₂										
2043 background traffic Haul Route North of TCEC (0:00)	R3, 843m away	4	22	0	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			19
2043 background traffic Haul Route North of TCEC (1:00)	R3, 843m away	4	10	0	3	80	0	y	1	-61	23	842.6	Soft	A	2.2	0.0	1.5	0.0			26
2043 background traffic Haul Route North of TCEC (2:00)	R3, 843m away	4	13	2	3	80	0	y	1	-61	23	842.6	Soft	A	2.0	0.0	1.5	0.0			27
2043 background traffic Haul Route North of TCEC (3:00)	R3, 843m away	4	19	3	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			23
2043 background traffic Haul Route North of TCEC (4:00)	R3, 843m away	4	22	3	4	80	0	y	1	-61	23	842.6	Soft	A	1.9	0.0	1.5	0.0			28
2043 background traffic Haul Route North of TCEC (5:00)	R3, 843m away	1	129	6	5	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			31
2043 background traffic Haul Route North of TCEC (6:00)	R3, 843m away	1	313	3	16	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			35
2043 background traffic Haul Route North of TCEC (7:00)	R3, 843m away	1	504	14	26	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			37
2043 background traffic Haul Route North of TCEC (8:00)	R3, 843m away	1	450	40	52	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			39
2043 background traffic Haul Route North of TCEC (9:00)	R3, 843m away	1	406	16	50	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			39
2043 background traffic Haul Route North of TCEC (10:00)	R3, 843m away	1	386	17	34	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			38
2043 background traffic Haul Route North of TCEC (11:00)	R3, 843m away	1	425	15	78	80	0	y	1	-61	23	842.6	Soft	A	2.0	0.0	1.5	0.0			40
2043 background traffic Haul Route North of TCEC (12:00)	R3, 843m away	1	366	11	42	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			38
2043 background traffic Haul Route North of TCEC (13:00)	R3, 843m away	1	392	19	81	80	0	y	1	-61	23	842.6	Soft	A	2.0	0.0	1.5	0.0			41
2043 background traffic Haul Route North of TCEC (14:00)	R3, 843m away	1	420	15	50	80	0	y	1	-61	23	842.6	Soft	A	1.8	0.0	1.5	0.0			39
2043 background traffic Haul Route North of TCEC (15:00)	R3, 843m away	1	464	24	43	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			39
2043 background traffic Haul Route North of TCEC (16:00)	R3, 843m away	1	560	26	42	80	0	y	1	-61	23	842.6	Soft	A	1.6	0.0	1.5	0.0			39
2043 background traffic Haul Route North of TCEC (17:00)	R3, 843m away	1	482	9	30	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			37
2043 background traffic Haul Route North of TCEC (18:00)	R3, 843m away	1	326	4	16	80	0	y	1	-61	23	842.6	Soft	A	1.5	0.0	1.5	0.0			35
2043 background traffic Haul Route North of TCEC (19:00)	R3, 843m away	1	215	2	0	80	0	y	1	-61	23	842.6	Soft	A	0.1	0.0	1.5	0.0			29
2043 background traffic Haul Route North of TCEC (20:00)	R3, 843m away	1	154	0	7	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			31
2043 background traffic Haul Route North of TCEC (21:00)	R3, 843m away	1	113	0	5	80	0	y	1	-61	23	842.6	Soft	A	1.4	0.0	1.5	0.0			30
2043 background traffic Haul Route North of TCEC (22:00)	R3, 843m away	1	96	0	3	80	0	y	1	-61	23	842.6	Soft	A	1.3	0.0	1.5	0.0			28
2043 background traffic Haul Route North of TCEC (23:00)	R3, 843m away	1	51	3	5	80	0	y	1	-61	23	842.6	Soft	A	1.7	0.0	1.5	0.0			29
2043 background traffic Haul Route North of TCEC (0:00)	R4, 229m away	4	22	0	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			30
2043 background traffic Haul Route North of TCEC (1:00)	R4, 229m away	4	10	0	3	80	0	y	1	-82	58	228.8	Soft	A	2.2	0.0	1.5	0.0			37
2043 background traffic Haul Route North of TCEC (2:00)	R4, 229m away	4	13	2	3	80	0	y	1	-82	58	228.8	Soft	A	2.0	0.0	1.5	0.0			38
2043 background traffic Haul Route North of TCEC (3:00)	R4, 229m away	4	19	3	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			34
2043 background traffic Haul Route North of TCEC (4:00)	R4, 229m away	4	22	3	4	80	0	y	1	-82	58	228.8	Soft	A	1.9	0.0	1.5	0.0			39
2043 background traffic Haul Route North of TCEC (5:00)	R4, 229m away	1	129	6	5	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			42
2043 background traffic Haul Route North of TCEC (6:00)	R4, 229m away	1	313	3	16	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			46
2043 background traffic Haul Route North of TCEC (7:00)	R4, 229m away	1	504	14	26	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			48
2043 background traffic Haul Route North of TCEC (8:00)	R4, 229m away	1	450	40	52	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			51
2043 background traffic Haul Route North of TCEC (9:00)	R4, 229m away	1	406	16	50	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			50
2043 background traffic Haul Route North of TCEC (10:00)	R4, 229m away	1	386	17	34	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			49
2043 background traffic Haul Route North of TCEC (11:00)	R4, 229m away	1	425	15	78	80	0	y	1	-82	58	228.8	Soft	A	2.0	0.0	1.5	0.0			51
2043 background traffic Haul Route North of TCEC (12:00)	R4, 229m away	1	366	11	42	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			49
2043 background traffic Haul Route North of TCEC (13:00)	R4, 229m away	1	392	19	81	80	0	y	1	-82	58	228.8	Soft	A	2.0	0.0	1.5	0.0			52
2043 background traffic Haul Route North of TCEC (14:00)	R4, 229m away	1	420	15	50	80	0	y	1	-82	58	228.8	Soft	A	1.8	0.0	1.5	0.0			50
2043 background traffic Haul Route North of TCEC (15:00)	R4, 229m away	1	464	24	43	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			50
2043 background traffic Haul Route North of TCEC (16:00)	R4, 229m away	1	560	26	42	80	0	y	1	-82	58	228.8	Soft	A	1.6	0.0	1.5	0.0			50
2043 background traffic Haul Route North of TCEC (17:00)	R4, 229m away	1	482	9	30	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			48
2043 background traffic Haul Route North of TCEC (18:00)	R4, 229m away	1	326	4	16	80	0	y	1	-82	58	228.8	Soft	A	1.5	0.0	1.5	0.0			46
2043 background traffic Haul Route North of TCEC (19:00)	R4, 229m away	1	215	2	0	80	0	y	1	-82	58	228.8	Soft	A	0.1	0.0	1.5	0.0			40
2043 background traffic Haul Route North of TCEC (20:00)	R4, 229m away	1	154	0	7	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			42
2043 background traffic Haul Route North of TCEC (21:00)	R4, 229m away	1	113	0	5	80	0	y	1	-82	58	228.8	Soft	A	1.4	0.0	1.5	0.0			41
2043 background traffic Haul Route North of TCEC (22:00)	R4, 229m away	1	96	0	3	80	0	y	1	-82	58	228.8	Soft	A	1.3	0.0	1.5	0.0			39
2043 background traffic Haul Route North of TCEC (23:00)	R4, 229m away	1	51	3	5	80	0	y	1	-82	58	228.8	Soft	A	1.7	0.0	1.5	0.0			40
2043 background traffic Haul Route North of TCEC (0:00)	R5, 40m away	4	22	0	0	80	0	y	1	-89	83	40.2	Soft	A	0.1	0.0	1.5	0.0			43
2043 background traffic Haul Route North of TCEC (1:00)	R5, 40m away	4	10	0	3	80	0	y	1	-89	83	40.2	Soft	A	2.2	0.0	1.5	0.0			50
2043 background traffic Haul Route North of TCEC (2:00)	R5, 40m away	4	13	2	3	80	0	y	1	-89	83	40.2	Soft	A	2.0	0.0	1.5	0.0			51
2043 background traffic Haul Route North of TCEC (3:00)	R5, 40m away	4	19	3	0	80	0	y	1	-89	83	40.2	Soft	A	0.1	0.0	1.5	0.0			47
2043 background traffic Haul Route North of TCEC (4:00)	R5, 40m away	4	22	3	4	80	0	y	1	-89	83	40.2	Soft	A	1.9	0.0	1.5	0.0			52
2043 background traffic Haul Route North of TCEC (5:00)	R5, 40m away	1	129	6	5	80	0	y	1	-89	83	40.2	Soft	A	1.4	0.0	1.5	0.0			55
2043 background traffic Haul Route North of TCEC (6:00)	R5, 40m away	1	313	3	16	80	0	y	1	-89	83	40.2	Soft	A	1.5	0.0	1.5	0.0			59
2043 background traffic Haul Route North of TCEC (7:00)	R5, 40m away	1	504	14	26	80	0	y	1	-89	83	40.2	Soft	A	1.5	0.0	1.5	0.0			61
2043 background traffic Haul Route North of TCEC (8:00)	R5, 40m away	1	450	40	52	80	0	y	1	-89	83	40.2	Soft	A	1.8	0.0	1.5	0.0			64
2043 background traffic Haul Route North of TCEC (9:00)	R5, 40m away	1	406	16	50	80	0	y	1	-89	83	40.2	Soft	A	1.8	0.0	1.5	0.0			63
2043 background traffic Haul Route North of TCEC (10:00)	R5, 40m away	1	386	17	34	80	0	y	1	-89	83	40.2	Soft	A	1.7	0.0	1.5	0.0			62
2043 background traffic Haul Route North of TCEC (11:00)	R5, 40m away	1	425	15	78	80	0	y	1	-89	83	40.2	Soft	A	2.0	0.0	1.5	0.0			64
2043 background traffic Haul Route North of TCEC (12:00)	R5, 40m away	1	366	11	42	80	0	y	1	-89	83	40.2	Soft	A	1.8	0.0	1.5	0.0			62
2043 background traffic Haul Route North of TCEC (13:00)	R5, 40m away	1	392	19	81	80	0	y	1	-89	83	40.2	Soft	A	2.0	0.0	1.5	0.0			65

2043 background traffic Haul Route North of TCEC (2:00)	R34, 459m away	4	13	2	3	80	0	y	1	-29	73	459.4	Soft	A	2.0	0.0	1.5	0.0				32
2043 background traffic Haul Route North of TCEC (3:00)	R34, 459m away	4	19	3	0	80	0	y	1	-29	73	459.4	Soft	A	0.1	0.0	1.5	0.0				27
2043 background traffic Haul Route North of TCEC (4:00)	R34, 459m away	4	22	3	4	80	0	y	1	-29	73	459.4	Soft	A	1.9	0.0	1.5	0.0				33
2043 background traffic Haul Route North of TCEC (5:00)	R34, 459m away	1	129	6	5	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0				36
2043 background traffic Haul Route North of TCEC (6:00)	R34, 459m away	1	313	3	16	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0				40
2043 background traffic Haul Route North of TCEC (7:00)	R34, 459m away	1	504	14	26	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0				42
2043 background traffic Haul Route North of TCEC (8:00)	R34, 459m away	1	450	40	52	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0				44
2043 background traffic Haul Route North of TCEC (9:00)	R34, 459m away	1	406	16	50	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0				44
2043 background traffic Haul Route North of TCEC (10:00)	R34, 459m away	1	386	17	34	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0				42
2043 background traffic Haul Route North of TCEC (11:00)	R34, 459m away	1	425	15	78	80	0	y	1	-29	73	459.4	Soft	A	2.0	0.0	1.5	0.0				45
2043 background traffic Haul Route North of TCEC (12:00)	R34, 459m away	1	366	11	42	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0				43
2043 background traffic Haul Route North of TCEC (13:00)	R34, 459m away	1	392	19	81	80	0	y	1	-29	73	459.4	Soft	A	2.0	0.0	1.5	0.0				46
2043 background traffic Haul Route North of TCEC (14:00)	R34, 459m away	1	420	15	50	80	0	y	1	-29	73	459.4	Soft	A	1.8	0.0	1.5	0.0				44
2043 background traffic Haul Route North of TCEC (15:00)	R34, 459m away	1	464	24	43	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0				44
2043 background traffic Haul Route North of TCEC (16:00)	R34, 459m away	1	560	26	42	80	0	y	1	-29	73	459.4	Soft	A	1.6	0.0	1.5	0.0				44
2043 background traffic Haul Route North of TCEC (17:00)	R34, 459m away	1	482	9	30	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0				42
2043 background traffic Haul Route North of TCEC (18:00)	R34, 459m away	1	326	4	16	80	0	y	1	-29	73	459.4	Soft	A	1.5	0.0	1.5	0.0				40
2043 background traffic Haul Route North of TCEC (19:00)	R34, 459m away	1	215	2	0	80	0	y	1	-29	73	459.4	Soft	A	0.1	0.0	1.5	0.0				34
2043 background traffic Haul Route North of TCEC (20:00)	R34, 459m away	1	154	0	7	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0				36
2043 background traffic Haul Route North of TCEC (21:00)	R34, 459m away	1	113	0	5	80	0	y	1	-29	73	459.4	Soft	A	1.4	0.0	1.5	0.0				35
2043 background traffic Haul Route North of TCEC (22:00)	R34, 459m away	1	96	0	3	80	0	y	1	-29	73	459.4	Soft	A	1.3	0.0	1.5	0.0				33
2043 background traffic Haul Route North of TCEC (23:00)	R34, 459m away	1	51	3	5	80	0	y	1	-29	73	459.4	Soft	A	1.7	0.0	1.5	0.0				34



Summary of Traffic Volumes: 2-way Traffic, west of Nauvoo on Confederation

Job No. 2101750
 Job Name Twin Creeks

Year Veh. Size	2019 Background Traffic				2032 Background Traffic				2043 Background Traffic				Site Traffic (all years)				2019 Total Traffic				2032 Total Traffic				2043 Total Traffic			
	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total
0:00	2	0	0	2	8	0	0	8	9	0	0	9	-	-	-	-	2	0	0	2	8	0	0	8	9	0	0	9
1:00	2	0	0	2	8	0	0	8	8	0	0	8	-	-	-	-	2	0	0	2	8	0	0	8	8	0	0	8
2:00	2	0	0	2	2	0	0	2	3	0	0	3	-	-	-	-	2	0	0	2	2	0	0	2	3	0	0	3
3:00	1	0	0	1	7	0	0	7	7	0	0	7	-	-	-	-	1	0	0	1	7	0	0	7	7	0	0	7
4:00	12	0	0	12	32	0	0	32	33	0	0	33	-	-	-	-	12	0	0	12	32	0	0	32	33	0	0	33
5:00	22	0	0	22	69	0	0	69	72	0	0	72	-	-	-	-	22	0	0	22	69	0	0	69	72	0	0	72
6:00	83	1	1	85	220	1	1	222	231	1	1	233	0	0	0	0	83	1	1	85	220	1	1	222	231	1	1	233
7:00	104	8	1	113	334	9	1	344	348	11	1	360	0	0	0	0	104	8	1	113	334	9	1	344	348	11	1	360
8:00	99	7	5	111	295	8	6	309	307	9	6	322	0	0	0	0	99	7	5	111	295	8	6	309	307	9	6	322
9:00	86	7	5	98	214	8	5	227	225	9	7	241	0	0	0	0	86	7	5	98	214	8	5	227	225	9	7	241
10:00	82	7	1	90	209	8	1	218	220	9	1	230	0	0	0	0	82	7	1	90	209	8	1	218	220	9	1	230
11:00	96	4	5	105	218	4	6	228	230	5	6	241	0	0	0	0	96	4	5	105	218	4	6	228	230	5	6	241
12:00	106	9	4	119	215	11	4	230	229	11	6	246	0	0	0	0	106	9	4	119	215	11	4	230	229	11	6	246
13:00	106	5	2	113	219	6	2	227	233	6	2	241	0	0	0	0	106	5	2	113	219	6	2	227	233	6	2	241
14:00	104	8	4	116	222	9	4	235	236	10	5	251	0	0	0	0	104	8	4	116	222	9	4	235	236	10	5	251
15:00	166	7	1	174	289	8	1	298	311	9	1	321	0	0	0	0	166	7	1	174	289	8	1	298	311	9	1	321
16:00	149	5	0	154	294	5	0	299	313	7	0	320	0	0	0	0	149	5	0	154	294	5	0	299	313	7	0	320
17:00	143	2	1	146	287	2	1	290	305	2	1	308	-	-	-	-	143	2	1	146	287	2	1	290	305	2	1	308
18:00	104	1	0	105	216	1	0	217	230	1	0	231	-	-	-	-	104	1	0	105	216	1	0	217	230	1	0	231
19:00	62	0	0	62	143	0	0	143	151	0	0	151	-	-	-	-	62	0	0	62	143	0	0	143	151	0	0	151
20:00	45	0	0	45	103	0	0	103	109	0	0	109	-	-	-	-	45	0	0	45	103	0	0	103	109	0	0	109
21:00	39	1	1	41	85	1	1	87	89	1	1	91	-	-	-	-	39	1	1	41	85	1	1	87	89	1	1	91
22:00	16	1	0	17	38	1	0	39	40	1	0	41	-	-	-	-	16	1	0	17	38	1	0	39	40	1	0	41
23:00	16	0	0	16	30	0	0	30	32	0	0	32	-	-	-	-	16	0	0	16	30	0	0	30	32	0	0	32
Daily Total	1647	73	31	1751	3757	82	33	3872	3971	92	38	4101	0	0	0	0	1647	73	31	1751	3757	82	33	3872	3971	92	38	4101
Average	69	3	1	73	157	3	1	161	165	4	2	171	0	0	0	0	69	3	1	73	157	3	1	161	165	4	2	171

* Future Traffic Volumes Provided by HDR



Summary of Traffic Volumes: Haul Route 2-way traffic (north of the Nauvoo Road driveway)

Job No. 2101750

Job Name Twin Creeks

Year Veh. Size	2019 Background Traffic				2032 Background Traffic				2043 Background Traffic				Site Traffic (all years)				2019 Total Traffic				2032 Total Traffic				2043 Total Traffic			
	Autos	Medium	Heavy	Total	Autos	Medium	Heavy	Total	Autos	Medium	Heavy	Total	Autos	Medium	Heavy	Total	Autos	Medium	Heavy	Total	Autos	Medium	Heavy	Total	Autos	Medium	Heavy	Total
0:00	11	0	0	11	18	0	0	18	22	0	0	22	-	-	-	-	11	0	0	11	18	0	0	18	22	0	0	22
1:00	4	0	2	6	8	0	3	11	10	0	3	13	-	-	-	-	4	0	2	6	8	0	3	11	10	0	3	13
2:00	7	1	2	10	10	1	3	14	13	2	3	18	-	-	-	-	7	1	2	10	10	1	3	14	13	2	3	18
3:00	10	2	0	12	16	3	0	19	19	3	0	22	-	-	-	-	10	2	0	12	16	3	0	19	19	3	0	22
4:00	10	2	2	14	19	3	2	24	22	3	4	29	-	-	-	-	10	2	2	14	19	3	2	24	22	3	4	29
5:00	72	4	3	79	107	6	4	117	129	6	5	140	-	-	-	-	72	4	3	79	107	6	4	117	129	6	5	140
6:00	173	2	10	185	258	3	13	274	313	3	16	332	0	1	14	15	173	3	24	200	258	4	27	289	313	4	30	347
7:00	269	9	16	294	419	11	21	451	504	14	26	544	0	6	44	50	269	15	60	344	419	17	65	501	504	20	70	594
8:00	247	25	32	304	373	33	41	447	450	40	52	542	1	1	33	35	248	26	65	339	374	34	74	482	451	41	85	577
9:00	230	10	31	271	334	13	40	387	406	16	50	472	0	9	24	33	230	19	55	304	334	22	64	420	406	25	74	505
10:00	216	11	21	248	318	14	27	359	386	17	34	437	4	8	27	39	220	19	48	287	322	22	54	398	390	25	61	476
11:00	240	9	49	298	350	12	63	425	425	15	78	518	3	10	27	40	243	19	76	338	353	22	90	465	428	25	105	558
12:00	208	7	26	241	300	9	34	343	366	11	42	419	3	20	23	46	211	27	49	287	303	29	57	389	369	31	65	465
13:00	223	12	50	285	322	16	65	403	392	19	81	492	1	8	22	31	224	20	72	316	323	24	87	434	393	27	103	523
14:00	238	9	31	278	345	12	40	397	420	15	50	485	3	2	21	26	241	11	52	304	348	14	61	423	423	17	71	511
15:00	263	15	27	305	381	20	35	436	464	24	43	531	0	2	8	10	263	17	35	315	381	22	43	446	464	26	51	541
16:00	311	16	26	353	462	20	33	515	560	26	42	628	0	0	4	4	311	16	30	357	462	20	37	519	560	26	46	632
17:00	269	6	19	294	398	8	25	431	482	9	30	521	-	-	-	-	269	6	19	294	398	8	25	431	482	9	30	521
18:00	177	2	10	189	270	2	13	285	326	4	16	346	-	-	-	-	177	2	10	189	270	2	13	285	326	4	16	346
19:00	115	1	0	116	179	1	0	180	215	2	0	217	-	-	-	-	115	1	0	116	179	1	0	180	215	2	0	217
20:00	79	0	4	83	129	0	5	134	154	0	7	161	-	-	-	-	79	0	4	83	129	0	5	134	154	0	7	161
21:00	58	0	3	61	95	0	4	99	113	0	5	118	-	-	-	-	58	0	3	61	95	0	4	99	113	0	5	118
22:00	54	0	2	56	79	0	3	82	96	0	3	99	-	-	-	-	54	0	2	56	79	0	3	82	96	0	3	99
23:00	28	2	3	33	42	3	4	49	51	3	5	59	-	-	-	-	28	2	3	33	42	3	4	49	51	3	5	59
Daily Total	3512	145	369	4026	5232	190	478	5900	6338	232	595	7165	15	67	247	329	3527	212	616	4355	5247	257	725	6229	6353	299	842	7494
Average	146	6	15	168	218	8	20	246	264	10	25	299	1	6	22	30	147	9	26	181	219	11	30	260	265	12	35	312

* Future Traffic Volumes Provided by HDR



Summary of Traffic Volumes: Haul Route 2-way traffic (south of the Nauvoo Road driveway)

Job No. 2101750
Job Name Twin Creeks

Year Veh. Size	2019 Background Traffic				2032 Background Traffic				2043 Background Traffic				Site Traffic (all years)				2019 Total Traffic				2032 Total Traffic				2043 Total Traffic			
	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total
0:00	11	0	0	11	18	0	0	18	22	0	0	22	-	-	-	-	11	0	0	11	18	0	0	18	22	0	0	22
1:00	4	0	2	6	8	0	3	11	10	0	3	13	-	-	-	-	4	0	2	6	8	0	3	11	10	0	3	13
2:00	7	1	2	10	10	1	3	14	13	2	3	18	-	-	-	-	7	1	2	10	10	1	3	14	13	2	3	18
3:00	10	2	0	12	16	3	0	19	19	3	0	22	-	-	-	-	10	2	0	12	16	3	0	19	19	3	0	22
4:00	10	2	2	14	19	3	2	24	22	3	4	29	-	-	-	-	10	2	2	14	19	3	2	24	22	3	4	29
5:00	72	4	3	79	107	6	4	117	129	6	5	140	-	-	-	-	72	4	3	79	107	6	4	117	129	6	5	140
6:00	173	3	21	197	258	4	27	289	313	5	34	352	0	0	3	3	173	3	24	200	258	4	30	292	313	5	37	355
7:00	269	13	48	330	419	17	62	498	504	21	77	602	0	2	9	11	269	15	57	341	419	19	71	509	504	23	86	613
8:00	245	26	58	329	370	34	75	479	447	42	93	582	3	0	7	10	248	26	65	339	373	34	82	489	450	42	100	592
9:00	229	17	50	296	333	22	65	420	405	27	81	513	1	2	5	8	230	19	55	304	334	24	70	428	406	29	86	521
10:00	212	17	43	272	313	22	55	390	380	27	69	476	8	2	5	15	220	19	48	287	321	24	60	405	388	29	74	491
11:00	237	17	71	325	345	22	92	459	420	27	115	562	6	2	5	13	243	19	76	338	351	24	97	472	426	29	120	575
12:00	205	22	44	271	296	28	57	381	360	36	71	467	6	4	5	15	211	26	49	286	302	32	62	396	366	40	76	482
13:00	221	17	67	305	320	22	87	429	389	27	108	524	3	2	5	10	224	19	72	315	323	24	92	439	392	29	113	534
14:00	235	11	48	294	341	14	62	417	415	17	77	509	6	0	4	10	241	11	52	304	347	14	66	427	421	17	81	519
15:00	263	17	33	313	381	22	43	446	464	27	53	544	0	0	2	2	263	17	35	315	381	22	45	448	464	27	55	546
16:00	311	16	29	356	462	20	37	519	560	26	47	633	0	0	1	1	311	16	30	357	462	20	38	520	560	26	48	634
17:00	269	6	19	294	398	8	25	431	482	9	30	521	-	-	-	-	269	6	19	294	398	8	25	431	482	9	30	521
18:00	177	2	10	189	270	2	13	285	326	4	16	346	-	-	-	-	177	2	10	189	270	2	13	285	326	4	16	346
19:00	115	1	0	116	179	1	0	180	215	2	0	217	-	-	-	-	115	1	0	116	179	1	0	180	215	2	0	217
20:00	79	0	4	83	129	0	5	134	154	0	7	161	-	-	-	-	79	0	4	83	129	0	5	134	154	0	7	161
21:00	58	0	3	61	95	0	4	99	113	0	5	118	-	-	-	-	58	0	3	61	95	0	4	99	113	0	5	118
22:00	54	0	2	56	79	0	3	82	96	0	3	99	-	-	-	-	54	0	2	56	79	0	3	82	96	0	3	99
23:00	28	2	3	33	42	3	4	49	51	3	5	59	-	-	-	-	28	2	3	33	42	3	4	49	51	3	5	59
Daily Total	3494	196	562	4252	5208	254	728	6190	6309	314	906	7529	33	14	51	98	3527	210	613	4350	5241	268	779	6288	6342	328	957	7627
Average	146	8	23	177	217	11	30	258	263	13	38	314	3	1	5	9	147	9	26	181	218	11	32	262	264	14	40	318

* Future Traffic Volumes Provided by HDR



Summary of Traffic Volumes: 2-way Traffic west of Nauvoo on Zion

Job No. 2101750
Job Name Twin Creeks

Year Veh. Size	2019 Background Traffic				2032 Background Traffic				2043 Background Traffic				Site Traffic (all years)				2019 Total Traffic				2032 Total Traffic				2043 Total Traffic			
	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total
0:00	1	0	0	1	1	0	0	1	1	0	0	1	-	-	-	-	1	0	0	1	1	0	0	1	1	0	0	1
1:00	2	0	0	2	2	0	0	2	2	0	0	2	-	-	-	-	2	0	0	2	2	0	0	2	2	0	0	2
2:00	1	0	0	1	1	0	0	1	1	0	0	1	-	-	-	-	1	0	0	1	1	0	0	1	1	0	0	1
3:00	1	0	0	1	1	0	0	1	1	0	0	1	-	-	-	-	1	0	0	1	1	0	0	1	1	0	0	1
4:00	5	0	0	5	6	0	0	6	6	0	0	6	-	-	-	-	5	0	0	5	6	0	0	6	6	0	0	6
5:00	8	0	0	8	9	0	0	9	11	0	0	11	-	-	-	-	8	0	0	8	9	0	0	9	11	0	0	11
6:00	27	0	0	27	30	0	0	30	34	0	0	34	0	0	0	0	27	0	0	27	30	0	0	30	34	0	0	34
7:00	33	2	2	37	37	2	2	41	42	3	3	48	0	0	0	0	33	2	2	37	37	2	2	41	42	3	3	48
8:00	20	3	1	24	23	3	1	27	26	4	1	31	0	0	0	0	20	3	1	24	23	3	1	27	26	4	1	31
9:00	9	11	0	20	10	12	0	22	12	14	0	26	0	0	0	0	9	11	0	20	10	12	0	22	12	14	0	26
10:00	9	12	0	21	10	13	0	23	12	16	0	28	0	0	0	0	9	12	0	21	10	13	0	23	12	16	0	28
11:00	9	3	0	12	10	3	0	13	12	4	0	16	0	0	0	0	9	3	0	12	10	3	0	13	12	4	0	16
12:00	32	5	0	37	36	5	0	41	40	7	0	47	0	0	0	0	32	5	0	37	36	5	0	41	40	7	0	47
13:00	31	1	0	32	35	1	0	36	40	1	0	41	0	0	0	0	31	1	0	32	35	1	0	36	40	1	0	41
14:00	26	4	0	30	30	5	0	35	33	5	0	38	0	0	0	0	26	4	0	30	30	5	0	35	33	5	0	38
15:00	41	2	0	43	46	2	0	48	52	3	0	55	0	0	0	0	41	2	0	43	46	2	0	48	52	3	0	55
16:00	27	2	1	30	31	2	1	34	35	3	1	39	0	0	0	0	27	2	1	30	31	2	1	34	35	3	1	39
17:00	36	0	0	36	41	0	0	41	46	0	0	46	-	-	-	-	36	0	0	36	41	0	0	41	46	0	0	46
18:00	26	1	0	27	30	1	0	31	33	1	0	34	-	-	-	-	26	1	0	27	30	1	0	31	33	1	0	34
19:00	16	0	0	16	18	0	0	18	20	0	0	20	-	-	-	-	16	0	0	16	18	0	0	18	20	0	0	20
20:00	11	0	0	11	13	0	0	13	14	0	0	14	-	-	-	-	11	0	0	11	13	0	0	13	14	0	0	14
21:00	10	0	0	10	12	0	0	12	12	0	0	12	-	-	-	-	10	0	0	10	12	0	0	12	12	0	0	12
22:00	5	0	0	5	5	0	0	5	7	0	0	7	-	-	-	-	5	0	0	5	5	0	0	5	7	0	0	7
23:00	5	0	0	5	6	0	0	6	6	0	0	6	-	-	-	-	5	0	0	5	6	0	0	6	6	0	0	6
Daily Total	391	46	4	441	443	49	4	496	498	61	5	564	0	0	0	0	391	46	4	441	443	49	4	496	498	61	5	564
Average	16	2	0	18	18	2	0	21	21	3	0	24	0	0	0	0	16	2	0	18	18	2	0	21	21	3	0	24

* Future Traffic Volumes Provided by HDR

B

Landfilling Source Sound Power Levels and Sample Calculations

Table B-1 : MODELLED SOURCE LEVEL

Twin Creeks - Watford, ON, 2101750

Notes to Table:

1. All sound level sources were from "Proposed Expansion of WM warwick Landfill: Noise Impact Assessment" dated May 2007 and prepared by Aercoustics Engineering Ltd. with the only exception of the propane cannon.
2. All frequency contents of the sound levels were from the previous audits conducted by RWDI.

Source ID	Source Description	Octave Band Sound Power Level Data (dB)								Total (dBA/dBAI)	
		31.5	63	125	250	500	1000	2000	4000		8000
Cat 836G	Landfill Operations Cat 836G	111.1	115.3	128.0	112.7	114.5	116.1	109.7	103.9	103.4	119.5
Cat D8R	Landfill Operations Cat D8R	108.2	109.9	110.1	110.0	110.9	109.3	108.6	102.5	98.2	114.5
Cat D6R	Landfill Operations Cat D6R	103.9	103.7	106.6	107.8	104.7	105.2	99.0	102.2	92.6	109.5
Cat D400	Landfill Operations Cat D400	111.0	112.8	111.4	105.6	105.1	106.0	101.7	95.9	90.4	109.5
Cat 330L	Landfill Operations Cat 330L	105.1	105.6	107.2	106.7	103.7	103.2	99.2	94.7	93.6	107.5
Cat 140H	Landfill Operations Cat 140H						111.5				111.5
PC	Propane Cannon	107.7	114.9	120.6	117.1	115.3	115.0	111.5	108.9	106.7	119.5
WC	Whistler Cartridge	92.3	96.1	95.2	100.9	109.9	115.4	118.2	111.0	105.7	121.6
CC	Cracker Cartridge	110.5	113.6	111.2	103.9	111.3	110.5	124.7	115.4	107.7	126.6
ED	Electronic Distress						121.6				121.6

Table B.2: Key Parameters Included in the Cadna/A Noise Modelling

Twin Creeks - Watford, ON, 2101750

Parameter	Value	Rationale
Ground Absorption	1	Accounts for soft (e.g., loose dirt, grass) surfaces between facility and receptors of interest
Temperature	10 °C	Ontario standard conditions
Relative Humidity	70%	Ontario standard conditions
Max. Order of Reflection	1	Some significant reflections from buildings on site
Absorption Coefficient Alpha	0.21	Cadna/A default value for smooth façade

B.3 - TCEC Landfilling Sample CadnaA Calculation - Phase 2A - R2 at 4.5 m

Receiver
 Name: R2_4.5m
 ID: !0000!R2_4.5m
 X: 429379.85 m
 Y: 4758996.99 m
 Z: 244.50 m

Area Source, ISO 9613, Name: "2A - Slope All Landfilling Equipment", ID: "!06020000!"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
12	429127.10	4758700.62	269.90	0	DEN	A	79.6	38.9	0.0	0.0	0.0	62.8	1.7	-1.1	0.0	0.0	4.6	0.0	0.0	50.5
25	429157.81	4758654.14	269.90	0	DEN	A	79.6	37.1	0.0	0.0	0.0	63.2	1.8	-1.2	0.0	0.0	4.8	0.0	0.0	48.0
29	429201.30	4758652.40	269.90	0	DEN	A	79.6	31.6	0.0	0.0	0.0	62.8	1.7	-1.2	0.0	0.0	4.5	0.0	0.0	43.3
31	429168.77	4758695.80	269.90	0	DEN	A	79.6	29.6	0.0	0.0	0.0	62.3	1.6	-1.1	0.0	0.0	4.7	0.0	0.0	41.6
42	429190.33	4758652.40	269.90	0	DEN	A	79.6	24.6	0.0	0.0	0.0	62.9	1.7	-1.2	0.0	0.0	4.5	0.0	0.0	36.2
48	429199.47	4758689.25	269.90	0	DEN	A	79.6	19.3	0.0	0.0	0.0	62.1	1.6	-1.1	0.0	0.0	4.5	0.0	0.0	31.8

Point Source, ISO 9613, Name: "Compactor CAT 836G", ID: "!06020000!"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
21	429254.00	4758754.32	258.17	0	DEN	A	116.5	0.0	0.0	0.0	0.0	59.7	1.1	-0.7	0.0	0.0	0.0	0.0	0.0	56.3

Point Source, ISO 9613, Name: "Dozer D8R", ID: "!06020000!"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
27	429224.03	4758788.20	261.51	0	DEN	A	114.5	0.0	0.0	0.0	0.0	59.3	1.7	-0.9	0.0	0.0	0.0	0.0	0.0	54.4

Area Source, ISO 9613, Name: "2A - Cell Cover Equipment", ID: "!06020000!"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
33	429023.65	4758698.84	269.90	0	DEN	A	70.9	40.2	0.0	0.0	0.0	64.4	2.7	-1.4	0.0	0.0	4.7	0.0	0.0	40.9
36	428904.24	4758675.47	269.90	0	DEN	A	70.9	38.1	0.0	0.0	0.0	66.2	3.1	-1.6	0.0	0.0	4.7	0.0	0.0	36.6
39	428996.95	4758657.00	269.90	0	DEN	A	70.9	37.0	0.0	0.0	0.0	65.2	2.9	-1.5	0.0	0.0	4.7	0.0	0.0	36.6
45	428880.37	4758633.88	269.90	0	DEN	A	70.9	36.4	0.0	0.0	0.0	66.8	3.3	-1.6	0.0	0.0	4.7	0.0	0.0	34.1
62	428850.18	4758715.59	269.90	0	DEN	A	70.9	31.7	0.0	0.0	0.0	66.6	3.2	-1.5	0.0	0.0	4.7	0.0	0.0	29.7
65	428965.99	4758656.15	269.90	0	DEN	A	70.9	27.9	0.0	0.0	0.0	65.6	3.0	-1.6	0.0	0.0	4.7	0.0	0.0	27.1
111	428875.51	4758715.61	269.90	0	DEN	A	70.9	27.6	0.0	0.0	0.0	66.2	3.1	-1.5	0.0	0.0	4.7	0.0	0.0	25.9
150	428960.29	4758656.00	269.90	0	DEN	A	70.9	25.9	0.0	0.0	0.0	65.7	3.0	-1.6	0.0	0.0	4.7	0.0	0.0	25.0
152	428956.13	4758655.89	269.90	0	DEN	A	70.9	25.3	0.0	0.0	0.0	65.7	3.0	-1.6	0.0	0.0	4.7	0.0	0.0	24.4
172	428952.45	4758655.79	269.90	0	DEN	A	70.9	24.9	0.0	0.0	0.0	65.8	3.0	-1.6	0.0	0.0	4.7	0.0	0.0	23.8
232	428868.30	4758715.39	269.90	0	DEN	A	70.9	18.7	0.0	0.0	0.0	66.3	3.1	-1.5	0.0	0.0	4.7	0.0	0.0	16.9
269	428938.86	4758696.36	269.90	0	DEN	A	70.9	17.8	0.0	0.0	0.0	65.6	3.0	-1.5	0.0	0.0	4.7	0.0	0.0	17.0
273	428850.48	4758695.73	269.90	0	DEN	A	70.9	17.6	0.0	0.0	0.0	66.7	3.2	-1.5	0.0	0.0	4.7	0.0	0.0	15.5
289	428934.97	4758696.25	269.90	0	DEN	A	70.9	15.8	0.0	0.0	0.0	65.6	3.0	-1.5	0.0	0.0	4.7	0.0	0.0	15.0
355	428932.46	4758696.18	269.90	0	DEN	A	70.9	15.2	0.0	0.0	0.0	65.6	3.0	-1.5	0.0	0.0	4.7	0.0	0.0	14.3
361	428930.26	4758696.12	269.90	0	DEN	A	70.9	14.7	0.0	0.0	0.0	65.7	3.0	-1.5	0.0	0.0	4.7	0.0	0.0	13.8

Point Source, ISO 9613, Name: "Excavator (Cover Activity)", ID: "!060202!Excavator Cover Activity"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
115	429253.18	4757239.29	267.40	0	DEN	A	107.5	0.0	0.0	0.0	0.0	75.9	5.6	-0.7	0.0	0.0	4.4	0.0	0.0	22.3

Line Source, ISO 9613, Name: "Heavy Truck", ID: "!060203!Heavy Truck"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
148	429084.65	4758613.97	271.00	0	D	A	78.4	21.3	0.0	0.0	0.0	64.7	2.7	-1.4	0.0	0.0	4.8	0.0	0.0	28.9
148	429084.65	4758613.97	271.00	0	N	A	-39.1	21.3	0.0	0.0	0.0	64.7	2.7	-1.4	0.0	0.0	4.8	0.0	0.0	-88.5
148	429084.65	4758613.97	271.00	0	E	A	-39.1	21.3	0.0	0.0	0.0	64.7	2.7	-1.4	0.0	0.0	4.8	0.0	0.0	-88.5
174	429007.15	4757987.32	271.00	0	D	A	78.4	25.3	0.0	0.0	0.0	71.6	4.5	-1.8	0.0	0.0	4.6	0.0	0.0	24.8
174	429007.15	4757987.32	271.00	0	N	A	-39.1	25.3	0.0	0.0	0.0	71.6	4.5	-1.8	0.0	0.0	4.6	0.0	0.0	-92.6
174	429007.15	4757987.32	271.00	0	E	A	-39.1	25.3	0.0	0.0	0.0	71.6	4.5	-1.8	0.0	0.0	4.6	0.0	0.0	-92.6
176	429010.57	4758468.84	271.00	0	D	A	78.4	20.6	0.0	0.0	0.0	67.2	3.2	-1.6	0.0	0.0	4.9	0.0	0.0	25.4
176	429010.57	4758468.84	271.00	0	N	A	-39.1	20.6	0.0	0.0	0.0	67.2	3.2	-1.6	0.0	0.0	4.9	0.0	0.0	-92.1

Line Source, ISO 9613, Name: "Heavy Truck", ID: "I060203!Heavy Truck"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahou	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
176	429010.57	4758468.84	271.00	0	E	A	-39.1	20.6	0.0	0.0	0.0	67.2	3.2	-1.6	0.0	0.0	4.9	0.0	0.0	-92.1
180	429008.88	4758231.49	271.00	0	D	A	78.4	21.7	0.0	0.0	0.0	69.6	3.9	-1.7	0.0	0.0	4.6	0.0	0.0	23.8
180	429008.88	4758231.49	271.00	0	N	A	-39.1	21.7	0.0	0.0	0.0	69.6	3.9	-1.7	0.0	0.0	4.6	0.0	0.0	-93.7
180	429008.88	4758231.49	271.00	0	E	A	-39.1	21.7	0.0	0.0	0.0	69.6	3.9	-1.7	0.0	0.0	4.6	0.0	0.0	-93.7
182	428408.08	4758503.92	243.50	0	D	A	78.4	22.6	0.0	0.0	0.0	71.7	4.5	-1.1	0.0	0.0	9.5	0.0	0.0	16.4
182	428408.08	4758503.92	243.50	0	N	A	-39.1	22.6	0.0	0.0	0.0	71.7	4.5	-1.1	0.0	0.0	9.5	0.0	0.0	-101.1
182	428408.08	4758503.92	243.50	0	E	A	-39.1	22.6	0.0	0.0	0.0	71.7	4.5	-1.1	0.0	0.0	9.5	0.0	0.0	-101.1
218	429009.70	4758346.62	271.00	0	D	A	78.4	18.2	0.0	0.0	0.0	68.5	3.6	-1.7	0.0	0.0	4.6	0.0	0.0	21.6
218	429009.70	4758346.62	271.00	0	N	A	-39.1	18.2	0.0	0.0	0.0	68.5	3.6	-1.7	0.0	0.0	4.6	0.0	0.0	-95.9
218	429009.70	4758346.62	271.00	0	E	A	-39.1	18.2	0.0	0.0	0.0	68.5	3.6	-1.7	0.0	0.0	4.6	0.0	0.0	-95.9
255	428490.43	4757985.28	243.50	0	D	A	78.4	22.8	0.0	0.0	0.0	73.6	5.1	-1.7	0.0	0.0	14.5	0.0	0.0	9.7
255	428490.43	4757985.28	243.50	0	N	A	-39.1	22.8	0.0	0.0	0.0	73.6	5.1	-1.7	0.0	0.0	14.5	0.0	0.0	-107.8
255	428490.43	4757985.28	243.50	0	E	A	-39.1	22.8	0.0	0.0	0.0	73.6	5.1	-1.7	0.0	0.0	14.5	0.0	0.0	-107.8
276	428408.51	4758351.02	243.50	0	D	A	78.4	20.9	0.0	0.0	0.0	72.3	4.7	-1.2	0.0	0.0	10.0	0.0	0.0	13.5
276	428408.51	4758351.02	243.50	0	N	A	-39.1	20.9	0.0	0.0	0.0	72.3	4.7	-1.2	0.0	0.0	10.0	0.0	0.0	-104.0
276	428408.51	4758351.02	243.50	0	E	A	-39.1	20.9	0.0	0.0	0.0	72.3	4.7	-1.2	0.0	0.0	10.0	0.0	0.0	-104.0
282	428491.86	4758141.78	243.50	0	D	A	78.4	20.8	0.0	0.0	0.0	72.8	4.9	-1.7	0.0	0.0	15.0	0.0	0.0	8.2
282	428491.86	4758141.78	243.50	0	N	A	-39.1	20.8	0.0	0.0	0.0	72.8	4.9	-1.7	0.0	0.0	15.0	0.0	0.0	-109.2
282	428491.86	4758141.78	243.50	0	E	A	-39.1	20.8	0.0	0.0	0.0	72.8	4.9	-1.7	0.0	0.0	15.0	0.0	0.0	-109.2
284	428690.03	4757772.21	243.50	0	D	A	78.4	22.1	0.0	0.0	0.0	74.0	5.3	-1.7	0.0	0.0	15.5	0.0	0.0	7.5
284	428690.03	4757772.21	243.50	0	N	A	-39.1	22.1	0.0	0.0	0.0	74.0	5.3	-1.7	0.0	0.0	15.5	0.0	0.0	-110.0
284	428690.03	4757772.21	243.50	0	E	A	-39.1	22.1	0.0	0.0	0.0	74.0	5.3	-1.7	0.0	0.0	15.5	0.0	0.0	-110.0
293	428562.34	4757823.02	243.50	0	D	A	78.4	21.0	0.0	0.0	0.0	74.1	5.3	-1.7	0.0	0.0	14.2	0.0	0.0	7.5
293	428562.34	4757823.02	243.50	0	N	A	-39.1	21.0	0.0	0.0	0.0	74.1	5.3	-1.7	0.0	0.0	14.2	0.0	0.0	-110.0
293	428562.34	4757823.02	243.50	0	E	A	-39.1	21.0	0.0	0.0	0.0	74.1	5.3	-1.7	0.0	0.0	14.2	0.0	0.0	-110.0
519	428956.28	4757757.19	262.15	0	D	A	78.4	18.7	0.0	0.0	0.0	73.3	5.1	-1.9	0.0	0.0	10.4	0.0	0.0	10.2
519	428956.28	4757757.19	262.15	0	N	A	-39.1	18.7	0.0	0.0	0.0	73.3	5.1	-1.9	0.0	0.0	10.4	0.0	0.0	-107.3
519	428956.28	4757757.19	262.15	0	E	A	-39.1	18.7	0.0	0.0	0.0	73.3	5.1	-1.9	0.0	0.0	10.4	0.0	0.0	-107.3
536	429037.05	4758557.63	271.00	0	D	A	78.4	10.9	0.0	0.0	0.0	65.9	2.9	-1.5	0.0	0.0	4.8	0.0	0.0	17.1
536	429037.05	4758557.63	271.00	0	N	A	-39.1	10.9	0.0	0.0	0.0	65.9	2.9	-1.5	0.0	0.0	4.8	0.0	0.0	-100.3
536	429037.05	4758557.63	271.00	0	E	A	-39.1	10.9	0.0	0.0	0.0	65.9	2.9	-1.5	0.0	0.0	4.8	0.0	0.0	-100.3
538	428386.58	4758620.75	243.50	0	D	A	78.4	16.3	0.0	0.0	0.0	71.5	4.4	-0.8	0.0	0.0	7.6	0.0	0.0	11.9
538	428386.58	4758620.75	243.50	0	N	A	-39.1	16.3	0.0	0.0	0.0	71.5	4.4	-0.8	0.0	0.0	7.6	0.0	0.0	-105.6
538	428386.58	4758620.75	243.50	0	E	A	-39.1	16.3	0.0	0.0	0.0	71.5	4.4	-0.8	0.0	0.0	7.6	0.0	0.0	-105.6
541	429010.10	4758402.41	271.00	0	D	A	78.4	12.3	0.0	0.0	0.0	67.9	3.4	-1.7	0.0	0.0	4.7	0.0	0.0	16.3
541	429010.10	4758402.41	271.00	0	N	A	-39.1	12.3	0.0	0.0	0.0	67.9	3.4	-1.7	0.0	0.0	4.7	0.0	0.0	-101.1
541	429010.10	4758402.41	271.00	0	E	A	-39.1	12.3	0.0	0.0	0.0	67.9	3.4	-1.7	0.0	0.0	4.7	0.0	0.0	-101.1
545	429014.39	4758530.81	271.00	0	D	A	78.4	10.2	0.0	0.0	0.0	66.5	3.1	-1.6	0.0	0.0	4.8	0.0	0.0	15.9
545	429014.39	4758530.81	271.00	0	N	A	-39.1	10.2	0.0	0.0	0.0	66.5	3.1	-1.6	0.0	0.0	4.8	0.0	0.0	-101.6
545	429014.39	4758530.81	271.00	0	E	A	-39.1	10.2	0.0	0.0	0.0	66.5	3.1	-1.6	0.0	0.0	4.8	0.0	0.0	-101.6
547	428347.68	4758621.04	243.50	0	D	A	78.4	15.5	0.0	0.0	0.0	71.8	4.5	-0.7	0.0	0.0	6.1	0.0	0.0	12.1
547	428347.68	4758621.04	243.50	0	N	A	-39.1	15.5	0.0	0.0	0.0	71.8	4.5	-0.7	0.0	0.0	6.1	0.0	0.0	-105.3
547	428347.68	4758621.04	243.50	0	E	A	-39.1	15.5	0.0	0.0	0.0	71.8	4.5	-0.7	0.0	0.0	6.1	0.0	0.0	-105.3
550	428461.72	4758202.21	243.50	0	D	A	78.4	16.3	0.0	0.0	0.0	72.7	4.8	-1.7	0.0	0.0	13.1	0.0	0.0	5.9
550	428461.72	4758202.21	243.50	0	N	A	-39.1	16.3	0.0	0.0	0.0	72.7	4.8	-1.7	0.0	0.0	13.1	0.0	0.0	-111.6
550	428461.72	4758202.21	243.50	0	E	A	-39.1	16.3	0.0	0.0	0.0	72.7	4.8	-1.7	0.0	0.0	13.1	0.0	0.0	-111.6
553	429009.98	4758386.76	271.00	0	D	A	78.4	11.6	0.0	0.0	0.0	68.1	3.5	-1.7	0.0	0.0	4.7	0.0	0.0	15.4
553	429009.98	4758386.76	271.00	0	N	A	-39.1	11.6	0.0	0.0	0.0	68.1	3.5	-1.7	0.0	0.0	4.7	0.0	0.0	-102.1
553	429009.98	4758386.76	271.00	0	E	A	-39.1	11.6	0.0	0.0	0.0	68.1	3.5	-1.7	0.0	0.0	4.7	0.0	0.0	-102.1
555	428798.61	4757723.58	246.34	0	D	A	78.4	17.3	0.0	0.0	0.0	73.9	5.3	-1.9	0.0	0.0	15.9	0.0	0.0	2.6
555	428798.61	4757723.58	246.34	0	N	A	-39.1	17.3	0.0	0.0	0.0	73.9	5.3	-1.9	0.0	0.0	15.9	0.0	0.0	-114.9
555	428798.61	4757723.58	246.34	0	E	A	-39.1	17.3	0.0	0.0	0.0	73.9	5.3	-1.9	0.0	0.0	15.9	0.0	0.0	-114.9
557	429030.34	4758549.69	271.00	0	D	A	78.4	9.3	0.0	0.0	0.0	66.1	3.0	-1.5	0.0	0.0	4.8	0.0	0.0	15.3
557	429030.34	4758549.69	271.00	0	N	A	-39.1	9.3	0.0	0.0	0.0	66.1	3.0	-1.5	0.0	0.0	4.8	0.0	0.0	-102.2
557	429030.34	4758549.69	271.00	0	E	A	-39.1	9.3	0.0	0.0	0.0	66.1	3.0	-1.5	0.0	0.0	4.8	0.0	0.0	-102.2
575	428408.74	4758270.88	243.50	0	D	A	78.4	15.6	0.0	0.0	0.0	72.7	4.8	-1.2	0.0	0.0	10.0	0.0	0.0	7.7
575	428408.74	4758270.88	243.50	0	N	A	-39.1	15.6	0.0	0.0	0.0	72.7	4.8	-1.2	0.0	0.0	10.0	0.0	0.0	-109.8
575	428408.74	4758270.88	243.50	0	E	A	-39.1	15.6	0.0	0.0	0.0	72.7	4.8	-1.2	0.0	0.0	10.0	0.0	0.0	-109.8
596	428489.32	4757864.77	243.50	0	D	A	78.4	16.9	0.0	0.0	0.0	74.2	5.3	-1.7	0.0	0.0	13.2	0.0	0.0	4.3
596	428489.32	4757864.77	243.50	0	N	A	-39.1	16.9	0.0	0.0	0.0	74.2	5.3	-1.7	0.0	0.0	13.2	0.0	0.0	-113.2
596	428489.32	4757864.77	243.50	0	E	A	-39.1	16.9	0.0	0.0	0.0	74.2	5.3	-1.7	0.0	0.0	13.2	0.0	0.0	-113.2
603	429025.09	4758543.47	271.00	0	D	A	78.4	8.9	0.0	0.0	0.0	66.2	3.0	-1.5	0.0	0.0	4.8	0.0	0.0	14.8
603	429025.09	4758543.47	271.00	0	N	A	-39.1	8.9	0.0	0.0	0.0	66.2	3.0	-1.5	0.0	0.0	4.8	0.0	0.0	-102.6

Line Source, ISO 9613, Name: "Heavy Truck", ID: "I060203!Heavy Truck"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
603	429025.09	4758543.47	271.00	0	E	A	-39.1	8.9	0.0	0.0	0.0	66.2	3.0	-1.5	0.0	0.0	4.8	0.0	0.0	-102.6
604	428408.88	4758218.87	243.50	0	D	A	78.4	15.3	0.0	0.0	0.0	72.9	4.9	-1.1	0.0	0.0	10.0	0.0	0.0	7.1
604	428408.88	4758218.87	243.50	0	N	A	-39.1	15.3	0.0	0.0	0.0	72.9	4.9	-1.1	0.0	0.0	10.0	0.0	0.0	-110.4
604	428408.88	4758218.87	243.50	0	E	A	-39.1	15.3	0.0	0.0	0.0	72.9	4.9	-1.1	0.0	0.0	10.0	0.0	0.0	-110.4
606	429020.18	4758537.67	271.00	0	D	A	78.4	8.7	0.0	0.0	0.0	66.3	3.0	-1.6	0.0	0.0	4.8	0.0	0.0	14.5
606	429020.18	4758537.67	271.00	0	N	A	-39.1	8.7	0.0	0.0	0.0	66.3	3.0	-1.6	0.0	0.0	4.8	0.0	0.0	-103.0
606	429020.18	4758537.67	271.00	0	E	A	-39.1	8.7	0.0	0.0	0.0	66.3	3.0	-1.6	0.0	0.0	4.8	0.0	0.0	-103.0
662	428407.79	4758604.96	243.50	0	D	A	78.4	12.9	0.0	0.0	0.0	71.4	4.4	-1.3	0.0	0.0	9.0	0.0	0.0	7.8
662	428407.79	4758604.96	243.50	0	N	A	-39.1	12.9	0.0	0.0	0.0	71.4	4.4	-1.3	0.0	0.0	9.0	0.0	0.0	-109.7
662	428407.79	4758604.96	243.50	0	E	A	-39.1	12.9	0.0	0.0	0.0	71.4	4.4	-1.3	0.0	0.0	9.0	0.0	0.0	-109.7
722	429001.53	4757804.23	271.00	0	D	A	78.4	14.2	0.0	0.0	0.0	72.9	4.9	-1.7	0.0	0.0	4.5	0.0	0.0	12.0
722	429001.53	4757804.23	271.00	0	N	A	-39.1	14.2	0.0	0.0	0.0	72.9	4.9	-1.7	0.0	0.0	4.5	0.0	0.0	-105.5
722	429001.53	4757804.23	271.00	0	E	A	-39.1	14.2	0.0	0.0	0.0	72.9	4.9	-1.7	0.0	0.0	4.5	0.0	0.0	-105.5
724	428304.68	4758621.35	243.50	0	D	A	78.4	13.3	0.0	0.0	0.0	72.1	4.6	-0.7	0.0	0.0	5.2	0.0	0.0	10.5
724	428304.68	4758621.35	243.50	0	N	A	-39.1	13.3	0.0	0.0	0.0	72.1	4.6	-0.7	0.0	0.0	5.2	0.0	0.0	-107.0
724	428304.68	4758621.35	243.50	0	E	A	-39.1	13.3	0.0	0.0	0.0	72.1	4.6	-0.7	0.0	0.0	5.2	0.0	0.0	-107.0
753	428852.27	4757726.84	250.29	0	D	A	78.4	14.3	0.0	0.0	0.0	73.8	5.2	-1.8	0.0	0.0	15.4	0.0	0.0	0.2
753	428852.27	4757726.84	250.29	0	N	A	-39.1	14.3	0.0	0.0	0.0	73.8	5.2	-1.8	0.0	0.0	15.4	0.0	0.0	-117.3
753	428852.27	4757726.84	250.29	0	E	A	-39.1	14.3	0.0	0.0	0.0	73.8	5.2	-1.8	0.0	0.0	15.4	0.0	0.0	-117.3
839	429009.44	4758309.31	271.00	0	D	A	78.4	9.4	0.0	0.0	0.0	68.9	3.7	-1.7	0.0	0.0	4.6	0.0	0.0	12.4
839	429009.44	4758309.31	271.00	0	N	A	-39.1	9.4	0.0	0.0	0.0	68.9	3.7	-1.7	0.0	0.0	4.6	0.0	0.0	-105.1
839	429009.44	4758309.31	271.00	0	E	A	-39.1	9.4	0.0	0.0	0.0	68.9	3.7	-1.7	0.0	0.0	4.6	0.0	0.0	-105.1
880	428887.12	4757731.72	252.43	0	D	A	78.4	13.8	0.0	0.0	0.0	73.7	5.2	-1.8	0.0	0.0	14.9	0.0	0.0	0.4
880	428887.12	4757731.72	252.43	0	N	A	-39.1	13.8	0.0	0.0	0.0	73.7	5.2	-1.8	0.0	0.0	14.9	0.0	0.0	-117.1
880	428887.12	4757731.72	252.43	0	E	A	-39.1	13.8	0.0	0.0	0.0	73.7	5.2	-1.8	0.0	0.0	14.9	0.0	0.0	-117.1
897	428993.49	4757781.63	268.56	0	D	A	78.4	13.2	0.0	0.0	0.0	73.1	5.0	-1.8	0.0	0.0	4.5	0.0	0.0	10.8
897	428993.49	4757781.63	268.56	0	N	A	-39.1	13.2	0.0	0.0	0.0	73.1	5.0	-1.8	0.0	0.0	4.5	0.0	0.0	-106.7
897	428993.49	4757781.63	268.56	0	E	A	-39.1	13.2	0.0	0.0	0.0	73.1	5.0	-1.8	0.0	0.0	4.5	0.0	0.0	-106.7
920	428408.81	4758244.10	243.50	0	D	A	78.4	12.3	0.0	0.0	0.0	72.8	4.9	-1.1	0.0	0.0	10.0	0.0	0.0	4.2
920	428408.81	4758244.10	243.50	0	N	A	-39.1	12.3	0.0	0.0	0.0	72.8	4.9	-1.1	0.0	0.0	10.0	0.0	0.0	-113.3
920	428408.81	4758244.10	243.50	0	E	A	-39.1	12.3	0.0	0.0	0.0	72.8	4.9	-1.1	0.0	0.0	10.0	0.0	0.0	-113.3
926	428286.72	4758621.48	243.50	0	D	A	78.4	11.6	0.0	0.0	0.0	72.3	4.7	-0.6	0.0	0.0	4.9	0.0	0.0	8.8
926	428286.72	4758621.48	243.50	0	N	A	-39.1	11.6	0.0	0.0	0.0	72.3	4.7	-0.6	0.0	0.0	4.9	0.0	0.0	-108.7
926	428286.72	4758621.48	243.50	0	E	A	-39.1	11.6	0.0	0.0	0.0	72.3	4.7	-0.6	0.0	0.0	4.9	0.0	0.0	-108.7
928	428323.30	4758621.22	243.50	0	D	A	78.4	11.2	0.0	0.0	0.0	72.0	4.6	-0.7	0.0	0.0	5.5	0.0	0.0	8.2
928	428323.30	4758621.22	243.50	0	N	A	-39.1	11.2	0.0	0.0	0.0	72.0	4.6	-0.7	0.0	0.0	5.5	0.0	0.0	-109.2
928	428323.30	4758621.22	243.50	0	E	A	-39.1	11.2	0.0	0.0	0.0	72.0	4.6	-0.7	0.0	0.0	5.5	0.0	0.0	-109.2
1058	428762.36	4757721.37	243.50	0	D	A	78.4	12.8	0.0	0.0	0.0	74.0	5.3	-1.8	0.0	0.0	15.4	0.0	0.0	-1.8
1058	428762.36	4757721.37	243.50	0	N	A	-39.1	12.8	0.0	0.0	0.0	74.0	5.3	-1.8	0.0	0.0	15.4	0.0	0.0	-119.2
1058	428762.36	4757721.37	243.50	0	E	A	-39.1	12.8	0.0	0.0	0.0	74.0	5.3	-1.8	0.0	0.0	15.4	0.0	0.0	-119.2
1186	428434.81	4758202.13	243.50	0	D	A	78.4	10.3	0.0	0.0	0.0	72.8	4.9	-1.3	0.0	0.0	11.3	0.0	0.0	1.0
1186	428434.81	4758202.13	243.50	0	N	A	-39.1	10.3	0.0	0.0	0.0	72.8	4.9	-1.3	0.0	0.0	11.3	0.0	0.0	-116.4
1186	428434.81	4758202.13	243.50	0	E	A	-39.1	10.3	0.0	0.0	0.0	72.8	4.9	-1.3	0.0	0.0	11.3	0.0	0.0	-116.4
1200	428423.97	4758202.10	243.50	0	D	A	78.4	10.4	0.0	0.0	0.0	72.9	4.9	-1.2	0.0	0.0	10.7	0.0	0.0	1.5
1200	428423.97	4758202.10	243.50	0	N	A	-39.1	10.4	0.0	0.0	0.0	72.9	4.9	-1.2	0.0	0.0	10.7	0.0	0.0	-116.0
1200	428423.97	4758202.10	243.50	0	E	A	-39.1	10.4	0.0	0.0	0.0	72.9	4.9	-1.2	0.0	0.0	10.7	0.0	0.0	-116.0
1214	428832.09	4757725.61	249.54	0	D	A	78.4	11.3	0.0	0.0	0.0	73.8	5.2	-1.8	0.0	0.0	15.4	0.0	0.0	-2.9
1214	428832.09	4757725.61	249.54	0	N	A	-39.1	11.3	0.0	0.0	0.0	73.8	5.2	-1.8	0.0	0.0	15.4	0.0	0.0	-120.4
1214	428832.09	4757725.61	249.54	0	E	A	-39.1	11.3	0.0	0.0	0.0	73.8	5.2	-1.8	0.0	0.0	15.4	0.0	0.0	-120.4
1268	428916.95	4757740.67	257.72	0	D	A	78.4	10.6	0.0	0.0	0.0	73.5	5.1	-1.8	0.0	0.0	12.3	0.0	0.0	-0.0
1268	428916.95	4757740.67	257.72	0	N	A	-39.1	10.6	0.0	0.0	0.0	73.5	5.1	-1.8	0.0	0.0	12.3	0.0	0.0	-117.5
1268	428916.95	4757740.67	257.72	0	E	A	-39.1	10.6	0.0	0.0	0.0	73.5	5.1	-1.8	0.0	0.0	12.3	0.0	0.0	-117.5
1281	428487.83	4758202.28	243.50	0	D	A	78.4	9.6	0.0	0.0	0.0	72.5	4.8	-1.8	0.0	0.0	14.9	0.0	0.0	-2.4
1281	428487.83	4758202.28	243.50	0	N	A	-39.1	9.6	0.0	0.0	0.0	72.5	4.8	-1.8	0.0	0.0	14.9	0.0	0.0	-119.9
1281	428487.83	4758202.28	243.50	0	E	A	-39.1	9.6	0.0	0.0	0.0	72.5	4.8	-1.8	0.0	0.0	14.9	0.0	0.0	-119.9
1320	428413.72	4758202.07	243.50	0	D	A	78.4	9.8	0.0	0.0	0.0	72.9	4.9	-1.1	0.0	0.0	10.2	0.0	0.0	1.3
1320	428413.72	4758202.07	243.50	0	N	A	-39.1	9.8	0.0	0.0	0.0	72.9	4.9	-1.1	0.0	0.0	10.2	0.0	0.0	-116.1
1320	428413.72	4758202.07	243.50	0	E	A	-39.1	9.8	0.0	0.0	0.0	72.9	4.9	-1.1	0.0	0.0	10.2	0.0	0.0	-116.1
1505	428870.65	4757727.95	251.02	0	D	A	78.4	9.9	0.0	0.0	0.0	73.7	5.2	-1.8	0.0	0.0	15.3	0.0	0.0	-4.0
1505	428870.65	4757727.95	251.02	0	N	A	-39.1	9.9	0.0	0.0	0.0	73.7	5.2	-1.8	0.0	0.0	15.3	0.0	0.0	-121.5
1505	428870.65	4757727.95	251.02	0	E	A	-39.1	9.9	0.0	0.0	0.0	73.7	5.2	-1.8	0.0	0.0	15.3	0.0	0.0	-121.5
1547	428907.32	4757737.78	255.38	0	D	A	78.4	9.7	0.0	0.0	0.0	73.6	5.1	-1.8	0.0	0.0	13.7	0.0	0.0	-2.4
1547	428907.32	4757737.78	255.38	0	N	A	-39.1	9.7	0.0	0.0	0.0	73.6	5.1	-1.8	0.0	0.0	13.7	0.0	0.0	-119.9

Line Source, ISO 9613, Name: "Heavy Truck", ID: "I060203!Heavy Truck"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
1547	428907.32	4757737.78	255.38	0	E	A	-39.1	9.7	0.0	0.0	0.0	73.6	5.1	-1.8	0.0	0.0	13.7	0.0	0.0	-119.9
1624	428488.98	4757827.70	243.50	0	D	A	78.4	10.3	0.0	0.0	0.0	74.3	5.4	-1.7	0.0	0.0	13.0	0.0	0.0	-2.4
1624	428488.98	4757827.70	243.50	0	N	A	-39.1	10.3	0.0	0.0	0.0	74.3	5.4	-1.7	0.0	0.0	13.0	0.0	0.0	-119.9
1624	428488.98	4757827.70	243.50	0	E	A	-39.1	10.3	0.0	0.0	0.0	74.3	5.4	-1.7	0.0	0.0	13.0	0.0	0.0	-119.9
1638	428407.76	4758617.93	243.50	0	D	A	78.4	7.3	0.0	0.0	0.0	71.4	4.4	-1.1	0.0	0.0	8.8	0.0	0.0	2.2
1638	428407.76	4758617.93	243.50	0	N	A	-39.1	7.3	0.0	0.0	0.0	71.4	4.4	-1.1	0.0	0.0	8.8	0.0	0.0	-115.3
1638	428407.76	4758617.93	243.50	0	E	A	-39.1	7.3	0.0	0.0	0.0	71.4	4.4	-1.1	0.0	0.0	8.8	0.0	0.0	-115.3
1651	428493.95	4757822.39	243.50	0	D	A	78.4	10.0	0.0	0.0	0.0	74.4	5.4	-1.6	0.0	0.0	13.3	0.0	0.0	-3.0
1651	428493.95	4757822.39	243.50	0	N	A	-39.1	10.0	0.0	0.0	0.0	74.4	5.4	-1.6	0.0	0.0	13.3	0.0	0.0	-120.5
1651	428493.95	4757822.39	243.50	0	E	A	-39.1	10.0	0.0	0.0	0.0	74.4	5.4	-1.6	0.0	0.0	13.3	0.0	0.0	-120.5
1956	428489.07	4757836.65	243.50	0	D	A	78.4	8.6	0.0	0.0	0.0	74.3	5.4	-1.7	0.0	0.0	13.1	0.0	0.0	-4.1
1956	428489.07	4757836.65	243.50	0	N	A	-39.1	8.6	0.0	0.0	0.0	74.3	5.4	-1.7	0.0	0.0	13.1	0.0	0.0	-121.6
1956	428489.07	4757836.65	243.50	0	E	A	-39.1	8.6	0.0	0.0	0.0	74.3	5.4	-1.7	0.0	0.0	13.1	0.0	0.0	-121.6
2156	428900.97	4757735.87	253.50	0	D	A	78.4	6.8	0.0	0.0	0.0	73.6	5.1	-1.8	0.0	0.0	14.7	0.0	0.0	-6.4
2156	428900.97	4757735.87	253.50	0	N	A	-39.1	6.8	0.0	0.0	0.0	73.6	5.1	-1.8	0.0	0.0	14.7	0.0	0.0	-123.9
2156	428900.97	4757735.87	253.50	0	E	A	-39.1	6.8	0.0	0.0	0.0	73.6	5.1	-1.8	0.0	0.0	14.7	0.0	0.0	-123.9
2927	428316.04	4758621.27	243.50	0	D	A	78.4	0.8	0.0	0.0	0.0	72.0	4.6	-0.7	0.0	0.0	5.4	0.0	0.0	-2.2
2927	428316.04	4758621.27	243.50	0	N	A	-39.1	0.8	0.0	0.0	0.0	72.0	4.6	-0.7	0.0	0.0	5.4	0.0	0.0	-119.7
2927	428316.04	4758621.27	243.50	0	E	A	-39.1	0.8	0.0	0.0	0.0	72.0	4.6	-0.7	0.0	0.0	5.4	0.0	0.0	-119.7
2996	428626.45	4757823.62	243.50	0	D	A	78.4	1.7	0.0	0.0	0.0	73.9	5.2	-1.6	0.0	0.0	15.9	0.0	0.0	-13.3
2996	428626.45	4757823.62	243.50	0	N	A	-39.1	1.7	0.0	0.0	0.0	73.9	5.2	-1.6	0.0	0.0	15.9	0.0	0.0	-130.7
2996	428626.45	4757823.62	243.50	0	E	A	-39.1	1.7	0.0	0.0	0.0	73.9	5.2	-1.6	0.0	0.0	15.9	0.0	0.0	-130.7
3245	428407.77	4758614.98	243.50	0	D	A	78.4	-2.4	0.0	0.0	0.0	71.4	4.4	-1.3	0.0	0.0	8.9	0.0	0.0	-7.4
3245	428407.77	4758614.98	243.50	0	N	A	-39.1	-2.4	0.0	0.0	0.0	71.4	4.4	-1.3	0.0	0.0	8.9	0.0	0.0	-124.9
3245	428407.77	4758614.98	243.50	0	E	A	-39.1	-2.4	0.0	0.0	0.0	71.4	4.4	-1.3	0.0	0.0	8.9	0.0	0.0	-124.9
3344	428997.00	4757791.52	271.00	0	D	A	78.4	-1.9	0.0	0.0	0.0	73.0	4.9	-1.7	0.0	0.0	4.5	0.0	0.0	-4.3
3344	428997.00	4757791.52	271.00	0	N	A	-39.1	-1.9	0.0	0.0	0.0	73.0	4.9	-1.7	0.0	0.0	4.5	0.0	0.0	-121.8
3344	428997.00	4757791.52	271.00	0	E	A	-39.1	-1.9	0.0	0.0	0.0	73.0	4.9	-1.7	0.0	0.0	4.5	0.0	0.0	-121.8
3395	428407.82	4758595.13	243.50	0	D	A	78.4	-7.4	0.0	0.0	0.0	71.4	4.4	-1.1	0.0	0.0	9.0	0.0	0.0	-12.7
3395	428407.82	4758595.13	243.50	0	N	A	-39.1	-7.4	0.0	0.0	0.0	71.4	4.4	-1.1	0.0	0.0	9.0	0.0	0.0	-130.2
3395	428407.82	4758595.13	243.50	0	E	A	-39.1	-7.4	0.0	0.0	0.0	71.4	4.4	-1.1	0.0	0.0	9.0	0.0	0.0	-130.2

Line Source, ISO 9613, Name: "Haul Truck (Cover Activity)", ID: "I060203!Haul Truck_Cover Activity"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
178	429083.65	4758615.53	271.00	0	D	A	74.3	21.3	0.0	0.0	0.0	64.7	2.2	-1.6	0.0	0.0	4.9	0.0	0.0	25.4
178	429083.65	4758615.53	271.00	0	N	A	-33.5	21.3	0.0	0.0	0.0	64.7	2.2	-1.6	0.0	0.0	4.9	0.0	0.0	-82.4
178	429083.65	4758615.53	271.00	0	E	A	-33.5	21.3	0.0	0.0	0.0	64.7	2.2	-1.6	0.0	0.0	4.9	0.0	0.0	-82.4
186	429006.62	4757984.28	271.00	0	D	A	74.3	25.3	0.0	0.0	0.0	71.7	4.1	-2.0	0.0	0.0	4.7	0.0	0.0	21.2
186	429006.62	4757984.28	271.00	0	N	A	-33.5	25.3	0.0	0.0	0.0	71.7	4.1	-2.0	0.0	0.0	4.7	0.0	0.0	-86.6
186	429006.62	4757984.28	271.00	0	E	A	-33.5	25.3	0.0	0.0	0.0	71.7	4.1	-2.0	0.0	0.0	4.7	0.0	0.0	-86.6
234	429008.94	4758468.81	271.00	0	D	A	74.3	20.6	0.0	0.0	0.0	67.2	2.8	-1.8	0.0	0.0	5.0	0.0	0.0	21.8
234	429008.94	4758468.81	271.00	0	N	A	-33.5	20.6	0.0	0.0	0.0	67.2	2.8	-1.8	0.0	0.0	5.0	0.0	0.0	-86.0
234	429008.94	4758468.81	271.00	0	E	A	-33.5	20.6	0.0	0.0	0.0	67.2	2.8	-1.8	0.0	0.0	5.0	0.0	0.0	-86.0
278	429007.79	4758229.18	271.00	0	D	A	74.3	21.7	0.0	0.0	0.0	69.6	3.4	-1.9	0.0	0.0	4.7	0.0	0.0	20.2
278	429007.79	4758229.18	271.00	0	N	A	-33.5	21.7	0.0	0.0	0.0	69.6	3.4	-1.9	0.0	0.0	4.7	0.0	0.0	-87.6
278	429007.79	4758229.18	271.00	0	E	A	-33.5	21.7	0.0	0.0	0.0	69.6	3.4	-1.9	0.0	0.0	4.7	0.0	0.0	-87.6
359	428991.86	4757661.98	243.50	0	D	A	74.3	24.6	0.0	0.0	0.0	73.9	5.0	-1.9	0.0	0.0	13.9	0.0	0.0	8.1
359	428991.86	4757661.98	243.50	0	N	A	-33.5	24.6	0.0	0.0	0.0	73.9	5.0	-1.9	0.0	0.0	13.9	0.0	0.0	-99.7
359	428991.86	4757661.98	243.50	0	E	A	-33.5	24.6	0.0	0.0	0.0	73.9	5.0	-1.9	0.0	0.0	13.9	0.0	0.0	-99.7
377	429008.35	4758345.78	271.00	0	D	A	74.3	18.3	0.0	0.0	0.0	68.5	3.1	-1.9	0.0	0.0	4.7	0.0	0.0	18.1
377	429008.35	4758345.78	271.00	0	N	A	-33.5	18.3	0.0	0.0	0.0	68.5	3.1	-1.9	0.0	0.0	4.7	0.0	0.0	-89.7
377	429008.35	4758345.78	271.00	0	E	A	-33.5	18.3	0.0	0.0	0.0	68.5	3.1	-1.9	0.0	0.0	4.7	0.0	0.0	-89.7
601	429166.32	4757479.10	246.17	0	D	A	74.3	21.3	0.0	0.0	0.0	74.7	5.3	-1.2	0.0	0.0	4.5	0.0	0.0	12.2
601	429166.32	4757479.10	246.17	0	N	A	-33.5	21.3	0.0	0.0	0.0	74.7	5.3	-1.2	0.0	0.0	4.5	0.0	0.0	-95.6
601	429166.32	4757479.10	246.17	0	E	A	-33.5	21.3	0.0	0.0	0.0	74.7	5.3	-1.2	0.0	0.0	4.5	0.0	0.0	-95.6
691	428956.71	4757756.84	262.06	0	D	A	74.3	18.7	0.0	0.0	0.0	73.3	4.7	-2.1	0.0	0.0	11.4	0.0	0.0	5.6
691	428956.71	4757756.84	262.06	0	N	A	-33.5	18.7	0.0	0.0	0.0	73.3	4.7	-2.1	0.0	0.0	11.4	0.0	0.0	-102.2
691	428956.71	4757756.84	262.06	0	E	A	-33.5	18.7	0.0	0.0	0.0	73.3	4.7	-2.1	0.0	0.0	11.4	0.0	0.0	-102.2
728	429036.15	4758558.87	271.00	0	D	A	74.3	10.9	0.0	0.0	0.0	65.9	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	13.5
728	429036.15	4758558.87	271.00	0	N	A	-33.5	10.9	0.0	0.0	0.0	65.9	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-94.2
728	429036.15	4758558.87	271.00	0	E	A	-33.5	10.9	0.0	0.0	0.0	65.9	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-94.2
743	429166.33	4757629.19	243.50	0	D	A	74.3	18.4	0.0	0.0	0.0	73.8	4.9	-0.6	0.0	0.0	4.4	0.0	0.0	10.2

Line Source, ISO 9613, Name: "Haul Truck (Cover Activity)", ID: "I060203!Haul Truck Cover Activity"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
743	429166.33	4757629.19	243.50	0	N	A	-33.5	18.4	0.0	0.0	0.0	73.8	4.9	-0.6	0.0	0.0	4.4	0.0	0.0	-97.6
743	429166.33	4757629.19	243.50	0	E	A	-33.5	18.4	0.0	0.0	0.0	73.8	4.9	-0.6	0.0	0.0	4.4	0.0	0.0	-97.6
872	429013.15	4758531.43	271.00	0	D	A	74.3	10.9	0.0	0.0	0.0	66.5	2.6	-1.7	0.0	0.0	4.9	0.0	0.0	12.9
872	429013.15	4758531.43	271.00	0	N	A	-33.5	10.9	0.0	0.0	0.0	66.5	2.6	-1.7	0.0	0.0	4.9	0.0	0.0	-94.9
872	429013.15	4758531.43	271.00	0	E	A	-33.5	10.9	0.0	0.0	0.0	66.5	2.6	-1.7	0.0	0.0	4.9	0.0	0.0	-94.9
875	428787.86	4757695.90	243.50	0	D	A	74.3	18.5	0.0	0.0	0.0	74.1	5.1	-2.0	0.0	0.0	16.3	0.0	0.0	-0.7
875	428787.86	4757695.90	243.50	0	N	A	-33.5	18.5	0.0	0.0	0.0	74.1	5.1	-2.0	0.0	0.0	16.3	0.0	0.0	-108.4
875	428787.86	4757695.90	243.50	0	E	A	-33.5	18.5	0.0	0.0	0.0	74.1	5.1	-2.0	0.0	0.0	16.3	0.0	0.0	-108.4
878	429008.62	4758402.41	271.00	0	D	A	74.3	12.3	0.0	0.0	0.0	67.9	2.9	-1.8	0.0	0.0	4.8	0.0	0.0	12.7
878	429008.62	4758402.41	271.00	0	N	A	-33.5	12.3	0.0	0.0	0.0	67.9	2.9	-1.8	0.0	0.0	4.8	0.0	0.0	-95.1
878	429008.62	4758402.41	271.00	0	E	A	-33.5	12.3	0.0	0.0	0.0	67.9	2.9	-1.8	0.0	0.0	4.8	0.0	0.0	-95.1
922	429008.55	4758386.65	271.00	0	D	A	74.3	11.6	0.0	0.0	0.0	68.1	3.0	-1.9	0.0	0.0	4.8	0.0	0.0	11.9
922	429008.55	4758386.65	271.00	0	N	A	-33.5	11.6	0.0	0.0	0.0	68.1	3.0	-1.9	0.0	0.0	4.8	0.0	0.0	-95.9
922	429008.55	4758386.65	271.00	0	E	A	-33.5	11.6	0.0	0.0	0.0	68.1	3.0	-1.9	0.0	0.0	4.8	0.0	0.0	-95.9
932	428800.07	4757721.88	246.27	0	D	A	74.3	17.1	0.0	0.0	0.0	73.9	5.0	-2.1	0.0	0.0	17.3	0.0	0.0	-2.7
932	428800.07	4757721.88	246.27	0	N	A	-33.5	17.1	0.0	0.0	0.0	73.9	5.0	-2.1	0.0	0.0	17.3	0.0	0.0	-110.5
932	428800.07	4757721.88	246.27	0	E	A	-33.5	17.1	0.0	0.0	0.0	73.9	5.0	-2.1	0.0	0.0	17.3	0.0	0.0	-110.5
934	429029.51	4758550.94	271.00	0	D	A	74.3	9.3	0.0	0.0	0.0	66.1	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	11.7
934	429029.51	4758550.94	271.00	0	N	A	-33.5	9.3	0.0	0.0	0.0	66.1	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-96.1
934	429029.51	4758550.94	271.00	0	E	A	-33.5	9.3	0.0	0.0	0.0	66.1	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-96.1
989	429091.58	4757353.31	252.23	0	D	A	74.3	14.6	0.0	0.0	0.0	75.4	5.7	-1.6	0.0	0.0	5.2	0.0	0.0	4.2
989	429091.58	4757353.31	252.23	0	N	A	-33.5	14.6	0.0	0.0	0.0	75.4	5.7	-1.6	0.0	0.0	5.2	0.0	0.0	-103.6
989	429091.58	4757353.31	252.23	0	E	A	-33.5	14.6	0.0	0.0	0.0	75.4	5.7	-1.6	0.0	0.0	5.2	0.0	0.0	-103.6
1006	429121.26	4757357.09	252.29	0	D	A	74.3	14.9	0.0	0.0	0.0	75.4	5.6	-1.5	0.0	0.0	4.9	0.0	0.0	4.6
1006	429121.26	4757357.09	252.29	0	N	A	-33.5	14.9	0.0	0.0	0.0	75.4	5.6	-1.5	0.0	0.0	4.9	0.0	0.0	-103.1
1006	429121.26	4757357.09	252.29	0	E	A	-33.5	14.9	0.0	0.0	0.0	75.4	5.6	-1.5	0.0	0.0	4.9	0.0	0.0	-103.1
1034	429137.33	4757359.14	252.33	0	D	A	74.3	2.3	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-7.7
1034	429137.33	4757359.14	252.33	0	N	A	-33.5	2.3	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-115.4
1034	429137.33	4757359.14	252.33	0	E	A	-33.5	2.3	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-115.4
1043	429142.91	4757359.85	252.34	0	D	A	74.3	9.8	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-0.1
1043	429142.91	4757359.85	252.34	0	N	A	-33.5	9.8	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-107.9
1043	429142.91	4757359.85	252.34	0	E	A	-33.5	9.8	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-107.9
1086	429166.33	4757570.55	244.06	0	D	A	74.3	16.8	0.0	0.0	0.0	74.2	5.1	-1.0	0.0	0.0	4.5	0.0	0.0	8.4
1086	429166.33	4757570.55	244.06	0	N	A	-33.5	16.8	0.0	0.0	0.0	74.2	5.1	-1.0	0.0	0.0	4.5	0.0	0.0	-99.4
1086	429166.33	4757570.55	244.06	0	E	A	-33.5	16.8	0.0	0.0	0.0	74.2	5.1	-1.0	0.0	0.0	4.5	0.0	0.0	-99.4
1100	429024.31	4758544.74	271.00	0	D	A	74.3	8.9	0.0	0.0	0.0	66.2	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	11.2
1100	429024.31	4758544.74	271.00	0	N	A	-33.5	8.9	0.0	0.0	0.0	66.2	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-96.5
1100	429024.31	4758544.74	271.00	0	E	A	-33.5	8.9	0.0	0.0	0.0	66.2	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-96.5
1128	429019.45	4758538.94	271.00	0	D	A	74.3	8.7	0.0	0.0	0.0	66.3	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	10.9
1128	429019.45	4758538.94	271.00	0	N	A	-33.5	8.7	0.0	0.0	0.0	66.3	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-96.9
1128	429019.45	4758538.94	271.00	0	E	A	-33.5	8.7	0.0	0.0	0.0	66.3	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-96.9
1242	429150.63	4757663.65	243.50	0	D	A	74.3	15.0	0.0	0.0	0.0	73.6	4.9	-1.2	0.0	0.0	4.5	0.0	0.0	7.4
1242	429150.63	4757663.65	243.50	0	N	A	-33.5	15.0	0.0	0.0	0.0	73.6	4.9	-1.2	0.0	0.0	4.5	0.0	0.0	-100.3
1242	429150.63	4757663.65	243.50	0	E	A	-33.5	15.0	0.0	0.0	0.0	73.6	4.9	-1.2	0.0	0.0	4.5	0.0	0.0	-100.3
1294	429071.09	4757267.80	263.50	0	D	A	74.3	16.9	0.0	0.0	0.0	75.9	5.9	-1.6	0.0	0.0	4.6	0.0	0.0	6.5
1294	429071.09	4757267.80	263.50	0	N	A	-33.5	16.9	0.0	0.0	0.0	75.9	5.9	-1.6	0.0	0.0	4.6	0.0	0.0	-101.3
1294	429071.09	4757267.80	263.50	0	E	A	-33.5	16.9	0.0	0.0	0.0	75.9	5.9	-1.6	0.0	0.0	4.6	0.0	0.0	-101.3
1362	429001.77	4757802.71	271.00	0	D	A	74.3	13.7	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	7.7
1362	429001.77	4757802.71	271.00	0	N	A	-33.5	13.7	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.1
1362	429001.77	4757802.71	271.00	0	E	A	-33.5	13.7	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.1
1418	429008.17	4758307.81	271.00	0	D	A	74.3	9.4	0.0	0.0	0.0	68.9	3.2	-1.9	0.0	0.0	4.7	0.0	0.0	8.8
1418	429008.17	4758307.81	271.00	0	N	A	-33.5	9.4	0.0	0.0	0.0	68.9	3.2	-1.9	0.0	0.0	4.7	0.0	0.0	-99.0
1418	429008.17	4758307.81	271.00	0	E	A	-33.5	9.4	0.0	0.0	0.0	68.9	3.2	-1.9	0.0	0.0	4.7	0.0	0.0	-99.0
1447	428852.12	4757726.27	250.22	0	D	A	74.3	14.3	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-4.8
1447	428852.12	4757726.27	250.22	0	N	A	-33.5	14.3	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-112.6
1447	428852.12	4757726.27	250.22	0	E	A	-33.5	14.3	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-112.6
1534	429166.32	4757394.26	248.10	0	D	A	74.3	15.4	0.0	0.0	0.0	75.2	5.5	-1.2	0.0	0.0	4.5	0.0	0.0	5.7
1534	429166.32	4757394.26	248.10	0	N	A	-33.5	15.4	0.0	0.0	0.0	75.2	5.5	-1.2	0.0	0.0	4.5	0.0	0.0	-102.1
1534	429166.32	4757394.26	248.10	0	E	A	-33.5	15.4	0.0	0.0	0.0	75.2	5.5	-1.2	0.0	0.0	4.5	0.0	0.0	-102.1
1572	428887.25	4757731.64	252.43	0	D	A	74.3	13.9	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.3	0.0	0.0	-4.5
1572	428887.25	4757731.64	252.43	0	N	A	-33.5	13.9	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.3	0.0	0.0	-112.3
1572	428887.25	4757731.64	252.43	0	E	A	-33.5	13.9	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.3	0.0	0.0	-112.3
1586	428993.91	4757781.43	268.51	0	D	A	74.3	13.3	0.0	0.0	0.0	73.1	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	7.2

Line Source, ISO 9613, Name: "Haul Truck (Cover Activity)", ID: "060203!Haul Truck_Cover Activity"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
1586	428993.91	4757781.43	268.51	0	N	A	-33.5	13.3	0.0	0.0	0.0	73.1	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.6
1586	428993.91	4757781.43	268.51	0	E	A	-33.5	13.3	0.0	0.0	0.0	73.1	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.6
1718	429013.60	4757343.36	256.78	0	D	A	74.3	7.4	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-2.6
1718	429013.60	4757343.36	256.78	0	N	A	-33.5	7.4	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-110.3
1718	429013.60	4757343.36	256.78	0	E	A	-33.5	7.4	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-110.3
1731	429020.36	4757344.23	256.66	0	D	A	74.3	9.1	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-0.8
1731	429020.36	4757344.23	256.66	0	N	A	-33.5	9.1	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.6
1731	429020.36	4757344.23	256.66	0	E	A	-33.5	9.1	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.6
1745	429034.14	4757345.98	256.42	0	D	A	74.3	12.9	0.0	0.0	0.0	75.5	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	3.0
1745	429034.14	4757345.98	256.42	0	N	A	-33.5	12.9	0.0	0.0	0.0	75.5	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-104.8
1745	429034.14	4757345.98	256.42	0	E	A	-33.5	12.9	0.0	0.0	0.0	75.5	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-104.8
1758	429038.99	4757286.80	263.50	0	D	A	74.3	15.3	0.0	0.0	0.0	75.8	5.8	-1.5	0.0	0.0	4.6	0.0	0.0	4.9
1758	429038.99	4757286.80	263.50	0	N	A	-33.5	15.3	0.0	0.0	0.0	75.8	5.8	-1.5	0.0	0.0	4.6	0.0	0.0	-102.9
1758	429038.99	4757286.80	263.50	0	E	A	-33.5	15.3	0.0	0.0	0.0	75.8	5.8	-1.5	0.0	0.0	4.6	0.0	0.0	-102.9
1842	429150.61	4757255.65	267.01	0	D	A	74.3	15.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	4.3
1842	429150.61	4757255.65	267.01	0	N	A	-33.5	15.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-103.5
1842	429150.61	4757255.65	267.01	0	E	A	-33.5	15.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-103.5
1856	428823.12	4757666.77	243.50	0	D	A	74.3	13.1	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.9	0.0	0.0	-4.8
1856	428823.12	4757666.77	243.50	0	N	A	-33.5	13.1	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.9	0.0	0.0	-112.6
1856	428823.12	4757666.77	243.50	0	E	A	-33.5	13.1	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.9	0.0	0.0	-112.6
1881	429024.09	4757316.60	261.77	0	D	A	74.3	12.6	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	2.4
1881	429024.09	4757316.60	261.77	0	N	A	-33.5	12.6	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-105.4
1881	429024.09	4757316.60	261.77	0	E	A	-33.5	12.6	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-105.4
1895	429018.04	4757328.70	260.19	0	D	A	74.3	9.6	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-0.4
1895	429018.04	4757328.70	260.19	0	N	A	-33.5	9.6	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.2
1895	429018.04	4757328.70	260.19	0	E	A	-33.5	9.6	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.2
1995	429233.79	4757242.94	268.50	0	D	A	74.3	13.8	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	3.0
1995	429233.79	4757242.94	268.50	0	N	A	-33.5	13.8	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-104.8
1995	429233.79	4757242.94	268.50	0	E	A	-33.5	13.8	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-104.8
2019	429066.63	4757350.13	252.93	0	D	A	74.3	13.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.2	0.0	0.0	2.7
2019	429066.63	4757350.13	252.93	0	N	A	-33.5	13.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.2	0.0	0.0	-105.1
2019	429066.63	4757350.13	252.93	0	E	A	-33.5	13.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.2	0.0	0.0	-105.1
2071	428767.54	4757719.14	243.50	0	D	A	74.3	11.5	0.0	0.0	0.0	74.0	5.0	-2.1	0.0	0.0	16.9	0.0	0.0	-8.1
2071	428767.54	4757719.14	243.50	0	N	A	-33.5	11.5	0.0	0.0	0.0	74.0	5.0	-2.1	0.0	0.0	16.9	0.0	0.0	-115.9
2071	428767.54	4757719.14	243.50	0	E	A	-33.5	11.5	0.0	0.0	0.0	74.0	5.0	-2.1	0.0	0.0	16.9	0.0	0.0	-115.9
2113	428832.08	4757724.58	249.42	0	D	A	74.3	11.2	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-8.0
2113	428832.08	4757724.58	249.42	0	N	A	-33.5	11.2	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-115.7
2113	428832.08	4757724.58	249.42	0	E	A	-33.5	11.2	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-115.7
2126	428917.31	4757740.34	257.63	0	D	A	74.3	10.8	0.0	0.0	0.0	73.5	4.8	-2.1	0.0	0.0	13.5	0.0	0.0	-4.6
2126	428917.31	4757740.34	257.63	0	N	A	-33.5	10.8	0.0	0.0	0.0	73.5	4.8	-2.1	0.0	0.0	13.5	0.0	0.0	-112.4
2126	428917.31	4757740.34	257.63	0	E	A	-33.5	10.8	0.0	0.0	0.0	73.5	4.8	-2.1	0.0	0.0	13.5	0.0	0.0	-112.4
2181	429124.90	4757259.58	265.53	0	D	A	74.3	13.1	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	2.5
2181	429124.90	4757259.58	265.53	0	N	A	-33.5	13.1	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-105.3
2181	429124.90	4757259.58	265.53	0	E	A	-33.5	13.1	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-105.3
2250	428870.57	4757727.83	251.00	0	D	A	74.3	10.0	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.7	0.0	0.0	-8.9
2250	428870.57	4757727.83	251.00	0	N	A	-33.5	10.0	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.7	0.0	0.0	-116.7
2250	428870.57	4757727.83	251.00	0	E	A	-33.5	10.0	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.7	0.0	0.0	-116.7
2289	428907.48	4757737.49	255.34	0	D	A	74.3	9.6	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	15.0	0.0	0.0	-7.4
2289	428907.48	4757737.49	255.34	0	N	A	-33.5	9.6	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	15.0	0.0	0.0	-115.2
2289	428907.48	4757737.49	255.34	0	E	A	-33.5	9.6	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	15.0	0.0	0.0	-115.2
2303	429210.89	4757246.44	268.50	0	D	A	74.3	11.8	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	1.1
2303	429210.89	4757246.44	268.50	0	N	A	-33.5	11.8	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-106.7
2303	429210.89	4757246.44	268.50	0	E	A	-33.5	11.8	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-106.7
2343	429046.20	4757347.52	255.76	0	D	A	74.3	6.8	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-3.1
2343	429046.20	4757347.52	255.76	0	N	A	-33.5	6.8	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-110.9
2343	429046.20	4757347.52	255.76	0	E	A	-33.5	6.8	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-110.9
2356	429049.06	4757347.88	255.15	0	D	A	74.3	0.4	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-9.5
2356	429049.06	4757347.88	255.15	0	N	A	-33.5	0.4	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-117.3
2356	429049.06	4757347.88	255.15	0	E	A	-33.5	0.4	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-117.3
2371	429052.87	4757348.37	254.35	0	D	A	74.3	8.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.1	0.0	0.0	-2.2
2371	429052.87	4757348.37	254.35	0	N	A	-33.5	8.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.1	0.0	0.0	-110.0
2371	429052.87	4757348.37	254.35	0	E	A	-33.5	8.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.1	0.0	0.0	-110.0
2467	429015.28	4757334.22	259.25	0	D	A	74.3	5.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-4.8

Line Source, ISO 9613, Name: "Haul Truck (Cover Activity)", ID: "!060203!Haul Truck Cover Activity"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahou	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
2467	429015.28	4757334.22	259.25	0	N	A	-33.5	5.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-112.5
2467	429015.28	4757334.22	259.25	0	E	A	-33.5	5.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-112.5
2481	429012.72	4757339.35	257.84	0	D	A	74.3	9.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-0.7
2481	429012.72	4757339.35	257.84	0	N	A	-33.5	9.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.5
2481	429012.72	4757339.35	257.84	0	E	A	-33.5	9.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.5
2525	429188.00	4757249.94	268.50	0	D	A	74.3	10.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-0.2
2525	429188.00	4757249.94	268.50	0	N	A	-33.5	10.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-108.0
2525	429188.00	4757249.94	268.50	0	E	A	-33.5	10.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-108.0
2539	428845.13	4757660.44	243.50	0	D	A	74.3	8.7	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.6	0.0	0.0	-8.8
2539	428845.13	4757660.44	243.50	0	N	A	-33.5	8.7	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.6	0.0	0.0	-116.6
2539	428845.13	4757660.44	243.50	0	E	A	-33.5	8.7	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.6	0.0	0.0	-116.6
2620	429166.32	4757367.17	249.56	0	D	A	74.3	9.5	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-0.4
2620	429166.32	4757367.17	249.56	0	N	A	-33.5	9.5	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-108.2
2620	429166.32	4757367.17	249.56	0	E	A	-33.5	9.5	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-108.2
2648	428837.40	4757660.36	243.50	0	D	A	74.3	8.3	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-9.2
2648	428837.40	4757660.36	243.50	0	N	A	-33.5	8.3	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-117.0
2648	428837.40	4757660.36	243.50	0	E	A	-33.5	8.3	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-117.0
2716	429178.35	4757251.41	268.12	0	D	A	74.3	9.2	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-1.5
2716	429178.35	4757251.41	268.12	0	N	A	-33.5	9.2	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.3
2716	429178.35	4757251.41	268.12	0	E	A	-33.5	9.2	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.3
2756	429110.92	4757261.72	264.29	0	D	A	74.3	9.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-1.5
2756	429110.92	4757261.72	264.29	0	N	A	-33.5	9.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-109.3
2756	429110.92	4757261.72	264.29	0	E	A	-33.5	9.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-109.3
2812	429162.91	4757362.40	251.42	0	D	A	74.3	8.5	0.0	0.0	0.0	75.3	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-1.5
2812	429162.91	4757362.40	251.42	0	N	A	-33.5	8.5	0.0	0.0	0.0	75.3	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.3
2812	429162.91	4757362.40	251.42	0	E	A	-33.5	8.5	0.0	0.0	0.0	75.3	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.3
2831	429159.62	4757361.98	252.20	1	D	A	74.3	-6.5	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-80.0
2831	429159.62	4757361.98	252.20	1	N	A	-33.5	-6.5	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-187.7
2831	429159.62	4757361.98	252.20	1	E	A	-33.5	-6.5	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-187.7
2859	429170.30	4757252.64	267.68	0	D	A	74.3	9.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-1.7
2859	429170.30	4757252.64	267.68	0	N	A	-33.5	9.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.5
2859	429170.30	4757252.64	267.68	0	E	A	-33.5	9.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.5
2875	428901.20	4757735.67	253.50	0	D	A	74.3	6.7	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	16.0	0.0	0.0	-11.4
2875	428901.20	4757735.67	253.50	0	N	A	-33.5	6.7	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	16.0	0.0	0.0	-119.2
2875	428901.20	4757735.67	253.50	0	E	A	-33.5	6.7	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	16.0	0.0	0.0	-119.2
2901	429151.00	4757360.88	252.39	0	D	A	74.3	8.3	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-1.7
2901	429151.00	4757360.88	252.39	0	N	A	-33.5	8.3	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.5
2901	429151.00	4757360.88	252.39	0	E	A	-33.5	8.3	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.5
2941	429098.74	4757263.58	263.50	0	D	A	74.3	8.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-2.5
2941	429098.74	4757263.58	263.50	0	N	A	-33.5	8.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-110.3
2941	429098.74	4757263.58	263.50	0	E	A	-33.5	8.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-110.3
2984	429248.73	4757240.66	268.50	0	D	A	74.3	8.0	0.0	0.0	0.0	75.9	5.9	-1.2	0.0	0.0	4.5	0.0	0.0	-2.8
2984	429248.73	4757240.66	268.50	0	N	A	-33.5	8.0	0.0	0.0	0.0	75.9	5.9	-1.2	0.0	0.0	4.5	0.0	0.0	-110.6
2984	429248.73	4757240.66	268.50	0	E	A	-33.5	8.0	0.0	0.0	0.0	75.9	5.9	-1.2	0.0	0.0	4.5	0.0	0.0	-110.6
3010	429156.92	4757361.64	252.33	0	D	A	74.3	7.2	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-2.8
3010	429156.92	4757361.64	252.33	0	N	A	-33.5	7.2	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-110.6
3010	429156.92	4757361.64	252.33	0	E	A	-33.5	7.2	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-110.6
3024	429157.06	4757361.66	252.32	1	D	A	74.3	6.9	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-66.5
3024	429157.06	4757361.66	252.32	1	N	A	-33.5	6.9	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-174.3
3024	429157.06	4757361.66	252.32	1	E	A	-33.5	6.9	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-174.3
3088	429196.31	4757248.67	268.50	0	D	A	74.3	7.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-3.2
3088	429196.31	4757248.67	268.50	0	N	A	-33.5	7.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-111.0
3088	429196.31	4757248.67	268.50	0	E	A	-33.5	7.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-111.0
3116	429166.32	4757373.83	248.50	0	D	A	74.3	6.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-3.2
3116	429166.32	4757373.83	248.50	0	N	A	-33.5	6.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-111.0
3116	429166.32	4757373.83	248.50	0	E	A	-33.5	6.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-111.0
3141	429104.43	4757262.71	263.72	0	D	A	74.3	7.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-3.5
3141	429104.43	4757262.71	263.72	0	N	A	-33.5	7.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-111.3
3141	429104.43	4757262.71	263.72	0	E	A	-33.5	7.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-111.3
3169	428832.50	4757660.31	243.50	0	D	A	74.3	4.9	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-12.6
3169	428832.50	4757660.31	243.50	0	N	A	-33.5	4.9	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-120.4
3169	428832.50	4757660.31	243.50	0	E	A	-33.5	4.9	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-120.4
3206	429201.28	4757247.91	268.50	0	D	A	74.3	6.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-4.2

Line Source, ISO 9613, Name: "Haul Truck (Cover Activity)", ID: "!060203!Haul Truck_Cover Activity"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
3206	429201.28	4757247.91	268.50	0	N	A	-33.5	6.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-112.0
3206	429201.28	4757247.91	268.50	0	E	A	-33.5	6.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-112.0
3258	429029.36	4757306.05	263.22	0	D	A	74.3	6.0	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-4.2
3258	429029.36	4757306.05	263.22	0	N	A	-33.5	6.0	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-112.0
3258	429029.36	4757306.05	263.22	0	E	A	-33.5	6.0	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-112.0
3305	429220.15	4757245.03	268.50	0	D	A	74.3	5.7	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-5.0
3305	429220.15	4757245.03	268.50	0	N	A	-33.5	5.7	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-112.7
3305	429220.15	4757245.03	268.50	0	E	A	-33.5	5.7	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-112.7
3424	428997.63	4757791.50	271.00	0	D	A	74.3	-1.9	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.6	0.0	0.0	-7.9
3424	428997.63	4757791.50	271.00	0	N	A	-33.5	-1.9	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.6	0.0	0.0	-115.7
3424	428997.63	4757791.50	271.00	0	E	A	-33.5	-1.9	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.6	0.0	0.0	-115.7
3438	429030.88	4757303.03	263.50	0	D	A	74.3	0.8	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-9.4
3438	429030.88	4757303.03	263.50	0	N	A	-33.5	0.8	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-117.2
3438	429030.88	4757303.03	263.50	0	E	A	-33.5	0.8	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-117.2
3477	428841.11	4757660.40	243.50	0	D	A	74.3	-1.6	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-19.1
3477	428841.11	4757660.40	243.50	0	N	A	-33.5	-1.6	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-126.9
3477	428841.11	4757660.40	243.50	0	E	A	-33.5	-1.6	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-126.9
3504	429028.29	4757308.19	262.88	0	D	A	74.3	-0.8	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-11.0
3504	429028.29	4757308.19	262.88	0	N	A	-33.5	-0.8	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-118.8
3504	429028.29	4757308.19	262.88	0	E	A	-33.5	-0.8	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-118.8
3529	429030.43	4757303.93	263.50	0	D	A	74.3	-1.0	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-11.2
3529	429030.43	4757303.93	263.50	0	N	A	-33.5	-1.0	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-119.0
3529	429030.43	4757303.93	263.50	0	E	A	-33.5	-1.0	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-119.0
3587	429166.32	4757376.51	248.50	0	D	A	74.3	-1.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-11.5
3587	429166.32	4757376.51	248.50	0	N	A	-33.5	-1.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-119.3
3587	429166.32	4757376.51	248.50	0	E	A	-33.5	-1.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-119.3
3660	429031.26	4757302.27	263.50	0	D	A	74.3	-3.2	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-13.4
3660	429031.26	4757302.27	263.50	0	N	A	-33.5	-3.2	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-121.2
3660	429031.26	4757302.27	263.50	0	E	A	-33.5	-3.2	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-121.2

Line Source, ISO 9613, Name: "Haul Truck (Final Cover Activity)", ID: "!06020000!Haul Truck_Cover Activity"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
184	429007.06	4757984.99	271.00	0	D	A	74.3	25.3	0.0	0.0	0.0	71.7	4.1	-2.0	0.0	0.0	4.7	0.0	0.0	21.2
184	429007.06	4757984.99	271.00	0	N	A	-33.5	25.3	0.0	0.0	0.0	71.7	4.1	-2.0	0.0	0.0	4.7	0.0	0.0	-86.6
184	429007.06	4757984.99	271.00	0	E	A	-33.5	25.3	0.0	0.0	0.0	71.7	4.1	-2.0	0.0	0.0	4.7	0.0	0.0	-86.6
253	429008.99	4758468.81	271.00	0	D	A	74.3	20.6	0.0	0.0	0.0	67.2	2.8	-1.8	0.0	0.0	5.0	0.0	0.0	21.8
253	429008.99	4758468.81	271.00	0	N	A	-33.5	20.6	0.0	0.0	0.0	67.2	2.8	-1.8	0.0	0.0	5.0	0.0	0.0	-86.0
253	429008.99	4758468.81	271.00	0	E	A	-33.5	20.6	0.0	0.0	0.0	67.2	2.8	-1.8	0.0	0.0	5.0	0.0	0.0	-86.0
271	429015.07	4758632.72	271.00	0	D	A	74.3	18.3	0.0	0.0	0.0	65.3	2.3	-1.6	0.0	0.0	4.7	0.0	0.0	21.9
271	429015.07	4758632.72	271.00	0	N	A	-33.5	18.3	0.0	0.0	0.0	65.3	2.3	-1.6	0.0	0.0	4.7	0.0	0.0	-85.9
271	429015.07	4758632.72	271.00	0	E	A	-33.5	18.3	0.0	0.0	0.0	65.3	2.3	-1.6	0.0	0.0	4.7	0.0	0.0	-85.9
280	429008.04	4758229.80	271.00	0	D	A	74.3	21.7	0.0	0.0	0.0	69.6	3.4	-1.9	0.0	0.0	4.7	0.0	0.0	20.2
280	429008.04	4758229.80	271.00	0	N	A	-33.5	21.7	0.0	0.0	0.0	69.6	3.4	-1.9	0.0	0.0	4.7	0.0	0.0	-87.6
280	429008.04	4758229.80	271.00	0	E	A	-33.5	21.7	0.0	0.0	0.0	69.6	3.4	-1.9	0.0	0.0	4.7	0.0	0.0	-87.6
357	428991.86	4757661.98	243.50	0	D	A	74.3	24.6	0.0	0.0	0.0	73.9	5.0	-1.9	0.0	0.0	13.9	0.0	0.0	8.1
357	428991.86	4757661.98	243.50	0	N	A	-33.5	24.6	0.0	0.0	0.0	73.9	5.0	-1.9	0.0	0.0	13.9	0.0	0.0	-99.7
357	428991.86	4757661.98	243.50	0	E	A	-33.5	24.6	0.0	0.0	0.0	73.9	5.0	-1.9	0.0	0.0	13.9	0.0	0.0	-99.7
393	429008.50	4758345.89	271.00	0	D	A	74.3	18.3	0.0	0.0	0.0	68.5	3.1	-1.9	0.0	0.0	4.7	0.0	0.0	18.1
393	429008.50	4758345.89	271.00	0	N	A	-33.5	18.3	0.0	0.0	0.0	68.5	3.1	-1.9	0.0	0.0	4.7	0.0	0.0	-89.7
393	429008.50	4758345.89	271.00	0	E	A	-33.5	18.3	0.0	0.0	0.0	68.5	3.1	-1.9	0.0	0.0	4.7	0.0	0.0	-89.7
593	429009.81	4758537.46	271.00	0	D	A	74.3	13.3	0.0	0.0	0.0	66.4	2.6	-1.7	0.0	0.0	4.9	0.0	0.0	15.4
593	429009.81	4758537.46	271.00	0	N	A	-33.5	13.3	0.0	0.0	0.0	66.4	2.6	-1.7	0.0	0.0	4.9	0.0	0.0	-92.4
593	429009.81	4758537.46	271.00	0	E	A	-33.5	13.3	0.0	0.0	0.0	66.4	2.6	-1.7	0.0	0.0	4.9	0.0	0.0	-92.4
599	429166.32	4757479.10	246.17	0	D	A	74.3	21.3	0.0	0.0	0.0	74.7	5.3	-1.2	0.0	0.0	4.5	0.0	0.0	12.2
599	429166.32	4757479.10	246.17	0	N	A	-33.5	21.3	0.0	0.0	0.0	74.7	5.3	-1.2	0.0	0.0	4.5	0.0	0.0	-95.6
599	429166.32	4757479.10	246.17	0	E	A	-33.5	21.3	0.0	0.0	0.0	74.7	5.3	-1.2	0.0	0.0	4.5	0.0	0.0	-95.6
630	429012.77	4758591.11	271.00	0	D	A	74.3	12.0	0.0	0.0	0.0	65.8	2.4	-1.6	0.0	0.0	4.8	0.0	0.0	14.9
630	429012.77	4758591.11	271.00	0	N	A	-33.5	12.0	0.0	0.0	0.0	65.8	2.4	-1.6	0.0	0.0	4.8	0.0	0.0	-92.9
630	429012.77	4758591.11	271.00	0	E	A	-33.5	12.0	0.0	0.0	0.0	65.8	2.4	-1.6	0.0	0.0	4.8	0.0	0.0	-92.9
730	429012.02	4758577.41	271.00	0	D	A	74.3	10.7	0.0	0.0	0.0	65.9	2.5	-1.7	0.0	0.0	4.8	0.0	0.0	13.4
730	429012.02	4758577.41	271.00	0	N	A	-33.5	10.7	0.0	0.0	0.0	65.9	2.5	-1.7	0.0	0.0	4.8	0.0	0.0	-94.4
730	429012.02	4758577.41	271.00	0	E	A	-33.5	10.7	0.0	0.0	0.0	65.9	2.5	-1.7	0.0	0.0	4.8	0.0	0.0	-94.4

Line Source, ISO 9613, Name: "Haul Truck (Final Cover Activity)", ID: "!0602000!Haul_Truck_Cover Activity"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
745	429166.33	4757629.19	243.50	0	D	A	74.3	18.4	0.0	0.0	0.0	73.8	4.9	-0.6	0.0	0.0	4.4	0.0	0.0	10.2
745	429166.33	4757629.19	243.50	0	N	A	-33.5	18.4	0.0	0.0	0.0	73.8	4.9	-0.6	0.0	0.0	4.4	0.0	0.0	-97.6
745	429166.33	4757629.19	243.50	0	E	A	-33.5	18.4	0.0	0.0	0.0	73.8	4.9	-0.6	0.0	0.0	4.4	0.0	0.0	-97.6
837	428962.58	4757758.58	262.53	0	D	A	74.3	17.9	0.0	0.0	0.0	73.3	4.7	-2.1	0.0	0.0	11.1	0.0	0.0	5.1
837	428962.58	4757758.58	262.53	0	N	A	-33.5	17.9	0.0	0.0	0.0	73.3	4.7	-2.1	0.0	0.0	11.1	0.0	0.0	-102.7
837	428962.58	4757758.58	262.53	0	E	A	-33.5	17.9	0.0	0.0	0.0	73.3	4.7	-2.1	0.0	0.0	11.1	0.0	0.0	-102.7
843	429011.37	4758565.74	271.00	0	D	A	74.3	10.7	0.0	0.0	0.0	66.1	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	13.2
843	429011.37	4758565.74	271.00	0	N	A	-33.5	10.7	0.0	0.0	0.0	66.1	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-94.6
843	429011.37	4758565.74	271.00	0	E	A	-33.5	10.7	0.0	0.0	0.0	66.1	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-94.6
846	429010.73	4758554.06	271.00	0	D	A	74.3	10.7	0.0	0.0	0.0	66.2	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	13.1
846	429010.73	4758554.06	271.00	0	N	A	-33.5	10.7	0.0	0.0	0.0	66.2	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-94.7
846	429010.73	4758554.06	271.00	0	E	A	-33.5	10.7	0.0	0.0	0.0	66.2	2.5	-1.7	0.0	0.0	4.9	0.0	0.0	-94.7
874	428787.86	4757695.90	243.50	0	D	A	74.3	18.5	0.0	0.0	0.0	74.1	5.1	-2.0	0.0	0.0	16.3	0.0	0.0	-0.7
874	428787.86	4757695.90	243.50	0	N	A	-33.5	18.5	0.0	0.0	0.0	74.1	5.1	-2.0	0.0	0.0	16.3	0.0	0.0	-108.4
874	428787.86	4757695.90	243.50	0	E	A	-33.5	18.5	0.0	0.0	0.0	74.1	5.1	-2.0	0.0	0.0	16.3	0.0	0.0	-108.4
877	429008.72	4758402.41	271.00	0	D	A	74.3	12.3	0.0	0.0	0.0	67.9	2.9	-1.8	0.0	0.0	4.8	0.0	0.0	12.7
877	429008.72	4758402.41	271.00	0	N	A	-33.5	12.3	0.0	0.0	0.0	67.9	2.9	-1.8	0.0	0.0	4.8	0.0	0.0	-95.1
877	429008.72	4758402.41	271.00	0	E	A	-33.5	12.3	0.0	0.0	0.0	67.9	2.9	-1.8	0.0	0.0	4.8	0.0	0.0	-95.1
924	429008.66	4758386.66	271.00	0	D	A	74.3	11.6	0.0	0.0	0.0	68.1	3.0	-1.9	0.0	0.0	4.8	0.0	0.0	11.9
924	429008.66	4758386.66	271.00	0	N	A	-33.5	11.6	0.0	0.0	0.0	68.1	3.0	-1.9	0.0	0.0	4.8	0.0	0.0	-95.9
924	429008.66	4758386.66	271.00	0	E	A	-33.5	11.6	0.0	0.0	0.0	68.1	3.0	-1.9	0.0	0.0	4.8	0.0	0.0	-95.9
930	428800.02	4757722.04	246.29	0	D	A	74.3	17.1	0.0	0.0	0.0	73.9	5.0	-2.1	0.0	0.0	17.3	0.0	0.0	-2.7
930	428800.02	4757722.04	246.29	0	N	A	-33.5	17.1	0.0	0.0	0.0	73.9	5.0	-2.1	0.0	0.0	17.3	0.0	0.0	-110.5
930	428800.02	4757722.04	246.29	0	E	A	-33.5	17.1	0.0	0.0	0.0	73.9	5.0	-2.1	0.0	0.0	17.3	0.0	0.0	-110.5
936	429091.58	4757353.31	252.23	0	D	A	74.3	14.6	0.0	0.0	0.0	75.4	5.7	-1.6	0.0	0.0	5.2	0.0	0.0	4.2
936	429091.58	4757353.31	252.23	0	N	A	-33.5	14.6	0.0	0.0	0.0	75.4	5.7	-1.6	0.0	0.0	5.2	0.0	0.0	-103.6
936	429091.58	4757353.31	252.23	0	E	A	-33.5	14.6	0.0	0.0	0.0	75.4	5.7	-1.6	0.0	0.0	5.2	0.0	0.0	-103.6
980	429121.26	4757357.09	252.29	0	D	A	74.3	14.9	0.0	0.0	0.0	75.4	5.6	-1.5	0.0	0.0	4.9	0.0	0.0	4.6
980	429121.26	4757357.09	252.29	0	N	A	-33.5	14.9	0.0	0.0	0.0	75.4	5.6	-1.5	0.0	0.0	4.9	0.0	0.0	-103.1
980	429121.26	4757357.09	252.29	0	E	A	-33.5	14.9	0.0	0.0	0.0	75.4	5.6	-1.5	0.0	0.0	4.9	0.0	0.0	-103.1
983	429137.33	4757359.14	252.33	0	D	A	74.3	2.3	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-7.7
983	429137.33	4757359.14	252.33	0	N	A	-33.5	2.3	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-115.4
983	429137.33	4757359.14	252.33	0	E	A	-33.5	2.3	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-115.4
986	429142.91	4757359.85	252.34	0	D	A	74.3	9.8	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-0.1
986	429142.91	4757359.85	252.34	0	N	A	-33.5	9.8	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-107.9
986	429142.91	4757359.85	252.34	0	E	A	-33.5	9.8	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	0.0	-107.9
1072	429166.33	4757570.55	244.06	0	D	A	74.3	16.8	0.0	0.0	0.0	74.2	5.1	-1.0	0.0	0.0	4.5	0.0	0.0	8.4
1072	429166.33	4757570.55	244.06	0	N	A	-33.5	16.8	0.0	0.0	0.0	74.2	5.1	-1.0	0.0	0.0	4.5	0.0	0.0	-99.4
1072	429166.33	4757570.55	244.06	0	E	A	-33.5	16.8	0.0	0.0	0.0	74.2	5.1	-1.0	0.0	0.0	4.5	0.0	0.0	-99.4
1255	429150.63	4757663.65	243.50	0	D	A	74.3	15.0	0.0	0.0	0.0	73.6	4.9	-1.2	0.0	0.0	4.5	0.0	0.0	7.4
1255	429150.63	4757663.65	243.50	0	N	A	-33.5	15.0	0.0	0.0	0.0	73.6	4.9	-1.2	0.0	0.0	4.5	0.0	0.0	-100.3
1255	429150.63	4757663.65	243.50	0	E	A	-33.5	15.0	0.0	0.0	0.0	73.6	4.9	-1.2	0.0	0.0	4.5	0.0	0.0	-100.3
1307	429071.09	4757267.80	263.50	0	D	A	74.3	16.9	0.0	0.0	0.0	75.9	5.9	-1.6	0.0	0.0	4.6	0.0	0.0	6.5
1307	429071.09	4757267.80	263.50	0	N	A	-33.5	16.9	0.0	0.0	0.0	75.9	5.9	-1.6	0.0	0.0	4.6	0.0	0.0	-101.3
1307	429071.09	4757267.80	263.50	0	E	A	-33.5	16.9	0.0	0.0	0.0	75.9	5.9	-1.6	0.0	0.0	4.6	0.0	0.0	-101.3
1334	429002.16	4757802.91	271.00	0	D	A	74.3	13.8	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	7.8
1334	429002.16	4757802.91	271.00	0	N	A	-33.5	13.8	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.0
1334	429002.16	4757802.91	271.00	0	E	A	-33.5	13.8	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.0
1404	428852.29	4757726.65	250.27	0	D	A	74.3	14.4	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-4.7
1404	428852.29	4757726.65	250.27	0	N	A	-33.5	14.4	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-112.5
1404	428852.29	4757726.65	250.27	0	E	A	-33.5	14.4	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-112.5
1431	429008.35	4758308.02	271.00	0	D	A	74.3	9.4	0.0	0.0	0.0	68.9	3.2	-1.9	0.0	0.0	4.7	0.0	0.0	8.8
1431	429008.35	4758308.02	271.00	0	N	A	-33.5	9.4	0.0	0.0	0.0	68.9	3.2	-1.9	0.0	0.0	4.7	0.0	0.0	-99.0
1431	429008.35	4758308.02	271.00	0	E	A	-33.5	9.4	0.0	0.0	0.0	68.9	3.2	-1.9	0.0	0.0	4.7	0.0	0.0	-99.0
1461	428886.36	4757731.97	252.41	0	D	A	74.3	14.0	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.3	0.0	0.0	-4.5
1461	428886.36	4757731.97	252.41	0	N	A	-33.5	14.0	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.3	0.0	0.0	-112.2
1461	428886.36	4757731.97	252.41	0	E	A	-33.5	14.0	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.3	0.0	0.0	-112.2
1476	428923.14	4757742.22	258.15	0	D	A	74.3	13.9	0.0	0.0	0.0	73.5	4.8	-2.1	0.0	0.0	13.3	0.0	0.0	-1.3
1476	428923.14	4757742.22	258.15	0	N	A	-33.5	13.9	0.0	0.0	0.0	73.5	4.8	-2.1	0.0	0.0	13.3	0.0	0.0	-109.1
1476	428923.14	4757742.22	258.15	0	E	A	-33.5	13.9	0.0	0.0	0.0	73.5	4.8	-2.1	0.0	0.0	13.3	0.0	0.0	-109.1
1519	429166.32	4757394.26	248.10	0	D	A	74.3	15.4	0.0	0.0	0.0	75.2	5.5	-1.2	0.0	0.0	4.5	0.0	0.0	5.7
1519	429166.32	4757394.26	248.10	0	N	A	-33.5	15.4	0.0	0.0	0.0	75.2	5.5	-1.2	0.0	0.0	4.5	0.0	0.0	-102.1
1519	429166.32	4757394.26	248.10	0	E	A	-33.5	15.4	0.0	0.0	0.0	75.2	5.5	-1.2	0.0	0.0	4.5	0.0	0.0	-102.1

Line Source, ISO 9613, Name: "Haul Truck (Final Cover Activity)", ID: "I0602000!Haul_Truck_Cover Activity"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
1558	428994.01	4757781.43	268.51	0	D	A	74.3	13.3	0.0	0.0	0.0	73.1	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	7.2
1558	428994.01	4757781.43	268.51	0	N	A	-33.5	13.3	0.0	0.0	0.0	73.1	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.6
1558	428994.01	4757781.43	268.51	0	E	A	-33.5	13.3	0.0	0.0	0.0	73.1	4.6	-2.0	0.0	0.0	4.7	0.0	0.0	-100.6
1676	429013.60	4757343.36	256.78	0	D	A	74.3	7.4	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-2.6
1676	429013.60	4757343.36	256.78	0	N	A	-33.5	7.4	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-110.3
1676	429013.60	4757343.36	256.78	0	E	A	-33.5	7.4	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-110.3
1689	429020.36	4757344.23	256.66	0	D	A	74.3	9.1	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-0.8
1689	429020.36	4757344.23	256.66	0	N	A	-33.5	9.1	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.6
1689	429020.36	4757344.23	256.66	0	E	A	-33.5	9.1	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.6
1705	429034.14	4757345.98	256.42	0	D	A	74.3	12.9	0.0	0.0	0.0	75.5	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	3.0
1705	429034.14	4757345.98	256.42	0	N	A	-33.5	12.9	0.0	0.0	0.0	75.5	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-104.8
1705	429034.14	4757345.98	256.42	0	E	A	-33.5	12.9	0.0	0.0	0.0	75.5	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-104.8
1771	429038.99	4757286.80	263.50	0	D	A	74.3	15.3	0.0	0.0	0.0	75.8	5.8	-1.5	0.0	0.0	4.6	0.0	0.0	4.9
1771	429038.99	4757286.80	263.50	0	N	A	-33.5	15.3	0.0	0.0	0.0	75.8	5.8	-1.5	0.0	0.0	4.6	0.0	0.0	-102.9
1771	429038.99	4757286.80	263.50	0	E	A	-33.5	15.3	0.0	0.0	0.0	75.8	5.8	-1.5	0.0	0.0	4.6	0.0	0.0	-102.9
1829	429150.61	4757255.65	267.01	0	D	A	74.3	15.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	4.3
1829	429150.61	4757255.65	267.01	0	N	A	-33.5	15.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-103.5
1829	429150.61	4757255.65	267.01	0	E	A	-33.5	15.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-103.5
1869	428823.12	4757666.77	243.50	0	D	A	74.3	13.1	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.9	0.0	0.0	-4.8
1869	428823.12	4757666.77	243.50	0	N	A	-33.5	13.1	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.9	0.0	0.0	-112.6
1869	428823.12	4757666.77	243.50	0	E	A	-33.5	13.1	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.9	0.0	0.0	-112.6
1907	429024.09	4757316.60	261.77	0	D	A	74.3	12.6	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	2.4
1907	429024.09	4757316.60	261.77	0	N	A	-33.5	12.6	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-105.4
1907	429024.09	4757316.60	261.77	0	E	A	-33.5	12.6	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-105.4
1920	429018.04	4757328.70	260.19	0	D	A	74.3	9.6	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-0.4
1920	429018.04	4757328.70	260.19	0	N	A	-33.5	9.6	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.2
1920	429018.04	4757328.70	260.19	0	E	A	-33.5	9.6	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.2
2007	429233.79	4757242.94	268.50	0	D	A	74.3	13.8	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	3.0
2007	429233.79	4757242.94	268.50	0	N	A	-33.5	13.8	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-104.8
2007	429233.79	4757242.94	268.50	0	E	A	-33.5	13.8	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.5	0.0	0.0	-104.8
2034	429066.63	4757350.13	252.93	0	D	A	74.3	13.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.2	0.0	0.0	2.7
2034	429066.63	4757350.13	252.93	0	N	A	-33.5	13.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.2	0.0	0.0	-105.1
2034	429066.63	4757350.13	252.93	0	E	A	-33.5	13.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.2	0.0	0.0	-105.1
2083	428767.50	4757719.17	243.50	0	D	A	74.3	11.5	0.0	0.0	0.0	74.0	5.0	-2.1	0.0	0.0	16.9	0.0	0.0	-8.1
2083	428767.50	4757719.17	243.50	0	N	A	-33.5	11.5	0.0	0.0	0.0	74.0	5.0	-2.1	0.0	0.0	16.9	0.0	0.0	-115.9
2083	428767.50	4757719.17	243.50	0	E	A	-33.5	11.5	0.0	0.0	0.0	74.0	5.0	-2.1	0.0	0.0	16.9	0.0	0.0	-115.9
2098	428832.09	4757724.87	249.45	0	D	A	74.3	11.2	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-7.9
2098	428832.09	4757724.87	249.45	0	N	A	-33.5	11.2	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-115.7
2098	428832.09	4757724.87	249.45	0	E	A	-33.5	11.2	0.0	0.0	0.0	73.8	4.9	-2.1	0.0	0.0	16.8	0.0	0.0	-115.7
2167	429124.90	4757259.58	265.53	0	D	A	74.3	13.1	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	2.5
2167	429124.90	4757259.58	265.53	0	N	A	-33.5	13.1	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-105.3
2167	429124.90	4757259.58	265.53	0	E	A	-33.5	13.1	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-105.3
2263	428907.29	4757737.80	255.37	0	D	A	74.3	9.7	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	15.0	0.0	0.0	-7.3
2263	428907.29	4757737.80	255.37	0	N	A	-33.5	9.7	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	15.0	0.0	0.0	-115.1
2263	428907.29	4757737.80	255.37	0	E	A	-33.5	9.7	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	15.0	0.0	0.0	-115.1
2318	429210.89	4757246.44	268.50	0	D	A	74.3	11.8	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	1.1
2318	429210.89	4757246.44	268.50	0	N	A	-33.5	11.8	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-106.7
2318	429210.89	4757246.44	268.50	0	E	A	-33.5	11.8	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-106.7
2331	428870.07	4757728.22	251.01	0	D	A	74.3	9.3	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.7	0.0	0.0	-9.7
2331	428870.07	4757728.22	251.01	0	N	A	-33.5	9.3	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.7	0.0	0.0	-117.5
2331	428870.07	4757728.22	251.01	0	E	A	-33.5	9.3	0.0	0.0	0.0	73.7	4.9	-2.1	0.0	0.0	16.7	0.0	0.0	-117.5
2386	429046.20	4757347.52	255.76	0	D	A	74.3	6.8	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-3.1
2386	429046.20	4757347.52	255.76	0	N	A	-33.5	6.8	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-110.9
2386	429046.20	4757347.52	255.76	0	E	A	-33.5	6.8	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-110.9
2399	429049.06	4757347.88	255.15	0	D	A	74.3	0.4	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-9.5
2399	429049.06	4757347.88	255.15	0	N	A	-33.5	0.4	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-117.3
2399	429049.06	4757347.88	255.15	0	E	A	-33.5	0.4	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	4.6	0.0	0.0	-117.3
2412	429052.87	4757348.37	254.35	0	D	A	74.3	8.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.1	0.0	0.0	-2.2
2412	429052.87	4757348.37	254.35	0	N	A	-33.5	8.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.1	0.0	0.0	-110.0
2412	429052.87	4757348.37	254.35	0	E	A	-33.5	8.3	0.0	0.0	0.0	75.5	5.7	-1.5	0.0	0.0	5.1	0.0	0.0	-110.0
2439	429015.28	4757334.22	259.25	0	D	A	74.3	5.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-4.8
2439	429015.28	4757334.22	259.25	0	N	A	-33.5	5.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-112.5
2439	429015.28	4757334.22	259.25	0	E	A	-33.5	5.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-112.5

Line Source, ISO 9613, Name: "Haul Truck (Final Cover Activity)", ID: "I0602000!Haul_Truck_Cover Activity"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahou	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
2454	429012.72	4757339.35	257.84	0	D	A	74.3	9.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-0.7
2454	429012.72	4757339.35	257.84	0	N	A	-33.5	9.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.5
2454	429012.72	4757339.35	257.84	0	E	A	-33.5	9.3	0.0	0.0	0.0	75.6	5.7	-1.6	0.0	0.0	4.6	0.0	0.0	-108.5
2510	429188.00	4757249.94	268.50	0	D	A	74.3	10.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-0.2
2510	429188.00	4757249.94	268.50	0	N	A	-33.5	10.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-108.0
2510	429188.00	4757249.94	268.50	0	E	A	-33.5	10.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-108.0
2552	428845.13	4757660.44	243.50	0	D	A	74.3	8.7	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.6	0.0	0.0	-8.8
2552	428845.13	4757660.44	243.50	0	N	A	-33.5	8.7	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.6	0.0	0.0	-116.6
2552	428845.13	4757660.44	243.50	0	E	A	-33.5	8.7	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.6	0.0	0.0	-116.6
2607	429166.32	4757367.17	249.56	0	D	A	74.3	9.5	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-0.4
2607	429166.32	4757367.17	249.56	0	N	A	-33.5	9.5	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-108.2
2607	429166.32	4757367.17	249.56	0	E	A	-33.5	9.5	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-108.2
2660	428837.40	4757660.36	243.50	0	D	A	74.3	8.3	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-9.2
2660	428837.40	4757660.36	243.50	0	N	A	-33.5	8.3	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-117.0
2660	428837.40	4757660.36	243.50	0	E	A	-33.5	8.3	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-117.0
2703	429178.35	4757251.41	268.12	0	D	A	74.3	9.2	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-1.5
2703	429178.35	4757251.41	268.12	0	N	A	-33.5	9.2	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.3
2703	429178.35	4757251.41	268.12	0	E	A	-33.5	9.2	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.3
2730	428900.81	4757735.99	253.50	0	D	A	74.3	6.9	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	16.1	0.0	0.0	-11.3
2730	428900.81	4757735.99	253.50	0	N	A	-33.5	6.9	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	16.1	0.0	0.0	-119.1
2730	428900.81	4757735.99	253.50	0	E	A	-33.5	6.9	0.0	0.0	0.0	73.6	4.8	-2.1	0.0	0.0	16.1	0.0	0.0	-119.1
2742	429110.92	4757261.72	264.29	0	D	A	74.3	9.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-1.5
2742	429110.92	4757261.72	264.29	0	N	A	-33.5	9.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-109.3
2742	429110.92	4757261.72	264.29	0	E	A	-33.5	9.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-109.3
2784	429162.91	4757362.40	251.42	0	D	A	74.3	8.5	0.0	0.0	0.0	75.3	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-1.5
2784	429162.91	4757362.40	251.42	0	N	A	-33.5	8.5	0.0	0.0	0.0	75.3	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.3
2784	429162.91	4757362.40	251.42	0	E	A	-33.5	8.5	0.0	0.0	0.0	75.3	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.3
2799	429159.62	4757361.98	252.20	1	D	A	74.3	-6.5	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-80.0
2799	429159.62	4757361.98	252.20	1	N	A	-33.5	-6.5	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-187.7
2799	429159.62	4757361.98	252.20	1	E	A	-33.5	-6.5	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-187.7
2844	429170.30	4757252.64	267.68	0	D	A	74.3	9.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-1.7
2844	429170.30	4757252.64	267.68	0	N	A	-33.5	9.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.5
2844	429170.30	4757252.64	267.68	0	E	A	-33.5	9.0	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-109.5
2915	429151.00	4757360.88	252.39	0	D	A	74.3	8.3	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-1.7
2915	429151.00	4757360.88	252.39	0	N	A	-33.5	8.3	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.5
2915	429151.00	4757360.88	252.39	0	E	A	-33.5	8.3	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-109.5
2957	429098.74	4757263.58	263.50	0	D	A	74.3	8.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-2.5
2957	429098.74	4757263.58	263.50	0	N	A	-33.5	8.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-110.3
2957	429098.74	4757263.58	263.50	0	E	A	-33.5	8.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-110.3
2970	429248.73	4757240.66	268.50	0	D	A	74.3	8.0	0.0	0.0	0.0	75.9	5.9	-1.2	0.0	0.0	4.5	0.0	0.0	-2.8
2970	429248.73	4757240.66	268.50	0	N	A	-33.5	8.0	0.0	0.0	0.0	75.9	5.9	-1.2	0.0	0.0	4.5	0.0	0.0	-110.6
2970	429248.73	4757240.66	268.50	0	E	A	-33.5	8.0	0.0	0.0	0.0	75.9	5.9	-1.2	0.0	0.0	4.5	0.0	0.0	-110.6
3040	429156.92	4757361.64	252.33	0	D	A	74.3	7.2	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-2.8
3040	429156.92	4757361.64	252.33	0	N	A	-33.5	7.2	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-110.6
3040	429156.92	4757361.64	252.33	0	E	A	-33.5	7.2	0.0	0.0	0.0	75.4	5.6	-1.3	0.0	0.0	4.5	0.0	0.0	-110.6
3056	429157.06	4757361.66	252.32	1	D	A	74.3	6.9	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-66.5
3056	429157.06	4757361.66	252.32	1	N	A	-33.5	6.9	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-174.3
3056	429157.06	4757361.66	252.32	1	E	A	-33.5	6.9	0.0	0.0	0.0	75.4	5.6	-1.4	0.0	0.0	4.6	0.0	63.6	-174.3
3102	429196.31	4757248.67	268.50	0	D	A	74.3	7.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-3.2
3102	429196.31	4757248.67	268.50	0	N	A	-33.5	7.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-111.0
3102	429196.31	4757248.67	268.50	0	E	A	-33.5	7.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-111.0
3130	429166.32	4757373.83	248.50	0	D	A	74.3	6.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-3.2
3130	429166.32	4757373.83	248.50	0	N	A	-33.5	6.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-111.0
3130	429166.32	4757373.83	248.50	0	E	A	-33.5	6.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-111.0
3155	429104.43	4757262.71	263.72	0	D	A	74.3	7.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-3.5
3155	429104.43	4757262.71	263.72	0	N	A	-33.5	7.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-111.3
3155	429104.43	4757262.71	263.72	0	E	A	-33.5	7.1	0.0	0.0	0.0	75.9	5.9	-1.5	0.0	0.0	4.6	0.0	0.0	-111.3
3183	428832.50	4757660.31	243.50	0	D	A	74.3	4.9	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-12.6
3183	428832.50	4757660.31	243.50	0	N	A	-33.5	4.9	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-120.4
3183	428832.50	4757660.31	243.50	0	E	A	-33.5	4.9	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-120.4
3195	429201.28	4757247.91	268.50	0	D	A	74.3	6.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-4.2
3195	429201.28	4757247.91	268.50	0	N	A	-33.5	6.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-112.0
3195	429201.28	4757247.91	268.50	0	E	A	-33.5	6.5	0.0	0.0	0.0	75.9	5.9	-1.3	0.0	0.0	4.6	0.0	0.0	-112.0

Line Source, ISO 9613, Name: "Haul Truck (Final Cover Activity)", ID: "!0602000!Haul_Truck_Cover Activity"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
3272	429029.36	4757306.05	263.22	0	D	A	74.3	6.0	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-4.2
3272	429029.36	4757306.05	263.22	0	N	A	-33.5	6.0	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-112.0
3272	429029.36	4757306.05	263.22	0	E	A	-33.5	6.0	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-112.0
3318	429220.15	4757245.03	268.50	0	D	A	74.3	5.7	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-5.0
3318	429220.15	4757245.03	268.50	0	N	A	-33.5	5.7	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-112.7
3318	429220.15	4757245.03	268.50	0	E	A	-33.5	5.7	0.0	0.0	0.0	75.9	5.9	-1.4	0.0	0.0	4.6	0.0	0.0	-112.7
3410	428997.83	4757791.50	271.00	0	D	A	74.3	-1.9	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.6	0.0	0.0	-7.9
3410	428997.83	4757791.50	271.00	0	N	A	-33.5	-1.9	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.6	0.0	0.0	-115.7
3410	428997.83	4757791.50	271.00	0	E	A	-33.5	-1.9	0.0	0.0	0.0	73.0	4.6	-2.0	0.0	0.0	4.6	0.0	0.0	-115.7
3451	429030.88	4757303.03	263.50	0	D	A	74.3	0.8	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-9.4
3451	429030.88	4757303.03	263.50	0	N	A	-33.5	0.8	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-117.2
3451	429030.88	4757303.03	263.50	0	E	A	-33.5	0.8	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-117.2
3491	428841.11	4757660.40	243.50	0	D	A	74.3	-1.6	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-19.1
3491	428841.11	4757660.40	243.50	0	N	A	-33.5	-1.6	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-126.9
3491	428841.11	4757660.40	243.50	0	E	A	-33.5	-1.6	0.0	0.0	0.0	74.2	5.1	-2.0	0.0	0.0	14.5	0.0	0.0	-126.9
3518	429028.29	4757308.19	262.88	0	D	A	74.3	-0.8	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-11.0
3518	429028.29	4757308.19	262.88	0	N	A	-33.5	-0.8	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-118.8
3518	429028.29	4757308.19	262.88	0	E	A	-33.5	-0.8	0.0	0.0	0.0	75.7	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-118.8
3543	429030.43	4757303.93	263.50	0	D	A	74.3	-1.0	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-11.2
3543	429030.43	4757303.93	263.50	0	N	A	-33.5	-1.0	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-119.0
3543	429030.43	4757303.93	263.50	0	E	A	-33.5	-1.0	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-119.0
3573	429166.32	4757376.51	248.50	0	D	A	74.3	-1.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-11.5
3573	429166.32	4757376.51	248.50	0	N	A	-33.5	-1.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-119.3
3573	429166.32	4757376.51	248.50	0	E	A	-33.5	-1.7	0.0	0.0	0.0	75.3	5.6	-1.2	0.0	0.0	4.5	0.0	0.0	-119.3
3645	429031.26	4757302.27	263.50	0	D	A	74.3	-3.2	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-13.4
3645	429031.26	4757302.27	263.50	0	N	A	-33.5	-3.2	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-121.2
3645	429031.26	4757302.27	263.50	0	E	A	-33.5	-3.2	0.0	0.0	0.0	75.8	5.8	-1.6	0.0	0.0	4.6	0.0	0.0	-121.2

Line Source, ISO 9613, Name: "Medium Truck", ID: "!060203!Medium Truck"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
188	429084.05	4758613.70	270.50	0	D	A	71.4	21.2	0.0	0.0	0.0	64.7	2.9	-1.6	0.0	0.0	4.9	0.0	0.0	21.7
188	429084.05	4758613.70	270.50	0	N	A	-45.4	21.2	0.0	0.0	0.0	64.7	2.9	-1.6	0.0	0.0	4.9	0.0	0.0	-95.1
188	429084.05	4758613.70	270.50	0	E	A	-45.4	21.2	0.0	0.0	0.0	64.7	2.9	-1.6	0.0	0.0	4.9	0.0	0.0	-95.1
287	429004.83	4757982.37	270.50	0	D	A	71.4	25.2	0.0	0.0	0.0	71.7	4.8	-2.1	0.0	0.0	4.6	0.0	0.0	17.6
287	429004.83	4757982.37	270.50	0	N	A	-45.4	25.2	0.0	0.0	0.0	71.7	4.8	-2.1	0.0	0.0	4.6	0.0	0.0	-99.2
287	429004.83	4757982.37	270.50	0	E	A	-45.4	25.2	0.0	0.0	0.0	71.7	4.8	-2.1	0.0	0.0	4.6	0.0	0.0	-99.2
291	429006.77	4758470.30	270.50	0	D	A	71.4	20.8	0.0	0.0	0.0	67.2	3.5	-1.8	0.0	0.0	4.9	0.0	0.0	18.4
291	429006.77	4758470.30	270.50	0	N	A	-45.4	20.8	0.0	0.0	0.0	67.2	3.5	-1.8	0.0	0.0	4.9	0.0	0.0	-98.5
291	429006.77	4758470.30	270.50	0	E	A	-45.4	20.8	0.0	0.0	0.0	67.2	3.5	-1.8	0.0	0.0	4.9	0.0	0.0	-98.5
517	429005.79	4758224.70	270.50	0	D	A	71.4	21.8	0.0	0.0	0.0	69.7	4.1	-2.0	0.0	0.0	4.6	0.0	0.0	16.8
517	429005.79	4758224.70	270.50	0	N	A	-45.4	21.8	0.0	0.0	0.0	69.7	4.1	-2.0	0.0	0.0	4.6	0.0	0.0	-100.1
517	429005.79	4758224.70	270.50	0	E	A	-45.4	21.8	0.0	0.0	0.0	69.7	4.1	-2.0	0.0	0.0	4.6	0.0	0.0	-100.1
543	428407.97	4758503.60	243.00	0	D	A	71.4	22.6	0.0	0.0	0.0	71.7	4.8	-1.3	0.0	0.0	9.3	0.0	0.0	9.5
543	428407.97	4758503.60	243.00	0	N	A	-45.4	22.6	0.0	0.0	0.0	71.7	4.8	-1.3	0.0	0.0	9.3	0.0	0.0	-107.3
543	428407.97	4758503.60	243.00	0	E	A	-45.4	22.6	0.0	0.0	0.0	71.7	4.8	-1.3	0.0	0.0	9.3	0.0	0.0	-107.3
559	429006.27	4758344.43	270.50	0	D	A	71.4	18.4	0.0	0.0	0.0	68.5	3.8	-1.9	0.0	0.0	4.7	0.0	0.0	14.7
559	429006.27	4758344.43	270.50	0	N	A	-45.4	18.4	0.0	0.0	0.0	68.5	3.8	-1.9	0.0	0.0	4.7	0.0	0.0	-102.2
559	429006.27	4758344.43	270.50	0	E	A	-45.4	18.4	0.0	0.0	0.0	68.5	3.8	-1.9	0.0	0.0	4.7	0.0	0.0	-102.2
608	428493.63	4757964.81	243.00	0	D	A	71.4	22.5	0.0	0.0	0.0	73.7	5.4	-2.0	0.0	0.0	14.1	0.0	0.0	2.7
608	428493.63	4757964.81	243.00	0	N	A	-45.4	22.5	0.0	0.0	0.0	73.7	5.4	-2.0	0.0	0.0	14.1	0.0	0.0	-114.1
608	428493.63	4757964.81	243.00	0	E	A	-45.4	22.5	0.0	0.0	0.0	73.7	5.4	-2.0	0.0	0.0	14.1	0.0	0.0	-114.1
610	428492.72	4758128.37	243.00	0	D	A	71.4	21.7	0.0	0.0	0.0	72.9	5.2	-2.0	0.0	0.0	14.5	0.0	0.0	2.6
610	428492.72	4758128.37	243.00	0	N	A	-45.4	21.7	0.0	0.0	0.0	72.9	5.2	-2.0	0.0	0.0	14.5	0.0	0.0	-114.2
610	428492.72	4758128.37	243.00	0	E	A	-45.4	21.7	0.0	0.0	0.0	72.9	5.2	-2.0	0.0	0.0	14.5	0.0	0.0	-114.2
646	428408.40	4758350.82	243.00	0	D	A	71.4	20.9	0.0	0.0	0.0	72.3	5.0	-1.3	0.0	0.0	9.6	0.0	0.0	6.6
646	428408.40	4758350.82	243.00	0	N	A	-45.4	20.9	0.0	0.0	0.0	72.3	5.0	-1.3	0.0	0.0	9.6	0.0	0.0	-110.2
646	428408.40	4758350.82	243.00	0	E	A	-45.4	20.9	0.0	0.0	0.0	72.3	5.0	-1.3	0.0	0.0	9.6	0.0	0.0	-110.2
726	428692.61	4757769.27	243.00	0	D	A	71.4	22.0	0.0	0.0	0.0	74.0	5.6	-2.0	0.0	0.0	14.8	0.0	0.0	1.1
726	428692.61	4757769.27	243.00	0	N	A	-45.4	22.0	0.0	0.0	0.0	74.0	5.6	-2.0	0.0	0.0	14.8	0.0	0.0	-115.7
726	428692.61	4757769.27	243.00	0	E	A	-45.4	22.0	0.0	0.0	0.0	74.0	5.6	-2.0	0.0	0.0	14.8	0.0	0.0	-115.7
900	428560.41	4757821.65	243.00	0	D	A	71.4	20.9	0.0	0.0	0.0	74.1	5.6	-2.0	0.0	0.0	13.5	0.0	0.0	1.0
900	428560.41	4757821.65	243.00	0	N	A	-45.4	20.9	0.0	0.0	0.0	74.1	5.6	-2.0	0.0	0.0	13.5	0.0	0.0	-115.8

Line Source, ISO 9613, Name: "Medium Truck", ID: "I060203!Medium Truck"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahou	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
900	428560.41	4757821.65	243.00	0	E	A	-45.4	20.9	0.0	0.0	0.0	74.1	5.6	-2.0	0.0	0.0	13.5	0.0	0.0	-115.8
1114	428957.71	4757758.14	261.89	0	D	A	71.4	18.6	0.0	0.0	0.0	73.3	5.3	-2.2	0.0	0.0	10.4	0.0	0.0	3.1
1114	428957.71	4757758.14	261.89	0	N	A	-45.4	18.6	0.0	0.0	0.0	73.3	5.3	-2.2	0.0	0.0	10.4	0.0	0.0	-113.8
1114	428957.71	4757758.14	261.89	0	E	A	-45.4	18.6	0.0	0.0	0.0	73.3	5.3	-2.2	0.0	0.0	10.4	0.0	0.0	-113.8
1143	429035.09	4758560.36	270.50	0	D	A	71.4	10.8	0.0	0.0	0.0	65.9	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	9.9
1143	429035.09	4758560.36	270.50	0	N	A	-45.4	10.8	0.0	0.0	0.0	65.9	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	-106.9
1143	429035.09	4758560.36	270.50	0	E	A	-45.4	10.8	0.0	0.0	0.0	65.9	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	-106.9
1157	428386.28	4758621.38	243.00	0	D	A	71.4	16.3	0.0	0.0	0.0	71.5	4.7	-1.1	0.0	0.0	7.6	0.0	0.0	5.0
1157	428386.28	4758621.38	243.00	0	N	A	-45.4	16.3	0.0	0.0	0.0	71.5	4.7	-1.1	0.0	0.0	7.6	0.0	0.0	-111.9
1157	428386.28	4758621.38	243.00	0	E	A	-45.4	16.3	0.0	0.0	0.0	71.5	4.7	-1.1	0.0	0.0	7.6	0.0	0.0	-111.9
1172	429011.25	4758534.38	270.50	0	D	A	71.4	11.0	0.0	0.0	0.0	66.4	3.3	-1.8	0.0	0.0	4.9	0.0	0.0	9.5
1172	429011.25	4758534.38	270.50	0	N	A	-45.4	11.0	0.0	0.0	0.0	66.4	3.3	-1.8	0.0	0.0	4.9	0.0	0.0	-107.3
1172	429011.25	4758534.38	270.50	0	E	A	-45.4	11.0	0.0	0.0	0.0	66.4	3.3	-1.8	0.0	0.0	4.9	0.0	0.0	-107.3
1228	429006.50	4758402.42	270.50	0	D	A	71.4	12.3	0.0	0.0	0.0	67.9	3.7	-1.9	0.0	0.0	4.8	0.0	0.0	9.1
1228	429006.50	4758402.42	270.50	0	N	A	-45.4	12.3	0.0	0.0	0.0	67.9	3.7	-1.9	0.0	0.0	4.8	0.0	0.0	-107.7
1228	429006.50	4758402.42	270.50	0	E	A	-45.4	12.3	0.0	0.0	0.0	67.9	3.7	-1.9	0.0	0.0	4.8	0.0	0.0	-107.7
1348	429006.44	4758386.49	270.50	0	D	A	71.4	11.8	0.0	0.0	0.0	68.1	3.7	-1.9	0.0	0.0	4.8	0.0	0.0	8.5
1348	429006.44	4758386.49	270.50	0	N	A	-45.4	11.8	0.0	0.0	0.0	68.1	3.7	-1.9	0.0	0.0	4.8	0.0	0.0	-108.3
1348	429006.44	4758386.49	270.50	0	E	A	-45.4	11.8	0.0	0.0	0.0	68.1	3.7	-1.9	0.0	0.0	4.8	0.0	0.0	-108.3
1376	428347.64	4758621.66	243.00	0	D	A	71.4	15.4	0.0	0.0	0.0	71.8	4.8	-1.1	0.0	0.0	6.3	0.0	0.0	5.0
1376	428347.64	4758621.66	243.00	0	N	A	-45.4	15.4	0.0	0.0	0.0	71.8	4.8	-1.1	0.0	0.0	6.3	0.0	0.0	-111.8
1376	428347.64	4758621.66	243.00	0	E	A	-45.4	15.4	0.0	0.0	0.0	71.8	4.8	-1.1	0.0	0.0	6.3	0.0	0.0	-111.8
1390	428462.31	4758202.84	243.00	0	D	A	71.4	16.2	0.0	0.0	0.0	72.7	5.1	-2.0	0.0	0.0	12.7	0.0	0.0	-0.9
1390	428462.31	4758202.84	243.00	0	N	A	-45.4	16.2	0.0	0.0	0.0	72.7	5.1	-2.0	0.0	0.0	12.7	0.0	0.0	-117.7
1390	428462.31	4758202.84	243.00	0	E	A	-45.4	16.2	0.0	0.0	0.0	72.7	5.1	-2.0	0.0	0.0	12.7	0.0	0.0	-117.7
1491	428799.79	4757722.24	245.79	0	D	A	71.4	17.1	0.0	0.0	0.0	73.9	5.5	-2.2	0.0	0.0	15.3	0.0	0.0	-4.0
1491	428799.79	4757722.24	245.79	0	N	A	-45.4	17.1	0.0	0.0	0.0	73.9	5.5	-2.2	0.0	0.0	15.3	0.0	0.0	-120.8
1491	428799.79	4757722.24	245.79	0	E	A	-45.4	17.1	0.0	0.0	0.0	73.9	5.5	-2.2	0.0	0.0	15.3	0.0	0.0	-120.8
1600	429028.24	4758552.89	270.50	0	D	A	71.4	9.2	0.0	0.0	0.0	66.1	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	8.1
1600	429028.24	4758552.89	270.50	0	N	A	-45.4	9.2	0.0	0.0	0.0	66.1	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	-108.7
1600	429028.24	4758552.89	270.50	0	E	A	-45.4	9.2	0.0	0.0	0.0	66.1	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	-108.7
1612	428408.63	4758271.00	243.00	0	D	A	71.4	15.7	0.0	0.0	0.0	72.7	5.1	-1.3	0.0	0.0	9.7	0.0	0.0	0.9
1612	428408.63	4758271.00	243.00	0	N	A	-45.4	15.7	0.0	0.0	0.0	72.7	5.1	-1.3	0.0	0.0	9.7	0.0	0.0	-115.9
1612	428408.63	4758271.00	243.00	0	E	A	-45.4	15.7	0.0	0.0	0.0	72.7	5.1	-1.3	0.0	0.0	9.7	0.0	0.0	-115.9
1666	429022.89	4758547.07	270.50	0	D	A	71.4	8.8	0.0	0.0	0.0	66.2	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	7.6
1666	429022.89	4758547.07	270.50	0	N	A	-45.4	8.8	0.0	0.0	0.0	66.2	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	-109.2
1666	429022.89	4758547.07	270.50	0	E	A	-45.4	8.8	0.0	0.0	0.0	66.2	3.2	-1.7	0.0	0.0	4.9	0.0	0.0	-109.2
1785	428408.77	4758219.20	243.00	0	D	A	71.4	15.2	0.0	0.0	0.0	72.9	5.2	-1.4	0.0	0.0	9.7	0.0	0.0	0.2
1785	428408.77	4758219.20	243.00	0	N	A	-45.4	15.2	0.0	0.0	0.0	72.9	5.2	-1.4	0.0	0.0	9.7	0.0	0.0	-116.6
1785	428408.77	4758219.20	243.00	0	E	A	-45.4	15.2	0.0	0.0	0.0	72.9	5.2	-1.4	0.0	0.0	9.7	0.0	0.0	-116.6
1816	429017.91	4758541.64	270.50	0	D	A	71.4	8.5	0.0	0.0	0.0	66.3	3.3	-1.8	0.0	0.0	4.9	0.0	0.0	7.2
1816	429017.91	4758541.64	270.50	0	N	A	-45.4	8.5	0.0	0.0	0.0	66.3	3.3	-1.8	0.0	0.0	4.9	0.0	0.0	-109.6
1816	429017.91	4758541.64	270.50	0	E	A	-45.4	8.5	0.0	0.0	0.0	66.3	3.3	-1.8	0.0	0.0	4.9	0.0	0.0	-109.6
1932	428494.23	4757857.41	243.00	0	D	A	71.4	15.7	0.0	0.0	0.0	74.2	5.6	-1.9	0.0	0.0	12.9	0.0	0.0	-3.8
1932	428494.23	4757857.41	243.00	0	N	A	-45.4	15.7	0.0	0.0	0.0	74.2	5.6	-1.9	0.0	0.0	12.9	0.0	0.0	-120.6
1932	428494.23	4757857.41	243.00	0	E	A	-45.4	15.7	0.0	0.0	0.0	74.2	5.6	-1.9	0.0	0.0	12.9	0.0	0.0	-120.6
1944	428407.68	4758604.92	243.00	0	D	A	71.4	12.9	0.0	0.0	0.0	71.4	4.7	-1.6	0.0	0.0	9.0	0.0	0.0	0.9
1944	428407.68	4758604.92	243.00	0	N	A	-45.4	12.9	0.0	0.0	0.0	71.4	4.7	-1.6	0.0	0.0	9.0	0.0	0.0	-116.0
1944	428407.68	4758604.92	243.00	0	E	A	-45.4	12.9	0.0	0.0	0.0	71.4	4.7	-1.6	0.0	0.0	9.0	0.0	0.0	-116.0
1969	429000.34	4757804.02	270.50	0	D	A	71.4	14.1	0.0	0.0	0.0	73.0	5.2	-2.0	0.0	0.0	4.6	0.0	0.0	4.8
1969	429000.34	4757804.02	270.50	0	N	A	-45.4	14.1	0.0	0.0	0.0	73.0	5.2	-2.0	0.0	0.0	4.6	0.0	0.0	-112.0
1969	429000.34	4757804.02	270.50	0	E	A	-45.4	14.1	0.0	0.0	0.0	73.0	5.2	-2.0	0.0	0.0	4.6	0.0	0.0	-112.0
1981	428304.43	4758621.98	243.00	0	D	A	71.4	13.2	0.0	0.0	0.0	72.1	4.9	-1.1	0.0	0.0	5.3	0.0	0.0	3.3
1981	428304.43	4758621.98	243.00	0	N	A	-45.4	13.2	0.0	0.0	0.0	72.1	4.9	-1.1	0.0	0.0	5.3	0.0	0.0	-113.5
1981	428304.43	4758621.98	243.00	0	E	A	-45.4	13.2	0.0	0.0	0.0	72.1	4.9	-1.1	0.0	0.0	5.3	0.0	0.0	-113.5
2046	429006.11	4758305.38	270.50	0	D	A	71.4	9.6	0.0	0.0	0.0	68.9	3.9	-1.9	0.0	0.0	4.7	0.0	0.0	5.4
2046	429006.11	4758305.38	270.50	0	N	A	-45.4	9.6	0.0	0.0	0.0	68.9	3.9	-1.9	0.0	0.0	4.7	0.0	0.0	-111.4
2046	429006.11	4758305.38	270.50	0	E	A	-45.4	9.6	0.0	0.0	0.0	68.9	3.9	-1.9	0.0	0.0	4.7	0.0	0.0	-111.4
2058	428852.19	4757726.47	249.74	0	D	A	71.4	14.3	0.0	0.0	0.0	73.8	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-6.2
2058	428852.19	4757726.47	249.74	0	N	A	-45.4	14.3	0.0	0.0	0.0	73.8	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-123.0
2058	428852.19	4757726.47	249.74	0	E	A	-45.4	14.3	0.0	0.0	0.0	73.8	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-123.0
2140	428886.68	4757731.93	251.92	0	D	A	71.4	13.8	0.0	0.0	0.0	73.7	5.4	-2.2	0.0	0.0	14.4	0.0	0.0	-6.2
2140	428886.68	4757731.93	251.92	0	N	A	-45.4	13.8	0.0	0.0	0.0	73.7	5.4	-2.2	0.0	0.0	14.4	0.0	0.0	-123.0

Line Source, ISO 9613, Name: "Medium Truck", ID: "I060203!Medium Truck"																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A)
2140	428886.68	4757731.93	251.92	0	E	A	-45.4	13.8	0.0	0.0	0.0	73.7	5.4	-2.2	0.0	0.0	14.4	0.0	0.0	-123.0
2193	428993.35	4757781.80	268.10	0	D	A	71.4	13.1	0.0	0.0	0.0	73.1	5.2	-2.1	0.0	0.0	4.6	0.0	0.0	3.6
2193	428993.35	4757781.80	268.10	0	N	A	-45.4	13.1	0.0	0.0	0.0	73.1	5.2	-2.1	0.0	0.0	4.6	0.0	0.0	-113.2
2193	428993.35	4757781.80	268.10	0	E	A	-45.4	13.1	0.0	0.0	0.0	73.1	5.2	-2.1	0.0	0.0	4.6	0.0	0.0	-113.2
2207	428323.21	4758621.84	243.00	0	D	A	71.4	11.5	0.0	0.0	0.0	72.0	4.9	-1.1	0.0	0.0	5.6	0.0	0.0	1.5
2207	428323.21	4758621.84	243.00	0	N	A	-45.4	11.5	0.0	0.0	0.0	72.0	4.9	-1.1	0.0	0.0	5.6	0.0	0.0	-115.3
2207	428323.21	4758621.84	243.00	0	E	A	-45.4	11.5	0.0	0.0	0.0	72.0	4.9	-1.1	0.0	0.0	5.6	0.0	0.0	-115.3
2221	428408.70	4758244.16	243.00	0	D	A	71.4	12.3	0.0	0.0	0.0	72.8	5.1	-1.3	0.0	0.0	9.7	0.0	0.0	-2.6
2221	428408.70	4758244.16	243.00	0	N	A	-45.4	12.3	0.0	0.0	0.0	72.8	5.1	-1.3	0.0	0.0	9.7	0.0	0.0	-119.4
2221	428408.70	4758244.16	243.00	0	E	A	-45.4	12.3	0.0	0.0	0.0	72.8	5.1	-1.3	0.0	0.0	9.7	0.0	0.0	-119.4
2236	428286.68	4758622.11	243.00	0	D	A	71.4	11.6	0.0	0.0	0.0	72.3	4.9	-1.0	0.0	0.0	5.0	0.0	0.0	1.8
2236	428286.68	4758622.11	243.00	0	N	A	-45.4	11.6	0.0	0.0	0.0	72.3	4.9	-1.0	0.0	0.0	5.0	0.0	0.0	-115.0
2236	428286.68	4758622.11	243.00	0	E	A	-45.4	11.6	0.0	0.0	0.0	72.3	4.9	-1.0	0.0	0.0	5.0	0.0	0.0	-115.0
2275	428764.18	4757719.36	243.00	0	D	A	71.4	13.0	0.0	0.0	0.0	74.0	5.6	-2.1	0.0	0.0	14.7	0.0	0.0	-7.9
2275	428764.18	4757719.36	243.00	0	N	A	-45.4	13.0	0.0	0.0	0.0	74.0	5.6	-2.1	0.0	0.0	14.7	0.0	0.0	-124.7
2275	428764.18	4757719.36	243.00	0	E	A	-45.4	13.0	0.0	0.0	0.0	74.0	5.6	-2.1	0.0	0.0	14.7	0.0	0.0	-124.7
2424	428918.15	4757741.75	257.50	0	D	A	71.4	11.6	0.0	0.0	0.0	73.5	5.4	-2.2	0.0	0.0	12.0	0.0	0.0	-5.8
2424	428918.15	4757741.75	257.50	0	N	A	-45.4	11.6	0.0	0.0	0.0	73.5	5.4	-2.2	0.0	0.0	12.0	0.0	0.0	-122.6
2424	428918.15	4757741.75	257.50	0	E	A	-45.4	11.6	0.0	0.0	0.0	73.5	5.4	-2.2	0.0	0.0	12.0	0.0	0.0	-122.6
2496	428425.20	4758202.73	243.00	0	D	A	71.4	10.6	0.0	0.0	0.0	72.9	5.2	-1.5	0.0	0.0	10.4	0.0	0.0	-5.0
2496	428425.20	4758202.73	243.00	0	N	A	-45.4	10.6	0.0	0.0	0.0	72.9	5.2	-1.5	0.0	0.0	10.4	0.0	0.0	-121.8
2496	428425.20	4758202.73	243.00	0	E	A	-45.4	10.6	0.0	0.0	0.0	72.9	5.2	-1.5	0.0	0.0	10.4	0.0	0.0	-121.8
2565	428832.09	4757724.85	248.95	0	D	A	71.4	11.2	0.0	0.0	0.0	73.8	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-9.4
2565	428832.09	4757724.85	248.95	0	N	A	-45.4	11.2	0.0	0.0	0.0	73.8	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-126.2
2565	428832.09	4757724.85	248.95	0	E	A	-45.4	11.2	0.0	0.0	0.0	73.8	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-126.2
2579	428436.19	4758202.77	243.00	0	D	A	71.4	10.2	0.0	0.0	0.0	72.8	5.1	-1.6	0.0	0.0	11.0	0.0	0.0	-5.8
2579	428436.19	4758202.77	243.00	0	N	A	-45.4	10.2	0.0	0.0	0.0	72.8	5.1	-1.6	0.0	0.0	11.0	0.0	0.0	-122.6
2579	428436.19	4758202.77	243.00	0	E	A	-45.4	10.2	0.0	0.0	0.0	72.8	5.1	-1.6	0.0	0.0	11.0	0.0	0.0	-122.6
2593	428414.12	4758202.70	243.00	0	D	A	71.4	10.3	0.0	0.0	0.0	72.9	5.2	-1.3	0.0	0.0	9.8	0.0	0.0	-5.0
2593	428414.12	4758202.70	243.00	0	N	A	-45.4	10.3	0.0	0.0	0.0	72.9	5.2	-1.3	0.0	0.0	9.8	0.0	0.0	-121.8
2593	428414.12	4758202.70	243.00	0	E	A	-45.4	10.3	0.0	0.0	0.0	72.9	5.2	-1.3	0.0	0.0	9.8	0.0	0.0	-121.8
2634	428487.75	4758202.91	243.00	0	D	A	71.4	9.6	0.0	0.0	0.0	72.5	5.0	-2.0	0.0	0.0	14.3	0.0	0.0	-8.9
2634	428487.75	4758202.91	243.00	0	N	A	-45.4	9.6	0.0	0.0	0.0	72.5	5.0	-2.0	0.0	0.0	14.3	0.0	0.0	-125.7
2634	428487.75	4758202.91	243.00	0	E	A	-45.4	9.6	0.0	0.0	0.0	72.5	5.0	-2.0	0.0	0.0	14.3	0.0	0.0	-125.7
2673	428407.64	4758618.24	243.00	0	D	A	71.4	7.8	0.0	0.0	0.0	71.4	4.6	-1.5	0.0	0.0	8.8	0.0	0.0	-4.2
2673	428407.64	4758618.24	243.00	0	N	A	-45.4	7.8	0.0	0.0	0.0	71.4	4.6	-1.5	0.0	0.0	8.8	0.0	0.0	-121.0
2673	428407.64	4758618.24	243.00	0	E	A	-45.4	7.8	0.0	0.0	0.0	71.4	4.6	-1.5	0.0	0.0	8.8	0.0	0.0	-121.0
2688	428907.05	4757738.29	254.95	0	D	A	71.4	9.8	0.0	0.0	0.0	73.6	5.4	-2.1	0.0	0.0	13.3	0.0	0.0	-8.9
2688	428907.05	4757738.29	254.95	0	N	A	-45.4	9.8	0.0	0.0	0.0	73.6	5.4	-2.1	0.0	0.0	13.3	0.0	0.0	-125.7
2688	428907.05	4757738.29	254.95	0	E	A	-45.4	9.8	0.0	0.0	0.0	73.6	5.4	-2.1	0.0	0.0	13.3	0.0	0.0	-125.7
2770	428870.42	4757727.95	250.50	0	D	A	71.4	9.8	0.0	0.0	0.0	73.7	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-10.6
2770	428870.42	4757727.95	250.50	0	N	A	-45.4	9.8	0.0	0.0	0.0	73.7	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-127.5
2770	428870.42	4757727.95	250.50	0	E	A	-45.4	9.8	0.0	0.0	0.0	73.7	5.5	-2.2	0.0	0.0	14.8	0.0	0.0	-127.5
2887	428626.19	4757820.09	243.00	0	D	A	71.4	9.8	0.0	0.0	0.0	73.9	5.5	-2.0	0.0	0.0	15.0	0.0	0.0	-11.3
2887	428626.19	4757820.09	243.00	0	N	A	-45.4	9.8	0.0	0.0	0.0	73.9	5.5	-2.0	0.0	0.0	15.0	0.0	0.0	-128.2
2887	428626.19	4757820.09	243.00	0	E	A	-45.4	9.8	0.0	0.0	0.0	73.9	5.5	-2.0	0.0	0.0	15.0	0.0	0.0	-128.2
3072	428494.39	4757830.04	243.00	0	D	A	71.4	8.9	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-10.6
3072	428494.39	4757830.04	243.00	0	N	A	-45.4	8.9	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-127.4
3072	428494.39	4757830.04	243.00	0	E	A	-45.4	8.9	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-127.4
3232	428900.52	4757736.25	253.00	0	D	A	71.4	6.9	0.0	0.0	0.0	73.6	5.4	-2.1	0.0	0.0	14.3	0.0	0.0	-12.9
3232	428900.52	4757736.25	253.00	0	N	A	-45.4	6.9	0.0	0.0	0.0	73.6	5.4	-2.1	0.0	0.0	14.3	0.0	0.0	-129.7
3232	428900.52	4757736.25	253.00	0	E	A	-45.4	6.9	0.0	0.0	0.0	73.6	5.4	-2.1	0.0	0.0	14.3	0.0	0.0	-129.7
3291	428494.35	4757836.46	243.00	0	D	A	71.4	7.1	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-12.4
3291	428494.35	4757836.46	243.00	0	N	A	-45.4	7.1	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-129.2
3291	428494.35	4757836.46	243.00	0	E	A	-45.4	7.1	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-129.2
3331	428496.91	4757823.15	243.00	0	D	A	71.4	7.0	0.0	0.0	0.0	74.3	5.7	-2.0	0.0	0.0	12.9	0.0	0.0	-12.7
3331	428496.91	4757823.15	243.00	0	N	A	-45.4	7.0	0.0	0.0	0.0	74.3	5.7	-2.0	0.0	0.0	12.9	0.0	0.0	-129.5
3331	428496.91	4757823.15	243.00	0	E	A	-45.4	7.0	0.0	0.0	0.0	74.3	5.7	-2.0	0.0	0.0	12.9	0.0	0.0	-129.5
3369	428494.42	4757824.70	243.00	0	D	A	71.4	4.7	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-14.8
3369	428494.42	4757824.70	243.00	0	N	A	-45.4	4.7	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-131.6
3369	428494.42	4757824.70	243.00	0	E	A	-45.4	4.7	0.0	0.0	0.0	74.3	5.7	-1.9	0.0	0.0	12.8	0.0	0.0	-131.6
3382	428315.50	4758621.90	243.00	0	D	A	71.4	0.6	0.0	0.0	0.0	72.1	4.9	-1.1	0.0	0.0	5.5	0.0	0.0	-9.3
3382	428315.50	4758621.90	243.00	0	N	A	-45.4	0.6	0.0	0.0	0.0	72.1	4.9	-1.1	0.0	0.0	5.5	0.0	0.0	-126.1

Line Source, ISO 9613, Name: "Medium Truck", ID: "I060203!Medium Truck"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3382	428315.50	4758621.90	243.00	0	E	A	-45.4	0.6	0.0	0.0	0.0	72.1	4.9	-1.1	0.0	0.0	5.5	0.0	0.0	-126.1
3558	428407.65	4758614.97	243.00	0	D	A	71.4	-2.4	0.0	0.0	0.0	71.4	4.7	-1.6	0.0	0.0	8.9	0.0	0.0	-14.3
3558	428407.65	4758614.97	243.00	0	N	A	-45.4	-2.4	0.0	0.0	0.0	71.4	4.7	-1.6	0.0	0.0	8.9	0.0	0.0	-131.2
3558	428407.65	4758614.97	243.00	0	E	A	-45.4	-2.4	0.0	0.0	0.0	71.4	4.7	-1.6	0.0	0.0	8.9	0.0	0.0	-131.2
3617	428996.41	4757791.53	270.50	0	D	A	71.4	-2.0	0.0	0.0	0.0	73.0	5.2	-2.1	0.0	0.0	4.6	0.0	0.0	-11.4
3617	428996.41	4757791.53	270.50	0	N	A	-45.4	-2.0	0.0	0.0	0.0	73.0	5.2	-2.1	0.0	0.0	4.6	0.0	0.0	-128.2
3617	428996.41	4757791.53	270.50	0	E	A	-45.4	-2.0	0.0	0.0	0.0	73.0	5.2	-2.1	0.0	0.0	4.6	0.0	0.0	-128.2
3728	428407.71	4758595.06	243.00	0	D	A	71.4	-7.4	0.0	0.0	0.0	71.4	4.7	-1.4	0.0	0.0	8.9	0.0	0.0	-19.6
3728	428407.71	4758595.06	243.00	0	N	A	-45.4	-7.4	0.0	0.0	0.0	71.4	4.7	-1.4	0.0	0.0	8.9	0.0	0.0	-136.4
3728	428407.71	4758595.06	243.00	0	E	A	-45.4	-7.4	0.0	0.0	0.0	71.4	4.7	-1.4	0.0	0.0	8.9	0.0	0.0	-136.4

Line Source, ISO 9613, Name: "Small Vehicle", ID: "I060203!Small Vehicle"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3219	428409.04	4758506.20	241.00	0	D	A	53.7	22.5	0.0	0.0	0.0	71.7	3.5	-2.0	0.0	0.0	6.8	0.0	0.0	-3.8
3219	428409.04	4758506.20	241.00	0	N	A	-58.8	22.5	0.0	0.0	0.0	71.7	3.5	-2.0	0.0	0.0	6.8	0.0	0.0	-116.3
3219	428409.04	4758506.20	241.00	0	E	A	-58.8	22.5	0.0	0.0	0.0	71.7	3.5	-2.0	0.0	0.0	6.8	0.0	0.0	-116.3
3357	428409.11	4758352.61	241.00	0	D	A	53.7	21.1	0.0	0.0	0.0	72.3	3.6	-2.2	0.0	0.0	7.2	0.0	0.0	-6.1
3357	428409.11	4758352.61	241.00	0	N	A	-58.8	21.1	0.0	0.0	0.0	72.3	3.6	-2.2	0.0	0.0	7.2	0.0	0.0	-118.7
3357	428409.11	4758352.61	241.00	0	E	A	-58.8	21.1	0.0	0.0	0.0	72.3	3.6	-2.2	0.0	0.0	7.2	0.0	0.0	-118.7
3463	428386.71	4758621.99	241.00	0	D	A	53.7	16.5	0.0	0.0	0.0	71.5	3.5	-2.7	0.0	0.0	6.4	0.0	0.0	-8.5
3463	428386.71	4758621.99	241.00	0	N	A	-58.8	16.5	0.0	0.0	0.0	71.5	3.5	-2.7	0.0	0.0	6.4	0.0	0.0	-121.0
3463	428386.71	4758621.99	241.00	0	E	A	-58.8	16.5	0.0	0.0	0.0	71.5	3.5	-2.7	0.0	0.0	6.4	0.0	0.0	-121.0
3602	428347.59	4758622.28	241.00	0	D	A	53.7	15.3	0.0	0.0	0.0	71.8	3.5	-2.8	0.0	0.0	5.7	0.0	0.0	-9.2
3602	428347.59	4758622.28	241.00	0	N	A	-58.8	15.3	0.0	0.0	0.0	71.8	3.5	-2.8	0.0	0.0	5.7	0.0	0.0	-121.7
3602	428347.59	4758622.28	241.00	0	E	A	-58.8	15.3	0.0	0.0	0.0	71.8	3.5	-2.8	0.0	0.0	5.7	0.0	0.0	-121.7
3630	428409.15	4758272.98	241.00	0	D	A	53.7	14.9	0.0	0.0	0.0	72.7	3.7	-2.4	0.0	0.0	7.3	0.0	0.0	-12.7
3630	428409.15	4758272.98	241.00	0	N	A	-58.8	14.9	0.0	0.0	0.0	72.7	3.7	-2.4	0.0	0.0	7.3	0.0	0.0	-125.2
3630	428409.15	4758272.98	241.00	0	E	A	-58.8	14.9	0.0	0.0	0.0	72.7	3.7	-2.4	0.0	0.0	7.3	0.0	0.0	-125.2
3675	428408.99	4758605.33	241.00	0	D	A	53.7	12.8	0.0	0.0	0.0	71.4	3.4	-1.8	0.0	0.0	6.3	0.0	0.0	-12.8
3675	428408.99	4758605.33	241.00	0	N	A	-58.8	12.8	0.0	0.0	0.0	71.4	3.4	-1.8	0.0	0.0	6.3	0.0	0.0	-125.4
3675	428408.99	4758605.33	241.00	0	E	A	-58.8	12.8	0.0	0.0	0.0	71.4	3.4	-1.8	0.0	0.0	6.3	0.0	0.0	-125.4
3688	428304.18	4758622.60	241.00	0	D	A	53.7	13.1	0.0	0.0	0.0	72.1	3.6	-3.0	0.0	0.0	5.2	0.0	0.0	-11.0
3688	428304.18	4758622.60	241.00	0	N	A	-58.8	13.1	0.0	0.0	0.0	72.1	3.6	-3.0	0.0	0.0	5.2	0.0	0.0	-123.6
3688	428304.18	4758622.60	241.00	0	E	A	-58.8	13.1	0.0	0.0	0.0	72.1	3.6	-3.0	0.0	0.0	5.2	0.0	0.0	-123.6
3703	428323.13	4758622.46	241.00	0	D	A	53.7	11.8	0.0	0.0	0.0	72.0	3.5	-2.9	0.0	0.0	5.4	0.0	0.0	-12.5
3703	428323.13	4758622.46	241.00	0	N	A	-58.8	11.8	0.0	0.0	0.0	72.0	3.5	-2.9	0.0	0.0	5.4	0.0	0.0	-125.0
3703	428323.13	4758622.46	241.00	0	E	A	-58.8	11.8	0.0	0.0	0.0	72.0	3.5	-2.9	0.0	0.0	5.4	0.0	0.0	-125.0
3716	428286.72	4758622.72	241.00	0	D	A	53.7	11.6	0.0	0.0	0.0	72.3	3.6	-3.0	0.0	0.0	5.0	0.0	0.0	-12.6
3716	428286.72	4758622.72	241.00	0	N	A	-58.8	11.6	0.0	0.0	0.0	72.3	3.6	-3.0	0.0	0.0	5.0	0.0	0.0	-125.1
3716	428286.72	4758622.72	241.00	0	E	A	-58.8	11.6	0.0	0.0	0.0	72.3	3.6	-3.0	0.0	0.0	5.0	0.0	0.0	-125.1
3740	428408.99	4758618.60	241.00	0	D	A	53.7	8.1	0.0	0.0	0.0	71.4	3.4	-3.2	0.0	0.0	7.4	0.0	0.0	-17.2
3740	428408.99	4758618.60	241.00	0	N	A	-58.8	8.1	0.0	0.0	0.0	71.4	3.4	-3.2	0.0	0.0	7.4	0.0	0.0	-129.7
3740	428408.99	4758618.60	241.00	0	E	A	-58.8	8.1	0.0	0.0	0.0	71.4	3.4	-3.2	0.0	0.0	7.4	0.0	0.0	-129.7
3752	428314.97	4758622.52	241.00	0	D	A	53.7	0.5	0.0	0.0	0.0	72.1	3.6	-3.0	0.0	0.0	5.3	0.0	0.0	-23.7
3752	428314.97	4758622.52	241.00	0	N	A	-58.8	0.5	0.0	0.0	0.0	72.1	3.6	-3.0	0.0	0.0	5.3	0.0	0.0	-136.2
3752	428314.97	4758622.52	241.00	0	E	A	-58.8	0.5	0.0	0.0	0.0	72.1	3.6	-3.0	0.0	0.0	5.3	0.0	0.0	-136.2
3765	428408.99	4758615.07	241.00	0	D	A	53.7	-2.3	0.0	0.0	0.0	71.4	3.4	-3.0	0.0	0.0	7.3	0.0	0.0	-27.6
3765	428408.99	4758615.07	241.00	0	N	A	-58.8	-2.3	0.0	0.0	0.0	71.4	3.4	-3.0	0.0	0.0	7.3	0.0	0.0	-140.2
3765	428408.99	4758615.07	241.00	0	E	A	-58.8	-2.3	0.0	0.0	0.0	71.4	3.4	-3.0	0.0	0.0	7.3	0.0	0.0	-140.2
3779	428409.00	4758595.79	241.00	0	D	A	53.7	-7.0	0.0	0.0	0.0	71.4	3.4	-1.8	0.0	0.0	6.3	0.0	0.0	-32.7
3779	428409.00	4758595.79	241.00	0	N	A	-58.8	-7.0	0.0	0.0	0.0	71.4	3.4	-1.8	0.0	0.0	6.3	0.0	0.0	-145.2
3779	428409.00	4758595.79	241.00	0	E	A	-58.8	-7.0	0.0	0.0	0.0	71.4	3.4	-1.8	0.0	0.0	6.3	0.0	0.0	-145.2

B.4 - TCEC All Pest Control at Once Sample CadnaA Calculation - R3 at 4.5 m

Receiver
 Name: R3_4.5m
 ID: R3_4.5m
 X: 429119.63 m
 Y: 4758999.34 m
 Z: 244.50 m

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3	429112.85	4758823.47	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	56.3	2.0	-0.5	0.0	0.0	0.0	0.0	0.0	68.7

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5	429312.85	4758823.47	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	59.5	2.9	-0.5	0.0	0.0	0.0	0.0	0.0	64.7

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
109	428912.85	4758823.47	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	59.9	3.0	-0.5	0.0	0.0	0.0	0.0	0.0	64.3

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
111	429112.85	4758823.47	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	56.3	1.8	-0.5	0.0	0.0	0.0	0.0	0.0	64.0

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
113	429112.85	4758823.47	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	56.3	0.4	-0.5	0.0	0.0	0.0	0.0	0.0	65.4

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
152	429112.85	4758823.47	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	56.3	1.3	-0.3	0.0	0.0	0.0	0.0	0.0	62.2

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
153	428712.85	4758823.47	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	64.0	4.6	-0.5	0.0	0.0	0.0	0.0	0.0	58.6

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
155	429312.85	4758823.47	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	59.5	2.5	-0.5	0.0	0.0	0.0	0.0	0.0	60.1

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
156	429312.85	4758823.47	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	59.5	0.5	-0.5	0.0	0.0	0.0	0.0	0.0	62.1

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
204	428912.85	4758823.47	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	59.9	2.6	-0.5	0.0	0.0	0.0	0.0	0.0	59.7

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
215	428912.85	4758823.47	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	59.9	0.5	-0.5	0.0	0.0	0.0	0.0	0.0	61.7

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
217	429312.85	4758823.47	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	59.5	1.7	-0.3	0.0	0.0	0.0	0.0	0.0	58.6

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
219	428912.85	4758823.47	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	59.9	1.7	-0.3	0.0	0.0	0.0	0.0	0.0	58.3

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
234	428512.85	4758823.47	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	67.0	6.3	-0.3	0.0	0.0	0.0	0.0	0.0	53.6

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
236	428520.46	4758612.38	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	68.1	7.0	-0.9	0.0	0.0	0.0	0.0	0.0	52.4

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
238	428712.85	4758823.47	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	64.0	3.8	-0.5	0.0	0.0	0.0	0.0	0.0	54.4

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
259	428712.85	4758823.47	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	64.0	0.9	-0.5	0.0	0.0	0.0	0.0	0.0	57.3

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
276	428520.46	4758412.38	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	69.5	8.1	-0.9	0.0	0.0	0.0	0.0	0.0	49.9

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
298	428520.46	4758212.38	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	70.9	9.4	-0.9	0.0	0.0	4.8	0.0	0.0	42.5

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
370	428712.85	4758823.47	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	64.0	2.4	-0.3	0.0	0.0	0.0	0.0	0.0	53.4

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
374	428521.09	4758075.55	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	71.8	10.3	-0.9	0.0	0.0	4.8	0.0	0.0	40.6

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
376	428512.85	4758823.47	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	67.0	5.1	-0.3	0.0	0.0	0.0	0.0	0.0	49.8

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
379	428512.85	4758823.47	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	67.0	1.2	-0.3	0.0	0.0	0.0	0.0	0.0	53.6

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
382	428711.08	4757813.90	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	73.0	11.5	-0.9	0.0	0.0	4.8	0.0	0.0	38.3

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
403	428520.46	4758612.38	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	68.1	5.6	-0.9	0.0	0.0	0.0	0.0	0.0	48.8

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
417	428520.46	4758612.38	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	68.1	1.4	-0.9	0.0	0.0	0.0	0.0	0.0	53.0

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
472	428517.96	4757857.68	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	73.2	11.8	-0.9	0.0	0.0	4.8	0.0	0.0	37.7

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
475	429121.58	4757700.07	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	73.3	11.9	-1.0	0.0	0.0	4.8	0.0	0.0	37.6

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
477	428960.36	4757702.58	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	73.3	11.9	-1.0	0.0	0.0	4.8	0.0	0.0	37.5

Point Source, ISO 9613, Name: "Cracker Cartridge", ID: "!08!Cracker_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
479	428854.17	4757711.96	300.00	0	DEN	A	126.6	0.0	0.0	0.0	0.0	73.4	12.0	-0.9	0.0	0.0	4.8	0.0	0.0	37.4

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
496	428512.85	4758823.47	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	67.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	49.4

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
498	428520.46	4758412.38	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	69.5	6.3	-0.9	0.0	0.0	0.0	0.0	0.0	46.7

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
500	428520.46	4758412.38	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	69.5	1.6	-0.9	0.0	0.0	0.0	0.0	0.0	51.4

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
546	428520.46	4758612.38	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	68.1	3.3	-0.6	0.0	0.0	0.0	0.0	0.0	48.7

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
548	428520.46	4758212.38	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	70.9	7.2	-0.9	0.0	0.0	4.8	0.0	0.0	39.7

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
550	428520.46	4758212.38	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	70.9	1.9	-0.9	0.0	0.0	4.8	0.0	0.0	44.9

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
552	428520.46	4758412.38	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	69.5	3.7	-0.6	0.0	0.0	0.0	0.0	0.0	46.9

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
554	428521.09	4758075.55	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	71.8	7.8	-0.9	0.0	0.0	4.8	0.0	0.0	38.2

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
590	428521.09	4758075.55	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	71.8	2.1	-0.9	0.0	0.0	4.8	0.0	0.0	43.8

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
592	428711.08	4757813.90	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	73.0	8.6	-1.0	0.0	0.0	4.8	0.0	0.0	36.3

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
594	428711.08	4757813.90	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	73.0	2.4	-1.0	0.0	0.0	4.8	0.0	0.0	42.4

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
596	428520.46	4758212.38	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	70.9	4.2	-0.6	0.0	0.0	4.6	0.0	0.0	40.4

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
598	428517.96	4757857.68	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	73.2	8.8	-1.0	0.0	0.0	4.8	0.0	0.0	35.8

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
615	428517.96	4757857.68	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	73.2	2.5	-1.0	0.0	0.0	4.8	0.0	0.0	42.1

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
634	429121.58	4757700.07	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	73.3	8.8	-1.0	0.0	0.0	4.8	0.0	0.0	35.8

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
636	429121.58	4757700.07	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	73.3	2.5	-1.0	0.0	0.0	4.8	0.0	0.0	42.0

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
651	428960.36	4757702.58	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	73.3	8.8	-1.0	0.0	0.0	4.8	0.0	0.0	35.7

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
653	428960.36	4757702.58	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	73.3	2.5	-1.0	0.0	0.0	4.8	0.0	0.0	42.0

Point Source, ISO 9613, Name: "Whistler Cartridge", ID: "!07!Whistler_Cartridge"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
656	428854.17	4757711.96	300.00	0	DEN	A	121.6	0.0	0.0	0.0	0.0	73.4	8.9	-1.0	0.0	0.0	4.8	0.0	0.0	35.6

Point Source, ISO 9613, Name: "Electronic Distress", ID: "!09!Electronic_Distress"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
675	428854.17	4757711.96	300.00	0	DEN	500	121.6	0.0	0.0	0.0	0.0	73.4	2.5	-1.0	0.0	0.0	4.8	0.0	0.0	41.9

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
696	428521.09	4758075.55	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	71.8	4.5	-0.6	0.0	0.0	4.6	0.0	0.0	39.2

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
699	428711.08	4757813.90	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	73.0	4.9	-0.5	0.0	0.0	4.6	0.0	0.0	37.6

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
701	428517.96	4757857.68	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	73.2	5.0	-0.5	0.0	0.0	4.6	0.0	0.0	37.3

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
703	429121.58	4757700.07	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	73.3	5.0	-0.6	0.0	0.0	4.6	0.0	0.0	37.2

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
705	428960.36	4757702.58	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	73.3	5.0	-0.6	0.0	0.0	4.6	0.0	0.0	37.2

Point Source, ISO 9613, Name: "Propane Cannon", ID: "!06!Propane_Cannon"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
707	428854.17	4757711.96	300.00	0	DEN	A	119.5	0.0	0.0	0.0	0.0	73.4	5.0	-0.5	0.0	0.0	4.6	0.0	0.0	37.1

Point Source, ISO 9613, Name: "1st Stage LFG Compressor C", ID: "!02!LFG_Comp_C"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3380	429099.11	4757411.88	246.20	0	DEN	A	98.5	0.0	0.0	0.0	0.0	69.2	3.1	-0.2	0.0	0.0	0.0	0.0	0.0	26.4
3394	429099.11	4757411.88	246.20	1	DEN	A	98.5	0.0	0.0	0.0	0.0	69.6	3.2	-0.2	0.0	0.0	0.0	0.0	1.3	24.7
3407	429099.11	4757411.88	246.20	1	DEN	A	98.5	0.0	0.0	0.0	0.0	69.3	3.1	-0.2	0.0	0.0	0.0	0.0	1.9	24.5

Point Source, ISO 9613, Name: "1st Stage LFG Compressor A", ID: "!02!LFG_Comp_A"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3421	429098.94	4757416.63	246.09	0	DEN	A	98.5	0.0	0.0	0.0	0.0	69.2	3.1	-0.2	0.0	0.0	0.0	0.0	0.0	26.4
3435	429098.94	4757416.63	246.09	1	DEN	A	98.5	0.0	0.0	0.0	0.0	69.6	3.2	-0.2	0.0	0.0	0.0	0.0	1.3	24.7
3448	429098.94	4757416.63	246.09	1	DEN	A	98.5	0.0	0.0	0.0	0.0	69.3	3.1	-0.2	0.0	0.0	0.0	0.0	1.3	25.1

Point Source, ISO 9613, Name: "1st Stage Blowers Cooler", ID: "!02!St_1_Blowers_Cooler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3462	429131.30	4757457.84	245.15	0	DEN	A	98.3	0.0	0.0	0.0	0.0	69.7	3.0	-0.1	0.0	0.0	15.3	0.0	0.0	10.4

Point Source, ISO 9613, Name: "2nd Stage Blowers Cooler", ID: "!02!St_2_Blower_Cooler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3476	429142.55	4757457.31	245.16	0	DEN	A	98.3	0.0	0.0	0.0	0.0	69.8	3.0	-0.1	0.0	0.0	16.0	0.0	0.0	9.5

Point Source, ISO 9613, Name: "2nd Stage LFG Gas Cooler", ID: "!02!LFG_2_Gas_Cooler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3490	429070.92	4757415.55	246.11	0	DEN	A	97.1	0.0	0.0	0.0	0.0	68.9	2.5	0.1	0.0	0.0	0.0	0.0	0.0	25.6
3502	429070.92	4757415.55	246.11	1	DEN	A	97.1	0.0	0.0	0.0	0.0	69.0	2.5	0.1	0.0	0.0	0.0	0.0	1.4	24.1

Point Source, ISO 9613, Name: "Booster Gas Cooler", ID: "!02!Booster_Gas_Cooler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3516	429058.50	4757459.31	245.07	0	DEN	A	96.6	0.0	0.0	0.0	0.0	68.9	2.5	0.1	0.0	0.0	4.8	0.0	0.0	20.2

Point Source, ISO 9613, Name: "1st Stage Gas Cooler", ID: "!02!St_1_Gas_Cooler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3530	429077.09	4757415.72	246.11	0	DEN	A	96.5	0.0	0.0	0.0	0.0	69.0	2.6	0.1	0.0	0.0	0.0	0.0	0.0	24.9
3544	429077.09	4757415.72	246.11	1	DEN	A	96.5	0.0	0.0	0.0	0.0	69.8	2.7	-0.0	0.0	0.0	0.0	0.0	2.2	21.8
3557	429077.09	4757415.72	246.11	1	DEN	A	96.5	0.0	0.0	0.0	0.0	69.0	2.6	0.1	0.0	0.0	0.0	0.0	1.4	23.5

Point Source, ISO 9613, Name: "Louvre 09", ID: "!02!Louvre_09"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3571	429041.51	4757421.10	249.95	0	DEN	A	95.9	0.0	0.0	0.0	0.0	68.6	4.6	-0.8	0.0	0.0	0.0	0.0	0.0	23.4
3586	429041.51	4757421.10	249.95	1	DEN	A	95.9	0.0	0.0	0.0	0.0	70.2	5.2	-1.1	0.0	0.0	0.0	0.0	2.9	18.7

Point Source, ISO 9613, Name: "Louvre 01", ID: "!02!Louvre_01"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3600	429044.45	4757454.30	249.17	0	DEN	A	95.9	0.0	0.0	0.0	0.0	68.7	4.7	-0.7	0.0	0.0	11.4	0.0	0.0	11.8

Point Source, ISO 9613, Name: "Louvre 10", ID: "!02!Louvre_10"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3614	429055.51	4757421.10	249.96	0	DEN	A	95.9	0.0	0.0	0.0	0.0	68.8	4.7	-0.8	0.0	0.0	0.0	0.0	0.0	23.3
3627	429055.51	4757421.10	249.96	1	DEN	A	95.9	0.0	0.0	0.0	0.0	70.0	5.2	-1.1	0.0	0.0	0.0	0.0	2.9	18.9

Point Source, ISO 9613, Name: "2nd Stage LFG Oil Cooler B", ID: "!02!St_2_LFG_Oil_Cooler_B"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3641	429082.57	4757417.12	246.08	0	DEN	A	96.1	0.0	0.0	0.0	0.0	69.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	24.4
3655	429082.57	4757417.12	246.08	1	DEN	A	96.1	0.0	0.0	0.0	0.0	69.8	2.8	-0.0	0.0	0.0	0.0	0.0	2.2	21.5
3668	429082.57	4757417.12	246.08	1	DEN	A	96.1	0.0	0.0	0.0	0.0	69.1	2.6	0.0	0.0	0.0	0.0	0.0	1.4	23.0

Point Source, ISO 9613, Name: "Louvre 07", ID: "!02!Louvre_07"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3904	429128.45	4757454.30	249.23	0	DEN	A	95.9	0.0	0.0	0.0	0.0	69.6	5.0	-1.0	0.0	0.0	21.1	0.0	0.0	1.1

Point Source, ISO 9613, Name: "Louvre 16", ID: "!02!Louvre_16"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3918	429139.51	4757421.10	249.99	0	DEN	A	95.9	0.0	0.0	0.0	0.0	69.7	5.0	-1.0	0.0	0.0	2.9	0.0	0.0	19.3

Point Source, ISO 9613, Name: "Louvre 08", ID: "!02!Louvre_08"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3933	429142.45	4757454.30	249.23	0	DEN	A	95.9	0.0	0.0	0.0	0.0	69.8	5.1	-1.0	0.0	0.0	21.4	0.0	0.0	0.7

Point Source, ISO 9613, Name: "Mobile Gen Doosan", ID: "!03!Gen_Doosan"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3948	428739.75	4758148.07	276.22	0	DEN	500	97.0	0.0	0.0	0.0	0.0	70.8	1.9	-0.6	0.0	0.0	0.0	0.0	0.0	24.9

Point Source, ISO 9613, Name: "NRU Low Gas Cooler", ID: "!02!NRU_Low_Gas_Cooler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3962	429053.11	4757417.08	246.05	0	DEN	A	93.6	0.0	0.0	0.0	0.0	68.8	2.3	0.2	0.0	0.0	0.0	0.0	0.0	22.3
3977	429053.11	4757417.08	246.05	1	DEN	A	93.6	0.0	0.0	0.0	0.0	68.8	2.3	0.2	0.0	0.0	0.0	0.0	0.0	37.0

Area Source, ISO 9613, Name: "WWMT Breakout Top", ID: "!02!WWMT_Breakout_top"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3994	429141.55	4757421.53	253.98	0	DEN	A	58.2	6.6	0.0	0.0	0.0	69.7	1.2	0.0	0.0	0.0	4.5	0.0	0.0	-10.6
4005	429097.56	4757425.34	253.87	0	DEN	A	58.2	28.1	0.0	0.0	0.0	69.3	1.1	0.2	0.0	0.0	4.1	0.0	0.0	11.6
4020	429074.10	4757427.49	253.81	0	DEN	A	58.2	10.8	0.0	0.0	0.0	69.0	1.1	0.3	0.0	0.0	4.0	0.0	0.0	-5.4
4034	429062.44	4757436.36	253.60	0	DEN	A	58.2	30.3	0.0	0.0	0.0	68.9	1.1	0.3	0.0	0.0	4.0	0.0	0.0	14.2
4048	429089.54	4757449.84	253.30	0	DEN	A	58.2	28.4	0.0	0.0	0.0	69.2	1.1	0.2	0.0	0.0	4.1	0.0	0.0	11.9
4059	429119.76	4757442.95	253.47	0	DEN	A	58.2	28.2	0.0	0.0	0.0	69.5	1.1	0.1	0.0	0.0	4.1	0.0	0.0	11.4
4074	429132.49	4757432.00	253.73	0	DEN	A	58.2	25.9	0.0	0.0	0.0	69.6	1.2	0.1	0.0	0.0	4.1	0.0	0.0	9.1
4088	429144.61	4757422.05	253.97	0	DEN	A	58.2	4.0	0.0	0.0	0.0	69.7	1.2	0.0	0.0	0.0	4.2	0.0	0.0	-13.0

Point Source, ISO 9613, Name: "Booster Oil Cooler", ID: "!02!Booster_Oil_Cooler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4102	429065.75	4757417.30	246.06	0	DEN	A	89.7	0.0	0.0	0.0	0.0	68.9	7.0	-0.9	0.0	0.0	0.0	0.0	0.0	14.6
4116	429065.75	4757417.30	246.06	1	DEN	A	89.7	0.0	0.0	0.0	0.0	69.9	7.5	-1.0	0.0	0.0	0.0	0.0	1.1	12.2
4130	429065.75	4757417.30	246.06	1	DEN	A	89.7	0.0	0.0	0.0	0.0	68.9	7.0	-0.9	0.0	0.0	0.0	0.0	1.0	13.6

Point Source, ISO 9613, Name: "Mobile Gen", ID: "!03!Gen_03"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4144	428405.88	4758384.20	242.00	0	DEN	500	90.5	0.0	0.0	0.0	0.0	71.9	2.1	-0.9	0.0	0.0	4.8	0.0	0.0	12.6

Point Source, ISO 9613, Name: "Chilled Water Unit", ID: "!02!Chill_Water"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4159	429108.40	4757459.03	245.12	0	DEN	500	88.0	0.0	0.0	0.0	0.0	69.4	1.6	-0.4	0.0	0.0	15.2	0.0	0.0	2.1

Point Source, ISO 9613, Name: "XFMR 7MVA", ID: "!02!Transformer_3"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4173	429133.01	4757405.91	246.33	0	DEN	A	86.7	0.0	0.0	0.0	0.0	69.6	2.2	-0.0	0.0	0.0	0.0	0.0	0.0	14.9
4187	429133.01	4757405.91	246.33	1	DEN	A	86.7	0.0	0.0	0.0	0.0	69.6	2.2	-0.0	0.0	0.0	11.1	0.0	4.1	-0.3

Point Source, ISO 9613, Name: "CATD50P1 (Mobile Gen)", ID: "!03!Gen_02"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4201	428409.04	4758692.09	242.00	0	DEN	A	89.5	0.0	0.0	0.0	0.0	74.0	2.7	1.7	0.0	0.0	3.0	0.0	0.0	8.0

TCEC Stationary Sources - R10 at 4.5 m

vert. Area Source, ISO 9613, Name: "WWMT Breakout long", ID: "I02!WWMT_Breakout_long_north"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4215	429140.85	4757421.10	249.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	2.4	0.0	0.0	-1.4
4230	429088.50	4757421.10	249.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	-0.2	0.0	0.0	0.0	0.0	0.0	11.4
4244	429040.83	4757421.10	249.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	-0.0	0.0	0.0	4.1	0.0	0.0	-15.0
4258	429092.29	4757421.10	249.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	0.0	0.0	1.7	-0.8
4272	429064.05	4757421.10	249.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	-0.3	0.0	0.0	0.0	0.0	3.7	3.9
4288	429140.85	4757421.10	250.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	1.9	0.0	0.0	-0.9
4300	429088.50	4757421.10	250.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	-0.2	0.0	0.0	0.0	0.0	0.0	11.4
4315	429040.83	4757421.10	250.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	0.0	0.0	0.0	0.0	0.0	0.0	-10.9
4328	429092.29	4757421.10	250.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	0.0	0.0	1.7	-0.8
4342	429064.05	4757421.10	250.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	-0.3	0.0	0.0	0.0	0.0	3.7	3.8
4358	429140.85	4757421.10	253.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	0.0	0.0	0.0	0.9
4372	429088.50	4757421.10	253.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	-0.0	0.0	0.0	0.0	0.0	0.0	11.2
4385	429040.83	4757421.10	253.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	0.2	0.0	0.0	0.0	0.0	0.0	-11.1
4401	429140.85	4757421.10	252.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	1.8	0.0	0.0	-0.8
4413	429088.50	4757421.10	252.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	-0.1	0.0	0.0	0.0	0.0	0.0	11.3
4426	429040.83	4757421.10	252.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	0.1	0.0	0.0	0.0	0.0	0.0	-11.1
4441	429092.29	4757421.10	252.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	0.0	0.0	1.7	-0.9
4455	429064.05	4757421.10	252.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	-0.3	0.0	0.0	0.0	0.0	3.8	3.7
4470	429140.85	4757421.10	251.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	1.8	0.0	0.0	-0.8
4485	429088.50	4757421.10	251.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	-0.2	0.0	0.0	0.0	0.0	0.0	11.4
4499	429040.83	4757421.10	251.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	0.1	0.0	0.0	0.0	0.0	0.0	-11.0
4512	429092.29	4757421.10	251.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	0.0	0.0	1.7	-0.8
4526	429064.05	4757421.10	251.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	-0.3	0.0	0.0	0.0	0.0	3.8	3.8
4542	429140.85	4757421.10	245.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	1.0	0.0	0.0	3.8	0.0	0.0	-4.0
4555	429088.50	4757421.10	245.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	1.1	0.0	0.0	0.0	0.0	0.0	10.1
4568	429040.83	4757421.10	245.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	1.2	0.0	0.0	5.3	0.0	0.0	-17.4
4581	429092.29	4757421.10	245.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	1.0	0.0	0.0	0.0	0.0	1.9	-2.4
4595	429064.05	4757421.10	245.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	1.0	0.0	0.0	0.0	0.0	3.6	2.6
4609	429140.85	4757421.10	244.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	2.3	0.0	0.0	3.7	0.0	0.0	-5.2
4622	429088.50	4757421.10	244.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	2.3	0.0	0.0	0.0	0.0	0.0	8.9
4635	429040.83	4757421.10	244.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	2.4	0.0	0.0	5.2	0.0	0.0	-18.5
4649	429092.29	4757421.10	244.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	2.3	0.0	0.0	0.0	0.0	2.3	-4.0
4664	429064.05	4757421.10	244.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	2.2	0.0	0.0	0.0	0.0	4.5	0.4
4678	429140.85	4757421.10	246.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	0.2	0.0	0.0	3.7	0.0	0.0	-3.1
4692	429088.50	4757421.10	246.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	0.2	0.0	0.0	0.0	0.0	0.0	11.0
4707	429040.83	4757421.10	246.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	0.3	0.0	0.0	5.3	0.0	0.0	-16.6
4720	429092.29	4757421.10	246.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	0.2	0.0	0.0	0.0	0.0	1.7	-1.3
4733	429064.05	4757421.10	246.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	0.1	0.0	0.0	0.0	0.0	3.3	3.8
4745	429140.85	4757421.10	248.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	2.9	0.0	0.0	-1.9
4759	429088.50	4757421.10	248.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	-0.2	0.0	0.0	0.0	0.0	0.0	11.4
4773	429040.83	4757421.10	248.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	-0.1	0.0	0.0	4.9	0.0	0.0	-15.8
4785	429092.29	4757421.10	248.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	0.0	0.0	1.7	-0.8
4798	429064.05	4757421.10	248.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	-0.3	0.0	0.0	0.0	0.0	3.6	3.9
4813	429140.85	4757421.10	247.49	0	DEN	A	59.1	9.9	0.0	3.0	0.0	69.7	1.6	-0.1	0.0	0.0	3.3	0.0	0.0	-2.5
4827	429088.50	4757421.10	247.47	0	DEN	A	59.1	19.8	0.0	3.0	0.0	69.1	1.5	-0.1	0.0	0.0	0.0	0.0	0.0	11.2
4842	429040.83	4757421.10	247.45	0	DEN	A	59.1	-3.0	0.0	3.0	0.0	68.6	1.4	0.1	0.0	0.0	5.2	0.0	0.0	-16.2
4855	429092.29	4757421.10	247.47	1	DEN	A	59.1	9.8	0.0	3.0	0.0	69.7	1.6	-0.1	0.0	0.0	0.0	0.0	1.7	-1.0
4868	429064.05	4757421.10	247.46	1	DEN	A	59.1	16.7	0.0	3.0	0.0	70.0	1.6	-0.2	0.0	0.0	0.0	0.0	3.4	4.0

vert. Area Source, ISO 9613, Name: "WWMT Breakout Long", ID: "I02!WWMT_breakout_long_north"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4882	429093.18	4757454.30	249.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	-0.2	0.0	0.0	14.6	0.0	0.0	-2.9
4896	429093.18	4757454.30	250.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	-0.1	0.0	0.0	12.8	0.0	0.0	-1.2
4910	429093.18	4757454.30	248.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	-0.2	0.0	0.0	14.7	0.0	0.0	-3.0
4925	429093.18	4757454.30	246.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	-0.0	0.0	0.0	14.8	0.0	0.0	-3.3
4939	429093.18	4757454.30	247.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	-0.1	0.0	0.0	14.8	0.0	0.0	-3.2
4952	429093.18	4757454.30	244.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	1.1	0.0	0.0	14.3	0.0	0.0	-3.9
4966	429093.18	4757454.30	243.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	2.4	0.0	0.0	13.4	0.0	0.0	-4.2
4981	429093.18	4757454.30	245.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	0.3	0.0	0.0	14.8	0.0	0.0	-3.5
4994	429093.18	4757454.30	251.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	-0.0	0.0	0.0	12.5	0.0	0.0	-0.9
5008	429093.18	4757454.30	252.70	0	DEN	A	59.1	20.2	0.0	3.0	0.0	69.3	1.5	0.0	0.0	0.0	11.9	0.0	0.0	-0.4

Point Source, ISO 9613, Name: "XFMR 3MVA", ID: "!02!Transformer_1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5021	429124.92	4757406.08	246.33	0	DEN	A	81.3	0.0	0.0	0.0	0.0	69.5	2.2	-0.0	0.0	0.0	0.0	0.0	0.0	9.6
5034	429124.92	4757406.08	246.33	1	DEN	A	81.3	0.0	0.0	0.0	0.0	69.6	2.2	-0.0	0.0	0.0	0.0	0.0	1.8	7.7

Point Source, ISO 9613, Name: "XFMR 3MVA", ID: "!02!Transformer_2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5049	429128.75	4757406.08	246.33	0	DEN	A	81.3	0.0	0.0	0.0	0.0	69.5	2.2	-0.0	0.0	0.0	0.0	0.0	0.0	9.5
5063	429128.75	4757406.08	246.33	1	DEN	A	81.3	0.0	0.0	0.0	0.0	69.6	2.2	-0.0	0.0	0.0	0.0	0.0	1.8	7.7

Point Source, ISO 9613, Name: "Amine ReBoiler", ID: "!02!Amine_ReBoiler"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5078	429070.49	4757466.34	244.92	0	DEN	500	78.2	0.0	0.0	0.0	0.0	69.1	1.5	-0.3	0.0	0.0	4.8	0.0	0.0	3.1

vert. Area Source, ISO 9613, Name: "WWMT Breakout Short", ID: "!02!WWMT_breakout_short_west"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5090	429040.58	4757430.14	250.24	0	DEN	A	59.1	12.6	0.0	3.0	0.0	68.6	1.4	0.1	0.0	0.0	0.0	0.0	0.0	4.5
5104	429040.58	4757446.74	249.85	0	DEN	A	59.1	11.8	0.0	3.0	0.0	68.7	1.4	0.0	0.0	0.0	4.2	0.0	0.0	-0.5
5120	429040.58	4757437.70	251.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	0.1	0.0	0.0	0.0	0.0	0.0	7.1
5138	429040.58	4757437.70	247.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	0.1	0.0	0.0	5.8	0.0	0.0	1.3
5154	429040.58	4757437.70	249.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	-0.0	0.0	0.0	4.2	0.0	0.0	3.0
5168	429040.58	4757437.70	248.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	-0.0	0.0	0.0	4.6	0.0	0.0	2.6
5182	429040.58	4757437.70	245.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	1.2	0.0	0.0	8.0	0.0	0.0	-2.0
5196	429040.58	4757437.70	244.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	2.4	0.0	0.0	8.1	0.0	0.0	-3.3
5210	429040.58	4757437.70	246.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	0.3	0.0	0.0	7.1	0.0	0.0	-0.3
5224	429040.58	4757437.70	252.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	0.1	0.0	0.0	0.0	0.0	0.0	7.0
5238	429040.58	4757437.70	253.06	0	DEN	A	59.1	15.2	0.0	3.0	0.0	68.7	1.4	0.2	0.0	0.0	0.0	0.0	0.0	7.0

vert. Area Source, ISO 9613, Name: "WWMT Breakout Short", ID: "!02!WWMT_breakout_short_east"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5252	429145.78	4757438.53	250.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	-0.3	0.0	0.0	19.4	0.0	0.0	-13.4
5266	429145.78	4757421.96	250.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	15.9	0.0	0.0	-22.8
5280	429145.78	4757421.13	250.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	2.3	0.0	0.0	-23.6
5294	429145.78	4757438.53	249.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	-0.3	0.0	0.0	19.9	0.0	0.0	-13.9
5308	429145.78	4757421.96	249.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	16.3	0.0	0.0	-23.2
5322	429145.78	4757421.13	249.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	2.9	0.0	0.0	-24.2
5336	429145.78	4757438.53	251.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	-0.3	0.0	0.0	18.6	0.0	0.0	-12.7
5350	429145.78	4757421.96	251.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	15.1	0.0	0.0	-22.0
5363	429145.78	4757421.13	251.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	2.1	0.0	0.0	-23.4
5378	429145.78	4757438.53	253.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	-0.2	0.0	0.0	16.3	0.0	0.0	-10.4
5392	429145.78	4757421.96	253.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	8.9	0.0	0.0	-15.9
5406	429145.78	4757421.13	253.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	0.0	0.0	0.0	-21.4
5420	429145.78	4757438.53	252.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	-0.2	0.0	0.0	18.4	0.0	0.0	-12.4
5434	429145.78	4757421.96	252.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	13.9	0.0	0.0	-20.8
5448	429145.78	4757421.13	252.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	-0.2	0.0	0.0	2.1	0.0	0.0	-23.4
5463	429145.78	4757438.53	245.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	1.0	0.0	0.0	19.9	0.0	0.0	-15.3
5477	429145.78	4757421.96	245.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	1.0	0.0	0.0	16.7	0.0	0.0	-24.9
5490	429145.78	4757421.13	245.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	1.0	0.0	0.0	4.4	0.0	0.0	-27.1
5504	429145.78	4757438.53	244.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	2.3	0.0	0.0	19.0	0.0	0.0	-15.5
5517	429145.78	4757421.96	244.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	2.3	0.0	0.0	15.9	0.0	0.0	-25.4
5530	429145.78	4757421.13	244.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	2.3	0.0	0.0	4.3	0.0	0.0	-28.1
5545	429145.78	4757438.53	246.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	0.1	0.0	0.0	20.4	0.0	0.0	-14.8
5560	429145.78	4757421.96	246.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	0.1	0.0	0.0	17.1	0.0	0.0	-24.5
5572	429145.78	4757421.13	246.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	0.1	0.0	0.0	4.3	0.0	0.0	-26.1
5585	429145.78	4757438.53	248.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	-0.3	0.0	0.0	20.2	0.0	0.0	-14.2
5598	429145.78	4757421.96	248.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	16.8	0.0	0.0	-23.7
5611	429145.78	4757421.13	248.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	-0.3	0.0	0.0	3.5	0.0	0.0	-24.8
5624	429145.78	4757438.53	247.09	0	DEN	A	59.1	15.0	0.0	3.0	0.0	69.8	1.6	-0.1	0.0	0.0	20.3	0.0	0.0	-14.5
5639	429145.78	4757421.96	247.47	0	DEN	A	59.1	2.1	0.0	3.0	0.0	69.7	1.6	-0.1	0.0	0.0	17.0	0.0	0.0	-24.1
5653	429145.78	4757421.13	247.49	0	DEN	A	59.1	-12.3	0.0	3.0	0.0	69.7	1.6	-0.1	0.0	0.0	4.0	0.0	0.0	-25.4