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West Carleton Environmental Centre

Ottawa, Ontario

Final Report

Acoustic Assessment Report

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SUBMITTED TO

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EXECUTIVE SUMMARY

Waste Management of Canada Corporation has retained RWDI AIR Inc. to complete an Acoustic Assessment Report for the proposed landfill expansion at the West Carleton Environmental Centre (WCEC) located in Ottawa, Ontario. This assessment has been completed in support of an application to replace Environmental Compliance Approvals (ECA's) #4117-8EHQE7, #7025-7F4PN5 and #7816-7C9JMR. The purpose of this assessment is for a site wide ECA application to include landfill operations and ancillary facilities.

This assessment focuses on sound levels due to the WCEC at surrounding worst-case sensitive receptors. Sources at the WCEC include flares, gas-to-energy generators, leachate treatment system, heavy equipment, and pest control devices.

Data for the predictable worst-case operations were described using five operating scenarios. Sound levels from the WCEC were assessed by detailed modelling using the Cadna/A software package.

Surrounding land-uses within the area of investigation are largely industrial and agricultural. The closest receptor to the proposed landfill operations is located at approximately 440 m away. Seven representative receptors were selected and modelled. The acoustic environment at the receptor locations is typical of a suburban environment, which is characterized by the sounds of human activity. Human activity noise is predominantly caused by nearby road traffic on Richardson Side Road, Carp Road, Highway 7 and Highway 417.

The sound levels attributable to WCEC were assessed against the applicable MOE Landfill and NPC-300, Class 2, sound level limits at each receptor. Background sound levels were investigated at each receptor through traffic modelling and long-term measurements. The higher of either the background or the MOE guideline limits were used for this assessment. The WCEC was found to be in compliance with these noise performance limits.

CONSULTING ENGINEERS & SCIENTISTS

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1. INTRODUCTION

Waste Management of Canada Corporation (WM) has retained RWDI AIR Inc. (RWDI) to complete an acoustic assessment and Acoustic Assessment Report (AAR) for the proposed landfill expansion at the West Carleton Environmental Centre (WCEC) located in Ottawa, Ontario. This AAR was completed using the applicable MOE guidance documents (MOE, November 2005 and MOE, 1995a). A copy of the Acoustic Assessment Report checklist is included in Appendix A. This assessment has been completed in support of an application to replace Environmental Compliance Approvals (ECA's) #4117-8EHQE7, #7025-7F4PN5 and #7816-7C9JMR. The previous ECA's for the landfill are included in Appendix A. The purpose of this assessment is for a site wide ECA application to include landfill operations and ancillary facilities.

The MOE Primary Noise Screening has been completed for the WCEC, and is included in Appendix A. The North American Industry Classification Scheme (NAICS) code for the WCEC is 562210, Waste Disposal and Treatment. This NAICS code is not included in the list for which the Primary Noise Screening is applicable. Sensitive land-uses are located in proximity to the WCEC, as shown on the Zoning Maps included in Appendix B. A detailed assessment has therefore been completed.

This assessment focuses on sound levels due to WCEC activities at the surrounding worst-case sensitive receptors. Sources at the WCEC include: flares, gas-to-energy generators, leachate treatment system, heavy equipment, and pest control devices. Operations at the WCEC do not include any large sources of vibration, such as stamping presses, shaker tables, and large rotating machinery. An assessment of vibration impact is therefore not required.

2. FACILITY DESCRIPTION

WCEC is a waste disposal landfill. The WCEC is located at 2301 Carp Road in Ottawa, Ontario. The WCEC is bounded by Carp Road on the east, Highway 417 to the south, William Mooney Road to the west, and Richardson Side Road to the north. The WCEC operations do not produce any products; instead landfill gases and leachate are generated as by-products of the landfilling operations. The WCEC site is illustrated in Figure 2. The surrounding land-uses are provided in Appendix B and discussed in Section 4.

Landfilling operations are concentrated mostly within the proposed waste footprint. Ancillary operations are outside of the proposed waste footprint and located at various locations within the WCEC property boundary. Existing and proposed site topography was used in the modelling. Details of the topography are provided in Section 6. A site layout is provided in Figure 1a. The proposed landfilling and waste transfer operations will be limited to daytime hours (07:00 to 19:00h), with the exception of a couple of dozers operating between 06:00 to 07:00h and 19:00 to 20:00h used only for stripping and daily cover, respectively. Ancillary operations at the WCEC can operate up to 24 hours per day. Ancillary operations include the landfill gas flares, gas-to-energy plant, and the leachate treatment system. Operating scenarios and details of specific sources are provided in Section 3.5.

Detailed descriptions for the existing, modified or new operations at the WCEC are provided in the following sections. Source details are outlined in Section 3.

2.1 Existing Closed Landfill Footprint

The existing landfill area is closed and is under final cover. The total closed landfill final cover area is approximately 355,000 m^2 with a finished height of 172 mASL (or approximately 47 m above local grade). Gas generated from the existing closed landfill is gathered through a landfill gas collection system.

2.2 Proposed Landfill Footprint

The proposed landfill expansion is located north of the existing closed landfill footprint. Waste material accepted will consist of institutional, commercial and industrial waste, as well as residential waste and contaminated soils. Contaminated soils may be used for daily or interim cover material. The total proposed landfill footprint is approximately 378,000 m^2 with a finished height of approximately 156 mASL (or approximately 31 m above local grade).

2.3 Access Roads and Haul Routes

Access will start at a new site entrance off Carp Road and south of the existing Laurysen Building. The access road will proceed west from the new entrance, then south towards a new scale house. The road will continue south along the eastern side of the proposed landfill footprint, and then west between the existing closed landfill and proposed landfill footprints. The road will continue west to a turning circle where haul trucks would travel north and access the landfilling cells at the west end. Ancillary activity trucks would follow a similar pattern, but would continue south after the turning circle along the west perimeter of the existing closed landfill. Access roads, haul routes, and existing and proposed landfill footprint are illustrated in Figures 1a and 1c.Waste haul trucks will travel to the site primarily from Highway 417 east of Carp Road, with a few trucks expected to travel to the site via Richardson Side Road and from Carp Road.

2.4 Landfilling Operations

Landfilling operations occur primarily during daytime hours (07:00 to 19:00h), with the exception of a couple of dozers operating an hour before and after the daytime period. Site preparation, consisting of installation of the base liner and construction of roads, perimeter berms, etc., will commence prior to landfilling activities. Progression of construction and landfilling activities is divided into 10 landfill development phases and is proposed to proceed from east to west. The proposed landfill footprint is presented in 12 landfilling cells and is illustrated in Figure 1a. Waste placement will commence after the completion of the liner construction in cell 1A. Drawings detailing the proposed development phases are provided in Appendix C.

Construction and landfilling working faces are kept to a minimum area. One construction area and one landfilling working face occurring simultaneously were considered for this assessment as a conservative approximation.

Stripping of the cover will be occuring between 06:00 to 07:00h in preparation for the landfilling operations starting at 07:00h. Daily cover will be applied following each day's landfilling operations between 19:00 to 20:00h. Daily cover will be delivered to the cover soil stockpile and will be supplemented by excess materials from construction operations. Extracted materials from the construction area will be transported to the overburden or cover soil stockpile area.

2.5 Integrated Waste Transfer and Processing Facility

The integrated Waste Transfer and Processing Facility (WTPF) operate during daytime hours (07:00 to 19:00h) only. The role of this WTPF is the diversion and processing of recyclable wastes. Recyclable wastes can come from residential, industrial, commercial, construction and demolition waste generators.

2.6 Landfill Gas Collection and Conversion System

The landfill gas (LFG) collection and conversion system can operate 24 hours a day. An existing LFG collection system controls the emissions of landfill gas and is currently serving the existing closed landfill. The system will be expanded to service the proposed landfill. The LFG collection system supplies LFG to the on-site electricity generation system at the landfill gas-to-energy (LFGTE) plant. The LFGTE plant consists of five reciprocating generator sets, all located inside a building near the southeast corner of the site. In addition to supplying LFG to the LFGTE generator sets, the LFG collection systems can also supply LFG generated from the existing and proposed landfills to three flares. The flares are utilized to combust LFG that is not sent to the generators. The electricity that is produced is supplied to the electrical grid.

The proposed landfill expansion does not change the activity level of the gas flares or LFGTE plant.

2.7 Leachate Management

The leachate treatment system can operate 24 hours a day. The preferred leachate treatment system for the site consists of discharge of pre-treated leachate to the City of Ottawa sanitary sewer system. This preferred method utilizes leachate pre-treatment prior to sewer disposal. As a conservative approximation, two leachate pre-treatment facilities are assumed to operate simultaneously.

3. NOISE SOURCE SUMMARY

Sound level data for the sources identified were obtained from a combination of on-site measurements, RWDI historical data of equipment at the WCEC and other landfill sites, manufacturer's data, published data, and theoretical formulae. WCEC operations include sources of steady-state (or continuous) and impulsive sounds. Impulsive and steady-state sources have been considered separately in this assessment.

Sources at the WCEC include flares, LFGTE generators, leachate treatment system, heavy equipment, and pest control devices. Sources being considered in the model are shown in Figures 1a to 1d. A list of sources is provided in Table 1 and detailed in Table TD.1 of Appendix D. Insignificant sources are listed in Table TD.2 of Appendix D.

3.1 Steady-State Sources

Sound pressure level (SPL) measurements were conducted for existing sources by RWDI on April 11-12, 2006 and April 19, 2011. Measurements were consistent with ISO 3744 (ISO, 1994) and ISO 3746 (ISO, 1995) measurement standards, and the applicable portions of the MOE NPC-103 (1978). Measurement equipment and weather conditions met the requirements set out in NPC-103. The SPL to sound power level (PWL) conversions and octave band sound power data are detailed in Appendix D. Weather data and measurement equipment information is provided in Appendix E.

Stationary equipment has been modelled as point sources. Source-specific measurements for the landfill gas flares and gas-to-energy plant were completed during 2011, after the closure of the existing landfill. The five radiator fans of the LFGTE plant were measured as a group. Therefore, a 7 dB reduction was applied to account for the individual PWL from each of the radiator fans. Similarly, the five combustion exhaust stacks were also measured as a group and the same adjustment was made for each source.

Sound from travelling vehicles was calculated based on measured sound levels during the 2006 site visit. Where sound data was not available, data on file from another landfill was used. Measurements of mobile equipment during pass-by events in simulation of normal operation were conducted in 2006 using procedures from SAE J88 (SAE, 1980). The maximum SPL during the pass-by event was considered representative of the mobile source. PWLs were calculated from the measured SPLs using the distances and source geometry. Sound levels from trucks traveling on-site were modelled using a moving point source calculation method. The maximum number of trucks during the predictable worst-case hour was estimated based on data provided by WM and provided in Appendix D. Trucks are expected to travel approximately at a speed of 20 km/h while on-site and was modelled as such.

Data on file of similar design and capacity was used as proxy for a waste compactor, concrete crusher, landfill compactor, landfill grader, soil haul truck, and truck idling on weigh scale.

The PWLs of the leachate blowers were modelled using published calculation methods incorporating manufacturer's equipment capacities. Calculations of source sound power level and octave band spectra were made using equations provided by American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE, 1991). Calculations are shown in Appendix D.

The PWL for the loader was approximated based on the manufacturer's PWL data. Manufacturer's overall PWL data was given and shaped based on measured data of similar equipment. The manufacturer's PWL data and shaping are included in Appendix D.

3.2 Pest Control Devices

Based on the MOE Landfill guideline, pest control devices are to be assessed separately from other steady-state sources and are given separate sound level limits as provided in Section 5 of this report. The WCEC pest control devices include propane cannons, shotgun and 'whistle'. On-site measurements of the propane cannons and 'whistle' were conducted in 2006. The shotgun is based on published measured data. The propane cannons and shotgun were found to be impulsive. The 'whistle' was found to be non-impulsive and details are provided in Section 3.3. Impulsive source data for the propane cannons and shotgun and its Logarithmic Mean Impulse calculations are included in Appendix D. Sound field directivity for the propane cannons and shotgun were based on published data and incorporated into the modelling. Directivity details are included in Appendix D.

3.3 Identifiable Source Characteristics

Sources that have characteristics considered to be particularly annoying receive additional consideration in accordance with MOE NPC-104 guidelines (MOE, 1978). These guidelines specify that a penalty is applicable for tonal, cyclically varying, or quasi-steady impulsive sound characteristics. During the 2006 site visit, the pest control 'whistle' was identified as being tonal at the point of reception. A 5 dB penalty was therefore applied. There were no noise sources with buzzing or cyclically varying sounds identified during the site visit. The adjustment is based on assessment at the point of reception, as described in MOE Publication NPC-103. There were no sources with beating characteristics identified during the site visits. Source characteristics are included in Table 1 and detailed source descriptions in Table TD.1 of Appendix D.

3.4 Construction Scenarios

Sound level limits set out in MOE Publication NPC-115 (MOE, 1977b) were reviewed for all construction equipment. New or used construction equipment utilized at the WCEC will meet NPC-115 criteria. The sound levels generated by construction equipment (e.g., excavators, dozers, loaders) used in the assessment meet the maximum sound level limits set out in NPC-115.

The number and type of equipment at the construction working face varies depending on the activities required in each construction phase. Below is a summary of the number and type of equipment required for construction of the landfill liner in the worst-case hour.

- Landfill development phase Site Preparation, 1, 2 and 4:
  - 2 excavators, 1 grader, 2 loaders, and 3 scrapers.
- Landfill development phase 5:
  - 2 excavators, 1 grader, 2 dozers, and 3 scrapers.
- Landfill development phase 7:
  - 2 excavators, 1 grader, 2 dozers.

Landfill development is planned over 10 different phases. Landfilling equipment remain the same in all phases (refer to Table 1 for a list of landfilling equipment). The development phases are provided in Appendix C.

3.5 Operating Scenarios

Five scenarios were developed to describe the predictable worst-case WCEC operations. The variation between the scenarios involves the time of day and location of working faces within the proposed landfill footprint. Worst-case sound levels at the receptors occur when liner construction and landfilling activities take place simultaneously and are closest to the receptors. The first two scenarios have been used to capture this. Since construction and landfilling activities occur only during daytime hours, a third scenario is needed for ancillary activities that can occur 24 hours a day. The five predictable worst-case operating scenarios are therefore:

- Scenario 1 – Daytime operations of landfill development phase 1:
  - liner construction in cell 2A and simultaneous landfilling in cell 1A, and
  - all ancillary sources in operation.
- Scenario 2 – Daytime operations of landfill development phase 7:
  - liner construction in cell 8A and simultaneous landfilling in cell 6A, and
  - all ancillary sources in operation.
- Scenario 3 – 06:00 to 07:00h/19:00 to 20:00h operations of landfill development phase 1:
  - all ancillary sources in operation including 2 dozers operating between 06:00 to 07:00h and 19:00 to 20:00h.
- Scenario 4 – 06:00 to 07:00h/19:00 to 20:00h operations of landfill development phase 7:
  - all ancillary sources in operation including 2 dozers operating between 06:00 to 07:00h and 19:00 to 20:00h.
- Scenario 5 – 20:00 to 06:00h operations of all landfill development phases:
  - all ancillary sources in operation outside of 06:00 to 07:00h and 19:00 to 20:00h.

4. POINT OF RECEPTION SUMMARY

Sound levels from sources at the WCEC were determined at points of reception, representative of noise-sensitive land-uses. The applicable sensitive land-uses are defined under the MOE Landfill guideline (MOE, 1998) for landfill sites and MOE Publication NPC-300 guideline (MOE, 2013) for all ancillary operations occurring outside of landfilling hours. Details on all applicable guidelines are given in Section 5. In general, noise-sensitive land-uses are defined as a property which accommodates a dwelling, a noise-sensitive commercial building or a noise-sensitive institutional building. A noise-sensitive land-use may have one or more points of reception.

Points of reception for an acoustic assessment are those locations where sound from the WCEC is received and assessed against the applicable limits. Sound may be assessed at the façade of the building and/or outdoor areas, depending on the type of receptor assessed.

Points of reception at the façade of a building include windows or openings in the façade leading to noise-sensitive spaces such as bedrooms, living rooms, eat-in kitchens, classrooms, therapy or treatment rooms, and assembly spaces for worship.

Outdoor points of reception are assessed when associated with dwellings, campgrounds or noise-sensitive zoned lots. For dwellings, the outdoor point of reception is within 30 m of a façade of the building, at a height of 1.5 m above ground, typically in backyards, front yards, terraces or patios.

Properties which are zoned to permit a noise-sensitive land-use and are currently vacant are assessed as if a noise-sensitive land-use exists at that location. The location and height of points of reception in this case are selected to evaluate the potential future land-use.

4.1 Surrounding Noise-Sensitive Land-Uses

Existing and potential future sensitive land-uses surrounding the WCEC were identified from current available zoning maps. A copy of the zoning maps obtained from the City of Ottawa in 2010 is provided in Appendix B. Land-uses surrounding the WCEC is largely industrial and agricultural. The existing landfill is zoned as rural heavy industrial and is bordered by mineral extraction, rural general industrial, rural commercial, and environmental protection areas.

4.2 Modelled Points of Reception

It should be noted that there are other existing sensitive land-uses located in all directions around the WCEC. These locations were identified in the approved Environmental Assessment (EA) for the WCEC (EA file #EA-02-08-02). A copy of the EA notice of approval is provided in Appendix A. However, for the purposes of this assessment, the closest/worst-case receptors were analyzed to determine the predictable worst-case sound levels of the WCEC. It is assumed that sound levels applicable to the closest/worst-case receptors would also apply to all other receptors and in many cases would be lower.

The following representative worst-case locations are the specific noise-sensitive receptors applicable for this assessment. Receptor ID's have been carried forward from the EA.

- NR1 is a 1-storey home on Richardson Side Road North to the north;
- NR2 is a 2-storey home at 2166 Carp Road East to the southeast;
- NR4 is a 2-storey home at 292 Moonstone Road South to the south-southwest;
- NR8 is a 2-storey Terrace Youth Residential Services to the south;
- PR4 is a 2-storey home on Richardson Side Road to the northwest;
- PR9 is a 2-storey home David Manchester Road to the west; and
- RR14 is a 2-storey home at 607 William Mooney Road to the north-northwest.

Both the outdoor and façade locations were considered for the above receptors. Receptor locations are shown in Figure 2.

Lands within the WCEC property boundary are either owned or optioned by WM. As part of the WCEC expansion, WM will exercise property options within the property boundary. This will result in current noise-sensitive dwellings leaving the property during the life of the proposed landfilling operations. This includes an existing single dwelling, located outside of WCEC's current property boundary to the north, which is now owned by WM. This existing dwelling was previously identified as 'NR1' in the EA. These properties have therefore been excluded from the assessment. An alternate receptor location was chosen for this assessment and described above (1-storey home on Richardson Side Road North).

5. ASSESSMENT CRITERIA

The applicable guidelines are determined from the level of urbanization and resulting background sound levels at each of the receptors adjacent to the WCEC. Since landfilling operations are expected to occur only during daytime hours, while ancillary operations can occur 24 hours a day, both of the following criteria are applicable for the WCEC expansion:

- MOE Landfill guideline (MOE, 1998) for landfilling operations; and
- MOE "Stationary and Transportation Sources" as set out in MOE Publication NPC-300 guideline (MOE, 2013) for ancillary operations.

5.1 Landfilling Operations

Steady-State Sources

The MOE Landfill guideline (MOE, 1998) sets the following one-hour energy equivalent sound level (L_{EQ-1hr} dBA values) limit for the receptors adjacent to the WCEC.

- The higher of 55 dBA or background sound, during the daytime hours (07:00 to 19:00h);
- The higher of 45 dBA or background sound, during the evening hours (19:00 to 23:00h); and
- The higher of 45 dBA or background sound, during the night-time hours (23:00 to 07:00h).

Landfilling operations are planned during daytime period; therefore only the above daytime criterion is applicable.

Pest Control Devices

Pest control devices at the WCEC are expected to include impulsive sources (e.g., propane cannons and shotgun), and quasi-steady impulsive sources (e.g., 'whistle'). Although the 'whistle' is not a quasi-steady impulsive source, the quasi-steady impulsive guideline limit was used to assess this pest control device under the MOE Landfill guideline as a conservative approximation. The MOE Landfill guideline sets sound level limits for pest control devices at the points of reception.

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

Notes: [1] L_{LM} is the logarithmic mean impulse level.

5.2 Ancillary Operations

The applicable guideline limits for the receptors adjacent to the WCEC ancillary operations are the MOE "Stationary and Transportation Sources" guideline as set out in MOE Publication NPC-300 (MOE, 2013). These guidelines state that one-hour sound exposures (L_{EQ-1hr} dBA values) from stationary sources shall not exceed that of the background, where the background is defined as the sound level present in the environment produced by sources other than those associated with landfilling operations. Receptors in the vicinity of the WCEC are expected to exhibit background sound levels typically of suburban areas (Class 2) since they are influenced predominantly by nearby road traffic on Richardson Side Road, Carp Road, Highway 7 and Highway 417.

Façade Point of Reception

The MOE NPC-300 Class 2 sound level limits at the façade of a building, which include windows or openings, are summarized as follows:

- The higher of 50 dBA or background sound, during the daytime hours (07:00 to 19:00h);
- The higher of 50 dBA or background sound, during the evening hours (19:00 to 23:00h); and
- The higher of 45 dBA or background sound, during the night-time hours (23:00 to 07:00h).

Outdoor Point of Reception

The MOE NPC-300 Class 2 sound level limits at the outdoor points of reception are only for daytime and evening hours, and are summarized as follows:

- The higher of 50 dBA or background sound, during the daytime hours (07:00 to 19:00h); and
- The higher of 45 dBA or background sound, during the evening hours (19:00 to 23:00h).

As daytime operations are governed under the MOE Landfill guideline criteria, the above evening and night-time sound level limits are applicable for ancillary stationary source operations.

5.3 Modelling of Background Sound Level

The applicable sound level limits above the MOE default values were modelled for receptors NR1, NR2, NR8, PR4, PR9, and RR14. Background sound levels at receptor NR4 were measured and are summarized in the next Section.

Ambient sound levels in the area are dominated by the sound of road traffic along Richardson Side Road, Carp Road, Highway 7, and Highway 417. Background sound levels at the receptors were determined based on traffic modelling as specified in MOE Publication NPC-206 (MOE, 1996c). Traffic sound levels were modelled using a spreadsheet version of the Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT) algorithms (MOE, 1989). Where applicable, the barrier effect of houses was included when assessing background noise levels related to traffic. An evaluation of the façade with the lowest background sound levels was considered to demonstrate worst-case exposure to the WCEC sound level emissions.

Available 2009 and 2011 hourly traffic volumes for Carp Road, Richardson Side Road, Highway 7 and Highway 417 were compiled by AECOM and provided to RWDI through WM. Traffic volumes for William Mooney Road were unavailable due to low volumes; therefore, sound levels from this road was excluded from the analysis. Landfill-related vehicles were provided by WM and were subtracted from the off-site traffic on public roads to address expected baseline conditions with no landfill in operation. Traffic data are provided in Appendix F.

The above 2009 and 2011 traffic data were provided as hourly vehicle volumes; with the exception of two road segments: Richardson Side Road east of Carp Road and Highway 417 west of Carp Road. Hourly volumes for 2009 were not collected by the Ministry of Transportation (MTO) for Highway 417 west of Carp Road segment, per AECOM. As such, traffic volumes in the form of Average Annual Daily Traffic (AADT) for Richardson Side Road east of Carp Road were adjusted by assuming the same distribution of hourly traffic data for Richardson Side Road west of Carp Road. Highway 417 west of Carp Road was addressed through a measurement program as described below.

Historical road traffic volumes for the various segment lengths of Highway 417 and Highway 7 were taken from MTO Provincial Highways Traffic Volumes for 2006 to 2007. The most recent annual percent change in traffic volume was based on data from MTO's AADT and applied to estimate the 2012 traffic volumes. Where an annual percent change was not available, a default target of 1% growth per year was applied, as per City of Ottawa 2020 Transportation Master Plan.

The guideline limit for each of the three time periods was determined by distributing the $L_{EQ-24hr}$ over 24 hours based on hourly traffic counts. During each time period, the lowest L_{EQ-1hr} was selected to represent the guideline limit for that period. A summary of the applicable sound level limits are shown in Tables 3a through 3d. Traffic data, calculations, and spreadsheet printouts are included in Appendix F.

5.4 Measurement of Background

Due to the lack of hourly traffic data for Highway 417 west of Carp Road, sound level measurements were conducted by RWDI from April 26 to 30, 2012 to determine the background sound levels at NR4. These measurements were conducted to obtain the background sound level prior to the proposed landfill expansion. The applicable sound level limits above the MOE default values were established for receptor NR4 and the analysis is provided in Appendix G.

NR4 is the closest receptor to the WCEC located south of the site and represents the worst-case sound levels in this direction. Background sound levels in the area are influenced predominantly by the sound of road traffic along Highway 417. The pit (Clark Quarry) located to the west of the receptor was not operating during the measurement period.

Measurements were conducted in accordance with the applicable requirements of MOE NPC-103 (MOE, 1978). Only data with meteorological conditions complying with NPC-103 and manufacturer's specifications during the measurement period were used in the analysis of background sound levels. Measurement equipment data and weather conditions during the measurement period are summarized in Appendix G.

The lowest measured one-hour L_{EQ} sound levels at NR4 were above the MOE default values. The applicable daytime, evening and night-time sound level limits are 60 dBA, 59 dBA and 51 dBA, respectively. The applicable limits during the 06:00-07:00h and 19:00-20:00h are 59 dBA and 62 dBA, respectively.

5.5 Summary of Applicable Limits

The higher of the applicable MOE default limit or background sound level was used to establish the criteria of each receptor. This method is as prescribed in MOE NPC-300 guidelines. Background sound level is either estimated based on road traffic volumes, or measured based on monitoring. The applicable sound level limits vary by point of reception for each time period and therefore are summarized in Tables 3a through 3d.

A detailed summary of the applicable steady-state (or continuous) sound level limits at each point of reception are provided on the following page.

Point of Reception (PoR) ID	Façade / Outdoor PoR	Time Period	MOE Default Landfill or NPC-300 Guideline Limit (dBA)	Calculated or Measured Sound Level (dBA)		Resulting Peformance Limit (dBA)
NR1	Façade	Daytime (Landfill)	55	61	Calculated	61
		1900-2000h	50	60		60
		2000-2300h	50	57		57
		2300-0600h	45	45		45
		0600-0700h	45	62		62
	Outdoor	Daytime (Landfill)	55	61	Calculated	61
		1900-2000h	45	59		59
		2000-2300h	45	57		57
NR2	Façade	Daytime (Landfill)	55	60	Calculated	60
		1900-2000h	50	59		59
		2000-2300h	50	56		56
		2300-0600h	45	45		45
		0600-0700h	45	60		60
	Outdoor	Daytime (Landfill)	55	59	Calculated	59
		1900-2000h	45	58		58
		2000-2300h	45	56		56
NR4	Façade	Daytime (Landfill)	55	60	Measured	60
		1900-2000h	50	62		62
		2000-2300h	50	59		59
		2300-0600h	45	51		51
		0600-0700h	45	59		59
	Outdoor	Daytime (Landfill)	55	60	Measured	60
		1900-2000h	45	62		62
		2000-2300h	45	59		59
NR8	Façade	Daytime (Landfill)	55	57	Calculated	57
		1900-2000h	50	56		56
		2000-2300h	50	53		53
		2300-0600h	45	45		45
		0600-0700h	45	57		57
	Outdoor	Daytime (Landfill)	55	56	Calculated	56
		1900-2000h	45	55		55
		2000-2300h	45	51		51
PR4	Façade	Daytime (Landfill)	55	51	Calculated	55
		1900-2000h	50	50		50
		2000-2300h	50	50		50
		2300-0600h	45	45		45
		0600-0700h	45	51		51
	Outdoor	Daytime (Landfill)	55	55	Calculated	55
		1900-2000h	45	50		50
		2000-2300h	45	47		47
PR9	Façade	Daytime (Landfill)	55	57	Calculated	57
		1900-2000h	50	57		57
		2000-2300h	50	54		54
		2300-0600h	45	46		46
		0600-0700h	45	57		57
	Outdoor	Daytime (Landfill)	55	56	Calculated	56
		1900-2000h	45	56		56
		2000-2300h	45	53		53
RR14	Façade	Daytime (Landfill)	55	61	Calculated	61
		1900-2000h	50	60		60
		2000-2300h	50	57		57
		2300-0600h	45	45		45
		0600-0700h	45	62		62
	Outdoor	Daytime (Landfill)	55	61	Calculated	61
		1900-2000h	45	59		59
		2000-2300h	45	57		57

The applicable impulsive sound level limits at each point of reception are summarized in detail below.

Point of Reception (PoR) ID	Pest Control Device	MOE Default Landfill Guideline Limit (dBA/dBAI)	Calculated or Measured Sound Level (dBA/dBAI)		Resulting Peformance Limit (dBA/dBAI)
NR1	Whistle	60	61	Calculated	61
	Propane Cannons or Shotgun	70	61		70
NR2	Whistle	60	60	Calculated	60
	Propane Cannons or Shotgun	70	60		70
NR4	Whistle	60	60	Measured	60
	Propane Cannons or Shotgun	70	60		70
NR8	Whistle	60	57	Calculated	60
	Propane Cannons or Shotgun	70	57		70
PR4	Whistle	60	51	Calculated	60
	Propane Cannons or Shotgun	70	51		70
PR9	Whistle	60	57	Calculated	60
	Propane Cannons or Shotgun	70	57		70
RR14	Whistle	60	61	Calculated	61
	Propane Cannons or Shotgun	70	61		70

6. IMPACT ASSESSMENT

The assessment of predictable worst-case sound level was completed through detailed modelling. The modelled sound level from the WCEC was assessed based on normal operations as described in Section 3. The L_{EQ-1hr} values for each scenario were calculated by combining emissions from the relevant significant sources. The WCEC sound levels were assessed against the applicable sound level limits. The predicted WCEC sound levels at each receptor are below the applicable limits.

6.1 Modelling

Modelling of sound level propagation to the points of reception was completed using Cadna/A, a commercially available implementation of the ISO 9613 (ISO, 1994b and ISO, 1996) algorithms. Cadna/A is produced by Datakustik GmbH. The modelling took into account the following factors:

- Source sound power level and directivity;
- Distance attenuation;
- Source-receptor geometry including heights, elevations and topography;
- Barrier effects of the site and surrounding buildings;
- Duration of events;
- Ground and air (atmospheric) attenuation;
- Temperature and humidity effects on propagation; and
- Moderate downwind or inversion conditions (per the ISO 9613 standard, where sound contributions at a receptor from multiple sources are calculated under a downwind condition, regardless of spatial orientation).

Key parameters used in the model and sample calculations are summarized in Appendix H.

Topography

Base elevations for the WCEC are based on drawings provided by WM. Terrain information for the area surrounding the quarry was obtained from the MOE Ontario Digital Elevation Model Data website. The terrain data are based on the North American Datum 1983 (NAD83) horizontal reference datum. ArcGIS software was used to estimate base elevations for receptors and to help the model account for changes in elevation of the surrounding terrain.

Ground Absorption

Localized ground absorption was used to account for hard surfaces (e.g., ponds, asphalt and gravel) between the WCEC and points of reception. Ground absorption is otherwise considered soft, due to large grassy areas.

6.2 Modelling Results

The individual contributions of each source at the worst-case points of reception are presented in Tables 2a and 2b. Due to the large amount of data, only the daytime contributions at the worst-case façade receptors are shown.

The WCEC sound levels at the representative receptors were assessed against the applicable sound level limits. A summary of the sound levels and limits are provided in Tables 3a through 3d for steady-state and impulsive sources. Sound level contours (isopleths of equal sound level) generated for all operating scenarios are presented in the following figures:

- Figure 3a: Predicted sound level contours for daytime (07:00 to 19:00h) operations (scenario 1).
- Figure 3b: Predicted sound level contours for daytime (07:00 to 19:00h) operations (scenario 2).
- Figure 4: Predicted sound level contours for 06:00 to 07:00h or 19:00 to 20:00h operations (scenario 3).
- Figure 5: Predicted sound level contours for 06:00 to 07:00h or 19:00 to 20:00h operations (scenario 4).
- Figure 6: Predicted sound level contours for 20:00 to 06:00h operations (scenario 5).

The 20:00 to 06:00h operations are consistent in all operating scenarios and landfill development phases. The predicted WCEC levels at each receptor are below the applicable limits.

7. CONCLUSIONS

The impacts from the existing and proposed sources at the WCEC are predicted to meet the applicable MOE Landfill and MOE NPC-300 Class 2 guideline limits. The WCEC is therefore predicted to be in compliance with all applicable guidelines.

8. REFERENCES

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TABLES

Table 1: Noise Source Summary

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

- "Table A1" in Appendix A of Basic CCofA Guide.

1. Wherever possible, the Source ID matches the identifiers used in the ESDM report.

2. Sound Power Level of Source, in dBA or dBAI, not including sound characteristic adjustments per NPC-104.

3. Source Location: O = Outside of building, including the roof, I = Inside of building

4. Sound Characteristic, per NPC-104

S = Steady	I = Impulsive	T = Tonal
Q = Quasi-Steady Impulsive	B = Buzzing	C = Cyclic

Where annoying characteristics are audible at the source, but not at receptors, no penalty is applied and the characteristic in this table is shown as "S". See section 3 of the report text for further details.

5. Noise control measures currently in place or specified in construction drawings

S = Silencer/Muffler	L = Lagging	O = Other
A = Acoustic lining, plenum	E = Acoustic enclosure	U = Uncontrolled
B = Barrier		

Where noise control measures are specified in construction drawings or were found on existing equipment, octave band sound power levels include the effects of the noise control measures. Noise control measures recommended in the mitigation section of this report are not included in this table.

Source ID [1]	Source Description	Sound Power Level [2] (dBA/dBAI)	Source Location [3] (I or O)	Sound Characteristics [4] (S,Q,I,B,T,C)	Noise Control Measures [5] (S,A,B,L,E,O,U)
LANDFILL GAS FLARES					
BLOWER_BLDG	Blower Bldg concentric opening	81	O	S	U
C_FLARE_motor	Candlestick flare motor 875 cfm	94	O	S	U
C_FLARE_stk	Candlestick flare exhaust 875 cfm	95	O	S	U
E_FLARE1_in	Smaller enclosed flare air intake at base	84	O	S	U
E_FLARE2_in	Larger enclosed flare air intake at base	84	O	S	U
LANDFILL GAS-TO-ENERGY PLANT					
GEN_IN_left	Energy Bldg sweep of air intakes; left half	93	O	S	U
GEN_IN_right	Energy Bldg sweep of air intakes; right half	91	O	S	U
GEN_OH1	Energy Building overhead door 1	95	O	S	U
GEN_OH2	Energy Building overhead door 2	94	O	S	U
GEN_OH3	Energy Building overhead door 3	93	O	S	U
GEN_RAD1	Energy Building Smithco radiator fan 1	100	O	S	U
GEN_RAD2	Energy Building Smithco radiator fan 2	100	O	S	U
GEN_RAD3	Energy Building Smithco radiator fan 3	100	O	S	U
GEN_RAD4	Energy Building Smithco radiator fan 4	100	O	S	U
GEN_RAD5	Energy Building Smithco radiator fan 5	100	O	S	U
GEN_STK1	Energy Bldg generator combustion exhaust 1	91	O	S	S
GEN_STK2	Energy Bldg generator combustion exhaust 2	91	O	S	S
GEN_STK3	Energy Bldg generator combustion exhaust 3	91	O	S	S
GEN_STK4	Energy Bldg generator combustion exhaust 4	91	O	S	S
GEN_STK5	Energy Bldg generator combustion exhaust 5	91	O	S	S
GEN_WALL1	Energy Bldg wall 1	92	O	S	U
GEN_WALL2	Energy Bldg wall 2	91	O	S	U
GEN_WALL3	Energy Bldg wall 3	90	O	S	U

Source ID [1]	Source Description	Sound Power Level [2] (dBA/dBAI)	Source Location [3] (I or O)	Sound Characteristics [4] (S,Q,I,B,T,C)	Noise Control Measures [5] (S,A,B,L,E,O,U)
LEACHATE TREATMENT SYSTEM					
SBR_BLR500	SBR Blower 500; 1295 cfm future	97	O	S	U
SBR_BLR510	SBR Blower 510; 1295 cfm future	97	O	S	U
SBR_SBLR600	Sludge Blower 600; 1295 cfm	97	O	S	U
SBR_BLR200	SBR Blower 200; 1295 cfm	97	O	S	U
SBR_BLR210	SBR Blower 210; 1295 cfm	97	O	S	U
SBR_BLR300	Sludge Blower 300; 1295 cfm	97	O	S	U
HEAVY EQUIPMENT - COMMON					
SS_TRK_IDLE	Idling Truck on Weigh Scale	100	O	S	U
WTPF_COMP	WTPF Waste compactor	95	O	S	U
WTPF_DROP_ICI	WTPF Drop-off truck unloading at IC&I pad	115	O	S	U
WTPF_DROP_CD	WTPF Drop-off truck unloading at C&D pad	115	O	S	U
WTPF_LOADER_CD	WTPF Loader C&D	115	O	S	U
WTPF_CRUSHER	WTPF Portable Concrete Crusher	113	O	S	U
WTPF_HR1_inICI	WTPF Inbound IC&I Delivery Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U
WTPF_HR2_inCD	WTPF Inbound C&D Material Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U
WTPF_HR3_outTT	WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)	110	O	S	U
WTPF_HR4_outICI	WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U
WTPF_HR5_outCD	WTPF Outbound C&D Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2.1 km long)	110	O	S	U
HEAVY EQUIPMENT - SCENARIO 1					
SS1_cs_ldr	Cover Soil - CAT Loader	115	O	S	U
SS1_lwf_cmpt1	Landfill Working Face - CAT 826G Compactor	109	O	S	U
SS1_lwf_cmpt2	Landfill Working Face - CAT 826G Compactor	109	O	S	U
SS1_lwf_dzr1	Landfill Working Face - CAT D6R Dozer	116	O	S	U
SS1_lwf_dzr2	Landfill Working Face - CAT D7 Dozer	115	O	S	U
SS1_lwf_dzr3	Landfill Working Face - CAT D7 Dozer	115	O	S	U
SS1_ob_stu	Overburden - CAT Soil Truck Unloading	117	O	S	U
SS1_cwf_grdr	Construction Working Face - Grader	115	O	S	U
SS1_cwf_exc1	Construction Working Face - CAT 330B Excavator	105	O	S	U
SS1_cwf_exc2	Construction Working Face - CAT 330B Excavator	105	O	S	U
SS1_cwf_ldr1	Construction Working Face - CAT 988H Loader 1	115	O	S	U
SS1_cwf_ldr2	Construction Working Face - CAT 988H Loader 2	115	O	S	U
SS1_cwf_scrpr1	Construction Working Face - CAT Scraper 1	114	O	S	U
SS1_cwf_scrpr2	Construction Working Face - CAT Scraper 2	114	O	S	U
SS1_cwf_scrpr3	Construction Working Face - CAT Scraper 3	114	O	S	U
SS1_HR1_rfpv	Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.7 km long)	117	O	S	U
SS1_HR2_cspv	Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 950 m long)	114	O	S	U
SS1_HR3_lst	Daily Cover Soil Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 320 m long)	111	O	S	U
SS1_HR3_cst	Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 320 m long)	111	O	S	U
SS1_HR4_cht	Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2.5 km long)	110	O	S	U

Source ID [1]	Source Description	Sound Power Level [2] (dBA/dBAI)	Source Location [3] (I or O)	Sound Characteristics [4] (S,Q,I,B,T,C)	Noise Control Measures [5] (S,A,B,L,E,O,U)
HEAVY EQUIPMENT - SCENARIO 2					
SS2_cs_ldr	Cover Soil - CAT Loader	115	O	S	U
SS2_lwf_cmpt1	Landfill Working Face - CAT 826G Compactor	109	O	S	U
SS2_lwf_cmpt2	Landfill Working Face - CAT 826G Compactor	109	O	S	U
SS2_lwf_dzr1	Landfill Working Face - CAT D6R Dozer	116	O	S	U
SS2_lwf_dzr2	Landfill Working Face - CAT D7 Dozer	115	O	S	U
SS2_lwf_dzr3	Landfill Working Face - CAT D7 Dozer	115	O	S	U
SS2_ob_stu	Overburden - CAT Soil Truck Unloading	117	O	S	U
SS2_cwf_grdr	Construction Working Face - Grader	115	O	S	U
SS2_cwf_exc1	Construction Working Face - CAT 330B Excavator	105	O	S	U
SS2_cwf_exc2	Construction Working Face - CAT 330B Excavator	105	O	S	U
SS2_cwf_dzr1	Construction Working Face - CAT D7 Dozer 1	115	O	S	U
SS2_cwf_dzr2	Construction Working Face - CAT D7 Dozer 2	115	O	S	U
SS2_HR1_rfpv	Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)	117	O	S	U
SS2_HR2_cspv	Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 1.4 km long)	114	O	S	U
SS2_HR3_lst	Daily Cover Soil Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 300 m long)	111	O	S	U
SS2_HR3_cst	Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 330 m long)	111	O	S	U
SS2_HR4_cht	Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U
PEST CONTROL DEVICES - SCENARIO 1					
Imp1_pc_wh	Pest Control - Whistle	103	O	S, T	U
Imp1_pc_pc1	Pest Control - Propane Cannon 1	141	O	I	U
Imp1_pc_pc2	Pest Control - Propane Cannon 2	141	O	I	U
Imp1_pc_pc3	Pest Control - Propane Cannon 3	141	O	I	U
Imp1_pc_pc4	Pest Control - Propane Cannon 4	141	O	I	U
Imp1_pc_pc5	Pest Control - Propane Cannon 5	141	O	I	U
Imp1_pc_shtg	Pest Control - Shotgun	158	O	I	U
PEST CONTROL DEVICES - SCENARIO 2					
Imp2_pc_wh	Pest Control - Whistle	103	O	S, T	U
Imp2_pc_pc1	Pest Control - Propane Cannon 1	141	O	I	U
Imp2_pc_pc2	Pest Control - Propane Cannon 2	141	O	I	U
Imp2_pc_pc3	Pest Control - Propane Cannon 3	141	O	I	U
Imp2_pc_pc4	Pest Control - Propane Cannon 4	141	O	I	U
Imp2_pc_pc5	Pest Control - Propane Cannon 5	141	O	I	U
Imp2_pc_shtg	Pest Control - Shotgun	158	O	I	U

Table 2a: Point of Reception Noise Impact - Scenario 1 (Daytime Façade)

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

- "Table A2" in Appendix A of Basic CCofA Guide.

1. "Continuous" noise sources includes operating time corrections and sum of steady, quasi-steady impulsive, tonal, cyclical and buzzing noise sources, with appropriate penalties applied, in accordance with documents NPC-104 and NPC-300.

2. Wherever possible, the Source ID matches the identifiers used in the ESDM report.

3. Sound Level units
   dBA = 1-hour energy equivalent sound level (L_{eq}(1-hr)), in terms of A-Weighted decibels.
   dBAI = Logarithmic mean impulsive noise level (L_{LM}), in terms of A-Weighted decibels incorporating an impulsive time weighting

-- Noise and vibration receptors representative of worst-case potential impacts have been selected. For the purposes of noise and vibration impact assessment, the following land uses (existing or zoned for future use) have been considered:
   - permanent , seasonal, or rental residences
   - hotels, motels and campgrounds
   - nursing / retirement homes
   - hospitals and clinics
   - schools, universities, libraries and daycare centres
   - churches and places of worship

	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID
	NR1	NR2	NR4	NR8	PR4	PR9	RR14
	Point of Reception Description: 1-storey home on Richardson Side Road N	Point of Reception Description: 2-storey home at 2166 Carp Road East	Point of Reception Description: 2-storey home at 292 Moonstone Road South	Point of Reception Description: 2-storey Terrace Youth Residential Services	Point of Reception Description: 2-storey home on Richardson Side Road NNW	Point of Reception Description: 2-storey home David Manchester Road	Point of Reception Description: 2-storey home at 607 William Mooney Road
	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates
	X: 18423378; Y: 5015662; Z: 121.65	X: 18425095; Y: 5014365; Z: 133.61	X: 18424009; Y: 5013694; Z: 134.5	X: 18424510; Y: 5013860; Z: 134.18	X: 18422496; Y: 5014786; Z: 129.45	X: 18422477; Y: 5013457; Z: 140.05	X: 18422720; Y: 5015088; Z: 126.86

Source ID [2]	Source Description	Point of Reception 1			Point of Reception 2			Point of Reception 3			Point of Reception 4			Point of Reception 5			Point of Reception 6			Point of Reception 7		
		Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)
BLOWER_BLDG	Blower Bldg concentric opening	1367	0	dBA	808	1	dBA	1386	-11	dBA	1108	-5	dBA	2068	-4	dBA	2570	-6	dBA	1840	-4	dBA
C_FLARE_motor	Candlestick flare motor 875 cfm	1334	10	dBA	839	17	dBA	1386	11	dBA	1121	14	dBA	2038	3	dBA	2552	1	dBA	1808	1	dBA
C_FLARE_stk	Candlestick flare exhaust 875 cfm	1337	13	dBA	839	24	dBA	1396	19	dBA	1128	21	dBA	2046	8	dBA	2563	6	dBA	1815	9	dBA
E_FLARE1_in	Smaller enclosed flare air intake at base	1357	1	dBA	819	4	dBA	1390	1	dBA	1116	4	dBA	2061	-4	dBA	2568	-6	dBA	1832	-4	dBA
E_FLARE2_in	Larger enclosed flare air intake at base	1354	1	dBA	819	7	dBA	1381	1	dBA	1108	4	dBA	2053	-4	dBA	2558	-6	dBA	1825	-4	dBA
GEN_IN_left	Energy Bldg sweep of air intakes; left half	1698	-22	dBA	459	2	dBA	1254	-14	dBA	869	-11	dBA	2277	-25	dBA	2604	-20	dBA	2088	-25	dBA
GEN_IN_right	Energy Bldg sweep of air intakes; right half	1685	-22	dBA	472	2	dBA	1256	-15	dBA	876	-11	dBA	2267	-25	dBA	2601	-20	dBA	2078	-25	dBA
GEN_OH1	Energy Building overhead door 1	1703	-9	dBA	454	15	dBA	1252	2	dBA	866	6	dBA	2280	-10	dBA	2604	-5	dBA	2092	-9	dBA
GEN_OH2	Energy Building overhead door 2	1691	-10	dBA	466	18	dBA	1254	1	dBA	873	5	dBA	2271	-12	dBA	2601	-7	dBA	2083	-11	dBA
GEN_OH3	Energy Building overhead door 3	1680	-11	dBA	478	19	dBA	1257	-1	dBA	879	4	dBA	2263	-14	dBA	2599	-9	dBA	2073	-13	dBA
GEN_RAD1	Energy Building Smithco radiator fan 1	1678	17	dBA	476	31	dBA	1235	27	dBA	859	33	dBA	2250	15	dBA	2579	19	dBA	2063	16	dBA
GEN_RAD2	Energy Building Smithco radiator fan 2	1684	17	dBA	470	31	dBA	1234	27	dBA	856	33	dBA	2254	15	dBA	2580	19	dBA	2068	16	dBA
GEN_RAD3	Energy Building Smithco radiator fan 3	1690	17	dBA	465	31	dBA	1233	27	dBA	853	33	dBA	2258	15	dBA	2581	19	dBA	2072	16	dBA
GEN_RAD4	Energy Building Smithco radiator fan 4	1696	17	dBA	458	31	dBA	1231	27	dBA	849	31	dBA	2263	15	dBA	2583	19	dBA	2078	16	dBA
GEN_RAD5	Energy Building Smithco radiator fan 5	1702	17	dBA	452	31	dBA	1230	27	dBA	846	31	dBA	2267	15	dBA	2584	19	dBA	2082	16	dBA
GEN_STK1	Energy Bldg generator combustion exhaust 1	1680	7	dBA	475	25	dBA	1241	17	dBA	864	20	dBA	2255	5	dBA	2585	8	dBA	2067	6	dBA
GEN_STK2	Energy Bldg generator combustion exhaust 2	1686	7	dBA	469	26	dBA	1240	17	dBA	861	20	dBA	2259	5	dBA	2586	8	dBA	2072	6	dBA
GEN_STK3	Energy Bldg generator combustion exhaust 3	1691	7	dBA	464	26	dBA	1239	17	dBA	858	20	dBA	2263	5	dBA	2587	8	dBA	2076	6	dBA
GEN_STK4	Energy Bldg generator combustion exhaust 4	1698	7	dBA	457	26	dBA	1237	17	dBA	854	20	dBA	2267	5	dBA	2589	8	dBA	2081	6	dBA
GEN_STK5	Energy Bldg generator combustion exhaust 5	1704	7	dBA	451	26	dBA	1236	17	dBA	851	20	dBA	2272	5	dBA	2590	8	dBA	2086	6	dBA
GEN_WALL1	Energy Bldg wall 1	1696	-9	dBA	461	17	dBA	1253	1	dBA	870	4	dBA	2274	-11	dBA	2602	-6	dBA	2086	-10	dBA
GEN_WALL2	Energy Bldg wall 2	1683	-10	dBA	474	19	dBA	1256	0	dBA	877	4	dBA	2266	-12	dBA	2600	-7	dBA	2076	-11	dBA
GEN_WALL3	Energy Bldg wall 3	1705	-12	dBA	452	10	dBA	1252	-1	dBA	865	2	dBA	2281	-13	dBA	2605	-8	dBA	2094	-12	dBA
SBR_BLR200	SBR Blower 200; 1295 cfm	1340	10	dBA	846	21	dBA	1067	19	dBA	873	21	dBA	1830	13	dBA	2234	12	dBA	1647	12	dBA
SBR_BLR210	SBR Blower 210; 1295 cfm	1341	10	dBA	843	21	dBA	1071	19	dBA	875	21	dBA	1834	13	dBA	2239	12	dBA	1651	12	dBA
SBR_BLR300	Sludge Blower 300; 1295 cfm	1354	10	dBA	831	22	dBA	1064	19	dBA	863	21	dBA	1842	13	dBA	2240	11	dBA	1661	12	dBA
SBR_BLR500	SBR Blower 500; 1295 cfm future	1313	11	dBA	869	22	dBA	1083	19	dBA	897	21	dBA	1813	13	dBA	2232	12	dBA	1626	12	dBA
SBR_BLR510	SBR Blower 510; 1295 cfm future	1314	11	dBA	867	22	dBA	1087	19	dBA	900	21	dBA	1817	13	dBA	2238	12	dBA	1630	13	dBA
SBR_SBLR600	Sludge Blower 600; 1295 cfm	1325	11	dBA	856	22	dBA	1083	19	dBA	890	21	dBA	1826	13	dBA	2241	12	dBA	1640	13	dBA
SS_TRK_IDLE	Idling Truck on Weigh Scale	793	24	dBA	1359	12	dBA	1475	15	dBA	1405	13	dBA	1551	20	dBA	2290	14	dBA	1281	23	dBA
WTPF_COMP	WTPF Waste compactor	1636	-8	dBA	1383	5	dBA	457	31	dBA	792	15	dBA	1441	18	dBA	1407	18	dBA	1446	18	dBA
WTPF_DROP_ICI	WTPF Drop-off truck unloading at IC&I pad	1614	28	dBA	1341	37	dBA	465	45	dBA	767	44	dBA	1457	32	dBA	1453	31	dBA	1450	32	dBA
WTPF_DROP_CD	WTPF Drop-off truck unloading at C&D pad	1625	28	dBA	1321	38	dBA	449	50	dBA	745	44	dBA	1479	32	dBA	1469	32	dBA	1470	31	dBA
WTPF_LOADER_CD	WTPF Loader C&D	1631	31	dBA	1327	40	dBA	444	51	dBA	746	46	dBA	1479	39	dBA	1463	34	dBA	1472	39	dBA
WTPF_CRUSHER	WTPF Portable Concrete Crusher	1639	28	dBA	1335	36	dBA	439	48	dBA	749	43	dBA	1478	31	dBA	1453	35	dBA	1474	35	dBA

Source ID [2]	Source Description	Point of Reception 1			Point of Reception 2			Point of Reception 3			Point of Reception 4			Point of Reception 5			Point of Reception 6			Point of Reception 7		
		Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)
WTPF_HR1_inICI	WTPF Inbound IC&I Delivery Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	Varies	36	dBA	Varies	28	dBA	Varies	38	dBA	Varies	33	dBA	Varies	37	dBA	Varies	33	dBA	Varies	38	dBA
WTPF_HR2_inCD	WTPF Inbound C&D Material Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	Varies	38	dBA	Varies	30	dBA	Varies	40	dBA	Varies	35	dBA	Varies	38	dBA	Varies	35	dBA	Varies	39	dBA
WTPF_HR3_outTT	WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)	Varies	31	dBA	Varies	25	dBA	Varies	36	dBA	Varies	31	dBA	Varies	32	dBA	Varies	29	dBA	Varies	33	dBA
WTPF_HR4_outICI	WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	Varies	29	dBA	Varies	21	dBA	Varies	30	dBA	Varies	26	dBA	Varies	30	dBA	Varies	26	dBA	Varies	31	dBA
WTPF_HR5_outCD	WTPF Outbound C&D Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2.1 km long)	Varies	33	dBA	Varies	26	dBA	Varies	36	dBA	Varies	31	dBA	Varies	34	dBA	Varies	30	dBA	Varies	35	dBA
SS1_cs_ldr	Cover Soil - CAT Loader	834	39	dBA	1338	30	dBA	1359	32	dBA	1318	30	dBA	1475	38	dBA	2169	33	dBA	1227	40	dBA
SS1_lwf_cmpt1	Landfill Working Face - CAT 826G Compactor	492	42	dBA	1666	25	dBA	1644	25	dBA	1651	25	dBA	1337	32	dBA	2236	26	dBA	1029	35	dBA
SS1_lwf_cmpt2	Landfill Working Face - CAT 826G Compactor	494	42	dBA	1661	25	dBA	1650	25	dBA	1653	25	dBA	1352	32	dBA	2250	26	dBA	1043	35	dBA
SS1_lwf_dzr1	Landfill Working Face - CAT D6R Dozer	497	49	dBA	1663	33	dBA	1632	33	dBA	1642	33	dBA	1327	40	dBA	2222	34	dBA	1021	43	dBA
SS1_lwf_dzr2	Landfill Working Face - CAT D7 Dozer	472	48	dBA	1686	32	dBA	1657	32	dBA	1668	32	dBA	1325	40	dBA	2235	33	dBA	1014	42	dBA
SS1_lwf_dzr3	Landfill Working Face - CAT D7 Dozer	474	48	dBA	1681	32	dBA	1669	32	dBA	1674	32	dBA	1347	39	dBA	2257	33	dBA	1035	42	dBA
SS1_ob_stu	Overburden - CAT Soil Truck Unloading	844	40	dBA	1396	31	dBA	1266	30	dBA	1283	30	dBA	1340	40	dBA	2010	35	dBA	1115	43	dBA
SS1_cwf_grdr	Construction Working Face - Grader	522	47	dBA	1696	30	dBA	1555	31	dBA	1608	30	dBA	1196	39	dBA	2082	31	dBA	905	42	dBA
SS1_cwf_exc1	Construction Working Face - CAT 330B Excavator	488	38	dBA	1741	21	dBA	1583	22	dBA	1646	22	dBA	1163	30	dBA	2075	23	dBA	866	34	dBA
SS1_cwf_exc2	Construction Working Face - CAT 330B Excavator	483	38	dBA	1735	21	dBA	1590	22	dBA	1648	22	dBA	1179	30	dBA	2091	23	dBA	880	33	dBA
SS1_cwf_ldr1	Construction Working Face - CAT 988H Loader 1	527	48	dBA	1706	32	dBA	1544	33	dBA	1606	33	dBA	1170	41	dBA	2057	34	dBA	882	44	dBA
SS1_cwf_ldr2	Construction Working Face - CAT 988H Loader 2	493	49	dBA	1724	32	dBA	1581	33	dBA	1638	33	dBA	1185	41	dBA	2090	34	dBA	888	44	dBA
SS1_cwf_scrpr1	Construction Working Face - CAT Scraper 1	512	47	dBA	1724	29	dBA	1557	30	dBA	1623	29	dBA	1160	38	dBA	2057	31	dBA	868	42	dBA
SS1_cwf_scrpr2	Construction Working Face - CAT Scraper 2	508	47	dBA	1717	29	dBA	1565	30	dBA	1624	29	dBA	1177	38	dBA	2074	31	dBA	884	41	dBA
SS1_cwf_scrpr3	Construction Working Face - CAT Scraper 3	504	47	dBA	1710	29	dBA	1572	30	dBA	1626	29	dBA	1194	38	dBA	2092	30	dBA	899	41	dBA
SS1_HR1_rfpv	Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.7 km long)	Varies	49	dBA	Varies	38	dBA	Varies	42	dBA	Varies	38	dBA	Varies	48	dBA	Varies	43	dBA	Varies	50	dBA
SS1_HR2_cspv	Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 950 m long)	Varies	31	dBA	Varies	22	dBA	Varies	22	dBA	Varies	21	dBA	Varies	27	dBA	Varies	23	dBA	Varies	29	dBA
SS1_HR3_lst	Daily Cover Soil Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 320 m long)	Varies	32	dBA	Varies	19	dBA	Varies	19	dBA	Varies	19	dBA	Varies	26	dBA	Varies	20	dBA	Varies	28	dBA
SS1_HR3_cst	Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 320 m long)	Varies	25	dBA	Varies	13	dBA	Varies	13	dBA	Varies	13	dBA	Varies	21	dBA	Varies	15	dBA	Varies	24	dBA
SS1_HR4_cht	Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2.5 km long)	Varies	41	dBA	Varies	31	dBA	Varies	35	dBA	Varies	31	dBA	Varies	41	dBA	Varies	36	dBA	Varies	43	dBA
Imp1_pc_wh	Pest Control - Whistle	462	40	dBA	1694	20	dBA	1676	20	dBA	1684	20	dBA	1338	27	dBA	2255	22	dBA	1025	30	dBA
Imp1_pc_pc1	Pest Control - Propane Cannon 1	893	57	dBAI	1361	50	dBAI	1216	47	dBAI	1234	48	dBAI	1351	57	dBAI	1985	52	dBAI	1138	59	dBAI
Imp1_pc_pc2	Pest Control - Propane Cannon 2	515	64	dBAI	1637	54	dBAI	1669	53	dBAI	1655	54	dBAI	1407	56	dBAI	2300	50	dBAI	1097	59	dBAI
Imp1_pc_pc3	Pest Control - Propane Cannon 3	579	62	dBAI	1599	55	dBAI	1535	54	dBAI	1552	55	dBAI	1306	57	dBAI	2152	51	dBAI	1020	60	dBAI
Imp1_pc_pc4	Pest Control - Propane Cannon 4	654	60	dBAI	1499	54	dBAI	1551	53	dBAI	1518	54	dBAI	1454	56	dBAI	2267	50	dBAI	1167	58	dBAI
Imp1_pc_pc5	Pest Control - Propane Cannon 5	458	65	dBAI	1700	54	dBAI	1669	53	dBAI	1682	54	dBAI	1320	57	dBAI	2238	51	dBAI	1007	60	dBAI
Imp1_pc_shtg	Pest Control - Shotgun	492	67	dBAI	1675	68	dBAI	1622	59	dBAI	1641	63	dBAI	1300	58	dBAI	2198	55	dBAI	995	62	dBAI

Table 2b: Point of Reception Noise Impact - Scenario 2 (Daytime Façade)

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

- "Table A2" in Appendix A of Basic CCofA Guide.

1. "Continuous" noise sources includes operating time corrections and sum of steady, quasi-steady impulsive, tonal, cyclical and buzzing noise sources, with appropriate penalties applied, in accordance with documents NPC-104 and NPC-300.

2. Wherever possible, the Source ID matches the identifiers used in the ESDM report.

3. Sound Level units
   dBA = 1-hour energy equivalent sound level (L_{eq}(1-hr)), in terms of A-Weighted decibels.
   dBAI = Logarithmic mean impulsive noise level (L_{LM}), in terms of A-Weighted decibels incorporating an impulsive time weighting

-- Noise and vibration receptors representative of worst-case potential impacts have been selected. For the purposes of noise and vibration impact assessment, the following land uses (existing or zoned for future use) have been considered:
   - permanent , seasonal, or rental residences
   - hotels, motels and campgrounds
   - nursing / retirement homes
   - hospitals and clinics
   - schools, universities, libraries and daycare centres
   - churches and places of worship

	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID	Point of Reception ID
	NR1	NR2	NR4	NR8	PR4	PR9	RR14
	Point of Reception Description: 1-storey home on Richardson Side Road N	Point of Reception Description: 2-storey home at 2166 Carp Road East	Point of Reception Description: 2-storey home at 292 Moonstone Road South	Point of Reception Description: 2-storey Terrace Youth Residential Services	Point of Reception Description: 2-storey home on Richardson Side Road NNW	Point of Reception Description: 2-storey home David Manchester Road	Point of Reception Description: 2-storey home at 607 William Mooney Road
	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates	Point of reception coordinates
	X: 18423378; Y: 5015662; Z: 121.65	X: 18425095; Y: 5014365; Z: 133.61	X: 18424009; Y: 5013694; Z: 134.5	X: 18424510; Y: 5013860; Z: 134.18	X: 18422496; Y: 5014786; Z: 129.45	X: 18422477; Y: 5013457; Z: 140.05	X: 18422720; Y: 5015088; Z: 126.86

Source ID [2]	Source Description	Point of Reception 1			Point of Reception 2			Point of Reception 3			Point of Reception 4			Point of Reception 5			Point of Reception 6			Point of Reception 7		
		Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)
BLOWER_BLDG	Blower Bldg concentric opening	1367	0	dBA	808	1	dBA	1386	-11	dBA	1108	-5	dBA	2068	-4	dBA	2570	-6	dBA	1840	-5	dBA
C_FLARE_motor	Candlestick flare motor 875 cfm	1334	10	dBA	839	17	dBA	1386	11	dBA	1121	14	dBA	2038	3	dBA	2552	1	dBA	1808	-3	dBA
C_FLARE_stk	Candlestick flare exhaust 875 cfm	1337	13	dBA	839	24	dBA	1396	19	dBA	1128	21	dBA	2046	8	dBA	2563	6	dBA	1815	7	dBA
E_FLARE1_in	Smaller enclosed flare air intake at base	1357	1	dBA	819	4	dBA	1390	1	dBA	1116	4	dBA	2061	-4	dBA	2568	-6	dBA	1832	-6	dBA
E_FLARE2_in	Larger enclosed flare air intake at base	1354	1	dBA	819	7	dBA	1381	1	dBA	1108	4	dBA	2053	-4	dBA	2558	-6	dBA	1825	-6	dBA
GEN_IN_left	Energy Bldg sweep of air intakes; left half	1698	-22	dBA	459	2	dBA	1254	-14	dBA	869	-11	dBA	2277	-25	dBA	2604	-20	dBA	2088	-25	dBA
GEN_IN_right	Energy Bldg sweep of air intakes; right half	1685	-22	dBA	472	2	dBA	1256	-15	dBA	876	-11	dBA	2267	-25	dBA	2601	-20	dBA	2078	-25	dBA
GEN_OH1	Energy Building overhead door 1	1703	-9	dBA	454	15	dBA	1252	2	dBA	866	6	dBA	2280	-10	dBA	2604	-5	dBA	2092	-10	dBA
GEN_OH2	Energy Building overhead door 2	1691	-10	dBA	466	18	dBA	1254	1	dBA	873	5	dBA	2271	-12	dBA	2601	-7	dBA	2083	-11	dBA
GEN_OH3	Energy Building overhead door 3	1680	-11	dBA	478	19	dBA	1257	-1	dBA	879	4	dBA	2263	-14	dBA	2599	-9	dBA	2073	-13	dBA
GEN_RAD1	Energy Building Smithco radiator fan 1	1678	17	dBA	476	31	dBA	1235	27	dBA	859	33	dBA	2250	15	dBA	2579	19	dBA	2063	16	dBA
GEN_RAD2	Energy Building Smithco radiator fan 2	1684	17	dBA	470	31	dBA	1234	27	dBA	856	33	dBA	2254	15	dBA	2580	19	dBA	2068	16	dBA
GEN_RAD3	Energy Building Smithco radiator fan 3	1690	17	dBA	465	31	dBA	1233	27	dBA	853	33	dBA	2258	15	dBA	2581	19	dBA	2072	16	dBA
GEN_RAD4	Energy Building Smithco radiator fan 4	1696	17	dBA	458	31	dBA	1231	27	dBA	849	31	dBA	2263	15	dBA	2583	19	dBA	2078	16	dBA
GEN_RAD5	Energy Building Smithco radiator fan 5	1702	17	dBA	452	31	dBA	1230	27	dBA	846	31	dBA	2267	15	dBA	2584	19	dBA	2082	16	dBA
GEN_STK1	Energy Bldg generator combustion exhaust 1	1680	7	dBA	475	25	dBA	1241	17	dBA	864	20	dBA	2255	5	dBA	2585	8	dBA	2067	6	dBA
GEN_STK2	Energy Bldg generator combustion exhaust 2	1686	7	dBA	469	26	dBA	1240	17	dBA	861	20	dBA	2259	5	dBA	2586	8	dBA	2072	6	dBA
GEN_STK3	Energy Bldg generator combustion exhaust 3	1691	7	dBA	464	26	dBA	1239	17	dBA	858	20	dBA	2263	5	dBA	2587	8	dBA	2076	6	dBA
GEN_STK4	Energy Bldg generator combustion exhaust 4	1698	7	dBA	457	26	dBA	1237	17	dBA	854	20	dBA	2267	5	dBA	2589	8	dBA	2081	6	dBA
GEN_STK5	Energy Bldg generator combustion exhaust 5	1704	7	dBA	451	26	dBA	1236	17	dBA	851	20	dBA	2272	5	dBA	2590	8	dBA	2086	6	dBA
GEN_WALL1	Energy Bldg wall 1	1696	-9	dBA	461	17	dBA	1253	1	dBA	870	4	dBA	2274	-11	dBA	2602	-6	dBA	2086	-11	dBA
GEN_WALL2	Energy Bldg wall 2	1683	-10	dBA	474	19	dBA	1256	0	dBA	877	4	dBA	2266	-12	dBA	2600	-7	dBA	2076	-11	dBA
GEN_WALL3	Energy Bldg wall 3	1705	-12	dBA	452	10	dBA	1252	-1	dBA	865	2	dBA	2281	-13	dBA	2605	-8	dBA	2094	-13	dBA
SBR_BLR200	SBR Blower 200; 1295 cfm	1340	7	dBA	846	21	dBA	1067	19	dBA	873	21	dBA	1830	13	dBA	2234	12	dBA	1647	9	dBA
SBR_BLR210	SBR Blower 210; 1295 cfm	1341	7	dBA	843	21	dBA	1071	19	dBA	875	21	dBA	1834	13	dBA	2239	12	dBA	1651	9	dBA
SBR_BLR300	Sludge Blower 300; 1295 cfm	1354	7	dBA	831	22	dBA	1064	19	dBA	863	21	dBA	1842	13	dBA	2240	11	dBA	1661	10	dBA
SBR_BLR500	SBR Blower 500; 1295 cfm future	1313	8	dBA	869	22	dBA	1083	19	dBA	897	21	dBA	1813	13	dBA	2232	12	dBA	1626	10	dBA
SBR_BLR510	SBR Blower 510; 1295 cfm future	1314	8	dBA	867	22	dBA	1087	19	dBA	900	21	dBA	1817	13	dBA	2238	12	dBA	1630	10	dBA
SBR_SBLR600	Sludge Blower 600; 1295 cfm	1325	8	dBA	856	22	dBA	1083	19	dBA	890	21	dBA	1826	13	dBA	2241	12	dBA	1640	11	dBA
SS_TRK_IDLE	Idling Truck on Weigh Scale	793	24	dBA	1359	12	dBA	1475	15	dBA	1405	13	dBA	1551	12	dBA	2290	9	dBA	1281	13	dBA
WTPF_COMP	WTPF Waste compactor	1636	-9	dBA	1383	5	dBA	457	31	dBA	792	15	dBA	1441	18	dBA	1407	18	dBA	1446	18	dBA
WTPF_DROP_ICI	WTPF Drop-off truck unloading at IC&I pad	1614	25	dBA	1341	37	dBA	465	45	dBA	767	44	dBA	1457	32	dBA	1453	31	dBA	1450	32	dBA
WTPF_DROP_CD	WTPF Drop-off truck unloading at C&D pad	1625	25	dBA	1321	38	dBA	449	50	dBA	745	44	dBA	1479	32	dBA	1469	32	dBA	1470	31	dBA
WTPF_LOADER_CD	WTPF Loader C&D	1631	29	dBA	1327	40	dBA	444	51	dBA	746	46	dBA	1479	39	dBA	1463	34	dBA	1472	39	dBA
WTPF_CRUSHER	WTPF Portable Concrete Crusher	1639	26	dBA	1335	36	dBA	439	48	dBA	749	43	dBA	1478	31	dBA	1453	35	dBA	1474	35	dBA

Source ID [2]	Source Description	Point of Reception 1			Point of Reception 2			Point of Reception 3			Point of Reception 4			Point of Reception 5			Point of Reception 6			Point of Reception 7		
		Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)	Distance (m)	Sound Level at PoR	Units [3] (dBA)
WTPF_HR1_inICI	WTPF Inbound IC&I Delivery Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	Varies	32	dBA	Varies	28	dBA	Varies	38	dBA	Varies	33	dBA	Varies	34	dBA	Varies	33	dBA	Varies	35	dBA
WTPF_HR2_inCD	WTPF Inbound C&D Material Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	Varies	34	dBA	Varies	30	dBA	Varies	40	dBA	Varies	35	dBA	Varies	36	dBA	Varies	35	dBA	Varies	36	dBA
WTPF_HR3_outTT	WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)	Varies	27	dBA	Varies	25	dBA	Varies	36	dBA	Varies	31	dBA	Varies	30	dBA	Varies	28	dBA	Varies	30	dBA
WTPF_HR4_outICI	WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	Varies	25	dBA	Varies	21	dBA	Varies	30	dBA	Varies	26	dBA	Varies	27	dBA	Varies	26	dBA	Varies	28	dBA
WTPF_HR5_outCD	WTPF Outbound C&D Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2.1 km long)	Varies	29	dBA	Varies	26	dBA	Varies	36	dBA	Varies	31	dBA	Varies	32	dBA	Varies	30	dBA	Varies	32	dBA
SS2_cs_ldr	Cover Soil - CAT Loader	1002	37	dBA	1614	33	dBA	1095	35	dBA	1285	33	dBA	1021	42	dBA	1592	37	dBA	894	44	dBA
SS2_lwf_cmpt1	Landfill Working Face - CAT 826G Compactor	721	38	dBA	1839	22	dBA	1411	27	dBA	1586	26	dBA	867	37	dBA	1721	29	dBA	646	41	dBA
SS2_lwf_cmpt2	Landfill Working Face - CAT 826G Compactor	712	34	dBA	1830	19	dBA	1413	27	dBA	1583	26	dBA	881	37	dBA	1735	29	dBA	656	40	dBA
SS2_lwf_dzr1	Landfill Working Face - CAT D6R Dozer	735	45	dBA	1839	31	dBA	1402	35	dBA	1581	34	dBA	860	45	dBA	1707	37	dBA	644	48	dBA
SS2_lwf_dzr2	Landfill Working Face - CAT D7 Dozer	713	44	dBA	1858	30	dBA	1428	34	dBA	1605	33	dBA	852	44	dBA	1721	36	dBA	627	47	dBA
SS2_lwf_dzr3	Landfill Working Face - CAT D7 Dozer	696	44	dBA	1847	27	dBA	1433	34	dBA	1603	33	dBA	872	44	dBA	1743	36	dBA	641	47	dBA
SS2_ob_stu	Overburden - CAT Soil Truck Unloading	1075	34	dBA	1699	32	dBA	1075	38	dBA	1318	30	dBA	936	45	dBA	1466	39	dBA	852	46	dBA
SS2_cwf_grdr	Construction Working Face - Grader	833	42	dBA	1950	26	dBA	1405	32	dBA	1636	30	dBA	712	45	dBA	1569	35	dBA	541	48	dBA
SS2_cwf_exc1	Construction Working Face - CAT 330B Excavator	827	33	dBA	1996	19	dBA	1444	23	dBA	1680	21	dBA	671	36	dBA	1565	27	dBA	495	39	dBA
SS2_cwf_exc2	Construction Working Face - CAT 330B Excavator	813	33	dBA	1987	18	dBA	1445	23	dBA	1676	22	dBA	684	36	dBA	1580	27	dBA	502	39	dBA
SS2_cwf_dzr1	Construction Working Face - CAT D7 Dozer 1	851	42	dBA	1976	30	dBA	1413	34	dBA	1652	32	dBA	681	47	dBA	1545	38	dBA	520	49	dBA
SS2_cwf_dzr2	Construction Working Face - CAT D7 Dozer 2	824	43	dBA	1969	29	dBA	1425	34	dBA	1656	32	dBA	697	46	dBA	1573	38	dBA	521	49	dBA
SS2_HR1_rfpv	Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)	Varies	44	dBA	Varies	36	dBA	Varies	41	dBA	Varies	37	dBA	Varies	46	dBA	Varies	42	dBA	Varies	48	dBA
SS2_HR2_cspv	Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 1.4 km long)	Varies	29	dBA	Varies	23	dBA	Varies	23	dBA	Varies	22	dBA	Varies	25	dBA	Varies	26	dBA	Varies	25	dBA
SS2_HR3_lst	Daily Cover Soil Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 300 m long)	Varies	24	dBA	Varies	18	dBA	Varies	22	dBA	Varies	20	dBA	Varies	30	dBA	Varies	23	dBA	Varies	31	dBA
SS2_HR3_cst	Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 330 m long)	Varies	17	dBA	Varies	12	dBA	Varies	17	dBA	Varies	13	dBA	Varies	26	dBA	Varies	19	dBA	Varies	28	dBA
SS2_HR4_cht	Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)	Varies	36	dBA	Varies	29	dBA	Varies	34	dBA	Varies	30	dBA	Varies	39	dBA	Varies	35	dBA	Varies	41	dBA
Imp2_pc_wh	Pest Control - Whistle	697	34	dBA	1874	19	dBA	1448	21	dBA	1625	20	dBA	845	32	dBA	1731	24	dBA	613	36	dBA
Imp2_pc_pc1	Pest Control - Propane Cannon 1	1105	51	dBAI	1650	55	dBAI	1027	57	dBAI	1264	48	dBAI	987	60	dBAI	1475	56	dBAI	906	61	dBAI
Imp2_pc_pc2	Pest Control - Propane Cannon 2	744	61	dBAI	1724	56	dBAI	1345	56	dBAI	1491	56	dBAI	978	60	dBAI	1768	54	dBAI	762	63	dBAI
Imp2_pc_pc3	Pest Control - Propane Cannon 3	610	64	dBAI	1829	48	dBAI	1488	44	dBAI	1628	45	dBAI	943	61	dBAI	1843	49	dBAI	681	64	dBAI
Imp2_pc_pc4	Pest Control - Propane Cannon 4	828	45	dBAI	1854	42	dBAI	1344	57	dBAI	1553	45	dBAI	808	62	dBAI	1608	55	dBAI	634	64	dBAI
Imp2_pc_pc5	Pest Control - Propane Cannon 5	687	63	dBAI	1862	51	dBAI	1448	56	dBAI	1619	55	dBAI	862	61	dBAI	1746	54	dBAI	626	65	dBAI
Imp2_pc_shtg	Pest Control - Shotgun	745	68	dBAI	1865	69	dBAI	1409	64	dBAI	1597	66	dBAI	829	64	dBAI	1686	60	dBAI	617	66	dBAI

Table 3a: Acoustic Assessment Summary - Scenario 1 (Steady-State)

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

1. "Continuous" noise sources includes sum of steady, quasi-steady impulsive, tonal, cyclical and buzzing noise sources, with appropriate penalties applied, in accordance with documents NPC-104 and NPC-300. Pest control devices, be it impulsive or quasi-steady impulsive, and emergency noise sources are assessed seperately from continuous noise sources.
2. Unless otherwise noted, daytime occurs from 0700-1900h, evening occurs from 1900h-2300h and night-time occurs from 2300-0700h.
3. Worst-case cumulative sound level from all applicable sources operating.
4. Has an acoustic audit (as defined in Publication NPC-233) been conducted with source in place and operating?
5. The higher of MOE Landfill / NPC-300 / ORNAMENT road traffic modelling sound level limit.
6. Performance limit (aka guideline limit) based on following:
   C = Calculated based on road traffic volumes in compliance with NPC-206 requirements.
   M = Measured based on monitoring for a minimum 48 hour period, in accordance with NPC-233 requirements.
   D = Default guideline minima per MOE Landfill / NPC-300, as applicable (e.g., 55 dBA daytime for MOE Landfill guideline).

Assessment of Impacts for "Steady-State" or "Continuous" Sources [1]

Point of Reception (PoR) ID	Description of PoR	Location of PoR (Façade / Outdoor)	Time Period [2]	Total Sound Level at PoR [3] (dBA)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR1	1-storey home on Richardson Side Road N	Façade	Daytime	59	No	61	C	Yes
			1900-2000h	52	No	60		Yes
			2000-2300h	26	No	57		Yes
			2300-0600h	26	No	45		Yes
			0600-0700h	52	No	62		Yes
		Outdoor	Daytime	59	No	61		Yes
			1900-2000h	52	No	59		Yes
			2000-2300h	26	No	57		Yes
NR2	2-storey home at 2166 Carp Road East	Façade	Daytime	48	No	60	C	Yes
			1900-2000h	41	No	59		Yes
			2000-2300h	40	No	56		Yes
			2300-0600h	40	No	45		Yes
			0600-0700h	41	No	60		Yes
		Outdoor	Daytime	47	No	59		Yes
			1900-2000h	40	No	58		Yes
			2000-2300h	39	No	56		Yes
NR4	2-storey home at 292 Moonstone Road South	Façade	Daytime	56	No	60	M	Yes
			1900-2000h	39	No	62		Yes
			2000-2300h	35	No	59		Yes
			2300-0600h	35	No	51		Yes
			0600-0700h	39	No	59		Yes
		Outdoor	Daytime	55	No	60		Yes
			1900-2000h	37	No	62		Yes
			2000-2300h	33	No	59		Yes

Assessment of Impacts for "Steady-State" or "Continuous" Sources [1]

Point of Reception (PoR) ID	Description of PoR	Location of PoR (Façade / Outdoor)	Time Period [2]	Total Sound Level at PoR [3] (dBA)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR8	2-storey Terrace Youth Residential Services	Façade	Daytime	52	No	57	C	Yes
			1900-2000h	42	No	56		Yes
			2000-2300h	40	No	53		Yes
			2300-0600h	40	No	45		Yes
			0600-0700h	42	No	57		Yes
		Outdoor	Daytime	51	No	56		Yes
			1900-2000h	40	No	55		Yes
			2000-2300h	39	No	51		Yes
PR4	2-storey home on Richardson Side Road NNW	Façade	Daytime	53	No	55	C	Yes
			1900-2000h	43	No	50		Yes
			2000-2300h	25	No	50		Yes
			2300-0600h	25	No	45		Yes
			0600-0700h	43	No	51		Yes
		Outdoor	Daytime	52	No	55		Yes
			1900-2000h	41	No	50		Yes
			2000-2300h	24	No	47		Yes
PR9	2-storey home David Manchester Road	Façade	Daytime	48	No	57	C	Yes
			1900-2000h	37	No	57		Yes
			2000-2300h	27	No	54		Yes
			2300-0600h	27	No	46		Yes
			0600-0700h	37	No	57		Yes
		Outdoor	Daytime	46	No	56		Yes
			1900-2000h	35	No	56		Yes
			2000-2300h	24	No	53		Yes
RR14	2-storey home at 607 William Mooney Road	Façade	Daytime	56	No	61	C	Yes
			1900-2000h	46	No	60		Yes
			2000-2300h	25	No	57		Yes
			2300-0600h	25	No	45		Yes
			0600-0700h	46	No	62		Yes
		Outdoor	Daytime	54	No	61		Yes
			1900-2000h	44	No	59		Yes
			2000-2300h	24	No	57		Yes

Table 3b: Acoustic Assessment Summary - Scenario 1 (Pest Control Devices)

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

1. "Continuous" noise sources includes sum of steady, quasi-steady impulsive, tonal, cyclical and buzzing noise sources, with appropriate penalties applied, in accordance with documents NPC-104 and NPC-300. Pest control devices, be it impulsive or quasi-steady impulsive, and emergency noise sources are assessed seperately from continuous noise sources.
2. Pest control devices are only planned during daytime hours from 0700-1900h.
3. Worst-case façade sound level from individual pest control devices operating.
4. Has an acoustic audit (as defined in Publication NPC-233) been conducted with source in place and operating?
5. The higher of MOE Landfill / NPC-300 / ORNAMENT road traffic modelling sound level limit.
6. Performance limit (aka guideline limit) based on following:
   C = Calculated based on road traffic volumes in compliance with NPC-206 requirements.
   M = Measured based on monitoring for a minimum 48 hour period, in accordance with NPC-233 requirements.
   D = Default guideline minima per MOE Landfill (e.g., 70 dBAI and 60 dBA for impulsive and quasi-steady impulsive).

Assessment of Impacts for Pest Control Devices [1]

Point of Reception (PoR) ID	Description of PoR	Pest Control Device	Sound Level at PoR [3] (dBA / dBAI)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA / dBAI)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR1	1-storey home on Richardson Side Road N	Whistle	40	No	61	C	Yes
		Propane Cannon 1	57	No	70	D	Yes
		Propane Cannon 2	64	No			Yes
		Propane Cannon 3	62	No			Yes
		Propane Cannon 4	60	No			Yes
		Propane Cannon 5	65	No			Yes
		Shotgun	67	No			Yes
NR2	2-storey home at 2166 Carp Road East	Whistle	20	No	60	D	Yes
		Propane Cannon 1	50	No	70		Yes
		Propane Cannon 2	54	No			Yes
		Propane Cannon 3	55	No			Yes
		Propane Cannon 4	54	No			Yes
		Propane Cannon 5	54	No			Yes
		Shotgun	68	No			Yes
NR4	2-storey home at 292 Moonstone Road South	Whistle	20	No	60	D	Yes
		Propane Cannon 1	47	No	70		Yes
		Propane Cannon 2	53	No			Yes
		Propane Cannon 3	54	No			Yes
		Propane Cannon 4	53	No			Yes
		Propane Cannon 5	53	No			Yes
		Shotgun	59	No			Yes

Assessment of Impacts for Pest Control Devices [1]

Point of Reception (PoR) ID	Description of PoR	Pest Control Device	Sound Level at PoR [3] (dBA / dBAI)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA / dBAI)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR8	2-storey Terrace Youth Residential Services	Whistle	20	No	60	D	Yes
		Propane Cannon 1	48	No	70		Yes
		Propane Cannon 2	54	No			Yes
		Propane Cannon 3	55	No			Yes
		Propane Cannon 4	54	No			Yes
		Propane Cannon 5	54	No			Yes
		Shotgun	63	No			Yes
PR4	2-storey home on Richardson Side Road NNW	Whistle	27	No	60	D	Yes
		Propane Cannon 1	57	No	70		Yes
		Propane Cannon 2	56	No			Yes
		Propane Cannon 3	57	No			Yes
		Propane Cannon 4	56	No			Yes
		Propane Cannon 5	57	No			Yes
		Shotgun	58	No			Yes
PR9	2-storey home David Manchester Road	Whistle	22	No	60	D	Yes
		Propane Cannon 1	52	No	70		Yes
		Propane Cannon 2	50	No			Yes
		Propane Cannon 3	51	No			Yes
		Propane Cannon 4	50	No			Yes
		Propane Cannon 5	51	No			Yes
		Shotgun	55	No			Yes
RR14	2-storey home at 607 William Mooney Road	Whistle	30	No	61	C	Yes
		Propane Cannon 1	59	No	70	D	Yes
		Propane Cannon 2	59	No			Yes
		Propane Cannon 3	60	No			Yes
		Propane Cannon 4	58	No			Yes
		Propane Cannon 5	60	No			Yes
		Shotgun	62	No			Yes

Table 3c: Acoustic Assessment Summary - Scenario 2 (Steady-State)

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

1. "Continuous" noise sources includes sum of steady, quasi-steady impulsive, tonal, cyclical and buzzing noise sources, with appropriate penalties applied, in accordance with documents NPC-104 and NPC-300. Pest control devices, be it impulsive or quasi-steady impulsive, and emergency noise sources are assessed seperately from continuous noise sources.
2. Unless otherwise noted, daytime occurs from 0700-1900h, evening occurs from 1900h-2300h and night-time occurs from 2300-0700h.
3. Worst-case cumulative sound level from all applicable sources operating.
4. Has an acoustic audit (as defined in Publication NPC-233) been conducted with source in place and operating?
5. The higher of MOE Landfill / NPC-300 / ORNAMENT road traffic modelling sound level limit.
6. Performance limit (aka guideline limit) based on following:
   C = Calculated based on road traffic volumes in compliance with NPC-206 requirements.
   M = Measured based on monitoring for a minimum 48 hour period, in accordance with NPC-233 requirements.
   D = Default guideline minima per MOE Landfill / NPC-300, as applicable (e.g., 55 dBA daytime for MOE Landfill guideline).

Assessment of Impacts for "Steady-State" or "Continuous" Sources [1]

Point of Reception (PoR) ID	Description of PoR	Location of PoR (Façade / Outdoor)	Time Period [2]	Total Sound Level at PoR [3] (dBA)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR1	1-storey home on Richardson Side Road N	Façade	Daytime	53	No	61	C	Yes
			1900-2000h	48	No	60		Yes
			2000-2300h	25	No	57		Yes
			2300-0600h	25	No	45		Yes
			0600-0700h	48	No	62		Yes
		Outdoor	Daytime	53	No	61		Yes
			1900-2000h	48	No	59		Yes
			2000-2300h	25	No	57		Yes
NR2	2-storey home at 2166 Carp Road East	Façade	Daytime	47	No	60	C	Yes
			1900-2000h	41	No	59		Yes
			2000-2300h	40	No	56		Yes
			2300-0600h	40	No	45		Yes
			0600-0700h	41	No	60		Yes
		Outdoor	Daytime	46	No	59		Yes
			1900-2000h	40	No	58		Yes
			2000-2300h	39	No	56		Yes
NR4	2-storey home at 292 Moonstone Road South	Façade	Daytime	56	No	60	M	Yes
			1900-2000h	40	No	62		Yes
			2000-2300h	35	No	59		Yes
			2300-0600h	35	No	51		Yes
			0600-0700h	40	No	59		Yes
		Outdoor	Daytime	55	No	60		Yes
			1900-2000h	38	No	62		Yes
			2000-2300h	33	No	59		Yes

Assessment of Impacts for "Steady-State" or "Continuous" Sources [1]

Point of Reception (PoR) ID	Description of PoR	Location of PoR (Façade / Outdoor)	Time Period [2]	Total Sound Level at PoR [3] (dBA)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR8	2-storey Terrace Youth Residential Services	Façade	Daytime	52	No	57	C	Yes
			1900-2000h	42	No	56		Yes
			2000-2300h	40	No	53		Yes
			2300-0600h	40	No	45		Yes
			0600-0700h	42	No	57		Yes
		Outdoor	Daytime	51	No	56		Yes
			1900-2000h	40	No	55		Yes
			2000-2300h	39	No	51		Yes
PR4	2-storey home on Richardson Side Road NNW	Façade	Daytime	55	No	55	C	Yes
			1900-2000h	48	No	50		Yes
			2000-2300h	25	No	50		Yes
			2300-0600h	25	No	45		Yes
			0600-0700h	48	No	51		Yes
		Outdoor	Daytime	54	No	55		Yes
			1900-2000h	46	No	50		Yes
			2000-2300h	24	No	47		Yes
PR9	2-storey home David Manchester Road	Façade	Daytime	49	No	57	C	Yes
			1900-2000h	40	No	57		Yes
			2000-2300h	27	No	54		Yes
			2300-0600h	27	No	46		Yes
			0600-0700h	40	No	57		Yes
		Outdoor	Daytime	47	No	56		Yes
			1900-2000h	38	No	56		Yes
			2000-2300h	24	No	53		Yes
RR14	2-storey home at 607 William Mooney Road	Façade	Daytime	58	No	61	C	Yes
			1900-2000h	51	No	60		Yes
			2000-2300h	25	No	57		Yes
			2300-0600h	25	No	45		Yes
			0600-0700h	51	No	62		Yes
		Outdoor	Daytime	56	No	61		Yes
			1900-2000h	49	No	59		Yes
			2000-2300h	24	No	57		Yes

Table 3d: Acoustic Assessment Summary - Scenario 2 (Pest Control Devices)

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

1. "Continuous" noise sources includes sum of steady, quasi-steady impulsive, tonal, cyclical and buzzing noise sources, with appropriate penalties applied, in accordance with documents NPC-104 and NPC-300. Pest control devices, be it impulsive or quasi-steady impulsive, and emergency noise sources are assessed seperately from continuous noise sources.
2. Pest control devices are only planned during daytime hours from 0700-1900h.
3. Worst-case façade sound level from individual pest control devices operating.
4. Has an acoustic audit (as defined in Publication NPC-233) been conducted with source in place and operating?
5. The higher of MOE Landfill / NPC-300 / ORNAMENT road traffic modelling sound level limit.
6. Performance limit (aka guideline limit) based on following:
   C = Calculated based on road traffic volumes in compliance with NPC-206 requirements.
   M = Measured based on monitoring for a minimum 48 hour period, in accordance with NPC-233 requirements.
   D = Default guideline minima per MOE Landfill (e.g., 70 dBAI and 60 dBA for impulsive and quasi-steady impulsive).

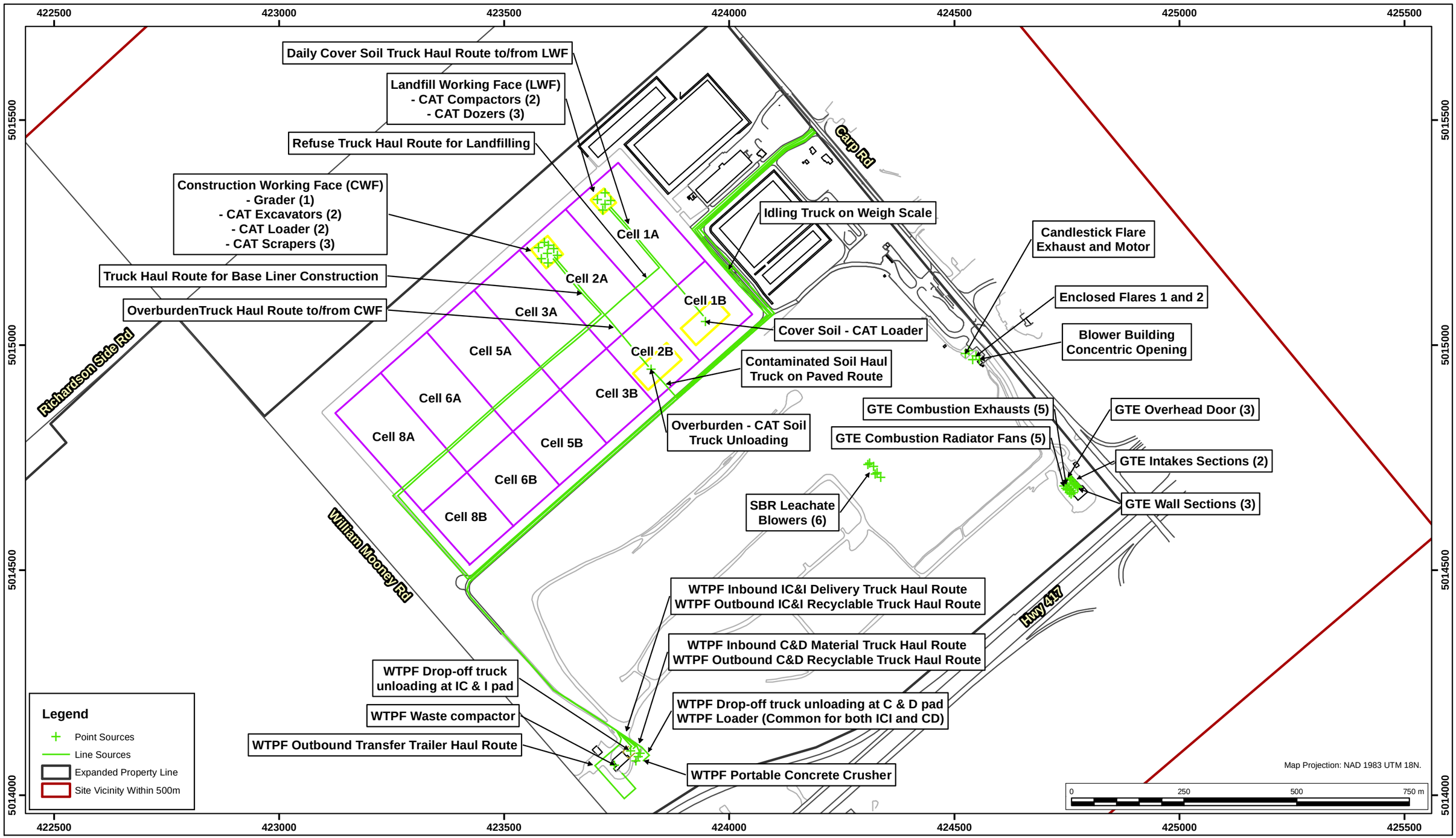
Assessment of Impacts for Pest Control Devices [1]

Point of Reception (PoR) ID	Description of PoR	Pest Control Device	Sound Level at PoR [3] (dBA / dBAI)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA / dBAI)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR1	1-storey home on Richardson Side Road N	Whistle	34	No	61	C	Yes
		Propane Cannon 1	51	No	70	D	Yes
		Propane Cannon 2	61	No			Yes
		Propane Cannon 3	64	No			Yes
		Propane Cannon 4	45	No			Yes
		Propane Cannon 5	63	No			Yes
		Shotgun	68	No			Yes
NR2	2-storey home at 2166 Carp Road East	Whistle	19	No	60	D	Yes
		Propane Cannon 1	55	No	70		Yes
		Propane Cannon 2	56	No			Yes
		Propane Cannon 3	48	No			Yes
		Propane Cannon 4	42	No			Yes
		Propane Cannon 5	51	No			Yes
		Shotgun	69	No			Yes
NR4	2-storey home at 292 Moonstone Road South	Whistle	21	No	60	D	Yes
		Propane Cannon 1	57	No	70		Yes
		Propane Cannon 2	56	No			Yes
		Propane Cannon 3	44	No			Yes
		Propane Cannon 4	57	No			Yes
		Propane Cannon 5	56	No			Yes
		Shotgun	64	No			Yes

Assessment of Impacts for Pest Control Devices [1]

Point of Reception (PoR) ID	Description of PoR	Pest Control Device	Sound Level at PoR [3] (dBA / dBAI)	Verified by Acoustic Audit [4] (Yes/No)	Performance Limit [5] (dBA / dBAI)	Peformance Limit Source [6] (C / M/ D)	Compliance with Performance Limit (Yes/No)
NR8	2-storey Terrace Youth Residential Services	Whistle	20	No	60	D	Yes
		Propane Cannon 1	48	No	70		Yes
		Propane Cannon 2	56	No			Yes
		Propane Cannon 3	45	No			Yes
		Propane Cannon 4	45	No			Yes
		Propane Cannon 5	55	No			Yes
		Shotgun	66	No			Yes
PR4	2-storey home on Richardson Side Road NNW	Whistle	32	No	60	D	Yes
		Propane Cannon 1	60	No	70		Yes
		Propane Cannon 2	60	No			Yes
		Propane Cannon 3	61	No			Yes
		Propane Cannon 4	62	No			Yes
		Propane Cannon 5	61	No			Yes
		Shotgun	64	No			Yes
PR9	2-storey home David Manchester Road	Whistle	24	No	60	D	Yes
		Propane Cannon 1	56	No	70		Yes
		Propane Cannon 2	54	No			Yes
		Propane Cannon 3	49	No			Yes
		Propane Cannon 4	55	No			Yes
		Propane Cannon 5	54	No			Yes
		Shotgun	60	No			Yes
RR14	2-storey home at 607 William Mooney Road	Whistle	36	No	61	C	Yes
		Propane Cannon 1	61	No	70	D	Yes
		Propane Cannon 2	63	No			Yes
		Propane Cannon 3	64	No			Yes
		Propane Cannon 4	64	No			Yes
		Propane Cannon 5	65	No			Yes
		Shotgun	66	No			Yes

FIGURES



Steady-State Source Locations

Scenario 1

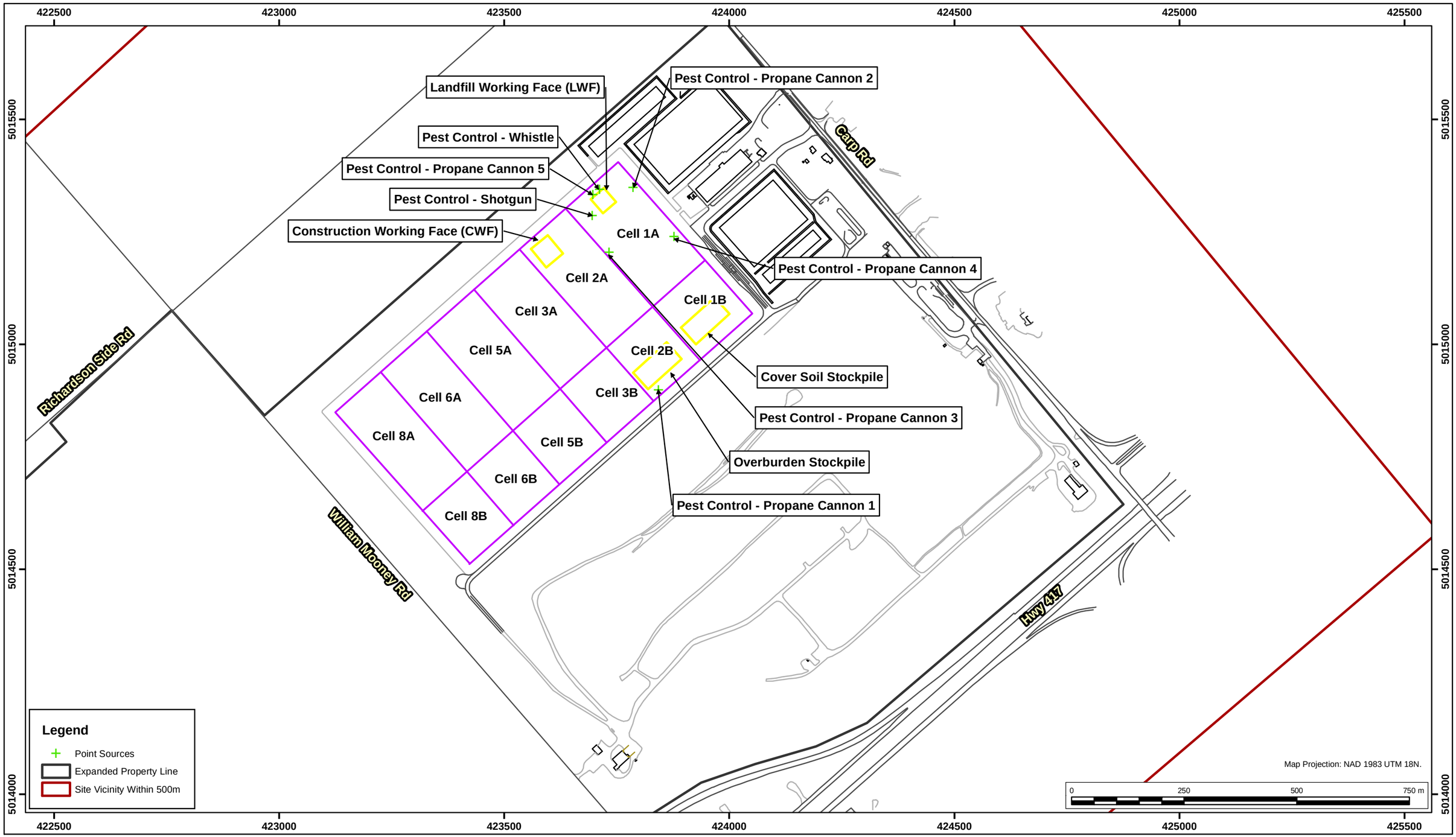
WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	1a
Approx. Scale:	1:8,000		
Date Revised:	Apr. 7, 2014		

RWDI



Pest Control Device Source Locations

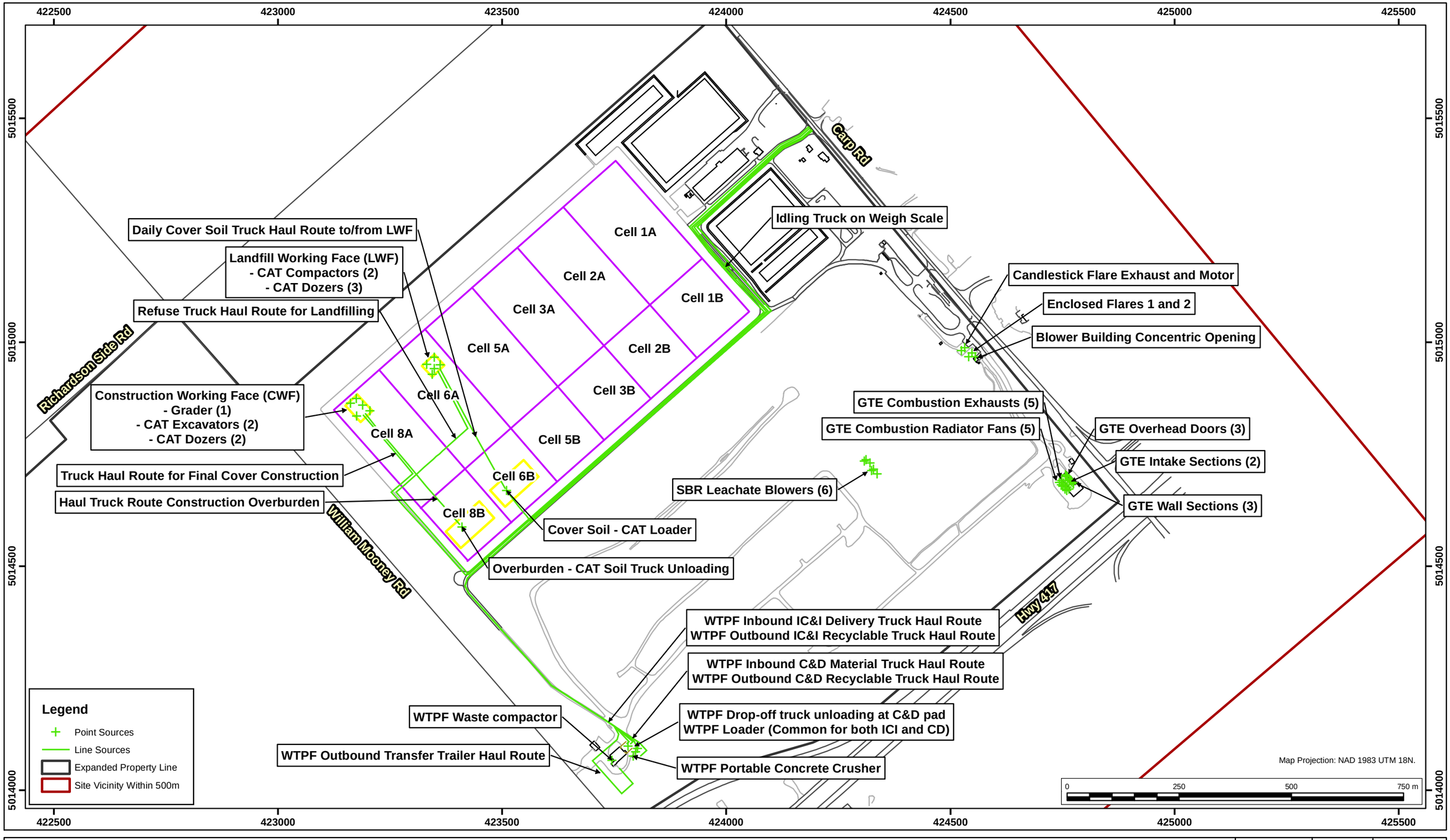
Scenario 1

WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	1b
Approx. Scale:	1:8,000		
Date Revised:	Jul. 29, 2014		



Steady-State Source Locations

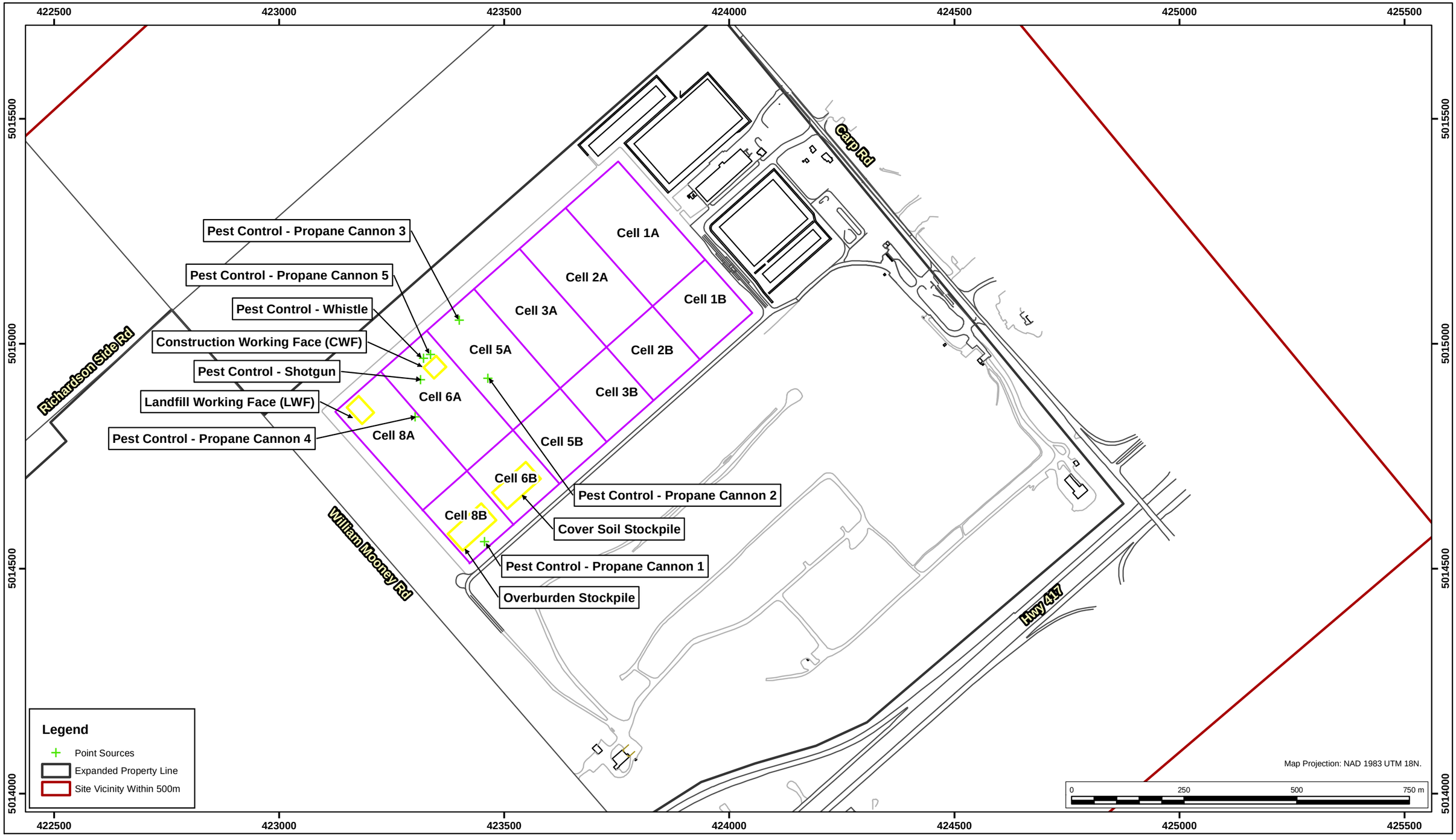
Scenario 2

WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	1c
Approx. Scale:	1:8,000		
Date Revised:	Apr. 7, 2014		



Pest Control Device Source Locations

Scenario 2

WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	1d
Approx. Scale:	1:8,000		
Date Revised:	Jul. 29, 2014		

RWDI

Receptor Locations

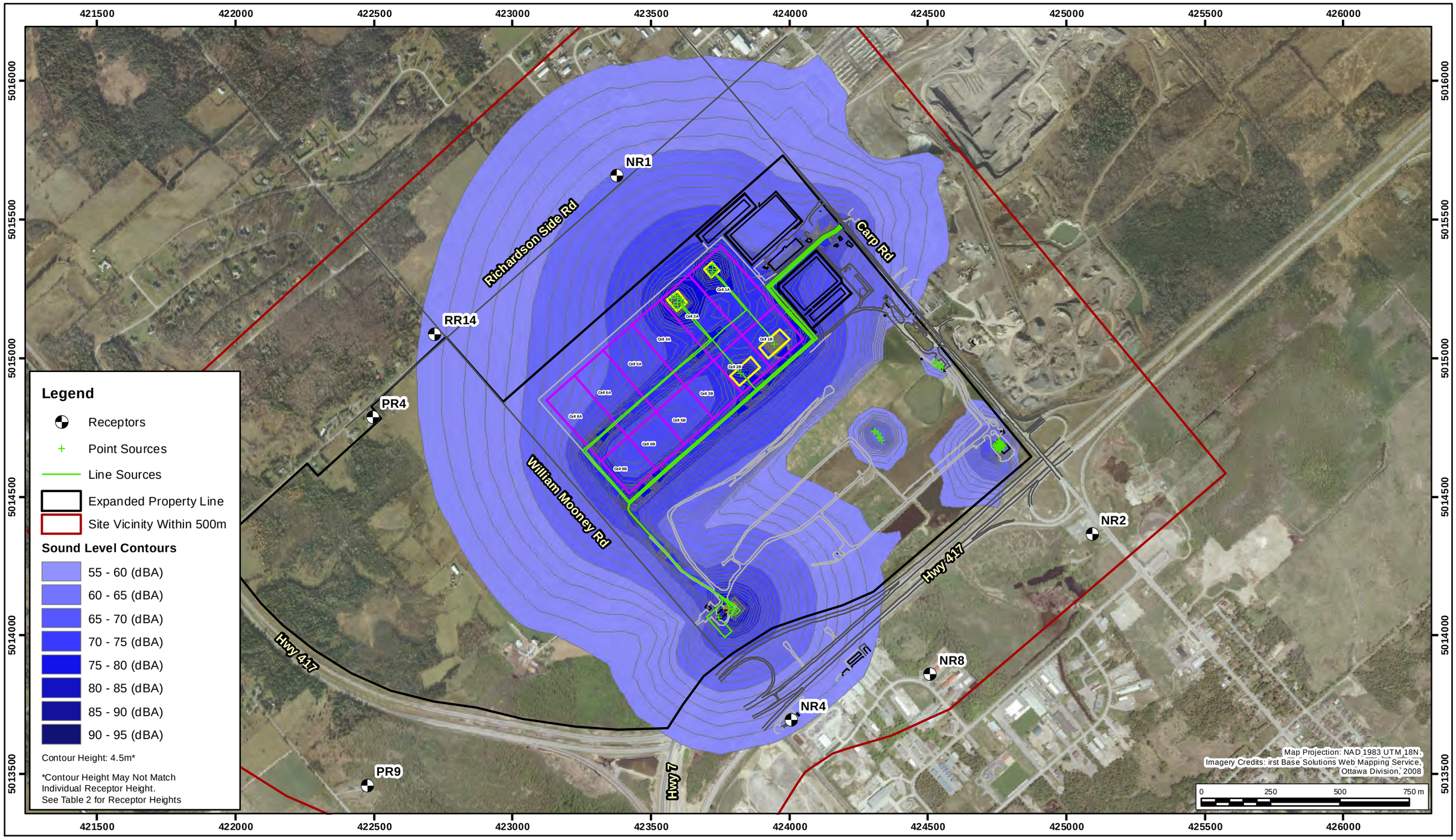
WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	2
Approx. Scale:	1:11,000		
Date Revised:	Apr. 7, 2014		

RWDI



Predicted Sound Level Contours - Daytime

Scenario 1

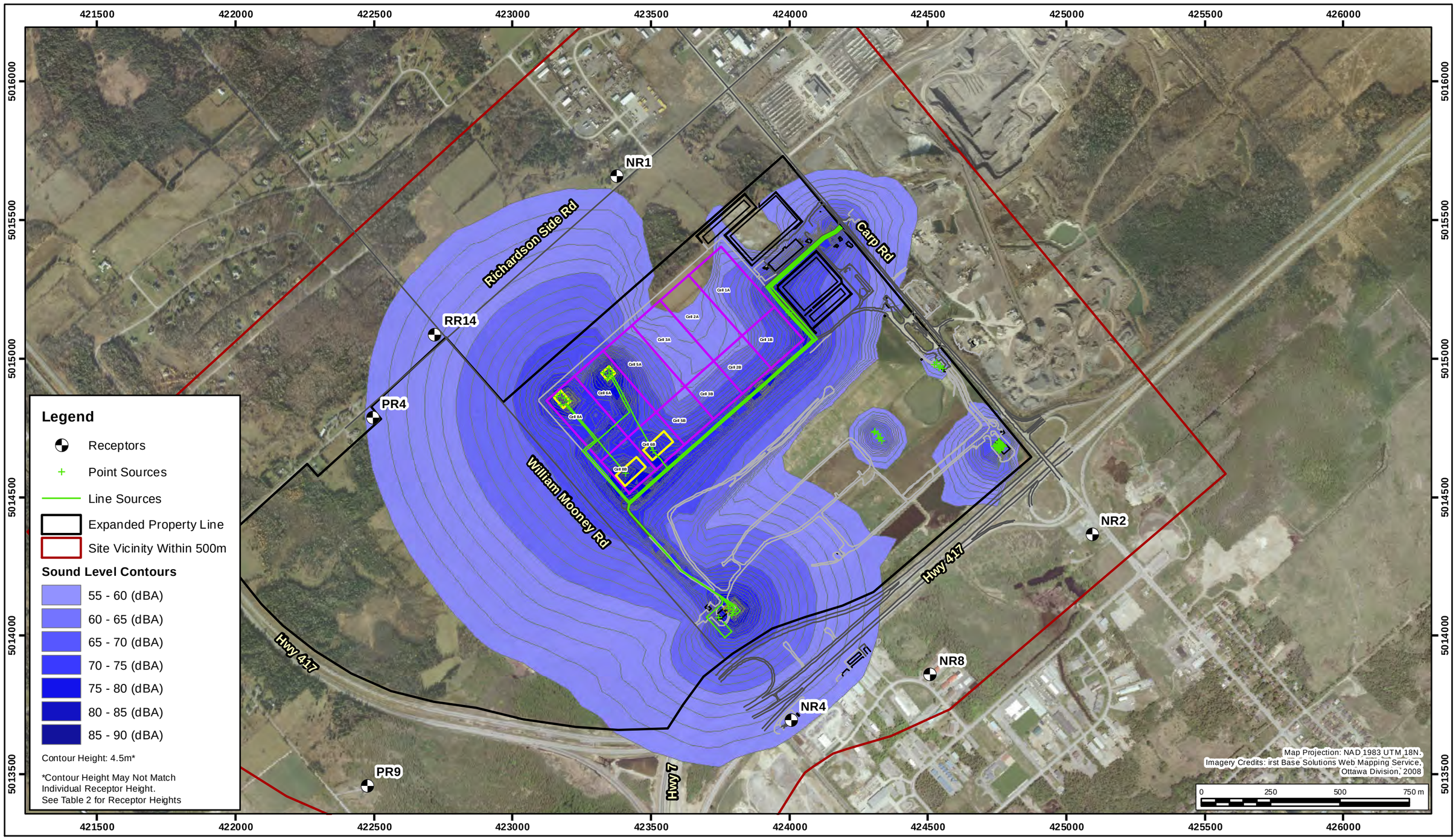
WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	3a
Approx. Scale:	1:13,000		
Date Revised:	Apr. 7, 2014		

RWDI



Predicted Sound Level Contours - Daytime

Scenario 2

WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	3b
Approx. Scale:	1:13,000		
Date Revised:	Apr. 7, 2014		

RWDI

Predicted Sound Level Contours - 06:00-07:00h or 19:00-20:00h

Scenario 3

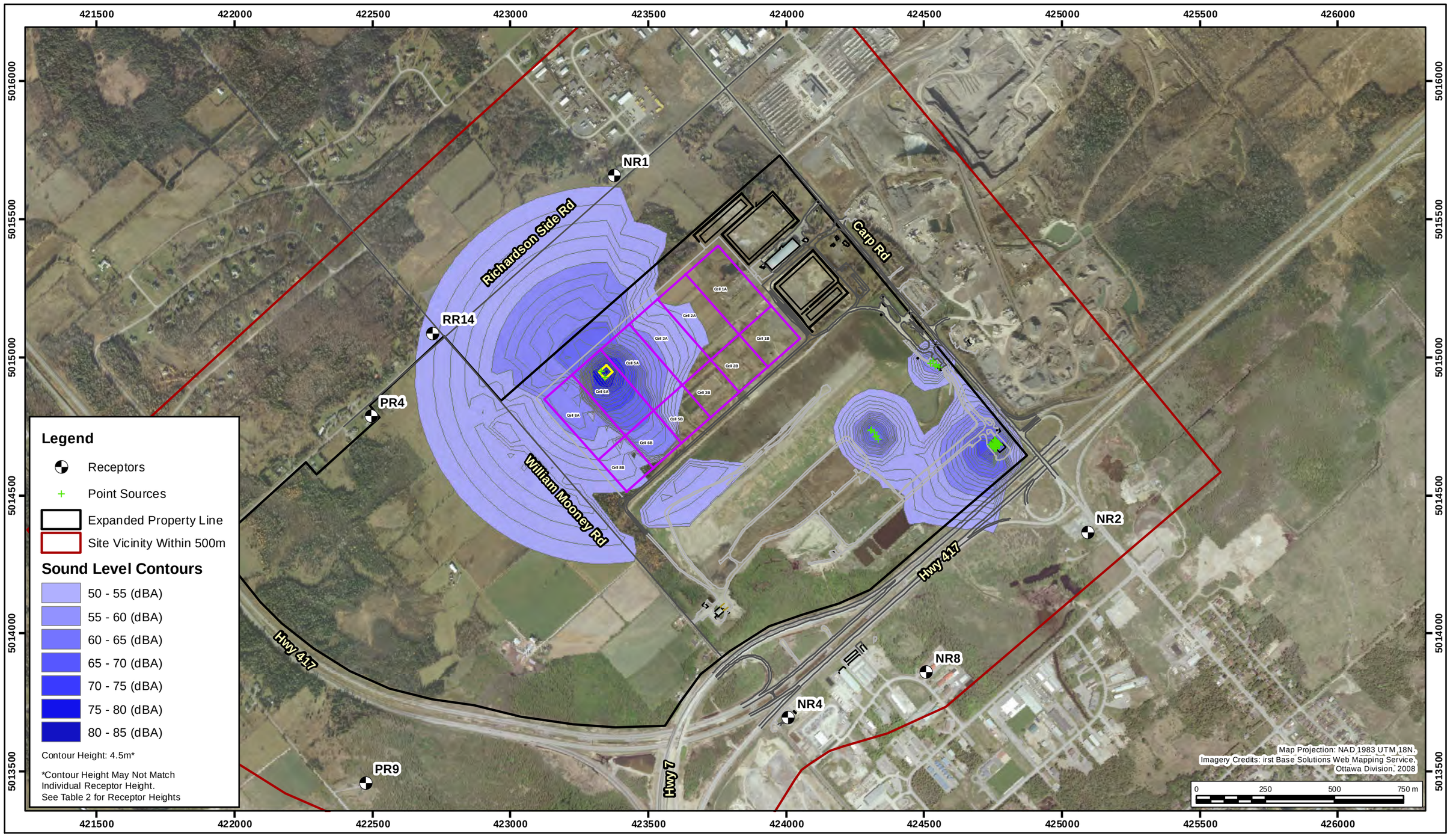
WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	4
Approx. Scale:	1:13,000		
Date Revised:	Jun. 5, 2014		

RWDI



Predicted Sound Level Contours - 06:00-07:00h or 19:00-20:00h

Scenario 4

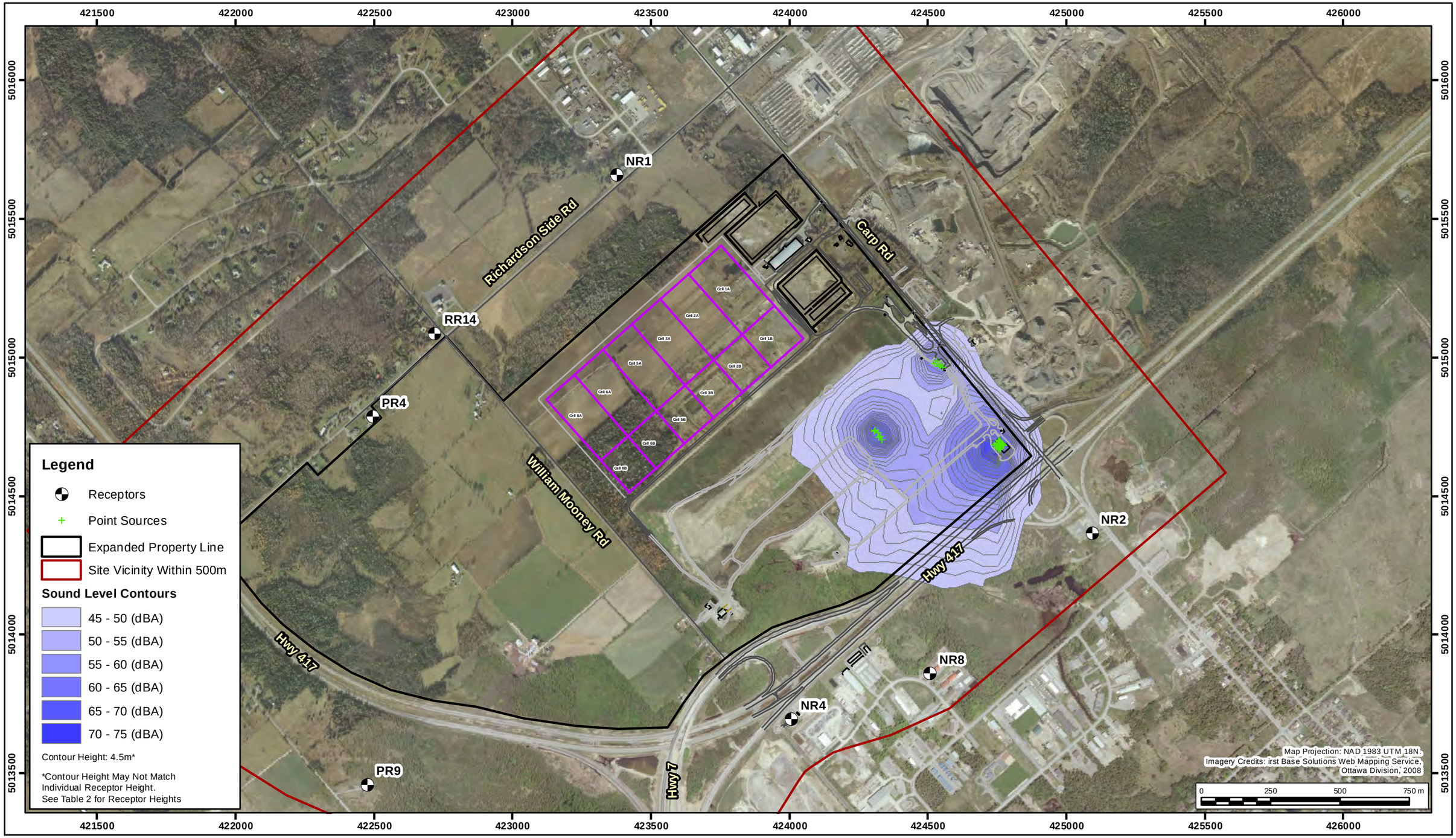
WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	5
Approx. Scale:	1:13,000		
Date Revised:	Jun. 5, 2014		

RWDI



Predicted Sound Level Contours - 20:00-06:00h

Scenario 5 (Common to All Other Scenarios)

WCEC - Ottawa, Ontario

True North

Project #1302177

Drawn by:	NBN	Figure:	6
Approx. Scale:	1:13,000		
Date Revised:	Jun. 5, 2014		

RWDI

APPENDIX A

AAR Checklist, Approved ECA's & EA

Company Name: Waste Management of Canada Corporation

Company Address: 2301 Carp Road
Ottawa, ON K0A 1L0

Location of Facility: 2301 Carp Road
Ottawa, ON K0A 1L0

The attached Acoustic Assessment Report was prepared in accordance with the guidance in the ministry document "Information to be Submitted for Approval of Stationary Sources of Sound" (NPC 233) dated October 1995 and the minimum required information identified in the check-list on the reverse of this sheet has been submitted.

Company Contact:

Name: Wayne Jenken

Title: Area Landfill Engineer

Phone Number: (519) 849-5810

Signature:

Date: July 30, 2014

Technical Contact:

Name: Brad Bergeron, A.Sc.T, d.E.T.

Representing: RWDI AIR Inc.

Phone Number: (519) 823-1311 ext. 2428

Signature:

Date: July 30 2014

ACOUSTIC ASSESSMENT REPORT CHECKLIST

	Required Information		
		Submitted	Explanation/Reference
1.0	**Introduction** (Project Background and Overview)	☑ Yes	Section 1
2.0	**Facility Description**		
	2.1 Operating hours of facility and significant Noise Sources	☑ Yes	Section 2
	2.2 Site Plan identifying all significant Noise Sources	☑ Yes	Figures 1a-1d
3.0	**Noise Source Summary**		
	3.1 ***Noise Source Summary Table***	☑ Yes	Table 1
	3.2 Source noise emissions specifications	☑ Yes	Section 3
	3.3 Source power/capacity ratings	☑ Yes	Table D.1 of Appendix D
	3.4 Noise control equipment description and acoustical specifications	☐ Yes	N/A
4.0	**Point of Reception Noise Impact Calculations**		
	4.1 ***Point of Reception Noise Impact Table***	☑ Yes	Tables 2a-b
	4.2 Point(s) of Reception (POR) list and description	☑ Yes	Section 4
	4.3 Land-use Zoning Plan	☑ Yes	Appendix B
	4.4 Scaled Area Location Plan	☑ Yes	Figure 2
	4.5 Procedure used to assess noise impacts at each POR	☑ Yes	Section 5
	4.6 List of parameters/assumptions used in calculations	☑ Yes	Sections 5 and 6
5.0	**Acoustic Assessment Summary**		
	5.1 ***Acoustic Assessment Summary Table***	☑ Yes	Tables 3a-d
	5.2 Rationale for selecting applicable noise guideline limits	☑ Yes	Section 5
	5.3 Predictable Worst Case Impacts Operating Scenario	☑ Yes	Section 3
6.0	**Conclusions**		
	6.1 Statement of compliance with the selected noise performance limits	☑ Yes	Section 7
7.0	**Appendices** (Provide details such as)	☑ Yes	
	Listing of Insignificant Noise Sources	☑ Yes	Table C.2 of Appendix D
	Manufacture's Noise Specifications	☑ Yes	Appendix D
	Calculations	☑ Yes	Appendix D
	Instrumentation	☑ Yes	Appendix E
	Meteorology during Sound Level Measurements	☑ Yes	Appendix E
	Raw Data from Measurements	☑ Yes	Table D.3 of Appendix D
	Drawings (Facility / Equipment)	☐ Yes	N/A

Ontario

NOISE SCREENING PROCESS FOR S.9 APPLICATIONS SUPPLEMENT TO APPLICATION FOR APPROVAL

In order to obtain an approval under Section 9 of the EPA, applicants are, as a minimum, required to assess and document the impacts of all noise emissions from their facility on any noise sensitive locations defined as a Point of Reception. In order to facilitate this assessment, the ministry has developed a Noise Screening Process.

The Noise Screening Process has been developed for mining, utilities and manufacturing operations that are being reviewed by the Air and Noise Unit of the Environmental Assessment and Approvals Branch. *Other facilities that require Section 9 approval can not use this Noise Screening Process. Applications for equipment identified as candidates for the Streamline Review Unit (SRU) should not complete this process, rather they should follow specific directions from the SRU. For more information about the types of applications that may be reviewed by the SRU, please refer to the Guide to Applying for Approval (Air & Noise) dated February, 2005.*

The Noise Screening Process consists of the following Steps:

Step 1:	Identify the closest Point of Reception to the facility. (Zoning Plan)
Step 2:	Determine the actual separation distance from the Point of Reception to the facility. (Scaled Area Location Plan)
Step 3:	Calculate the minimum required separation distance by completing the questionnaire on using the facility's North American Industrial Classification System Code and generic assumptions regarding the actual noise sources present at the facility.
Step 4:	Compare the actual separation distance determined in Step 2 with the minimum required separation distance calculated in Step 3 and sign the form.

The Noise Screening Process is based on the fact that the noise emissions from any noise sources at a facility will not exceed ministry noise guidelines at the closest Point of Reception provided there is a sufficient separation distance between the facility's noise sources and the Point of Reception. Using conservative assumptions regarding the likely noise sources present at a facility, a procedure was developed for calculating the minimum required separation distance to achieve compliance with the ministry noise guidelines. If the actual separation distance from the facility to the closest Point of Reception is greater than the calculated minimum required separation distance, then no further action is required. The signed Noise Screening Process form would provide sufficient supporting information for the noise assessment required by the application process.

If the closest Point of Reception is closer than the minimum required separation distance calculated in Step 3 then further assessment is required. The application may still be approved as proposed and noise control measures may not be necessary; however, a more detailed noise impact assessment using site specific information on the noise sources present at the facility must be completed. The Zoning Plan and Scaled Area Location Plan required by the Noise Screening Process will form part of the required assessment outlined in the ministry publication NPC 233 "Information to be Submitted for Approval of Stationary Sources of Sound." See the Guide to Applying for Approval (Air and Noise) dated February, 2005 for more information on the minimum required supporting information to be included with an application that is unable to pass the Noise Screening Process.

1. Applicant Information

Company Name	Site Name	North American Industry Classification System (NAICS) Code
Waste Management of Canada Corporation	West Carlton Environmental Centre	

Site Address - Street information *(applies to an address that has civic numbering and street information - includes street number, name, type and direction)*	Unit Identifier *(identifies type of unit, such as suite & number)*
2301 Carp Road	

Survey Address *(used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory)*

Non Address Information *(includes any additional information to clarify clients' physical location)*

Municipality/Unorganized Township	County/District	Postal Code
Ottawa, Ontario		K0A 1L0

2. Noise Screening Process *(please refer to the attached Noise Screening Process – Information & Instructions)*

Step 1

Identify Closest Point of Reception (POR) (attach Land Use Zoning Designation Plan)

POR Description residential dwelling POR Acoustical Class (as per NPC-205 & NPC-232) ☐1 ☒2 ☐3

Step 2

Determine Actual Separation Distance (attach Scaled Area Location Plan) 440 m

Step 3

Calculate Minimum Separation Distance (complete attached Noise Screening Process Questionnaire) 1000 m

Step 4

By signing this statement you are verifying that:

- I am the applicant or have been retained by the applicant, for the purposes of completing this Noise Screening Process;
- The closest Point of Reception has been identified and the Land Use Zoning Designation Plan provided by the Local Municipality is attached (Step 1);
- A Scaled Area Location Plan, prepared by myself, that identifies the facility, the closest Point of Reception and the actual minimum separation distance is attached (Step 2);
- I have accurately completed the Noise Screening Process questionnaire and identified all noise sources as required (Step 3);
- The actual separation distance from the facility to the closest Point of Reception, as determined in Steps 1 and 2, is greater than the minimum required separation distance determined in Step 3; and
- The facility belongs to one of the sectors for which the ministry has indicated the Noise Screening Process is applicable.

Name of Signing Authority (*please print*)	Title:	Company: *(if different from the Applicant)*
Wayne Jenken	Landfill Engineer-Southwest Landfills	

Civic Address - Street information *(includes street number, name, type and direction)* ☐ Same as Site Address	Unit Identifier *(identifies type of unit, such as suite & number)*
5768 Nauvoo Rd	

Municipality	Postal Station	Province/State	Country	Postal Code
Watford		Ontario	Canada	N0M 2S0

Telephone Number *(including area code & extension)*	Fax Number *(including area code)*	E-mail Address
1-519-849-5810	1-519-849-5811	wjenken@wm.com

Signature	Date *(y/m/d)*
	Jul 30, 2014

Noise Screening Process Questionnaire

Question 1

1 (a) - Is your facility NAICS Code Listed on Table 1.1 below?

Table 1.1 Industry with significant noise sources

NAICS Code	Industry	Check all That Apply
21	Mining and Oil and Gas Extraction	☐
22111	Electrical Power Generation	☐
324	Petroleum and Coal Products Manufacturing	☐
3251	Basic Chemical Manufacturing	☐
32731	Cement Manufacturing	☐
32741	Lime Manufacturing	☐
3311	Iron and Steel Mills and Ferro-Alloy Manufacturing	☐
3313	Alumina and Aluminium Production and Processing	☐

1 (b) - Is any of the following equipment Listed on Table 1.2 below present at the facility?

Table 1.2 Equipment with significant noise emissions

Equipment	Check all That Apply
Flares	☒
Gas Turbines, Cogeneration Facilities or any other continuous or peak shaving electrical power generation equipment	☒
Arc Furnaces	☐
Asphalt Plants	☐
High velocity or pressure atmospheric vents such as Gas Process Blow Down Devices	☐
Rock, Concrete or Aggregate Crushing Operations	☐
Individual Fans with flow rates in excess of 47 m^3/s	☐
Individual Pressure Blowers or Positive Displacement Blowers with static pressures in excess of 1.25 kilopascal	☐

Did you answer "Yes" to Question 1(a) or 1 (b)? ☒ Yes ☐ No

If Yes, the minimum required separation distance is 1,000 m.
You have completed Step 3 of the Noise Screening Process, proceed to Step 4.

If No, proceed to Question 2

Proceed to Question 2

Question 2

2 - Is your facility NAICS Code Listed on Table 2 below?

Table 2 Industries with a 500 m Radius		
NAICS Code	**Industry**	**Check all That Apply**
22112	Electrical Power Transmission, Control and Distribution	☐
2213	Water Sewage and Other Systems	☐
321	Wood Product Manufacturing	☐
322	Paper Manufacturing	☐
325	Chemical Manufacturing (except 3251 as noted in Table 1.1 above)	☐
326	Plastics and Rubber Products Manufacturing	☐
327	Non-Metallic Mineral Product Manufacturing (except 32731 and 32741 as noted in Table 1.1 above)	☐
331	Primary Metal Manufacturing (except 3311 as noted in Table 1.1 above)	☐
332	Fabricated Metal Product Manufacturing (except 33271 and 3328)	☐
333	Machinery Manufacturing	☐
335	Electrical Equipment, Appliance and Component Manufacturing	☐
336	Transportation Equipment Manufacturing	☐

Did you answer "Yes" to Question 2? ☐ Yes ☒ No

If Yes, the minimum required separation distance is as follows:

	Minimum Separation	Check the One That Applies
For Class 1:		
Daytime Operation Only (between 7:00 am and 7:00 pm)	300 m	N/A
Daytime and Afternoon shift only (between 7:00 am and 11:00 pm)	400 m	N/A
Other times (outside the hours of 7:00 am to 11:00 pm)	500 m	N/A
For Class 2:		
Daytime Operation Only (between 7:00 am and 7:00 pm)	300 m	☐
Multi shifts (outside the hours of 7:00 am to 7:00 pm)	500 m	☐
For Class 3:		
Any Operation	500 m	N/A

You have completed Step 3 of the Noise Screening Process, proceed to Step 4

If No, proceed to Question 3

Proceed to Question 3

Question 3

3 - Provide information on the facility and any noise sources that may be present by answering the following questions to determine a Score for noise sources located at the facility:

			Check one for each question	Value	Score
(a)	What is the area of the enclosed buildings of the facility?				
	< 650 m^2	< 7,000 ft^2	☐	20	
	650 m^2 to < 2,300 m^2	7,000 ft^2 to < 25,000 ft^2	☐	25	
	2,300 m^2 to 9,300 m^2	25,000 ft^2 to 100,000 ft^2	☐	30	
	> 9,300 m^2	> 100,000 ft^2	☐	40	
	multi building		☐	40	
(b)	Are any cooling towers located at the facility?				
	Yes				
	- Total of all cooling towers less than 20 horsepower	< 15 kW	☐	10	
	- Total of all cooling towers from 20 to 100 horsepower	15 to 75 kW	☐	20	
	- Total of all cooling towers greater than 100 horsepower	> 75 kW	☐	40	
	No		☐	0	
(c)	Are any outdoor air cooled chillers located at the facility?				
	Yes				
	- Total of all chillers less than 150 ton	< 530 kW	☐	10	
	- Total of all chillers from 150 to 1,000 ton	530 to 3,500 kW	☐	20	
	- Total of all chillers greater than 1,000 ton	> 3,500 kW	☐	40	
	No		☐	0	
(d)	Are any air compressors used to provide process air or for pneumatic conveying systems located at the facility?				
	Yes				
	- Total of all compressors less than 10 horsepower	< 7.5 kW	☐	10	
	- Total of all compressors from 10 to 75 horsepower	7.5 to 56 kW	☐	20	
	- Total of all compressors greater than 75 horsepower	> 56 kW	☐	40	
	No		☐	0	
(e)	Is a boiler located at the facility?				
	Yes				
	- Total heat input of all boilers less than 10 million BTU/hr	< 2,930 kW	☐	10	
	- Total heat input of all boilers from 10 to 67 million BTU/hr	2,930 to 19,600 kW	☐	20	
	- Total heat input of all boilers greater than 67 million BTU/hr	> 19,600 kW	☐	40	
	No		☐	0	
(f)	What is the total volumetric flow rate of all process exhaust and general ventilation fans?				
	< 5 m^3/s		☐	0	
	5 m^3/s to < 10 m^3/s		☐	10	
	10 m^3/s to < 15m^3/s		☐	20	
	15 m^3/s to < 20 m^3/s		☐	30	
	> 20 m^3/s		☐	40	
(g)	Are any of the above air compressors, fan or blower motors located outside the building envelope?				
	Yes		☐	10	
	No		☐	0	
			SUBTOTAL - *Add Score from (a) to (g)*		

Question 3 (continued)

Adjustments for Hours of Operation		Check one	Value	Score
Class 1	Daytime Operation Only (between 7:00 am and 7:00 pm) *	☒	-20	
	Daytime and Afternoon shift only (between 7:00 am and 11:00 pm) **	N/A	-15	
	Other times (outside the hours of 7:00 am to 11:00 pm)	N/A	-10	
Class2	Daytime Operation Only (between 7:00 am and 7:00 pm)*	☐	-20	
	Multi shifts (outside the hours of 7:00 am to 7:00 pm)	☐	-10	
Class 3	Daytime Operation Only (between 7:00 am and 7:00 pm)	N/A	-10	
	Multi shifts (outside the hours of 7:00 am to 7:00 pm)	N/A	0	
			TOTAL ADJUSTMENT (A)	
Adjustments for Elevated Background Noise at Point of Reception (POR)***		Check one	Value	Score
Class 1	POR within 100 m of a 400 Series Freeway (e.g. 401)	☒	-10	
	POR within 30 m of a Provincial Highway or Arterial Road (eg HWY 27, Keele St)	N/A	-10	
	POR at other locations	N/A	0	
Class2	POR within 100 m of a 400 Series Freeway (e.g. 401)	☐	-10	
	POR within 30 m of a Provincial Highway or Arterial Road (eg HWY 27, Keele St)	☐	-10	
	POR at other locations	☐	0	
Class 3	All locations	N/A	0	
			TOTAL ADJUSTMENT (B)	
			TOTAL SCORE - *SUBTOTAL + TOTAL ADJUSTMENT (A) + TOTAL ADJUSTMENT (B)*	

* Note: the largest minimum separation distance for Daytime Operation only in Class 1 or 2 is 300 m.

** Note: the largest minimum separation distance for Evening and Daytime Operation only in Class 1 is 400 m

*** Note: if Adjustments for Elevated Background Noise are used then the applicant must identify the next closest receptor outside the area of influence of the roadway and show that the actual separation distance to the next closest receptor is greater than the minimum required separation distance without adjustments.

Minimum Separation Distances – Based on Total Score (above)

Total Score	Minimum Separation Distance	Check the distance that applies
< 0 points	50 m	☐
< 5 points	75 m	☐
< 10 points	100 m	☐
< 20 points	200 m	☐
< 30 points	300 m	☐
< 40 points	400 m	☐
40 or more points	500 m	☐
	Distance:	m

NOISE SCREENING PROCESS – INFORMATION & INSTRUCTIONS

STEP 1: IDENTIFY CLOSEST POINT OF RECEPTION

The applicant must identify and locate the closest Point of Reception (POR) affected by any noise emissions that may arise from the operations at the facility. A Point of Reception is defined as "any point on the premises of a person where sound or vibration originating from other than those premises is received".

The Point of Reception may be located on any of the following existing or zoned for future use premises:

- permanent or seasonal residences;
- hotels/motels;
- nursing/retirement homes;
- rental residences;
- hospitals;
- campgrounds; and
- noise sensitive buildings such as schools and places of worship.

For the Screening Process it is only required to identify the closest Point of Reception to the facility or any outdoor noise sources. For a more detailed assessment additional Point(s) or Reception may be required to be identified in other directions based on site specific conditions.

The closest Point of Reception must be selected using a **Land Use Zoning Designation Plan.** This plan indicates the approved local land use and nature of the neighbourhood for the area surrounding the facility. The plan must be based on up-to-date Zoning information provided by the Local Municipality. Zoning Designation Plans may be obtained from the planning department of the Local Municipality. This information may be in the form of hard copy zoning plans prepared by the municipality or electronic base maps showing local land use and features that may be available from the municipality to be printed by the applicant.

The Zoning information obtained from the Local Municipality must be detailed enough to clearly indicate the approved local land use for the individual properties surrounding the facility in a radius including the closest Point of Reception. The plan must include a scale and legend indicating the land use. The Zoning Information used to identify the closest Point of Reception must be attached to the Screening Process.

The Point of Reception Identification section should also describe the environmental noise climate at the Point of Reception in terms of the acoustical class, according to the following definitions:

- "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background noise is dominated by the urban hum.

- "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas, and in which a low ambient sound level, normally occurring only between 23:00 and 07:00 hours in Class 1 Areas, will typically be realized as early as 19:00 hours.
  Other characteristics which may indicate the presence of a Class 2 Area include:
  - absence of urban hum between 19:00 and 23:00 hours;
  - evening background sound level defined by natural environment and infrequent human activity; and
  - no clearly audible sound from stationary sources other than from those under impact assessment.

- "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:
  - a small community with less than 1,000 population;
  - an agricultural area;
  - a rural recreational area such as a cottage or a resort area; or
  - a wilderness area.

STEP 2: DETERMINE ACTUAL SEPARATION DISTANCE

The location of the closest Point of Reception must be shown on a figure, prepared by the applicant, to determine the actual separation distance from the facility to the Point of Reception. The figure is referred to as a **Scaled Area Location Plan.**

For the Purposes of the Screening Process it may be possible to use the Zoning information provided by the Local Municipality as the Scaled Area Location Plan. However, the information is usually better presented in two separate figures because the scale of zoning plans available from the Local municipality is usually too small to sufficiently show the level of detail required by the Scaled Area Location Plan.

This figure, prepared by the applicant, must clearly indicate the location of the facility, the facility property line, all buildings on the facility and any noise sources at the facility that are located outside of the building envelope, such as dust collectors located beside a building. For the purposes of the Screening Process, it is not required to identify all noise sources, such as roof-mounted exhaust fans, on the Scaled Area Location Plan. The Scaled Area Location Plan must also show and name all local roads and features of the neighbourhood for the area surrounding the facility within a radius that includes the closest Point of Reception identified in Step 1. The figure must include a legend and scale.

The actual separation distance is calculated from the closest facility wall or outside noise source, such as a dust collector located outside the facility, to the Property Line of the selected Point of Reception. For rural receptors in Class 3 Areas, where properties may be larger and may include areas that would not be considered noise-sensitive, Points of Reception are limited to locations within 30 metres of a dwelling or a camping area, where sound or vibration originating from other than those premises is received. The location of the closest Point of Reception must be shown on the figure and the actual separation distance from the facility to the Property line of the closest Point of Reception must also be shown as a line on the figure, measured in metres.

Base maps showing the features of the surrounding neighbourhood may be obtained from the Local Municipality, Ministry of Natural Resources or other mapping companies.

The plan may include the location and features of all buildings surrounding the facility and include the topography of the surrounding area should it have an effect on the transmission of noise to a Point of Reception. However for the Screening Process this is usually not necessary. This information is required for a more detailed noise assessment.

Note: For larger facilities with outdoor noise sources, this process may have to be repeated for each outdoor noise source and different Points of Reception in order to identify the shortest actual separation distance to the closest Point of Reception.

STEP 3 – CALCULATE MINIMUM REQUIRED SEPARATION DISTANCE

Applicants are required to complete the Noise Screening Process questionnaire to calculate the minimum required separation distance that will result in compliance with the noise guidelines for the facility. Generic separation distances have been supplied that should provide a sufficient separation distance for a facility based on the type of operations conducted at the facility and the size and quantity of common noise sources associated with the type of facility under review. The minimum required distances have been provided from 1,000 m to 50 m. If a facility is closer to a Point of Reception than 50 m, you can not use this process. Conversely, if a facility is well sited, located more than 1,000m from a Point of Reception, then a detailed noise assessment is not required.

Applicants must use the North American Industry Classification System (NAICS) Code required by the application form to describe the facility. The NAICS code is determined in accordance with the Statistics Canada publication "North American Industry Classification System (NAICS) 2002 - Canada". For more information on determining the NAICS Code for a business please see www.statcan.ca. This screening process only applies to facilities with NAICS Codes starting with 21, 22, 31, 32 or 33. **If the NAICS code for the facility does not fall into one of these sectors then this step of the Screening Process can not be used.**

The following explanations are intended to assist with completing the Questionnaire:

Table 1.2 The presence of any one piece of equipment identified on this table should be indicated in the appropriate check box. The reference to fans and blowers is for individual large fans or blowers only. It is not required to sum the total volumetric flow rate or pressure drops across all fans or blowers at the facility. The applicant

must include any fans or blowers located on delivery trucks that supply or transport raw materials or products from the facility.

Table 1.2 The applicant must identify large atmospheric vents that are associated with process pressure vessels, or piping such as natural gas blow down valves at pipeline compressor stations. This category of equipment is not intended to capture mandatory steam release valves from commercial boilers.

Question 3 For each type of equipment identified on this table the total rating for all similar pieces of equipment should be summed and indicated in the appropriate question.

Question 3(f) The applicant is required to sum the total maximum volumetric flow rate for all process or general ventilation fans or blowers at the facility that are not directly referenced elsewhere in the table. If fans are capable of operating at two speeds the higher volumetric flow rate should be used. It is not necessary to include fans associated with cooling towers or part of packaged HVAC equipment. Fans serving condensers or other cooling units should be included. The applicant must include any fans or blowers located on delivery trucks that supply or transport raw materials or products from the facility.

Question 3(g) The applicant is required to identify if any motors powering any of the fans, blowers or air compressors are located outside the building envelope. For example if a fan serving a dust collector is located outside then the answer is yes. If the fan and dust collector are inside the building envelope the answer is no.

STEP 4: STATEMENT FACILITY MEETS SCREENING REQUIRMENTS

If an applicant can demonstrate through this screening process that the actual separation distance from the facility to the closest Point of Reception shown on the Scaled Area Location Plan is greater than the minimum required separation distance calculated in Step 3, then the person who conducted the Noise Screening Process must complete and sign off in Step 4.

Ontario

Ministry of the Environment
Ministère de l'Environnement

ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 4117-8EHQE7
Issue Date: February 16, 2012

Waste Management of Canada Corporation
8039 Zion Line
Watford, Ontario
N0M 2S0

Site Location: Ottawa Landfill Site
2301 Carp Road, Lots 3 and 4, Concession 3, Huntley Ward
Ottawa City, Ontario

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

one (1) Leachate Pre-treatment System, having a maximum treatment capacity of 205 cubic metres of raw leachate per day, for treatment of raw leachate generated in the lined portion of the landfill, consisting of the following equipment and supporting accessories:

- one (1) outdoor, above-ground, covered and insulated Raw Leachate Equalization Tank, having a maximum storage capacity of 568 cubic metres, exhausting to an activated carbon adsorption system common with the Treated Leachate Equalization Tank described below;

- two (2) raw leachate transfer pumps, one (1) on duty and one (1) on standby, each having a transfer capacity of 28.4 litres per second, to transfer the raw leachate in the Raw Leachate Equalization Tank to the SBR described below;

- one (1) outdoor, above-ground, covered and insulated Sequencing Batch Reactor (SBR), having a capacity of 1,325 cubic metres, to treat the raw leachate biologically and aerobically by aerobic micro-organisms in the reactor. The SBR operates on a 5-phase cycle, 24 hours per cycle basis: Fill, React, Settle, Decant and De-sludge. Aeration to the content in the SBR during the React phase is provided by two (2) aeration blowers, one (1) on duty and one (1) on stand-by, each blower having a maximum aeration rate of 0.6 cubic metre per second. The content of the SBR is mixed by two (2) SBR mixing pumps, one (1) on duty and one (1) on standby, each having a capacity of 251 litres per second at a TDH of 8 metres. After the Settle phase, the treated leachate is decanted to the Treated Leachate Equalization Tank during the Decant phase and a portion of the sludge, if required, is pumped by one (1) waste activated sludge pump having a capacity of 50.5 litres per second at a TDH of 6.4 m to the Sludge Storage Tank during the De-sludge phase. The content of the SBR is heated in winter periods in a boiler/heat exchanger/recirculation pump combination to maintain at a minimum 32 degrees Celsius. The exhausts of the SBR are piped to an activated carbon adsorption system common with the Sludge Storage Tank described below;

- one (1) outdoor, above-ground, covered Treated Leachate Equalization Tank, having a storage capacity of 568 cubic metres, for temporary storage of the treated leachate decanted from the SBR. The treated leachate is periodically pumped to the sanitary sewers for disposal. The Treated Leachate Equalization Tank exhausts to the activated carbon adsorption system common with the Raw Leachate Equalization Tank;

- one (1) outdoor, above-ground, covered Sludge Storage Tank, having a storage capacity of 568 cubic metres, for storage of the waste sludge de-sludged from the SBR. The content in the Sludge Storage Tank is aerated by two (2) aeration blowers, one (1) on duty and one (1) on stand-by, each blower having an aeration rate of 0.26 cubic metre per second. The Sludge Storage Tank exhausts to the activated carbon adsorption system common with the SBR;

- one (1) activated carbon adsorption system, used for the treatment of passive exhausts from the Raw Leachate

Equalization Tank and Treated Leachate Equalization Tank, consisting of about 80 kilograms of coal-based activated carbon impregnated with 5% potassium hydroxide contained in a steel vessel, exhausting into the atmosphere through a stack, having an exit diameter of 0.05 metre, extending 1.5 metres above grade;

- one (1) activated carbon adsorption system, used for the treatment of exhausts from the SBR and the Sludge Storage Tank, consisting of about 668 kilograms of coal-based activated carbon impregnated with 5% potassium hydroxide and 500 kilograms of alumina-based activated carbon impregnated with 8% potassium permanganate contained in a fiber reinforced plastic vessel complete with a mist/grease eliminator at the outlet, exhausting into the atmosphere at a maximum total volumetric flow rate of 0.87 cubic metre per second, through a stack, having an exit diameter of 0.36 metre, extending 3 metres above grade;

- one (1) landfill gas-fired boiler, having a maximum heat input capacity of 2,111,000 kilojoules per hour, in combination with a heat exchanger and a recirculation pump having a capacity of 22 litres per second at a TDH of 9.4 metres, to provide heating to the content of the SBR in winter periods to maintain a minimum 32 degrees Celsius, exhausting into the atmosphere through a stack, having an exit diameter of 0.35 metre, extending 0.6 metre above the roof and 5.4 metres above grade;

- one (1) standby diesel generator set, having a prime rating of 320 kilowatts, to provide power for the Leachate Pre-treatment System during emergency situations, exhausting to the atmosphere through a stack having an exit diameter of 0.2 metre, extending 0.1 metre above the roof of the generator enclosure and 3.1 metres above grade;

- supporting accessories as follows:

- one (1) submersible well pump having a capacity of 2.4 litres per second at a TDH of 22 metres complete with level transmitter in the North leachate well,
- replacement of existing South leachate well pump (P-030) with one (1) submersible well pump having a capacity of 2.4 litres per second at a TDH of 22 metres complete with level transmitter,
- two (2) effluent pumps, one (1) on duty and one (1) on standby, each having a capacity of 2.4 litres per second at a TDH of 10 metres pumping the treated leachate from the Treated Leachate Equalization Tank to a final polyethylene effluent tank in the GDT Building before its discharge to the sanitary sewer,
- one (1) sampling pump for raw equalization pump, one (1) sampling pump for the Treated Leachate Equalization Tank and one (1) sampling pump for the SBR, each feeding online monitoring instruments and each having a capacity of 1.4 litres per second at a TDH of 9 metres,
- chemical feed system for the SBR, including one (1) duty and one (1) standby alum metering pumps each having a capacity of 6 litres per hour, one (1) defoamer metering pump having a capacity of 132 litres per hour, one (1) sodium hydroxide metering pump having a capacity of 6 litres per hour, each of the chemical feed pumps has a weight scale and indicator under the chemical storage drums,
- instrumentation equipment, HVAC equipment and various piping and valves, and
- one (1) 22 metres by 17 metres pre-fabricated steel building housing pumps, blowers, boiler, chemical feed system and miscellaneous instruments;

all in accordance with Schedule "A" of this Approval.

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

(1) "Act" means the *Environmental Protection Act.*

(2) "Approval" means this Environmental Compliance Approval and any Schedules to it, including the application and supporting documentation listed in Schedule "A".

(3) "Company" means Waste Management of Canada Corporation and its successors and assignees.

(4) "Director" means any Ministry employee appointed by the Minister pursuant to Section 5 of the Act.

(5) "District Manager" means the District Manager, Ottawa District Office, Eastern Region of the Ministry.

(6) "Equipment" means the one (1) leachate pre-treatment system described in the Company's application, this Approval

and in the supporting documentation submitted with the application, to the extent approved by this Approval.

(7) "Exhausted" means the capacity of the activated carbon to absorb or adsorb contaminant emissions is reached and the activated carbon system is no longer able to effectively reduce emissions.

(8) "Manual" means a document or a set of documents that provide written instructions to staff of the Company.

(9) "Ministry" means the Ontario Ministry of the Environment.

(10) "Start of Operation" means the date when raw leachate is first pumped into the SBR for treatment.

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

TERMS AND CONDITIONS

OPERATION AND MAINTENANCE

1. The Company shall ensure that the Equipment is properly operated and maintained at all times. The Company shall:

(1) prepare, not later than three (3) months after the Start of Operation of the Equipment, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment. The Manual shall include, as a minimum, the following:

(a) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;

(b) emergency procedures and procedures to prevent upset conditions;

(c) procedures to devise and adjust, as necessary, the five (5) phases of the SBR operation cycle, for example the operational times of the phases, procedures and frequency of monitoring to confirm that the design basis of the SBR is met, procedures to determine the frequency of de-sludging from the SBR, etc.

(d) procedures to monitor the performance of the activated carbon in the activated carbon adsorption systems and the criteria of the replacement of the activated carbon;

(e) procedures to monitor and record the quantity and quality of the landfill gas fed to the boiler, when it is in operation;

(f) the operator(s) and the training required and provided by an individual experienced with the Equipment;

(g) procedures for any record keeping activities relating to operation and maintenance of the Equipment;

(h) all appropriate measures to minimize noise and odorous emissions from all potential sources; and

(i) procedures for recording and responding to complaints regarding the operation of the Equipment;

(2) implement the procedures of the Manual.

2. The Company shall not permit the activated carbon in either of the two (2) activated carbon adsorption systems to be Exhausted at any time during the operation of the Equipment.

RECORD RETENTION

3. The Company shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this Approval, and make these records available for review by staff of the Ministry upon request. The Company shall retain:

(1) all records on the operation, maintenance, repair and inspection of the Equipment;

(2) all records on the performance monitoring of the Equipment;

(3) all records on operator(s) training;

(4) all records of any environmental complaints; including:

(a) a description, time and date of each incident to which the complaint relates,

(b) wind direction at the time of the incident to which the complaint relates, and

(c) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

NOTIFICATION OF COMPLAINTS

4. The Company shall notify the District Manager, in writing, of each environmental complaint, received by the Company through the Company's published phone number or email address established for the Facility, within two (2) business days of the complaint. The notification shall include:

(1) this Approval number;

(2) a description of the nature of the complaint;

(3) the time and date of the incident to which the complaint relates;

(4) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

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

1. Conditions No. 2 and 3 are included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Approval.

2. Condition No. 4 is included to require the Company to keep records and to provide information to staff of the Ministry so that compliance with the Act, the regulations and this Approval can be verified.

3. Condition No. 5 is included to require the Company to notify staff of the Ministry so as to assist the Ministry with the review of the site's compliance.

SCHEDULE "A"

Supporting Documentation

1. Application for Approval (Air & Noise), dated November 2, 2010 and received November 22, 2010 and signed by Ried Cleland, Waste Management of Canada Corporation, and all information and documentation associated with the application.

2. Additional information provided by AECOM Canada Ltd. on behalf of Waste Management of Canada Corporation, dated December 10, 2010, April 4, 2011 and September 13, 2011 and signed by Michael Gundry, P.Eng., and contained in the emails sent June 24, 2011, August 30, 2011, September 2, 2011 and October 21, 2011 from Meseret Aniye, P.Eng., AECOM Canada Ltd.

3. Information contained in the set of drawings for Project No. 60156478 prepared by AECOM Canada Ltd., dated May 31, 2011 and submitted to Dale Gable, P.Eng., Senior Waste Engineer of the Ministry.

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

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

The Notice should also include:

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

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

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street, Suite 605
Toronto, Ontario
M5S 2B1

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

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

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

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

DATED AT TORONTO this 16th day of February, 2012

Ian Parrott, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

RW/
c: District Manager, MOE Ottawa District Office
Michael Gundry, P.Eng., AECOM Canada Ltd

Ontario

Ministry of the Environment
Ministère de l'Environnement

CERTIFICATE OF APPROVAL
AIR
NUMBER 7025-7F4PN5
Issue Date: October 1, 2008

Waste Management of Canada Corporation
117 Wentworth Court
Brampton, Ontario
L6T 5L4

Site Location: Ottawa Landfill Site
2301 Carp Road
Ottawa City, Ontario

You have applied in accordance with Section 9 of the Environmental Protection Act for approval of:

- one (1) open candlestick flare, used as a contingent back-up in the landfill site, combusting up to a maximum of 1.0 cubic metre per second of landfill gas, exhausting into the atmosphere through a stack, having an exit diameter of 0.2 metre, extending 10.4 metres above grade;

all in accordance with the Application for Approval (Air & Noise), dated April 23, 2008 and signed by Michael Pullen, P.Eng., Waste Management of Canada Corporation, and all information associated with the application including additional information provided by Henderson Paddon & Associates Limited on behalf of Waste Management of Canada Corporation in the form of a revised Emission Summary and Dispersion Modeling (ESDM) Report dated August 2008 and co-signed by Jeff Armstrong, P.Eng. and Jeni Spencer.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

1. "Act" means the *Environmental Protection Act.*

2. "Certificate" means this Certificate of Approval, issued in accordance with Section 9 of the Act.

3. "Company" means Waste Management of Canada Corporation.

4. "Equipment" means the one (1) open candlestick flare described in the Company's application, this Certificate and in the supporting documentation submitted with the application, to the extent approved by this Certificate.

5. "Manual" means a document or a set of documents that provide written instructions to staff of the Company.

6. "Ministry" means the Ontario Ministry of the Environment.

7. "Publication NPC-205" means Ministry Publication NPC-205 "Sound level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October 1995.

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

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

TERMS AND CONDITIONS

1. The Company shall ensure that the Equipment is properly operated and maintained when it is in operation. The Company shall:

(1) prepare, not later than three (3) months after the date of this Certificate, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment, including:

(a) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;

(b) emergency procedures;

(c) criteria when the Equipment shall be operated;

(d) procedures to record the dates and times when the Equipment is operated, and the quantity of landfill gas combusted when the Equipment is operated, together with the operational status and details of other landfill gas combustion devices in the site at those times when the Equipment is operated;

(e) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and

(f) all appropriate measures to minimize noise and odorous emissions from all potential sources;

(2) implement the recommendations, procedures and measures of the Manual; and

(3) retain, for a minimum of two (2) years from the date of their creation, all records on the maintenance, repair and inspection of the Equipment, and make these records available for review by staff of the Ministry upon request.

2. The Company shall ensure that the noise emissions from the Equipment comply with the limits set in Publication NPC-205 or Publication NPC-232, where applicable.

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

1. Condition No. 1 is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Certificate.

In addition, the Company is required to keep records and to provide information to staff of the Ministry so that compliance with the Act, the regulations and this Certificate can be verified.

2. Condition No. 2 is included to provide minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Equipment.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, S.O. 1993, Chapter 28, the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:

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

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;

6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

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

This Notice must be served upon:

The Secretary* Environmental Review Tribunal 655 Bay Street, 15th Floor Toronto, Ontario M5G 1E5	AND	The Environmental Commissioner 1075 Bay Street, 6th Floor Suite 605 Toronto, Ontario M5S 2B1	AND	The Director Section 9, *Environmental Protection Act* Ministry ofthe Environment 2 St. Clair Avenue West, Floor 12A Toronto, Ontario M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

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

The above noted works are approved under Section 9 of the Environmental Protection Act.

DATED AT TORONTO this 1st day of October, 2008

Victor Low, P.Eng.
Director
Section 9, *Environmental Protection Act*

RW/
c: District Manager, MOE Ottawa District Office
Jeffrey E. Armstrong, P.Eng., Henderson Paddon & Associates Limited

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDMENT TO ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 7816-7C9JMR
Notice No. 2
Issue Date: March 5, 2012

Waste Management of Canada Corporation
2301 Carp Rd
Ottawa, Ontario
K0A 1L0

Site Location: Ottawa Landfill Site
2301 Carp Rd Lots 3 and 4, Concession 3, Huntley Ward
Ottawa City,

You are hereby notified that I have amended Approval No. 7816-7C9JMR issued on March 7, 2008 for for flare systems, landfill gas-to-energy facility and soil bioremediation process, as follows:

The following Definition is added:

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

The following Condition:

1. The Company shall, at all times, ensure that the noise emissions from the Facility comply with the limits determined in accordance with Ministry Publication NPC-205.

is revoked and replaced by the following:

1. The Company shall, at all times, ensure that the noise emissions from the Facility comply with the limits determined in accordance with Ministry Publication NPC-205 and/or NPC-232, as applicable.

The following Conditions are revoked:

ACOUSTIC AUDIT

8.1 The Company shall carry out acoustic audit measurements on the actual noise emissions due to the operation of the Facility. The Company shall:

(a) carry out acoustic audit measurements in accordance with the procedures in Publication NPC-103;
(b) submit an Acoustic Audit Report on the results of the Acoustic Audit, prepared by an Independent Acoustical Consultant, in accordance with the requirements of Publication NPC-233, to the District Manager and the Director not later than three (3) months after the date of this Notice or commencement of operation of the Facility.

8.2 If the Acoustic Audit Report indicates that the Facility is not in compliance with the noise limits stated in Ministry Publication NPC-205 or Publication NPC-232, whichever is applicable, then the Company shall submit a new application for a Certificate of Approval containing a Noise Abatement Action Plan.

The Noise Abatement Action Plan shall include a detailed timetable of scheduled mitigating measures, with the objective to ensure that the noise emissions from the Facility comply with limits in Publication NPC-205 or Publication NPC-232, whichever is applicable. The Noise Abatement Action Plan shall also be based upon the objective to complete the implementation of the required mitigating measures by a date not exceeding twelve (12) months after the date noted on this Notice.

9. The Director:

(1) may not accept the results of the Acoustic Audit if the requirements of Publication NPC-233 were not followed;

(2) may require the Company to repeat the Acoustic Audit if the results of the Acoustic Audit are found unacceptable to the Director

All other Terms and Conditions remain the same.

The reason for this amendment to the Certificate of Approval is to address information provided in the Acoustic Audit Report dated July 16, 2010 and signed by Arjun Tandalam, Marcus Li, Colin Welburn and John DeYoe, RWDI Air Inc.

This Notice shall constitute part of the approval issued under Approval No. 7816-7C9JMR dated March 7, 2008.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

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

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

The Notice should also include:

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

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

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

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

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

DATED AT TORONTO this 5th day of March, 2012

Ian Greason, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

DZ/
c: District Manager, MOE Ottawa
Arjun Tandalam, RWDI Inc.

Ministry of the Environment

Office of the Minister

77 Wellesley Street West
11th Floor, Ferguson Block
Toronto ON M7A 2T5
Tel.: 416 314-6790
Fax: 416 314-6748

Ministère de l'Environnement

Bureau du ministre

77, rue Wellesley Ouest
11e étage, édifice Ferguson
Toronto ON M7A 2T5
Tél. : 416 314-6790
Téléc. : 416 314-6748

Ontario

ENV1283MC-2013-1796

SEP 0 5 2013

Mr. Tim Murphy
Director
Environmental Protection and Regulatory Affairs
Waste Management of Canada Corporation
117 Wentworth Street,
Brampton ON L6T 5L4

Dear Mr. Murphy:

Thank you for submitting your environmental assessment for the West Carleton Environmental Centre New Landfill Footprint on September 14, 2012, as amended on January 21, 2013. The ministry has completed its review and I wish to inform you that I have approved your environmental assessment with regard to the proposed undertaking.

Attached is a signed copy of the Notice of Approval to Proceed with the Undertaking as required by the Environmental Assessment Act.

Should you require further assistance please contact Jason Ryan, Supervisor, Project Coordination Unit of the Environmental Approvals Branch, at 416-314-7241 or by e-mail at Jason.Ryan@ontario.ca.

Yours sincerely,

Jim Bradley
Minister of the Environment

Attachment

c: Jack MacLaren, MPP, Carleton-Mississippi Mills

Ontario
Executive Council
Conseil des ministres

Order in Council
Décret

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and concurrence of the Executive Council, orders that:

Sur la recommandation du soussigné, le lieutenant-gouverneur, sur l'avis et avec le consentement du Conseil des ministres, décrète ce qui suit :

WHEREAS section 9 of the Environmental Assessment Act provides that the Minister of the Environment, with the approval of the Lieutenant Governor in Council, may give approval to proceed with an undertaking, give approval to proceed with an undertaking subject to such conditions as the Minister considers necessary, or refuse to give approval to proceed with the undertaking; and

WHEREAS a Notice of Completion of the Review for the Environmental Assessment for a New Landfill Footprint at the West Carleton Environmental Centre (hereafter "the undertaking") was published on February 22, 2013, and one request for a referral to a hearing was received; and

WHEREAS, having considered the purpose of the Act, the Environmental Assessment of the undertaking, the Terms of Reference, and the submissions received, the undersigned Minister of the Environment considers that a hearing is unnecessary and is of the opinion that the undertaking should be given approval to proceed, subject to the conditions specified in the attached approval,

THEREFORE, pursuant to section 9 of the Environmental Assessment Act, approval to proceed with the undertaking is given in the form attached, subject to the conditions specified therein.

Recommended _____
Minister of the Environment

Concurred _____
Chair of Cabinet

Approved
and Ordered AUG 2 8 2013
Date

_____
Lieutenant Governor

O.C./Décret 1228/2013

ENVIRONMENTAL ASSESSMENT ACT

SECTION 9

NOTICE OF APPROVAL TO PROCEED WITH THE UNDERTAKING

RE: An Environmental Assessment for a New Landfill Footprint at the West Carleton Environmental Centre (Amended January 21, 2013)

Proponent: Waste Management of Canada Corporation

EA File No.: EA-02-08-02

TAKE NOTICE that the period for requesting a hearing, provided for in the Notice of Completion of the Review for the above-noted undertaking, expired on April 2, 2013.

I received one submission requesting a hearing by the Environmental Review Tribunal.

I consider a hearing to be unnecessary in this case. Having considered the purpose of the Environmental Assessment Act, the approved Terms of Reference, the Amended Environmental Assessment, the Ministry Review of the Environmental Assessment and submissions received, I hereby give approval to proceed with the Undertaking, subject to the conditions set out below.

REASONS

My reasons for giving approval are:

(1) The proponent has complied with the requirements of the Environmental Assessment Act.

(2) The Amended Environmental Assessment has been prepared in accordance with the approved Terms of Reference.

(3) On the basis of the proponent's Amended Environmental Assessment and the Ministry Review, the proponent's conclusion that, on balance, the advantages of this undertaking outweigh its disadvantages appears to be valid.

(4) No other beneficial alternative method of implementing the undertaking was identified.

(5) The proponent has demonstrated that the environmental effects of the undertaking can be appropriately prevented, changed, mitigated, or remedied.

(6) On the basis of the proponent's Amended Environmental Assessment, the Ministry Review and the conditions of approval, the construction, operation and maintenance of the undertaking will be consistent with the purpose of the Environmental Assessment Act (section 2).

(7) The government agency, public and Aboriginal review of the Amended Environmental Assessment has indicated no outstanding concerns that cannot be addressed through commitments made in the Amended Environmental Assessment, through the conditions set out below, or future additional approvals that will be required.

(8) The submissions received after the Notice of Completion of the Review was published are being dealt with through commitments made in the Amended Environmental Assessment, through the conditions set out below, or future additional approvals that will be required. I am not aware of any outstanding issues with respect to this undertaking which suggest that a hearing should be required.

CONDITIONS

The approval is subject to the following conditions:

1. Definitions

For the purposes of these conditions:

"CLC" means the Community Liaison Committee.

"construction" means physical construction activities, including, site preparation works, but does not include tendering of contracts.

"date of approval" means the date on which the Order in Council was approved by the Lieutenant Governor.

"Director" means the Director of the Environmental Approvals Branch.

"EAB" means the Environmental Approvals Branch of the Ministry of the Environment.

"environmental assessment" means the document titled West Carleton Environmental Centre New Landfill Footprint Environmental Assessment (as amended January 21, 2013).

"ministry" means the Ministry of the Environment.

"Notice" means this Notice of Approval to Proceed with the Undertaking.

"program" means compliance monitoring program.

"proponent" means Waste Management of Canada Corporation.

"Regional Director" means the Director of the ministry's Eastern Regional Office.

"site" means

- the entire waste disposal site, including the buffer lands, located on Lots 3 and 4, Concession 3, in the former Township of Huntley, formerly in the Township of West Carleton, now the City of Ottawa; and,
- the contaminant attenuation zone (CAZ), including portions of 2301, 2330, 2104, 2326 and 2300 Carp Road, located on Part of Lot 4, Concession 2, Part of Lot 3, Concession 2, and Part of Lot 2, Concession 2, in the former Township of Huntley, formerly in the Township of West Carleton, now in the City of Ottawa.

"undertaking" means the construction and operation of a new landfill footprint at the site, and as more specifically set out in the environmental assessment.

2. General Requirements

2.1 The proponent shall carry out the undertaking in accordance with the environmental assessment which is hereby incorporated in this approval by reference except as provided in these conditions and as provided in any other approval or permit that may be issued for the site.

2.2 The proponent shall fulfill all commitments made during the environmental assessment process.

2.3 The conditions set out in this Notice do not prevent more restrictive conditions being imposed under other statutes.

3. Public Record

3.1 Where a document is required for the public record, the proponent shall provide two copies of the document to the Director: a copy for the public record file maintained for the undertaking and a copy for staff use.

3.2 The EAB file number EA-02-08-02 shall be quoted on all documents submitted to the ministry pursuant to this Notice.

3.3 For every document submitted to the ministry, the proponent shall clearly identify which condition the document is meant to fulfill

3.4 Documents may be provided electronically where appropriate. The ministry may request that the document be provided in hardcopy.

4. Compliance Monitoring Program

4.1 The proponent shall prepare and submit to the Director for the public record, an environmental assessment compliance monitoring program.

4.2 The program shall be submitted to the Director within one year from the date of approval, or 60 days before the commencement of construction, whichever is earlier.

4.3 The program shall include monitoring of the proponent's implementation of the undertaking in accordance with the environmental assessment and the conditions in this Notice with respect to mitigation measures, public consultation, and additional studies and work to be carried out. The program shall also include monitoring of compliance with all commitments made in the environmental assessment and the subsequent review of the environmental assessment and the approval process for the environmental assessment with respect to mitigation measures, public consultation, and additional studies and work to be carried out.

4.4 The program must contain an implementation schedule.

4.5 The Director may require the proponent to amend the program. The program, as it may be amended by the Director, must be carried out by the proponent.

4.6 The proponent shall make the program documentation available to the ministry or its designate upon request in a timely manner when so requested by the ministry.

5. Compliance Reporting

5.1 The proponent shall prepare an annual compliance report which describes the proponent's compliance with the conditions in this Notice and the results of the program.

5.2 The annual compliance report shall be submitted for the public record on or before March 31 of each year, with the first report being due in 2014, and shall cover all activities of the previous calendar year.

5.3 The proponent shall submit annual compliance reports until all conditions are satisfied.

5.4 When all conditions have been satisfied, the proponent shall indicate in the annual compliance report that it is the final annual compliance report.

5.5 The proponent shall retain, either on site or in another location approved by the Director, copies of the annual compliance reports for each reporting year and any associated documentation of compliance monitoring activities.

5.6 The proponent shall make the compliance reports and supporting documentation available to the ministry or its designate upon request in a timely manner when requested to so by the ministry.

6. Community Liaison Committee

6.1 The proponent shall establish and maintain a CLC in respect of the undertaking to provide a forum for public concerns to be raised and for mitigation measures to be discussed where appropriate.

6.2 If there is no interest from the public in continuing the existing CLC or establishing and participating in a new CLC (once sufficient notice has been given) it may be discontinued. If discontinued the proponent shall publish a notice at least annually inviting expressions of interest in establishing or re-establishing the CLC.

6.3 If continued or re-established, the CLC shall serve as the focal point for dissemination, review and exchange of information and monitoring results relevant to the undertaking.

6.4 If there is interest in forming a CLC and members are willing to serve, the CLC shall be established.

6.5 The proponent shall provide administrative support for the CLC including, at minimum:

a) providing CLC meeting space;

b) preparing and publishing meeting notices;

c) recording minutes of each meeting; and,

d) preparing an annual report to be submitted as part of Compliance Reporting as required by Condition 5.

7. Complaint Protocol

7.1 The proponent shall prepare and implement a protocol on how it will deal with and respond to inquiries and complaints with respect to the undertaking.

7.2 The proponent shall submit the Complaint Protocol to the Director at least 6 months prior to the start of construction.

7.3 The Director may require the proponent to amend the Complaint Protocol at any time. Should an amendment be required, the Director shall notify the proponent in writing of the amendment required and when the amendment must be completed.

7.4 The proponent shall submit the amended Complaint Protocol to the Director within the time period specified by the Director.

7.5 The proponent shall implement the Complaint Protocol and any amendments to it.

8. Groundwater and Surface Water Monitoring Plan

8.1 The proponent shall prepare and submit to the Regional Director a draft Groundwater and Surface Water Monitoring Plan for review and comment prior to the commencement of construction of the undertaking. The Regional Director may require the proponent to amend the plan.

8.2 The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan.

8.3 Any monitoring reports prepared by the proponent in accordance with the Groundwater and Surface Water Monitoring Plan shall be made publicly available on the proponent's website for the undertaking.

9. Species at Risk Mitigation, Compensation and Monitoring Plans

9.1 The proponent shall develop and implement a Bank Swallow Mitigation, Compensation and Monitoring Plan in consultation with Environment Canada and the Ontario Ministry of Natural Resources prior to the commencement of construction of the undertaking.

9.2 The Bank Swallow Mitigation, Compensation and Monitoring Plan shall include measures to mitigate impacts of the undertaking on the species, compensate for unavoidable adverse impacts and detail monitoring requirements.

9.3 The proponent shall conduct on-site surveys to determine the presence of Barn Swallow habitat on-site in consultation with the Ontario Ministry of Natural Resources.

9.4 Should Barn Swallow habitat be present, the proponent shall comply with the requirements of the Endangered Species Act, 2007.

9.5 The proponent shall conduct on-site surveys to determine the presence of Flooded Jellyskin habitat on-site in consultation with the Ontario Ministry of Natural Resources prior to the commencement of construction of the undertaking.

9.6 Should the presence of Flooded Jellyskin habitat be present, the proponent shall comply with the requirements of the Endangered Species Act, 2007.

10. Property Value Protection Plan

10.1 The proponent shall implement the Property Value Protection Plan as described in Appendix D – Community Commitments of the environmental assessment.

10.2 Should additional studies required for future approvals under the Environmental Protection Act indicate potential impacts to the value of a property; the proponent shall identify the potentially impacted properties by municipal address in the Property Value Protection Plan and shall notify the owners of the properties.

Dated the 16th day of August 2013 at TORONTO.

Jim Bradley

Minister of the Environment
77 Wellesley Street West
11th Floor, Ferguson Block
Toronto, Ontario
M7A 2T5

Approved by O.C. No. _____

Date O.C. Approved _____

APPENDIX B

Zoning Information

TABLE 35(B)- LIST OF PRIMARY ZONES AND CODES

(I) Zone Name	(II) Zone Code
RESIDENTIAL ZONES	
(1) Residential First Density Zone	R1
(2) Residential Second Density Zone	R2
(3) Residential Third Density Zone	R3
(4) Residential Fourth Density Zone	R4
(5) Residential Fifth Density Zone	R5
(6) Mobile Home Park Zone	RM
INSTITUTIONAL ZONES	
(7) Minor Institutional Zone	I1
(8) Major Institutional Zone	I2
OPEN SPACE AND LEISURE ZONES	
(9) Parks and Open Space Zone	O1
(10) Community Leisure Facility Zone	L1
(11) Major Leisure Facility Zone	L2
(12) Central Experimental Farm Zone	L3
ENVIRONMENTAL ZONE	
(13) Environmental Protection Zone	EP
COMMERCIAL/MIXED USE ZONES	
(14) Local Commercial Zone	LC
(15) General Mixed Use Zone	GM
(16) Traditional Mainstreet Zone	TM
(17) Arterial Mainstreet Zone	AM
(18) Mixed Use Centre Zone	MC
(19) Mixed Use Downtown Zone	MD

(I) Zone Name	(II) Zone Code
INDUSTRIAL ZONES	
(20) Business Park Industrial Zone	IP
(21) Light Industrial Zone	IL
(22) General Industrial Zone	IG
(23) Heavy Industrial Zone	IH
TRANSPORTATION ZONES	
(24) Air Transportation Facility Zone	T1
(25) Ground Transportation Facility Zone	T2
RURAL ZONES	
(26) Agricultural Zone	AG
(27) Mineral Extraction Zone	ME
(28) Mineral Aggregate Reserve Zone	MR
(29) Rural Commercial Zone	RC
(30) Rural General Industrial Zone	RG
(31) Rural Heavy Industrial Zone	RH
(32) Rural Institutional Zone	RI
(33) Rural Residential Zone	RR
(34) Rural Countryside Zone	RU
(35) Village Mixed Use Zone	VM
(36) Village Residential First Density Zone	V1
(37) Village Residential Second Density Zone	V2
(38) Village Residential Third Density Zone	V3
OTHER ZONES	
(39) Development Reserve Zone	DR

Figure 6.2a - Zoning Map for Ottawa Landfill
Showing Lands South and West of the Landfill

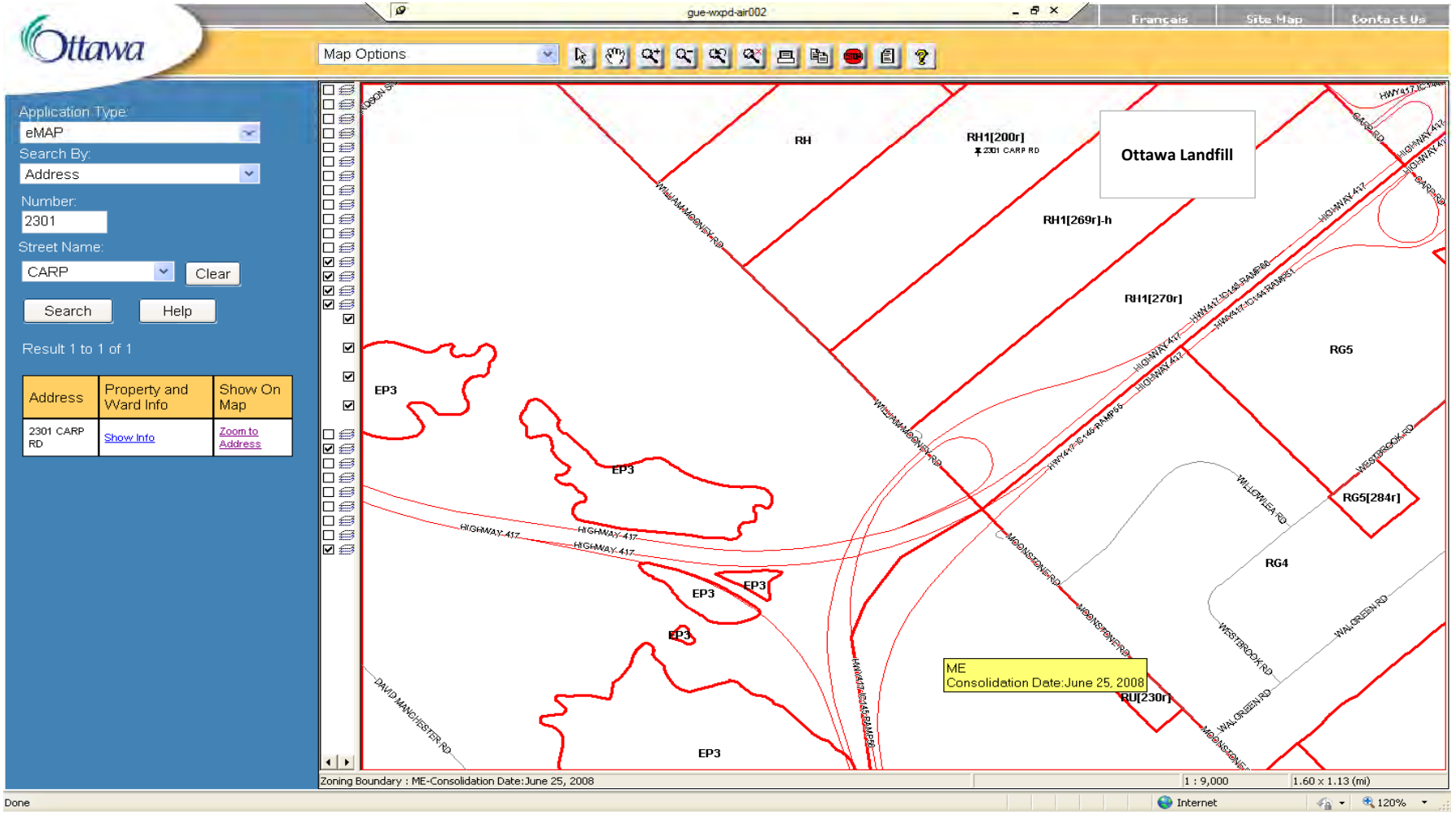
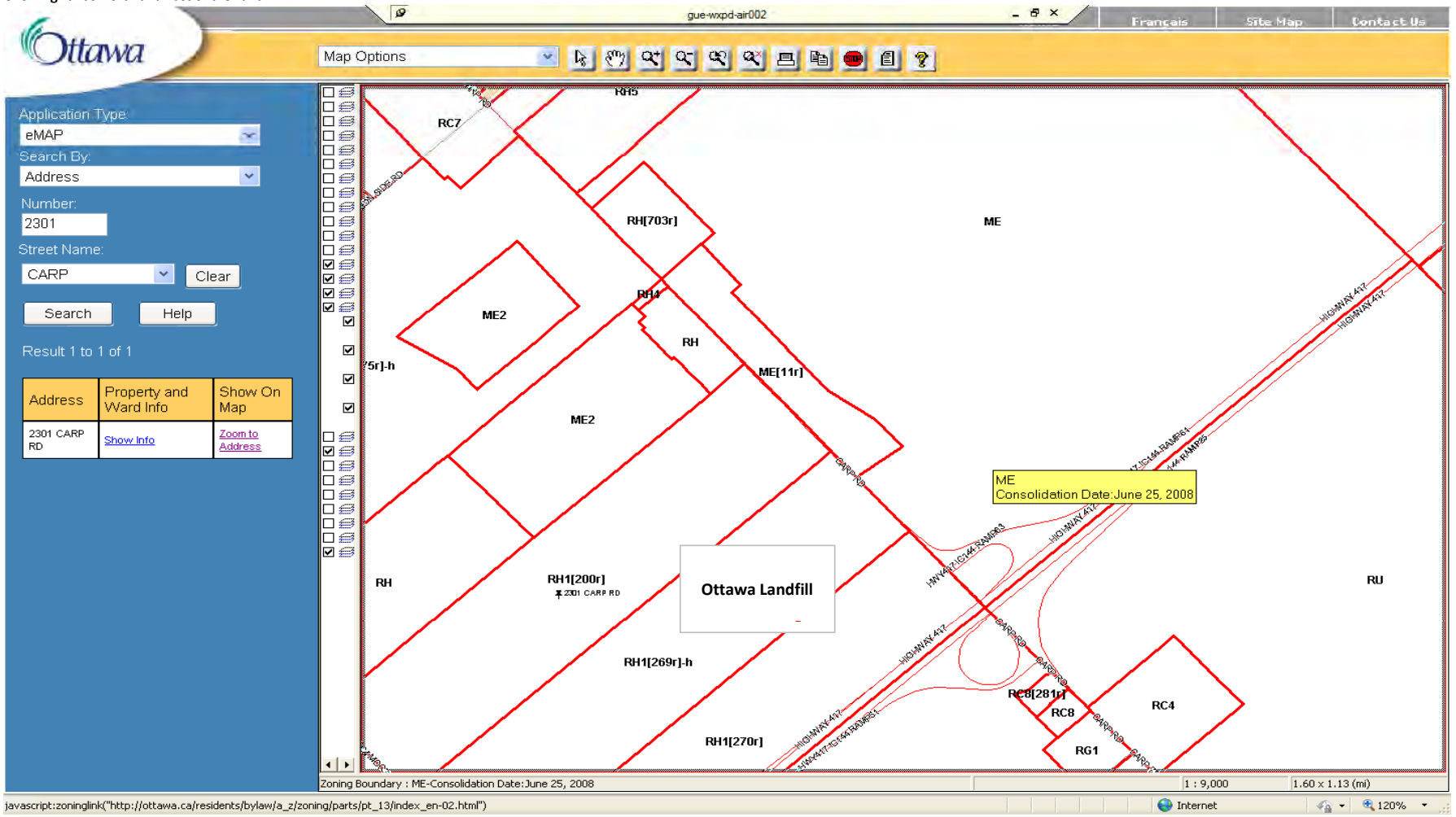


Figure 6.2b - Zoning Map for Ottawa Landfill

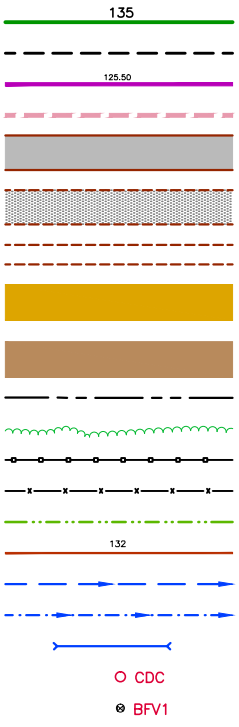
Showing Lands North and East of the Landfill



APPENDIX C

Landfill Development Phases

LEGEND :



AREA COMPLETED TO FINAL WASTE GRADES (SEE NOTE BELOW)

PROPOSED LIMIT OF WASTE (EXPANSION AREA)

PROPOSED BOTTOM OF WASTE CONTOURS

APPROXIMATE LIMIT OF EXISTING LANDFILL

HARD SURFACE ACCESS ROAD

GRAVEL HIGH LEVEL ACCESS ROAD

TEMPORARY GRAVEL ACCESS ROAD

WORKING AREA FOR EACH LANDFILLING PHASE

AREA OF TEMPORARY CLAY SEAL

WASTE MANAGEMENT OF CANADA CORP. PROPERTY LIMIT

TREELINE

LITTER FENCE 10m HIGH

LITTER FENCE 3m HIGH

CUT/FILL LIMIT BESIDE EXISTING LANDFILL MOUND

FILL CONTOURS BESIDE EXISTING LANDFILL MOUND

PROPOSED DITCH/SWALE

PROPOSED DITCH/SWALE RIP RAP LINED

PROPOSED CULVERT

CDC — CONDENSATE DRAIN CHAMBER/PUMPING STATION

BFV1 — 750ø BUTTERFLY ISOLATION VALVE

ABBREVIATIONS :

LF	LEACHATE FORCEMAIN
WM	WATERMAIN (NONPOTABLE)
OH	OVERHEAD HYDRO
SAF	SANITARY FORCEMAIN/SEWER
PWF	PURGE WELL FORCEMAIN
GH	GAS HEADER
CA	COMPRESSED AIR LINE
PS	PUMPING STATION (PRIMARY AND SECONDARY LEACHATE COLLECTION SYSTEM)

NOTE :

THIS AREA WILL BE PARTIALLY CAPPED AND VEGETATED AS SOON AS PRACTICAL AND FULLY CAPPED AND VEGETATED ONCE STABILIZED AND NO SIGNIFICANT SETTLEMENT IS ANTICIPATED. CONTOUR ELEVATIONS SHOWN REFLECT TOP OF FINAL COVER.

EXISTING/PROPOSED FACILITIES

LOCATION	DESCRIPTION
A	PUMPING STATIONS PS5/PS6
B	END OF GAS HEADER AT PHASE 1 – NORTH
C	MAINTENANCE BUILDING
D	SCALE HOUSE
E	END OF GAS HEADER AT PHASE 1 – SOUTH
F	END OF EXISTING PURGE WELL FORCEMAIN (PW20)
G	PUMPING STATION PS1
H	BLOWER BUILDING AND FLARES
J	EXISTING OFFICE BUILDING
K	LEACHATE PRETREATMENT PLANT
L	PUMPING STATION PS3
M	GAS HEADER TEE FOR LANDFILL LOOP
N	KIOSK MINI TRANSFER AREA
P	END OF GAS HEADER AT PHASE 2 – NORTH
Q	END OF GAS HEADER AT PHASE 2 – SOUTH
R	END OF GAS HEADER AT PHASE 3 – NORTH
S	END OF GAS HEADER AT PHASE 3 – SOUTH
T	END OF GAS HEADER AT PHASE 5 – NORTH
U	END OF GAS HEADER AT PHASE 5 – SOUTH
V	END OF GAS HEADER AT PHASE 6 – SOUTH
W	END OF GAS HEADER AT PHASE 6 – NORTH
X	ACCESS ROAD TURNAROUND

FIGURE 4-1

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2013
SCALE: N T S

WASTE MANAGEMENT OF CANADA CORP.

DRAWING NO. 131–19416–00 – 4–1

LEGEND

WEST CARLETON ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101–1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM

WORK DESIGNATION

RUN	PIPING INFO
A – K	LF (75ø)
B – E	GH, GH & CA (750/250/75ø)
C – D	WM (50ø)
D – A	OH
D – C	SAF (75ø)
E – F	PWF (150ø)
H – M	GH, GH & CA (750/250/75ø)
J – D	OH
J – N	OH

UTILITY TRENCH SECTION (1 / 4-2)
SCALE: 1 : 75

NOTE :
CONFIGURATION OF COMMON TRENCH VARIES DEPENDING ON LOCATION.

WSP
101-1450 1st AVENUE W
OWEN SOUND, ONTARIO, CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8098 | WWW.WSPGROUP.COM

WASTE MANAGEMENT

SITE PREPARATION FOR PHASE 1 - PART 1

WEST CARLETON ENVIRONMENTAL CENTRE

DWN BY: T C G
CHK BY: F C F

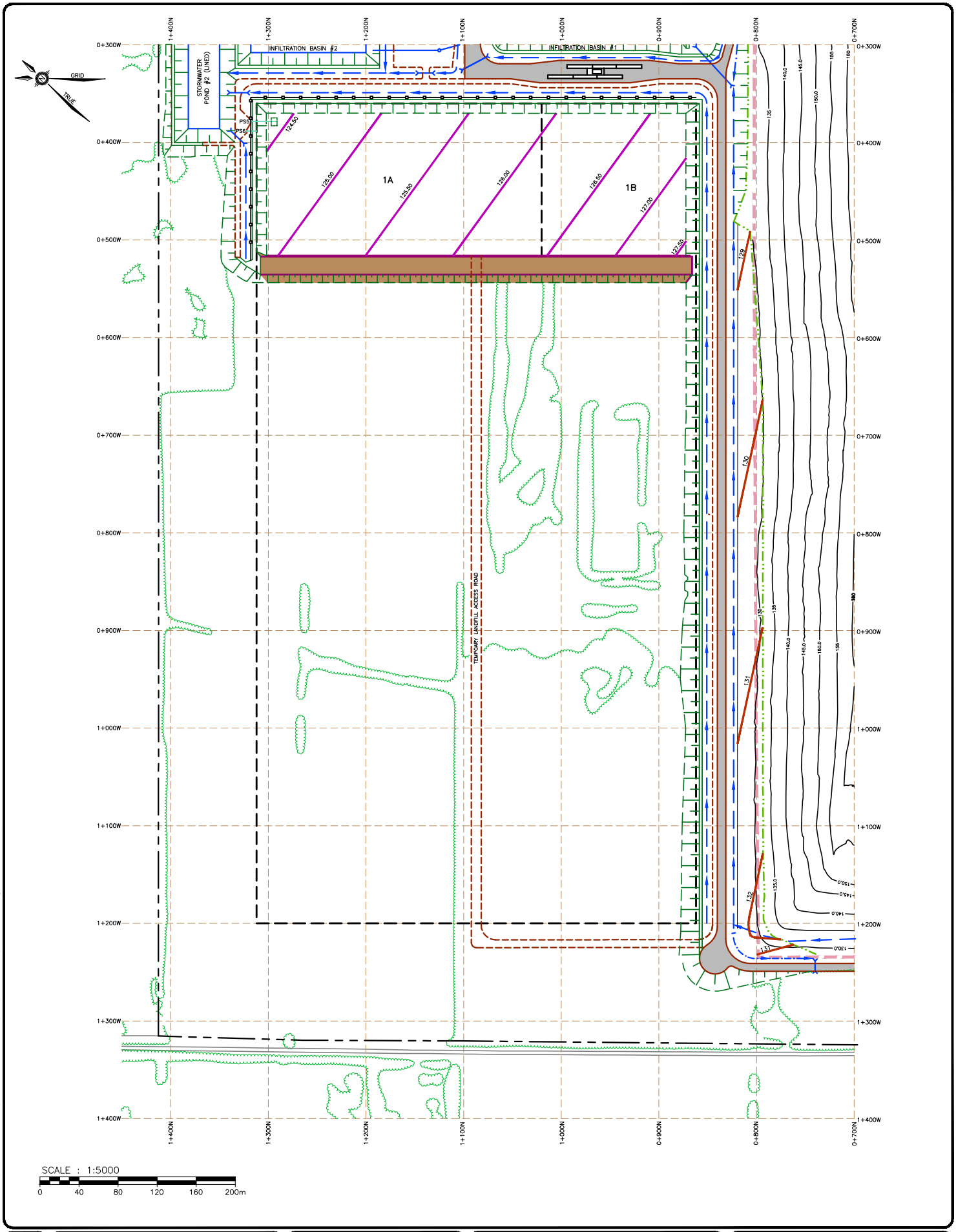
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

DRAWING NO. 131-19416-00 – 4-2

FIGURE 4-2

G:\2013\05\13-401 – Environmental\131-19416-00 – Ottawa Landfill Expansion\DRAWINGS FOR D&O\131-19416-00-4-2.dwg Mar 18, 2014 – 4:18pm



G:\2013\05\13-401 – Environmental\131-19416-00 – Ottawa Landfill Expansion\DRAWINGS FOR DMO\131-19416-00-4-3.dwg Mar 14, 2014 - 4:07pm

FIGURE 4-3

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

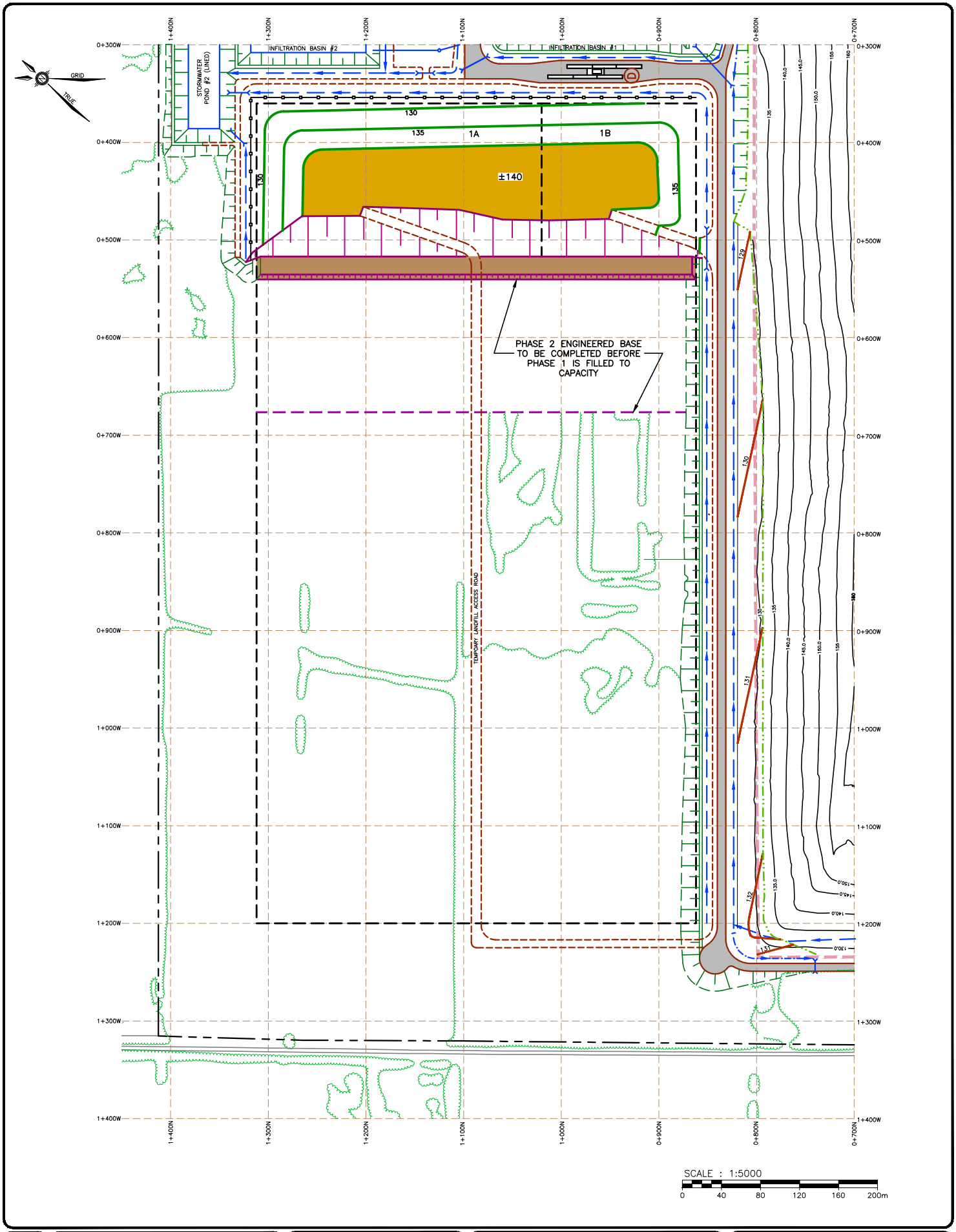
DRAWING NO. 131–19416–00 – 4–3

SITE PREPARATION FOR PHASE 1 - PART 2

WEST CARLETON ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM



G:\2013\GIS\13-401 – Environmental\131-19416-00 – Ottawa Landfill Expansion\DRAWINGS FOR EA\131-19416-00-4-4.dwg Mar 14, 2014 - 3:58pm

FIGURE 4-4

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

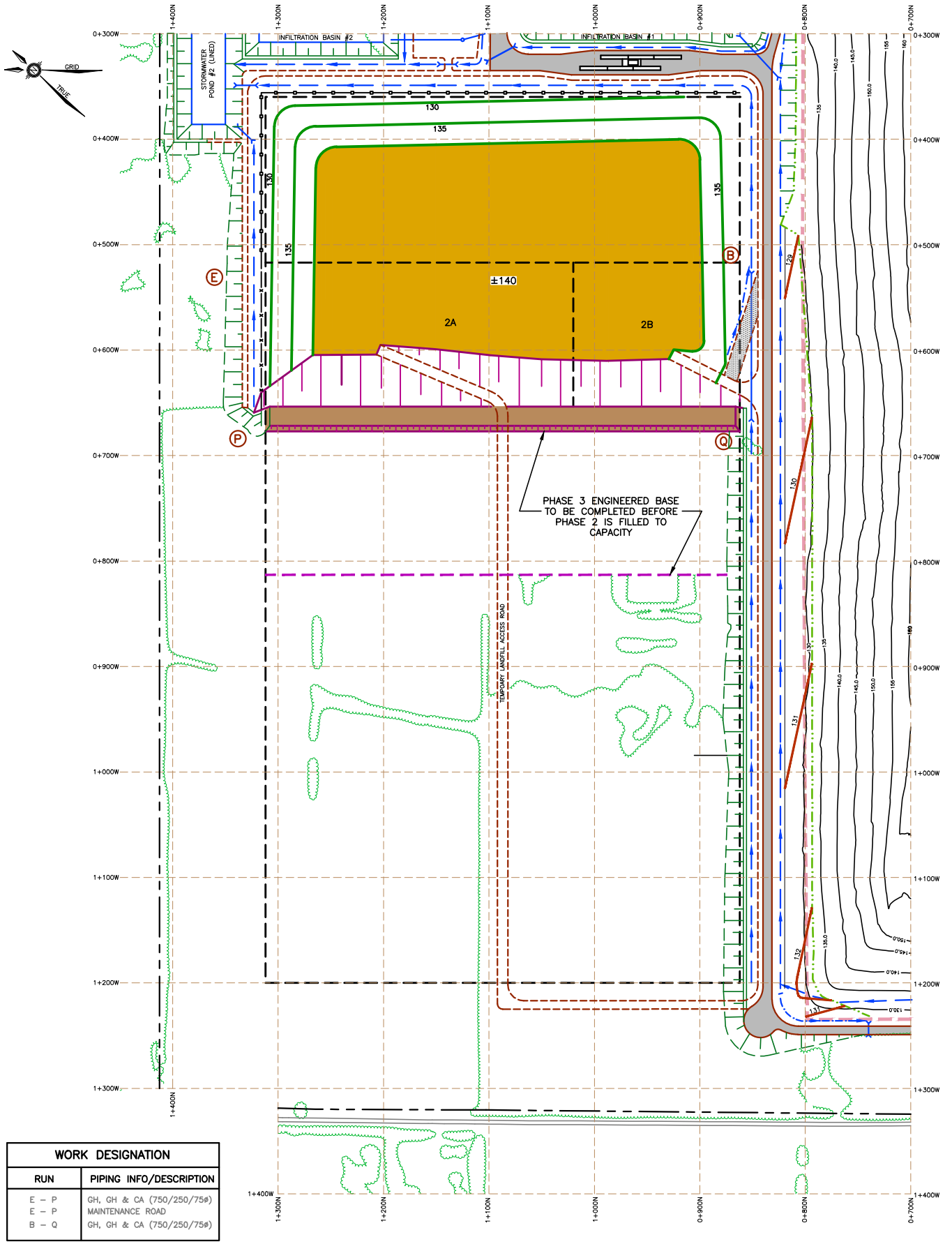
DRAWING NO. 131-19416-00 – 4-4

PHASE 1
LANDFILL DEVELOPMENT

WEST CARLETON ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM



WORK DESIGNATION	
RUN	PIPING INFO/DESCRIPTION
E – P	GH, GH & CA (750/250/75ø)
E – P	MAINTENANCE ROAD
B – Q	GH, GH & CA (750/250/75ø)

G:\2015\05\13-401 - Environmental\131-19416-00 - Ottawa Landfill Expansion\DRAWINGS FOR DA0\131-19416-00-4-5.dwg Mar 14, 2014 - 4:05pm

FIGURE 4-5

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

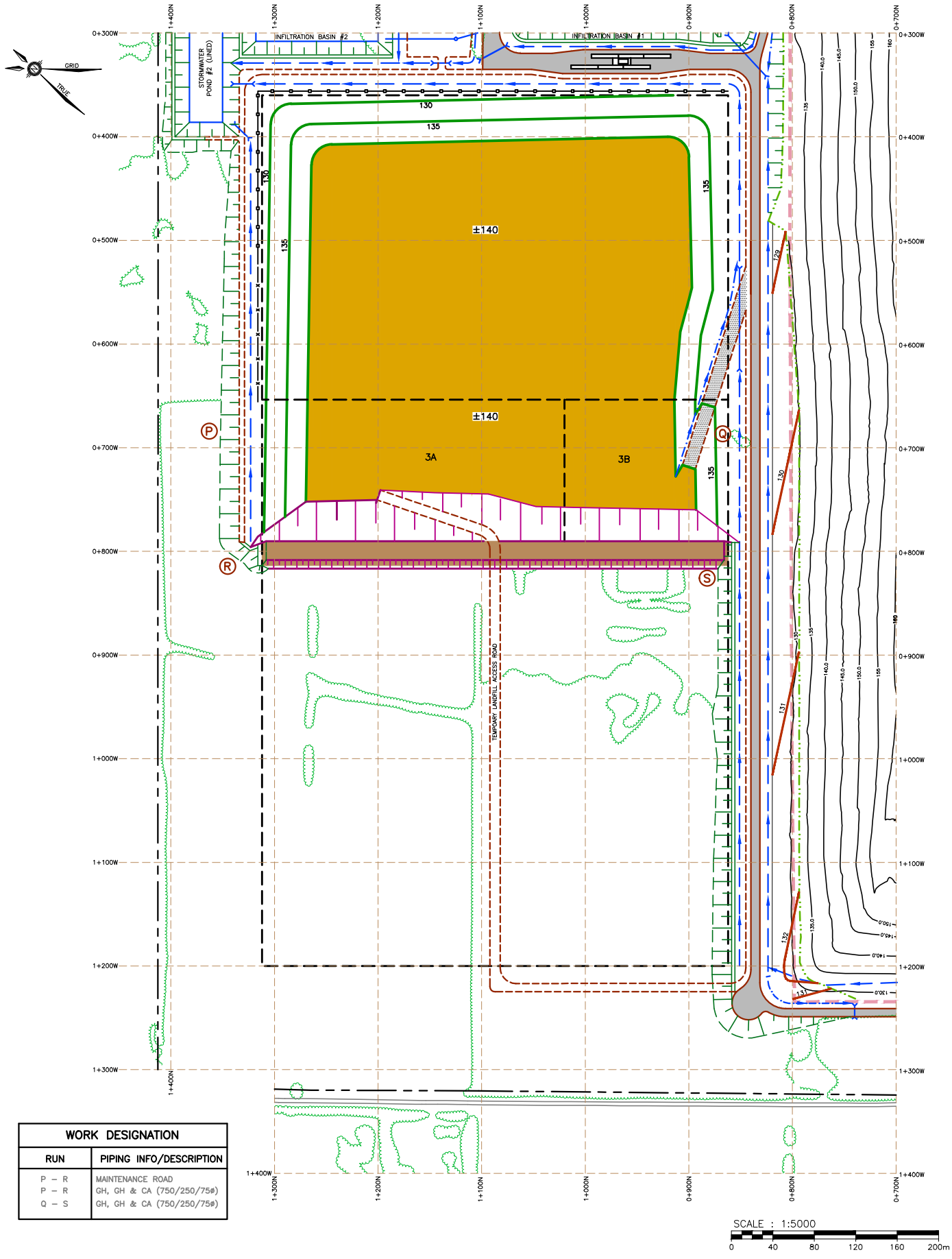
DRAWING NO. 131-19416-00 – 4-5

PHASE 2
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM



WORK DESIGNATION	
RUN	PIPING INFO/DESCRIPTION
P – R	MAINTENANCE ROAD
P – R	GH, GH & CA (750/250/75ø)
Q – S	GH, GH & CA (750/250/75ø)

FIGURE 4-6

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

DRAWING NO. 131–19416–00 – 4–6

PHASE 3
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM

G:\2013\GS\13-401 – Environmental\131-19416-00 – Ottawa Landfill Expansion\DRAWINGS FOR CAD\131-19416-00-4-6.dwg Mar 14, 2014 – 4:07pm

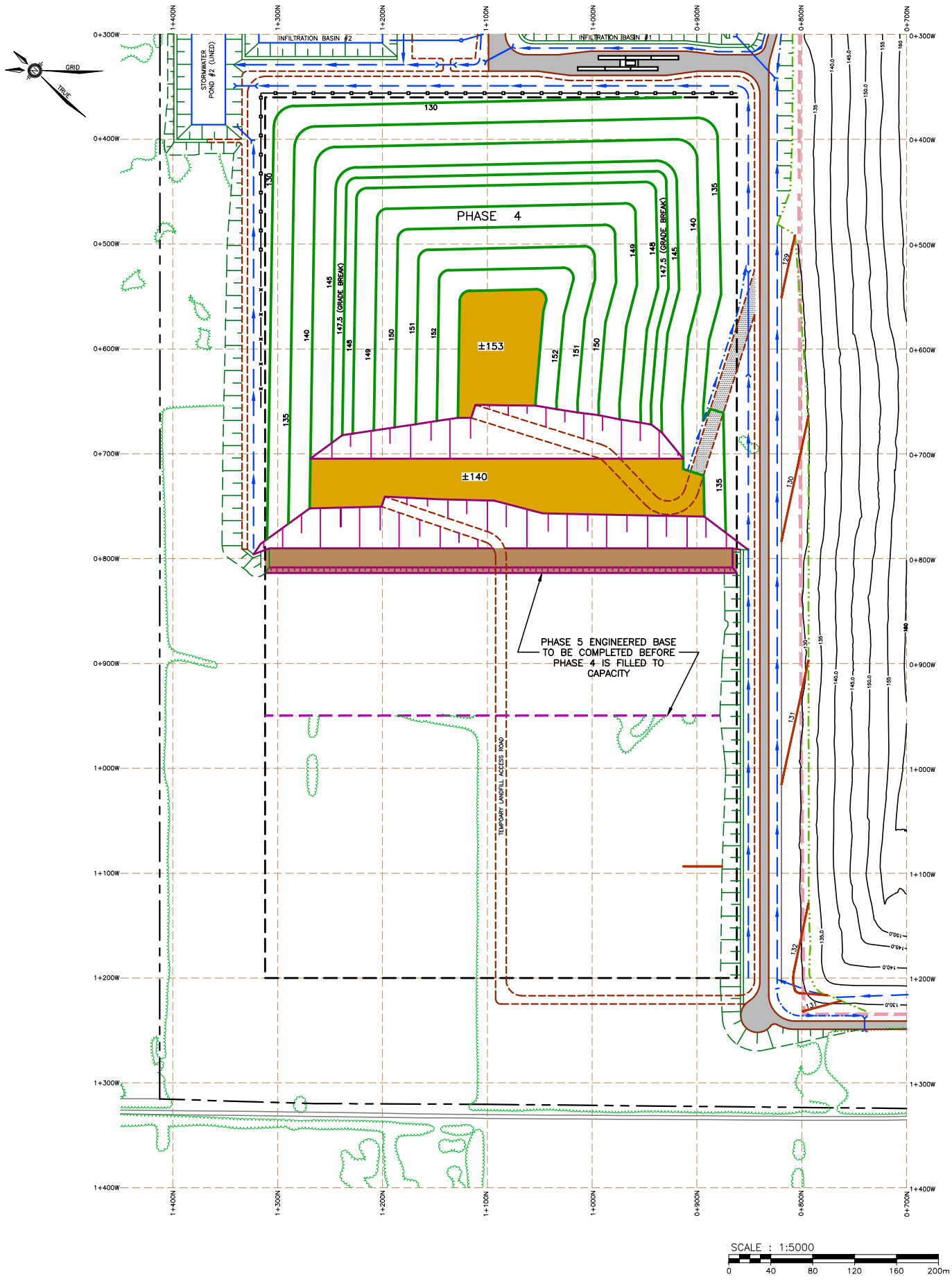


FIGURE 4-7

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

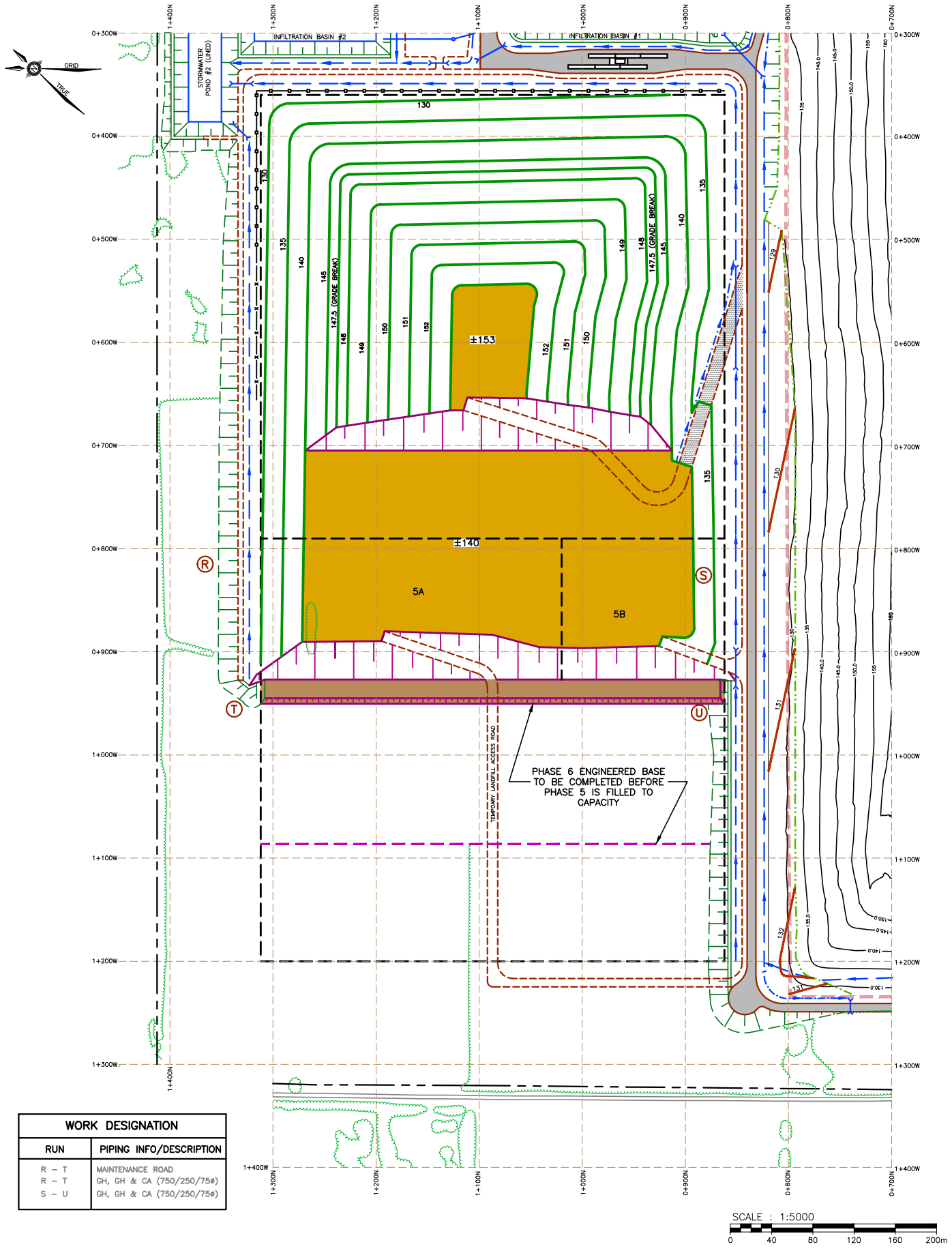
DRAWING NO. 131-19416-00 - 4-7

PHASE 4
LANDFILL DEVELOPMENT

WEST CARLETON ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM



WORK DESIGNATION	
RUN	PIPING INFO/DESCRIPTION
R – T	MAINTENANCE ROAD
R – T	GH, GH & CA (750/250/75ø)
S – U	GH, GH & CA (750/250/75ø)

G:\201\3\05\13-401 – Environmental\131-19416-00 – Ottawa Landfill Expansion\DRAWINGS FOR DMO\131-19416-00-4-8.dwg Mar 14, 2014 – 4:11pm

FIGURE 4-8

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

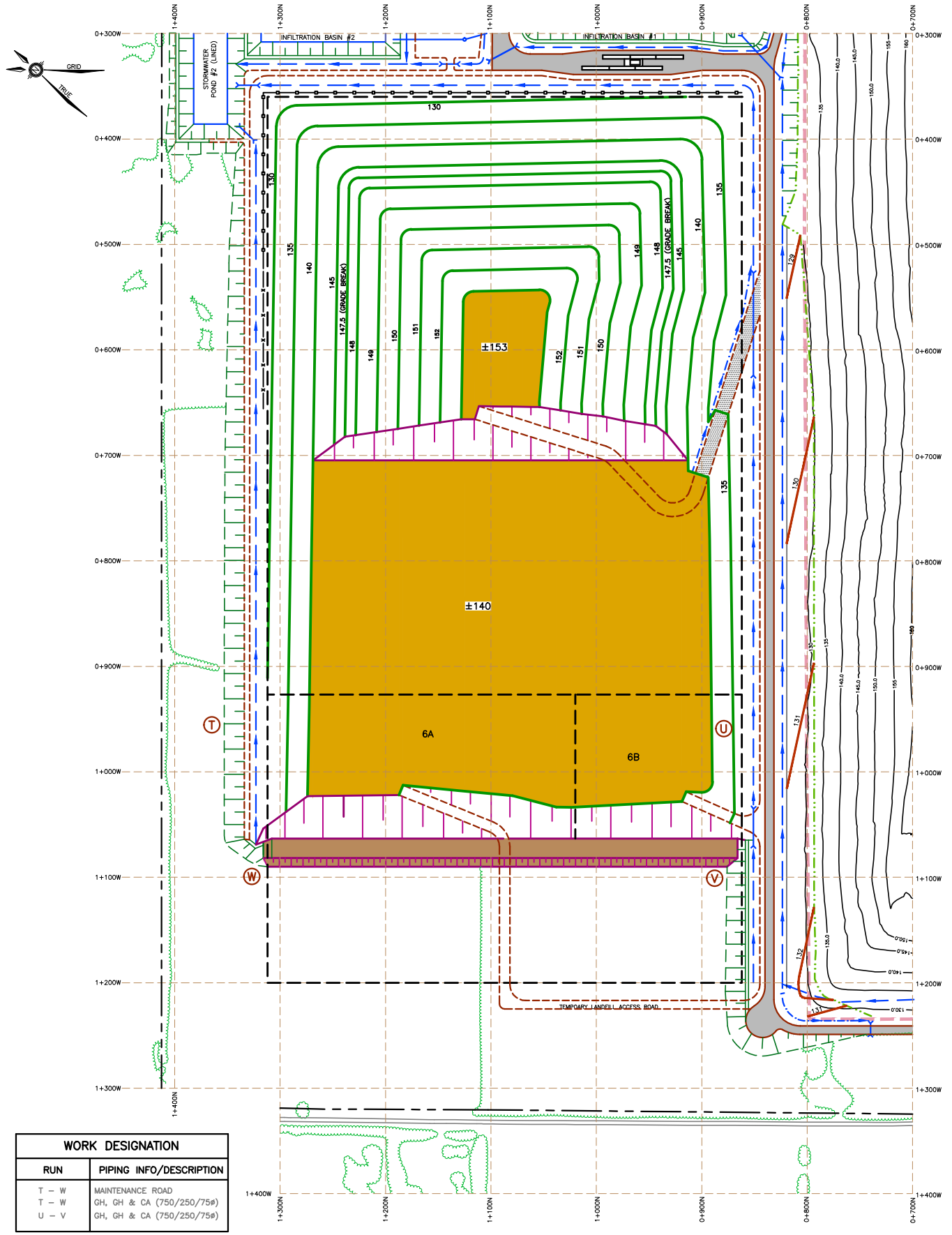
DRAWING NO. 131–19416–00 – 4–8

PHASE 5
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM



WORK DESIGNATION	
RUN	PIPING INFO/DESCRIPTION
T – W	MAINTENANCE ROAD
T – W	GH, GH & CA (750/250/75ø)
U – V	GH, GH & CA (750/250/75ø)

FIGURE 4-9

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

DRAWING NO. 131–19416–00 – 4–9

PHASE 6
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM

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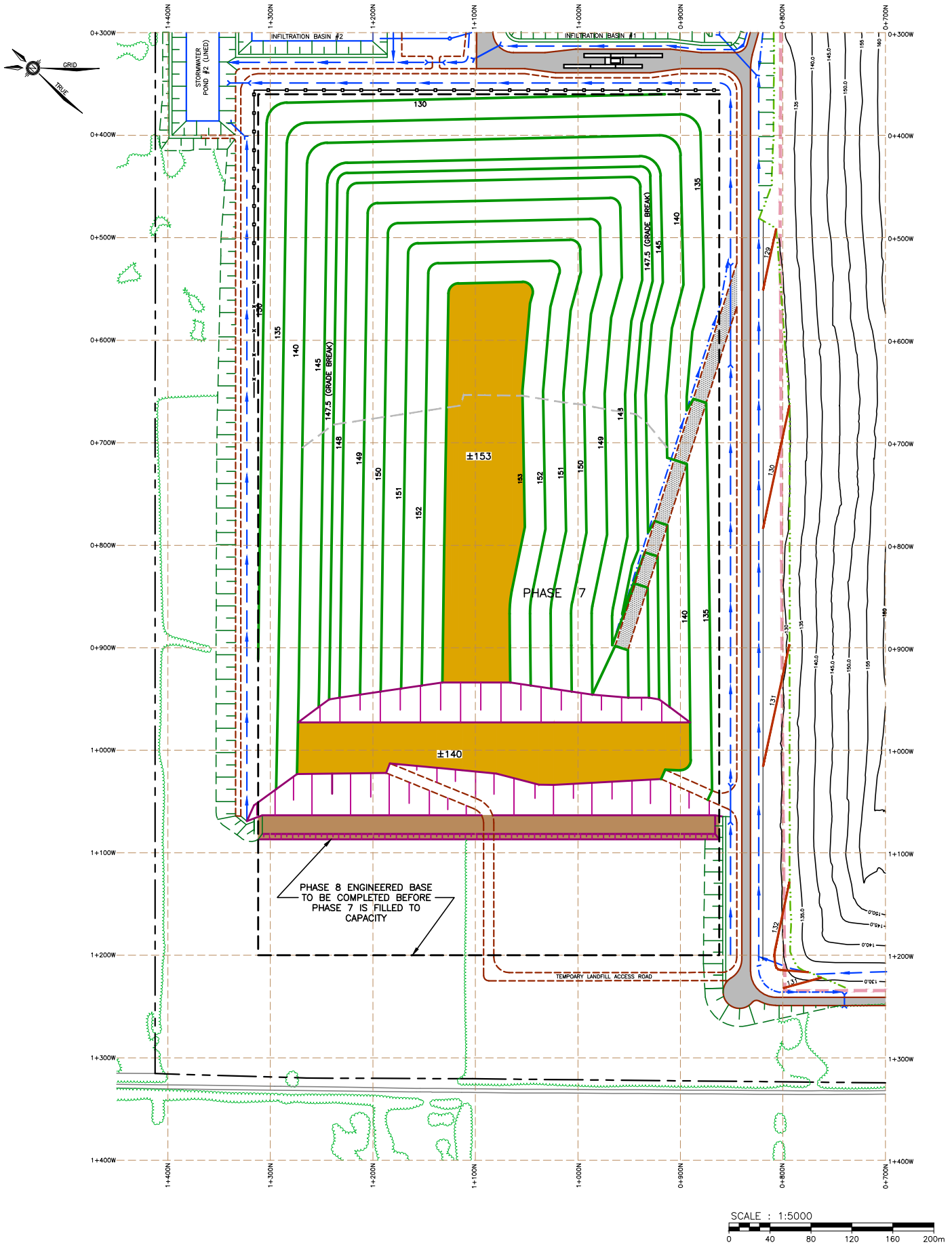

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FIGURE 4-10

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

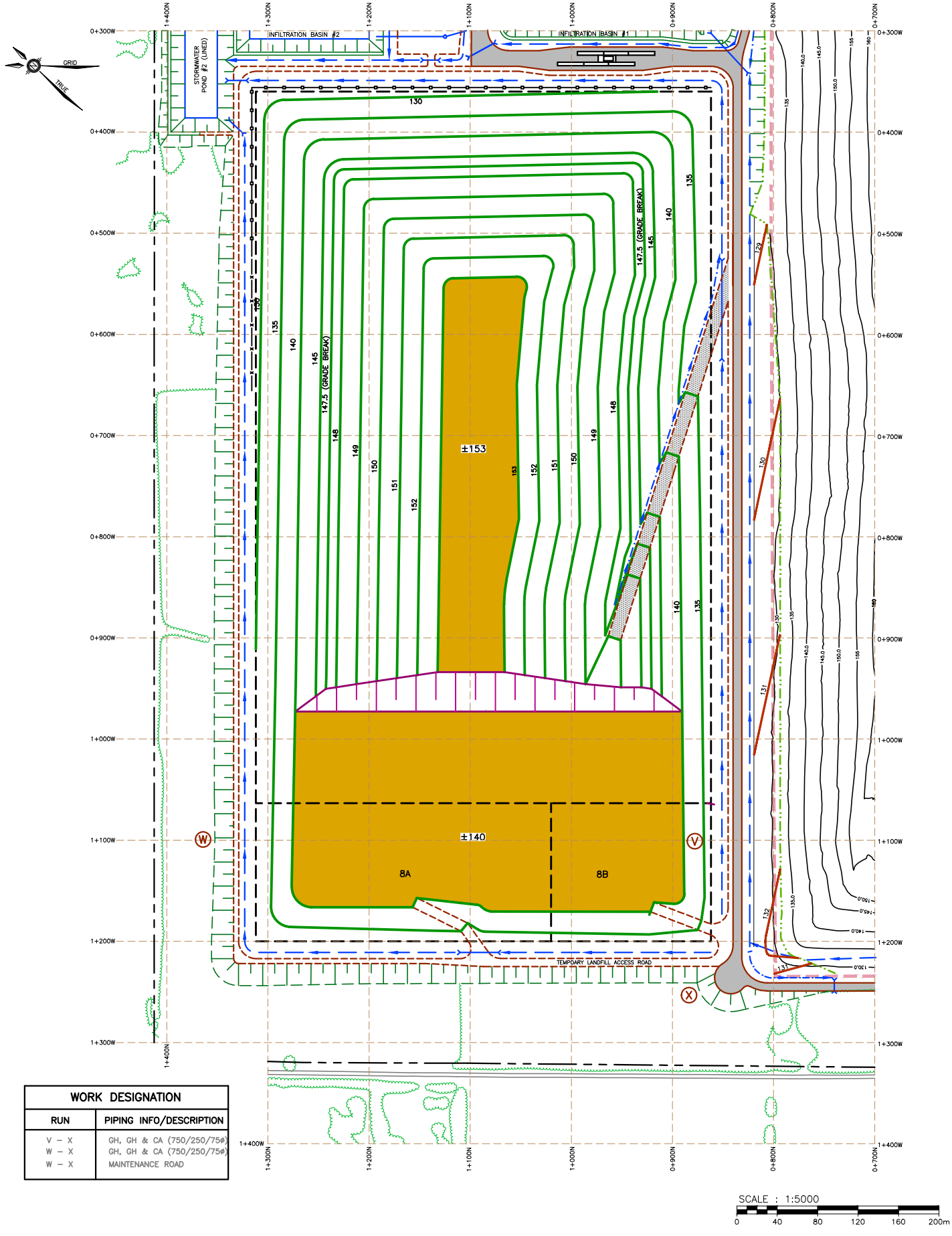
DRAWING NO. 131–19416–00 – 4–10

PHASE 7
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM



WORK DESIGNATION	
RUN	PIPING INFO/DESCRIPTION
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W – X	GH, GH & CA (750/250/75ø)
W – X	MAINTENANCE ROAD

G:\2013\05\13-401 – Environmental\131-19416-00 – Ottawa Landfill Expansion\DRAWINGS FOR DWG\131-19416-00-4-11.dwg Mar 14, 2014 – 4:18pm

FIGURE 4-11

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

DRAWING NO. 131–19416–00 – 4–11

PHASE 8
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM

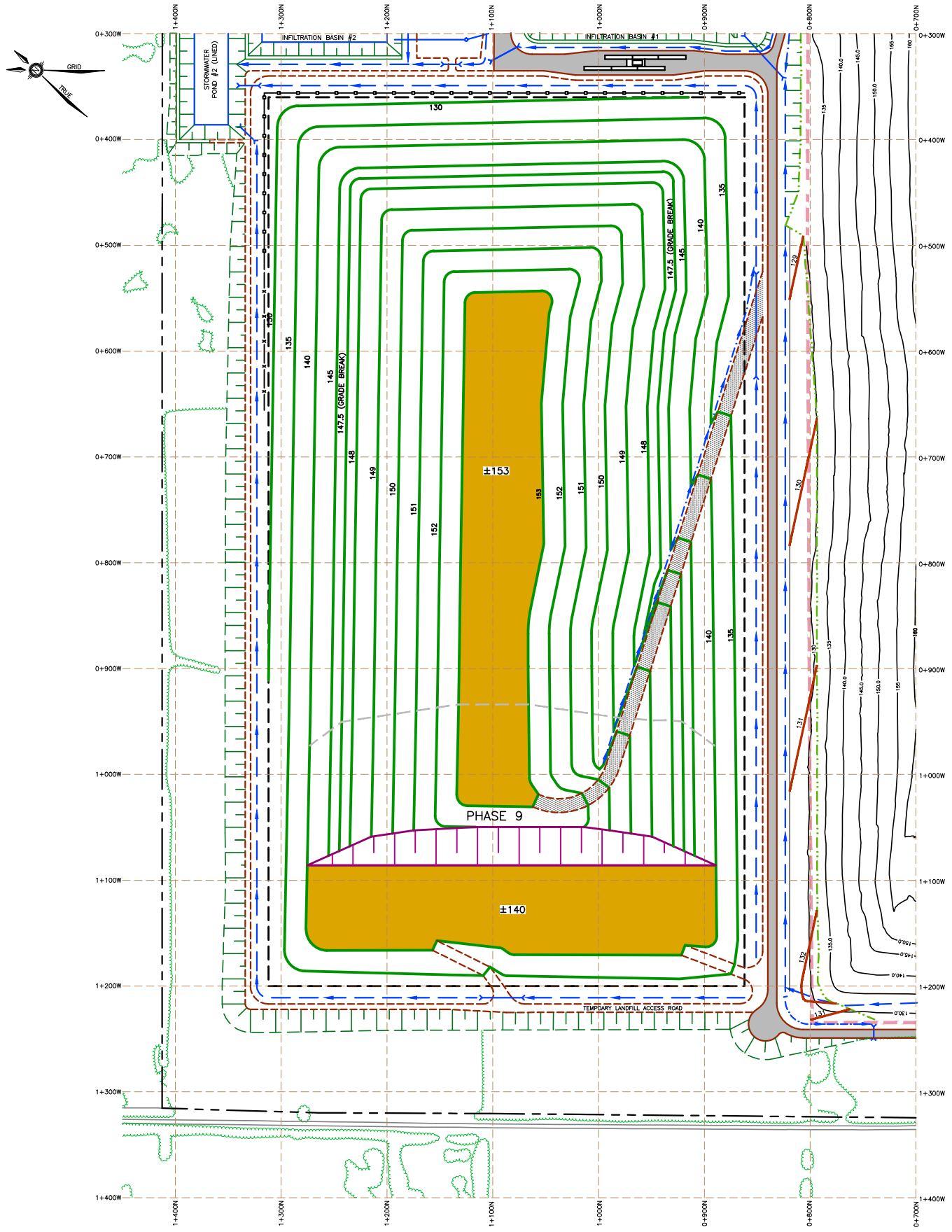


FIGURE 4-12

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

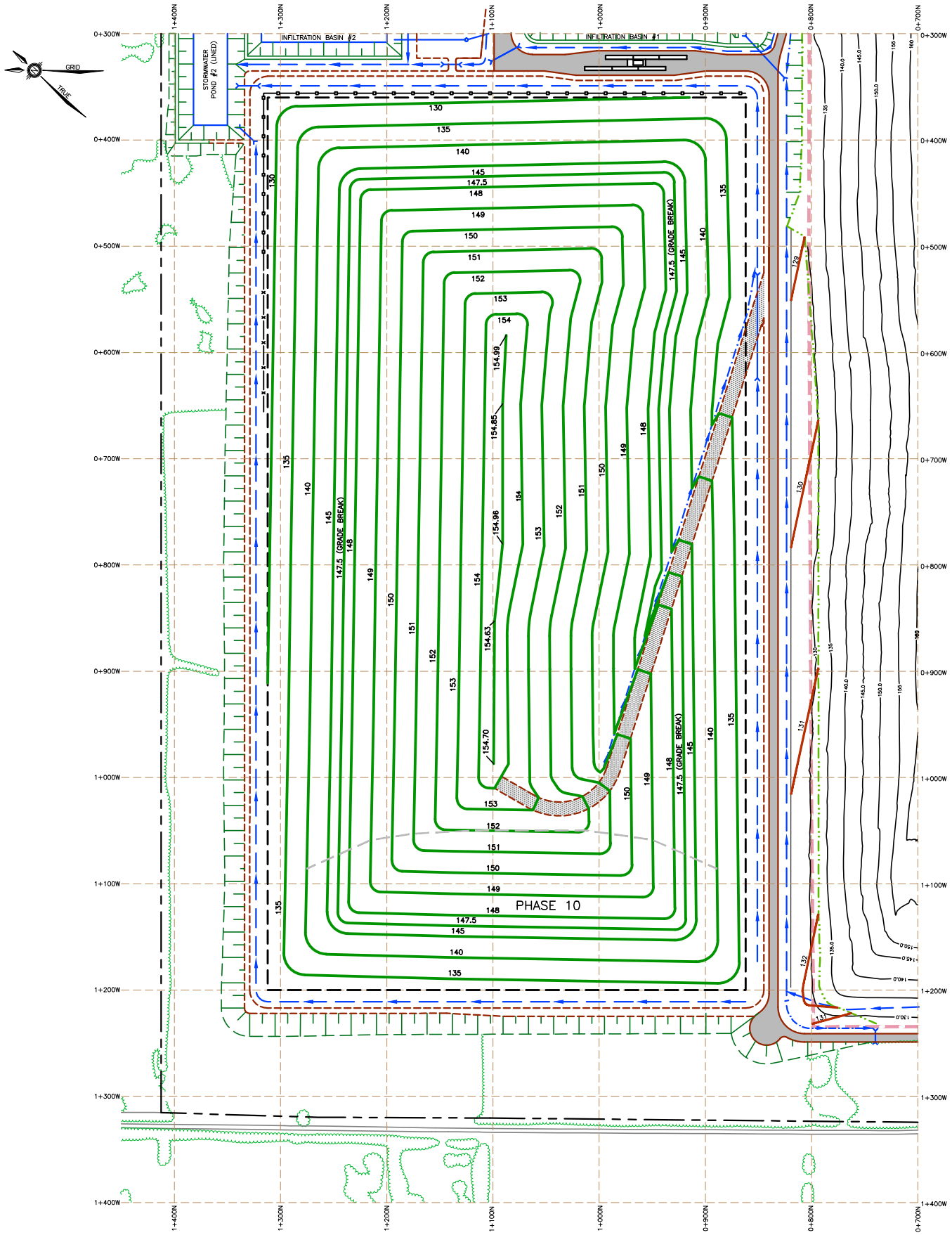
DRAWING NO. 131-19416-00 - 4-12

PHASE 9
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM



SCALE : 1:5000

0 40 80 120 160 200m

G:\2013\05\13-401 - Environmental\131-19416-00 - Ottawa Landfill Expansion\DRAWINGS FOR DWG\131-19416-00-4-13.dwg Mar 18, 2014 - 11:35am

FIGURE 4-13

DWN BY: T C G
CHK BY: F C F
DATE: MAR 17, 2014
SCALE: SEE BAR SCALE

WASTE MANAGEMENT OF CANADA CORP.

DRAWING NO. 131-19416-00 - 4-13

PHASE 10
LANDFILL DEVELOPMENT

WEST CARLETON
ENVIRONMENTAL CENTRE

WASTE MANAGEMENT

WSP
101-1450 1st AVENUE W
OWEN SOUND (ONTARIO) CANADA N4K 6W2
TEL.: 519-376-7612 | FAX: 519-376-8008 | WWW.WSPGROUP.COM

APPENDIX D

Noise Source Data

Table D.1: Noise Source Data

WCEC - Ottawa, Ontario, 1302177

Notes to Table:

1. Wherever possible, the Source ID matches the identifiers used in the ESDM report.

2. Sound Power Level of Source, in dBA or dBAI, not including sound characteristic adjustments per NPC-104

3. Source Location: O = Outside of building, including the roof, I = Inside of building

4. Sound Characteristic, per NPC-104
   S = Steady; I = Impulsive; T = Tonal
   Q = Quasi-Steady Impulsive; B = Buzzing; C = Cyclic

5. Noise control measures currently in place or specified in construction drawings
   S = Silencer; L = Lagging; O = Other
   A = Acoustic lining, plenum; E = Acoustic Enclosure; U = Uncontrolled
   B = Barrier
   Where noise control measures are specified in construction drawings or were found on existing equipment, octave band sound power levels include the effects of the noise control measures. Noise control measures recommended in the mitigation section of this report are not included in this table.

6. Source type indicates Cadna/A modelling methodology. For Point, Line, and Area sources, PWLs represent the overall level for the entire source. Where source type is Truck Route, the source is modelled as a moving point source, and PWL is calculated from a single-vehicle passby.

7. Sound Power Level Data Source
   Man = Manufacturer's Data; EC = Engineering Calc based on specifications
   Mea = Measured Directly; Same ### = same type as source no. ###
   Pre = Pre-tender Package; Hist = Historical Measured Data
   Pub = Published Data

Source ID [1]	Source Description	Sound Power Level [2]	Source Location [3]	Sound Characteristics [4]	Noise Control Measures [5]	1/1 Octave Band Sound Power Level Data if available (dB)									Source Type [6]	PWL Data Source [7]	Height Above Grade	Source Co-ordinates for point sources (m)			Operating Scenarios		
		(dBA/dBAI)	(I or O)	(S,Q,I,B,T,C)	(S,A,B,L,E,O,U)	31.5	63	125	250	500	1000	2000	4000	8000			(m)	X	Y	Z	Day	Evening	Night
LANDFILL GAS FLARES																							
BLOWER_BLDG	Blower Bldg concentric opening	81	O	S	U	99.5	96.8	83.7	77.1	75.0	73.8	75.4	69.9	61.9	Point	Mea	0.6	18424556	5014968	129	✓	✓	✓
C_FLARE_motor	Candlestick flare motor 875 cfm	94	O	S	U		88.2	80.3	79.6	84.2	92.4	81.8	81.1	77.3	Point	Mea	1.0	18424525	5014981	129	✓	✓	✓
C_FLARE_stk	Candlestick flare exhaust 875 cfm	95	O	S	U	103.1	102.4	96.5	91.8	90.4	91.0	88.8	81.6	77.7	Point	Mea	10.4	18424532	5014988	139	✓	✓	✓
E_FLARE1_in	Smaller enclosed flare air intake at base	84	O	S	U		95.1	84.4	78.8	76.8	79.5	77.0	72.1	67.5	Point	Mea	1.0	18424549	5014975	129	✓	✓	✓
E_FLARE2_in	Larger enclosed flare air intake at base	84	O	S	U		95.1	84.4	78.8	76.8	79.5	77.0	72.1	67.5	Point	Same E_FLARE1_in	1.0	18424541	5014968	129	✓	✓	✓
LANDFILL GAS-TO-ENERGY PLANT																							
GEN_IN_left	Energy Bldg sweep of air intakes; left half	93	O	S	U	85.4	94.4	97.2	89.7	87.2	88.1	86.1	81.8	81.5	Point	Mea	4.6	18424771	5014690	130	✓	✓	✓
GEN_IN_right	Energy Bldg sweep of air intakes; right half	91	O	S	U	88.2	94.8	95.8	87.9	86.4	87.1	84.2	78.9	75.7	Point	Mea	4.7	18424762	5014700	130	✓	✓	✓
GEN_OH1	Energy Building overhead door 1	95	O	S	U	83.9	92.3	98.2	94.3	90.8	89.8	88.1	82.7	85.2	Point	Mea	1.7	18424774	5014686	127	✓	✓	✓
GEN_OH2	Energy Building overhead door 2	94	O	S	U	85.1	93.2	95.3	92.2	89.7	89.2	86.9	82.0	82.4	Point	Mea	1.7	18424766	5014695	127	✓	✓	✓
GEN_OH3	Energy Building overhead door 3	93	O	S	U	86.9	90.3	92.4	89.5	88.2	88.8	85.4	79.0	76.2	Point	Mea	1.7	18424758	5014704	127	✓	✓	✓
GEN_RAD1	Energy Building Smithco radiator fan 1	100	O	S	U	104.6	110.0	107.9	101.6	95.5	94.3	90.7	89.5	78.2	Point	Mea	3.2	18424744	5014687	128	✓	✓	✓
GEN_RAD2	Energy Building Smithco radiator fan 2	100	O	S	U	104.6	110.0	107.9	101.6	95.5	94.3	90.7	89.5	78.2	Point	Same GEN_RAD1	3.2	18424748	5014682	128	✓	✓	✓
GEN_RAD3	Energy Building Smithco radiator fan 3	100	O	S	U	104.6	110.0	107.9	101.6	95.5	94.3	90.7	89.5	78.2	Point	Same GEN_RAD1	3.2	18424752	5014678	128	✓	✓	✓
GEN_RAD4	Energy Building Smithco radiator fan 4	100	O	S	U	104.6	110.0	107.9	101.6	95.5	94.3	90.7	89.5	78.2	Point	Same GEN_RAD1	3.2	18424756	5014673	128	✓	✓	✓
GEN_RAD5	Energy Building Smithco radiator fan 5	100	O	S	U	104.6	110.0	107.9	101.6	95.5	94.3	90.7	89.5	78.2	Point	Same GEN_RAD1	3.2	18424760	5014669	128	✓	✓	✓
GEN_STK1	Energy Bldg generator combustion exhaust 1	91	O	S	S	100.0	101.1	97.4	90.7	86.9	85.5	80.4	76.2	77.3	Point	Mea	13.4	18424749	5014691	138	✓	✓	✓
GEN_STK2	Energy Bldg generator combustion exhaust 2	91	O	S	S	100.0	101.1	97.4	90.7	86.9	85.5	80.4	76.2	77.3	Point	Same GEN_STK1	13.4	18424753	5014686	138	✓	✓	✓
GEN_STK3	Energy Bldg generator combustion exhaust 3	91	O	S	S	100.0	101.1	97.4	90.7	86.9	85.5	80.4	76.2	77.3	Point	Same GEN_STK1	13.4	18424756	5014682	138	✓	✓	✓
GEN_STK4	Energy Bldg generator combustion exhaust 4	91	O	S	S	100.0	101.1	97.4	90.7	86.9	85.5	80.4	76.2	77.3	Point	Same GEN_STK1	13.4	18424761	5014677	138	✓	✓	✓
GEN_STK5	Energy Bldg generator combustion exhaust 5	91	O	S	S	100.0	101.1	97.4	90.7	86.9	85.5	80.4	76.2	77.3	Point	Same GEN_STK1	13.4	18424765	5014673	138	✓	✓	✓
GEN_WALL1	Energy Bldg wall 1	92	O	S	U	91.5	96.7	98.7	91.5	88.0	87.1	83.8	79.4	78.3	Point	Mea	2.4	18424768	5014691	127	✓	✓	✓
GEN_WALL2	Energy Bldg wall 2	91	O	S	U	97.2	97.4	97.4	90.2	87.2	87.3	82.6	77.4	73.3	Point	Mea	2.4	18424760	5014701	127	✓	✓	✓
GEN_WALL3	Energy Bldg wall 3	90	O	S	U	89.0	93.4	97.3	89.6	86.0	84.7	81.7	77.0	78.1	Point	Mea	2.4	18424775	5014684	127	✓	✓	✓
LEACHATE TREATMENT SYSTEM																							
SBR_BLR500	SBR Blower 500; 1295 cfm future	97	O	S	U		107.6	107.6	97.6	92.6	90.6	85.6	80.6	75.6	Point	Man, EC	1.0	18424324	5014713	125	✓	✓	✓
SBR_BLR510	SBR Blower 510; 1295 cfm future	97	O	S	U		107.6	107.6	97.6	92.6	90.6	85.6	80.6	75.6	Point	Same SBR_BLR500	1.0	18424329	5014717	125	✓	✓	✓
SBR_SBLR600	Sludge Blower 600; 1295 cfm	97	O	S	U		107.6	107.6	97.6	92.6	90.6	85.6	80.6	75.6	Point	Same SBR_BLR500	1.0	18424337	5014706	125	✓	✓	✓
SBR_BLR200	SBR Blower 200; 1295 cfm	97	O	S	U		107.6	107.6	97.6	92.6	90.6	85.6	80.6	75.6	Point	Same SBR_BLR500	1.0	18424308	5014735	126	✓	✓	✓
SBR_BLR210	SBR Blower 210; 1295 cfm	97	O	S	U		107.6	107.6	97.6	92.6	90.6	85.6	80.6	75.6	Point	Same SBR_BLR500	1.0	18424312	5014738	125	✓	✓	✓
SBR_BLR300	Sludge Blower 300; 1295 cfm	97	O	S	U		107.6	107.6	97.6	92.6	90.6	85.6	80.6	75.6	Point	Same SBR_BLR500	1.0	18424321	5014731	125	✓	✓	✓

Notes to Table:

1. Wherever possible, the Source ID matches the identifiers used in the ESDM report.

2. Sound Power Level of Source, in dBA or dBAI, not including sound characteristic adjustments per NPC-104

3. Source Location: O = Outside of building, including the roof, I = Inside of building

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   S = Steady; I = Impulsive; T = Tonal
   Q = Quasi-Steady Impulsive; B = Buzzing; C = Cyclic

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   S = Silencer; L = Lagging; O = Other
   A = Acoustic lining, plenum; E = Acoustic Enclosure; U = Uncontrolled
   B = Barrier
   Where noise control measures are specified in construction drawings or were found on existing equipment, octave band sound power levels include the effects of the noise control measures. Noise control measures recommended in the mitigation section of this report are not included in this table.

6. Source type indicates Cadna/A modelling methodology. For Point, Line, and Area sources, PWLs represent the overall level for the entire source. Where source type is Truck Route, the source is modelled as a moving point source, and PWL is calculated from a single-vehicle passby.

7. Sound Power Level Data Source
   Man = Manufacturer's Data; EC = Engineering Calc based on specifications
   Mea = Measured Directly; Same ### = same type as source no. ###
   Pre = Pre-tender Package; Hist = Historical Measured Data
   Pub = Published Data

Source ID [1]	Source Description	Sound Power Level [2]	Source Location [3]	Sound Characteristics [4]	Noise Control Measures [5]	1/1 Octave Band Sound Power Level Data if available (dB)									Source Type [6]	PWL Data Source [7]	Height Above Grade	Source Co-ordinates for point sources (m)			Operating Scenarios		
		(dBA/dBAI)	(I or O)	(S,Q,I,B,T,C)	(S,A,B,L,E,O,U)	31.5	63	125	250	500	1000	2000	4000	8000			(m)	X	Y	Z	Day	Evening	Night
HEAVY EQUIPMENT - COMMON																							
SS_TRK_IDLE	Idling Truck on Weigh Scale	100	O	S	U	99.1	99.1	94.7	90.6	91.9	96.6	95.2	88.3	78.9	Point	Hist	3.5	18423999	5015169	131	✓	✓	✓
WTPF_COMP	WTPF Waste compactor	95	O	S	U		83.0	84.3	83.3	90.6	93.3	84.6	80.9	79.9	Point	Hist	2.5	18423745	5014067	133	✓		
WTPF_DROP_ICI	WTPF Drop-off truck unloading at IC&I pad	115	O	S	U	113.6	108.1	110.5	112.2	111.2	109.8	108.5	106.1	102.9	Point	Hist	2.0	18423781	5014099	132	✓		
WTPF_DROP_CD	WTPF Drop-off truck unloading at C&D pad	115	O	S	U	113.6	108.1	110.5	112.2	111.2	109.8	108.5	106.1	102.9	Point	Same WTPF_DROP_ICI	2.0	18423802	5014093	132	✓		
WTPF_LOADER_CD	WTPF Loader C&D	115	O	S	U	111.6	119.3	121.5	113.5	113.1	110.3	104.5	93.9	83.6	Point	Man	3.0	18423798	5014085	133	✓		
WTPF_CRUSHER	WTPF Portable Concrete Crusher	113	O	S	U	113.5	122.4	116.0	108.4	109.2	107.4	105.3	103.0	99.3	Point	Hist	4.0	18423792	5014076	134	✓		
WTPF_HR1_inICI	WTPF Inbound IC&I Delivery Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U	102.5	109.6	107.2	110.7	106.9	103.7	102.6	100.5	97.6	Truck Route	Hist	3.0	Varies			✓		
WTPF_HR2_inCD	WTPF Inbound C&D Material Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U	102.5	109.6	107.2	110.7	106.9	103.7	102.6	100.5	97.6	Truck Route	Same WTPF_HR1_inICI	3.0	Varies			✓		
WTPF_HR3_outTT	WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)	110	O	S	U	102.5	109.6	107.2	110.7	106.9	103.7	102.6	100.5	97.6	Truck Route	Same WTPF_HR1_inICI	3.0	Varies			✓		
WTPF_HR4_outICI	WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U	102.5	109.6	107.2	110.7	106.9	103.7	102.6	100.5	97.6	Truck Route	Same WTPF_HR1_inICI	3.0	Varies			✓		
WTPF_HR5_outCD	WTPF Outbound C&D Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2.1 km long)	110	O	S	U	102.5	109.6	107.2	110.7	106.9	103.7	102.6	100.5	97.6	Truck Route	Same WTPF_HR1_inICI	3.0	Varies			✓		
HEAVY EQUIPMENT - SCENARIO 1																							
SS1_cs_ldr	Cover Soil - CAT Loader	115	O	S	U	111.6	119.3	121.5	113.5	113.1	110.3	104.5	93.9	83.6	Point	Same WTPF_LOADER_CD	3.0	18423947	5015052	130	✓		
SS1_lwf_cmpt1	Landfill Working Face - CAT 826G Compactor	109	O	S	U	109.0	111.1	108.7	102.9	106.3	104.7	99.8	96.2	94.3	Point	Hist	3.0	18423725	5015313	130	✓		
SS1_lwf_cmpt2	Landfill Working Face - CAT 826G Compactor	109	O	S	U	109.0	111.1	108.7	102.9	106.3	104.7	99.8	96.2	94.3	Point	Same SS1_lwf_cmpt1	3.0	18423737	5015322	130	✓		
SS1_lwf_dzr1	Landfill Working Face - CAT D6R Dozer	116	O	S	U	110.6	109.8	116.8	117.6	114.2	110.7	105.5	103.9	99.1	Point	Hist	3.0	18423719	5015300	130	✓	1900-2000h	0600-0700h
SS1_lwf_dzr2	Landfill Working Face - CAT D7 Dozer	115	O	S	U	115.7	115.6	110.1	115.5	114.5	108.7	102.3	99.1	89.8	Point	Hist	3.0	18423707	5015323	130	✓	1900-2000h	0600-0700h
SS1_lwf_dzr3	Landfill Working Face - CAT D7 Dozer	115	O	S	U	115.7	115.6	110.1	115.5	114.5	108.7	102.3	99.1	89.8	Point	Same SS1_lwf_dzr2	3.0	18423725	5015339	130	✓		
SS1_ob_stu	Overburden - CAT Soil Truck Unloading	117	O	S	U	121.8	116.5	115.6	109.1	115.8	110.7	109.4	108.6	106.3	Point	Hist	3.0	18423826	5014947	130	✓		
SS1_cwf_grdr	Construction Working Face - Grader	115	O	S	U	114.0	116.0	114.0	110.0	110.0	110.0	108.0	104.0	102.0	Point	Hist	3.0	18423618	5015199	130	✓		
SS1_cwf_exc1	Construction Working Face - CAT 330B Excavator	105	O	S	U	113.2	109.7	108.6	103.3	102.8	99.3	96.7	91.5	84.7	Point	Hist	3.0	18423577	5015217	130	✓		
SS1_cwf_exc2	Construction Working Face - CAT 330B Excavator	105	O	S	U	113.2	109.7	108.6	103.3	102.8	99.3	96.7	91.5	84.7	Point	Same SS1_cwf_exc1	3.0	18423589	5015227	130	✓		
SS1_cwf_ldr1	Construction Working Face - CAT 988H Loader 1	115	O	S	U	111.6	119.3	121.5	113.5	113.1	110.3	104.5	93.9	83.6	Point	Same WTPF_LOADER_CD	3.0	18423597	5015182	130	✓		
SS1_cwf_ldr2	Construction Working Face - CAT 988H Loader 2	115	O	S	U	111.6	119.3	121.5	113.5	113.1	110.3	104.5	93.9	83.6	Point	Same WTPF_LOADER_CD	3.0	18423598	5015221	130	✓		
SS1_cwf_scrpr1	Construction Working Face - CAT Scraper 1	114	O	S	U	101.7	110.2	115.5	109.0	109.4	108.9	107.7	106.3	100.7	Point	Hist	3.0	18423582	5015192	130	✓		
SS1_cwf_scrpr2	Construction Working Face - CAT Scraper 2	114	O	S	U	101.7	110.2	115.5	109.0	109.4	108.9	107.7	106.3	100.7	Point	Same SS1_cwf_scrpr1	3.0	18423597	5015204	130	✓		
SS1_cwf_scrpr3	Construction Working Face - CAT Scraper 3	114	O	S	U	101.7	110.2	115.5	109.0	109.4	108.9	107.7	106.3	100.7	Point	Same SS1_cwf_scrpr1	3.0	18423611	5015215	130	✓		
SS1_HR1_rfpv	Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.7 km long)	117	O	S	U	110.8	113.4	117.9	109.8	111.7	113.3	109.1	104.5	96.2	Truck Route	Hist	3.0	Varies			✓		
SS1_HR2_cspv	Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 950 m long)	114	O	S	U	120.2	121.6	119.0	109.2	108.6	109.7	104.8	101.2	99.5	Truck Route	Hist	3.0	Varies			✓		
SS1_HR3_lst	Daily Cover Soil Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 320 m long)	111	O	S	U	112.7	114.0	111.8	108.0	110.5	104.1	103.0	100.4	92.7	Truck Route	Hist	3.0	Varies			✓		
SS1_HR3_cst	Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 320 m long)	111	O	S	U	112.7	114.0	111.8	108.0	110.5	104.1	103.0	100.4	92.7	Truck Route	Same SS1_HR3_lst	3.0	Varies			✓		
SS1_HR4_cht	Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2.5 km long)	110	O	S	U	102.5	109.6	107.2	110.7	106.9	103.7	102.6	100.5	97.6	Truck Route	Same WTPF_HR1_inICI	3.0	Varies			✓		

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   Pre = Pre-tender Package; Hist = Historical Measured Data
   Pub = Published Data

Source ID [1]	Source Description	Sound Power Level [2] (dBA/dBAI)	Source Location [3] (I or O)	Sound Characteristics [4] (S,Q,I,B,T,C)	Noise Control Measures [5] (S,A,B,L,E,O,U)	1/1 Octave Band Sound Power Level Data if available (dB) 31.5	63	125	250	500	1000	2000	4000	8000	Source Type [6]	PWL Data Source [7]	Height Above Grade (m)	Source Co-ordinates for point sources (m) X	Y	Z	Operating Scenarios Day	Evening	Night
HEAVY EQUIPMENT - SCENARIO 2																							
SS2_cs_ldr	Cover Soil - CAT Loader	115	O	S	U	111.6	119.3	121.5	113.5	113.1	110.3	104.5	93.9	83.6	Point	Same WTPF_LOADER_CD	3.0	18423510	5014669	143	✓		
SS2_lwf_cmpt1	Landfill Working Face - CAT 826G Compactor	109	O	S	U	109.0	111.1	108.7	102.9	106.3	104.7	99.8	96.2	94.3	Point	Same SS1_lwf_cmpt1	3.0	18423349	5014941	143	✓		
SS2_lwf_cmpt2	Landfill Working Face - CAT 826G Compactor	109	O	S	U	109.0	111.1	108.7	102.9	106.3	104.7	99.8	96.2	94.3	Point	Same SS1_lwf_cmpt1	3.0	18423362	5014950	143	✓		
SS2_lwf_dzr1	Landfill Working Face - CAT D6R Dozer	116	O	S	U	110.6	109.8	116.8	117.6	114.2	110.7	105.5	103.9	99.1	Point	Same SS1_lwf_dzr1	3.0	18423344	5014928	143	✓	1900-2000h	0600-0700h
SS2_lwf_dzr2	Landfill Working Face - CAT D7 Dozer	115	O	S	U	115.7	115.6	110.1	115.5	114.5	108.7	102.3	99.1	89.8	Point	Same SS1_lwf_dzr2	3.0	18423332	5014951	143	✓	1900-2000h	0600-0700h
SS2_lwf_dzr3	Landfill Working Face - CAT D7 Dozer	115	O	S	U	115.7	115.6	110.1	115.5	114.5	108.7	102.3	99.1	89.8	Point	Same SS1_lwf_dzr2	3.0	18423349	5014967	143	✓		
SS2_ob_stu	Overburden - CAT Soil Truck Unloading	117	O	S	U	121.8	116.5	115.6	109.1	115.8	110.7	109.4	108.6	106.3	Point	Same SS1_ob_stu	3.0	18423411	5014588	130	✓		
SS2_cwf_grdr	Construction Working Face - Grader	115	O	S	U	114.0	116.0	114.0	110.0	110.0	110.0	108.0	104.0	102.0	Point	Same SS1_cwf_grdr	3.0	18423205	5014847	130	✓		
SS2_cwf_exc1	Construction Working Face - CAT 330B Excavator	105	O	S	U	113.2	109.7	108.6	103.3	102.8	99.3	96.7	91.5	84.7	Point	Same SS1_cwf_exc1	3.0	18423162	5014864	130	✓		
SS2_cwf_exc2	Construction Working Face - CAT 330B Excavator	105	O	S	U	113.2	109.7	108.6	103.3	102.8	99.3	96.7	91.5	84.7	Point	Same SS1_cwf_exc1	3.0	18423175	5014875	130	✓		
SS2_cwf_dzr1	Construction Working Face - CAT D7 Dozer 1	115	O	S	U	115.7	115.6	110.1	115.5	114.5	108.7	102.3	99.1	89.8	Point	Same SS1_lwf_dzr2	3.0	18423176	5014836	130	✓		
SS2_cwf_dzr2	Construction Working Face - CAT D7 Dozer 2	115	O	S	U	115.7	115.6	110.1	115.5	114.5	108.7	102.3	99.1	89.8	Point	Same SS1_lwf_dzr2	3.0	18423189	5014860	130	✓		
SS2_HR1_rfpv	Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)	117	O	S	U	110.8	113.4	117.9	109.8	111.7	113.3	109.1	104.5	96.2	Truck Route	Same SS1_HR1_rfpv	3.0	Varies			✓		
SS2_HR2_cspv	Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 1.4 km long)	114	O	S	U	120.2	121.6	119.0	109.2	108.6	109.7	104.8	101.2	99.5	Truck Route	Same SS1_HR2_cspv	3.0	Varies			✓		
SS2_HR3_lst	Daily Cover Soil Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 300 m long)	111	O	S	U	112.7	114.0	111.8	108.0	110.5	104.1	103.0	100.4	92.7	Truck Route	Same SS1_HR3_lst	3.0	Varies			✓		
SS2_HR3_cst	Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 330 m long)	111	O	S	U	112.7	114.0	111.8	108.0	110.5	104.1	103.0	100.4	92.7	Truck Route	Same SS1_HR3_lst	3.0	Varies			✓		
SS2_HR4_cht	Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)	110	O	S	U	102.5	109.6	107.2	110.7	106.9	103.7	102.6	100.5	97.6	Truck Route	Same WTPF_HR1_inICI	3.0	Varies			✓		
PEST CONTROL DEVICES - SCENARIO 1																							
Imp1_pc_wh	Pest Control - Whistle	103	O	S, T	U	127.4	105.9	94.0	85.2	87.6	90.3	98.8	97.1	89.1	Point	Mea	20.0	18423712	5015344	147	✓		
Imp1_pc_pc1	Pest Control - Propane Cannon 1	141	O	I	U					140.6					Point	Mea	1.5	18423843	5014899	129	✓		
Imp1_pc_pc2	Pest Control - Propane Cannon 2	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423786	5015349	129	✓		
Imp1_pc_pc3	Pest Control - Propane Cannon 3	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423733	5015204	129	✓		
Imp1_pc_pc4	Pest Control - Propane Cannon 4	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423877	5015240	129	✓		
Imp1_pc_pc5	Pest Control - Propane Cannon 5	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423697	5015333	129	✓		
Imp1_pc_shtg	Pest Control - Shotgun	158	O	I	U					158.0					Point	Pub	1.5	18423696	5015286	129	✓		
PEST CONTROL DEVICES - SCENARIO 2																							
Imp2_pc_wh	Pest Control - Whistle	103	O	S, T	U	127.4	105.9	94.0	85.2	87.6	90.3	98.8	97.1	89.1	Point	Same Imp1_pc_wh	20.0	18423321	5014968	160	✓		
Imp2_pc_pc1	Pest Control - Propane Cannon 1	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423457	5014560	129	✓		
Imp2_pc_pc2	Pest Control - Propane Cannon 2	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423464	5014924	154	✓		
Imp2_pc_pc3	Pest Control - Propane Cannon 3	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423400	5015052	139	✓		
Imp2_pc_pc4	Pest Control - Propane Cannon 4	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423303	5014837	133	✓		
Imp2_pc_pc5	Pest Control - Propane Cannon 5	141	O	I	U					140.6					Point	Same Imp1_pc_pc1	1.5	18423337	5014977	142	✓		
Imp2_pc_shtg	Pest Control - Shotgun	158	O	I	U					158.0					Point	Same Imp1_pc_shtg	1.5	18423314	5014920	142	✓		

Table D.2: Summary of Insignificant Noise Sources

WCEC Landfill - Ottawa, Ontario, 1302177

Source ID	Source Description
LEACHGEN	320 kW emergency diesel generator for the SBR leachate system; registered under EASR
BOILER	Leachate Boiler; low sound level
B3	GS Blower; low sound level

Table D.3: SPL to PWL Conversions of Measurment Data for Point Sources

Ottawa Landfill Environmental Assessment - Ottawa Ontario

Notes to Table:

1. Measurements were conducted on April 11-12, 2006, using a Larson Davis LD-824 SLM / RTA.
2. All measurements taken consistent with ISO 3744:1994(E) and ISO 3746:1995(E) measurement standards, and the applicable portions of the MOE Publication NPC-103.
3. Sound Data Type "SPL[Q]", "Q" refers to the directivity of the source. For example, "SPL2" implies a directivity of 2 inherent in the measurement. This directivty is accounted for in estrimating the sound power level of the source.
4. Where an area is entered, the sound power level is estimated using an area correction 10 log A, rather than a distance correction.
5. Where the SPL reference distance is less than 1/4 wavelength of the octave band being measured, the estimated PWL is set to "-"
6. Sound Power Level Data Source
   Man = Manufacturer's Data EC = Engineering Calc based on specifications
   Mea = Measured Directly

1/4 WAVELENGTH CRITERION								
2.72222	1.36111	0.686	0.343	0.1715	0.08575	0.04288	0.02144	0.01072

Source Level No.	Measurement File Name	Source ID	Source Description	Sound Data Type [3] (SPL[Q])	SPL Ref Dis. (m)	No. of Events (#/hr)	Event Duration (min/hr)	Octave Band Sound Pressure Levels (Hz) 31.5 (dB)	63 (dB)	125 (dB)	250 (dB)	500 (dB)	1000 (dB)	2000 (dB)	4000 (dB)	8000 (dB)	Total (dBA)	Octave Band Sound Pressure Levels (Hz) [5] 31.5 (dB)	63 (dB)	125 (dB)	250 (dB)	500 (dB)	1000 (dB)	2000 (dB)	4000 (dB)	8000 (dB)	Total (dBA)
April 11, 2006																											
4	060411 824A0450 file_004.slmdl	dzr2	CAT D7 Dozer - uphill forwards	SPL2	29	1	60	78.5	78.4	72.9	78.3	77.3	71.5	65.1	61.9	52.6	77.5	115.7	115.6	110.1	115.5	114.5	108.7	102.3	99.1	89.8	114.7
6	060411 824A0450 file_006.slmdl	dzr1	CAT D6R Dozer- forwards, spreading soil	SPL2	8	1	60	81.7	81.9	87.6	81.8	83.9	80.5	77.4	72.1	67.2	85.6	107.7	107.9	113.6	107.8	109.9	106.5	103.4	98.1	93.2	111.6
9	060411 824A0450 file_009.slmdl	exc	CAT 330B Excavator - loading cover soil	SPL2	10.2	1	60	85.0	81.5	80.4	75.2	74.6	71.2	68.5	63.3	56.5	76.7	113.2	109.7	108.6	103.4	102.8	99.4	96.7	91.5	84.7	104.9
14	060411 824A0450 file_014.slmdl	pc_wh	Pest Control - Whistle	SPL2	26.2	40	0.00138	82.0	73.7	71.9	70.6	78.4	84.3	94.0	92.1	82.0	97.6	88.0	79.7	77.9	76.6	84.4	90.3	100.0	98.1	88.0	103.6
22	060411 824A0450 file_022.slmdl	pc_pc	Pest Control - Propane Cannon	SPL2	12	1	60					111.0					111.0					140.6					140.6
April 12, 2006																											
38	060412 824A0450 file_038.slmdl	st	CAT D300 Rock Truck	SPL2	15	1	60	81.2	82.5	80.3	76.5	79	72.6	71.5	68.9	61.2	79.8	112.7	114.0	111.8	108.0	110.5	104.1	103.0	100.4	92.7	111.3
62	060412 824A0450 file_062.slmdl	rdpv	WM Refuse Truck - to WF	SPL2	24	1	60	75.2	77.8	82.3	74.2	76.1	77.7	73.5	68.9	60.6	81.0	110.8	113.4	117.9	109.8	111.7	113.3	109.1	104.5	96.2	116.6
72	060412 824A0450 file_072.slmdl	cspv	Mulrooney Trailer - to scalehouse	SPL2	24	1	60	84.6	86	83.4	73.6	73	74.1	69.2	65.6	63.9	77.9	120.2	121.6	119.0	109.2	108.6	109.7	104.8	101.2	99.5	113.5

Table D.3: SOURCE LEVEL DATA AND SPL TO PWL CONVERSIONS - Version 3.22

WCEC Ottawa Landfill - Ottawa, Ontario

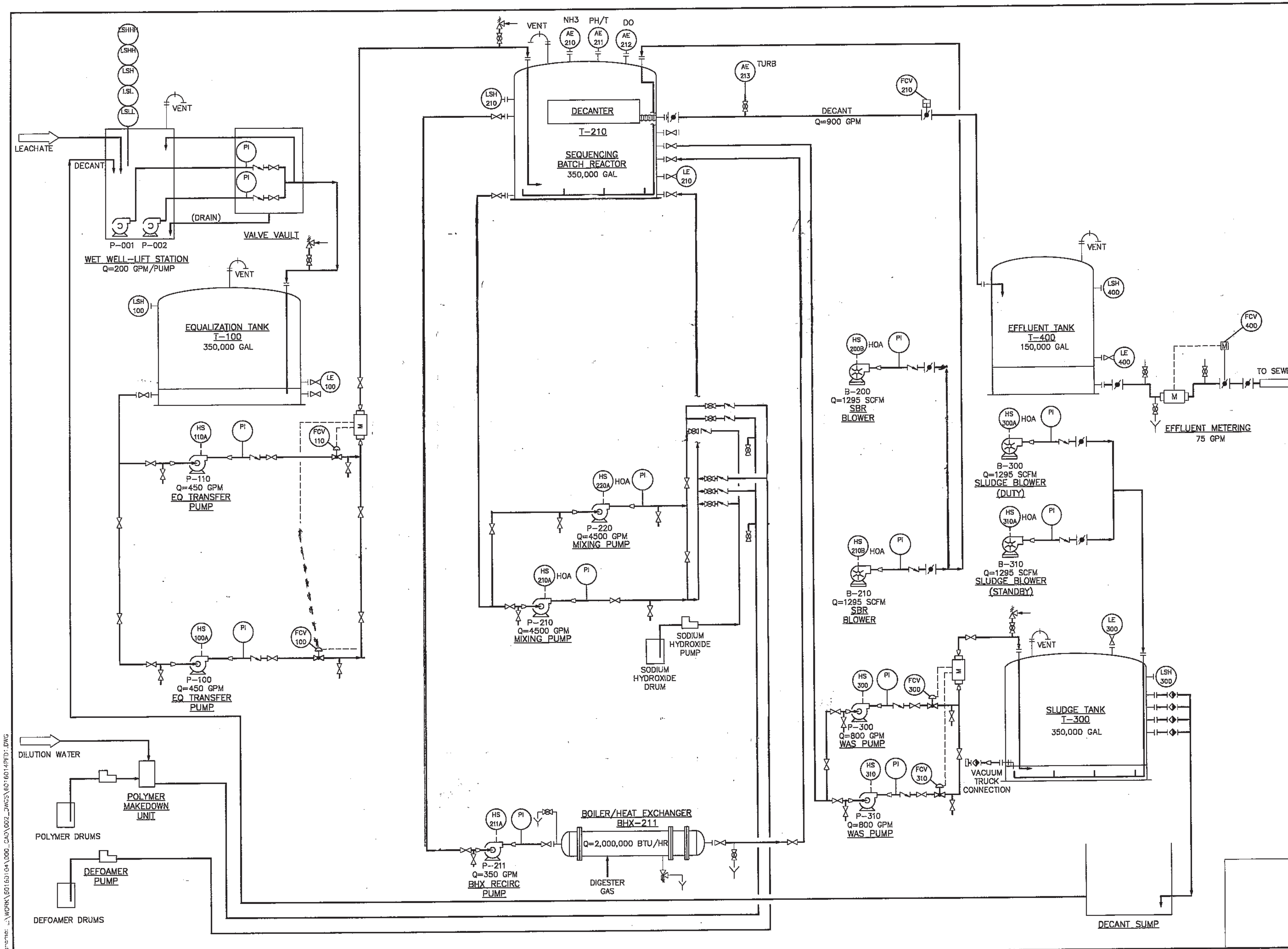
Notes to Table:

1. All measurements conducted on **April 19, 2011,** using Larson Davis LD-824 SLM's / RTA's.
2. All measurements were consistent with ISO 3744:1994(E) and ISO 3746:1995 measurement standards, and the applicable portions of the MOE Publication NPC-103.
3. Calc Type of C, A, or S refer to the source geometry, and represent Cylindrical, Area, or Spherical sources, respectively.
4. SPL Ref Distance refers to the radial distance from the microphone to the acoustic centre of a spherical source or the symmetrical axis of a cylindrical source.
5. Length refers to the length of a cylindrical source or line source. A length of 1.0 m may be used to define a PWL per metre.
6. Net surface area refers to surface area corrected for partition coefficient. Partition coefficient applies only to spherical and cylindrical geometries. Sound power level is estimated using an area correction 10 log A.
7. Refer to "Spectral Weighting" column for dB or dBA application information.
8. Where the radius of a spherical or cylindrical radiator is less than 1/4 wavelength of the octave band being measured, the estimated PWL will be left blank.

A-WEIGHTING (dB) - Applied to total PWL								
-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1

1/4 WAVELENGTH CRITERION (m)								
2.722	1.361	0.686	0.343	0.172	0.086	0.043	0.021	0.011

Measurement Reference	Source ID	Source Description	Calc Type [3] (A, C, or S)	SPL Ref Distance [4] (S or C) (m)	Area (A only) (m^2)	Partition Coefficient (S or C) (%)	Net Surface Area [6] (m^2)	Spectral Weighting (A or Flat)	Octave Band Sound Pressure Level Data (dB or dBA) [7] 31.5	63	125	250	500	1000	2000	4000	8000	Total (dBA)	Octave Band Sound Power Level Data [8] (dB or dBA) [7] 31.5	63	125	250	500	1000	2000	4000	8000	Total (dBA)
110419 824 kit1 NTN PV 1100798 File_002	C_FLARE_stk	Candlestick flare exhaust 875 cfm	S	21.0		50%	2769.5	Flat	68.7	68.0	62.1	57.4	56.0	56.6	54.4	47.2	43.3	60.9	103.1	102.4	96.5	91.8	90.4	91.0	88.8	81.6	77.7	95.3
110419 824 kit1 NTN PV 1100798 File_003	C_FLARE_motor	Candlestick flare motor 875 cfm	S	2.0		50%	25.1	Flat	71.7	74.2	66.3	65.6	70.2	78.4	67.8	67.1	63.3	79.6		88.2	80.3	79.6	84.2	92.4	81.8	81.1	77.3	93.6
110419 824 kit1 NTN PV 1100798 File_004	GEN_IN_left	Energy Bldg sweep of air intakes; left half	A		24.0		24.0	Flat	71.6	80.6	83.4	75.9	73.4	74.3	72.3	68.0	67.7	79.2	85.4	94.4	97.2	89.7	87.2	88.1	86.1	81.8	81.5	93.0
110419 824 kit1 NTN PV 1100798 File_005	GEN_IN_right	Energy Bldg sweep of air intakes; right half	A		24.0		24.0	Flat	74.4	81.0	82.0	74.1	72.6	73.3	70.4	65.1	61.9	77.6	88.2	94.8	95.8	87.9	86.4	87.1	84.2	78.9	75.7	91.4
110419 824 kit1 NTN PV 1100798 File_006	BLOWER_BLDG	Blower Bldg concentric opening	S	5.6		25%	98.5	Flat	79.6	76.9	63.8	57.2	55.1	53.9	55.5	50.0	42.0	61.0	99.5	96.8	83.7	77.1	75.0	73.8	75.4	69.9	61.9	81.0
110419 824 kit1 NTN PV 1100798 File_009	E_FLARE_in	Enclosed flare air intake at base	S	2.3		100%	66.4	Flat	84.4	76.9	66.2	60.6	58.6	61.3	58.8	53.9	49.3	65.4		95.1	84.4	78.8	76.8	79.5	77.0	72.1	67.5	83.6
110419 824 kit1 NTN PV 1100798 File_016	GEN_STK1to5	Energy Bldg generator combustion exhausts 5 of 5	S	94.6		50%	56162.1	Flat	59.5	60.6	56.9	50.2	46.4	45.0	39.9	35.7	36.8	50.1	107.0	108.1	104.4	97.7	93.9	92.5	87.4	83.2	84.3	97.6
110419 824 kit2 PV 1100798 File_001	GEN_OH1	Energy Bldg sweep of overhead door 1	A		13.0		13.0	Flat	72.8	81.2	87.1	83.2	79.7	78.7	77.0	71.6	74.1	84.2	83.9	92.3	98.2	94.3	90.8	89.8	88.1	82.7	85.2	95.4
110419 824 kit2 PV 1100798 File_002	GEN_WALL1	Energy Bldg sweep of wall 1	A		43.9		43.9	Flat	75.1	80.3	82.3	75.1	71.6	70.7	67.4	63.0	61.9	75.9	91.5	96.7	98.7	91.5	88.0	87.1	83.8	79.4	78.3	92.3
110419 824 kit2 PV 1100798 File_003	GEN_OH2	Energy Bldg sweep of overhead door 2	A		13.0		13.0	Flat	74.0	82.1	84.2	81.1	78.6	78.1	75.8	70.9	71.3	83.0	85.1	93.2	95.3	92.2	89.7	89.2	86.9	82.0	82.4	94.1
110419 824 kit2 PV 1100798 File_004	GEN_WALL2	Energy Bldg sweep of wall 2	A		49.6		49.6	Flat	80.2	80.4	80.4	73.2	70.2	70.3	65.6	60.4	56.3	74.5	97.2	97.4	97.4	90.2	87.2	87.3	82.6	77.4	73.3	91.4
110419 824 kit2 PV 1100798 File_005	GEN_OH3	Energy Bldg sweep of overhead door 3	A		13.0		13.0	Flat	75.8	79.2	81.3	78.4	77.1	77.7	74.3	67.9	65.1	81.5	86.9	90.3	92.4	89.5	88.2	88.8	85.4	79.0	76.2	92.7
110419 824 kit2 PV 1100798 File_006	GEN_WALL3	Energy Bldg sweep of wall 3	A		22.8		22.8	Flat	75.4	79.8	83.7	76.0	72.4	71.1	68.1	63.4	64.5	76.6	89.0	93.4	97.3	89.6	86.0	84.7	81.7	77.0	78.1	90.2
110419 824 kit1 NTN PV 1100798 File_017 - 110419 824 kit1 NTN PV 1100798 File_016	GEN_RAD1to5	Energy Bldg Smithco radiator fans 5 of 5	S	25.0		50%	3925.0	Flat	75.7	81.1	79.0	72.7	66.6	65.4	61.8	60.6	49.3	71.4	111.6	117.0	114.9	108.6	102.5	101.3	97.7	96.5	85.2	107.4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VENT
LSHHH
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LSL
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PI
(DRAIN)
P-001 P-002
VALVE VAULT
WET WELL-LIFT STATION
Q=200 GPM/PUMP
LSH 100
EQUALIZATION TANK
T-100
350,000 GAL
LE 100
HS 110A
P-100
Q=450 GPM
EQ TRANSFER PUMP
FCV 110
HS 100A
P-100
Q=450 GPM
EQ TRANSFER PUMP
FCV 100
DILUTION WATER
POLYMER MAKEDOWN UNIT
POLYMER DRUMS
DEFOAMER PUMP
DEFOAMER DRUMS
NH3
PH/T
DO
AE 210
AE 211
AE 212
LSH 210
DECANTER
T-210
SEQUENCING BATCH REACTOR
350,000 GAL
LE 210
AE 213
TURB
DECANT
Q=900 GPM
FCV 210
HS 220A
HOA
P-220
Q=4500 GPM
MIXING PUMP
HS 210A
P-210
Q=4500 GPM
MIXING PUMP
SODIUM HYDROXIDE PUMP
SODIUM HYDROXIDE DRUM
HS 211A
P-211
Q=350 GPM
BHX RECIRC PUMP
BOILER/HEAT EXCHANGER
BHX-211
Q=2,000,000 BTU/HR
DIGESTER GAS
HS 200B
B-200
Q=1295 SCFM
SBR BLOWER
HS 210B
B-210
Q=1295 SCFM
SBR BLOWER
LSH 400
EFFLUENT TANK
T-400
150,000 GAL
LE 400
FCV 400
TO SEWER
EFFLUENT METERING
75 GPM
HS 300A
B-300
Q=1295 SCFM
SLUDGE BLOWER
(DUTY)
HS 310A
B-310
Q=1295 SCFM
SLUDGE BLOWER
(STANDBY)
LE 300
LSH 300
SLUDGE TANK
T-300
350,000 GAL
HS 300
FCV 300
P-300
Q=800 GPM
WAS PUMP
HS 310
FCV 310
P-310
Q=800 GPM
WAS PUMP
VACUUM TRUCK CONNECTION
DECANT SUMP

Plotted By: eggerange
Plot Date Created: Aug/02/2010 4:24 PM
Layout-Sheet Name: PFD-1
Filename: ..\WORK\60160104\000_CAD\002_DWGS\60160104PFD1.DWG

VERIFY SCALE IF PLAN SHEET IS REDUCED

REV	DESCRIPTION	DRN	CHK	DATE (M/D/Y)

DRN BY: - DES BY: - CHK BY: - APP BY: -

PREPARED BY:

AECOM

5555 GLENWOOD HILLS PKWY. SUITE 300 GRAND RAPIDS, MI. 49512 1-616-942-9600

OTTAWA LANDFILL
LEACHATE TREATMENT SYSTEM
WASTE MANAGEMENT, INC.

PROCESS FLOW DIAGRAM

PROJECT START DATE (M/Y): AUGUST/2010
PROJECT NO.: 60160104
FILENAME: 60160104PFD1.dwg
SHEET NO.: -
DRAWING NO.: PFD

Table C1.3: Fan Sound Power Levels

PWL generation and/or PWL/SPL shaping

Source Information

From 1991 ASHRAE Handbook of Fundamentals Chapter 42

Type	Fan Type	Description
1	Centrifugal	Airfoil (AF), Backward Curved (BC), Backward Inclined (BI) > 36" dia. (900 mm)
2		AF, BC, BI fans < 36" (900mm)
3		Forward Curved (FC) (All fan sizes) USE FOR CENTRIFUGAL IF EXACT TYPE IS UNKNOWN
4		Radial Bladed Low Pressure, 4 to 10" H2O (1 to 2.5 kPa)
5		Radial Bladed Medium Pressure, 6 to 15" H2O (1.5 to 3.7 kPa)
6		Radial Bladed High Pressure, 15 to 60" H2O (3.7 to 15 kPa)
7	Vaneaxial	Hub Ratio 0.3 to 0.4
8		Hub Ratio 0.4 to 0.6
9		Hub Ratio 0.6 to 0.8 USE FOR VANEAXIAL IF EXACT TYPE IS UNKNOWN
10	Tubeaxial	Wheel dia. > 40" (1000 mm)
11		Wheel dia. < 40" (1000 mm)
12	Propeller	General Ventilation / Cooling Tower

Notes:

Unit Conversions

Calculation

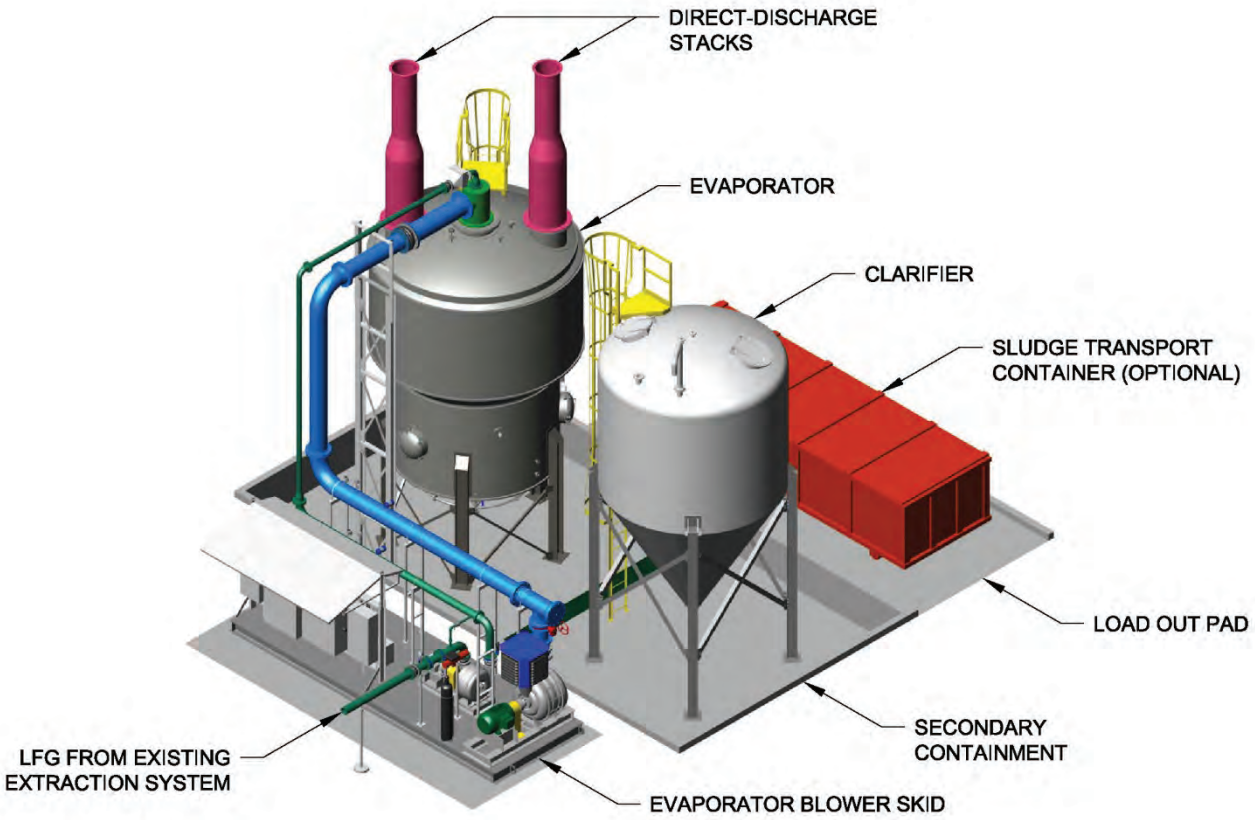
	Tag number / Description	Type	Flowrate (cfm)	Static Pressure (in. w.c.)	Fan Power (HP)	Motor Power (HP)	Number of Blades	rpm	Peak Efficiency (%)	Output Type	Inlet or Outlet Level Octave Band Frequencies 63	125	250	500	1000	2000	4000	8000
1	SBR blowers	3	1295	15	3.06					PWL	107.6	107.6	97.6	92.6	90.6	85.6	80.6	75.6
2																		
3																		

Evaporator Casing

LFG Specialties, L.L.C.
16406 U.S. Route 224 East
Findlay, OH 45840-9761
Direct (419) 425-6284
Main (419) 424-4999
Fax (419) 424-4991
russell.keckler@shawgrp.com

E-Vap® Direct Discharge Leachate Evaporator System

The E-Vap® brand Leachate Evaporator System utilizes a patented submerged combustion technology to reduce leachate water volume by as much as 97%. The process uses landfill gas as the primary fuel for the combustion system. Hot combustion gasses are injected into the leachate reservoir generating water vapor. The water vapor is then directly discharged into the atmosphere, leaving behind a concentrated effluent (residual). Fresh leachate is continuously fed into the evaporator while the residual is drawn off and sent to a Clarifier Tank for further concentration. From here the residual is sent to a roll-off container on an automated schedule, where it can either be reintroduced to the open face of the landfill, or hauled off for disposal. The system is designed for continuous 24-7 operation, while being un-manned during 2nd and 3rd shifts. Additionally, the system is automated with a touch-screen graphical user interface.



Process & Operational Data

E-Vap® System Capacity	20,000 gpd	30,000 gpd
Landfill Gas (50% CH_4)	333 scfm (Approx. 9.1 MM Btu/hr)	500 scfm (Approx. 14 MM Btu/hr)
Leachate Feed, Nominal	14 gpm @ 35 psig	21 gpm @ 35 psig
Estimated Residual Generated	600-1,000 gpd	900-1,500 gpd
Power	250A/480V/3φ/60hz	300A/480V/3φ/60hz
Man Power	1 Part-time Site Operator	1 Part-time Site Operator
Modular Footprint	Overall Footprint – 45’ x 50’	Overall Footprint – 45’ x 50’

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CHAPTER 82

SOUND POWER LEVEL PREDICTIONS FOR INDUSTRIAL MACHINERY

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1 INTRODUCTION*

The sound power level is the measure of the sound power radiated by a sound source expressed in a logarithmic scale relative to 10^{-12} W with a unit of decibels. Procedures for calculating the sound power level of industrial machinery are presented in this chapter. The calculated sound power levels can be used in modeling the sound pressure levels in a space or developing purchase specifications for new equipment.

With any project, acoustical data measured and calculated in accordance with recognized standards should be obtained. Many manufacturers provide sound power levels or measured sound pressure levels at 1 m from their equipment, and some offer special low-n[illegible] available. [illegible] unit in operation. If this is not practical, then the material in this chapter can be used.

Most of the equations presented in this chapter are based on measured data and tend to be conservative, usually predicting somewhat higher sound pressure levels than are measured in the field. Due to recent efforts in reducing equipment noise, sound pressure levels for some equipment may be significantly (10 dB) quieter than the levels calculated in this chapter.

Some equipment consists of several different sound-producing components such as motors, pumps, blowers, and the like. The sound power levels for each component should be determined and then combined (using correct decibel addition) to get the total sound power levels.

*Much of this material was published earlier as Chapter 86 of Volume 2 of *Encyclopedia of Acoustics*, John Wiley & Sons, Inc., 1997, which utilized formulas from several references, especially Ref. 1. In this chapter, some formulas have been modified to use metric units and to give the A-weighted sound power level directly from the equipment parameters.

2 POWER SOURCES

2.1 Boilers[1]

Main Steam Boilers Main steam boilers of a power plant radiate igniter, flow, and combustion noise from their surfaces. The A-weighted sound power level for main steam boilers (between 125 and 800 MWe) can be calculated using Eq. (1) where MWe is the electrical generating rating of the unit. The unweighted octave band sound power levels can be obtained by subtracting the values shown in Table 1.

$$L_W = 72 + 15 \log \text{MWe} \quad \text{dB} \tag{1}$$

Auxiliary Boilers The noise produced by auxiliary boilers is often due primarily to the blower and the burner, not the walls of the boiler. An estimate of the A-weighted sound power level for auxiliary boilers between 0.5 and 20 MW can be calculated using Eq. (2). The unweighted octave band sound power levels can be obtained by subtracting the values shown in Table 1. For boilers rated in other units, 1 MW = 102 bhp = 1600 kg steam/h.

$$L_W = 94 + 4 \log \text{MW} \quad \text{dB} \tag{2}$$

2.2 Electric Motors

Motors under 750 kW[2] Totally enclosed fan-cooled (TEFC) motors are the most common type of electric motors. They are generally cylindrical in shape with a fan at one end, the output shaft at the other end, and fins along the body. The A-weighted sound power level for TEFC motors can be calculated using the following equations:

$$< 40 \text{ kW}: L_W = 16 + 17 \log \text{kW} + 15 \log \text{rpm} + 10 \log S \quad \text{dB} \tag{3}$$

$$\geq 40 \text{ kW}: L_W = 27 + 10 \log \text{kW} + 15 \log \text{rpm} + 10 \log S \quad \text{dB} \tag{4}$$

Table 1 Octave Band Sound Power Level Adjustments

Source	31.5	63	125	250	500	1000	2000	4000	8000
Main steam boiler	−8	−7	−2	4	5	7	9	9	7
Auxiliary boiler	−3	−3	−2	0	3	6	9	12	15
TEFC motors under 750 kW	13	13	10	8	5	5	6	11	19
Drip-proof motors under 750 kW	5	5	3	3	2	5	8	14	24
Gas turbine casing	8	5	3	2	2	2	2	2	2
Gas turbine exhaust	8	4	2	2	3	5	7	11	17
Gas turbine intake	19	18	17	17	14	8	3	3	3
Reciprocating engines (<600 rpm)	8	8	2	1	3	5	8	14	24
Reciprocating engines (600–1500 rpm)	11	6	4	5	4	4	6	10	16
Reciprocating engines w/blower (600–1500 rpm)	21	15	17	13	2	3	9	14	25
Reciprocating engines (>1500 rpm)	20	12	5	5	6	4	5	11	18
Reciprocating engine turbocharged air inlet	1	8	10	10	9	6	5	6	14
Reciprocating engine exhaust	−7	−3	−9	−5	3	7	13	23	31
Steam turbines	6	2	1	4	5	5	7	8	12
Steam turbine generator units	−3	−9	−7	−2	2	6	9	17	23
Transformers	3	−3	−5	0	0	6	11	16	23
Centrifugal air compressor casing	8	8	9	11	11	9	5	6	10
Centrifugal air compressor air inlet	18	16	14	10	8	6	5	10	18
Rotary and reciprocating air compressors	9	13	8	9	11	8	3	6	13
Feed pumps (1–9 MW)	7	1	3	4	5	6	7	8	12
Feed pumps (9.5–18 MW)	18	12	14	10	4	4	6	18	22
Centrifugal fan[a]	11	9	7	8	9	9	13	17	24
Centrifugal fan casing[a]	3	6	7	11	16	18	22	26	33
Axial-flow fans[a]	8	7	6	5	5	5	7	11	12
Propeller fans[a]	12	12	9	2	4	5	8	14	16
Gas recirculation fan casing	−2	−5	−8	−5	6	8	13	15	19
Generators	7	4	3	3	3	5	7	10	15
Gears	13	10	7	7	7	7	7	7	7
Motor-driven pumps	11	10	9	7	7	4	7	11	17
Cooling towers (full speed)	−1	−4	−4	−1	2	6	9	12	20
Cooling towers (half speed)	4	1	1	5	5	6	6	9	15
Chillers with reciprocating compressor	—	19	11	7	1	4	9	14	—
Centrifugal chillers, internal geared	—	8	5	6	7	8	5	8	—
Centrifugal chillers, direct drive	—	8	6	7	3	4	7	12	—
Centrifugal chillers, > 1000 tons	—	11	11	8	8	4	6	13	—
Chillers with rotary-screw compressor	20	14	10	−2	1	5	10	15	17
Diesel-powered, mobile equipment	—	6	1	−2	3	5	8	14	20

[a] Equations (29)–(32) are for the unweighted sound power levels. Subtracting the values in this table will yield the unweighted octave band sound power levels. After making the adjustments described in the text for the blade passage frequency [calculated in Equation (28)], the A-weighted sound power level can be calculated.

where kW is the nameplate motor rating (1 kW = 1.34 hp), rpm is the speed at which the motor is operating, and S is the conformal surface area (in square metres) at 1 m from the motor (see the Appendix to this chapter for the equation for the conformal surface area). For TEFC motors between 300 and 750 kW, use the value 300 kW in Eq. (4). The unweighted octave band sound power levels can be obtained by subtracting the values shown in Table 1.

For drip-proof motors, the A-weighted sound power level can be calculated using the following equations:

$$<40\ kW: L_W = 8 + 17\ \log\ \text{kW} + 15\ \log\ \text{rpm} + 10\ \log\ S\ \text{dB} \quad (5)$$

$$\geq 40\ kW: L_W = 19 + 10\ \log\ \text{kW} + 15\ \log\ \text{rpm} + 10\ \log\ S\ \text{dB} \quad (6)$$

For drip-proof motors between 300 and 750 kW use the value 300 kW in Eq. (6).

The unweighted octave band sound power levels can be obtained by subtracting the values shown in Table 1.

Motors between 750 and 4000 kW[1] The sound power level for large drip-proof electric motors (between 750 and 4000 kW) can be estimated by using Table 1.

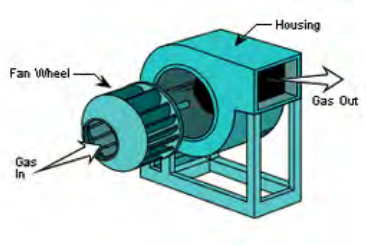
2.3 Gas Turbines[2]

Manufacturers of gas turbines often have sound power level data for the exhaust and inlet. Obtaining accurate casing data can be difficult due to contributions from the inlet, exhaust, or other equipment. The A-weighted sound power level for gas turbines can be estimated using Eqs. (7) to (9). The unweighted octave band sound power level for each of these sources can be obtained by subtracting the values shown in

Table C1.4: Centrifugal Blower - Backward Swept or Radial Swept Tip Blade

Nov. 17, 2011.

Blower Flow Rate:	6,000 cfm	169.9 m^3/min
Static Pressure (incl. 2" for Filter):	15.0 in W.G.	3736.3 Pa
No. of Blades:	10	
RPM	1800	
Blade Pass Frequency:	300 Hz	250 Hz OB
Wheel Diameter (expected)	30 in	
Wheel Hoop Speed (tip speed)	14,137 fpm	
Motor Power Rating (draw)	20 hp	



Theoretical PWL for Blower Inlet with Filter

Item	Levels at Octave Band Centre Frequencies									Overall dBA	Overall dBC
	31.5	63	125	250	500	1000	2000	4000	8000		
Nominal Fan PWL (Crocker 10+10logQ+20logP	104	104	104	104	104	104	104	104	104	**110.7**	**112.5**
Octave Band Correction Based on Crocker (modified)	11	9	7	7	8	10	14	17	21		
BPF Adjustment (add) 2@1/2X; 5@1X; 3@2X; 1@3X	0	0	2	5	3	1	0	0	0		
Basic Disposable Filter Attenuation (2" Farr Filter or Similar)	0	0	1	2	2	2	3	3	3		
Estimated Blower Inlet PWL w/ filter	**93**	**95**	**98**	**100**	**97**	**93**	**87**	**84**	**80**	**98.2**	**104.1**

Theoretical PWL for Blower Case

Item	Levels at Octave Band Centre Frequencies									Overall dBA	Overall dBC
	31.5	63	125	250	500	1000	2000	4000	8000		
Nominal Fan PWL (Based on Crocker with 3 dB adjustment: 4+10logQ+20logP	98	98	98	98	98	98	98	98	98	**104.7**	**106.5**
OB Correction - Based on Crocker (p. 874) (modified)	7	5	7	11	16	20	23	29	35		
BPF Adjustment (add)	0	0	2	5	3	1	0	0	0		
Estimated Blower Casing PWL	**91**	**93**	**93**	**92**	**85**	**79**	**75**	**69**	**63**	**87.2**	**97.7**

Theoretical PWL for Blower Outlet - Flow-through Source to Boiler Stack

Item	Levels at Octave Band Centre Frequencies									Overall dBA	Overall dBC
	31.5	63	125	250	500	1000	2000	4000	8000		
Nominal Fan PWL (Crocker with 5-dB adjustment: 15+10logQ+20logP	109	109	109	109	109	109	109	109	109	**115.7**	**117.5**
Octave Band Correction Based on Crocker (modified, shiflet down by 1 OB)	9	7	7	8	10	14	17	21	25		
BPF Adjustment (add) 2@1/2X; 5@1X; 3@2X; 1@3X	0	0	2	5	3	1	0	0	0		
Estimated Blower Outlet PWL	**100**	**102**	**104**	**106**	**102**	**96**	**92**	**88**	**84**	**102.9**	**109.9**
Flow Path Attenuation (3 elbows + evaporator)	2	3	5	8	10	12	13	15	17		
Estimated Boiler Stack Exit PWL	**98**	**99**	**99**	**98**	**92**	**84**	**79**	**73**	**67**	**93.2**	**103.8**

Reference: Malcolm J. Crocker, John Wiley & Sons, “Handbook of Noise and Vibration Control”, 2007.

988H

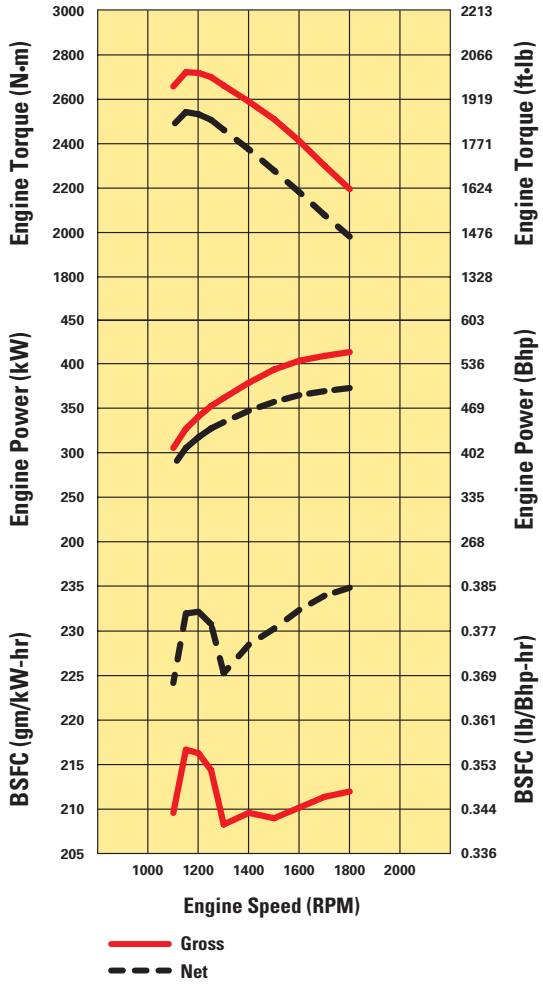
Wheel Loader

Engine		
Engine Model	Cat® C18 ACERT®	
Gross Power	414 kW	555 hp
Flywheel Power	373 kW	501 hp
Operating Specifications		
Operating Weight	49 546 kg	109,249 lb
Rated Payload	11.4 tonnes	12.5 tons
Buckets		
Bucket Capacities	6.3 m^3–7.0 m^3	8.2 yd^3–9.2 yd^3

Engine

Engine Model	Cat C18 ACERT®	
Gross Power	414 kW	555 hp
Flywheel Power	373 kW	501 hp
Net Power – EEC 80/1269	373 kW	501 hp
Net Power – ISO 9249	373 kW	501 hp
Gross Power – ISO 3046-2	388 kW	520 hp
Bore	145 mm	5.7 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1,104.5 in^3

- These ratings apply at 1,800 rpm when tested under the specific standard conditions for the specified standard.
- Power rating conditions based on standard air conditions of 25° C (77° F) and 99 kPa (29.32 in Hg) dry barometer, using 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30° C (86° F) [reference a fuel density of 838.9 g/L (7.001 lb/gal)].
- Net power advertised is the power available when the engine is equipped with alternator, air cleaner, muffler and hydraulic fan drive.
- No derating required up to 3048 m (10,000 ft) altitude.
- Direct-electric, 24-volt starting system with 100 amp alternator and four high performance maintenance-free batteries with 1,000 cold cranking amps.



Operating Specifications

Rated Payload	11.4 tonnes	12.5 tons
Operating Weight	49 546 kg	109,249 lb
Rated Payload – Standard	11.4 tonnes	12.5 tons

Transmission

Converter Drive – Forward 1	6.7 kph	4.2 mph
Converter Drive – Forward 2	11.8 kph	7.3 mph
Converter Drive – Forward 3	20.8 kph	12.9 mph
Converter Drive – Forward 4	36 kph	22.3 mph
Converter Drive – Reverse 1	7.6 kph	4.7 mph
Converter Drive – Reverse 2	13.5 kph	8.4 mph
Converter Drive – Reverse 3	23.7 kph	14.7 mph
Direct Drive – Forward 1	Lock-up disabled	
Direct Drive – Forward 2	12.3 kph	7.7 mph
Direct Drive – Forward 3	21.9 kph	13.6 mph
Direct Drive – Forward 4	38.6 kph	24 mph
Direct Drive – Reverse 1	7.9 kph	4.9 mph
Direct Drive – Reverse 2	14.1 kph	8.8 mph
Direct Drive – Reverse 3	25.1 kph	15.6 mph

- Travel speeds based on two percent rolling resistance and 35/65-33 tires.

Hydraulic Cycle Time

Raise	9.4 Seconds
Dump	2.4 Seconds
Lower Float Down (Empty)	3.8 Seconds
Total Hydraulic Cycle Time	15.6 Seconds

Service Refill Capacities

Fuel Tank	712 L	188 gal
Cooling System	103 L	27.2 gal
Crankcase	60 L	15.9 gal
Transmission	70 L	18.5 gal
Differentials and Final Drives – Front	186 L	49 gal
Differentials and Final Drives – Rear	186 L	49 gal
Hydraulic System (factory fill)	470 L	124.2 gal
Hydraulic System (tank only)	267 L	70.5 gal

Buckets

Bucket Capacities	6.3 m^3–7.0 m^3	8.2 yd^3–9.2 yd^3
Max. Bucket Capacity	7 m^3	9.2 yd^3

Axles

Maximum Single-Wheel Rise and Fall	568 mm	22.4 in
Front	Fixed	
Rear	Oscillating ±13°	

Brakes

Brakes	Meet SAE ISO 3450:1996

Cab

Cab – ROPS/FOPS	Meets SAE and ISO standards
Sound Performance	Meets ANSI, SAE and ISO standards

- Cat cab with integrated Rollover Protective Structure (ROPS) and Falling Object Protective Structure (FOPS) is standard.
- ROPS meets SAE J1040 APR99 and ISO 3471:1994 criteria.
- FOPS meets SAE J231 JAN 81 and ISO 3449:1992 Level II criteria.
- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT 98 is 77 dB(A), for the cab offered by Caterpillar, when properly installed, maintained and tested with the doors and windows closed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.
- The exterior sound pressure level for the standard machine measured at a distance of 15 m (49.2 ft) according to the test procedures specified in SAE J88 JUN 86 mid-gear-moving operation is 81 dB(A).
- The sound power level is 115 dB(A) measured according to the dynamic test procedure and conditions specified in ISO 6395:1998/AMD. 1:1996 for a standard machine configuration.
- For “CE” marked configurations, the labeled sound power level is 110 dB(A) measured according to the test procedures and conditions specified in 2000/14/EC.

Steering

Steering	Meets SAE and ISO standards
Total Steering Angle	86°

- Full hydraulic, load-sensing steering system meets SAE J1511 FEB94 and ISO 5010:1992 specified standards.
- Center point frame articulation.
- Front and rear wheels track.

Loader Hydraulic System

Main Hydraulic System Output at 2,010 rpm and 6900 kPa (1,000 psi)	492 L/min	130 gal/min
Relief Valve Setting	31 000 kPa	4,500 psi
Cylinders, Double Acting: Lift, Bore and Stroke	220 × 911 mm	8.7 × 35.9 in
Cylinder, Double Acting: Tilt, Bore and Stroke	220 × 1770 mm	8.7 × 69.7 in
Pilot System, Gear-Type Pump Output at 2,010 rpm and 2500 kPa (363 psi)	76 L/min	20.1 gal/min
Relief Valve Setting (low idle)	2400 kPa	348.1 psi

- With SAE 10W oil at 66° C (150° F).

Shaping

Shaping given an overall level

Notes:
The reference conditons (eg. PWL) for the given level also apply to the spectrum.
The octave band levels output is A-weighted.

Source	Description	Measured PWL	given value A-weighted? (y/n)	Given Spectrum:Octave Band Frequencies (No Weighting Applied) 31.5	63	125	250	500	1000	2000	4000	8000	Output Spectrum:Octave Band Frequencies (No Weighting Applied) 31.5	63	125	250	500	1000	2000	4000	8000	dBA	Spectrum Source
ldr	CAT 988H Loader	115.0	Y	116.5	124.2	126.4	118.4	118.0	115.2	109.4	98.8	88.5	111.6	119.3	121.5	113.5	113.1	110.3	104.5	93.9	83.6	115.0	CAT 972G Loader

Determination of Landfill Heavy Truck Traffic Volumes

WCEC Landfill - Ottawa, Ontario

Notes to Table:

1. Landfill traffic volumes for 2009 year were provided by AECOM.

Operation hours from 2010 NPRI questionnaire:

Hours/day:	9.5			
Operating Time:	7:00	am to	4:30	pm
Days/week:	5.5			
Weeks/year:	52			
Days/year:	286			

Material	Material Description	Loads 1-way	Loads 2-way
CDW	C&D WASTE	155	310
CDW OUT	C&D OUTSIDE GNZ	25	50
Cont Soil Met-P100034ON	Cont. Soil - Petroleum, PMT is RGC	408	816
Cont Soil Met-P100034ON	Cont. Soil - Metals	26	52
Cont Soil Pet-RGC-Metric Ton	Cont. Soil - Petroleum, PMT is RGC	982	1964
Cont Soil Pet-RGC-P100026ON	Cont. Soil - Petroleum, PMT is RGC	3	6
Cont Soil Pet-RGC-P100028ON	Cont. Soil - Petroleum, PMT is RGC	13	26
Cont Soil Pet-RGC-P100030ON	Cont. Soil - Petroleum, PMT is RGC	1	2
Cont Soil Pet-RGC-P100032ON	Cont. Soil - Petroleum, PMT is RGC	1	2
Cont Soil Pet-RGC-P100040ON	Cont. Soil - Petroleum, PMT is RGC	3	6
Cont Soil Pet-RGC-P100885ON	Cont. Soil - Petroleum, PMT is RGC	3	6
Cont Soil Pet-RGC-P100897ON	Cont. Soil - Petroleum, PMT is RGC	76	152
Cont Soil Pet-RGC-P100898ON	Cont. Soil - Petroleum, PMT is RGC	86	172
Cont Soil Pet-RGC-P100918ON	Cont. Soil - Petroleum, PMT is RGC	9	18
Cont Soil RCG-Metric Ton	Cont. Soil - Petroleum-RGC	2	4
Cont Soil RCG-P100034AON	Unspecified Contaminated Soil, PMT RCG	180	360
ContSoilPet-P100000ON	Cont. Soil - Petroleum-RGC	67	134
ContSoilPet-P100012ON	Cont. Soil - Petroleum-RGC	148	296
ContSoilPet-P100130ON	Cont. Soil - Petroleum-RGC	2	4
ContSoilPet-P100142ON	Cont. Soil - Petroleum-RGC	16	32
ContSoilPet-RGC-Metric Ton	Cont. Soil - Petroleum-RGC	3	6
ELE	ELECTRONICS	5	10
ICI	ICI WASTE	424	848
ICI CITY	ICI WITHIN GNZ	227	454
ICI OUT	ICI OUTSIDE GNZ	48	96
MSW	MS WASTE	1433	2866
MSW-Metric Ton	MSW Permitted Material, PMT MSW	101	202
SLUDGE-Metric Ton	MSW Permitted Material, PMT MSW	1	2
SludgeFilter-Metric Ton	MSW Permitted Material, PMT MSW	302	604
SludgeIndus-Metric Ton	Sludge Industrial	6	12
Special Misc-Metric Ton	Cont. Soil - Petroleum, PMT is RGC	14	28
Special Misc-Metric Ton	Special Waste Misc	1	2
Spwaste Plant-Metric Ton	Special Waste Plant Waste	2	4
WOD	WOOD WASTE	8	16
	Yearly Traffic:	4781	9562
	Daily Traffic:	**17**	**33**
	Hourly Traffic:	**2**	**4**

Shooting Ranges and Sound

EXECUTIVE SUMMARY

“Shooting Ranges and Sound” is a document intended for those people not trained in acoustics, who would like to gain an understanding of the propagation and control of sound and firearm noise. Such persons might be involved in the planning, construction or regulation of a shooting range in development or re-development.

The introductory section of this document provides the background information needed to understand the mechanisms involved in the generation, propagation and control of shooting noise. It describes the physics of sound, mechanisms of noise generation, sound characteristics of firearms, characteristics of sound wave propagation and sound measurement techniques.

Subsequent sections in the document describe existing noise guidelines or noise regulations and limits that are found in literature and/or law. With respect to these limits and measurements of shooting noise, an assessment can be made.

The concluding sections identify basic noise control principles and noise reduction techniques, and consider the construction of a new shooting range. Typical principles, such as shooting noise levels, noise reduction with distance and sound barriers, provide real-life examples and realistic expectations for noise control.

Table 1: Sound Pressure Levels of Firearms Being Measured at 10 m from the Muzzle (Downrange)

Name, Calibre and Ammunition of Weapon	Sound Pressure Level in dBA(I)
Rifle M/96, 6.5 mm, SK PTR M/94 PRJ M/41	126
Rifle M/96, 6.5 mm, KPTR M/14	120
Hunting rifle, 7.62 mm, 30-60 Norma Jaktmatch	127
Hunting rifle II, 5.7 mm, 222 Remington N. Jaktmatch	124
AK 4, 7.62 mm, KPTR 10	120
AK 4, 7.62 mm, SK PTR 10 PRJ	128
AK 5	125
CC 63 Junior, Cal. 22, NORMA 22 LR (pistol)	103
Pistol m/40, 9 mm, SK PTR M/39 B	126
Shotgun, Cal. 12, NIKE Skeet, 70 mm, 32 g, 2 mm	127

INTER-NOISE 2006

3-6 DECEMBER 2006
HONOLULU, HAWAII, USA

The Acoustics of Gunfire

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ABSTRACT

Gunfire results in acoustic emission of 1) an impulsive muzzle blast report from weapons without sound suppression, and 2) a traveling shock wave (i.e., N-wave) from the supersonic projectile discharged from most center fire rifles. Classic theory and International Organization for Standardization (ISO) standards for predicting these emissions are reviewed and compared with empirical data. The measurement of high level and very short-duration N-waves is discussed. Spectral measurement data is presented. The acoustic effects of sound suppression systems, muzzle brakes and compensators are reviewed. Gunshot forensic issues are outlined, and audibility and weapon identification by gunshot signature are discussed. Application of muzzle blast and N-wave prediction are discussed for a sniper location detection system.

1 INTRODUCTION

Gunfire acoustics are of interest to technical professionals in providing the basis of understanding for a wide range of acoustic emissions, and to criminal investigators examining gunshot recordings to determine the events at a crime scene. This paper is subsequently presented in two parts: explanation of the mechanisms for gunfire prediction and propagation, and case studies and applications of gunshot acoustic technology. An understanding of the physics and acoustics of gunfire can aid the forensic examiner in assessing audibility and discriminability.

1.1 Background

A firearm can be characterized as a heat engine that converts stored chemical energy into kinetic energy. This is achieved by igniting propellant within a cartridge to produce short-duration high pressure in a chamber that discharges a projectile at a high velocity. To analyze the acoustic emissions of gunfire we will review the events of a rifle discharge; pistols and shotgun discharges emissions may also be generally understood from this example.

When the trigger of a firearm is pulled, it actuates a mechanism enabling a spring-loaded firing pin to strike and ignite a small ignition cap (the primer) centered in the base of a cartridge (for center-fire ammunition). This ignites the cartridge propellant, which does not explode but burns rapidly and progressively (with an accelerating burn rate). This creates a high pressure within the cartridge forcing the bullet (the projectile) to release its compression fit from the cartridge and accelerate down the barrel and out the muzzle. The entire event takes place in 1.0 – 1.6 msec, with peak internal breech pressures of 240 – 450 MPa (35,000 – 65,000 psi) and a

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γ = gas ratio of specific heats.

2.2 ISO Model

The classical model predicts peak sound power of muzzle blasts to be 140 dB - 180 dB. This generally agrees with empirical data. However, muzzle blast is directional with sound levels on-axis ahead of the muzzle higher than levels directly behind the muzzle by up to 20 dB. Thus, the omni-directional monopole model does not conform directionally to the empirical data. Figure 1 shows the measured radiation pattern of a muzzle blast, reported in an ISO standard.[5]

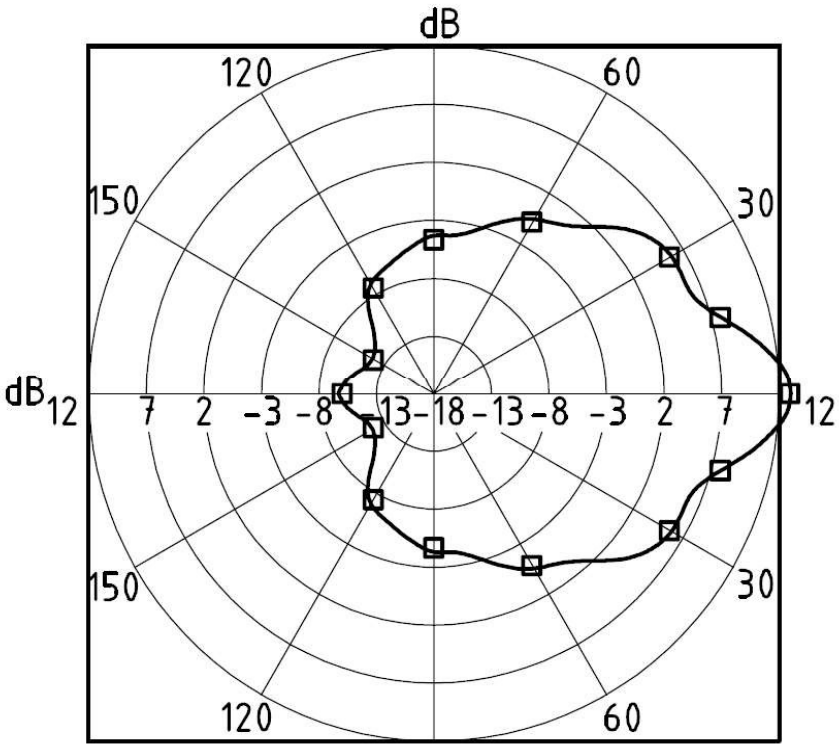


Figure 1: ISO 17201-1 measured radiation pattern.

It is clear from the measured muzzle blast radiation patterns in Figure 1 that the basic monopole model does not account for the directivity of muzzle blasts. Directivity is addressed in the ISO standard that is based upon the chemical energy of the cartridge. The ISO prediction of muzzle blast sound is a complex procedure, which incorporates empirical methods with the theory. The ISO model assumes that the acoustic energy is proportional to the total chemical energy of the discharge, but acknowledges a variation in acoustical efficiency. The equation for the angular source energy distribution [$S_q(\alpha)$], giving both magnitude and direction, is giving in the ISO standard:[6]

$$S_q(\alpha) = \frac{p^2 w}{pc} 4\pi R_w^2 \int_{\omega_1}^{\omega_2} \frac{1}{\pi} \left[\omega^2 + 9 \frac{c^2}{R_w^2} \left(\frac{c^2}{R_w^2 \omega^2} + 1 \right) \right]^{-1} d\omega \qquad (3)$$

Shotgun directivity	31.5	63	125	250	500	1000	2000	4000	8000
0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	-4	0	0	0	0
30	0	0	0	0	-6	0	0	0	0
45	0	0	0	0	-10	0	0	0	0
60	0	0	0	0	-12	0	0	0	0
75	0	0	0	0	-15	0	0	0	0
90	0	0	0	0	-17	0	0	0	0
105	0	0	0	0	-18	0	0	0	0
120	0	0	0	0	-19	0	0	0	0
135	0	0	0	0	-23	0	0	0	0
150	0	0	0	0	-24	0	0	0	0
165	0	0	0	0	-23	0	0	0	0
180	0	0	0	0	-22	0	0	0	0

Propane Cannon directivity	31.5	63	125	250	500	1000	2000	4000	8000
0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
30	0	0	0	0	-3	0	0	0	0
45	0	0	0	0	-3	0	0	0	0
60	0	0	0	0	-3	0	0	0	0
75	0	0	0	0	-4	0	0	0	0
90	0	0	0	0	-5	0	0	0	0
105	0	0	0	0	-7	0	0	0	0
120	0	0	0	0	-7	0	0	0	0
135	0	0	0	0	-7	0	0	0	0
150	0	0	0	0	-7	0	0	0	0
165	0	0	0	0	-7	0	0	0	0
180	0	0	0	0	-7	0	0	0	0

APPENDIX E

Equipment & Weather Information

MEASUREMENT EQUIPMENT

Sound Level Meter 824 Kit 1

Sound Level Meter	
Make and Model	Larson-Davis Model 824 SLM and RTA
Serial No.	824A0450
Pre-amplifier	
Make and Model	Larson-Davis Model PRM902
Serial No.	0836
Microphone	
Make and Model	Larson-Davis Model 2559 precision air-condenser microphone
Serial No.	3020
Calibrator	
Make and Model	Larson-Davis CAL200 precision acoustic calibrator (1000 Hz)
Serial No.	3192

Sound Level Meter 824 Kit 2

Sound Level Meter	
Make and Model	Larson-Davis Model 824 SLM and RTA
Serial No.	824A1556
Pre-amplifier	
Make and Model	Larson-Davis Model PRM902
Serial No.	2072
Microphone	
Make and Model	Larson-Davis Model 2559 precision air-condenser microphone
Serial No.	3118
Calibrator	
Make and Model	Larson-Davis CAL200 precision acoustic calibrator (1000 Hz)
Serial No.	3029

Weather during Sound Level Measurements on April 11-12, 2006

Weather:	mostly cloudy on both days
Precipitation:	none
Temperature:	8 to 20 °C
Relative Humidity:	60-75 %
Wind Speed:	6 to 17 km/h

Environment Canada Environnement Canada

Canada

Hourly Data Report for April 19, 2011

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

OTTAWA MACDONALD-CARTIER INT'L A
ONTARIO

Latitude: 45°19'21.000" N Longitude: 75°40'09.000" W Elevation: 114.00 m

Climate ID: 6106000 WMO ID: 71628 TC ID: YOW

Hourly Data Report for April 19, 2011

Time	Temp °C	Dew Point Temp °C	Rel Hum %	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
00:00	0.6	-2.7	79	28	6	24.1	100.37			Cloudy
01:00	0.7	-3.0	76	35	7	24.1	100.40			Mostly Cloudy
02:00	0.2	-6.4	61	35	15	24.1	100.47			Mainly Clear
03:00	-0.7	-7.1	62	36	13	24.1	100.52		-5	Mainly Clear
04:00	-1.9	-6.9	69	35	11	24.1	100.60		-6	Clear
05:00	-1.8	-6.6	70	32	6	24.1	100.72		-4	Clear
06:00	-1.3	-5.8	71	34	11	24.1	100.81		-5	Mainly Clear
07:00	0.9	-6.4	58	36	11	24.1	100.88			Mainly Clear
08:00	2.0	-7.2	50	4	13	24.1	100.92			Mainly Clear
09:00	2.8	-7.0	48	4	13	24.1	101.00			Mainly Clear
10:00	3.9	-6.4	47	29	6	24.1	100.97			Mainly Clear
11:00	5.1	-5.9	45	33	6	24.1	100.89			Mainly Clear
12:00	5.8	-6.0	42	34	7	24.1	100.88			Mainly Clear
13:00	6.9	-6.2	39	27	7	24.1	100.91			Mainly Clear
14:00	8.3	-6.1	35	4	7	24.1	100.81			Mostly Cloudy
15:00	7.7	-8.4	31	1	11	24.1	100.78			Mostly Cloudy
16:00	8.6	-8.2	30	5	9	24.1	100.70			Mostly Cloudy
17:00	8.3	-8.0	31	7	15	24.1	100.68			Mostly Cloudy
18:00	7.8	-7.0	34	7	11	24.1	100.68			Cloudy
19:00	7.2	-7.3	35	7	11	24.1	100.70			

20:00	6.9	-7.0	36	7	13	25.0	100.72	Cloudy
21:00	6.4	-8.0	35	7	15	25.0	100.71	Cloudy
22:00	5.5	-7.6	38	8	15	25.0	100.72	Cloudy
23:00	5.3	-6.0	44	7	17	25.0	100.58	Cloudy

Legend
M = Missing
E = Estimated
NA = Not Available
‡ = Partner data that is not subject to review by the National Climate Archives

We'd like to hear from you! Please click "Contact Us" to share your comments and suggestions.

Date Modified: 2012-01-11

APPENDIX F

Traffic Data & Modelling

Table F.1a: Determination of Traffic Volume and Hourly Distribution - Carp Road

WCEC Landfill - Ottawa, Ontario

	2011 Carp Road	
	North of 417	South of 417
Total Volume	12077	21340

	Carp Road North of 417				Carp Road South of 417			
	Cars [1]	Medium [2]	Heavy [3]	Total	Cars [1]	Medium [2]	Heavy [3]	Total
0:00	31	3	0	34	65	4	1	70
1:00	20	1	0	21	46	1	1	48
2:00	11	1	1	13	19	3	0	22
3:00	22	1	1	24	26	1	0	27
4:00	24	3	6	33	48	6	3	57
5:00	155	25	5	185	243	36	3	282
6:00	592	97	8	697	979	102	8	1089
7:00	864	131	17	1012	1473	104	15	1592
8:00	714	148	12	874	1518	151	5	1674
9:00	576	185	11	772	1191	134	9	1334
10:00	538	128	22	688	925	126	22	1073
11:00	559	134	13	706	998	100	6	1104
12:00	660	134	17	811	1191	103	8	1302
13:00	648	147	16	811	1101	113	11	1225
14:00	663	138	21	822	1100	130	16	1246
15:00	837	124	15	976	1477	110	14	1601
16:00	931	128	8	1067	1747	101	8	1856
17:00	800	77	1	878	1788	55	3	1846
18:00	499	38	2	539	1260	24	2	1286
19:00	328	28	4	360	750	13	5	768
20:00	290	13	1	304	607	7	2	616
21:00	195	8	0	203	500	7	2	509
22:00	159	11	0	170	540	8	0	548
23:00	73	4	0	77	164	1	0	165
Total	10189	1707	181	12077	19756	1440	144	21340
Day	**9261**	**1572**	**160**	**10993**	**18166**	**1286**	**128**	**19580**
Night	**928**	**135**	**21**	**1084**	**1590**	**154**	**16**	**1760**
Total	10189	1707	181	12077	19756	1440	144	21340

Notes:

- Traffic data provided by AECOM (MTO 2009 for Highway 417 and 7, April 2011 for Carp Road and Richardson Road).

[1] Cars: motorcycle, cars, cars with trailer, pickups, pickups with trailer.

[2] Medium: bus, single unit truck with dual rear axle, 3 axle truck with less than 5.49 m spacing between axle 2 and 3, 4 axle truck.

[3] Heavy: Transports, 3 axle truck with greater than 5.69m spacing between axles 2 and 3, 4 axle truck with greater than 1.52m spacing between axles 2 and 3 and less than 1.07m spacing between axles 3 and 4 and 4 axle trucks with greater than 1.52m spacing between axles 2 and 3 and greater than 3.05m spacing between axles 3 and 4, any other trucks with 5 or 6 axles.

Table F.1b: Determination of Traffic Volume and Hourly Distribution - Hwy 417 and 7

WCEC Landfill - Ottawa, Ontario

	2009 Highway 417		
	East of Carp	West of Carp**	West of Hwy 7
Total Volume	59434	24860	31852

**AADT

	2009 Highway 7
	South of Hwy 417
Total Volume	15665

	Highway 417		
	East of Carp	West of Carp	West of Hwy 7
	Vehicles	Vehicles	Vehicles
0:00	358	No data collected by MTO	199
1:00	197		88
2:00	153		81
3:00	142		109
4:00	259		122
5:00	919		591
6:00	2925		1533
7:00	3490		1818
8:00	3172		1585
9:00	3296		1570
10:00	3482		1707
11:00	3756		1840
12:00	3885		1775
13:00	3891		1979
14:00	4098		2117
15:00	4386		2523
16:00	4743		2782
17:00	4360		2618
18:00	3720		2154
19:00	2713		1508
20:00	1958		1122
21:00	1669		864
22:00	1098		705
23:00	764		462
Total	59434	N/A	31852

	Highway 417	
	Hourly Volume as % of AADT	
0:00	0.74%	
1:00	0.41%	
2:00	0.31%	
3:00	0.27%	
4:00	0.42%	
5:00	1.69%	
6:00	4.95%	
7:00	5.77%	
8:00	5.44%	
9:00	5.61%	
10:00	5.76%	
11:00	6.29%	
12:00	6.21%	
13:00	6.35%	
14:00	6.72%	
15:00	7.29%	
16:00	8.26%	
17:00	7.54%	
18:00	5.74%	
19:00	4.31%	
20:00	3.63%	
21:00	3.07%	
22:00	1.95%	
23:00	1.26%	

	Highway 7
	South of Hwy 417
	Vehicles
0:00	74
1:00	70
2:00	67
3:00	94
4:00	275
5:00	901
6:00	1586
7:00	1483
8:00	1110
9:00	827
10:00	803
11:00	790
12:00	812
13:00	781
14:00	875
15:00	850
16:00	874
17:00	869
18:00	813
19:00	546
20:00	425
21:00	324
22:00	255
23:00	161
Total	15665

Day	**53717**	N/A	**28667**
Night	**5717**	N/A	**3185**
Total	59434		31852

Day	**12437**
Night	**3228**
Total	15665

Notes:

- Traffic data provided by AECOM (MTO 2009 for Highway 417 and 7, April 2011 for Carp Road and Richards

[1] Cars: motorcycle, cars, cars with trailer, pickups, pickups with trailer.

[2] Medium: bus, single unit truck with dual rear axle, 3 axle truck with less than 5.49 m spacing between axle 2 and 3, 4 axle truck.

[3] Heavy: Transports, 3 axle truck with greater than 5.69m spacing between axles 2 and 3, 4 axle truck with greater than 1.52m spacing between axles 2 and 3 and less than 1.07m spacing between axles 3 and 4 and 4 axle trucks with greater than 1.52m spacing between axles 2 and 3 and greater than 3.05m spacing between axles 3 and 4, any other trucks with 5 or 6 axles.

Table F.1c: Determination of Traffic Volume and Hourly Distribution - Richardson Road

WCEC Landfill - Ottawa, Ontario

	2011 Richardson Road		
	West of Carp	East of Carp**	
Total Volume	4939	6985	**AADT

	Richardson Road				
	West of Carp Road				
	Cars [1]	Medium [2]	Heavy [3]	Total	% Hourly Volume
0:00	15	3	0	18	0.36%
1:00	5	0	0	5	0.10%
2:00	5	1	0	6	0.12%
3:00	7	1	0	8	0.16%
4:00	6	2	1	9	0.18%
5:00	76	11	0	87	1.76%
6:00	226	66	1	293	5.93%
7:00	353	76	0	429	8.69%
8:00	289	45	1	335	6.78%
9:00	222	48	1	271	5.49%
10:00	179	233	1	413	8.36%
11:00	210	37	0	247	5.00%
12:00	207	40	1	248	5.02%
13:00	200	59	1	260	5.26%
14:00	205	47	1	253	5.12%
15:00	300	52	2	354	7.17%
16:00	395	68	2	465	9.41%
17:00	374	24	0	398	8.06%
18:00	255	18	0	273	5.53%
19:00	160	16	0	176	3.56%
20:00	141	8	0	149	3.02%
21:00	100	4	0	104	2.11%
22:00	91	6	0	97	1.96%
23:00	38	3	0	41	0.83%
Total	4059	868	12	4939	100%

Day	**3681**	**781**	**10**	**4472**
Night	**378**	**87**	**2**	**467**
Total	4059	868	12	4939

	Richardson Road *
	East of Carp
	% Hourly Volume
0:00	0.36%
1:00	0.10%
2:00	0.12%
3:00	0.16%
4:00	0.18%
5:00	1.76%
6:00	5.93%
7:00	8.69%
8:00	6.78%
9:00	5.49%
10:00	8.36%
11:00	5.00%
12:00	5.02%
13:00	5.26%
14:00	5.12%
15:00	7.17%
16:00	9.41%
17:00	8.06%
18:00	5.53%
19:00	3.56%
20:00	3.02%
21:00	2.11%
22:00	1.96%
23:00	0.83%

* Assume the same % hourly distribution as Richardson Road, West of Carp.

Notes:

- Traffic data provided by AECOM (MTO 2009 for Highway 417 and 7, April 2011 for Carp Road and Richardson Road).

[1] Cars: motorcycle, cars, cars with trailer, pickups, pickups with trailer.

[2] Medium: bus, single unit truck with dual rear axle, 3 axle truck with less than 5.49 m spacing between axle 2 and 3, 4 axle truck.

[3] Heavy: Transports, 3 axle truck with greater than 5.69m spacing between axles 2 and 3, 4 axle truck with greater than 1.52m spacing between axles 2 and 3 and less than 1.07m spacing between axles 3 and 4 and 4 axle trucks with greater than 1.52m spacing between axles 2 and 3 and greater than 3.05m spacing between axles 3 and 4, any other trucks with 5 or 6 axles.

Table F.2: Determination of Traffic Volume Percent Change for Highway 7 and 417

WCEC Landfill - Ottawa, Ontario

Notes to Table:

1. Values taken from MTO Provincial Highways - Traffic Volumes 1988 - 2007 for Hwy 7 - Hwy S 417 & 17 IC.
2. Values taken from MTO Provincial Highways - Traffic Volumes 1988 - 2007 for Hwy 417 - Hwy 7 & W JCT Hwy 17 IC.
3. Values taken from MTO Provincial Highways - Traffic Volumes 1988 - 2007 for Hwy 417 - Carp Rd IC - OTT/Carl Rd 5.
4. Values taken from MTO Provincial Highways - Traffic Volumes 1988 - 2007 for Hwy 417 - Palladium Rd IC.
5. Traffic data provided by AECOM.
6. Default traffic growth for Ottawa is targeted to be less than 1% (as per City of Ottawa 2020 Transportation Master Plan).

Year	AADT	% Change			Comments
		per Year (%)	since 2006/2007 (%)	Resultant (%)	
Hwy 7 - south of Hwy 417 [1]					
2006	14400	0.0%	0%	**2.1%**	Use 2.1% growth per year from 2007 based on AADT change from 2006.
2007	14700	2.1%	2.1%		
2008	N/A	--	--		
2009	N/A	--	--		
Hwy 417 - west of Hwy 7 [2]					
2006	22500	8.2%	0%	**1.0%**	Use 1% growth per year from 2009 based on AADT change from 2006 to account for 2007 traffic anomaly.
2007	16800	-25.3%	--		
2008	N/A	--	--		
2009 [5]	31852	--	13.9%		
Hwy 417 - b/w Hwy 7 and Carp Rd [3]					
2006	38200	1.9%	--	**1.0%**	Use City of Ottawa's default growth rate of 1% from 2009 to 2012 based on lower AADT in 2009 from 2007.
2007	39800	4.2%	0%		
2008	N/A	--	--		
2009 [5]	24860	--	-18.8%		
Hwy 417 - east of Carp Road [4]					
2006	42800	0.5%	--	**1.0%**	Use City of Ottawa's default growth rate of 1% from 2009 to 2012 based on AADT change from 2007.
2007	43000	0.5%	0%		
2008	N/A	--	--		
2009 [5]	59434	--	19.1%		

Table F.3a: Determination of Traffic Volume - Existing

WCEC Landfill - Ottawa, Ontario

EXISTING TRAFFIC INCLUDING LANDFILL [1]

Road ID	Road Segment	Year	AADT Including Landfill				Total Vehicle Breakdown [3]		AADT Including Landfill			
			Cars	Medium	Heavy	Total	%Medium	%Heavy	Cars	Medium	Heavy	Total
Landfill	Landfill 2-Way Traffic at Weigh Scale	2009 [2]	0	0	33	**33**	0	100	0	0	33	**33**
Highway 7	South of 417	2009	--	--	--	**15665**	5	8	13629	783	1253	**15665**
Highway 417	West of Highway 7	2009	--	--	--	**31852**	5	15	25482	1593	4778	**31852**
Highway 417	West of Carp	2009	--	--	--	**24860**	5	15	19888	1243	3729	**24860**
Highway 417	East of Carp	2009	--	--	--	**59434**	5	15	47547	2972	8915	**59434**
Carp Road	North of 417 - North of Landfill Entrance	2011	10189	1707	181	**12077**	14	1	10189	1707	181	**12077**
Carp Road	North of 417 - South of Landfill Entrance	2011	10189	1707	181	**12077**	14	1	10189	1707	181	**12077**
Carp Road	South of 417	2011	19756	1440	144	**21340**	7	1	19756	1440	144	**21340**
Richardson Road	West of Carp Road	2011	4059	868	12	**4939**	18	0	4059	868	12	**4939**
Richardson Road	East of Carp Road	2011	--	--	--	**6985**	5	8	6077	349	559	**6985**

Notes:

[1] Traffic data for the Landfill (2009), Highway 417 (2009), Highway 7 (2009), Carp Road (2011), and Richardson Road (2011) provided by AECOM.

[2] Landfill traffic for 2009 are expected to be approximately equivalent to traffic volume in 2011.

[3] In the absence of data, freeways have breakdown of 5 MM/15 HH and 5 MM/8 HH for Regional Roads (per MTO Environmental Guide for Noise, October 2006).

Table F.3b: Determination of Traffic Volume - Baseline

WCEC Landfill - Ottawa, Ontario

EXISTING TRAFFIC EXCLUDING LANDFILL [1]

Road ID	Road Segment	Year	Heavy Truck Traffic Split				AADT Excluding Landfill Traffic			
			North of Landfill		South of Landfill					
			5%	95%	5%	90%	Cars	Medium	Heavy	Total
Landfill	Landfill 2-Way Traffic at Weigh Scale	2012 [2]	--	--	--	--	--	--	--	--
Highway 7	South of 417	2009	--	--	--	--	13629	783	1253	**15665**
Highway 417	West of Highway 7	2009	--	--	--	--	25482	1593	4778	**31852**
Highway 417	West of Carp	2009	--	--	--	0	19888	1243	3729	**24860**
Highway 417	East of Carp	2009	--	--	--	29	47547	2972	8886	**59405**
Carp Road	North of 417 - North of Landfill Entrance	2011	2	0	--	--	10189	1707	179	**12075**
Carp Road	North of 417 - South of Landfill Entrance	2011	0	31	--	--	10189	1707	150	**12046**
Carp Road	South of 417	2011	--	--	2	--	19756	1440	142	**21338**
Richardson Road	West of Carp Road	2011	0	--	--	--	4059	868	12	**4939**
Richardson Road	East of Carp Road	2011	2	--	--	--	6077	349	557	**6983**

BASELINE TRAFFIC EXCLUDING LANDFILL (2012)

Road ID	Road Segment	Year	Traffic Volume Growth [4]		2012 AADT			
			%Growth	#Years	Cars	Medium	Heavy	Total
Landfill	Landfill 2-Way Traffic at Weigh Scale	2012 [2]	--	--	--	--	--	**--**
Highway 7	South of 417	2012	2.1%	3	14498	833	1333	**16665**
Highway 417	West of Highway 7	2012	1.0%	3	26254	1641	4923	**32817**
Highway 417	West of Carp	2012	1.0%	3	20491	1281	3842	**25613**
Highway 417	East of Carp	2012	1.0%	3	48988	3062	9155	**61205**
Carp Road	North of 417 - North of Landfill Entrance	2012	1.0%	1	10291	1724	181	**12196**
Carp Road	North of 417 - South of Landfill Entrance	2012	1.0%	1	10291	1724	151	**12166**
Carp Road	South of 417	2012	1.0%	1	19954	1454	143	**21551**
Richardson Road	West of Carp Road	2012	1.0%	1	4100	877	12	**4988**
Richardson Road	East of Carp Road	2012	1.0%	1	6138	353	562	**7053**

Notes:

[1] Traffic data for the Landfill (2009), Highway 417 (2009), Highway 7 (2009), Carp Road (2011), and Richardson Road (2011) provided by AECOM.

[2] Landfill traffic for 2009 are expected to be approximately equivalent to traffic volume in 2011.

[3] In the absence of data, freeways have breakdown of 5 MM/15 HH and 5 MM/8 HH for Regional Roads (per MTO Environmental Guide for Noise, October 2006).

[4] Percent growth for Highway 417 and Highway 7 were estimated from MTO Provincial Highways
AADT Traffic Volumes 1988 - 2007 and 2009 AADT provided by AECOM.
Traffic growth for Ottawa is targeted to be less than 1% for Carp Road and Richardson Road (as per City of Ottawa 2020 Transportation Master Plan).

Table F.4a: ORNAMENT Calculations - Façade or Plane of Window Point of Reception

Ontario Road Noise Analysis Method for ENvironment and Transportation

version 2.05

Job No. 1302177 Scenario Baseline (2012)

Job Name WCEC Ottawa Landfill 24-hour Leq(24), Façade or Plane of Window PoR

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)	Topo-graphy Type	Source Height (m)	Road Elevation (m asl)	Receptor Height (m)	Receptor Elevation (m asl)	Ground Elevation Change (m)			Barrier Height (m)	Barrier Elevation (m asl)	Barrier-Reciever Distance (m)	Barrier Viewable Angle		No. of Rows of Houses	Density of Houses (% Houses)	Depth of Woods	Adjustment (dB)	Reason For Adjustment	**Total Segment L_{eq} (dBA)**
			Autos	Medium	Heavy					θ_1	θ_2								Elevation Change e (m)	Hor. Dist a (m)	Hor. Dist b (m)				θ_1	θ_2						
PR4	Highway 417 - West of Highway 7	24	26254	1641	4923	100	0	y	1	-35	0	770	Soft	A	2.0		4.5															45.6
	Highway 417 - West of Highway 7	24	26254	1641	4923	100	0	y	1	-90	-35	900	Soft	A	2.0		4.5															44.1
	Richardson Road - West of Carp Road	24	4100	877	12	80	0	y	1	-90	90	42	Soft	A	0.1		4.5														-10.0	self shielding	47.2
																																51
PR9	Highway 417 - West of Highway 7	24	26254	1641	4923	100	0	y	1	-65	70	310	Soft	A	2.0		4.5															**57**
NR1	Richardson Road - West of Carp Road	24	4100	877	12	80	0	y	1	-90	90	27	Soft	A	0.1		1.5															**60**
NR2	Highway 417 - West of Carp	24	20491	1281	3842	100	0	y	1	-75	10	300	Soft	A	2.0		4.5															53.8
	Carp Road - South of 417	24	19954	1454	143	80	0	y	1	-90	0	53	Soft	A	0.1		4.5															57.3
																																59
NR8	Highway 417 - West of Carp	24	20491	1281	3842	100	0	y	1	-65	70	296	Soft	A	2.0		4.5															**56**
RR14	Richardson Road - West of Carp Road	24	4100	877	12	80	0	y	1	-90	90	27	Soft	A	0.1		4.5															**60**

Road Traffic Noise at Facade PoR of NR1 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

		0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Hourly Traffic Volume	Total Volume																								
Richardson Road - West of Carp Road	4939	18	5	6	8	9	87	293	429	335	271	413	247	248	260	253	354	465	398	273	176	149	104	97	41

	Distribution	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
% Traffic Distribution	number																								
Richardson Road - West of Carp Road	2	0.36%	0.10%	0.12%	0.16%	0.18%	1.76%	5.93%	8.69%	6.78%	5.49%	8.36%	5.00%	5.02%	5.26%	5.12%	7.17%	9.41%	8.06%	5.53%	3.56%	3.02%	2.11%	1.96%	0.83%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	60.1	2	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		45	45	45	45	45	45	45	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45
AMBIENT GUIDELINE LIMIT LEQ(1)		49.5	45.0	45.0	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Lowest Daytime	**61**
Lowest Evening	**57**
Lowest Night-time	**45**
1900-2000h Evening	**59**
0600-0700h Night-time	**62**

Total Leq(day) 73.5 Road Leq(day) 73.5 day = 0700 through 2200

Total Leq(night) 63.7 Road Leq(night) 63.7 night = 2300 through 0600

Road Traffic Noise at Facade PoR of NR2 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Carp	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carp Road - South of 417	21340	70	48	22	27	57	282	1089	1592	1674	1334	1073	1104	1302	1225	1246	1601	1856	1846	1286	768	616	509	548	165

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Carp Road - South of 417	2	0.33%	0.22%	0.10%	0.13%	0.27%	1.32%	5.10%	7.46%	7.84%	6.25%	5.03%	5.17%	6.10%	5.74%	5.84%	7.50%	8.70%	8.65%	6.03%	3.60%	2.89%	2.39%	2.57%	0.77%
Highway 417 Traffic Distribution	3	0.74%	0.41%	0.31%	0.27%	0.42%	1.69%	4.95%	5.77%	5.44%	5.61%	5.76%	6.29%	6.21%	6.35%	6.72%	7.29%	8.26%	7.54%	5.74%	4.31%	3.63%	3.07%	1.95%	1.26%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Carp	53.8	3	46.3	43.7	42.5	41.9	43.8	49.9	54.5	55.2	55.0	55.1	55.2	55.6	55.5	55.6	55.9	56.2	56.8	56.4	55.2	53.9	53.2	52.5	50.5	48.6
Carp Road - South of 417	57.3	2	46.3	44.6	41.2	42.1	45.4	52.3	58.2	59.8	60.0	59.1	58.1	58.2	59.0	58.7	58.8	59.9	60.5	60.5	58.9	56.7	55.7	54.9	55.2	50.0

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	49.3	47.2	44.9	45.0	47.7	54.3	59.7	61.1	61.2	60.5	59.9	60.1	60.6	60.4	60.6	61.4	62.0	61.9	60.4	58.5	57.6	56.8	56.5	52.4

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	49.3	47.2	44.9	45.0	47.7	54.3	59.7	61.1	61.2	60.5	59.9	60.1	60.6	60.4	60.6	61.4	62.0	61.9	60.4	58.5	57.6	56.8	56.5	52.4

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		45	45	45	45	45	45	45	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45
AMBIENT GUIDELINE LIMIT LEQ(1)		49.3	47.2	45.0	45.0	47.7	54.3	59.7	61.1	61.2	60.5	59.9	60.1	60.6	60.4	60.6	61.4	62.0	61.9	60.4	58.5	57.6	56.8	56.5	52.4

Lowest Daytime	**60**	Total Leq(day)	72.3	Road Leq(day)	72.3	day = 0700 through 2200
Lowest Evening	**56**	Total Leq(night)	62.2	Road Leq(night)	62.2	night = 2300 through 0600
Lowest Night-time	**45**					
1900-2000h Evening	**59**					
0600-0700h Night-time	**60**					

Road Traffic Noise at Facade PoR of NR8 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

		0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Hourly Traffic Volume	Total Volume																								
Highway 417 - West of Carp	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Distribution																								
% Traffic Distribution	number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 Traffic Distribution	3	0.74%	0.41%	0.31%	0.27%	0.42%	1.69%	4.95%	5.77%	5.44%	5.61%	5.76%	6.29%	6.21%	6.35%	6.72%	7.29%	8.26%	7.54%	5.74%	4.31%	3.63%	3.07%	1.95%	1.26%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Carp	55.9	3	48.4	45.8	44.6	44.0	45.9	52.0	56.6	57.3	57.0	57.2	57.3	57.7	57.6	57.7	58.0	58.3	58.9	58.5	57.3	56.0	55.3	54.6	52.6	50.7

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	48.4	45.8	44.6	44.0	45.9	52.0	56.6	57.3	57.0	57.2	57.3	57.7	57.6	57.7	58.0	58.3	58.9	58.5	57.3	56.0	55.3	54.6	52.6	50.7

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	48.4	45.8	44.6	44.0	45.9	52.0	56.6	57.3	57.0	57.2	57.3	57.7	57.6	57.7	58.0	58.3	58.9	58.5	57.3	56.0	55.3	54.6	52.6	50.7

Guideline Limits

		0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Receptor Class per MOE Publication NPC-205/NPC-232:	2																								
NPC-205 Leq(1) minimum limit		45	45	45	45	45	45	45	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45
AMBIENT GUIDELINE LIMIT LEQ(1)		48.4	45.8	45.0	45.0	45.9	52.0	56.6	57.3	57.0	57.2	57.3	57.7	57.6	57.7	58.0	58.3	58.9	58.5	57.3	56.0	55.3	54.6	52.6	50.7

Lowest Daytime	**57**	Total Leq(day)	69.2	Road Leq(day)	69.2	day = 0700 through 2200
Lowest Evening	**53**	Total Leq(night)	59.7	Road Leq(night)	59.7	night = 2300 through 0600
Lowest Night-time	**45**					
1900-2000h Evening	**56**					
0600-0700h Night-time	**57**					

Road Traffic Noise at Facade PoR of PR4 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	31852	199	88	81	109	122	591	1533	1818	1585	1570	1707	1840	1775	1979	2117	2523	2782	2618	2154	1508	1122	864	705	462
Richardson Road - West of Carp Road	4939	18	5	6	8	9	87	293	429	335	271	413	247	248	260	253	354	465	398	273	176	149	104	97	41

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	2	0.62%	0.28%	0.25%	0.34%	0.38%	1.86%	4.81%	5.71%	4.98%	4.93%	5.36%	5.78%	5.57%	6.21%	6.65%	7.92%	8.73%	8.22%	6.76%	4.73%	3.52%	2.71%	2.21%	1.45%
Richardson Road - West of Carp Road	4	0.36%	0.10%	0.12%	0.16%	0.18%	1.76%	5.93%	8.69%	6.78%	5.49%	8.36%	5.00%	5.02%	5.26%	5.12%	7.17%	9.41%	8.06%	5.53%	3.56%	3.02%	2.11%	1.96%	0.83%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	47	2	39.1	35.6	35.2	36.5	37.0	43.9	48.0	48.7	48.1	48.1	48.5	48.8	48.6	49.1	49.4	50.2	50.6	50.3	49.5	47.9	46.6	45.5	44.6	42.8
Richardson Road - West of Carp Road	47	4	36.6	31.1	31.9	33.1	33.6	43.5	48.8	50.4	49.3	48.4	50.2	48.0	48.0	48.2	48.1	49.6	50.8	50.1	48.4	46.5	45.8	44.3	43.9	40.2

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	41.1	36.9	36.9	38.1	38.6	46.7	51.4	52.7	51.8	51.3	52.5	51.4	51.3	51.7	51.8	52.9	53.7	53.2	52.0	50.3	49.3	47.9	47.3	44.7

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	41.1	36.9	36.9	38.1	38.6	46.7	51.4	52.7	51.8	51.3	52.5	51.4	51.3	51.7	51.8	52.9	53.7	53.2	52.0	50.3	49.3	47.9	47.3	44.7

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232: 2

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit	45	45	45	45	45	45	45	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45
AMBIENT GUIDELINE LIMIT LEQ(1)	45.0	45.0	45.0	45.0	45.0	46.7	51.4	52.7	51.8	51.3	52.5	51.4	51.3	51.7	51.8	52.9	53.7	53.2	52.0	50.3	50.0	50.0	50.0	45.0

Lowest Daytime	**51**
Lowest Evening	**50**
Lowest Night-time	**45**
1900-2000h Evening	**50**
0600-0700h Night-time	**51**

Total Leq(day) 63.7 Road Leq(day) 63.7 day = 0700 through 2200

Total Leq(night) 54.0 Road Leq(night) 54.0 night = 2300 through 0600

Road Traffic Noise at Facade PoR of PR9 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	31852	199	88	81	109	122	591	1533	1818	1585	1570	1707	1840	1775	1979	2117	2523	2782	2618	2154	1508	1122	864	705	462

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	2	0.62%	0.28%	0.25%	0.34%	0.38%	1.86%	4.81%	5.71%	4.98%	4.93%	5.36%	5.78%	5.57%	6.21%	6.65%	7.92%	8.73%	8.22%	6.76%	4.73%	3.52%	2.71%	2.21%	1.45%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	56.7	2	48.4	44.9	44.5	45.8	46.3	53.1	57.3	58.0	57.4	57.4	57.7	58.1	57.9	58.4	58.7	59.4	59.9	59.6	58.8	57.2	55.9	54.8	53.9	52.1

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	48.4	44.9	44.5	45.8	46.3	53.1	57.3	58.0	57.4	57.4	57.7	58.1	57.9	58.4	58.7	59.4	59.9	59.6	58.8	57.2	55.9	54.8	53.9	52.1

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	48.4	44.9	44.5	45.8	46.3	53.1	57.3	58.0	57.4	57.4	57.7	58.1	57.9	58.4	58.7	59.4	59.9	59.6	58.8	57.2	55.9	54.8	53.9	52.1

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		45	45	45	45	45	45	45	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45
AMBIENT GUIDELINE LIMIT LEQ(1)		48.4	45.0	45.0	45.8	46.3	53.1	57.3	58.0	57.4	57.4	57.7	58.1	57.9	58.4	58.7	59.4	59.9	59.6	58.8	57.2	55.9	54.8	53.9	52.1

Lowest Daytime	**57**
Lowest Evening	**54**
Lowest Night-time	**45**
1900-2000h Evening	**57**
0600-0700h Night-time	**57**

Total Leq(day)	70.0	Road Leq(day)	70.0	day = 0700 through 2200
Total Leq(night)	60.5	Road Leq(night)	60.5	night = 2300 through 0600

Road Traffic Noise at Facade PoR of RR14 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	4939	18	5	6	8	9	87	293	429	335	271	413	247	248	260	253	354	465	398	273	176	149	104	97	41

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	2	0.36%	0.10%	0.12%	0.16%	0.18%	1.76%	5.93%	8.69%	6.78%	5.49%	8.36%	5.00%	5.02%	5.26%	5.12%	7.17%	9.41%	8.06%	5.53%	3.56%	3.02%	2.11%	1.96%	0.83%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	60.3	2	49.7	44.2	45.0	46.2	46.7	56.6	61.8	63.5	62.4	61.5	63.3	61.1	61.1	61.3	61.2	62.7	63.9	63.2	61.5	59.6	58.9	57.3	57.0	53.3

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	49.7	44.2	45.0	46.2	46.7	56.6	61.8	63.5	62.4	61.5	63.3	61.1	61.1	61.3	61.2	62.7	63.9	63.2	61.5	59.6	58.9	57.3	57.0	53.3

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	49.7	44.2	45.0	46.2	46.7	56.6	61.8	63.5	62.4	61.5	63.3	61.1	61.1	61.3	61.2	62.7	63.9	63.2	61.5	59.6	58.9	57.3	57.0	53.3

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		45	45	45	45	45	45	45	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45
AMBIENT GUIDELINE LIMIT LEQ(1)		49.7	45.0	45.0	46.2	46.7	56.6	61.8	63.5	62.4	61.5	63.3	61.1	61.1	61.3	61.2	62.7	63.9	63.2	61.5	59.6	58.9	57.3	57.0	53.3

Lowest Daytime	**61**
Lowest Evening	**57**
Lowest Night-time	**45**
1900-2000h Evening	**60**
0600-0700h Night-time	**62**

Total Leq(day) 73.7 Road Leq(day) 73.7 day = 0700 through 2200

Total Leq(night) 63.9 Road Leq(night) 63.9 night = 2300 through 0600

Table F.4b: ORNAMENT Calculations - Outdoor Point of Reception

Ontario Road Noise Analysis Method for ENvironment and Transportation

version 2.05

Job No. 1302177 Scenario Baseline (2012)

Job Name WCEC Ottawa Landfill 24-hour Leq(24), Outdoor PoR

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)	Topo-graphy Type	Source Height (m)	Road Elevation (m asl)	Receptor Height (m)	Receptor Elevation (m asl)	Ground Elevation Change (m)			Barrier Height (m)	Barrier Elevation (m asl)	Barrier-Reciever Distance (m)	Barrier Viewable Angle		No. of Rows of Houses	Density of Houses (% Houses)	Depth of Woods	Adjustment (dB)	Reason For Adjustment	**Total Segment L_{eq} (dBA)**
			Autos	Medium	Heavy					θ_1	θ_2								Elevation Change e (m)	Hor. Dist a (m)	Hor. Dist b (m)				θ_1	θ_2						
24-Hour																																
PR4	Highway 417 - West of Highway 7	24	26254	1641	4923	100	0	y	1	-35	0	770	Soft	A	2.0		1.5															44.1
	Highway 417 - West of Highway 7	24	26254	1641	4923	100	0	y	1	-90	-35	900	Soft	A	2.0		1.5															42.2
	Richardson Road - West of Carp Road	24	4100	877	12	80	0	y	1	-90	90	42	Soft	A	0.1		1.5													-10.0	self shielding	46.9
																																50
PR9	Highway 417 - West of Highway 7	24	26254	1641	4923	100	0	y	1	-65	70	310	Soft	A	2.0		1.5															**55**
NR1	Richardson Road - West of Carp Road	24	4100	877	12	80	0	y	1	-90	90	27	Soft	A	0.1		1.5															**60**
NR2	Highway 417 - West of Carp	24	20491	1281	3842	100	0	y	1	-75	10	300	Soft	A	2.0		1.5															52.5
	Carp Road - South of 417	24	19954	1454	143	80	0	y	1	-90	0	53	Soft	A	0.1		1.5															57.0
																																58
NR8	Highway 417 - West of Carp	24	20491	1281	3842	100	0	y	1	-65	70	296	Soft	A	2.0		1.5															**55**
RR14	Richardson Road - West of Carp Road	24	4100	877	12	80	0	y	1	-90	90	27	Soft	A	0.1		1.5															**60**

Road Traffic Noise at Outdoor PoR of NR1 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	4939	18	5	6	8	9	87	293	429	335	271	413	247	248	260	253	354	465	398	273	176	149	104	97	41

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	2	0.36%	0.10%	0.12%	0.16%	0.18%	1.76%	5.93%	8.69%	6.78%	5.49%	8.36%	5.00%	5.02%	5.26%	5.12%	7.17%	9.41%	8.06%	5.53%	3.56%	3.02%	2.11%	1.96%	0.83%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	60.1	2	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		--	--	--	--	--	--	--	50	50	50	50	50	50	50	50	50	50	50	50	45	45	45	45	--
AMBIENT GUIDELINE LIMIT LEQ(1)		49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Lowest Daytime	**61**
Lowest Evening	**57**
1900-2000h Evening	**59**

Total Leq(day)	73.5	Road Leq(day)	73.5
Total Leq(night)	63.7	Road Leq(night)	63.7

day = 0700 through 2200
night = 2300 through 0600

Road Traffic Noise at Outdoor PoR of NR2 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Carp	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carp Road - South of 417	21340	70	48	22	27	57	282	1089	1592	1674	1334	1073	1104	1302	1225	1246	1601	1856	1846	1286	768	616	509	548	165

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Carp Road - South of 417	2	0.33%	0.22%	0.10%	0.13%	0.27%	1.32%	5.10%	7.46%	7.84%	6.25%	5.03%	5.17%	6.10%	5.74%	5.84%	7.50%	8.70%	8.65%	6.03%	3.60%	2.89%	2.39%	2.57%	0.77%
Highway 417 Traffic Distribution	3	0.74%	0.41%	0.31%	0.27%	0.42%	1.69%	4.95%	5.77%	5.44%	5.61%	5.76%	6.29%	6.21%	6.35%	6.72%	7.29%	8.26%	7.54%	5.74%	4.31%	3.63%	3.07%	1.95%	1.26%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Carp	52.5	3	45.0	42.4	41.2	40.6	42.5	48.6	53.3	53.9	53.7	53.8	53.9	54.3	54.2	54.3	54.6	54.9	55.5	55.1	53.9	52.7	51.9	51.2	49.2	47.3
Carp Road - South of 417	57.0	2	46.0	44.3	41.0	41.8	45.1	52.0	57.9	59.6	59.8	58.8	57.8	58.0	58.7	58.4	58.5	59.6	60.2	60.2	58.6	56.4	55.4	54.6	54.9	49.7

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	48.5	46.5	44.1	44.3	47.0	53.7	59.2	60.6	60.7	60.0	59.3	59.5	60.0	59.8	60.0	60.9	61.5	61.4	59.9	57.9	57.0	56.2	56.0	51.7

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	48.5	46.5	44.1	44.3	47.0	53.7	59.2	60.6	60.7	60.0	59.3	59.5	60.0	59.8	60.0	60.9	61.5	61.4	59.9	57.9	57.0	56.2	56.0	51.7

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		--	--	--	--	--	--	--	50	50	50	50	50	50	50	50	50	50	50	50	45	45	45	45	--
AMBIENT GUIDELINE LIMIT LEQ(1)		48.5	46.5	44.1	44.3	47.0	53.7	59.2	60.6	60.7	60.0	59.3	59.5	60.0	59.8	60.0	60.9	61.5	61.4	59.9	57.9	57.0	56.2	56.0	51.7

Lowest Daytime	**59**	Total Leq(day)	71.7	Road Leq(day)	71.7	day = 0700 through 2200
Lowest Evening	**56**	Total Leq(night)	61.5	Road Leq(night)	61.5	night = 2300 through 0600
1900-2000h Evening	**58**					

Road Traffic Noise at Outdoor PoR of NR8 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

		0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Hourly Traffic Volume	Total Volume																								
Highway 417 - West of Carp	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Distribution	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
% Traffic Distribution	number																								
Highway 417 Traffic Distribution	3	0.74%	0.41%	0.31%	0.27%	0.42%	1.69%	4.95%	5.77%	5.44%	5.61%	5.76%	6.29%	6.21%	6.35%	6.72%	7.29%	8.26%	7.54%	5.74%	4.31%	3.63%	3.07%	1.95%	1.26%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Carp	54.6	3	47.1	44.6	43.3	42.7	44.7	50.7	55.4	56.0	55.8	55.9	56.0	56.4	56.4	56.5	56.7	57.1	57.6	57.2	56.0	54.8	54.0	53.3	51.3	49.4

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	47.1	44.6	43.3	42.7	44.7	50.7	55.4	56.0	55.8	55.9	56.0	56.4	56.4	56.5	56.7	57.1	57.6	57.2	56.0	54.8	54.0	53.3	51.3	49.4

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	47.1	44.6	43.3	42.7	44.7	50.7	55.4	56.0	55.8	55.9	56.0	56.4	56.4	56.5	56.7	57.1	57.6	57.2	56.0	54.8	54.0	53.3	51.3	49.4

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		--	--	--	--	--	--	--	50	50	50	50	50	50	50	50	50	50	50	50	45	45	45	45	--
AMBIENT GUIDELINE LIMIT LEQ(1)		47.1	44.6	43.3	42.7	44.7	50.7	55.4	56.0	55.8	55.9	56.0	56.4	56.4	56.5	56.7	57.1	57.6	57.2	56.0	54.8	54.0	53.3	51.3	49.4

Lowest Daytime	**56**
Lowest Evening	**51**
1900-2000h Evening	**55**

Total Leq(day)	68.0	Road Leq(day)	68.0
Total Leq(night)	58.5	Road Leq(night)	58.5

day = 0700 through 2200
night = 2300 through 0600

Road Traffic Noise at Outdoor PoR of PR4 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	31852	199	88	81	109	122	591	1533	1818	1585	1570	1707	1840	1775	1979	2117	2523	2782	2618	2154	1508	1122	864	705	462
Richardson Road - West of Carp Road	4939	18	5	6	8	9	87	293	429	335	271	413	247	248	260	253	354	465	398	273	176	149	104	97	41

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	2	0.62%	0.28%	0.25%	0.34%	0.38%	1.86%	4.81%	5.71%	4.98%	4.93%	5.36%	5.78%	5.57%	6.21%	6.65%	7.92%	8.73%	8.22%	6.76%	4.73%	3.52%	2.71%	2.21%	1.45%
Richardson Road - West of Carp Road	4	0.36%	0.10%	0.12%	0.16%	0.18%	1.76%	5.93%	8.69%	6.78%	5.49%	8.36%	5.00%	5.02%	5.26%	5.12%	7.17%	9.41%	8.06%	5.53%	3.56%	3.02%	2.11%	1.96%	0.83%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	46	2	38.0	34.5	34.1	35.4	35.9	42.8	46.9	47.6	47.0	47.0	47.4	47.7	47.5	48.0	48.3	49.1	49.5	49.2	48.4	46.8	45.5	44.4	43.5	41.7
Richardson Road - West of Carp Road	47	4	36.3	30.8	31.6	32.8	33.3	43.2	48.5	50.1	49.0	48.1	50.0	47.7	47.7	47.9	47.8	49.3	50.5	49.8	48.2	46.3	45.5	44.0	43.7	39.9

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	40.3	36.0	36.0	37.3	37.8	46.0	50.8	52.1	51.2	50.6	51.9	50.7	50.6	51.0	51.1	52.2	53.0	52.5	51.3	49.6	48.5	47.2	46.6	43.9

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	40.3	36.0	36.0	37.3	37.8	46.0	50.8	52.1	51.2	50.6	51.9	50.7	50.6	51.0	51.1	52.2	53.0	52.5	51.3	49.6	48.5	47.2	46.6	43.9

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		--	--	--	--	--	--	--	50	50	50	50	50	50	50	50	50	50	50	50	45	45	45	45	--
AMBIENT GUIDELINE LIMIT LEQ(1)		40.3	36.0	36.0	37.3	37.8	46.0	50.8	52.1	51.2	50.6	51.9	50.7	50.6	51.0	51.1	52.2	53.0	52.5	51.3	49.6	48.5	47.2	46.6	43.9

Lowest Daytime	**51**	Total Leq(day)	63.0	Road Leq(day)	63.0
Lowest Evening	**47**	Total Leq(night)	53.3	Road Leq(night)	53.3
1900-2000h Evening	**50**				

day = 0700 through 2200
night = 2300 through 0600

Road Traffic Noise at Outdoor PoR of PR9 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	31852	199	88	81	109	122	591	1533	1818	1585	1570	1707	1840	1775	1979	2117	2523	2782	2618	2154	1508	1122	864	705	462

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	2	0.62%	0.28%	0.25%	0.34%	0.38%	1.86%	4.81%	5.71%	4.98%	4.93%	5.36%	5.78%	5.57%	6.21%	6.65%	7.92%	8.73%	8.22%	6.76%	4.73%	3.52%	2.71%	2.21%	1.45%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Highway 417 - West of Highway 7	55.4	2	47.1	43.6	43.2	44.5	45.0	51.9	56.0	56.7	56.1	56.1	56.5	56.8	56.6	57.1	57.4	58.2	58.6	58.3	57.5	55.9	54.6	53.5	52.6	50.8

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	47.1	43.6	43.2	44.5	45.0	51.9	56.0	56.7	56.1	56.1	56.5	56.8	56.6	57.1	57.4	58.2	58.6	58.3	57.5	55.9	54.6	53.5	52.6	50.8

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	47.1	43.6	43.2	44.5	45.0	51.9	56.0	56.7	56.1	56.1	56.5	56.8	56.6	57.1	57.4	58.2	58.6	58.3	57.5	55.9	54.6	53.5	52.6	50.8

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		--	--	--	--	--	--	--	50	50	50	50	50	50	50	50	50	50	50	50	45	45	45	45	--
AMBIENT GUIDELINE LIMIT LEQ(1)		47.1	43.6	43.2	44.5	45.0	51.9	56.0	56.7	56.1	56.1	56.5	56.8	56.6	57.1	57.4	58.2	58.6	58.3	57.5	55.9	54.6	53.5	52.6	50.8

Lowest Daytime	**56**
Lowest Evening	**53**
1900-2000h Evening	**56**

Total Leq(day)	68.7	Road Leq(day)	68.7	day = 0700 through 2200
Total Leq(night)	59.2	Road Leq(night)	59.2	night = 2300 through 0600

Road Traffic Noise at Outdoor PoR of RR14 - Based on 24-hr Measurements

WCEC Ottawa Landfill

Road Noise Sources

Hourly Traffic Volume	Total Volume	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	4939	18	5	6	8	9	87	293	429	335	271	413	247	248	260	253	354	465	398	273	176	149	104	97	41

% Traffic Distribution	Distribution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	2	0.36%	0.10%	0.12%	0.16%	0.18%	1.76%	5.93%	8.69%	6.78%	5.49%	8.36%	5.00%	5.02%	5.26%	5.12%	7.17%	9.41%	8.06%	5.53%	3.56%	3.02%	2.11%	1.96%	0.83%

Road Source	24 hr Leq value (dBA)	Assign distrubution number	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Richardson Road - West of Carp Road	60.1	2	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Road Traffic Leq (1)	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Stationary Noise Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Total Stationary Sources Leq (1)																								

Total of Road + Stationary Sources

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Road+Stationary Leq (1)	49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Guideline Limits

Receptor Class per MOE Publication NPC-205/NPC-232:	2	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
NPC-205 Leq(1) minimum limit		--	--	--	--	--	--	--	50	50	50	50	50	50	50	50	50	50	50	50	45	45	45	45	--
AMBIENT GUIDELINE LIMIT LEQ(1)		49.5	44.0	44.8	46.0	46.5	56.4	61.7	63.3	62.2	61.3	63.1	60.9	60.9	61.1	61.0	62.5	63.7	63.0	61.3	59.4	58.7	57.2	56.8	53.1

Lowest Daytime	**61**
Lowest Evening	**57**
1900-2000h Evening	**59**

Total Leq(day)	73.5	Road Leq(day)	73.5
Total Leq(night)	63.7	Road Leq(night)	63.7

day = 0700 through 2200
night = 2300 through 0600

APPENDIX G

Background Sound Levels at NR4

CONSULTING ENGINEERS & SCIENTISTS

Memorandum

Tel: 519.823.1311
Fax: 519.823.1316
RWDI AIR Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada N1K 1B8
Email: solutions@rwdi.com

Date: June 1, 2012 **RWDI Reference #:** 1100798

To: Mr. Tim Murphy **E-Mail:** Tmurphy3@wm.com

From: Brad Bergeron **E-Mail:** Brad.Bergeron@rwdi.com

Re: **Assessment of Background Sound Levels near Receptor NR4**
Waste Management of Canada Corporation
Ottawa Landfill Site
Ottawa, Ontario

Dear Mr. Murphy,

Waste Management of Canada Corporation (WM) retained RWDI AIR Inc. (RWDI) to evaluate background sound levels near a two-storey home located at 292 Moonstone Road South which is situated southwest of the West Carleton Environmental Centre (WCEC) in Ottawa, Ontario. This home has been identified as receptor NR4 and is one of the receptors to be assessed for noise as part of the WCEC Expansion Project. Background sound levels were examined for this receptor in order to assess the predictable worst-case noise impacts from the landfill expansion.

The objective of this work is to evaluate the background sound levels near NR4 to determine if guideline limits above the Ontario Ministry of the Environment (MOE) default guideline limits could be established. This memorandum summarizes our findings from the background measurement programme.

MOE NOISE GUIDELINE LIMITS

The relevant criteria for the WCEC expansion is the MOE "Stationary Source" guidelines for Class 2 (suburban) areas as set out in MOE Publication NPC-205, and the MOE Landfill guideline for landfilling activities.

Steady-State (Stationary) Operations

The MOE Publication NPC-205 sound level limits for receptors in Class 2 areas are outlined as follows:

- The higher of 50 dBA or background noise, during the daytime hours (7:00 am to 7:00 pm);
- The higher of 45 dBA or background noise, during the evening hours (7:00 pm to 11:00 pm); and
- The higher of 45 dBA or background noise, during the night-time hours (11:00 pm to 7:00 am).

Landfill Operations

The Landfill guideline sets the One Hour Energy Equivalent Sound Level (Leq(1-hr)) limit for noise from a landfill site are outlined as follows:

- The higher of 55 dBA or background noise, during the daytime hours (7:00 am to 7:00 pm); and
- The higher of 45 dBA or background noise, during the evening hours (7:00 pm to 11:00 pm); and
- The higher of 45 dBA or background noise, during the night-time hours (11:00 pm to 7:00 am).

The MOE Publication NPC-205 or Landfill guideline uses the background sound level as the applicable sound level limit, where the background sound level is above the default values. If the actual background sound level is below the default limit, then the default limit can be used.

RESULTS

Background sound levels in the area are influenced mainly by the noise of road traffic along Highway 417. The landfill's waste transfer and processing facility (WTPF) was not audible at NR4 during operating hours. The pit (Clark Quarry) located to the west of the receptor was not operating during the measurement period.

Long-term measurements of background sound levels were conducted from April 26 to 30, 2012. Measurements were conducted in accordance with the applicable requirements of MOE Publication NPC-103. Only data gathered during meteorological conditions complying with MOE NPC-103 criteria have been used in the analysis of background sound levels. Equipment and weather data are provided in **Attachments 1 and 2**.

The measurement location was selected as representative of background sound levels for receptor NR4. Measurement location is shown as ML1 in **Figure A**. Long-term measurement results are shown in **Figure B**. Minimum ambient sound levels during the measurement period demonstrate that background sound levels are higher than the NPC-205 and the Landfill guideline minima. The minimum hourly measured sound levels, and resulting guideline limits to be used in the Environmental Assessment for receptor NR4 are 60 dBA, 59 dBA and 51 dBA for the daytime, evening and night-time hours, respectively.

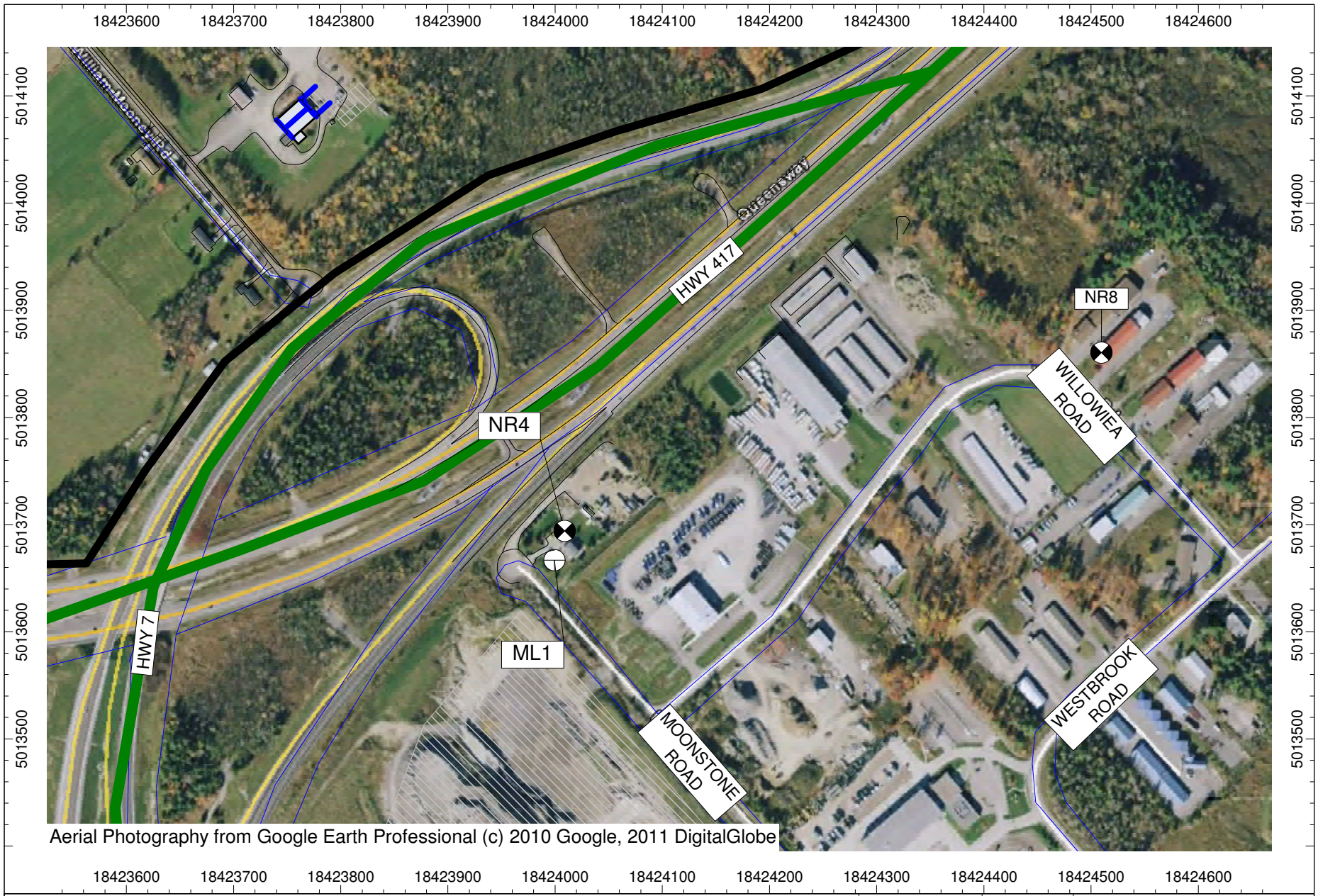
CLOSING

This memorandum provides the guideline limits that are applicable based on measured sound levels at receptor NR4. The measurements showed the minimum sound levels due to road traffic along Highway 417 west of Carp Road are higher than the applicable default guideline limits.

We would be pleased to respond should you have any questions.

Kind regards,

Brad Bergeron, A.Sc.T., d.E.T.
Senior Project Manager/Principal



Long-term Measurement Location ML1

True North

Drawn by: LBB	Figure: **1**
Scale:	1:5000
Date:	May 25, 2012

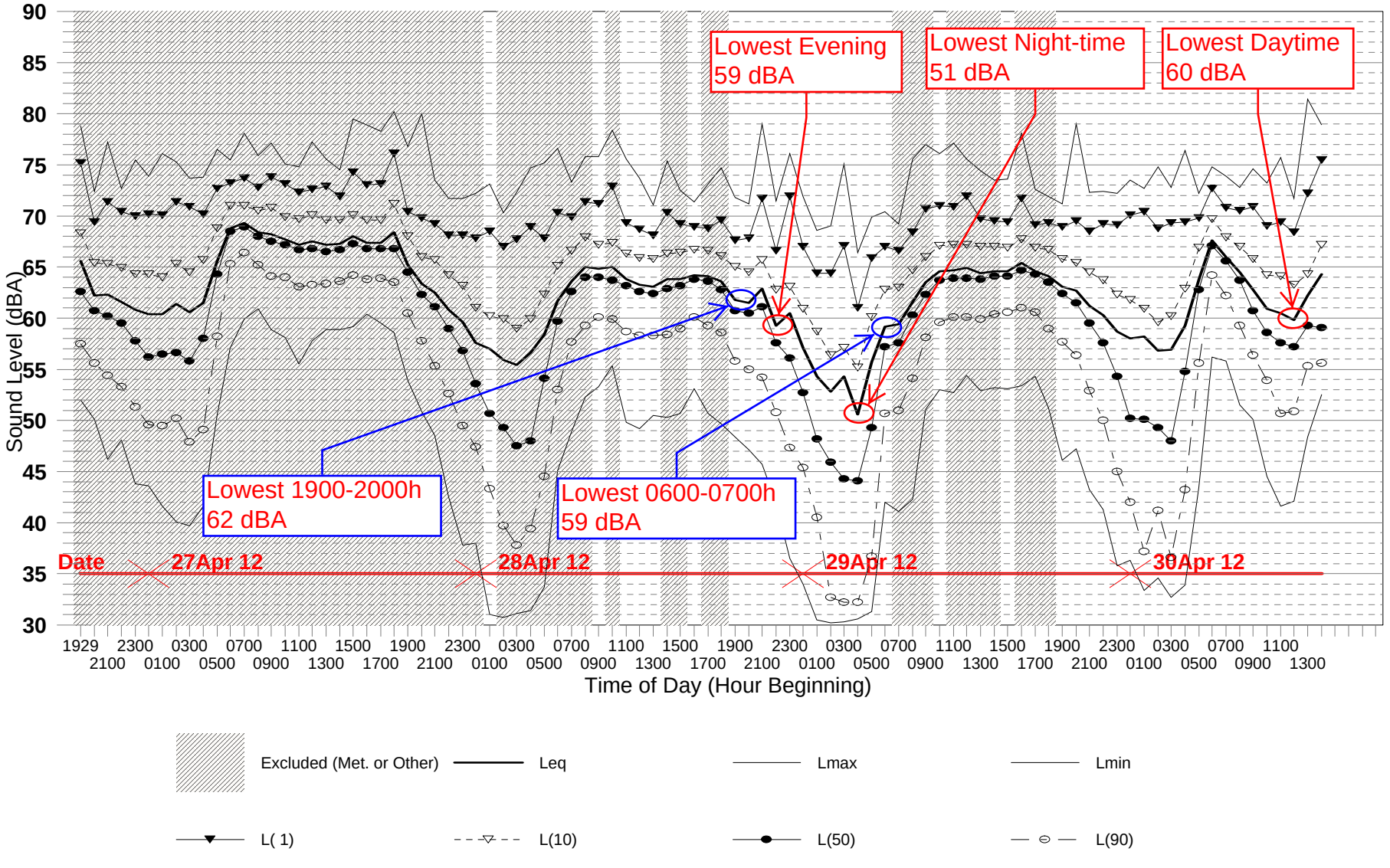
WCEC Landfill - Ottawa, Ontario

Project #1100798

RWDI®

Long-Term Measurement Results

NR4 (292 Moonstone Rd)



Measured Ambient Sound Levels - NR4 (292 Moonstone Rd) **April 26 2012 to April 30, 2012, 2002** WCEC Landfill – Ottawa, Ontario Project #1100798	Figure No. **B** Date: May 25, 2012	RWDI

MEASUREMENT EQUIPMENT

Sound Level Meter 820 Kit 3

Sound Level Meter	
Make and Model	Larson-Davis Model 820 SLM
Serial No.	1408
Pre-amplifier	
Make and Model	Larson-Davis Model PRM828
Serial No.	2093
Microphone	
Make and Model	Larson-Davis Model 2559 precision air-condenser microphone
Serial No.	3031
Calibrator	
Make and Model	Larson-Davis CAL200 precision acoustic calibrator (1000 Hz)
Serial No.	3628

Last modified: January 7, 2008

Environment Canada Environnement Canada

Canada

Hourly Data Report for April 26, 2012

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

OTTAWA INT'L
ONTARIO

Latitude: 45°19'00.000" N Longitude: 75°40'00.000" W Elevation: 114.00 m

Climate ID: 6106001 WMO ID: 71628 TC ID: YOW

Hourly Data Report for April 26, 2012

Time	Temp °C	Dew Point Temp °C	Rel Hum %	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
00:00‡	0.2	-2.0	85	17	4	10.0	99.76			NA
01:00‡	-2.0	-3.6	89	17	7	10.0	99.76		-5	Clear
02:00‡	-2.8	-4.2	90	14	6	10.0	99.66		-5	NA
03:00‡	-0.1	-2.6	83	19	9	10.0	99.67		-3	NA
04:00‡	-0.9	-2.5	89	17	7	10.0	99.67		-3	Mainly Clear
05:00‡	-1.7	-2.7	93	19	4	10.0	99.68		-3	NA
06:00‡	0.2	-1.0	92	10	7	10.0	99.67			NA
07:00‡	3.0	0.7	85	13	9	10.0	99.65			Mostly Cloudy
08:00‡	3.7	0.9	82	15	9	10.0	99.61			NA
09:00‡	6.6	0.5	65	18	13	10.0	99.56			NA
10:00‡	8.8	0.8	57	14	12	10.0	99.47			Cloudy
11:00‡	8.6	1.1	59	10	15	10.0	99.37			NA
12:00‡	9.9	0.0	50	11	19	10.0	99.21			NA
13:00‡	9.1	-1.0	49	9	25	10.0	99.03			Cloudy
14:00‡	9.2	-0.1	52	10	18	10.0	98.98			NA
15:00‡	9.2	0.7	55	6	12	10.0	98.84			NA
16:00‡	8.2	1.4	62	5	8	10.0	98.89			Rain
17:00‡	6.9	3.2	77	3	11	10.0	98.88			Rain
18:00‡	6.0	4.2	88	2	15	10.0	98.83			Rain
19:00‡	5.6	4.3	91	34	21	10.0	98.83			Rain
20:00‡	4.7	3.4	91	34	22	10.0	98.88			Rain
21:00‡	4.3	3.3	93	32	19	10.0	98.97			NA
22:00‡	4.1	3.4	95	32	17	10.0	99.00			Rain
23:00‡	4.1	3.1	93	31	18	10.0	99.06			Rain

Legend
M = Missing
E = Estimated
NA = Not Available
‡ = Partner data that is not subject to review by the National Climate Archives

Environment Canada Environnement Canada

Canada

Hourly Data Report for April 27, 2012

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

OTTAWA INT'L
ONTARIO

Latitude: 45°19'00.000" N **Longitude**: 75°40'00.000" W **Elevation**: 114.00 m

Climate ID: 6106001 **WMO ID**: 71628 **TC ID**: YOW

Hourly Data Report for April 27, 2012

Time	Temp °C	Dew Point Temp °C	Rel Hum %	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
00:00‡	3.2	1.3	87	32	30	10.0	99.17			Rain
01:00‡	1.7	-0.6	85	32	31	10.0	99.27			Rain
02:00‡	0.8	-1.8	83	32	42	10.0	99.33			Snow
03:00‡	0.5	-2.4	81	31	35	10.0	99.43			Snow
04:00‡	0.0	-2.9	81	31	31	10.0	99.51		-7	Snow
05:00‡	-0.5	-4.0	77	32	33	10.0	99.61		-7	NA
06:00‡	-0.6	-4.3	76	31	28	10.0	99.71		-7	NA
07:00‡	-0.5	-4.4	75	30	31	10.0	99.76		-7	Cloudy
08:00‡	-0.4	-4.7	73	30	31	10.0	99.85		-7	NA
09:00‡	-0.5	-5.3	70	30	37	10.0	99.92		-8	NA
10:00‡	0.1	-5.7	65	30	37	10.0	100.00			Cloudy
11:00‡	0.9	-5.8	61	32	38	10.0	100.07			NA
12:00‡	1.5	-5.7	59	29	30	10.0	100.13			NA
13:00‡	1.5	-6.4	56	31	31	10.0	100.21			Cloudy
14:00‡	1.1	-6.3	58	30	34	10.0	100.26			NA
15:00‡	2.2	-6.2	54	31	29	10.0	100.29			NA
16:00‡	2.5	-6.6	51	30	36	10.0	100.35			Mostly Cloudy
17:00‡	2.2	-6.4	53	31	34	10.0	100.43			NA
18:00‡	1.2	-7.1	54	32	37	10.0	100.48			NA
19:00‡	0.5	-7.5	55	33	27	10.0	100.55			Cloudy
20:00‡	0.2	-8.3	53	31	30	10.0	100.63			NA
21:00‡	0.3	-8.5	52	31	22	10.0	100.68			NA
22:00‡	0.3	-8.2	53	33	24	10.0	100.72			Cloudy
23:00‡	0.1	-8.6	52	33	30	10.0	100.77			NA

Legend
M = Missing
E = Estimated
NA = Not Available
‡ = Partner data that is not subject to review by the National Climate Archives

Environment Canada Environnement Canada

Canada

Hourly Data Report for April 28, 2012

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

OTTAWA INT'L
ONTARIO

Latitude: 45°19'00.000" N Longitude: 75°40'00.000" W Elevation: 114.00 m

Climate ID: 6106001 WMO ID: 71628 TC ID: YOW

Hourly Data Report for April 28, 2012

Time	Temp °C	Dew Point Temp °C	Rel Hum %	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
00:00‡	-0.2	-9.2	51	31	29	10.0	100.77		-7	NA
01:00‡	-0.5	-8.7	54	32	18	10.0	100.73		-6	Cloudy
02:00‡	-0.9	-8.9	55	34	21	10.0	100.74		-7	NA
03:00‡	-2.0	-9.7	56	32	23	10.0	100.81		-8	NA
04:00‡	-3.2	-10.1	59	30	21	10.0	100.88		-9	Mainly Clear
05:00‡	-3.4	-10.3	59	32	24	10.0	100.93		-10	NA
06:00‡	-2.8	-10.2	57	32	24	10.0	100.99		-9	NA
07:00‡	-2.1	-10.5	53	29	23	10.0	101.03		-8	Mainly Clear
08:00‡	-1.1	-11.3	46	31	21	10.0	101.07		-7	NA
09:00‡	0.4	-11.7	40	32	17	10.0	101.05			NA
10:00‡	1.5	-12.0	36	30	23	10.0	101.02			Clear
11:00‡	3.2	-11.6	33	28	17	10.0	101.01			NA
12:00‡	4.7	-10.7	32	31	18	10.0	100.92			NA
13:00‡	5.8	-10.5	30	31	20	10.0	100.87			Clear
14:00‡	6.5	-10.8	28	26	24	10.0	100.79			NA
15:00‡	7.6	-9.3	29	27	21	10.0	100.73			NA
16:00‡	7.5	-9.9	28	29	18	10.0	100.70			Mainly Clear
17:00‡	7.4	-10.9	26	29	25	10.0	100.65			NA
18:00‡	7.0	-10.8	27	27	21	10.0	100.66			NA
19:00‡	5.3	-11.4	29	28	14	10.0	100.62			Mainly Clear
20:00‡	3.1	-11.3	34	27	13	10.0	100.66			NA
21:00‡	3.3	-10.8	35	26	7	10.0	100.70			NA
22:00‡	1.5	-9.8	43	26	9	10.0	100.70			Mostly Cloudy
23:00‡	1.6	-9.7	43	27	9	10.0	100.68			NA

Legend
M = Missing
E = Estimated

Environment Canada Environnement Canada

Canada

Hourly Data Report for April 29, 2012

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

OTTAWA INT'L
ONTARIO

Latitude: 45°19'00.000" N Longitude: 75°40'00.000" W Elevation: 114.00 m

Climate ID: 6106001 WMO ID: 71628 TC ID: YOW

Hourly Data Report for April 29, 2012

Time	Temp °C	Dew Point Temp °C	Rel Hum %	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
00:00‡	1.1	-9.3	46	25	10	10.0	100.68			NA
01:00‡	-1.3	-8.3	59	25	13	10.0	100.68		-6	Mostly Cloudy
02:00‡	-2.0	-8.3	62	25	10	10.0	100.68		-6	NA
03:00‡	-2.0	-9.0	59	27	10	10.0	100.67		-6	NA
04:00‡	-3.2	-9.3	63	26	9	10.0	100.71		-7	Mainly Clear
05:00‡	-2.9	-9.2	62	28	10	10.0	100.76		-7	NA
06:00‡	0.1	-7.2	58	30	11	10.0	100.81			NA
07:00‡	2.6	-11.1	36	32	26	10.0	100.85			Mainly Clear
08:00‡	3.4	-13.1	29	33	30	10.0	100.90			NA
09:00‡	4.6	-12.9	27	31	30	10.0	100.89			NA
10:00‡	5.7	-11.9	27	30	20	10.0	100.93			Clear
11:00‡	7.1	-13.3	22	33	38	10.0	100.91			NA
12:00‡	7.4	-11.9	24	30	22	10.0	100.92			NA
13:00‡	9.1	-11.6	22	28	23	10.0	100.91			Clear
14:00‡	9.8	-11.6	21	28	28	10.0	100.90			NA
15:00‡	9.8	-12.8	19	33	17	10.0	100.90			NA
16:00‡	10.1	-11.9	20	29	29	10.0	100.92			Clear
17:00‡	9.7	-12.3	20	29	22	10.0	100.92			NA
18:00‡	9.1	-12.2	21	31	24	10.0	100.95			NA
19:00‡	7.5	-11.8	24	32	17	10.0	101.01			Mainly Clear
20:00‡	5.4	-11.7	28	29	12	10.0	101.11			NA
21:00‡	4.4	-8.7	38	29	13	10.0	101.17			NA
22:00‡	4.6	-11.6	30	34	9	10.0	101.19			Clear
23:00‡	3.9	-11.8	31	0	12	10.0	101.20			NA

Legend
M = Missing
E = Estimated
NA = Not Available

Environment Canada Environnement Canada

Canada

Hourly Data Report for April 30, 2012

All times are specified in Local Standard Time (LST). Add 1 hour to adjust for Daylight Saving Time where and when it is observed.

OTTAWA INT'L
ONTARIO

Latitude: 45°19'00.000" N Longitude: 75°40'00.000" W Elevation: 114.00 m

Climate ID: 6106001 WMO ID: 71628 TC ID: YOW

Hourly Data Report for April 30, 2012

Time	Temp °C	Dew Point Temp °C	Rel Hum %	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
00:00‡	3.6	-12.0	31	4	8	10.0	101.16			NA
01:00‡	4.2	-11.9	30	5	8	10.0	101.11			Mainly Clear
02:00‡	0.2	-11.0	43	21	4	10.0	101.11			NA
03:00‡	0.0	-6.7	61	22	8	10.0	101.19		-3	NA
04:00‡	-1.2	-8.7	57	22	10	10.0	101.24		-5	Mainly Clear
05:00‡	-2.0	-8.8	60	24	4	10.0	101.28		-3	NA
06:00‡	1.5	-6.4	56	29	8	10.0	101.37			NA
07:00‡	5.1	-7.4	40	32	6	10.0	101.37			Mostly Cloudy
08:00‡	7.7	-9.3	29	8	7	10.0	101.25			NA
09:00‡	9.2	-9.3	26	13	9	10.0	101.28			NA
10:00‡	10.2	-8.0	27	6	12	10.0	101.19			Mostly Cloudy
11:00‡	11.7	-7.7	25	13	8	10.0	101.14			NA
12:00‡	12.1	-7.3	25	7	12	10.0	101.05			NA
13:00‡	12.1	-6.3	27	10	4	10.0	100.94			Mostly Cloudy
14:00‡	12.5	-6.0	27	13	9	10.0	100.86			NA
15:00‡	13.0	-5.1	28	12	18	10.0	100.75			NA
16:00‡	12.6	-4.0	31	11	9	10.0	100.69			Mostly Cloudy
17:00‡	12.4	-4.7	30	10	13	10.0	100.67			NA
18:00‡	11.5	-3.4	35	10	17	10.0	100.57			NA
19:00‡	10.9	-2.8	38	11	20	10.0	100.42			Mostly Cloudy
20:00‡	10.4	-1.6	43	9	15	10.0	100.47			Rain Showers
21:00‡	10.2	-1.2	45	8	12	10.0	100.47			NA
22:00‡	9.5	-0.7	49	8	12	10.0	100.38			Rain Showers
23:00‡	9.3	-1.1	48	7	16	10.0	100.30			NA

APPENDIX H

Modelling Parameters & Sample Calculations

Table H.1: Key Parameters Included in the Cadna/A Noise Modelling

WCEC - Ottawa, Ontario, 1302177

Parameter	Value	Rationale
Global Ground Absorption	0.6	Accounts for a mix of hard and soft (e.g., grass, dirt, pavement) surfaces between facility and receptors of interest
Local Ground Absorption	0	Accounts for mostly hard (e.g., ponds, asphalt and gravel) surfaces between facility and receptors of interest
Temperature	10 ^{o}C	Ontario standard conditions
Relative Humidity	70%	Ontario standard conditions
Max. Order of Reflection	N/A	Reflections from buildings on-site are negligible
Absorption Coefficient Alpha		

Cadna/A ISO-9613 Calculation Protocol - Definitions

Parameter	Unit	Definition
X	**(m)**	X-axis Cartesian coordinate
Y	**(m)**	Y-axis Cartesian coordinate
Z	**(m)**	Z-axis Cartesian coordinate
Refl.	**order**	Order of reflection
Freq.	**(Hz)**	1/1-Octave Frequency Band Centre Frequency
LxT	**(dBA)**	Daytime Sound Power Level
LxN	**(dBA)**	Night-time Sound Power Level
K0	**(dB)**	D_omega in ISO-9613 (correction for radiation into solid angles less than 4 Pi)
Dc	**(dB)**	Attenuation due to Directivity Effects
Adiv	**(dB)**	Attenuation Due to Divergence
Aatm	**(dB)**	Atmospheric Attenuation
Agr	**(dB)**	Ground Attenuation
Afol	**(dB)**	Attenuation due to foliage
Ahous	**(dB)**	Attenuation from houses
Abar	**(dB)**	Barrier Attenuation
Cmet	**(dB)**	Meteorological Correction
RL	**(dB)**	Reflection Loss
LrT	**(dBA)**	Resulting Daytime Noise Impacts at the receptor - Leq(1hr)
LrN	**(dBA)**	Resulting Night-time Noise Impacts at the receptor - Leq(1hr)

Receiver
Name: 2-storey home on Richardson Side Road NNW
ID: PR4
X: 18422496.02
Y: 5014786.38
Z: 129.45

Point Source, ISO 9613, Name: "Blower Bldg concentric opening", ID: "BLOWER_BLDG"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424555.89	5014967.63	128.60	0	32	60.1	60.1	0.0	0.0	77.3	0.1	-5.8	0.0	0.0	4.8	0.0	-0.0	-16.3	-16.3
2	18424555.89	5014967.63	128.60	0	63	70.6	70.6	0.0	0.0	77.3	0.3	-5.8	0.0	0.0	4.8	0.0	-0.0	-6.0	-6.0
3	18424555.89	5014967.63	128.60	0	125	67.6	67.6	0.0	0.0	77.3	0.9	3.5	0.0	0.0	1.4	0.0	-0.0	-15.4	-15.4
4	18424555.89	5014967.63	128.60	0	250	68.5	68.5	0.0	0.0	77.3	2.2	3.5	0.0	0.0	1.5	0.0	-0.0	-15.9	-15.9
5	18424555.89	5014967.63	128.60	0	500	71.8	71.8	0.0	0.0	77.3	4.0	4.8	0.0	0.0	0.5	0.0	-0.0	-14.8	-14.8
6	18424555.89	5014967.63	128.60	0	1000	73.8	73.8	0.0	0.0	77.3	7.6	-0.1	0.0	0.0	5.8	0.0	-0.0	-16.7	-16.7
7	18424555.89	5014967.63	128.60	0	2000	76.6	76.6	0.0	0.0	77.3	20.0	-2.3	0.0	0.0	6.6	0.0	-0.0	-25.0	-25.0
8	18424555.89	5014967.63	128.60	0	4000	70.9	70.9	0.0	0.0	77.3	67.8	-2.3	0.0	0.0	7.9	0.0	-0.0	-79.8	-79.8
9	18424555.89	5014967.63	128.60	0	8000	60.8	60.8	0.0	0.0	77.3	241.7	-2.3	0.0	0.0	9.8	0.0	-0.0	-265.6	-265.6

Point Source, ISO 9613, Name: "Candlestick flare motor 875 cfm", ID: "C_FLARE_motor"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424524.69	5014981.06	129.29	0	32	-39.4	-39.4	0.0	0.0	77.2	0.1	-5.8	0.0	0.0	4.8	0.0	-0.0	-115.7	-115.7
2	18424524.69	5014981.06	129.29	0	63	62.0	62.0	0.0	0.0	77.2	0.3	-5.8	0.0	0.0	4.9	0.0	-0.0	-14.6	-14.6
3	18424524.69	5014981.06	129.29	0	125	64.2	64.2	0.0	0.0	77.2	0.8	3.4	0.0	0.0	1.7	0.0	-0.0	-18.9	-18.9
4	18424524.69	5014981.06	129.29	0	250	71.0	71.0	0.0	0.0	77.2	2.1	3.3	0.0	0.0	2.2	0.0	-0.0	-13.8	-13.8
5	18424524.69	5014981.06	129.29	0	500	81.0	81.0	0.0	0.0	77.2	3.9	3.0	0.0	0.0	3.1	0.0	-0.0	-6.2	-6.2
6	18424524.69	5014981.06	129.29	0	1000	92.4	92.4	0.0	0.0	77.2	7.5	-1.1	0.0	0.0	7.1	0.0	-0.0	1.8	1.8
7	18424524.69	5014981.06	129.29	0	2000	83.0	83.0	0.0	0.0	77.2	19.7	-2.3	0.0	0.0	8.6	0.0	-0.0	-20.2	-20.2
8	18424524.69	5014981.06	129.29	0	4000	82.1	82.1	0.0	0.0	77.2	66.8	-2.3	0.0	0.0	10.6	0.0	-0.0	-70.2	-70.2
9	18424524.69	5014981.06	129.29	0	8000	76.2	76.2	0.0	0.0	77.2	238.2	-2.3	0.0	0.0	13.0	0.0	-0.0	-249.9	-249.9

Point Source, ISO 9613, Name: "Candlestick flare exhaust 875 cfm", ID: "C_FLARE_stk"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424532.26	5014988.00	138.91	0	32	63.7	63.7	0.0	0.0	77.2	0.1	-5.3	0.0	0.0	4.8	0.0	-0.0	-13.0	-13.0
2	18424532.26	5014988.00	138.91	0	63	76.2	76.2	0.0	0.0	77.2	0.3	-5.3	0.0	0.0	4.8	0.0	-0.0	-0.7	-0.7
3	18424532.26	5014988.00	138.91	0	125	80.4	80.4	0.0	0.0	77.2	0.8	0.2	0.0	0.0	4.6	0.0	-0.0	-2.4	-2.4
4	18424532.26	5014988.00	138.91	0	250	83.2	83.2	0.0	0.0	77.2	2.1	-1.3	0.0	0.0	4.9	0.0	-0.0	0.3	0.3
5	18424532.26	5014988.00	138.91	0	500	87.2	87.2	0.0	0.0	77.2	3.9	-2.1	0.0	0.0	5.0	0.0	-0.0	3.2	3.2
6	18424532.26	5014988.00	138.91	0	1000	91.0	91.0	0.0	0.0	77.2	7.5	-2.1	0.0	0.0	5.2	0.0	-0.0	3.3	3.3
7	18424532.26	5014988.00	138.91	0	2000	90.0	90.0	0.0	0.0	77.2	19.8	-2.1	0.0	0.0	5.6	0.0	-0.0	-10.4	-10.4
8	18424532.26	5014988.00	138.91	0	4000	82.6	82.6	0.0	0.0	77.2	67.0	-2.1	0.0	0.0	6.3	0.0	-0.0	-65.8	-65.8
9	18424532.26	5014988.00	138.91	0	8000	76.6	76.6	0.0	0.0	77.2	239.2	-2.1	0.0	0.0	7.4	0.0	-0.0	-245.0	-245.0

Point Source, ISO 9613, Name: "Smaller enclosed flare air intake at base", ID: "E_FLARE1_in"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424548.58	5014975.38	129.00	0	32	-39.4	-39.4	0.0	0.0	77.3	0.1	-5.8	0.0	0.0	4.8	0.0	-0.0	-115.8	-115.8
2	18424548.58	5014975.38	129.00	0	63	68.9	68.9	0.0	0.0	77.3	0.3	-5.8	0.0	0.0	4.8	0.0	-0.0	-7.7	-7.7
3	18424548.58	5014975.38	129.00	0	125	68.3	68.3	0.0	0.0	77.3	0.9	3.4	0.0	0.0	1.5	0.0	-0.0	-14.7	-14.7
4	18424548.58	5014975.38	129.00	0	250	70.2	70.2	0.0	0.0	77.3	2.1	3.3	0.0	0.0	1.8	0.0	-0.0	-14.3	-14.3
5	18424548.58	5014975.38	129.00	0	500	73.6	73.6	0.0	0.0	77.3	4.0	3.0	0.0	0.0	2.4	0.0	-0.0	-13.1	-13.1
6	18424548.58	5014975.38	129.00	0	1000	79.5	79.5	0.0	0.0	77.3	7.5	-1.1	0.0	0.0	6.0	0.0	-0.0	-10.2	-10.2
7	18424548.58	5014975.38	129.00	0	2000	78.2	78.2	0.0	0.0	77.3	19.9	-2.3	0.0	0.0	7.0	0.0	-0.0	-23.7	-23.7
8	18424548.58	5014975.38	129.00	0	4000	73.1	73.1	0.0	0.0	77.3	67.5	-2.3	0.0	0.0	8.5	0.0	-0.0	-77.9	-77.9
9	18424548.58	5014975.38	129.00	0	8000	66.4	66.4	0.0	0.0	77.3	240.9	-2.3	0.0	0.0	10.4	0.0	-0.0	-259.9	-259.9

Point Source, ISO 9613, Name: "Larger enclosed flare air intake at base", ID: "E_FLARE2_in"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424541.38	5014968.34	129.00	0	32	-39.4	-39.4	0.0	0.0	77.3	0.1	-5.8	0.0	0.0	4.8	0.0	-0.0	-115.8	-115.8

Point Source, ISO 9613, Name: "Larger enclosed flare air intake at base", ID: "E_FLARE2_in"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
2	18424541.38	5014968.34	129.00	0	63	68.9	68.9	0.0	0.0	77.3	0.3	-5.8	0.0	0.0	4.8	0.0	-0.0	-7.6	-7.6
3	18424541.38	5014968.34	129.00	0	125	68.3	68.3	0.0	0.0	77.3	0.8	3.4	0.0	0.0	1.5	0.0	-0.0	-14.7	-14.7
4	18424541.38	5014968.34	129.00	0	250	70.2	70.2	0.0	0.0	77.3	2.1	3.3	0.0	0.0	1.9	0.0	-0.0	-14.3	-14.3
5	18424541.38	5014968.34	129.00	0	500	73.6	73.6	0.0	0.0	77.3	4.0	3.0	0.0	0.0	2.5	0.0	-0.0	-13.1	-13.1
6	18424541.38	5014968.34	129.00	0	1000	79.5	79.5	0.0	0.0	77.3	7.5	-1.1	0.0	0.0	6.1	0.0	-0.0	-10.2	-10.2
7	18424541.38	5014968.34	129.00	0	2000	78.2	78.2	0.0	0.0	77.3	19.8	-2.3	0.0	0.0	7.1	0.0	-0.0	-23.7	-23.7
8	18424541.38	5014968.34	129.00	0	4000	73.1	73.1	0.0	0.0	77.3	67.3	-2.3	0.0	0.0	8.6	0.0	-0.0	-77.8	-77.8
9	18424541.38	5014968.34	129.00	0	8000	66.4	66.4	0.0	0.0	77.3	240.0	-2.3	0.0	0.0	10.7	0.0	-0.0	-259.2	-259.2

Point Source, ISO 9613, Name: "Energy Bldg sweep of air intakes; left half", ID: "GEN_IN_left"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424770.49	5014689.84	129.60	0	32	46.0	46.0	0.0	-4.2	78.1	0.1	-5.6	0.0	0.0	11.8	0.0	-0.0	-42.5	-42.5
2	18424770.49	5014689.84	129.60	0	63	68.2	68.2	0.0	-8.5	78.1	0.3	-5.6	0.0	0.0	14.3	0.0	-0.0	-27.4	-27.4
3	18424770.49	5014689.84	129.60	0	125	81.1	81.1	0.0	-16.9	78.1	0.9	-0.0	0.0	0.0	17.1	0.0	-0.0	-31.9	-31.9
4	18424770.49	5014689.84	129.60	0	250	81.1	81.1	0.0	-18.4	78.1	2.4	-1.9	0.0	0.0	19.9	0.0	-0.0	-35.9	-35.9
5	18424770.49	5014689.84	129.60	0	500	84.0	84.0	0.0	-20.0	78.1	4.4	-2.9	0.0	0.0	22.9	0.0	-0.0	-38.5	-38.5
6	18424770.49	5014689.84	129.60	0	1000	88.1	88.1	0.0	-20.0	78.1	8.3	-2.9	0.0	0.0	25.0	0.0	-0.0	-40.4	-40.4
7	18424770.49	5014689.84	129.60	0	2000	87.3	87.3	0.0	-20.0	78.1	22.0	-2.9	0.0	0.0	25.0	0.0	-0.0	-54.9	-54.9
8	18424770.49	5014689.84	129.60	0	4000	82.8	82.8	0.0	-20.0	78.1	74.6	-2.9	0.0	0.0	25.0	0.0	-0.0	-112.0	-112.0
9	18424770.49	5014689.84	129.60	0	8000	80.4	80.4	0.0	-20.0	78.1	266.1	-2.9	0.0	0.0	25.0	0.0	-0.0	-305.9	-305.9

Point Source, ISO 9613, Name: "Energy Bldg sweep of air intakes; right half", ID: "GEN_IN_right"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424761.68	5014699.90	129.69	0	32	48.8	48.8	0.0	-4.2	78.1	0.1	-5.6	0.0	0.0	11.6	0.0	-0.0	-39.6	-39.6
2	18424761.68	5014699.90	129.69	0	63	68.6	68.6	0.0	-8.5	78.1	0.3	-5.6	0.0	0.0	14.2	0.0	-0.0	-26.8	-26.8
3	18424761.68	5014699.90	129.69	0	125	79.7	79.7	0.0	-16.9	78.1	0.9	0.5	0.0	0.0	16.4	0.0	-0.0	-33.2	-33.2
4	18424761.68	5014699.90	129.69	0	250	79.3	79.3	0.0	-18.4	78.1	2.4	-1.6	0.0	0.0	19.8	0.0	-0.0	-37.7	-37.7
5	18424761.68	5014699.90	129.69	0	500	83.2	83.2	0.0	-20.0	78.1	4.4	-2.8	0.0	0.0	22.7	0.0	-0.0	-39.2	-39.2
6	18424761.68	5014699.90	129.69	0	1000	87.1	87.1	0.0	-20.0	78.1	8.3	-2.8	0.0	0.0	25.0	0.0	-0.0	-41.5	-41.5
7	18424761.68	5014699.90	129.69	0	2000	85.4	85.4	0.0	-20.0	78.1	21.9	-2.8	0.0	0.0	25.0	0.0	-0.0	-56.8	-56.8
8	18424761.68	5014699.90	129.69	0	4000	79.9	79.9	0.0	-20.0	78.1	74.3	-2.8	0.0	0.0	25.0	0.0	-0.0	-114.7	-114.7
9	18424761.68	5014699.90	129.69	0	8000	74.6	74.6	0.0	-20.0	78.1	265.0	-2.8	0.0	0.0	25.0	0.0	-0.0	-310.7	-310.7

Point Source, ISO 9613, Name: "Energy Building overhead door 1", ID: "GEN_OH1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424773.53	5014685.50	126.65	0	32	44.5	44.5	0.0	0.0	78.2	0.1	-5.8	0.0	0.0	14.2	0.0	-0.0	-42.1	-42.1
2	18424773.53	5014685.50	126.65	0	63	66.1	66.1	0.0	0.0	78.2	0.3	-5.8	0.0	0.0	17.0	0.0	-0.0	-23.5	-23.5
3	18424773.53	5014685.50	126.65	0	125	82.1	82.1	0.0	0.0	78.2	0.9	-1.0	0.0	0.0	19.8	0.0	-0.0	-15.9	-15.9
4	18424773.53	5014685.50	126.65	0	250	85.7	85.7	0.0	0.0	78.2	2.4	-2.4	0.0	0.0	22.8	0.0	-0.0	-15.2	-15.2
5	18424773.53	5014685.50	126.65	0	500	87.6	87.6	0.0	0.0	78.2	4.4	-3.3	0.0	0.0	25.0	0.0	-0.0	-16.7	-16.7
6	18424773.53	5014685.50	126.65	0	1000	89.8	89.8	0.0	0.0	78.2	8.3	-3.3	0.0	0.0	25.0	0.0	-0.0	-18.4	-18.4
7	18424773.53	5014685.50	126.65	0	2000	89.3	89.3	0.0	0.0	78.2	22.0	-3.3	0.0	0.0	25.0	0.0	-0.0	-32.6	-32.6
8	18424773.53	5014685.50	126.65	0	4000	83.7	83.7	0.0	0.0	78.2	74.7	-3.3	0.0	0.0	25.0	0.0	-0.0	-90.9	-90.9
9	18424773.53	5014685.50	126.65	0	8000	84.1	84.1	0.0	0.0	78.2	266.5	-3.3	0.0	0.0	25.0	0.0	-0.0	-282.2	-282.2

Point Source, ISO 9613, Name: "Energy Building overhead door 2", ID: "GEN_OH2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424765.50	5014694.60	126.65	0	32	45.7	45.7	0.0	0.0	78.1	0.1	-5.8	0.0	0.0	14.2	0.0	-0.0	-40.9	-40.9
2	18424765.50	5014694.60	126.65	0	63	67.0	67.0	0.0	0.0	78.1	0.3	-5.8	0.0	0.0	17.0	0.0	-0.0	-22.6	-22.6
3	18424765.50	5014694.60	126.65	0	125	79.2	79.2	0.0	0.0	78.1	0.9	-0.9	0.0	0.0	19.9	0.0	-0.0	-18.7	-18.7
4	18424765.50	5014694.60	126.65	0	250	83.6	83.6	0.0	0.0	78.1	2.4	-2.4	0.0	0.0	22.8	0.0	-0.0	-17.3	-17.3
5	18424765.50	5014694.60	126.65	0	500	86.5	86.5	0.0	0.0	78.1	4.4	-3.2	0.0	0.0	25.0	0.0	-0.0	-17.7	-17.7
6	18424765.50	5014694.60	126.65	0	1000	89.2	89.2	0.0	0.0	78.1	8.3	-3.2	0.0	0.0	25.0	0.0	-0.0	-19.0	-19.0
7	18424765.50	5014694.60	126.65	0	2000	88.1	88.1	0.0	0.0	78.1	21.9	-3.2	0.0	0.0	25.0	0.0	-0.0	-33.7	-33.7
8	18424765.50	5014694.60	126.65	0	4000	83.0	83.0	0.0	0.0	78.1	74.4	-3.2	0.0	0.0	25.0	0.0	-0.0	-91.3	-91.3
9	18424765.50	5014694.60	126.65	0	8000	81.3	81.3	0.0	0.0	78.1	265.5	-3.2	0.0	0.0	25.0	0.0	-0.0	-284.0	-284.0

Point Source, ISO 9613, Name: "Energy Building overhead door 3", ID: "GEN_OH3"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424757.55	5014703.61	126.81	0	32	47.5	47.5	0.0	0.0	78.1	0.1	-5.8	0.0	0.0	14.2	0.0	-0.0	-39.0	-39.0
2	18424757.55	5014703.61	126.81	0	63	64.1	64.1	0.0	0.0	78.1	0.3	-5.8	0.0	0.0	16.9	0.0	-0.0	-25.4	-25.4
3	18424757.55	5014703.61	126.81	0	125	76.3	76.3	0.0	0.0	78.1	0.9	-0.9	0.0	0.0	19.8	0.0	-0.0	-21.6	-21.6
4	18424757.55	5014703.61	126.81	0	250	80.9	80.9	0.0	0.0	78.1	2.4	-2.4	0.0	0.0	22.7	0.0	-0.0	-19.9	-19.9
5	18424757.55	5014703.61	126.81	0	500	85.0	85.0	0.0	0.0	78.1	4.4	-3.2	0.0	0.0	25.0	0.0	-0.0	-19.2	-19.2
6	18424757.55	5014703.61	126.81	0	1000	88.8	88.8	0.0	0.0	78.1	8.3	-3.2	0.0	0.0	25.0	0.0	-0.0	-19.3	-19.3
7	18424757.55	5014703.61	126.81	0	2000	86.6	86.6	0.0	0.0	78.1	21.9	-3.2	0.0	0.0	25.0	0.0	-0.0	-35.1	-35.1
8	18424757.55	5014703.61	126.81	0	4000	80.0	80.0	0.0	0.0	78.1	74.2	-3.2	0.0	0.0	25.0	0.0	-0.0	-94.0	-94.0
9	18424757.55	5014703.61	126.81	0	8000	75.1	75.1	0.0	0.0	78.1	264.5	-3.2	0.0	0.0	25.0	0.0	-0.0	-289.3	-289.3

Point Source, ISO 9613, Name: "Energy Building Smithco radiator fan 1", ID: "GEN_RAD1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424743.92	5014686.74	128.15	0	32	65.2	65.2	0.0	0.0	78.0	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-12.0	-12.0
2	18424743.92	5014686.74	128.15	0	63	83.8	83.8	0.0	0.0	78.0	0.3	-5.7	0.0	0.0	4.8	0.0	-0.0	6.4	6.4
3	18424743.92	5014686.74	128.15	0	125	91.8	91.8	0.0	0.0	78.0	0.9	-0.3	0.0	0.0	4.8	0.0	-0.0	8.4	8.4
4	18424743.92	5014686.74	128.15	0	250	93.0	93.0	0.0	0.0	78.0	2.3	-1.9	0.0	0.0	4.8	0.0	-0.0	9.7	9.7
5	18424743.92	5014686.74	128.15	0	500	92.3	92.3	0.0	0.0	78.0	4.3	-3.0	0.0	0.0	4.8	0.0	-0.0	8.2	8.2
6	18424743.92	5014686.74	128.15	0	1000	94.3	94.3	0.0	0.0	78.0	8.2	-3.0	0.0	0.0	4.8	0.0	-0.0	6.3	6.3
7	18424743.92	5014686.74	128.15	0	2000	91.9	91.9	0.0	0.0	78.0	21.7	-3.0	0.0	0.0	4.8	0.0	-0.0	-9.6	-9.6
8	18424743.92	5014686.74	128.15	0	4000	90.5	90.5	0.0	0.0	78.0	73.7	-3.0	0.0	0.0	4.8	0.0	-0.0	-63.0	-63.0
9	18424743.92	5014686.74	128.15	0	8000	77.1	77.1	0.0	0.0	78.0	263.0	-3.0	0.0	0.0	4.8	0.0	-0.0	-265.7	-265.7

Point Source, ISO 9613, Name: "Energy Building Smithco radiator fan 2", ID: "GEN_RAD2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424747.86	5014682.23	128.15	0	32	65.2	65.2	0.0	0.0	78.1	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-12.0	-12.0
2	18424747.86	5014682.23	128.15	0	63	83.8	83.8	0.0	0.0	78.1	0.3	-5.7	0.0	0.0	4.8	0.0	-0.0	6.4	6.4
3	18424747.86	5014682.23	128.15	0	125	91.8	91.8	0.0	0.0	78.1	0.9	-0.7	0.0	0.0	4.8	0.0	-0.0	8.7	8.7
4	18424747.86	5014682.23	128.15	0	250	93.0	93.0	0.0	0.0	78.1	2.3	-2.1	0.0	0.0	4.8	0.0	-0.0	10.0	10.0
5	18424747.86	5014682.23	128.15	0	500	92.3	92.3	0.0	0.0	78.1	4.3	-3.1	0.0	0.0	4.8	0.0	-0.0	8.2	8.2
6	18424747.86	5014682.23	128.15	0	1000	94.3	94.3	0.0	0.0	78.1	8.3	-3.1	0.0	0.0	4.8	0.0	-0.0	6.3	6.3
7	18424747.86	5014682.23	128.15	0	2000	91.9	91.9	0.0	0.0	78.1	21.8	-3.1	0.0	0.0	4.8	0.0	-0.0	-9.6	-9.6
8	18424747.86	5014682.23	128.15	0	4000	90.5	90.5	0.0	0.0	78.1	73.9	-3.1	0.0	0.0	4.8	0.0	-0.0	-63.1	-63.1
9	18424747.86	5014682.23	128.15	0	8000	77.1	77.1	0.0	0.0	78.1	263.5	-3.1	0.0	0.0	4.8	0.0	-0.0	-266.1	-266.1

Point Source, ISO 9613, Name: "Energy Building Smithco radiator fan 3", ID: "GEN_RAD3"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424751.51	5014678.04	128.15	0	32	65.2	65.2	0.0	0.0	78.1	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-12.0	-12.0
2	18424751.51	5014678.04	128.15	0	63	83.8	83.8	0.0	0.0	78.1	0.3	-5.7	0.0	0.0	4.8	0.0	-0.0	6.4	6.4
3	18424751.51	5014678.04	128.15	0	125	91.8	91.8	0.0	0.0	78.1	0.9	-0.9	0.0	0.0	4.8	0.0	-0.0	8.9	8.9
4	18424751.51	5014678.04	128.15	0	250	93.0	93.0	0.0	0.0	78.1	2.4	-2.3	0.0	0.0	4.8	0.0	-0.0	10.2	10.2
5	18424751.51	5014678.04	128.15	0	500	92.3	92.3	0.0	0.0	78.1	4.3	-3.2	0.0	0.0	4.8	0.0	-0.0	8.3	8.3
6	18424751.51	5014678.04	128.15	0	1000	94.3	94.3	0.0	0.0	78.1	8.3	-3.2	0.0	0.0	4.8	0.0	-0.0	6.4	6.4
7	18424751.51	5014678.04	128.15	0	2000	91.9	91.9	0.0	0.0	78.1	21.8	-3.2	0.0	0.0	4.8	0.0	-0.0	-9.6	-9.6
8	18424751.51	5014678.04	128.15	0	4000	90.5	90.5	0.0	0.0	78.1	74.0	-3.2	0.0	0.0	4.8	0.0	-0.0	-63.1	-63.1
9	18424751.51	5014678.04	128.15	0	8000	77.1	77.1	0.0	0.0	78.1	263.9	-3.2	0.0	0.0	4.8	0.0	-0.0	-266.5	-266.5

Point Source, ISO 9613, Name: "Energy Building Smithco radiator fan 4", ID: "GEN_RAD4"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424756.19	5014672.89	128.15	0	32	65.2	65.2	0.0	0.0	78.1	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-12.0	-12.0
2	18424756.19	5014672.89	128.15	0	63	83.8	83.8	0.0	0.0	78.1	0.3	-5.7	0.0	0.0	4.8	0.0	-0.0	6.3	6.3
3	18424756.19	5014672.89	128.15	0	125	91.8	91.8	0.0	0.0	78.1	0.9	-0.9	0.0	0.0	4.8	0.0	-0.0	8.9	8.9
4	18424756.19	5014672.89	128.15	0	250	93.0	93.0	0.0	0.0	78.1	2.4	-2.3	0.0	0.0	4.8	0.0	-0.0	10.1	10.1
5	18424756.19	5014672.89	128.15	0	500	92.3	92.3	0.0	0.0	78.1	4.4	-3.2	0.0	0.0	4.8	0.0	-0.0	8.3	8.3
6	18424756.19	5014672.89	128.15	0	1000	94.3	94.3	0.0	0.0	78.1	8.3	-3.2	0.0	0.0	4.8	0.0	-0.0	6.3	6.3
7	18424756.19	5014672.89	128.15	0	2000	91.9	91.9	0.0	0.0	78.1	21.9	-3.2	0.0	0.0	4.8	0.0	-0.0	-9.6	-9.6
8	18424756.19	5014672.89	128.15	0	4000	90.5	90.5	0.0	0.0	78.1	74.2	-3.2	0.0	0.0	4.8	0.0	-0.0	-63.3	-63.3
9	18424756.19	5014672.89	128.15	0	8000	77.1	77.1	0.0	0.0	78.1	264.5	-3.2	0.0	0.0	4.8	0.0	-0.0	-267.1	-267.1

Point Source, ISO 9613, Name: "Energy Building Smithco radiator fan 5", ID: "GEN_RAD5"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424759.93	5014668.47	128.15	0	32	65.2	65.2	0.0	0.0	78.1	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-12.0	-12.0
2	18424759.93	5014668.47	128.15	0	63	83.8	83.8	0.0	0.0	78.1	0.3	-5.7	0.0	0.0	4.8	0.0	-0.0	6.3	6.3
3	18424759.93	5014668.47	128.15	0	125	91.8	91.8	0.0	0.0	78.1	0.9	-0.9	0.0	0.0	4.8	0.0	-0.0	8.9	8.9
4	18424759.93	5014668.47	128.15	0	250	93.0	93.0	0.0	0.0	78.1	2.4	-2.4	0.0	0.0	4.8	0.0	-0.0	10.1	10.1
5	18424759.93	5014668.47	128.15	0	500	92.3	92.3	0.0	0.0	78.1	4.4	-3.2	0.0	0.0	4.8	0.0	-0.0	8.2	8.2
6	18424759.93	5014668.47	128.15	0	1000	94.3	94.3	0.0	0.0	78.1	8.3	-3.2	0.0	0.0	4.8	0.0	-0.0	6.3	6.3
7	18424759.93	5014668.47	128.15	0	2000	91.9	91.9	0.0	0.0	78.1	21.9	-3.2	0.0	0.0	4.8	0.0	-0.0	-9.7	-9.7
8	18424759.93	5014668.47	128.15	0	4000	90.5	90.5	0.0	0.0	78.1	74.3	-3.2	0.0	0.0	4.8	0.0	-0.0	-63.4	-63.4
9	18424759.93	5014668.47	128.15	0	8000	77.1	77.1	0.0	0.0	78.1	265.0	-3.2	0.0	0.0	4.8	0.0	-0.0	-267.6	-267.6

Point Source, ISO 9613, Name: "Energy Bldg generator combustion exhaust 1", ID: "GEN_STK1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424748.45	5014690.84	138.40	0	32	60.6	60.6	0.0	0.0	78.1	0.1	-5.3	0.0	0.0	4.8	0.0	-0.0	-17.0	-17.0
2	18424748.45	5014690.84	138.40	0	63	74.9	74.9	0.0	0.0	78.1	0.3	-5.3	0.0	0.0	4.8	0.0	-0.0	-2.9	-2.9
3	18424748.45	5014690.84	138.40	0	125	81.3	81.3	0.0	0.0	78.1	0.9	0.0	0.0	0.0	4.8	0.0	-0.0	-2.5	-2.5
4	18424748.45	5014690.84	138.40	0	250	82.1	82.1	0.0	0.0	78.1	2.3	-1.5	0.0	0.0	4.8	0.0	-0.0	-1.6	-1.6
5	18424748.45	5014690.84	138.40	0	500	83.7	83.7	0.0	0.0	78.1	4.3	-2.3	0.0	0.0	4.8	0.0	-0.0	-1.2	-1.2
6	18424748.45	5014690.84	138.40	0	1000	85.5	85.5	0.0	0.0	78.1	8.3	-2.3	0.0	0.0	4.8	0.0	-0.0	-3.3	-3.3
7	18424748.45	5014690.84	138.40	0	2000	81.6	81.6	0.0	0.0	78.1	21.8	-2.3	0.0	0.0	4.8	0.0	-0.0	-20.7	-20.7
8	18424748.45	5014690.84	138.40	0	4000	77.2	77.2	0.0	0.0	78.1	73.9	-2.3	0.0	0.0	4.8	0.0	-0.0	-77.2	-77.2
9	18424748.45	5014690.84	138.40	0	8000	76.2	76.2	0.0	0.0	78.1	263.5	-2.3	0.0	0.0	4.8	0.0	-0.0	-267.9	-267.9

Point Source, ISO 9613, Name: "Energy Bldg generator combustion exhaust 2", ID: "GEN_STK2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424752.56	5014686.38	138.40	0	32	60.6	60.6	0.0	0.0	78.1	0.1	-5.3	0.0	0.0	4.8	0.0	-0.0	-17.0	-17.0
2	18424752.56	5014686.38	138.40	0	63	74.9	74.9	0.0	0.0	78.1	0.3	-5.3	0.0	0.0	4.8	0.0	-0.0	-2.9	-2.9
3	18424752.56	5014686.38	138.40	0	125	81.3	81.3	0.0	0.0	78.1	0.9	-0.0	0.0	0.0	4.8	0.0	-0.0	-2.5	-2.5
4	18424752.56	5014686.38	138.40	0	250	82.1	82.1	0.0	0.0	78.1	2.4	-1.5	0.0	0.0	4.8	0.0	-0.0	-1.6	-1.6
5	18424752.56	5014686.38	138.40	0	500	83.7	83.7	0.0	0.0	78.1	4.3	-2.3	0.0	0.0	4.8	0.0	-0.0	-1.2	-1.2
6	18424752.56	5014686.38	138.40	0	1000	85.5	85.5	0.0	0.0	78.1	8.3	-2.3	0.0	0.0	4.8	0.0	-0.0	-3.3	-3.3
7	18424752.56	5014686.38	138.40	0	2000	81.6	81.6	0.0	0.0	78.1	21.8	-2.3	0.0	0.0	4.8	0.0	-0.0	-20.8	-20.8
8	18424752.56	5014686.38	138.40	0	4000	77.2	77.2	0.0	0.0	78.1	74.0	-2.3	0.0	0.0	4.8	0.0	-0.0	-77.4	-77.4
9	18424752.56	5014686.38	138.40	0	8000	76.2	76.2	0.0	0.0	78.1	264.0	-2.3	0.0	0.0	4.8	0.0	-0.0	-268.4	-268.4

Point Source, ISO 9613, Name: "Energy Bldg generator combustion exhaust 3", ID: "GEN_STK3"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424756.29	5014682.12	138.40	0	32	60.6	60.6	0.0	0.0	78.1	0.1	-5.3	0.0	0.0	4.8	0.0	-0.0	-17.1	-17.1
2	18424756.29	5014682.12	138.40	0	63	74.9	74.9	0.0	0.0	78.1	0.3	-5.3	0.0	0.0	4.8	0.0	-0.0	-3.0	-3.0
3	18424756.29	5014682.12	138.40	0	125	81.3	81.3	0.0	0.0	78.1	0.9	-0.0	0.0	0.0	4.8	0.0	-0.0	-2.5	-2.5
4	18424756.29	5014682.12	138.40	0	250	82.1	82.1	0.0	0.0	78.1	2.4	-1.5	0.0	0.0	4.8	0.0	-0.0	-1.6	-1.6
5	18424756.29	5014682.12	138.40	0	500	83.7	83.7	0.0	0.0	78.1	4.4	-2.3	0.0	0.0	4.8	0.0	-0.0	-1.2	-1.2
6	18424756.29	5014682.12	138.40	0	1000	85.5	85.5	0.0	0.0	78.1	8.3	-2.3	0.0	0.0	4.8	0.0	-0.0	-3.3	-3.3
7	18424756.29	5014682.12	138.40	0	2000	81.6	81.6	0.0	0.0	78.1	21.9	-2.3	0.0	0.0	4.8	0.0	-0.0	-20.8	-20.8
8	18424756.29	5014682.12	138.40	0	4000	77.2	77.2	0.0	0.0	78.1	74.1	-2.3	0.0	0.0	4.8	0.0	-0.0	-77.5	-77.5
9	18424756.29	5014682.12	138.40	0	8000	76.2	76.2	0.0	0.0	78.1	264.5	-2.3	0.0	0.0	4.8	0.0	-0.0	-268.8	-268.8

Point Source, ISO 9613, Name: "Energy Bldg generator combustion exhaust 4", ID: "GEN_STK4"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424760.82	5014676.92	138.40	0	32	60.6	60.6	0.0	0.0	78.1	0.1	-5.3	0.0	0.0	4.8	0.0	-0.0	-17.1	-17.1
2	18424760.82	5014676.92	138.40	0	63	74.9	74.9	0.0	0.0	78.1	0.3	-5.3	0.0	0.0	4.8	0.0	-0.0	-3.0	-3.0
3	18424760.82	5014676.92	138.40	0	125	81.3	81.3	0.0	0.0	78.1	0.9	-0.1	0.0	0.0	4.8	0.0	-0.0	-2.5	-2.5
4	18424760.82	5014676.92	138.40	0	250	82.1	82.1	0.0	0.0	78.1	2.4	-1.5	0.0	0.0	4.8	0.0	-0.0	-1.6	-1.6
5	18424760.82	5014676.92	138.40	0	500	83.7	83.7	0.0	0.0	78.1	4.4	-2.3	0.0	0.0	4.8	0.0	-0.0	-1.2	-1.2
6	18424760.82	5014676.92	138.40	0	1000	85.5	85.5	0.0	0.0	78.1	8.3	-2.3	0.0	0.0	4.8	0.0	-0.0	-3.3	-3.3
7	18424760.82	5014676.92	138.40	0	2000	81.6	81.6	0.0	0.0	78.1	21.9	-2.3	0.0	0.0	4.8	0.0	-0.0	-20.9	-20.9
8	18424760.82	5014676.92	138.40	0	4000	77.2	77.2	0.0	0.0	78.1	74.3	-2.3	0.0	0.0	4.8	0.0	-0.0	-77.6	-77.6
9	18424760.82	5014676.92	138.40	0	8000	76.2	76.2	0.0	0.0	78.1	265.0	-2.3	0.0	0.0	4.8	0.0	-0.0	-269.4	-269.4

Point Source, ISO 9613, Name: "Energy Bldg generator combustion exhaust 5", ID: "GEN_STK5"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424764.65	5014672.50	138.40	0	32	60.6	60.6	0.0	0.0	78.1	0.1	-5.3	0.0	0.0	4.8	0.0	-0.0	-17.1	-17.1
2	18424764.65	5014672.50	138.40	0	63	74.9	74.9	0.0	0.0	78.1	0.3	-5.3	0.0	0.0	4.8	0.0	-0.0	-3.0	-3.0
3	18424764.65	5014672.50	138.40	0	125	81.3	81.3	0.0	0.0	78.1	0.9	-0.1	0.0	0.0	4.8	0.0	-0.0	-2.5	-2.5
4	18424764.65	5014672.50	138.40	0	250	82.1	82.1	0.0	0.0	78.1	2.4	-1.5	0.0	0.0	4.8	0.0	-0.0	-1.6	-1.6
5	18424764.65	5014672.50	138.40	0	500	83.7	83.7	0.0	0.0	78.1	4.4	-2.4	0.0	0.0	4.8	0.0	-0.0	-1.2	-1.2
6	18424764.65	5014672.50	138.40	0	1000	85.5	85.5	0.0	0.0	78.1	8.3	-2.4	0.0	0.0	4.8	0.0	-0.0	-3.3	-3.3
7	18424764.65	5014672.50	138.40	0	2000	81.6	81.6	0.0	0.0	78.1	21.9	-2.4	0.0	0.0	4.8	0.0	-0.0	-20.9	-20.9
8	18424764.65	5014672.50	138.40	0	4000	77.2	77.2	0.0	0.0	78.1	74.4	-2.4	0.0	0.0	4.8	0.0	-0.0	-77.8	-77.8
9	18424764.65	5014672.50	138.40	0	8000	76.2	76.2	0.0	0.0	78.1	265.5	-2.4	0.0	0.0	4.8	0.0	-0.0	-269.8	-269.8

Point Source, ISO 9613, Name: "Energy Bldg wall 1", ID: "GEN_WALL1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424768.37	5014691.34	127.35	0	32	52.1	52.1	0.0	0.0	78.1	0.1	-5.7	0.0	0.0	13.9	0.0	-0.0	-34.2	-34.2
2	18424768.37	5014691.34	127.35	0	63	70.5	70.5	0.0	0.0	78.1	0.3	-5.7	0.0	0.0	16.6	0.0	-0.0	-18.8	-18.8
3	18424768.37	5014691.34	127.35	0	125	82.6	82.6	0.0	0.0	78.1	0.9	-0.9	0.0	0.0	19.5	0.0	-0.0	-15.0	-15.0
4	18424768.37	5014691.34	127.35	0	250	82.9	82.9	0.0	0.0	78.1	2.4	-2.4	0.0	0.0	22.4	0.0	-0.0	-17.6	-17.6
5	18424768.37	5014691.34	127.35	0	500	84.8	84.8	0.0	0.0	78.1	4.4	-3.2	0.0	0.0	25.0	0.0	-0.0	-19.5	-19.5
6	18424768.37	5014691.34	127.35	0	1000	87.1	87.1	0.0	0.0	78.1	8.3	-3.2	0.0	0.0	25.0	0.0	-0.0	-21.1	-21.1
7	18424768.37	5014691.34	127.35	0	2000	85.0	85.0	0.0	0.0	78.1	22.0	-3.2	0.0	0.0	25.0	0.0	-0.0	-36.9	-36.9
8	18424768.37	5014691.34	127.35	0	4000	80.4	80.4	0.0	0.0	78.1	74.5	-3.2	0.0	0.0	25.0	0.0	-0.0	-94.0	-94.0
9	18424768.37	5014691.34	127.35	0	8000	77.2	77.2	0.0	0.0	78.1	265.8	-3.2	0.0	0.0	25.0	0.0	-0.0	-288.5	-288.5

Point Source, ISO 9613, Name: "Energy Bldg wall 2", ID: "GEN_WALL2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424759.96	5014700.88	127.35	0	32	57.8	57.8	0.0	0.0	78.1	0.1	-5.7	0.0	0.0	13.9	0.0	-0.0	-28.6	-28.6
2	18424759.96	5014700.88	127.35	0	63	71.2	71.2	0.0	0.0	78.1	0.3	-5.7	0.0	0.0	16.6	0.0	-0.0	-18.1	-18.1
3	18424759.96	5014700.88	127.35	0	125	81.3	81.3	0.0	0.0	78.1	0.9	-0.9	0.0	0.0	19.5	0.0	-0.0	-16.4	-16.4
4	18424759.96	5014700.88	127.35	0	250	81.6	81.6	0.0	0.0	78.1	2.4	-2.4	0.0	0.0	22.4	0.0	-0.0	-19.0	-19.0
5	18424759.96	5014700.88	127.35	0	500	84.0	84.0	0.0	0.0	78.1	4.4	-3.2	0.0	0.0	25.0	0.0	-0.0	-20.3	-20.3
6	18424759.96	5014700.88	127.35	0	1000	87.3	87.3	0.0	0.0	78.1	8.3	-3.2	0.0	0.0	25.0	0.0	-0.0	-20.9	-20.9
7	18424759.96	5014700.88	127.35	0	2000	83.8	83.8	0.0	0.0	78.1	21.9	-3.2	0.0	0.0	25.0	0.0	-0.0	-38.0	-38.0
8	18424759.96	5014700.88	127.35	0	4000	78.4	78.4	0.0	0.0	78.1	74.2	-3.2	0.0	0.0	25.0	0.0	-0.0	-95.8	-95.8
9	18424759.96	5014700.88	127.35	0	8000	72.2	72.2	0.0	0.0	78.1	264.8	-3.2	0.0	0.0	25.0	0.0	-0.0	-292.6	-292.6

Point Source, ISO 9613, Name: "Energy Bldg wall 3", ID: "GEN_WALL3"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424774.87	5014683.98	127.35	0	32	49.6	49.6	0.0	0.0	78.2	0.1	-5.7	0.0	0.0	13.9	0.0	-0.0	-36.8	-36.8
2	18424774.87	5014683.98	127.35	0	63	67.2	67.2	0.0	0.0	78.2	0.3	-5.7	0.0	0.0	16.6	0.0	-0.0	-22.2	-22.2
3	18424774.87	5014683.98	127.35	0	125	81.2	81.2	0.0	0.0	78.2	0.9	-0.9	0.0	0.0	19.5	0.0	-0.0	-16.5	-16.5
4	18424774.87	5014683.98	127.35	0	250	81.0	81.0	0.0	0.0	78.2	2.4	-2.4	0.0	0.0	22.4	0.0	-0.0	-19.6	-19.6
5	18424774.87	5014683.98	127.35	0	500	82.8	82.8	0.0	0.0	78.2	4.4	-3.2	0.0	0.0	25.0	0.0	-0.0	-21.6	-21.6
6	18424774.87	5014683.98	127.35	0	1000	84.7	84.7	0.0	0.0	78.2	8.3	-3.2	0.0	0.0	25.0	0.0	-0.0	-23.6	-23.6
7	18424774.87	5014683.98	127.35	0	2000	82.9	82.9	0.0	0.0	78.2	22.0	-3.2	0.0	0.0	25.0	0.0	-0.0	-39.1	-39.1
8	18424774.87	5014683.98	127.35	0	4000	78.0	78.0	0.0	0.0	78.2	74.8	-3.2	0.0	0.0	25.0	0.0	-0.0	-96.7	-96.7
9	18424774.87	5014683.98	127.35	0	8000	77.0	77.0	0.0	0.0	78.2	266.6	-3.2	0.0	0.0	25.0	0.0	-0.0	-289.6	-289.6

Point Source, ISO 9613, Name: "SBR Blower 200; 1295 cfm", ID: "SBR_BLR200"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424307.99	5014734.70	125.48	0	32	-39.4	-39.4	0.0	0.0	76.2	0.1	-5.7	0.0	0.0	4.9	0.0	-0.0	-114.8	-114.8
2	18424307.99	5014734.70	125.48	0	63	81.4	81.4	0.0	0.0	76.2	0.2	-5.7	0.0	0.0	5.0	0.0	-0.0	5.7	5.7
3	18424307.99	5014734.70	125.48	0	125	91.5	91.5	0.0	0.0	76.2	0.7	3.4	0.0	0.0	2.0	0.0	-0.0	9.2	9.2
4	18424307.99	5014734.70	125.48	0	250	89.0	89.0	0.0	0.0	76.2	1.9	3.3	0.0	0.0	2.8	0.0	-0.0	4.8	4.8
5	18424307.99	5014734.70	125.48	0	500	89.4	89.4	0.0	0.0	76.2	3.5	3.0	0.0	0.0	4.2	0.0	-0.0	2.5	2.5
6	18424307.99	5014734.70	125.48	0	1000	90.6	90.6	0.0	0.0	76.2	6.6	-1.1	0.0	0.0	8.8	0.0	-0.0	0.0	0.0
7	18424307.99	5014734.70	125.48	0	2000	86.8	86.8	0.0	0.0	76.2	17.5	-2.3	0.0	0.0	10.9	0.0	-0.0	-15.5	-15.5
8	18424307.99	5014734.70	125.48	0	4000	81.6	81.6	0.0	0.0	76.2	59.4	-2.3	0.0	0.0	13.4	0.0	-0.0	-65.0	-65.0
9	18424307.99	5014734.70	125.48	0	8000	74.5	74.5	0.0	0.0	76.2	211.9	-2.3	0.0	0.0	16.1	0.0	-0.0	-227.3	-227.3

Point Source, ISO 9613, Name: "SBR Blower 210; 1295 cfm", ID: "SBR_BLR210"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424311.91	5014738.02	125.38	0	32	-39.4	-39.4	0.0	0.0	76.2	0.1	-5.7	0.0	0.0	4.9	0.0	-0.0	-114.8	-114.8
2	18424311.91	5014738.02	125.38	0	63	81.4	81.4	0.0	0.0	76.2	0.2	-5.7	0.0	0.0	5.0	0.0	-0.0	5.7	5.7
3	18424311.91	5014738.02	125.38	0	125	91.5	91.5	0.0	0.0	76.2	0.8	3.4	0.0	0.0	2.0	0.0	-0.0	9.2	9.2
4	18424311.91	5014738.02	125.38	0	250	89.0	89.0	0.0	0.0	76.2	1.9	3.3	0.0	0.0	2.8	0.0	-0.0	4.8	4.8
5	18424311.91	5014738.02	125.38	0	500	89.4	89.4	0.0	0.0	76.2	3.5	3.0	0.0	0.0	4.1	0.0	-0.0	2.6	2.6
6	18424311.91	5014738.02	125.38	0	1000	90.6	90.6	0.0	0.0	76.2	6.6	-1.1	0.0	0.0	8.7	0.0	-0.0	0.1	0.1
7	18424311.91	5014738.02	125.38	0	2000	86.8	86.8	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	10.8	0.0	-0.0	-15.4	-15.4
8	18424311.91	5014738.02	125.38	0	4000	81.6	81.6	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	13.2	0.0	-0.0	-65.0	-65.0
9	18424311.91	5014738.02	125.38	0	8000	74.5	74.5	0.0	0.0	76.2	212.3	-2.3	0.0	0.0	15.9	0.0	-0.0	-227.6	-227.6

Point Source, ISO 9613, Name: "Sludge Blower 300; 1295 cfm", ID: "SBR_BLR300"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424321.08	5014730.73	125.25	0	32	-39.4	-39.4	0.0	0.0	76.2	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-114.8	-114.8
2	18424321.08	5014730.73	125.25	0	63	81.4	81.4	0.0	0.0	76.2	0.2	-5.7	0.0	0.0	5.0	0.0	-0.0	5.7	5.7
3	18424321.08	5014730.73	125.25	0	125	91.5	91.5	0.0	0.0	76.2	0.8	3.4	0.0	0.0	1.9	0.0	-0.0	9.3	9.3
4	18424321.08	5014730.73	125.25	0	250	89.0	89.0	0.0	0.0	76.2	1.9	3.3	0.0	0.0	2.6	0.0	-0.0	5.0	5.0
5	18424321.08	5014730.73	125.25	0	500	89.4	89.4	0.0	0.0	76.2	3.5	3.0	0.0	0.0	3.8	0.0	-0.0	2.8	2.8
6	18424321.08	5014730.73	125.25	0	1000	90.6	90.6	0.0	0.0	76.2	6.7	-1.1	0.0	0.0	8.2	0.0	-0.0	0.5	0.5
7	18424321.08	5014730.73	125.25	0	2000	86.8	86.8	0.0	0.0	76.2	17.7	-2.3	0.0	0.0	10.2	0.0	-0.0	-14.9	-14.9
8	18424321.08	5014730.73	125.25	0	4000	81.6	81.6	0.0	0.0	76.2	59.8	-2.3	0.0	0.0	12.5	0.0	-0.0	-64.7	-64.7
9	18424321.08	5014730.73	125.25	0	8000	74.5	74.5	0.0	0.0	76.2	213.4	-2.3	0.0	0.0	15.1	0.0	-0.0	-228.0	-228.0

Point Source, ISO 9613, Name: "SBR Blower 500; 1295 cfm future", ID: "SBR_BLR500"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424324.41	5014713.21	125.32	0	32	-39.4	-39.4	0.0	0.0	76.3	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-114.8	-114.8
2	18424324.41	5014713.21	125.32	0	63	81.4	81.4	0.0	0.0	76.3	0.2	-5.7	0.0	0.0	4.8	0.0	-0.0	5.8	5.8
3	18424324.41	5014713.21	125.32	0	125	91.5	91.5	0.0	0.0	76.3	0.8	3.4	0.0	0.0	1.6	0.0	-0.0	9.5	9.5
4	18424324.41	5014713.21	125.32	0	250	89.0	89.0	0.0	0.0	76.3	1.9	3.3	0.0	0.0	2.1	0.0	-0.0	5.5	5.5
5	18424324.41	5014713.21	125.32	0	500	89.4	89.4	0.0	0.0	76.3	3.5	3.0	0.0	0.0	2.9	0.0	-0.0	3.7	3.7
6	18424324.41	5014713.21	125.32	0	1000	90.6	90.6	0.0	0.0	76.3	6.7	-1.1	0.0	0.0	7.0	0.0	-0.0	1.8	1.8
7	18424324.41	5014713.21	125.32	0	2000	86.8	86.8	0.0	0.0	76.3	17.7	-2.3	0.0	0.0	8.4	0.0	-0.0	-13.3	-13.3
8	18424324.41	5014713.21	125.32	0	4000	81.6	81.6	0.0	0.0	76.3	60.0	-2.3	0.0	0.0	10.4	0.0	-0.0	-62.7	-62.7
9	18424324.41	5014713.21	125.32	0	8000	74.5	74.5	0.0	0.0	76.3	213.9	-2.3	0.0	0.0	12.8	0.0	-0.0	-226.1	-226.1

Point Source, ISO 9613, Name: "SBR Blower 510; 1295 cfm future", ID: "SBR_BLR510"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424328.66	5014716.59	125.21	0	32	-39.4	-39.4	0.0	0.0	76.3	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-114.8	-114.8
2	18424328.66	5014716.59	125.21	0	63	81.4	81.4	0.0	0.0	76.3	0.2	-5.7	0.0	0.0	4.8	0.0	-0.0	5.8	5.8
3	18424328.66	5014716.59	125.21	0	125	91.5	91.5	0.0	0.0	76.3	0.8	3.4	0.0	0.0	1.6	0.0	-0.0	9.5	9.5
4	18424328.66	5014716.59	125.21	0	250	89.0	89.0	0.0	0.0	76.3	1.9	3.3	0.0	0.0	2.1	0.0	-0.0	5.5	5.5
5	18424328.66	5014716.59	125.21	0	500	89.4	89.4	0.0	0.0	76.3	3.5	3.0	0.0	0.0	2.9	0.0	-0.0	3.6	3.6
6	18424328.66	5014716.59	125.21	0	1000	90.6	90.6	0.0	0.0	76.3	6.7	-1.1	0.0	0.0	6.9	0.0	-0.0	1.8	1.8
7	18424328.66	5014716.59	125.21	0	2000	86.8	86.8	0.0	0.0	76.3	17.7	-2.3	0.0	0.0	8.4	0.0	-0.0	-13.3	-13.3
8	18424328.66	5014716.59	125.21	0	4000	81.6	81.6	0.0	0.0	76.3	60.1	-2.3	0.0	0.0	10.4	0.0	-0.0	-62.8	-62.8
9	18424328.66	5014716.59	125.21	0	8000	74.5	74.5	0.0	0.0	76.3	214.4	-2.3	0.0	0.0	12.7	0.0	-0.0	-226.6	-226.6

Point Source, ISO 9613, Name: "Sludge Blower 600; 1295 cfm", ID: "SBR_SBLR600"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18424336.65	5014705.96	125.30	0	32	-39.4	-39.4	0.0	0.0	76.3	0.1	-5.7	0.0	0.0	4.8	0.0	-0.0	-114.8	-114.8
2	18424336.65	5014705.96	125.30	0	63	81.4	81.4	0.0	0.0	76.3	0.2	-5.7	0.0	0.0	4.8	0.0	-0.0	5.8	5.8
3	18424336.65	5014705.96	125.30	0	125	91.5	91.5	0.0	0.0	76.3	0.8	3.4	0.0	0.0	1.5	0.0	-0.0	9.5	9.5
4	18424336.65	5014705.96	125.30	0	250	89.0	89.0	0.0	0.0	76.3	1.9	3.3	0.0	0.0	1.9	0.0	-0.0	5.6	5.6
5	18424336.65	5014705.96	125.30	0	500	89.4	89.4	0.0	0.0	76.3	3.5	3.0	0.0	0.0	2.6	0.0	-0.0	3.9	3.9
6	18424336.65	5014705.96	125.30	0	1000	90.6	90.6	0.0	0.0	76.3	6.7	-1.1	0.0	0.0	6.5	0.0	-0.0	2.2	2.2
7	18424336.65	5014705.96	125.30	0	2000	86.8	86.8	0.0	0.0	76.3	17.8	-2.3	0.0	0.0	7.7	0.0	-0.0	-12.7	-12.7
8	18424336.65	5014705.96	125.30	0	4000	81.6	81.6	0.0	0.0	76.3	60.4	-2.3	0.0	0.0	9.4	0.0	-0.0	-62.2	-62.2
9	18424336.65	5014705.96	125.30	0	8000	74.5	74.5	0.0	0.0	76.3	215.3	-2.3	0.0	0.0	11.6	0.0	-0.0	-226.5	-226.5

Point Source, ISO 9613, Name: "WTPF Waste compactor", ID: "WTPF_COMP"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423745.10	5014067.40	132.50	0	32	-39.4	-88.0	0.0	0.0	74.2	0.1	-5.6	0.0	0.0	0.0	0.0	-0.0	-108.1	-88.0
2	18423745.10	5014067.40	132.50	0	63	56.8	-88.0	0.0	0.0	74.2	0.2	-5.6	0.0	0.0	0.0	0.0	-0.0	-12.0	-88.0
3	18423745.10	5014067.40	132.50	0	125	68.2	-88.0	0.0	0.0	74.2	0.6	2.9	0.0	0.0	0.0	0.0	-0.0	-9.4	-88.0
4	18423745.10	5014067.40	132.50	0	250	74.7	-88.0	0.0	0.0	74.2	1.5	1.6	0.0	0.0	0.0	0.0	-0.0	-2.5	-88.0
5	18423745.10	5014067.40	132.50	0	500	87.4	-88.0	0.0	0.0	74.2	2.8	-1.8	0.0	0.0	0.0	0.0	-0.0	12.2	-88.0
6	18423745.10	5014067.40	132.50	0	1000	93.3	-88.0	0.0	0.0	74.2	5.3	-2.2	0.0	0.0	0.0	0.0	-0.0	16.1	-88.0
7	18423745.10	5014067.40	132.50	0	2000	85.8	-88.0	0.0	0.0	74.2	13.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-0.1	-88.0
8	18423745.10	5014067.40	132.50	0	4000	81.9	-88.0	0.0	0.0	74.2	47.2	-2.2	0.0	0.0	0.0	0.0	-0.0	-37.3	-88.0
9	18423745.10	5014067.40	132.50	0	8000	78.8	-88.0	0.0	0.0	74.2	168.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-161.6	-88.0

Point Source, ISO 9613, Name: "WTPF Drop-off truck unloading at IC&I pad", ID: "WTPF_DROP_ICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423780.90	5014098.77	131.61	0	32	74.2	-88.0	0.0	0.0	74.3	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	0.7	-88.0
2	18423780.90	5014098.77	131.61	0	63	81.9	-88.0	0.0	0.0	74.3	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	8.3	-88.0
3	18423780.90	5014098.77	131.61	0	125	94.4	-88.0	0.0	0.0	74.3	0.6	2.3	0.0	0.0	2.5	0.0	-0.0	14.8	-88.0
4	18423780.90	5014098.77	131.61	0	250	103.6	-88.0	0.0	0.0	74.3	1.5	1.3	0.0	0.0	3.5	0.0	-0.0	23.0	-88.0
5	18423780.90	5014098.77	131.61	0	500	108.0	-88.0	0.0	0.0	74.3	2.8	-1.4	0.0	0.0	4.8	0.0	-0.0	27.5	-88.0
6	18423780.90	5014098.77	131.61	0	1000	109.8	-88.0	0.0	0.0	74.3	5.3	-2.4	0.0	0.0	4.8	0.0	-0.0	27.8	-88.0
7	18423780.90	5014098.77	131.61	0	2000	109.7	-88.0	0.0	0.0	74.3	14.1	-2.4	0.0	0.0	4.8	0.0	-0.0	19.0	-88.0
8	18423780.90	5014098.77	131.61	0	4000	107.1	-88.0	0.0	0.0	74.3	47.8	-2.4	0.0	0.0	4.8	0.0	-0.0	-17.3	-88.0
9	18423780.90	5014098.77	131.61	0	8000	101.8	-88.0	0.0	0.0	74.3	170.3	-2.4	0.0	0.0	4.8	0.0	-0.0	-145.2	-88.0

Point Source, ISO 9613, Name: "WTPF Drop-off truck unloading at C&D pad", ID: "WTPF_DROP_CD"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423802.17	5014092.67	131.58	0	32	74.2	-88.0	0.0	0.0	74.4	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	0.6	-88.0
2	18423802.17	5014092.67	131.58	0	63	81.9	-88.0	0.0	0.0	74.4	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	8.2	-88.0
3	18423802.17	5014092.67	131.58	0	125	94.4	-88.0	0.0	0.0	74.4	0.6	2.3	0.0	0.0	2.5	0.0	-0.0	14.6	-88.0
4	18423802.17	5014092.67	131.58	0	250	103.6	-88.0	0.0	0.0	74.4	1.5	1.3	0.0	0.0	3.5	0.0	-0.0	22.9	-88.0
5	18423802.17	5014092.67	131.58	0	500	108.0	-88.0	0.0	0.0	74.4	2.8	-1.4	0.0	0.0	4.8	0.0	-0.0	27.3	-88.0
6	18423802.17	5014092.67	131.58	0	1000	109.8	-88.0	0.0	0.0	74.4	5.4	-2.4	0.0	0.0	4.8	0.0	-0.0	27.6	-88.0
7	18423802.17	5014092.67	131.58	0	2000	109.7	-88.0	0.0	0.0	74.4	14.3	-2.4	0.0	0.0	4.8	0.0	-0.0	18.7	-88.0
8	18423802.17	5014092.67	131.58	0	4000	107.1	-88.0	0.0	0.0	74.4	48.5	-2.4	0.0	0.0	4.8	0.0	-0.0	-18.1	-88.0
9	18423802.17	5014092.67	131.58	0	8000	101.8	-88.0	0.0	0.0	74.4	172.9	-2.4	0.0	0.0	4.8	0.0	-0.0	-147.8	-88.0

Point Source, ISO 9613, Name: "WTPF Loader C&D ", ID: "WTPF_LOADER_CD"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423798.16	5014085.43	132.69	0	32	72.2	-88.0	0.0	0.0	74.4	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	3.3	-88.0
2	18423798.16	5014085.43	132.69	0	63	93.1	-88.0	0.0	0.0	74.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	24.1	-88.0
3	18423798.16	5014085.43	132.69	0	125	105.4	-88.0	0.0	0.0	74.4	0.6	1.5	0.0	0.0	0.0	0.0	-0.0	28.9	-88.0
4	18423798.16	5014085.43	132.69	0	250	104.9	-88.0	0.0	0.0	74.4	1.5	-0.2	0.0	0.0	0.0	0.0	-0.0	29.2	-88.0
5	18423798.16	5014085.43	132.69	0	500	109.9	-88.0	0.0	0.0	74.4	2.8	-2.4	0.0	0.0	0.0	0.0	-0.0	35.1	-88.0
6	18423798.16	5014085.43	132.69	0	1000	110.3	-88.0	0.0	0.0	74.4	5.4	-2.5	0.0	0.0	0.0	0.0	-0.0	33.0	-88.0
7	18423798.16	5014085.43	132.69	0	2000	105.7	-88.0	0.0	0.0	74.4	14.3	-2.5	0.0	0.0	0.0	0.0	-0.0	19.5	-88.0
8	18423798.16	5014085.43	132.69	0	4000	94.9	-88.0	0.0	0.0	74.4	48.5	-2.5	0.0	0.0	0.0	0.0	-0.0	-25.4	-88.0
9	18423798.16	5014085.43	132.69	0	8000	82.5	-88.0	0.0	0.0	74.4	172.9	-2.5	0.0	0.0	0.0	0.0	-0.0	-162.2	-88.0

Point Source, ISO 9613, Name: "WTPF Portable Concrete Crusher", ID: "WTPF_CRUSHER"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423792.33	5014075.61	133.80	0	32	74.1	-88.0	0.0	0.0	74.4	0.1	-5.5	0.0	0.0	4.8	0.0	-0.0	0.4	-88.0
2	18423792.33	5014075.61	133.80	0	63	96.2	-88.0	0.0	0.0	74.4	0.2	-5.5	0.0	0.0	4.8	0.0	-0.0	22.3	-88.0
3	18423792.33	5014075.61	133.80	0	125	99.9	-88.0	0.0	0.0	74.4	0.6	2.2	0.0	0.0	2.5	0.0	-0.0	20.1	-88.0
4	18423792.33	5014075.61	133.80	0	250	99.8	-88.0	0.0	0.0	74.4	1.5	-0.3	0.0	0.0	4.8	0.0	-0.0	19.4	-88.0
5	18423792.33	5014075.61	133.80	0	500	106.0	-88.0	0.0	0.0	74.4	2.8	-2.3	0.0	0.0	4.8	0.0	-0.0	26.2	-88.0
6	18423792.33	5014075.61	133.80	0	1000	107.4	-88.0	0.0	0.0	74.4	5.4	-2.3	0.0	0.0	4.8	0.0	-0.0	25.1	-88.0
7	18423792.33	5014075.61	133.80	0	2000	106.5	-88.0	0.0	0.0	74.4	14.3	-2.3	0.0	0.0	4.8	0.0	-0.0	15.3	-88.0
8	18423792.33	5014075.61	133.80	0	4000	104.0	-88.0	0.0	0.0	74.4	48.4	-2.3	0.0	0.0	4.8	0.0	-0.0	-21.4	-88.0
9	18423792.33	5014075.61	133.80	0	8000	98.2	-88.0	0.0	0.0	74.4	172.8	-2.3	0.0	0.0	4.8	0.0	-0.0	-151.5	-88.0

Point Source, ISO 9613, Name: "Idling Truck on Weigh Scale", ID: "SS_TRK_IDLE"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423998.90	5015168.87	130.56	0	32	59.7	-88.0	0.0	0.0	74.8	0.1	-5.5	0.0	0.0	5.0	0.0	-0.0	-14.6	-88.0
2	18423998.90	5015168.87	130.56	0	63	72.9	-88.0	0.0	0.0	74.8	0.2	-5.5	0.0	0.0	5.2	0.0	-0.0	-1.8	-88.0
3	18423998.90	5015168.87	130.56	0	125	78.6	-88.0	0.0	0.0	74.8	0.6	2.6	0.0	0.0	3.0	0.0	-0.0	-2.4	-88.0
4	18423998.90	5015168.87	130.56	0	250	82.0	-88.0	0.0	0.0	74.8	1.6	0.3	0.0	0.0	6.0	0.0	-0.0	-0.7	-88.0
5	18423998.90	5015168.87	130.56	0	500	88.7	-88.0	0.0	0.0	74.8	3.0	-2.2	0.0	0.0	7.4	0.0	-0.0	5.7	-88.0
6	18423998.90	5015168.87	130.56	0	1000	96.6	-88.0	0.0	0.0	74.8	5.7	-2.2	0.0	0.0	9.0	0.0	-0.0	9.3	-88.0
7	18423998.90	5015168.87	130.56	0	2000	96.4	-88.0	0.0	0.0	74.8	15.0	-2.2	0.0	0.0	11.1	0.0	-0.0	-2.3	-88.0
8	18423998.90	5015168.87	130.56	0	4000	89.3	-88.0	0.0	0.0	74.8	50.8	-2.2	0.0	0.0	13.6	0.0	-0.0	-47.7	-88.0
9	18423998.90	5015168.87	130.56	0	8000	77.8	-88.0	0.0	0.0	74.8	181.3	-2.2	0.0	0.0	16.3	0.0	-0.0	-192.4	-88.0

Point Source, ISO 9613, Name: "Cover Soil - CAT Loader", ID: "SS2_cs_ldr"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423510.13	5014668.45	143.00	0	32	72.2	-88.0	0.0	0.0	71.2	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	6.3	-88.0
2	18423510.13	5014668.45	143.00	0	63	93.1	-88.0	0.0	0.0	71.2	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	27.1	-88.0
3	18423510.13	5014668.45	143.00	0	125	105.4	-88.0	0.0	0.0	71.2	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	31.1	-88.0
4	18423510.13	5014668.45	143.00	0	250	104.9	-88.0	0.0	0.0	71.2	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	31.7	-88.0
5	18423510.13	5014668.45	143.00	0	500	109.9	-88.0	0.0	0.0	71.2	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	38.8	-88.0
6	18423510.13	5014668.45	143.00	0	1000	110.3	-88.0	0.0	0.0	71.2	3.7	-2.1	0.0	0.0	0.0	0.0	-0.0	37.5	-88.0
7	18423510.13	5014668.45	143.00	0	2000	105.7	-88.0	0.0	0.0	71.2	9.9	-2.1	0.0	0.0	0.0	0.0	-0.0	26.8	-88.0
8	18423510.13	5014668.45	143.00	0	4000	94.9	-88.0	0.0	0.0	71.2	33.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-7.6	-88.0
9	18423510.13	5014668.45	143.00	0	8000	82.5	-88.0	0.0	0.0	71.2	119.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-105.9	-88.0

Point Source, ISO 9613, Name: "Landfill Working Face - CAT 826G Compactor", ID: "SS2_lwf_cmpt1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423349.10	5014941.21	143.00	0	32	69.6	-88.0	0.0	0.0	69.8	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	5.0	-88.0
2	18423349.10	5014941.21	143.00	0	63	84.9	-88.0	0.0	0.0	69.8	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	20.3	-88.0
3	18423349.10	5014941.21	143.00	0	125	92.6	-88.0	0.0	0.0	69.8	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	19.9	-88.0
4	18423349.10	5014941.21	143.00	0	250	94.3	-88.0	0.0	0.0	69.8	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	22.6	-88.0
5	18423349.10	5014941.21	143.00	0	500	103.1	-88.0	0.0	0.0	69.8	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	33.6	-88.0
6	18423349.10	5014941.21	143.00	0	1000	104.7	-88.0	0.0	0.0	69.8	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	33.8	-88.0
7	18423349.10	5014941.21	143.00	0	2000	101.0	-88.0	0.0	0.0	69.8	8.4	-2.1	0.0	0.0	0.0	0.0	-0.0	24.9	-88.0
8	18423349.10	5014941.21	143.00	0	4000	97.2	-88.0	0.0	0.0	69.8	28.4	-2.1	0.0	0.0	0.0	0.0	-0.0	1.1	-88.0
9	18423349.10	5014941.21	143.00	0	8000	93.2	-88.0	0.0	0.0	69.8	101.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-75.8	-88.0

Point Source, ISO 9613, Name: "Landfill Working Face - CAT 826G Compactor", ID: "SS2_lwf_cmpt2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423361.53	5014950.01	143.00	0	32	69.6	-88.0	0.0	0.0	69.9	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	4.9	-88.0
2	18423361.53	5014950.01	143.00	0	63	84.9	-88.0	0.0	0.0	69.9	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	20.1	-88.0
3	18423361.53	5014950.01	143.00	0	125	92.6	-88.0	0.0	0.0	69.9	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	19.7	-88.0
4	18423361.53	5014950.01	143.00	0	250	94.3	-88.0	0.0	0.0	69.9	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	22.4	-88.0
5	18423361.53	5014950.01	143.00	0	500	103.1	-88.0	0.0	0.0	69.9	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	33.5	-88.0
6	18423361.53	5014950.01	143.00	0	1000	104.7	-88.0	0.0	0.0	69.9	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	33.7	-88.0
7	18423361.53	5014950.01	143.00	0	2000	101.0	-88.0	0.0	0.0	69.9	8.5	-2.1	0.0	0.0	0.0	0.0	-0.0	24.7	-88.0
8	18423361.53	5014950.01	143.00	0	4000	97.2	-88.0	0.0	0.0	69.9	28.9	-2.1	0.0	0.0	0.0	0.0	-0.0	0.5	-88.0
9	18423361.53	5014950.01	143.00	0	8000	93.2	-88.0	0.0	0.0	69.9	103.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-77.6	-88.0

Point Source, ISO 9613, Name: "Landfill Working Face - CAT D6R Dozer", ID: "SS2_lwf_dzr1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423343.86	5014928.13	143.00	0	32	71.2	71.2	0.0	0.0	69.7	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	6.7	6.7
2	18423343.86	5014928.13	143.00	0	63	83.6	83.6	0.0	0.0	69.7	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	19.0	19.0
3	18423343.86	5014928.13	143.00	0	125	100.7	100.7	0.0	0.0	69.7	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	28.1	28.1
4	18423343.86	5014928.13	143.00	0	250	109.0	109.0	0.0	0.0	69.7	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	37.4	37.4
5	18423343.86	5014928.13	143.00	0	500	111.0	111.0	0.0	0.0	69.7	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	41.6	41.6
6	18423343.86	5014928.13	143.00	0	1000	110.7	110.7	0.0	0.0	69.7	3.1	-2.1	0.0	0.0	0.0	0.0	-0.0	39.9	39.9
7	18423343.86	5014928.13	143.00	0	2000	106.7	106.7	0.0	0.0	69.7	8.3	-2.1	0.0	0.0	0.0	0.0	-0.0	30.8	30.8
8	18423343.86	5014928.13	143.00	0	4000	104.9	104.9	0.0	0.0	69.7	28.2	-2.1	0.0	0.0	0.0	0.0	-0.0	9.1	9.1
9	18423343.86	5014928.13	143.00	0	8000	98.0	98.0	0.0	0.0	69.7	100.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-70.1	-70.1

Point Source, ISO 9613, Name: "Landfill Working Face - CAT D7 Dozer", ID: "SS2_lwf_dzr2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423331.79	5014950.92	143.00	0	32	76.3	76.3	0.0	0.0	69.6	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	11.9	11.9
2	18423331.79	5014950.92	143.00	0	63	89.4	89.4	0.0	0.0	69.6	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	24.9	24.9
3	18423331.79	5014950.92	143.00	0	125	94.0	94.0	0.0	0.0	69.6	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	21.5	21.5
4	18423331.79	5014950.92	143.00	0	250	106.9	106.9	0.0	0.0	69.6	0.9	1.1	0.0	0.0	0.0	0.0	-0.0	35.4	35.4
5	18423331.79	5014950.92	143.00	0	500	111.3	111.3	0.0	0.0	69.6	1.6	-2.0	0.0	0.0	0.0	0.0	-0.0	42.0	42.0
6	18423331.79	5014950.92	143.00	0	1000	108.7	108.7	0.0	0.0	69.6	3.1	-2.1	0.0	0.0	0.0	0.0	-0.0	38.1	38.1
7	18423331.79	5014950.92	143.00	0	2000	103.5	103.5	0.0	0.0	69.6	8.2	-2.1	0.0	0.0	0.0	0.0	-0.0	27.7	27.7
8	18423331.79	5014950.92	143.00	0	4000	100.1	100.1	0.0	0.0	69.6	27.9	-2.1	0.0	0.0	0.0	0.0	-0.0	4.7	4.7
9	18423331.79	5014950.92	143.00	0	8000	88.7	88.7	0.0	0.0	69.6	99.6	-2.1	0.0	0.0	0.0	0.0	-0.0	-78.4	-78.4

Point Source, ISO 9613, Name: "Landfill Working Face - CAT D7 Dozer", ID: "SS2_lwf_dzr3"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423349.11	5014966.64	143.00	0	32	76.3	-88.0	0.0	0.0	69.8	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	11.7	-88.0
2	18423349.11	5014966.64	143.00	0	63	89.4	-88.0	0.0	0.0	69.8	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	24.7	-88.0
3	18423349.11	5014966.64	143.00	0	125	94.0	-88.0	0.0	0.0	69.8	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	21.2	-88.0
4	18423349.11	5014966.64	143.00	0	250	106.9	-88.0	0.0	0.0	69.8	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	35.1	-88.0
5	18423349.11	5014966.64	143.00	0	500	111.3	-88.0	0.0	0.0	69.8	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	41.8	-88.0
6	18423349.11	5014966.64	143.00	0	1000	108.7	-88.0	0.0	0.0	69.8	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	37.8	-88.0
7	18423349.11	5014966.64	143.00	0	2000	103.5	-88.0	0.0	0.0	69.8	8.4	-2.1	0.0	0.0	0.0	0.0	-0.0	27.4	-88.0
8	18423349.11	5014966.64	143.00	0	4000	100.1	-88.0	0.0	0.0	69.8	28.6	-2.1	0.0	0.0	0.0	0.0	-0.0	3.8	-88.0
9	18423349.11	5014966.64	143.00	0	8000	88.7	-88.0	0.0	0.0	69.8	101.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-81.0	-88.0

Point Source, ISO 9613, Name: "Overburden - CAT Soil Truck Unloading", ID: "SS2_ob_stu"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423410.66	5014587.76	130.00	0	32	82.4	-88.0	0.0	0.0	70.4	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	17.2	-88.0
2	18423410.66	5014587.76	130.00	0	63	90.3	-88.0	0.0	0.0	70.4	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	25.0	-88.0
3	18423410.66	5014587.76	130.00	0	125	99.5	-88.0	0.0	0.0	70.4	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	26.1	-88.0
4	18423410.66	5014587.76	130.00	0	250	100.5	-88.0	0.0	0.0	70.4	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	28.1	-88.0
5	18423410.66	5014587.76	130.00	0	500	112.6	-88.0	0.0	0.0	70.4	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	42.3	-88.0
6	18423410.66	5014587.76	130.00	0	1000	110.7	-88.0	0.0	0.0	70.4	3.4	-2.1	0.0	0.0	0.0	0.0	-0.0	39.0	-88.0
7	18423410.66	5014587.76	130.00	0	2000	110.6	-88.0	0.0	0.0	70.4	9.1	-2.1	0.0	0.0	0.0	0.0	-0.0	33.2	-88.0
8	18423410.66	5014587.76	130.00	0	4000	109.6	-88.0	0.0	0.0	70.4	30.7	-2.1	0.0	0.0	0.0	0.0	-0.0	10.6	-88.0
9	18423410.66	5014587.76	130.00	0	8000	105.2	-88.0	0.0	0.0	70.4	109.4	-2.1	0.0	0.0	0.0	0.0	-0.0	-72.5	-88.0

Point Source, ISO 9613, Name: "Construction Working Face - Grader", ID: "SS2_cwf_grdr"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423205.20	5014847.02	130.00	0	32	74.6	-88.0	0.0	0.0	68.0	0.0	-5.0	0.0	0.0	0.0	0.0	-0.0	11.6	-88.0
2	18423205.20	5014847.02	130.00	0	63	89.8	-88.0	0.0	0.0	68.0	0.1	-5.0	0.0	0.0	0.0	0.0	-0.0	26.7	-88.0
3	18423205.20	5014847.02	130.00	0	125	97.9	-88.0	0.0	0.0	68.0	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	27.2	-88.0
4	18423205.20	5014847.02	130.00	0	250	101.4	-88.0	0.0	0.0	68.0	0.7	1.1	0.0	0.0	0.0	0.0	-0.0	31.5	-88.0
5	18423205.20	5014847.02	130.00	0	500	106.8	-88.0	0.0	0.0	68.0	1.4	-1.9	0.0	0.0	0.0	0.0	-0.0	39.3	-88.0
6	18423205.20	5014847.02	130.00	0	1000	110.0	-88.0	0.0	0.0	68.0	2.6	-2.0	0.0	0.0	0.0	0.0	-0.0	41.4	-88.0
7	18423205.20	5014847.02	130.00	0	2000	109.2	-88.0	0.0	0.0	68.0	6.9	-2.0	0.0	0.0	0.0	0.0	-0.0	36.3	-88.0
8	18423205.20	5014847.02	130.00	0	4000	105.0	-88.0	0.0	0.0	68.0	23.3	-2.0	0.0	0.0	0.0	0.0	-0.0	15.7	-88.0
9	18423205.20	5014847.02	130.00	0	8000	100.9	-88.0	0.0	0.0	68.0	83.2	-2.0	0.0	0.0	0.0	0.0	-0.0	-48.3	-88.0

Point Source, ISO 9613, Name: "Construction Working Face - CAT 330B Excavator", ID: "SS2_cwf_exc1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423162.12	5014863.74	130.00	0	32	73.8	-88.0	0.0	0.0	67.5	0.0	-5.0	0.0	0.0	0.0	0.0	-0.0	11.2	-88.0
2	18423162.12	5014863.74	130.00	0	63	83.5	-88.0	0.0	0.0	67.5	0.1	-5.0	0.0	0.0	0.0	0.0	-0.0	20.9	-88.0
3	18423162.12	5014863.74	130.00	0	125	92.5	-88.0	0.0	0.0	67.5	0.3	2.3	0.0	0.0	0.0	0.0	-0.0	22.4	-88.0
4	18423162.12	5014863.74	130.00	0	250	94.7	-88.0	0.0	0.0	67.5	0.7	1.1	0.0	0.0	0.0	0.0	-0.0	25.3	-88.0
5	18423162.12	5014863.74	130.00	0	500	99.6	-88.0	0.0	0.0	67.5	1.3	-1.9	0.0	0.0	0.0	0.0	-0.0	32.6	-88.0
6	18423162.12	5014863.74	130.00	0	1000	99.3	-88.0	0.0	0.0	67.5	2.4	-2.0	0.0	0.0	0.0	0.0	-0.0	31.3	-88.0
7	18423162.12	5014863.74	130.00	0	2000	97.9	-88.0	0.0	0.0	67.5	6.5	-2.0	0.0	0.0	0.0	0.0	-0.0	25.9	-88.0
8	18423162.12	5014863.74	130.00	0	4000	92.5	-88.0	0.0	0.0	67.5	22.0	-2.0	0.0	0.0	0.0	0.0	-0.0	5.0	-88.0
9	18423162.12	5014863.74	130.00	0	8000	83.6	-88.0	0.0	0.0	67.5	78.4	-2.0	0.0	0.0	0.0	0.0	-0.0	-60.3	-88.0

Point Source, ISO 9613, Name: "Construction Working Face - CAT 330B Excavator", ID: "SS2_cwf_exc2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423174.82	5014874.60	130.00	0	32	73.8	-88.0	0.0	0.0	67.7	0.0	-5.0	0.0	0.0	0.0	0.0	-0.0	11.1	-88.0
2	18423174.82	5014874.60	130.00	0	63	83.5	-88.0	0.0	0.0	67.7	0.1	-5.0	0.0	0.0	0.0	0.0	-0.0	20.7	-88.0
3	18423174.82	5014874.60	130.00	0	125	92.5	-88.0	0.0	0.0	67.7	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	22.1	-88.0
4	18423174.82	5014874.60	130.00	0	250	94.7	-88.0	0.0	0.0	67.7	0.7	1.1	0.0	0.0	0.0	0.0	-0.0	25.2	-88.0
5	18423174.82	5014874.60	130.00	0	500	99.6	-88.0	0.0	0.0	67.7	1.3	-1.9	0.0	0.0	0.0	0.0	-0.0	32.4	-88.0
6	18423174.82	5014874.60	130.00	0	1000	99.3	-88.0	0.0	0.0	67.7	2.5	-2.0	0.0	0.0	0.0	0.0	-0.0	31.1	-88.0
7	18423174.82	5014874.60	130.00	0	2000	97.9	-88.0	0.0	0.0	67.7	6.6	-2.0	0.0	0.0	0.0	0.0	-0.0	25.6	-88.0
8	18423174.82	5014874.60	130.00	0	4000	92.5	-88.0	0.0	0.0	67.7	22.4	-2.0	0.0	0.0	0.0	0.0	-0.0	4.4	-88.0
9	18423174.82	5014874.60	130.00	0	8000	83.6	-88.0	0.0	0.0	67.7	80.0	-2.0	0.0	0.0	0.0	0.0	-0.0	-62.1	-88.0

Point Source, ISO 9613, Name: "Construction Working Face - CAT D7 Dozer 1", ID: "SS2_cwf_dzr1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423175.47	5014835.45	130.00	0	32	76.3	-88.0	0.0	0.0	67.7	0.0	-5.0	0.0	0.0	0.0	0.0	-0.0	13.6	-88.0
2	18423175.47	5014835.45	130.00	0	63	89.4	-88.0	0.0	0.0	67.7	0.1	-5.0	0.0	0.0	0.0	0.0	-0.0	26.7	-88.0
3	18423175.47	5014835.45	130.00	0	125	94.0	-88.0	0.0	0.0	67.7	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	23.7	-88.0
4	18423175.47	5014835.45	130.00	0	250	106.9	-88.0	0.0	0.0	67.7	0.7	1.1	0.0	0.0	0.0	0.0	-0.0	37.4	-88.0
5	18423175.47	5014835.45	130.00	0	500	111.3	-88.0	0.0	0.0	67.7	1.3	-1.9	0.0	0.0	0.0	0.0	-0.0	44.2	-88.0
6	18423175.47	5014835.45	130.00	0	1000	108.7	-88.0	0.0	0.0	67.7	2.5	-2.0	0.0	0.0	0.0	0.0	-0.0	40.5	-88.0
7	18423175.47	5014835.45	130.00	0	2000	103.5	-88.0	0.0	0.0	67.7	6.6	-2.0	0.0	0.0	0.0	0.0	-0.0	31.3	-88.0
8	18423175.47	5014835.45	130.00	0	4000	100.1	-88.0	0.0	0.0	67.7	22.3	-2.0	0.0	0.0	0.0	0.0	-0.0	12.1	-88.0
9	18423175.47	5014835.45	130.00	0	8000	88.7	-88.0	0.0	0.0	67.7	79.6	-2.0	0.0	0.0	0.0	0.0	-0.0	-56.6	-88.0

Point Source, ISO 9613, Name: "Construction Working Face - CAT D7 Dozer 2", ID: "SS2_cwf_dzr2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423189.09	5014860.05	130.00	0	32	76.3	-88.0	0.0	0.0	67.9	0.0	-5.0	0.0	0.0	0.0	0.0	-0.0	13.4	-88.0
2	18423189.09	5014860.05	130.00	0	63	89.4	-88.0	0.0	0.0	67.9	0.1	-5.0	0.0	0.0	0.0	0.0	-0.0	26.5	-88.0
3	18423189.09	5014860.05	130.00	0	125	94.0	-88.0	0.0	0.0	67.9	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	23.5	-88.0
4	18423189.09	5014860.05	130.00	0	250	106.9	-88.0	0.0	0.0	67.9	0.7	1.1	0.0	0.0	0.0	0.0	-0.0	37.2	-88.0
5	18423189.09	5014860.05	130.00	0	500	111.3	-88.0	0.0	0.0	67.9	1.3	-1.9	0.0	0.0	0.0	0.0	-0.0	44.0	-88.0
6	18423189.09	5014860.05	130.00	0	1000	108.7	-88.0	0.0	0.0	67.9	2.5	-2.0	0.0	0.0	0.0	0.0	-0.0	40.3	-88.0
7	18423189.09	5014860.05	130.00	0	2000	103.5	-88.0	0.0	0.0	67.9	6.7	-2.0	0.0	0.0	0.0	0.0	-0.0	30.9	-88.0
8	18423189.09	5014860.05	130.00	0	4000	100.1	-88.0	0.0	0.0	67.9	22.8	-2.0	0.0	0.0	0.0	0.0	-0.0	11.4	-88.0
9	18423189.09	5014860.05	130.00	0	8000	88.7	-88.0	0.0	0.0	67.9	81.5	-2.0	0.0	0.0	0.0	0.0	-0.0	-58.6	-88.0

Point Source, ISO 9613, Name: "Pest Control - Whistle", ID: "Imp1_pc_wh"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423712.27	5015344.04	152.73	0	32	93.0	-88.0	0.0	0.0	73.5	0.0	-4.3	0.0	0.0	0.0	0.0	-0.0	23.8	-88.0
2	18423712.27	5015344.04	152.73	0	63	84.7	-88.0	0.0	0.0	73.5	0.2	-4.3	0.0	0.0	0.0	0.0	-0.0	15.4	-88.0
3	18423712.27	5015344.04	152.73	0	125	82.9	-88.0	0.0	0.0	73.5	0.6	0.6	0.0	0.0	0.0	0.0	-0.0	8.3	-88.0
4	18423712.27	5015344.04	152.73	0	250	81.6	-88.0	0.0	0.0	73.5	1.4	-0.9	0.0	0.0	0.0	0.0	-0.0	7.6	-88.0
5	18423712.27	5015344.04	152.73	0	500	89.4	-88.0	0.0	0.0	73.5	2.6	-1.7	0.0	0.0	0.0	0.0	-0.0	15.0	-88.0
6	18423712.27	5015344.04	152.73	0	1000	95.3	-88.0	0.0	0.0	73.5	4.9	-1.7	0.0	0.0	0.0	0.0	-0.0	18.6	-88.0
7	18423712.27	5015344.04	152.73	0	2000	105.0	-88.0	0.0	0.0	73.5	12.9	-1.7	0.0	0.0	0.0	0.0	-0.0	20.3	-88.0
8	18423712.27	5015344.04	152.73	0	4000	103.1	-88.0	0.0	0.0	73.5	43.8	-1.7	0.0	0.0	0.0	0.0	-0.0	-12.5	-88.0
9	18423712.27	5015344.04	152.73	0	8000	93.0	-88.0	0.0	0.0	73.5	156.4	-1.7	0.0	0.0	0.0	0.0	-0.0	-135.2	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 1", ID: "Imp1_pc_pc1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423842.52	5014898.60	135.24	0	32	0.0	-88.0	0.0	0.0	73.6	0.0	-5.6	0.0	0.0	4.9	0.0	-0.0	-72.9	-88.0
2	18423842.52	5014898.60	135.24	0	63	0.0	-88.0	0.0	0.0	73.6	0.2	-5.6	0.0	0.0	5.0	0.0	-0.0	-73.1	-88.0
3	18423842.52	5014898.60	135.24	0	125	0.0	-88.0	0.0	0.0	73.6	0.6	3.3	0.0	0.0	1.9	0.0	-0.0	-79.3	-88.0
4	18423842.52	5014898.60	135.24	0	250	0.0	-88.0	0.0	0.0	73.6	1.4	2.8	0.0	0.0	2.7	0.0	-0.0	-80.5	-88.0
5	18423842.52	5014898.60	135.24	0	500	140.6	-88.0	0.0	-7.0	73.6	2.6	0.7	0.0	0.0	5.4	0.0	-0.0	51.3	-88.0
6	18423842.52	5014898.60	135.24	0	1000	0.0	-88.0	0.0	0.0	73.6	4.9	-1.8	0.0	0.0	7.1	0.0	-0.0	-83.8	-88.0
7	18423842.52	5014898.60	135.24	0	2000	0.0	-88.0	0.0	0.0	73.6	13.1	-2.2	0.0	0.0	8.6	0.0	-0.0	-93.1	-88.0
8	18423842.52	5014898.60	135.24	0	4000	0.0	-88.0	0.0	0.0	73.6	44.3	-2.2	0.0	0.0	10.6	0.0	-0.0	-126.3	-88.0
9	18423842.52	5014898.60	135.24	0	8000	0.0	-88.0	0.0	0.0	73.6	157.9	-2.2	0.0	0.0	13.1	0.0	-0.0	-242.4	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 2", ID: "Imp1_pc_pc2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423786.34	5015348.47	132.91	0	32	0.0	-88.0	0.0	0.0	74.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-73.2	-88.0
2	18423786.34	5015348.47	132.91	0	63	0.0	-88.0	0.0	0.0	74.0	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	-73.5	-88.0
3	18423786.34	5015348.47	132.91	0	125	0.0	-88.0	0.0	0.0	74.0	0.6	3.3	0.0	0.0	2.0	0.0	-0.0	-79.8	-88.0
4	18423786.34	5015348.47	132.91	0	250	0.0	-88.0	0.0	0.0	74.0	1.5	2.8	0.0	0.0	3.1	0.0	-0.0	-81.3	-88.0
5	18423786.34	5015348.47	132.91	0	500	140.6	-88.0	0.0	-7.0	74.0	2.7	0.7	0.0	0.0	6.2	0.0	-0.0	50.0	-88.0
6	18423786.34	5015348.47	132.91	0	1000	0.0	-88.0	0.0	0.0	74.0	5.1	-1.9	0.0	0.0	8.5	0.0	-0.0	-85.7	-88.0
7	18423786.34	5015348.47	132.91	0	2000	0.0	-88.0	0.0	0.0	74.0	13.6	-2.3	0.0	0.0	10.5	0.0	-0.0	-95.8	-88.0
8	18423786.34	5015348.47	132.91	0	4000	0.0	-88.0	0.0	0.0	74.0	46.1	-2.3	0.0	0.0	12.8	0.0	-0.0	-130.7	-88.0
9	18423786.34	5015348.47	132.91	0	8000	0.0	-88.0	0.0	0.0	74.0	164.5	-2.3	0.0	0.0	15.5	0.0	-0.0	-251.7	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 3", ID: "Imp1_pc_pc3"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423733.33	5015204.28	152.04	0	32	0.0	-88.0	0.0	0.0	73.3	0.0	-5.6	0.0	0.0	0.0	0.0	-0.0	-67.8	-88.0
2	18423733.33	5015204.28	152.04	0	63	0.0	-88.0	0.0	0.0	73.3	0.2	-5.6	0.0	0.0	0.0	0.0	-0.0	-67.9	-88.0
3	18423733.33	5015204.28	152.04	0	125	0.0	-88.0	0.0	0.0	73.3	0.5	3.2	0.0	0.0	0.0	0.0	-0.0	-77.1	-88.0
4	18423733.33	5015204.28	152.04	0	250	0.0	-88.0	0.0	0.0	73.3	1.4	2.8	0.0	0.0	0.0	0.0	-0.0	-77.5	-88.0
5	18423733.33	5015204.28	152.04	0	500	140.6	-88.0	0.0	-7.0	73.3	2.5	0.8	0.0	0.0	0.0	0.0	-0.0	57.0	-88.0
6	18423733.33	5015204.28	152.04	0	1000	0.0	-88.0	0.0	0.0	73.3	4.8	-1.8	0.0	0.0	0.0	0.0	-0.0	-76.3	-88.0
7	18423733.33	5015204.28	152.04	0	2000	0.0	-88.0	0.0	0.0	73.3	12.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-83.7	-88.0
8	18423733.33	5015204.28	152.04	0	4000	0.0	-88.0	0.0	0.0	73.3	42.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-113.9	-88.0
9	18423733.33	5015204.28	152.04	0	8000	0.0	-88.0	0.0	0.0	73.3	152.7	-2.2	0.0	0.0	0.0	0.0	-0.0	-223.8	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 4", ID: "Imp1_pc_pc4"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423877.19	5015239.94	134.67	0	32	0.0	-88.0	0.0	0.0	74.3	0.1	-5.6	0.0	0.0	5.1	0.0	-0.0	-73.8	-88.0
2	18423877.19	5015239.94	134.67	0	63	0.0	-88.0	0.0	0.0	74.3	0.2	-5.6	0.0	0.0	5.6	0.0	-0.0	-74.4	-88.0
3	18423877.19	5015239.94	134.67	0	125	0.0	-88.0	0.0	0.0	74.3	0.6	3.3	0.0	0.0	3.2	0.0	-0.0	-81.3	-88.0
4	18423877.19	5015239.94	134.67	0	250	0.0	-88.0	0.0	0.0	74.3	1.5	2.8	0.0	0.0	4.9	0.0	-0.0	-83.5	-88.0
5	18423877.19	5015239.94	134.67	0	500	140.6	-88.0	0.0	-7.0	74.3	2.8	0.7	0.0	0.0	8.7	0.0	-0.0	47.1	-88.0
6	18423877.19	5015239.94	134.67	0	1000	0.0	-88.0	0.0	0.0	74.3	5.3	-1.9	0.0	0.0	11.7	0.0	-0.0	-89.4	-88.0
7	18423877.19	5015239.94	134.67	0	2000	0.0	-88.0	0.0	0.0	74.3	14.1	-2.3	0.0	0.0	14.2	0.0	-0.0	-100.3	-88.0
8	18423877.19	5015239.94	134.67	0	4000	0.0	-88.0	0.0	0.0	74.3	47.6	-2.3	0.0	0.0	17.0	0.0	-0.0	-136.6	-88.0
9	18423877.19	5015239.94	134.67	0	8000	0.0	-88.0	0.0	0.0	74.3	169.9	-2.3	0.0	0.0	19.8	0.0	-0.0	-261.8	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 5", ID: "Imp1_pc_pc5"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423697.34	5015333.35	133.83	0	32	0.0	-88.0	0.0	0.0	73.4	0.0	-5.6	0.0	0.0	0.0	0.0	-0.0	-67.9	-88.0
2	18423697.34	5015333.35	133.83	0	63	0.0	-88.0	0.0	0.0	73.4	0.2	-5.6	0.0	0.0	0.0	0.0	-0.0	-68.0	-88.0
3	18423697.34	5015333.35	133.83	0	125	0.0	-88.0	0.0	0.0	73.4	0.5	3.2	0.0	0.0	0.0	0.0	-0.0	-77.2	-88.0
4	18423697.34	5015333.35	133.83	0	250	0.0	-88.0	0.0	0.0	73.4	1.4	2.8	0.0	0.0	0.0	0.0	-0.0	-77.6	-88.0
5	18423697.34	5015333.35	133.83	0	500	140.6	-88.0	0.0	-7.0	73.4	2.5	0.8	0.0	0.0	0.0	0.0	-0.0	56.9	-88.0
6	18423697.34	5015333.35	133.83	0	1000	0.0	-88.0	0.0	0.0	73.4	4.8	-1.8	0.0	0.0	0.0	0.0	-0.0	-76.4	-88.0
7	18423697.34	5015333.35	133.83	0	2000	0.0	-88.0	0.0	0.0	73.4	12.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-83.9	-88.0
8	18423697.34	5015333.35	133.83	0	4000	0.0	-88.0	0.0	0.0	73.4	43.3	-2.2	0.0	0.0	0.0	0.0	-0.0	-114.4	-88.0
9	18423697.34	5015333.35	133.83	0	8000	0.0	-88.0	0.0	0.0	73.4	154.3	-2.2	0.0	0.0	0.0	0.0	-0.0	-225.5	-88.0

Point Source, ISO 9613, Name: "Pest Control - Shotgun'', ID: "Imp1_pc_shtg"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423695.88	5015285.89	142.61	0	32	0.0	-88.0	0.0	0.0	73.3	0.0	-5.6	0.0	0.0	0.0	0.0	-0.0	-67.7	-88.0
2	18423695.88	5015285.89	142.61	0	63	0.0	-88.0	0.0	0.0	73.3	0.2	-5.6	0.0	0.0	0.0	0.0	-0.0	-67.8	-88.0
3	18423695.88	5015285.89	142.61	0	125	0.0	-88.0	0.0	0.0	73.3	0.5	3.2	0.0	0.0	0.0	0.0	-0.0	-77.0	-88.0
4	18423695.88	5015285.89	142.61	0	250	0.0	-88.0	0.0	0.0	73.3	1.4	2.8	0.0	0.0	0.0	0.0	-0.0	-77.5	-88.0
5	18423695.88	5015285.89	142.61	0	500	158.0	-88.0	0.0	-23.5	73.3	2.5	0.8	0.0	0.0	0.0	0.0	-0.0	58.0	-88.0
6	18423695.88	5015285.89	142.61	0	1000	0.0	-88.0	0.0	0.0	73.3	4.8	-1.8	0.0	0.0	0.0	0.0	-0.0	-76.2	-88.0
7	18423695.88	5015285.89	142.61	0	2000	0.0	-88.0	0.0	0.0	73.3	12.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-83.6	-88.0
8	18423695.88	5015285.89	142.61	0	4000	0.0	-88.0	0.0	0.0	73.3	42.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-113.6	-88.0
9	18423695.88	5015285.89	142.61	0	8000	0.0	-88.0	0.0	0.0	73.3	151.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-223.0	-88.0

Point Source, ISO 9613, Name: "Pest Control - Whistle", ID: "Imp2_pc_wh"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423320.99	5014968.32	160.00	0	32	93.0	-88.0	0.0	0.0	69.5	0.0	-3.4	0.0	0.0	0.0	0.0	-0.0	26.8	-88.0
2	18423320.99	5014968.32	160.00	0	63	84.7	-88.0	0.0	0.0	69.5	0.1	-3.4	0.0	0.0	0.0	0.0	-0.0	18.4	-88.0
3	18423320.99	5014968.32	160.00	0	125	82.9	-88.0	0.0	0.0	69.5	0.4	0.9	0.0	0.0	0.0	0.0	-0.0	12.1	-88.0
4	18423320.99	5014968.32	160.00	0	250	81.6	-88.0	0.0	0.0	69.5	0.9	-0.5	0.0	0.0	0.0	0.0	-0.0	11.7	-88.0
5	18423320.99	5014968.32	160.00	0	500	89.4	-88.0	0.0	0.0	69.5	1.6	-1.4	0.0	0.0	0.0	0.0	-0.0	19.6	-88.0
6	18423320.99	5014968.32	160.00	0	1000	95.3	-88.0	0.0	0.0	69.5	3.1	-1.4	0.0	0.0	0.0	0.0	-0.0	24.0	-88.0
7	18423320.99	5014968.32	160.00	0	2000	105.0	-88.0	0.0	0.0	69.5	8.2	-1.4	0.0	0.0	0.0	0.0	-0.0	28.7	-88.0
8	18423320.99	5014968.32	160.00	0	4000	103.1	-88.0	0.0	0.0	69.5	27.7	-1.4	0.0	0.0	0.0	0.0	-0.0	7.2	-88.0
9	18423320.99	5014968.32	160.00	0	8000	93.0	-88.0	0.0	0.0	69.5	98.8	-1.4	0.0	0.0	0.0	0.0	-0.0	-74.0	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 1", ID: "Imp2_pc_pc1"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423456.63	5014559.52	128.50	0	32	0.0	-88.0	0.0	0.0	70.9	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-65.5	-88.0
2	18423456.63	5014559.52	128.50	0	63	0.0	-88.0	0.0	0.0	70.9	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-65.5	-88.0
3	18423456.63	5014559.52	128.50	0	125	0.0	-88.0	0.0	0.0	70.9	0.4	3.1	0.0	0.0	0.0	0.0	-0.0	-74.4	-88.0
4	18423456.63	5014559.52	128.50	0	250	0.0	-88.0	0.0	0.0	70.9	1.0	2.9	0.0	0.0	0.0	0.0	-0.0	-74.8	-88.0
5	18423456.63	5014559.52	128.50	0	500	140.6	-88.0	0.0	-7.0	70.9	1.9	0.8	0.0	0.0	0.0	0.0	-0.0	60.0	-88.0
6	18423456.63	5014559.52	128.50	0	1000	0.0	-88.0	0.0	0.0	70.9	3.6	-1.8	0.0	0.0	0.0	0.0	-0.0	-72.7	-88.0
7	18423456.63	5014559.52	128.50	0	2000	0.0	-88.0	0.0	0.0	70.9	9.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-78.2	-88.0
8	18423456.63	5014559.52	128.50	0	4000	0.0	-88.0	0.0	0.0	70.9	32.3	-2.2	0.0	0.0	0.0	0.0	-0.0	-101.1	-88.0
9	18423456.63	5014559.52	128.50	0	8000	0.0	-88.0	0.0	0.0	70.9	115.4	-2.2	0.0	0.0	0.0	0.0	-0.0	-184.1	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 2", ID: "Imp2_pc_pc2"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423463.75	5014923.55	153.93	0	32	0.0	-88.0	0.0	0.0	70.8	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-65.4	-88.0
2	18423463.75	5014923.55	153.93	0	63	0.0	-88.0	0.0	0.0	70.8	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-65.5	-88.0
3	18423463.75	5014923.55	153.93	0	125	0.0	-88.0	0.0	0.0	70.8	0.4	3.1	0.0	0.0	0.0	0.0	-0.0	-74.3	-88.0
4	18423463.75	5014923.55	153.93	0	250	0.0	-88.0	0.0	0.0	70.8	1.0	2.9	0.0	0.0	0.0	0.0	-0.0	-74.7	-88.0
5	18423463.75	5014923.55	153.93	0	500	140.6	-88.0	0.0	-7.0	70.8	1.9	0.8	0.0	0.0	0.0	0.0	-0.0	60.1	-88.0
6	18423463.75	5014923.55	153.93	0	1000	0.0	-88.0	0.0	0.0	70.8	3.6	-1.8	0.0	0.0	0.0	0.0	-0.0	-72.6	-88.0
7	18423463.75	5014923.55	153.93	0	2000	0.0	-88.0	0.0	0.0	70.8	9.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-78.1	-88.0
8	18423463.75	5014923.55	153.93	0	4000	0.0	-88.0	0.0	0.0	70.8	32.0	-2.2	0.0	0.0	0.0	0.0	-0.0	-100.7	-88.0
9	18423463.75	5014923.55	153.93	0	8000	0.0	-88.0	0.0	0.0	70.8	114.3	-2.2	0.0	0.0	0.0	0.0	-0.0	-182.9	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 3", ID: "Imp2_pc_pc3"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423400.38	5015052.08	138.94	0	32	0.0	-88.0	0.0	0.0	70.5	0.0	-5.4	0.0	0.0	0.0	0.0	-0.0	-65.1	-88.0
2	18423400.38	5015052.08	138.94	0	63	0.0	-88.0	0.0	0.0	70.5	0.1	-5.4	0.0	0.0	0.0	0.0	-0.0	-65.2	-88.0
3	18423400.38	5015052.08	138.94	0	125	0.0	-88.0	0.0	0.0	70.5	0.4	3.1	0.0	0.0	0.0	0.0	-0.0	-73.9	-88.0
4	18423400.38	5015052.08	138.94	0	250	0.0	-88.0	0.0	0.0	70.5	1.0	2.9	0.0	0.0	0.0	0.0	-0.0	-74.3	-88.0
5	18423400.38	5015052.08	138.94	0	500	140.6	-88.0	0.0	-7.0	70.5	1.8	0.8	0.0	0.0	0.0	0.0	-0.0	60.5	-88.0
6	18423400.38	5015052.08	138.94	0	1000	0.0	-88.0	0.0	0.0	70.5	3.4	-1.8	0.0	0.0	0.0	0.0	-0.0	-72.2	-88.0
7	18423400.38	5015052.08	138.94	0	2000	0.0	-88.0	0.0	0.0	70.5	9.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-77.4	-88.0
8	18423400.38	5015052.08	138.94	0	4000	0.0	-88.0	0.0	0.0	70.5	30.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-99.2	-88.0
9	18423400.38	5015052.08	138.94	0	8000	0.0	-88.0	0.0	0.0	70.5	110.2	-2.2	0.0	0.0	0.0	0.0	-0.0	-178.5	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 4", ID: "Imp2_pc_pc4"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423302.47	5014837.12	133.12	0	32	0.0	-88.0	0.0	0.0	69.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-63.8	-88.0
2	18423302.47	5014837.12	133.12	0	63	0.0	-88.0	0.0	0.0	69.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-63.9	-88.0
3	18423302.47	5014837.12	133.12	0	125	0.0	-88.0	0.0	0.0	69.1	0.3	2.8	0.0	0.0	0.0	0.0	-0.0	-72.3	-88.0
4	18423302.47	5014837.12	133.12	0	250	0.0	-88.0	0.0	0.0	69.1	0.8	2.9	0.0	0.0	0.0	0.0	-0.0	-72.9	-88.0
5	18423302.47	5014837.12	133.12	0	500	140.6	-88.0	0.0	-7.0	69.1	1.6	0.9	0.0	0.0	0.0	0.0	-0.0	62.0	-88.0
6	18423302.47	5014837.12	133.12	0	1000	0.0	-88.0	0.0	0.0	69.1	3.0	-1.7	0.0	0.0	0.0	0.0	-0.0	-70.4	-88.0
7	18423302.47	5014837.12	133.12	0	2000	0.0	-88.0	0.0	0.0	69.1	7.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-74.8	-88.0
8	18423302.47	5014837.12	133.12	0	4000	0.0	-88.0	0.0	0.0	69.1	26.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-93.5	-88.0
9	18423302.47	5014837.12	133.12	0	8000	0.0	-88.0	0.0	0.0	69.1	94.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-161.5	-88.0

Point Source, ISO 9613, Name: "Pest Control - Propane Cannon 5", ID: "Imp2_pc_pc5"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423336.57	5014976.52	141.50	0	32	0.0	-88.0	0.0	0.0	69.7	0.0	-5.4	0.0	0.0	0.0	0.0	-0.0	-64.4	-88.0
2	18423336.57	5014976.52	141.50	0	63	0.0	-88.0	0.0	0.0	69.7	0.1	-5.4	0.0	0.0	0.0	0.0	-0.0	-64.4	-88.0
3	18423336.57	5014976.52	141.50	0	125	0.0	-88.0	0.0	0.0	69.7	0.4	2.9	0.0	0.0	0.0	0.0	-0.0	-73.0	-88.0
4	18423336.57	5014976.52	141.50	0	250	0.0	-88.0	0.0	0.0	69.7	0.9	2.9	0.0	0.0	0.0	0.0	-0.0	-73.5	-88.0
5	18423336.57	5014976.52	141.50	0	500	140.6	-88.0	0.0	-7.0	69.7	1.7	0.8	0.0	0.0	0.0	0.0	-0.0	61.4	-88.0
6	18423336.57	5014976.52	141.50	0	1000	0.0	-88.0	0.0	0.0	69.7	3.1	-1.8	0.0	0.0	0.0	0.0	-0.0	-71.1	-88.0
7	18423336.57	5014976.52	141.50	0	2000	0.0	-88.0	0.0	0.0	69.7	8.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-75.9	-88.0
8	18423336.57	5014976.52	141.50	0	4000	0.0	-88.0	0.0	0.0	69.7	28.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-95.8	-88.0
9	18423336.57	5014976.52	141.50	0	8000	0.0	-88.0	0.0	0.0	69.7	100.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-168.3	-88.0

Point Source, ISO 9613, Name: "Pest Control - Shotgun", ID: "Imp2_pc_shtg"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423314.31	5014920.24	141.50	0	32	0.0	-88.0	0.0	0.0	69.4	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-64.0	-88.0
2	18423314.31	5014920.24	141.50	0	63	0.0	-88.0	0.0	0.0	69.4	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-64.1	-88.0
3	18423314.31	5014920.24	141.50	0	125	0.0	-88.0	0.0	0.0	69.4	0.3	2.9	0.0	0.0	0.0	0.0	-0.0	-72.6	-88.0
4	18423314.31	5014920.24	141.50	0	250	0.0	-88.0	0.0	0.0	69.4	0.9	2.9	0.0	0.0	0.0	0.0	-0.0	-73.1	-88.0
5	18423314.31	5014920.24	141.50	0	500	158.0	-88.0	0.0	22.6	69.4	1.6	0.9	0.0	0.0	0.0	0.0	-0.0	63.6	-88.0
6	18423314.31	5014920.24	141.50	0	1000	0.0	-88.0	0.0	0.0	69.4	3.0	-1.7	0.0	0.0	0.0	0.0	-0.0	-70.7	-88.0
7	18423314.31	5014920.24	141.50	0	2000	0.0	-88.0	0.0	0.0	69.4	8.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-75.3	-88.0
8	18423314.31	5014920.24	141.50	0	4000	0.0	-88.0	0.0	0.0	69.4	27.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-94.4	-88.0
9	18423314.31	5014920.24	141.50	0	8000	0.0	-88.0	0.0	0.0	69.4	96.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-164.2	-88.0

Line Source, ISO 9613, Name: "WTPF Inbound IC&I Delivery Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR1_inICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423895.40	5014890.62	131.55	0	32	60.5	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	4.8	0.0	-0.0	-12.8	-88.0
2	18423895.40	5014890.62	131.55	0	63	80.8	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	4.8	0.0	-0.0	7.3	-88.0
3	18423895.40	5014890.62	131.55	0	125	88.5	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	2.2	0.0	-0.0	9.0	-88.0
4	18423895.40	5014890.62	131.55	0	250	99.5	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	4.1	0.0	-0.0	19.0	-88.0
5	18423895.40	5014890.62	131.55	0	500	101.1	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	5.3	0.0	-0.0	21.2	-88.0
6	18423895.40	5014890.62	131.55	0	1000	101.1	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	5.8	0.0	-0.0	18.4	-88.0
7	18423895.40	5014890.62	131.55	0	2000	101.2	-88.0	0.0	0.0	73.9	13.6	-2.2	0.0	0.0	6.6	0.0	-0.0	9.3	-88.0
8	18423895.40	5014890.62	131.55	0	4000	98.9	-88.0	0.0	0.0	73.9	46.0	-2.2	0.0	0.0	7.9	0.0	-0.0	-26.7	-88.0
9	18423895.40	5014890.62	131.55	0	8000	93.9	-88.0	0.0	0.0	73.9	164.0	-2.2	0.0	0.0	9.7	0.0	-0.0	-151.6	-88.0
10	18423517.76	5014336.79	130.89	0	32	57.5	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	0.0	0.0	-0.0	-9.1	-88.0
11	18423517.76	5014336.79	130.89	0	63	77.8	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	0.0	0.0	-0.0	11.1	-88.0
12	18423517.76	5014336.79	130.89	0	125	85.5	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	10.4	-88.0
13	18423517.76	5014336.79	130.89	0	250	96.5	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	0.0	0.0	-0.0	22.4	-88.0
14	18423517.76	5014336.79	130.89	0	500	98.1	-88.0	0.0	0.0	72.0	2.1	-2.0	0.0	0.0	0.0	0.0	-0.0	26.0	-88.0
15	18423517.76	5014336.79	130.89	0	1000	98.1	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	0.0	0.0	-0.0	24.2	-88.0
16	18423517.76	5014336.79	130.89	0	2000	98.2	-88.0	0.0	0.0	72.0	10.8	-2.2	0.0	0.0	0.0	0.0	-0.0	17.6	-88.0
17	18423517.76	5014336.79	130.89	0	4000	95.9	-88.0	0.0	0.0	72.0	36.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-10.5	-88.0
18	18423517.76	5014336.79	130.89	0	8000	90.9	-88.0	0.0	0.0	72.0	130.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-109.3	-88.0
19	18423611.18	5014640.68	129.25	0	32	56.4	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	5.2	0.0	-0.0	-15.5	-88.0
20	18423611.18	5014640.68	129.25	0	63	76.7	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	5.8	0.0	-0.0	4.1	-88.0
21	18423611.18	5014640.68	129.25	0	125	84.4	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	4.0	0.0	-0.0	5.1	-88.0
22	18423611.18	5014640.68	129.25	0	250	95.4	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	7.2	0.0	-0.0	14.0	-88.0
23	18423611.18	5014640.68	129.25	0	500	97.0	-88.0	0.0	0.0	72.0	2.2	-2.0	0.0	0.0	10.1	0.0	-0.0	14.7	-88.0
24	18423611.18	5014640.68	129.25	0	1000	97.0	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	12.4	0.0	-0.0	10.6	-88.0
25	18423611.18	5014640.68	129.25	0	2000	97.1	-88.0	0.0	0.0	72.0	10.9	-2.2	0.0	0.0	15.0	0.0	-0.0	1.3	-88.0
26	18423611.18	5014640.68	129.25	0	4000	94.8	-88.0	0.0	0.0	72.0	36.8	-2.2	0.0	0.0	17.8	0.0	-0.0	-29.8	-88.0
27	18423611.18	5014640.68	129.25	0	8000	89.8	-88.0	0.0	0.0	72.0	131.5	-2.2	0.0	0.0	20.7	0.0	-0.0	-132.3	-88.0
28	18423477.19	5014521.94	129.50	0	32	54.7	-88.0	0.0	0.0	71.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-11.1	-88.0
29	18423477.19	5014521.94	129.50	0	63	75.0	-88.0	0.0	0.0	71.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	9.1	-88.0
30	18423477.19	5014521.94	129.50	0	125	82.7	-88.0	0.0	0.0	71.1	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	8.5	-88.0
31	18423477.19	5014521.94	129.50	0	250	93.7	-88.0	0.0	0.0	71.1	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	20.6	-88.0
32	18423477.19	5014521.94	129.50	0	500	95.3	-88.0	0.0	0.0	71.1	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	24.3	-88.0
33	18423477.19	5014521.94	129.50	0	1000	95.3	-88.0	0.0	0.0	71.1	3.7	-2.1	0.0	0.0	0.0	0.0	-0.0	22.6	-88.0
34	18423477.19	5014521.94	129.50	0	2000	95.4	-88.0	0.0	0.0	71.1	9.8	-2.1	0.0	0.0	0.0	0.0	-0.0	16.6	-88.0
35	18423477.19	5014521.94	129.50	0	4000	93.1	-88.0	0.0	0.0	71.1	33.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-9.2	-88.0
36	18423477.19	5014521.94	129.50	0	8000	88.1	-88.0	0.0	0.0	71.1	118.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-99.6	-88.0
37	18423984.62	5015302.53	129.67	0	32	54.3	-88.0	0.0	0.0	75.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-19.9	-88.0

Line Source, ISO 9613, Name: "WTPF Inbound IC&I Delivery Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR1_inICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
38	18423984.62	5015302.53	129.67	0	63	74.6	-88.0	0.0	0.0	75.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	0.3	-88.0
39	18423984.62	5015302.53	129.67	0	125	82.3	-88.0	0.0	0.0	75.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	2.0	-88.0
40	18423984.62	5015302.53	129.67	0	250	93.3	-88.0	0.0	0.0	75.0	1.6	0.9	0.0	0.0	3.9	0.0	-0.0	11.9	-88.0
41	18423984.62	5015302.53	129.67	0	500	94.9	-88.0	0.0	0.0	75.0	3.0	-2.1	0.0	0.0	4.9	0.0	-0.0	14.2	-88.0
42	18423984.62	5015302.53	129.67	0	1000	94.9	-88.0	0.0	0.0	75.0	5.8	-2.2	0.0	0.0	5.0	0.0	-0.0	11.5	-88.0
43	18423984.62	5015302.53	129.67	0	2000	95.0	-88.0	0.0	0.0	75.0	15.2	-2.2	0.0	0.0	5.2	0.0	-0.0	1.9	-88.0
44	18423984.62	5015302.53	129.67	0	4000	92.7	-88.0	0.0	0.0	75.0	51.6	-2.2	0.0	0.0	5.6	0.0	-0.0	-37.3	-88.0
45	18423984.62	5015302.53	129.67	0	8000	87.7	-88.0	0.0	0.0	75.0	184.2	-2.2	0.0	0.0	6.4	0.0	-0.0	-175.5	-88.0
46	18424080.58	5015390.25	127.50	0	32	54.1	-88.0	0.0	0.0	75.6	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-20.7	-88.0
47	18424080.58	5015390.25	127.50	0	63	74.4	-88.0	0.0	0.0	75.6	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-0.5	-88.0
48	18424080.58	5015390.25	127.50	0	125	82.1	-88.0	0.0	0.0	75.6	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	1.1	-88.0
49	18424080.58	5015390.25	127.50	0	250	93.1	-88.0	0.0	0.0	75.6	1.8	0.9	0.0	0.0	3.9	0.0	-0.0	11.0	-88.0
50	18424080.58	5015390.25	127.50	0	500	94.7	-88.0	0.0	0.0	75.6	3.3	-2.1	0.0	0.0	4.8	0.0	-0.0	13.2	-88.0
51	18424080.58	5015390.25	127.50	0	1000	94.7	-88.0	0.0	0.0	75.6	6.2	-2.2	0.0	0.0	4.8	0.0	-0.0	10.4	-88.0
52	18424080.58	5015390.25	127.50	0	2000	94.8	-88.0	0.0	0.0	75.6	16.4	-2.2	0.0	0.0	4.8	0.0	-0.0	0.3	-88.0
53	18424080.58	5015390.25	127.50	0	4000	92.5	-88.0	0.0	0.0	75.6	55.6	-2.2	0.0	0.0	4.8	0.0	-0.0	-41.2	-88.0
54	18424080.58	5015390.25	127.50	0	8000	87.5	-88.0	0.0	0.0	75.6	198.2	-2.2	0.0	0.0	4.8	0.0	-0.0	-188.8	-88.0
55	18424017.83	5015164.02	132.18	0	32	57.1	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-17.2	-88.0
56	18424017.83	5015164.02	132.18	0	63	77.4	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	2.9	-88.0
57	18424017.83	5015164.02	132.18	0	125	85.1	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.4	0.0	-0.0	4.4	-88.0
58	18424017.83	5015164.02	132.18	0	250	96.1	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.5	0.0	-0.0	14.1	-88.0
59	18424017.83	5015164.02	132.18	0	500	97.7	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	6.0	0.0	-0.0	15.9	-88.0
60	18424017.83	5015164.02	132.18	0	1000	97.7	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	6.9	0.0	-0.0	12.3	-88.0
61	18424017.83	5015164.02	132.18	0	2000	97.8	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	8.4	0.0	-0.0	1.6	-88.0
62	18424017.83	5015164.02	132.18	0	4000	95.5	-88.0	0.0	0.0	74.9	51.4	-2.2	0.0	0.0	10.3	0.0	-0.0	-38.9	-88.0
63	18424017.83	5015164.02	132.18	0	8000	90.5	-88.0	0.0	0.0	74.9	183.3	-2.2	0.0	0.0	12.6	0.0	-0.0	-178.1	-88.0
64	18423671.00	5014194.41	131.50	0	32	54.7	-88.0	0.0	0.0	73.4	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-13.2	-88.0
65	18423671.00	5014194.41	131.50	0	63	75.0	-88.0	0.0	0.0	73.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	7.0	-88.0
66	18423671.00	5014194.41	131.50	0	125	82.7	-88.0	0.0	0.0	73.4	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	6.1	-88.0
67	18423671.00	5014194.41	131.50	0	250	93.7	-88.0	0.0	0.0	73.4	1.4	0.9	0.0	0.0	0.0	0.0	-0.0	18.0	-88.0
68	18423671.00	5014194.41	131.50	0	500	95.3	-88.0	0.0	0.0	73.4	2.5	-2.1	0.0	0.0	0.0	0.0	-0.0	21.5	-88.0
69	18423671.00	5014194.41	131.50	0	1000	95.3	-88.0	0.0	0.0	73.4	4.8	-2.2	0.0	0.0	0.0	0.0	-0.0	19.3	-88.0
70	18423671.00	5014194.41	131.50	0	2000	95.4	-88.0	0.0	0.0	73.4	12.7	-2.2	0.0	0.0	0.0	0.0	-0.0	11.5	-88.0
71	18423671.00	5014194.41	131.50	0	4000	93.1	-88.0	0.0	0.0	73.4	43.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-21.2	-88.0
72	18423671.00	5014194.41	131.50	0	8000	88.1	-88.0	0.0	0.0	73.4	153.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-136.9	-88.0
73	18423771.30	5014125.75	132.02	0	32	50.4	-88.0	0.0	0.0	74.1	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-18.3	-88.0
74	18423771.30	5014125.75	132.02	0	63	70.7	-88.0	0.0	0.0	74.1	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	1.9	-88.0
75	18423771.30	5014125.75	132.02	0	125	78.4	-88.0	0.0	0.0	74.1	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	1.0	-88.0
76	18423771.30	5014125.75	132.02	0	250	89.4	-88.0	0.0	0.0	74.1	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	12.8	-88.0
77	18423771.30	5014125.75	132.02	0	500	91.0	-88.0	0.0	0.0	74.1	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	16.2	-88.0
78	18423771.30	5014125.75	132.02	0	1000	91.0	-88.0	0.0	0.0	74.1	5.3	-2.2	0.0	0.0	0.0	0.0	-0.0	13.8	-88.0
79	18423771.30	5014125.75	132.02	0	2000	91.1	-88.0	0.0	0.0	74.1	13.9	-2.2	0.0	0.0	0.0	0.0	-0.0	5.3	-88.0
80	18423771.30	5014125.75	132.02	0	4000	88.8	-88.0	0.0	0.0	74.1	47.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-30.2	-88.0
81	18423771.30	5014125.75	132.02	0	8000	83.8	-88.0	0.0	0.0	74.1	167.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-156.0	-88.0
82	18423419.90	5014464.55	130.00	0	32	45.7	-88.0	0.0	0.0	70.8	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-19.8	-88.0
83	18423419.90	5014464.55	130.00	0	63	66.0	-88.0	0.0	0.0	70.8	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	0.4	-88.0
84	18423419.90	5014464.55	130.00	0	125	73.7	-88.0	0.0	0.0	70.8	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-0.1	-88.0
85	18423419.90	5014464.55	130.00	0	250	84.7	-88.0	0.0	0.0	70.8	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	11.9	-88.0
86	18423419.90	5014464.55	130.00	0	500	86.3	-88.0	0.0	0.0	70.8	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	15.6	-88.0
87	18423419.90	5014464.55	130.00	0	1000	86.3	-88.0	0.0	0.0	70.8	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	14.1	-88.0
88	18423419.90	5014464.55	130.00	0	2000	86.4	-88.0	0.0	0.0	70.8	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	8.3	-88.0
89	18423419.90	5014464.55	130.00	0	4000	84.1	-88.0	0.0	0.0	70.8	32.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-16.6	-88.0
90	18423419.90	5014464.55	130.00	0	8000	79.1	-88.0	0.0	0.0	70.8	114.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-103.9	-88.0
91	18423421.36	5014447.85	130.39	0	32	45.6	-88.0	0.0	0.0	70.9	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-19.9	-88.0
92	18423421.36	5014447.85	130.39	0	63	65.9	-88.0	0.0	0.0	70.9	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	0.3	-88.0
93	18423421.36	5014447.85	130.39	0	125	73.6	-88.0	0.0	0.0	70.9	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-0.3	-88.0
94	18423421.36	5014447.85	130.39	0	250	84.6	-88.0	0.0	0.0	70.9	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	11.7	-88.0
95	18423421.36	5014447.85	130.39	0	500	86.2	-88.0	0.0	0.0	70.9	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	15.5	-88.0
96	18423421.36	5014447.85	130.39	0	1000	86.2	-88.0	0.0	0.0	70.9	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	13.9	-88.0
97	18423421.36	5014447.85	130.39	0	2000	86.3	-88.0	0.0	0.0	70.9	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	8.1	-88.0
98	18423421.36	5014447.85	130.39	0	4000	84.0	-88.0	0.0	0.0	70.9	32.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-17.0	-88.0
99	18423421.36	5014447.85	130.39	0	8000	79.0	-88.0	0.0	0.0	70.9	115.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-104.9	-88.0
100	18424148.73	5015443.61	124.89	0	32	49.9	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-25.3	-88.0

Line Source, ISO 9613, Name: "WTPF Inbound IC&I Delivery Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR1_inICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
101	18424148.73	5015443.61	124.89	0	63	70.2	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-5.2	-88.0
102	18424148.73	5015443.61	124.89	0	125	77.9	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-3.6	-88.0
103	18424148.73	5015443.61	124.89	0	250	88.9	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	6.2	-88.0
104	18424148.73	5015443.61	124.89	0	500	90.5	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	8.3	-88.0
105	18424148.73	5015443.61	124.89	0	1000	90.5	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.0	0.0	-0.0	5.2	-88.0
106	18424148.73	5015443.61	124.89	0	2000	90.6	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.2	0.0	-0.0	-5.5	-88.0
107	18424148.73	5015443.61	124.89	0	4000	88.3	-88.0	0.0	0.0	76.0	58.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-49.3	-88.0
108	18424148.73	5015443.61	124.89	0	8000	83.3	-88.0	0.0	0.0	76.0	207.9	-2.3	0.0	0.0	6.3	0.0	-0.0	-204.6	-88.0
109	18423741.33	5014149.02	131.86	0	32	46.6	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-21.9	-88.0
110	18423741.33	5014149.02	131.86	0	63	66.9	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-1.7	-88.0
111	18423741.33	5014149.02	131.86	0	125	74.6	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-2.6	-88.0
112	18423741.33	5014149.02	131.86	0	250	85.6	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	9.3	-88.0
113	18423741.33	5014149.02	131.86	0	500	87.2	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	0.0	0.0	-0.0	12.6	-88.0
114	18423741.33	5014149.02	131.86	0	1000	87.2	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	0.0	0.0	-0.0	10.4	-88.0
115	18423741.33	5014149.02	131.86	0	2000	87.3	-88.0	0.0	0.0	73.9	13.5	-2.2	0.0	0.0	0.0	0.0	-0.0	2.0	-88.0
116	18423741.33	5014149.02	131.86	0	4000	85.0	-88.0	0.0	0.0	73.9	45.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-32.6	-88.0
117	18423741.33	5014149.02	131.86	0	8000	80.0	-88.0	0.0	0.0	73.9	163.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-155.3	-88.0
118	18424181.25	5015463.35	122.69	0	32	47.7	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-27.7	-88.0
119	18424181.25	5015463.35	122.69	0	63	68.0	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-7.5	-88.0
120	18424181.25	5015463.35	122.69	0	125	75.7	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	-6.0	-88.0
121	18424181.25	5015463.35	122.69	0	250	86.7	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	3.8	-88.0
122	18424181.25	5015463.35	122.69	0	500	88.3	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	5.9	-88.0
123	18424181.25	5015463.35	122.69	0	1000	88.3	-88.0	0.0	0.0	76.2	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	2.8	-88.0
124	18424181.25	5015463.35	122.69	0	2000	88.4	-88.0	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	5.0	0.0	-0.0	-8.1	-88.0
125	18424181.25	5015463.35	122.69	0	4000	86.1	-88.0	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	5.2	0.0	-0.0	-52.5	-88.0
126	18424181.25	5015463.35	122.69	0	8000	81.1	-88.0	0.0	0.0	76.2	212.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-210.7	-88.0
127	18423788.83	5014105.69	132.39	0	32	42.4	-88.0	0.0	0.0	74.3	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-26.4	-88.0
128	18423788.83	5014105.69	132.39	0	63	62.7	-88.0	0.0	0.0	74.3	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-6.2	-88.0
129	18423788.83	5014105.69	132.39	0	125	70.4	-88.0	0.0	0.0	74.3	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-7.2	-88.0
130	18423788.83	5014105.69	132.39	0	250	81.4	-88.0	0.0	0.0	74.3	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	4.7	-88.0
131	18423788.83	5014105.69	132.39	0	500	83.0	-88.0	0.0	0.0	74.3	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	8.0	-88.0
132	18423788.83	5014105.69	132.39	0	1000	83.0	-88.0	0.0	0.0	74.3	5.3	-2.2	0.0	0.0	0.0	0.0	-0.0	5.6	-88.0
133	18423788.83	5014105.69	132.39	0	2000	83.1	-88.0	0.0	0.0	74.3	14.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-3.1	-88.0
134	18423788.83	5014105.69	132.39	0	4000	80.8	-88.0	0.0	0.0	74.3	47.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-39.1	-88.0
135	18423788.83	5014105.69	132.39	0	8000	75.8	-88.0	0.0	0.0	74.3	170.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-167.0	-88.0

Line Source, ISO 9613, Name: "WTPF Inbound C&D Material Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR2_inCD"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423895.38	5014890.52	131.55	0	32	62.2	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	4.8	0.0	-0.0	-11.1	-88.0
2	18423895.38	5014890.52	131.55	0	63	82.5	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	4.8	0.0	-0.0	9.1	-88.0
3	18423895.38	5014890.52	131.55	0	125	90.2	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	2.2	0.0	-0.0	10.8	-88.0
4	18423895.38	5014890.52	131.55	0	250	101.2	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	4.1	0.0	-0.0	20.8	-88.0
5	18423895.38	5014890.52	131.55	0	500	102.8	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	5.3	0.0	-0.0	22.9	-88.0
6	18423895.38	5014890.52	131.55	0	1000	102.8	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	5.8	0.0	-0.0	20.2	-88.0
7	18423895.38	5014890.52	131.55	0	2000	102.9	-88.0	0.0	0.0	73.9	13.6	-2.2	0.0	0.0	6.6	0.0	-0.0	11.0	-88.0
8	18423895.38	5014890.52	131.55	0	4000	100.6	-88.0	0.0	0.0	73.9	46.0	-2.2	0.0	0.0	7.9	0.0	-0.0	-25.0	-88.0
9	18423895.38	5014890.52	131.55	0	8000	95.6	-88.0	0.0	0.0	73.9	164.0	-2.2	0.0	0.0	9.7	0.0	-0.0	-149.8	-88.0
10	18423517.81	5014336.78	130.89	0	32	59.3	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	0.0	0.0	-0.0	-7.3	-88.0
11	18423517.81	5014336.78	130.89	0	63	79.6	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	0.0	0.0	-0.0	12.9	-88.0
12	18423517.81	5014336.78	130.89	0	125	87.3	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	12.2	-88.0
13	18423517.81	5014336.78	130.89	0	250	98.3	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	0.0	0.0	-0.0	24.2	-88.0
14	18423517.81	5014336.78	130.89	0	500	99.9	-88.0	0.0	0.0	72.0	2.1	-2.0	0.0	0.0	0.0	0.0	-0.0	27.8	-88.0
15	18423517.81	5014336.78	130.89	0	1000	99.9	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	0.0	0.0	-0.0	26.0	-88.0
16	18423517.81	5014336.78	130.89	0	2000	100.0	-88.0	0.0	0.0	72.0	10.8	-2.2	0.0	0.0	0.0	0.0	-0.0	19.4	-88.0
17	18423517.81	5014336.78	130.89	0	4000	97.7	-88.0	0.0	0.0	72.0	36.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-8.7	-88.0
18	18423517.81	5014336.78	130.89	0	8000	92.7	-88.0	0.0	0.0	72.0	130.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-107.6	-88.0
19	18423611.14	5014640.62	129.25	0	32	58.1	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	5.2	0.0	-0.0	-13.8	-88.0
20	18423611.14	5014640.62	129.25	0	63	78.4	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	5.8	0.0	-0.0	5.9	-88.0
21	18423611.14	5014640.62	129.25	0	125	86.1	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	4.0	0.0	-0.0	6.9	-88.0
22	18423611.14	5014640.62	129.25	0	250	97.1	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	7.2	0.0	-0.0	15.8	-88.0
23	18423611.14	5014640.62	129.25	0	500	98.7	-88.0	0.0	0.0	72.0	2.2	-2.0	0.0	0.0	10.1	0.0	-0.0	16.5	-88.0
24	18423611.14	5014640.62	129.25	0	1000	98.7	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	12.4	0.0	-0.0	12.4	-88.0

Line Source, ISO 9613, Name: "WTPF Inbound C&D Material Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR2_inCD"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
25	18423611.14	5014640.62	129.25	0	2000	98.8	-88.0	0.0	0.0	72.0	10.9	-2.2	0.0	0.0	15.0	0.0	-0.0	3.1	-88.0
26	18423611.14	5014640.62	129.25	0	4000	96.5	-88.0	0.0	0.0	72.0	36.8	-2.2	0.0	0.0	17.8	0.0	-0.0	-28.0	-88.0
27	18423611.14	5014640.62	129.25	0	8000	91.5	-88.0	0.0	0.0	72.0	131.5	-2.2	0.0	0.0	20.7	0.0	-0.0	-130.5	-88.0
28	18423477.21	5014521.94	129.50	0	32	56.5	-88.0	0.0	0.0	71.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-9.3	-88.0
29	18423477.21	5014521.94	129.50	0	63	76.8	-88.0	0.0	0.0	71.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	10.9	-88.0
30	18423477.21	5014521.94	129.50	0	125	84.5	-88.0	0.0	0.0	71.1	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	10.3	-88.0
31	18423477.21	5014521.94	129.50	0	250	95.5	-88.0	0.0	0.0	71.1	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	22.3	-88.0
32	18423477.21	5014521.94	129.50	0	500	97.1	-88.0	0.0	0.0	71.1	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	26.0	-88.0
33	18423477.21	5014521.94	129.50	0	1000	97.1	-88.0	0.0	0.0	71.1	3.7	-2.1	0.0	0.0	0.0	0.0	-0.0	24.4	-88.0
34	18423477.21	5014521.94	129.50	0	2000	97.2	-88.0	0.0	0.0	71.1	9.8	-2.1	0.0	0.0	0.0	0.0	-0.0	18.4	-88.0
35	18423477.21	5014521.94	129.50	0	4000	94.9	-88.0	0.0	0.0	71.1	33.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-7.4	-88.0
36	18423477.21	5014521.94	129.50	0	8000	89.9	-88.0	0.0	0.0	71.1	118.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-97.9	-88.0
37	18423984.79	5015302.58	129.67	0	32	56.1	-88.0	0.0	0.0	75.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-18.1	-88.0
38	18423984.79	5015302.58	129.67	0	63	76.4	-88.0	0.0	0.0	75.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	2.1	-88.0
39	18423984.79	5015302.58	129.67	0	125	84.1	-88.0	0.0	0.0	75.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	3.7	-88.0
40	18423984.79	5015302.58	129.67	0	250	95.1	-88.0	0.0	0.0	75.0	1.6	0.9	0.0	0.0	3.9	0.0	-0.0	13.7	-88.0
41	18423984.79	5015302.58	129.67	0	500	96.7	-88.0	0.0	0.0	75.0	3.0	-2.1	0.0	0.0	4.9	0.0	-0.0	15.9	-88.0
42	18423984.79	5015302.58	129.67	0	1000	96.7	-88.0	0.0	0.0	75.0	5.8	-2.2	0.0	0.0	5.0	0.0	-0.0	13.2	-88.0
43	18423984.79	5015302.58	129.67	0	2000	96.8	-88.0	0.0	0.0	75.0	15.2	-2.2	0.0	0.0	5.2	0.0	-0.0	3.6	-88.0
44	18423984.79	5015302.58	129.67	0	4000	94.5	-88.0	0.0	0.0	75.0	51.6	-2.2	0.0	0.0	5.6	0.0	-0.0	-35.5	-88.0
45	18423984.79	5015302.58	129.67	0	8000	89.5	-88.0	0.0	0.0	75.0	184.2	-2.2	0.0	0.0	6.4	0.0	-0.0	-173.8	-88.0
46	18424080.72	5015390.27	127.51	0	32	55.9	-88.0	0.0	0.0	75.6	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-18.9	-88.0
47	18424080.72	5015390.27	127.51	0	63	76.2	-88.0	0.0	0.0	75.6	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	1.2	-88.0
48	18424080.72	5015390.27	127.51	0	125	83.9	-88.0	0.0	0.0	75.6	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	2.8	-88.0
49	18424080.72	5015390.27	127.51	0	250	94.9	-88.0	0.0	0.0	75.6	1.8	0.9	0.0	0.0	3.9	0.0	-0.0	12.8	-88.0
50	18424080.72	5015390.27	127.51	0	500	96.5	-88.0	0.0	0.0	75.6	3.3	-2.1	0.0	0.0	4.8	0.0	-0.0	15.0	-88.0
51	18424080.72	5015390.27	127.51	0	1000	96.5	-88.0	0.0	0.0	75.6	6.2	-2.2	0.0	0.0	4.8	0.0	-0.0	12.2	-88.0
52	18424080.72	5015390.27	127.51	0	2000	96.6	-88.0	0.0	0.0	75.6	16.4	-2.2	0.0	0.0	4.8	0.0	-0.0	2.1	-88.0
53	18424080.72	5015390.27	127.51	0	4000	94.3	-88.0	0.0	0.0	75.6	55.6	-2.2	0.0	0.0	4.8	0.0	-0.0	-39.4	-88.0
54	18424080.72	5015390.27	127.51	0	8000	89.3	-88.0	0.0	0.0	75.6	198.2	-2.2	0.0	0.0	4.8	0.0	-0.0	-187.1	-88.0
55	18424017.94	5015164.00	132.19	0	32	58.8	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-15.4	-88.0
56	18424017.94	5015164.00	132.19	0	63	79.1	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	4.7	-88.0
57	18424017.94	5015164.00	132.19	0	125	86.8	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.4	0.0	-0.0	6.2	-88.0
58	18424017.94	5015164.00	132.19	0	250	97.8	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.5	0.0	-0.0	15.9	-88.0
59	18424017.94	5015164.00	132.19	0	500	99.4	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	6.0	0.0	-0.0	17.6	-88.0
60	18424017.94	5015164.00	132.19	0	1000	99.4	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	6.9	0.0	-0.0	14.1	-88.0
61	18424017.94	5015164.00	132.19	0	2000	99.5	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	8.3	0.0	-0.0	3.4	-88.0
62	18424017.94	5015164.00	132.19	0	4000	97.2	-88.0	0.0	0.0	74.9	51.4	-2.2	0.0	0.0	10.3	0.0	-0.0	-37.1	-88.0
63	18424017.94	5015164.00	132.19	0	8000	92.2	-88.0	0.0	0.0	74.9	183.3	-2.2	0.0	0.0	12.6	0.0	-0.0	-176.4	-88.0
64	18423671.05	5014194.41	131.50	0	32	56.5	-88.0	0.0	0.0	73.4	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-11.5	-88.0
65	18423671.05	5014194.41	131.50	0	63	76.8	-88.0	0.0	0.0	73.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	8.7	-88.0
66	18423671.05	5014194.41	131.50	0	125	84.5	-88.0	0.0	0.0	73.4	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	7.8	-88.0
67	18423671.05	5014194.41	131.50	0	250	95.5	-88.0	0.0	0.0	73.4	1.4	0.9	0.0	0.0	0.0	0.0	-0.0	19.8	-88.0
68	18423671.05	5014194.41	131.50	0	500	97.1	-88.0	0.0	0.0	73.4	2.5	-2.1	0.0	0.0	0.0	0.0	-0.0	23.2	-88.0
69	18423671.05	5014194.41	131.50	0	1000	97.1	-88.0	0.0	0.0	73.4	4.8	-2.2	0.0	0.0	0.0	0.0	-0.0	21.1	-88.0
70	18423671.05	5014194.41	131.50	0	2000	97.2	-88.0	0.0	0.0	73.4	12.7	-2.2	0.0	0.0	0.0	0.0	-0.0	13.3	-88.0
71	18423671.05	5014194.41	131.50	0	4000	94.9	-88.0	0.0	0.0	73.4	43.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-19.4	-88.0
72	18423671.05	5014194.41	131.50	0	8000	89.9	-88.0	0.0	0.0	73.4	153.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-135.1	-88.0
73	18423772.58	5014126.41	132.00	0	32	52.3	-88.0	0.0	0.0	74.1	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-16.4	-88.0
74	18423772.58	5014126.41	132.00	0	63	72.6	-88.0	0.0	0.0	74.1	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	3.8	-88.0
75	18423772.58	5014126.41	132.00	0	125	80.3	-88.0	0.0	0.0	74.1	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	2.8	-88.0
76	18423772.58	5014126.41	132.00	0	250	91.3	-88.0	0.0	0.0	74.1	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	14.7	-88.0
77	18423772.58	5014126.41	132.00	0	500	92.9	-88.0	0.0	0.0	74.1	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	18.1	-88.0
78	18423772.58	5014126.41	132.00	0	1000	92.9	-88.0	0.0	0.0	74.1	5.3	-2.2	0.0	0.0	0.0	0.0	-0.0	15.7	-88.0
79	18423772.58	5014126.41	132.00	0	2000	93.0	-88.0	0.0	0.0	74.1	13.9	-2.2	0.0	0.0	0.0	0.0	-0.0	7.2	-88.0
80	18423772.58	5014126.41	132.00	0	4000	90.7	-88.0	0.0	0.0	74.1	47.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-28.3	-88.0
81	18423772.58	5014126.41	132.00	0	8000	85.7	-88.0	0.0	0.0	74.1	168.0	-2.2	0.0	0.0	0.0	0.0	-0.0	-154.2	-88.0
82	18423419.93	5014464.58	130.00	0	32	47.5	-88.0	0.0	0.0	70.8	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-18.1	-88.0
83	18423419.93	5014464.58	130.00	0	63	67.8	-88.0	0.0	0.0	70.8	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	2.2	-88.0
84	18423419.93	5014464.58	130.00	0	125	75.5	-88.0	0.0	0.0	70.8	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	1.6	-88.0
85	18423419.93	5014464.58	130.00	0	250	86.5	-88.0	0.0	0.0	70.8	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	13.6	-88.0
86	18423419.93	5014464.58	130.00	0	500	88.1	-88.0	0.0	0.0	70.8	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	17.4	-88.0
87	18423419.93	5014464.58	130.00	0	1000	88.1	-88.0	0.0	0.0	70.8	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	15.8	-88.0

Line Source, ISO 9613, Name: "WTPF Inbound C&D Material Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR2_inCD"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
88	18423419.93	5014464.58	130.00	0	2000	88.2	-88.0	0.0	0.0	70.8	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	10.0	-88.0
89	18423419.93	5014464.58	130.00	0	4000	85.9	-88.0	0.0	0.0	70.8	32.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-14.9	-88.0
90	18423419.93	5014464.58	130.00	0	8000	80.9	-88.0	0.0	0.0	70.8	114.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-102.2	-88.0
91	18423421.40	5014447.86	130.39	0	32	47.4	-88.0	0.0	0.0	70.9	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-18.2	-88.0
92	18423421.40	5014447.86	130.39	0	63	67.7	-88.0	0.0	0.0	70.9	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	2.0	-88.0
93	18423421.40	5014447.86	130.39	0	125	75.4	-88.0	0.0	0.0	70.9	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	1.5	-88.0
94	18423421.40	5014447.86	130.39	0	250	86.4	-88.0	0.0	0.0	70.9	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	13.5	-88.0
95	18423421.40	5014447.86	130.39	0	500	88.0	-88.0	0.0	0.0	70.9	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	17.2	-88.0
96	18423421.40	5014447.86	130.39	0	1000	88.0	-88.0	0.0	0.0	70.9	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	15.7	-88.0
97	18423421.40	5014447.86	130.39	0	2000	88.1	-88.0	0.0	0.0	70.9	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	9.9	-88.0
98	18423421.40	5014447.86	130.39	0	4000	85.8	-88.0	0.0	0.0	70.9	32.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-15.2	-88.0
99	18423421.40	5014447.86	130.39	0	8000	80.8	-88.0	0.0	0.0	70.9	115.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-103.1	-88.0
100	18424148.81	5015443.54	124.90	0	32	51.6	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-23.6	-88.0
101	18424148.81	5015443.54	124.90	0	63	71.9	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-3.4	-88.0
102	18424148.81	5015443.54	124.90	0	125	79.6	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-1.9	-88.0
103	18424148.81	5015443.54	124.90	0	250	90.6	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	8.0	-88.0
104	18424148.81	5015443.54	124.90	0	500	92.2	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	10.1	-88.0
105	18424148.81	5015443.54	124.90	0	1000	92.2	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.0	0.0	-0.0	7.0	-88.0
106	18424148.81	5015443.54	124.90	0	2000	92.3	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.2	0.0	-0.0	-3.8	-88.0
107	18424148.81	5015443.54	124.90	0	4000	90.0	-88.0	0.0	0.0	76.0	58.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-47.6	-88.0
108	18424148.81	5015443.54	124.90	0	8000	85.0	-88.0	0.0	0.0	76.0	207.9	-2.3	0.0	0.0	6.3	0.0	-0.0	-202.9	-88.0
109	18423741.18	5014149.00	131.86	0	32	48.3	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-20.2	-88.0
110	18423741.18	5014149.00	131.86	0	63	68.6	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	0.0	-88.0
111	18423741.18	5014149.00	131.86	0	125	76.3	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-0.9	-88.0
112	18423741.18	5014149.00	131.86	0	250	87.3	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	11.0	-88.0
113	18423741.18	5014149.00	131.86	0	500	88.9	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	0.0	0.0	-0.0	14.4	-88.0
114	18423741.18	5014149.00	131.86	0	1000	88.9	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	0.0	0.0	-0.0	12.1	-88.0
115	18423741.18	5014149.00	131.86	0	2000	89.0	-88.0	0.0	0.0	73.9	13.5	-2.2	0.0	0.0	0.0	0.0	-0.0	3.8	-88.0
116	18423741.18	5014149.00	131.86	0	4000	86.7	-88.0	0.0	0.0	73.9	45.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-30.9	-88.0
117	18423741.18	5014149.00	131.86	0	8000	81.7	-88.0	0.0	0.0	73.9	163.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-153.5	-88.0
118	18424181.27	5015463.29	122.69	0	32	49.5	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-25.9	-88.0
119	18424181.27	5015463.29	122.69	0	63	69.8	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-5.8	-88.0
120	18424181.27	5015463.29	122.69	0	125	77.5	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	-4.2	-88.0
121	18424181.27	5015463.29	122.69	0	250	88.5	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	5.6	-88.0
122	18424181.27	5015463.29	122.69	0	500	90.1	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	7.7	-88.0
123	18424181.27	5015463.29	122.69	0	1000	90.1	-88.0	0.0	0.0	76.2	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	4.6	-88.0
124	18424181.27	5015463.29	122.69	0	2000	90.2	-88.0	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	5.0	0.0	-0.0	-6.3	-88.0
125	18424181.27	5015463.29	122.69	0	4000	87.9	-88.0	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	5.2	0.0	-0.0	-50.8	-88.0
126	18424181.27	5015463.29	122.69	0	8000	82.9	-88.0	0.0	0.0	76.2	212.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-208.9	-88.0
127	18423801.68	5014094.13	132.55	0	32	39.9	-88.0	0.0	0.0	74.4	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-29.0	-88.0
128	18423801.68	5014094.13	132.55	0	63	60.2	-88.0	0.0	0.0	74.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-8.9	-88.0
129	18423801.68	5014094.13	132.55	0	125	67.9	-88.0	0.0	0.0	74.4	0.6	2.4	0.0	0.0	0.0	0.0	-0.0	-9.6	-88.0
130	18423801.68	5014094.13	132.55	0	250	78.9	-88.0	0.0	0.0	74.4	1.5	0.7	0.0	0.0	0.0	0.0	-0.0	2.3	-88.0
131	18423801.68	5014094.13	132.55	0	500	80.5	-88.0	0.0	0.0	74.4	2.8	-2.2	0.0	0.0	0.0	0.0	-0.0	5.4	-88.0
132	18423801.68	5014094.13	132.55	0	1000	80.5	-88.0	0.0	0.0	74.4	5.4	-2.3	0.0	0.0	0.0	0.0	-0.0	2.9	-88.0
133	18423801.68	5014094.13	132.55	0	2000	80.6	-88.0	0.0	0.0	74.4	14.3	-2.3	0.0	0.0	0.0	0.0	-0.0	-5.8	-88.0
134	18423801.68	5014094.13	132.55	0	4000	78.3	-88.0	0.0	0.0	74.4	48.4	-2.3	0.0	0.0	0.0	0.0	-0.0	-42.3	-88.0
135	18423801.68	5014094.13	132.55	0	8000	73.3	-88.0	0.0	0.0	74.4	172.7	-2.3	0.0	0.0	0.0	0.0	-0.0	-171.6	-88.0
136	18423797.95	5014102.77	132.39	0	32	46.8	-88.0	0.0	0.0	74.3	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-22.1	-88.0
137	18423797.95	5014102.77	132.39	0	63	67.1	-88.0	0.0	0.0	74.3	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-1.9	-88.0
138	18423797.95	5014102.77	132.39	0	125	74.8	-88.0	0.0	0.0	74.3	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-2.9	-88.0
139	18423797.95	5014102.77	132.39	0	250	85.8	-88.0	0.0	0.0	74.3	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	9.0	-88.0
140	18423797.95	5014102.77	132.39	0	500	87.4	-88.0	0.0	0.0	74.3	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	12.3	-88.0
141	18423797.95	5014102.77	132.39	0	1000	87.4	-88.0	0.0	0.0	74.3	5.4	-2.2	0.0	0.0	0.0	0.0	-0.0	9.9	-88.0
142	18423797.95	5014102.77	132.39	0	2000	87.5	-88.0	0.0	0.0	74.3	14.2	-2.2	0.0	0.0	0.0	0.0	-0.0	1.2	-88.0
143	18423797.95	5014102.77	132.39	0	4000	85.2	-88.0	0.0	0.0	74.3	48.2	-2.2	0.0	0.0	0.0	0.0	-0.0	-35.1	-88.0
144	18423797.95	5014102.77	132.39	0	8000	80.2	-88.0	0.0	0.0	74.3	171.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-163.8	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)", ID: "WTPF_HR3_outTT"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423895.30	5014890.53	131.54	0	32	55.2	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	4.8	0.0	-0.0	-18.0	-88.0
2	18423895.30	5014890.53	131.54	0	63	75.5	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	4.8	0.0	-0.0	2.1	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)", ID: "WTPF_HR3_outTT"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
3	18423895.30	5014890.53	131.54	0	125	83.2	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	2.2	0.0	-0.0	3.8	-88.0
4	18423895.30	5014890.53	131.54	0	250	94.2	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	4.1	0.0	-0.0	13.8	-88.0
5	18423895.30	5014890.53	131.54	0	500	95.8	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	5.3	0.0	-0.0	16.0	-88.0
6	18423895.30	5014890.53	131.54	0	1000	95.8	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	5.8	0.0	-0.0	13.2	-88.0
7	18423895.30	5014890.53	131.54	0	2000	95.9	-88.0	0.0	0.0	73.9	13.6	-2.2	0.0	0.0	6.6	0.0	-0.0	4.0	-88.0
8	18423895.30	5014890.53	131.54	0	4000	93.6	-88.0	0.0	0.0	73.9	46.0	-2.2	0.0	0.0	7.9	0.0	-0.0	-32.0	-88.0
9	18423895.30	5014890.53	131.54	0	8000	88.6	-88.0	0.0	0.0	73.9	164.0	-2.2	0.0	0.0	9.7	0.0	-0.0	-156.8	-88.0
10	18423517.85	5014336.75	130.89	0	32	52.3	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	0.0	0.0	-0.0	-14.3	-88.0
11	18423517.85	5014336.75	130.89	0	63	72.6	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	0.0	0.0	-0.0	5.9	-88.0
12	18423517.85	5014336.75	130.89	0	125	80.3	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	5.2	-88.0
13	18423517.85	5014336.75	130.89	0	250	91.3	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	0.0	0.0	-0.0	17.2	-88.0
14	18423517.85	5014336.75	130.89	0	500	92.9	-88.0	0.0	0.0	72.0	2.1	-2.0	0.0	0.0	0.0	0.0	-0.0	20.8	-88.0
15	18423517.85	5014336.75	130.89	0	1000	92.9	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	0.0	0.0	-0.0	19.0	-88.0
16	18423517.85	5014336.75	130.89	0	2000	93.0	-88.0	0.0	0.0	72.0	10.8	-2.2	0.0	0.0	0.0	0.0	-0.0	12.4	-88.0
17	18423517.85	5014336.75	130.89	0	4000	90.7	-88.0	0.0	0.0	72.0	36.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-15.7	-88.0
18	18423517.85	5014336.75	130.89	0	8000	85.7	-88.0	0.0	0.0	72.0	130.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-114.6	-88.0
19	18423611.10	5014640.58	129.25	0	32	51.1	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	5.2	0.0	-0.0	-20.7	-88.0
20	18423611.10	5014640.58	129.25	0	63	71.4	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	5.8	0.0	-0.0	-1.1	-88.0
21	18423611.10	5014640.58	129.25	0	125	79.1	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	4.0	0.0	-0.0	-0.1	-88.0
22	18423611.10	5014640.58	129.25	0	250	90.1	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	7.2	0.0	-0.0	8.8	-88.0
23	18423611.10	5014640.58	129.25	0	500	91.7	-88.0	0.0	0.0	72.0	2.2	-2.0	0.0	0.0	10.1	0.0	-0.0	9.5	-88.0
24	18423611.10	5014640.58	129.25	0	1000	91.7	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	12.4	0.0	-0.0	5.4	-88.0
25	18423611.10	5014640.58	129.25	0	2000	91.8	-88.0	0.0	0.0	72.0	10.9	-2.2	0.0	0.0	15.0	0.0	-0.0	-3.9	-88.0
26	18423611.10	5014640.58	129.25	0	4000	89.5	-88.0	0.0	0.0	72.0	36.8	-2.2	0.0	0.0	17.8	0.0	-0.0	-35.0	-88.0
27	18423611.10	5014640.58	129.25	0	8000	84.5	-88.0	0.0	0.0	72.0	131.4	-2.2	0.0	0.0	20.7	0.0	-0.0	-137.5	-88.0
28	18423477.21	5014521.92	129.50	0	32	49.5	-88.0	0.0	0.0	71.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-16.3	-88.0
29	18423477.21	5014521.92	129.50	0	63	69.8	-88.0	0.0	0.0	71.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	3.9	-88.0
30	18423477.21	5014521.92	129.50	0	125	77.5	-88.0	0.0	0.0	71.1	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	3.3	-88.0
31	18423477.21	5014521.92	129.50	0	250	88.5	-88.0	0.0	0.0	71.1	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	15.3	-88.0
32	18423477.21	5014521.92	129.50	0	500	90.1	-88.0	0.0	0.0	71.1	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	19.0	-88.0
33	18423477.21	5014521.92	129.50	0	1000	90.1	-88.0	0.0	0.0	71.1	3.7	-2.1	0.0	0.0	0.0	0.0	-0.0	17.4	-88.0
34	18423477.21	5014521.92	129.50	0	2000	90.2	-88.0	0.0	0.0	71.1	9.8	-2.1	0.0	0.0	0.0	0.0	-0.0	11.4	-88.0
35	18423477.21	5014521.92	129.50	0	4000	87.9	-88.0	0.0	0.0	71.1	33.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-14.4	-88.0
36	18423477.21	5014521.92	129.50	0	8000	82.9	-88.0	0.0	0.0	71.1	118.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-104.9	-88.0
37	18423984.79	5015302.57	129.66	0	32	49.1	-88.0	0.0	0.0	75.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-25.1	-88.0
38	18423984.79	5015302.57	129.66	0	63	69.4	-88.0	0.0	0.0	75.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-4.9	-88.0
39	18423984.79	5015302.57	129.66	0	125	77.1	-88.0	0.0	0.0	75.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-3.3	-88.0
40	18423984.79	5015302.57	129.66	0	250	88.1	-88.0	0.0	0.0	75.0	1.6	0.9	0.0	0.0	3.9	0.0	-0.0	6.7	-88.0
41	18423984.79	5015302.57	129.66	0	500	89.7	-88.0	0.0	0.0	75.0	3.0	-2.1	0.0	0.0	4.9	0.0	-0.0	8.9	-88.0
42	18423984.79	5015302.57	129.66	0	1000	89.7	-88.0	0.0	0.0	75.0	5.8	-2.2	0.0	0.0	5.0	0.0	-0.0	6.2	-88.0
43	18423984.79	5015302.57	129.66	0	2000	89.8	-88.0	0.0	0.0	75.0	15.2	-2.2	0.0	0.0	5.2	0.0	-0.0	-3.3	-88.0
44	18423984.79	5015302.57	129.66	0	4000	87.5	-88.0	0.0	0.0	75.0	51.6	-2.2	0.0	0.0	5.6	0.0	-0.0	-42.5	-88.0
45	18423984.79	5015302.57	129.66	0	8000	82.5	-88.0	0.0	0.0	75.0	184.2	-2.2	0.0	0.0	6.4	0.0	-0.0	-180.7	-88.0
46	18424080.78	5015390.25	127.50	0	32	48.9	-88.0	0.0	0.0	75.6	0.1	-5.6	0.0	0.0	8.1	0.0	-0.0	-29.2	-88.0
47	18424080.78	5015390.25	127.50	0	63	69.2	-88.0	0.0	0.0	75.6	0.2	-5.6	0.0	0.0	10.0	0.0	-0.0	-11.0	-88.0
48	18424080.78	5015390.25	127.50	0	125	76.9	-88.0	0.0	0.0	75.6	0.7	2.7	0.0	0.0	9.7	0.0	-0.0	-11.7	-88.0
49	18424080.78	5015390.25	127.50	0	250	87.9	-88.0	0.0	0.0	75.6	1.8	0.9	0.0	0.0	14.1	0.0	-0.0	-4.4	-88.0
50	18424080.78	5015390.25	127.50	0	500	89.5	-88.0	0.0	0.0	75.6	3.3	-2.1	0.0	0.0	17.8	0.0	-0.0	-5.0	-88.0
51	18424080.78	5015390.25	127.50	0	1000	89.5	-88.0	0.0	0.0	75.6	6.2	-2.2	0.0	0.0	20.7	0.0	-0.0	-10.7	-88.0
52	18424080.78	5015390.25	127.50	0	2000	89.6	-88.0	0.0	0.0	75.6	16.4	-2.2	0.0	0.0	23.6	0.0	-0.0	-23.8	-88.0
53	18424080.78	5015390.25	127.50	0	4000	87.3	-88.0	0.0	0.0	75.6	55.6	-2.2	0.0	0.0	25.0	0.0	-0.0	-66.6	-88.0
54	18424080.78	5015390.25	127.50	0	8000	82.3	-88.0	0.0	0.0	75.6	198.2	-2.2	0.0	0.0	25.0	0.0	-0.0	-214.3	-88.0
55	18424017.86	5015163.97	132.18	0	32	51.8	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-22.4	-88.0
56	18424017.86	5015163.97	132.18	0	63	72.1	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	-2.3	-88.0
57	18424017.86	5015163.97	132.18	0	125	79.8	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.4	0.0	-0.0	-0.8	-88.0
58	18424017.86	5015163.97	132.18	0	250	90.8	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.5	0.0	-0.0	8.9	-88.0
59	18424017.86	5015163.97	132.18	0	500	92.4	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	6.0	0.0	-0.0	10.6	-88.0
60	18424017.86	5015163.97	132.18	0	1000	92.4	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	6.9	0.0	-0.0	7.1	-88.0
61	18424017.86	5015163.97	132.18	0	2000	92.5	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	8.4	0.0	-0.0	-3.6	-88.0
62	18424017.86	5015163.97	132.18	0	4000	90.2	-88.0	0.0	0.0	74.9	51.4	-2.2	0.0	0.0	10.3	0.0	-0.0	-44.1	-88.0
63	18424017.86	5015163.97	132.18	0	8000	85.2	-88.0	0.0	0.0	74.9	183.3	-2.2	0.0	0.0	12.6	0.0	-0.0	-183.4	-88.0
64	18423671.10	5014194.41	131.50	0	32	49.5	-88.0	0.0	0.0	73.4	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-18.4	-88.0
65	18423671.10	5014194.41	131.50	0	63	69.8	-88.0	0.0	0.0	73.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	1.7	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)", ID: "WTPF_HR3_outTT"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
66	18423671.10	5014194.41	131.50	0	125	77.5	-88.0	0.0	0.0	73.4	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	0.8	-88.0
67	18423671.10	5014194.41	131.50	0	250	88.5	-88.0	0.0	0.0	73.4	1.4	0.9	0.0	0.0	0.0	0.0	-0.0	12.8	-88.0
68	18423671.10	5014194.41	131.50	0	500	90.1	-88.0	0.0	0.0	73.4	2.5	-2.1	0.0	0.0	0.0	0.0	-0.0	16.2	-88.0
69	18423671.10	5014194.41	131.50	0	1000	90.1	-88.0	0.0	0.0	73.4	4.8	-2.2	0.0	0.0	0.0	0.0	-0.0	14.1	-88.0
70	18423671.10	5014194.41	131.50	0	2000	90.2	-88.0	0.0	0.0	73.4	12.7	-2.2	0.0	0.0	0.0	0.0	-0.0	6.3	-88.0
71	18423671.10	5014194.41	131.50	0	4000	87.9	-88.0	0.0	0.0	73.4	43.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-26.4	-88.0
72	18423671.10	5014194.41	131.50	0	8000	82.9	-88.0	0.0	0.0	73.4	153.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-142.1	-88.0
73	18423734.25	5014029.21	132.87	0	32	47.8	-88.0	0.0	0.0	74.2	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-21.0	-88.0
74	18423734.25	5014029.21	132.87	0	63	68.1	-88.0	0.0	0.0	74.2	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-0.8	-88.0
75	18423734.25	5014029.21	132.87	0	125	75.8	-88.0	0.0	0.0	74.2	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-1.8	-88.0
76	18423734.25	5014029.21	132.87	0	250	86.8	-88.0	0.0	0.0	74.2	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	10.1	-88.0
77	18423734.25	5014029.21	132.87	0	500	88.4	-88.0	0.0	0.0	74.2	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	13.4	-88.0
78	18423734.25	5014029.21	132.87	0	1000	88.4	-88.0	0.0	0.0	74.2	5.3	-2.2	0.0	0.0	0.0	0.0	-0.0	11.1	-88.0
79	18423734.25	5014029.21	132.87	0	2000	88.5	-88.0	0.0	0.0	74.2	14.0	-2.2	0.0	0.0	0.0	0.0	-0.0	2.4	-88.0
80	18423734.25	5014029.21	132.87	0	4000	86.2	-88.0	0.0	0.0	74.2	47.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-33.4	-88.0
81	18423734.25	5014029.21	132.87	0	8000	81.2	-88.0	0.0	0.0	74.2	169.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-160.5	-88.0
82	18423729.05	5014089.51	132.80	0	32	46.5	-88.0	0.0	0.0	74.0	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-22.1	-88.0
83	18423729.05	5014089.51	132.80	0	63	66.8	-88.0	0.0	0.0	74.0	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-1.9	-88.0
84	18423729.05	5014089.51	132.80	0	125	74.5	-88.0	0.0	0.0	74.0	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-2.8	-88.0
85	18423729.05	5014089.51	132.80	0	250	85.5	-88.0	0.0	0.0	74.0	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	9.1	-88.0
86	18423729.05	5014089.51	132.80	0	500	87.1	-88.0	0.0	0.0	74.0	2.7	-2.1	0.0	0.0	0.0	0.0	-0.0	12.4	-88.0
87	18423729.05	5014089.51	132.80	0	1000	87.1	-88.0	0.0	0.0	74.0	5.2	-2.2	0.0	0.0	0.0	0.0	-0.0	10.1	-88.0
88	18423729.05	5014089.51	132.80	0	2000	87.2	-88.0	0.0	0.0	74.0	13.7	-2.2	0.0	0.0	0.0	0.0	-0.0	1.7	-88.0
89	18423729.05	5014089.51	132.80	0	4000	84.9	-88.0	0.0	0.0	74.0	46.4	-2.2	0.0	0.0	0.0	0.0	-0.0	-33.3	-88.0
90	18423729.05	5014089.51	132.80	0	8000	79.9	-88.0	0.0	0.0	74.0	165.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-157.5	-88.0
91	18423776.87	5014032.32	132.64	0	32	44.5	-88.0	0.0	0.0	74.4	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-24.5	-88.0
92	18423776.87	5014032.32	132.64	0	63	64.8	-88.0	0.0	0.0	74.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-4.3	-88.0
93	18423776.87	5014032.32	132.64	0	125	72.5	-88.0	0.0	0.0	74.4	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-5.3	-88.0
94	18423776.87	5014032.32	132.64	0	250	83.5	-88.0	0.0	0.0	74.4	1.6	0.9	0.0	0.0	0.0	0.0	-0.0	6.6	-88.0
95	18423776.87	5014032.32	132.64	0	500	85.1	-88.0	0.0	0.0	74.4	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	9.9	-88.0
96	18423776.87	5014032.32	132.64	0	1000	85.1	-88.0	0.0	0.0	74.4	5.4	-2.2	0.0	0.0	0.0	0.0	-0.0	7.4	-88.0
97	18423776.87	5014032.32	132.64	0	2000	85.2	-88.0	0.0	0.0	74.4	14.4	-2.2	0.0	0.0	0.0	0.0	-0.0	-1.4	-88.0
98	18423776.87	5014032.32	132.64	0	4000	82.9	-88.0	0.0	0.0	74.4	48.7	-2.2	0.0	0.0	0.0	0.0	-0.0	-38.0	-88.0
99	18423776.87	5014032.32	132.64	0	8000	77.9	-88.0	0.0	0.0	74.4	173.7	-2.2	0.0	0.0	0.0	0.0	-0.0	-168.1	-88.0
100	18423419.90	5014464.58	130.00	0	32	40.5	-88.0	0.0	0.0	70.8	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-25.0	-88.0
101	18423419.90	5014464.58	130.00	0	63	60.8	-88.0	0.0	0.0	70.8	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-4.8	-88.0
102	18423419.90	5014464.58	130.00	0	125	68.5	-88.0	0.0	0.0	70.8	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-5.4	-88.0
103	18423419.90	5014464.58	130.00	0	250	79.5	-88.0	0.0	0.0	70.8	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	6.7	-88.0
104	18423419.90	5014464.58	130.00	0	500	81.1	-88.0	0.0	0.0	70.8	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	10.4	-88.0
105	18423419.90	5014464.58	130.00	0	1000	81.1	-88.0	0.0	0.0	70.8	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	8.9	-88.0
106	18423419.90	5014464.58	130.00	0	2000	81.2	-88.0	0.0	0.0	70.8	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	3.1	-88.0
107	18423419.90	5014464.58	130.00	0	4000	78.9	-88.0	0.0	0.0	70.8	32.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-21.8	-88.0
108	18423419.90	5014464.58	130.00	0	8000	73.9	-88.0	0.0	0.0	70.8	114.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-109.1	-88.0
109	18423421.36	5014447.81	130.39	0	32	40.4	-88.0	0.0	0.0	70.9	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-25.2	-88.0
110	18423421.36	5014447.81	130.39	0	63	60.7	-88.0	0.0	0.0	70.9	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-4.9	-88.0
111	18423421.36	5014447.81	130.39	0	125	68.4	-88.0	0.0	0.0	70.9	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-5.5	-88.0
112	18423421.36	5014447.81	130.39	0	250	79.4	-88.0	0.0	0.0	70.9	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	6.5	-88.0
113	18423421.36	5014447.81	130.39	0	500	81.0	-88.0	0.0	0.0	70.9	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	10.3	-88.0
114	18423421.36	5014447.81	130.39	0	1000	81.0	-88.0	0.0	0.0	70.9	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	8.7	-88.0
115	18423421.36	5014447.81	130.39	0	2000	81.1	-88.0	0.0	0.0	70.9	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	2.9	-88.0
116	18423421.36	5014447.81	130.39	0	4000	78.8	-88.0	0.0	0.0	70.9	32.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-22.2	-88.0
117	18423421.36	5014447.81	130.39	0	8000	73.8	-88.0	0.0	0.0	70.9	115.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-110.1	-88.0
118	18424148.79	5015443.47	124.90	0	32	44.6	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-30.6	-88.0
119	18424148.79	5015443.47	124.90	0	63	64.9	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-10.4	-88.0
120	18424148.79	5015443.47	124.90	0	125	72.6	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-8.9	-88.0
121	18424148.79	5015443.47	124.90	0	250	83.6	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	1.0	-88.0
122	18424148.79	5015443.47	124.90	0	500	85.2	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	3.0	-88.0
123	18424148.79	5015443.47	124.90	0	1000	85.2	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.0	0.0	-0.0	-0.0	-88.0
124	18424148.79	5015443.47	124.90	0	2000	85.3	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.2	0.0	-0.0	-10.8	-88.0
125	18424148.79	5015443.47	124.90	0	4000	83.0	-88.0	0.0	0.0	76.0	58.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-54.6	-88.0
126	18424148.79	5015443.47	124.90	0	8000	78.0	-88.0	0.0	0.0	76.0	207.9	-2.3	0.0	0.0	6.3	0.0	-0.0	-209.9	-88.0
127	18423779.54	5014003.92	132.56	0	32	43.2	-88.0	0.0	0.0	74.5	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-25.9	-88.0
128	18423779.54	5014003.92	132.56	0	63	63.5	-88.0	0.0	0.0	74.5	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-5.7	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound Transfer Trailers #trips/hr; Entry and Exit (20 km/h, 2.3 km long)", ID: "WTPF_HR3_outTT"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
129	18423779.54	5014003.92	132.56	0	125	71.2	-88.0	0.0	0.0	74.5	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-6.7	-88.0
130	18423779.54	5014003.92	132.56	0	250	82.2	-88.0	0.0	0.0	74.5	1.6	0.9	0.0	0.0	0.0	0.0	-0.0	5.2	-88.0
131	18423779.54	5014003.92	132.56	0	500	83.8	-88.0	0.0	0.0	74.5	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	8.4	-88.0
132	18423779.54	5014003.92	132.56	0	1000	83.8	-88.0	0.0	0.0	74.5	5.5	-2.2	0.0	0.0	0.0	0.0	-0.0	6.0	-88.0
133	18423779.54	5014003.92	132.56	0	2000	83.9	-88.0	0.0	0.0	74.5	14.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-3.0	-88.0
134	18423779.54	5014003.92	132.56	0	4000	81.6	-88.0	0.0	0.0	74.5	49.3	-2.2	0.0	0.0	0.0	0.0	-0.0	-40.0	-88.0
135	18423779.54	5014003.92	132.56	0	8000	76.6	-88.0	0.0	0.0	74.5	175.7	-2.2	0.0	0.0	0.0	0.0	-0.0	-171.4	-88.0
136	18423741.08	5014149.20	131.86	0	32	41.2	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-27.2	-88.0
137	18423741.08	5014149.20	131.86	0	63	61.5	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-7.0	-88.0
138	18423741.08	5014149.20	131.86	0	125	69.2	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-8.0	-88.0
139	18423741.08	5014149.20	131.86	0	250	80.2	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	3.9	-88.0
140	18423741.08	5014149.20	131.86	0	500	81.8	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	0.0	0.0	-0.0	7.3	-88.0
141	18423741.08	5014149.20	131.86	0	1000	81.8	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	0.0	0.0	-0.0	5.0	-88.0
142	18423741.08	5014149.20	131.86	0	2000	81.9	-88.0	0.0	0.0	73.9	13.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-3.3	-88.0
143	18423741.08	5014149.20	131.86	0	4000	79.6	-88.0	0.0	0.0	73.9	45.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-37.9	-88.0
144	18423741.08	5014149.20	131.86	0	8000	74.6	-88.0	0.0	0.0	73.9	163.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-160.6	-88.0
145	18423755.15	5014134.39	131.89	0	32	41.0	-88.0	0.0	0.0	74.0	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-27.6	-88.0
146	18423755.15	5014134.39	131.89	0	63	61.3	-88.0	0.0	0.0	74.0	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-7.4	-88.0
147	18423755.15	5014134.39	131.89	0	125	69.0	-88.0	0.0	0.0	74.0	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-8.4	-88.0
148	18423755.15	5014134.39	131.89	0	250	80.0	-88.0	0.0	0.0	74.0	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	3.5	-88.0
149	18423755.15	5014134.39	131.89	0	500	81.6	-88.0	0.0	0.0	74.0	2.7	-2.1	0.0	0.0	0.0	0.0	-0.0	6.9	-88.0
150	18423755.15	5014134.39	131.89	0	1000	81.6	-88.0	0.0	0.0	74.0	5.2	-2.2	0.0	0.0	0.0	0.0	-0.0	4.6	-88.0
151	18423755.15	5014134.39	131.89	0	2000	81.7	-88.0	0.0	0.0	74.0	13.7	-2.2	0.0	0.0	0.0	0.0	-0.0	-3.9	-88.0
152	18423755.15	5014134.39	131.89	0	4000	79.4	-88.0	0.0	0.0	74.0	46.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-38.9	-88.0
153	18423755.15	5014134.39	131.89	0	8000	74.4	-88.0	0.0	0.0	74.0	165.7	-2.2	0.0	0.0	0.0	0.0	-0.0	-163.2	-88.0
154	18424181.28	5015463.23	122.70	0	32	42.5	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-32.9	-88.0
155	18424181.28	5015463.23	122.70	0	63	62.8	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-12.8	-88.0
156	18424181.28	5015463.23	122.70	0	125	70.5	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	-11.2	-88.0
157	18424181.28	5015463.23	122.70	0	250	81.5	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	-1.4	-88.0
158	18424181.28	5015463.23	122.70	0	500	83.1	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	0.7	-88.0
159	18424181.28	5015463.23	122.70	0	1000	83.1	-88.0	0.0	0.0	76.2	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	-2.3	-88.0
160	18424181.28	5015463.23	122.70	0	2000	83.2	-88.0	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	5.0	0.0	-0.0	-13.3	-88.0
161	18424181.28	5015463.23	122.70	0	4000	80.9	-88.0	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	5.2	0.0	-0.0	-57.8	-88.0
162	18424181.28	5015463.23	122.70	0	8000	75.9	-88.0	0.0	0.0	76.2	212.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-215.9	-88.0
163	18423758.35	5014119.37	132.32	0	32	39.0	-88.0	0.0	0.0	74.1	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-29.7	-88.0
164	18423758.35	5014119.37	132.32	0	63	59.3	-88.0	0.0	0.0	74.1	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-9.5	-88.0
165	18423758.35	5014119.37	132.32	0	125	67.0	-88.0	0.0	0.0	74.1	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-10.4	-88.0
166	18423758.35	5014119.37	132.32	0	250	78.0	-88.0	0.0	0.0	74.1	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	1.5	-88.0
167	18423758.35	5014119.37	132.32	0	500	79.6	-88.0	0.0	0.0	74.1	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	4.8	-88.0
168	18423758.35	5014119.37	132.32	0	1000	79.6	-88.0	0.0	0.0	74.1	5.2	-2.2	0.0	0.0	0.0	0.0	-0.0	2.5	-88.0
169	18423758.35	5014119.37	132.32	0	2000	79.7	-88.0	0.0	0.0	74.1	13.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-6.0	-88.0
170	18423758.35	5014119.37	132.32	0	4000	77.4	-88.0	0.0	0.0	74.1	46.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-41.3	-88.0
171	18423758.35	5014119.37	132.32	0	8000	72.4	-88.0	0.0	0.0	74.1	166.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-166.4	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR4_outICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423517.82	5014336.70	130.89	0	32	50.5	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	0.0	0.0	-0.0	-16.1	-88.0
2	18423517.82	5014336.70	130.89	0	63	70.8	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	0.0	0.0	-0.0	4.1	-88.0
3	18423517.82	5014336.70	130.89	0	125	78.5	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	3.4	-88.0
4	18423517.82	5014336.70	130.89	0	250	89.5	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	0.0	0.0	-0.0	15.4	-88.0
5	18423517.82	5014336.70	130.89	0	500	91.1	-88.0	0.0	0.0	72.0	2.1	-2.0	0.0	0.0	0.0	0.0	-0.0	19.1	-88.0
6	18423517.82	5014336.70	130.89	0	1000	91.1	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	0.0	0.0	-0.0	17.3	-88.0
7	18423517.82	5014336.70	130.89	0	2000	91.2	-88.0	0.0	0.0	72.0	10.8	-2.2	0.0	0.0	0.0	0.0	-0.0	10.6	-88.0
8	18423517.82	5014336.70	130.89	0	4000	88.9	-88.0	0.0	0.0	72.0	36.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-17.4	-88.0
9	18423517.82	5014336.70	130.89	0	8000	83.9	-88.0	0.0	0.0	72.0	130.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-116.3	-88.0
10	18423612.03	5014641.34	129.30	0	32	49.4	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	5.2	0.0	-0.0	-22.4	-88.0
11	18423612.03	5014641.34	129.30	0	63	69.7	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	5.8	0.0	-0.0	-2.8	-88.0
12	18423612.03	5014641.34	129.30	0	125	77.4	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	4.0	0.0	-0.0	-1.8	-88.0
13	18423612.03	5014641.34	129.30	0	250	88.4	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	7.1	0.0	-0.0	7.1	-88.0
14	18423612.03	5014641.34	129.30	0	500	90.0	-88.0	0.0	0.0	72.0	2.2	-2.0	0.0	0.0	10.0	0.0	-0.0	7.9	-88.0
15	18423612.03	5014641.34	129.30	0	1000	90.0	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	12.3	0.0	-0.0	3.8	-88.0
16	18423612.03	5014641.34	129.30	0	2000	90.1	-88.0	0.0	0.0	72.0	10.9	-2.2	0.0	0.0	14.9	0.0	-0.0	-5.5	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR4_outICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
17	18423612.03	5014641.34	129.30	0	4000	87.8	-88.0	0.0	0.0	72.0	36.9	-2.2	0.0	0.0	17.6	0.0	-0.0	-36.6	-88.0
18	18423612.03	5014641.34	129.30	0	8000	82.8	-88.0	0.0	0.0	72.0	131.5	-2.2	0.0	0.0	20.5	0.0	-0.0	-139.1	-88.0
19	18423973.89	5014959.45	132.18	0	32	51.4	-88.0	0.0	0.0	74.5	0.1	-5.5	0.0	0.0	4.8	0.0	-0.0	-22.4	-88.0
20	18423973.89	5014959.45	132.18	0	63	71.7	-88.0	0.0	0.0	74.5	0.2	-5.5	0.0	0.0	4.8	0.0	-0.0	-2.2	-88.0
21	18423973.89	5014959.45	132.18	0	125	79.4	-88.0	0.0	0.0	74.5	0.6	2.7	0.0	0.0	2.1	0.0	-0.0	-0.5	-88.0
22	18423973.89	5014959.45	132.18	0	250	90.4	-88.0	0.0	0.0	74.5	1.6	0.9	0.0	0.0	4.0	0.0	-0.0	9.5	-88.0
23	18423973.89	5014959.45	132.18	0	500	92.0	-88.0	0.0	0.0	74.5	2.9	-2.1	0.0	0.0	5.0	0.0	-0.0	11.7	-88.0
24	18423973.89	5014959.45	132.18	0	1000	92.0	-88.0	0.0	0.0	74.5	5.4	-2.2	0.0	0.0	5.3	0.0	-0.0	9.0	-88.0
25	18423973.89	5014959.45	132.18	0	2000	92.1	-88.0	0.0	0.0	74.5	14.4	-2.2	0.0	0.0	5.8	0.0	-0.0	-0.3	-88.0
26	18423973.89	5014959.45	132.18	0	4000	89.8	-88.0	0.0	0.0	74.5	48.8	-2.2	0.0	0.0	6.6	0.0	-0.0	-37.8	-88.0
27	18423973.89	5014959.45	132.18	0	8000	84.8	-88.0	0.0	0.0	74.5	173.9	-2.2	0.0	0.0	7.9	0.0	-0.0	-169.3	-88.0
28	18423477.14	5014521.85	129.50	0	32	47.7	-88.0	0.0	0.0	71.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-18.1	-88.0
29	18423477.14	5014521.85	129.50	0	63	68.0	-88.0	0.0	0.0	71.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	2.1	-88.0
30	18423477.14	5014521.85	129.50	0	125	75.7	-88.0	0.0	0.0	71.1	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	1.5	-88.0
31	18423477.14	5014521.85	129.50	0	250	86.7	-88.0	0.0	0.0	71.1	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	13.6	-88.0
32	18423477.14	5014521.85	129.50	0	500	88.3	-88.0	0.0	0.0	71.1	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	17.3	-88.0
33	18423477.14	5014521.85	129.50	0	1000	88.3	-88.0	0.0	0.0	71.1	3.7	-2.1	0.0	0.0	0.0	0.0	-0.0	15.6	-88.0
34	18423477.14	5014521.85	129.50	0	2000	88.4	-88.0	0.0	0.0	71.1	9.8	-2.1	0.0	0.0	0.0	0.0	-0.0	9.6	-88.0
35	18423477.14	5014521.85	129.50	0	4000	86.1	-88.0	0.0	0.0	71.1	33.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-16.2	-88.0
36	18423477.14	5014521.85	129.50	0	8000	81.1	-88.0	0.0	0.0	71.1	118.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-106.6	-88.0
37	18423769.99	5014780.40	130.18	0	32	49.3	-88.0	0.0	0.0	73.1	0.0	-5.5	0.0	0.0	4.9	0.0	-0.0	-23.3	-88.0
38	18423769.99	5014780.40	130.18	0	63	69.6	-88.0	0.0	0.0	73.1	0.2	-5.5	0.0	0.0	5.1	0.0	-0.0	-3.3	-88.0
39	18423769.99	5014780.40	130.18	0	125	77.3	-88.0	0.0	0.0	73.1	0.5	2.7	0.0	0.0	2.7	0.0	-0.0	-1.8	-88.0
40	18423769.99	5014780.40	130.18	0	250	88.3	-88.0	0.0	0.0	73.1	1.3	0.9	0.0	0.0	5.1	0.0	-0.0	7.8	-88.0
41	18423769.99	5014780.40	130.18	0	500	89.9	-88.0	0.0	0.0	73.1	2.5	-2.0	0.0	0.0	7.0	0.0	-0.0	9.3	-88.0
42	18423769.99	5014780.40	130.18	0	1000	89.9	-88.0	0.0	0.0	73.1	4.7	-2.2	0.0	0.0	8.5	0.0	-0.0	5.8	-88.0
43	18423769.99	5014780.40	130.18	0	2000	90.0	-88.0	0.0	0.0	73.1	12.3	-2.2	0.0	0.0	10.5	0.0	-0.0	-3.7	-88.0
44	18423769.99	5014780.40	130.18	0	4000	87.7	-88.0	0.0	0.0	73.1	41.8	-2.2	0.0	0.0	12.8	0.0	-0.0	-37.8	-88.0
45	18423769.99	5014780.40	130.18	0	8000	82.7	-88.0	0.0	0.0	73.1	148.9	-2.2	0.0	0.0	15.5	0.0	-0.0	-152.7	-88.0
46	18423984.62	5015302.52	129.67	0	32	47.4	-88.0	0.0	0.0	75.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-26.9	-88.0
47	18423984.62	5015302.52	129.67	0	63	67.7	-88.0	0.0	0.0	75.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-6.7	-88.0
48	18423984.62	5015302.52	129.67	0	125	75.4	-88.0	0.0	0.0	75.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-5.0	-88.0
49	18423984.62	5015302.52	129.67	0	250	86.4	-88.0	0.0	0.0	75.0	1.6	0.9	0.0	0.0	3.9	0.0	-0.0	4.9	-88.0
50	18423984.62	5015302.52	129.67	0	500	88.0	-88.0	0.0	0.0	75.0	3.0	-2.1	0.0	0.0	4.9	0.0	-0.0	7.2	-88.0
51	18423984.62	5015302.52	129.67	0	1000	88.0	-88.0	0.0	0.0	75.0	5.8	-2.2	0.0	0.0	5.0	0.0	-0.0	4.5	-88.0
52	18423984.62	5015302.52	129.67	0	2000	88.1	-88.0	0.0	0.0	75.0	15.2	-2.2	0.0	0.0	5.2	0.0	-0.0	-5.1	-88.0
53	18423984.62	5015302.52	129.67	0	4000	85.8	-88.0	0.0	0.0	75.0	51.6	-2.2	0.0	0.0	5.6	0.0	-0.0	-44.2	-88.0
54	18423984.62	5015302.52	129.67	0	8000	80.8	-88.0	0.0	0.0	75.0	184.2	-2.2	0.0	0.0	6.4	0.0	-0.0	-182.5	-88.0
55	18424080.60	5015390.26	127.51	0	32	47.1	-88.0	0.0	0.0	75.6	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-27.7	-88.0
56	18424080.60	5015390.26	127.51	0	63	67.4	-88.0	0.0	0.0	75.6	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-7.5	-88.0
57	18424080.60	5015390.26	127.51	0	125	75.1	-88.0	0.0	0.0	75.6	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-5.9	-88.0
58	18424080.60	5015390.26	127.51	0	250	86.1	-88.0	0.0	0.0	75.6	1.8	0.9	0.0	0.0	3.9	0.0	-0.0	4.0	-88.0
59	18424080.60	5015390.26	127.51	0	500	87.7	-88.0	0.0	0.0	75.6	3.3	-2.1	0.0	0.0	4.8	0.0	-0.0	6.2	-88.0
60	18424080.60	5015390.26	127.51	0	1000	87.7	-88.0	0.0	0.0	75.6	6.2	-2.2	0.0	0.0	4.8	0.0	-0.0	3.4	-88.0
61	18424080.60	5015390.26	127.51	0	2000	87.8	-88.0	0.0	0.0	75.6	16.4	-2.2	0.0	0.0	4.8	0.0	-0.0	-6.7	-88.0
62	18424080.60	5015390.26	127.51	0	4000	85.5	-88.0	0.0	0.0	75.6	55.6	-2.2	0.0	0.0	4.8	0.0	-0.0	-48.2	-88.0
63	18424080.60	5015390.26	127.51	0	8000	80.5	-88.0	0.0	0.0	75.6	198.2	-2.2	0.0	0.0	4.8	0.0	-0.0	-195.8	-88.0
64	18424017.85	5015164.00	132.19	0	32	50.1	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-24.2	-88.0
65	18424017.85	5015164.00	132.19	0	63	70.4	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	-4.1	-88.0
66	18424017.85	5015164.00	132.19	0	125	78.1	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.4	0.0	-0.0	-2.6	-88.0
67	18424017.85	5015164.00	132.19	0	250	89.1	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.5	0.0	-0.0	7.1	-88.0
68	18424017.85	5015164.00	132.19	0	500	90.7	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	6.0	0.0	-0.0	8.9	-88.0
69	18424017.85	5015164.00	132.19	0	1000	90.7	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	6.9	0.0	-0.0	5.3	-88.0
70	18424017.85	5015164.00	132.19	0	2000	90.8	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	8.3	0.0	-0.0	-5.4	-88.0
71	18424017.85	5015164.00	132.19	0	4000	88.5	-88.0	0.0	0.0	74.9	51.4	-2.2	0.0	0.0	10.3	0.0	-0.0	-45.9	-88.0
72	18424017.85	5015164.00	132.19	0	8000	83.5	-88.0	0.0	0.0	74.9	183.3	-2.2	0.0	0.0	12.6	0.0	-0.0	-185.1	-88.0
73	18423671.05	5014194.36	131.50	0	32	47.7	-88.0	0.0	0.0	73.4	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-20.2	-88.0
74	18423671.05	5014194.36	131.50	0	63	68.0	-88.0	0.0	0.0	73.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-0.0	-88.0
75	18423671.05	5014194.36	131.50	0	125	75.7	-88.0	0.0	0.0	73.4	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	-0.9	-88.0
76	18423671.05	5014194.36	131.50	0	250	86.7	-88.0	0.0	0.0	73.4	1.4	0.9	0.0	0.0	0.0	0.0	-0.0	11.0	-88.0
77	18423671.05	5014194.36	131.50	0	500	88.3	-88.0	0.0	0.0	73.4	2.5	-2.1	0.0	0.0	0.0	0.0	-0.0	14.5	-88.0
78	18423671.05	5014194.36	131.50	0	1000	88.3	-88.0	0.0	0.0	73.4	4.8	-2.2	0.0	0.0	0.0	0.0	-0.0	12.3	-88.0
79	18423671.05	5014194.36	131.50	0	2000	88.4	-88.0	0.0	0.0	73.4	12.7	-2.2	0.0	0.0	0.0	0.0	-0.0	4.5	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR4_outICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
80	18423671.05	5014194.36	131.50	0	4000	86.1	-88.0	0.0	0.0	73.4	43.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-28.2	-88.0
81	18423671.05	5014194.36	131.50	0	8000	81.1	-88.0	0.0	0.0	73.4	153.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-143.9	-88.0
82	18423766.84	5014125.64	132.04	0	32	42.9	-88.0	0.0	0.0	74.1	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-25.8	-88.0
83	18423766.84	5014125.64	132.04	0	63	63.2	-88.0	0.0	0.0	74.1	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-5.6	-88.0
84	18423766.84	5014125.64	132.04	0	125	70.9	-88.0	0.0	0.0	74.1	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-6.6	-88.0
85	18423766.84	5014125.64	132.04	0	250	81.9	-88.0	0.0	0.0	74.1	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	5.3	-88.0
86	18423766.84	5014125.64	132.04	0	500	83.5	-88.0	0.0	0.0	74.1	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	8.7	-88.0
87	18423766.84	5014125.64	132.04	0	1000	83.5	-88.0	0.0	0.0	74.1	5.2	-2.2	0.0	0.0	0.0	0.0	-0.0	6.3	-88.0
88	18423766.84	5014125.64	132.04	0	2000	83.6	-88.0	0.0	0.0	74.1	13.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-2.2	-88.0
89	18423766.84	5014125.64	132.04	0	4000	81.3	-88.0	0.0	0.0	74.1	46.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-37.6	-88.0
90	18423766.84	5014125.64	132.04	0	8000	76.3	-88.0	0.0	0.0	74.1	167.4	-2.2	0.0	0.0	0.0	0.0	-0.0	-163.1	-88.0
91	18423419.93	5014464.58	130.00	0	32	38.8	-88.0	0.0	0.0	70.8	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-26.8	-88.0
92	18423419.93	5014464.58	130.00	0	63	59.1	-88.0	0.0	0.0	70.8	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-6.6	-88.0
93	18423419.93	5014464.58	130.00	0	125	66.8	-88.0	0.0	0.0	70.8	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-7.1	-88.0
94	18423419.93	5014464.58	130.00	0	250	77.8	-88.0	0.0	0.0	70.8	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	4.9	-88.0
95	18423419.93	5014464.58	130.00	0	500	79.4	-88.0	0.0	0.0	70.8	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	8.7	-88.0
96	18423419.93	5014464.58	130.00	0	1000	79.4	-88.0	0.0	0.0	70.8	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	7.1	-88.0
97	18423419.93	5014464.58	130.00	0	2000	79.5	-88.0	0.0	0.0	70.8	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	1.3	-88.0
98	18423419.93	5014464.58	130.00	0	4000	77.2	-88.0	0.0	0.0	70.8	32.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-23.6	-88.0
99	18423419.93	5014464.58	130.00	0	8000	72.2	-88.0	0.0	0.0	70.8	114.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-110.9	-88.0
100	18423421.38	5014447.81	130.39	0	32	38.7	-88.0	0.0	0.0	70.9	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-26.9	-88.0
101	18423421.38	5014447.81	130.39	0	63	59.0	-88.0	0.0	0.0	70.9	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-6.7	-88.0
102	18423421.38	5014447.81	130.39	0	125	66.7	-88.0	0.0	0.0	70.9	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-7.3	-88.0
103	18423421.38	5014447.81	130.39	0	250	77.7	-88.0	0.0	0.0	70.9	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	4.8	-88.0
104	18423421.38	5014447.81	130.39	0	500	79.3	-88.0	0.0	0.0	70.9	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	8.5	-88.0
105	18423421.38	5014447.81	130.39	0	1000	79.3	-88.0	0.0	0.0	70.9	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	6.9	-88.0
106	18423421.38	5014447.81	130.39	0	2000	79.4	-88.0	0.0	0.0	70.9	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	1.1	-88.0
107	18423421.38	5014447.81	130.39	0	4000	77.1	-88.0	0.0	0.0	70.9	32.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-24.0	-88.0
108	18423421.38	5014447.81	130.39	0	8000	72.1	-88.0	0.0	0.0	70.9	115.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-111.8	-88.0
109	18424148.74	5015443.58	124.90	0	32	42.9	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-32.3	-88.0
110	18424148.74	5015443.58	124.90	0	63	63.2	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-12.2	-88.0
111	18424148.74	5015443.58	124.90	0	125	70.9	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-10.6	-88.0
112	18424148.74	5015443.58	124.90	0	250	81.9	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	-0.8	-88.0
113	18424148.74	5015443.58	124.90	0	500	83.5	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	1.3	-88.0
114	18424148.74	5015443.58	124.90	0	1000	83.5	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.0	0.0	-0.0	-1.8	-88.0
115	18424148.74	5015443.58	124.90	0	2000	83.6	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.2	0.0	-0.0	-12.6	-88.0
116	18424148.74	5015443.58	124.90	0	4000	81.3	-88.0	0.0	0.0	76.0	58.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-56.3	-88.0
117	18424148.74	5015443.58	124.90	0	8000	76.3	-88.0	0.0	0.0	76.0	207.9	-2.3	0.0	0.0	6.3	0.0	-0.0	-211.6	-88.0
118	18423741.33	5014149.00	131.86	0	32	39.6	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-28.9	-88.0
119	18423741.33	5014149.00	131.86	0	63	59.9	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-8.7	-88.0
120	18423741.33	5014149.00	131.86	0	125	67.6	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-9.6	-88.0
121	18423741.33	5014149.00	131.86	0	250	78.6	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	2.3	-88.0
122	18423741.33	5014149.00	131.86	0	500	80.2	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	0.0	0.0	-0.0	5.6	-88.0
123	18423741.33	5014149.00	131.86	0	1000	80.2	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	0.0	0.0	-0.0	3.4	-88.0
124	18423741.33	5014149.00	131.86	0	2000	80.3	-88.0	0.0	0.0	73.9	13.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-4.9	-88.0
125	18423741.33	5014149.00	131.86	0	4000	78.0	-88.0	0.0	0.0	73.9	45.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-39.6	-88.0
126	18423741.33	5014149.00	131.86	0	8000	73.0	-88.0	0.0	0.0	73.9	163.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-162.2	-88.0
127	18424181.17	5015463.34	122.69	0	32	40.7	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-34.7	-88.0
128	18424181.17	5015463.34	122.69	0	63	61.0	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-14.5	-88.0
129	18424181.17	5015463.34	122.69	0	125	68.7	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	-13.0	-88.0
130	18424181.17	5015463.34	122.69	0	250	79.7	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	-3.2	-88.0
131	18424181.17	5015463.34	122.69	0	500	81.3	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	-1.1	-88.0
132	18424181.17	5015463.34	122.69	0	1000	81.3	-88.0	0.0	0.0	76.2	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	-4.1	-88.0
133	18424181.17	5015463.34	122.69	0	2000	81.4	-88.0	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	5.0	0.0	-0.0	-15.1	-88.0
134	18424181.17	5015463.34	122.69	0	4000	79.1	-88.0	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	5.2	0.0	-0.0	-59.5	-88.0
135	18424181.17	5015463.34	122.69	0	8000	74.1	-88.0	0.0	0.0	76.2	212.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-217.7	-88.0
136	18423779.42	5014104.52	132.53	0	32	32.7	-88.0	0.0	0.0	74.3	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-36.0	-88.0
137	18423779.42	5014104.52	132.53	0	63	53.0	-88.0	0.0	0.0	74.3	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-15.9	-88.0
138	18423779.42	5014104.52	132.53	0	125	60.7	-88.0	0.0	0.0	74.3	0.6	2.5	0.0	0.0	0.0	0.0	-0.0	-16.6	-88.0
139	18423779.42	5014104.52	132.53	0	250	71.7	-88.0	0.0	0.0	74.3	1.5	0.7	0.0	0.0	0.0	0.0	-0.0	-4.7	-88.0
140	18423779.42	5014104.52	132.53	0	500	73.3	-88.0	0.0	0.0	74.3	2.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-1.6	-88.0
141	18423779.42	5014104.52	132.53	0	1000	73.3	-88.0	0.0	0.0	74.3	5.3	-2.3	0.0	0.0	0.0	0.0	-0.0	-3.9	-88.0
142	18423779.42	5014104.52	132.53	0	2000	73.4	-88.0	0.0	0.0	74.3	14.0	-2.3	0.0	0.0	0.0	0.0	-0.0	-12.6	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound IC&I Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "WTPF_HR4_outICI"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
143	18423779.42	5014104.52	132.53	0	4000	71.1	-88.0	0.0	0.0	74.3	47.6	-2.3	0.0	0.0	0.0	0.0	-0.0	-48.5	-88.0
144	18423779.42	5014104.52	132.53	0	8000	66.1	-88.0	0.0	0.0	74.3	169.9	-2.3	0.0	0.0	0.0	0.0	-0.0	-175.7	-88.0
145	18423782.02	5014107.31	132.41	0	32	30.9	-88.0	0.0	0.0	74.3	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-37.8	-88.0
146	18423782.02	5014107.31	132.41	0	63	51.2	-88.0	0.0	0.0	74.3	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-17.7	-88.0
147	18423782.02	5014107.31	132.41	0	125	58.9	-88.0	0.0	0.0	74.3	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	-18.6	-88.0
148	18423782.02	5014107.31	132.41	0	250	69.9	-88.0	0.0	0.0	74.3	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	-6.8	-88.0
149	18423782.02	5014107.31	132.41	0	500	71.5	-88.0	0.0	0.0	74.3	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-3.4	-88.0
150	18423782.02	5014107.31	132.41	0	1000	71.5	-88.0	0.0	0.0	74.3	5.3	-2.2	0.0	0.0	0.0	0.0	-0.0	-5.8	-88.0
151	18423782.02	5014107.31	132.41	0	2000	71.6	-88.0	0.0	0.0	74.3	14.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-14.5	-88.0
152	18423782.02	5014107.31	132.41	0	4000	69.3	-88.0	0.0	0.0	74.3	47.7	-2.2	0.0	0.0	0.0	0.0	-0.0	-50.4	-88.0
153	18423782.02	5014107.31	132.41	0	8000	64.3	-88.0	0.0	0.0	74.3	170.0	-2.2	0.0	0.0	0.0	0.0	-0.0	-177.7	-88.0

Line Source, ISO 9613, Name: "WTPF Outbound C&D Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "WTPF_HR5_outCD																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A
1	18423517.91	5014336.74	130.89	0	32	54.5	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	0.0	0.0	-0.0	-12.1	-88.(
2	18423517.91	5014336.74	130.89	0	63	74.8	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	0.0	0.0	-0.0	8.1	-88.(
3	18423517.91	5014336.74	130.89	0	125	82.5	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	7.4	-88.(
4	18423517.91	5014336.74	130.89	0	250	93.5	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	0.0	0.0	-0.0	19.4	-88.(
5	18423517.91	5014336.74	130.89	0	500	95.1	-88.0	0.0	0.0	72.0	2.1	-2.0	0.0	0.0	0.0	0.0	-0.0	23.0	-88.(
6	18423517.91	5014336.74	130.89	0	1000	95.1	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	0.0	0.0	-0.0	21.2	-88.(
7	18423517.91	5014336.74	130.89	0	2000	95.2	-88.0	0.0	0.0	72.0	10.8	-2.2	0.0	0.0	0.0	0.0	-0.0	14.6	-88.(
8	18423517.91	5014336.74	130.89	0	4000	92.9	-88.0	0.0	0.0	72.0	36.6	-2.2	0.0	0.0	0.0	0.0	-0.0	-13.5	-88.(
9	18423517.91	5014336.74	130.89	0	8000	87.9	-88.0	0.0	0.0	72.0	130.5	-2.2	0.0	0.0	0.0	0.0	-0.0	-112.4	-88.(
10	18423611.08	5014640.56	129.25	0	32	53.4	-88.0	0.0	0.0	72.0	0.0	-5.4	0.0	0.0	5.2	0.0	-0.0	-18.5	-88.(
11	18423611.08	5014640.56	129.25	0	63	73.7	-88.0	0.0	0.0	72.0	0.1	-5.4	0.0	0.0	5.8	0.0	-0.0	1.1	-88.(
12	18423611.08	5014640.56	129.25	0	125	81.4	-88.0	0.0	0.0	72.0	0.5	2.7	0.0	0.0	4.0	0.0	-0.0	2.1	-88.(
13	18423611.08	5014640.56	129.25	0	250	92.4	-88.0	0.0	0.0	72.0	1.2	1.0	0.0	0.0	7.2	0.0	-0.0	11.0	-88.(
14	18423611.08	5014640.56	129.25	0	500	94.0	-88.0	0.0	0.0	72.0	2.2	-2.0	0.0	0.0	10.1	0.0	-0.0	11.7	-88.(
15	18423611.08	5014640.56	129.25	0	1000	94.0	-88.0	0.0	0.0	72.0	4.1	-2.2	0.0	0.0	12.4	0.0	-0.0	7.6	-88.(
16	18423611.08	5014640.56	129.25	0	2000	94.1	-88.0	0.0	0.0	72.0	10.9	-2.2	0.0	0.0	15.0	0.0	-0.0	-1.7	-88.(
17	18423611.08	5014640.56	129.25	0	4000	91.8	-88.0	0.0	0.0	72.0	36.8	-2.2	0.0	0.0	17.8	0.0	-0.0	-32.8	-88.(
18	18423611.08	5014640.56	129.25	0	8000	86.8	-88.0	0.0	0.0	72.0	131.4	-2.2	0.0	0.0	20.7	0.0	-0.0	-135.2	-88.(
19	18423973.54	5014959.15	132.18	0	32	55.4	-88.0	0.0	0.0	74.5	0.1	-5.5	0.0	0.0	4.8	0.0	-0.0	-18.4	-88.(
20	18423973.54	5014959.15	132.18	0	63	75.7	-88.0	0.0	0.0	74.5	0.2	-5.5	0.0	0.0	4.8	0.0	-0.0	1.8	-88.(
21	18423973.54	5014959.15	132.18	0	125	83.4	-88.0	0.0	0.0	74.5	0.6	2.7	0.0	0.0	2.1	0.0	-0.0	3.5	-88.(
22	18423973.54	5014959.15	132.18	0	250	94.4	-88.0	0.0	0.0	74.5	1.6	0.9	0.0	0.0	4.0	0.0	-0.0	13.5	-88.(
23	18423973.54	5014959.15	132.18	0	500	96.0	-88.0	0.0	0.0	74.5	2.9	-2.1	0.0	0.0	5.0	0.0	-0.0	15.7	-88.(
24	18423973.54	5014959.15	132.18	0	1000	96.0	-88.0	0.0	0.0	74.5	5.4	-2.2	0.0	0.0	5.3	0.0	-0.0	13.0	-88.(
25	18423973.54	5014959.15	132.18	0	2000	96.1	-88.0	0.0	0.0	74.5	14.4	-2.2	0.0	0.0	5.8	0.0	-0.0	3.7	-88.(
26	18423973.54	5014959.15	132.18	0	4000	93.8	-88.0	0.0	0.0	74.5	48.8	-2.2	0.0	0.0	6.6	0.0	-0.0	-33.8	-88.(
27	18423973.54	5014959.15	132.18	0	8000	88.8	-88.0	0.0	0.0	74.5	173.9	-2.2	0.0	0.0	7.9	0.0	-0.0	-165.3	-88.(
28	18423477.18	5014521.93	129.50	0	32	51.7	-88.0	0.0	0.0	71.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-14.1	-88.(
29	18423477.18	5014521.93	129.50	0	63	72.0	-88.0	0.0	0.0	71.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	6.1	-88.(
30	18423477.18	5014521.93	129.50	0	125	79.7	-88.0	0.0	0.0	71.1	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	5.5	-88.(
31	18423477.18	5014521.93	129.50	0	250	90.7	-88.0	0.0	0.0	71.1	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	17.5	-88.(
32	18423477.18	5014521.93	129.50	0	500	92.3	-88.0	0.0	0.0	71.1	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	21.2	-88.(
33	18423477.18	5014521.93	129.50	0	1000	92.3	-88.0	0.0	0.0	71.1	3.7	-2.1	0.0	0.0	0.0	0.0	-0.0	19.6	-88.(
34	18423477.18	5014521.93	129.50	0	2000	92.4	-88.0	0.0	0.0	71.1	9.8	-2.1	0.0	0.0	0.0	0.0	-0.0	13.6	-88.(
35	18423477.18	5014521.93	129.50	0	4000	90.1	-88.0	0.0	0.0	71.1	33.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-12.2	-88.(
36	18423477.18	5014521.93	129.50	0	8000	85.1	-88.0	0.0	0.0	71.1	118.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-102.6	-88.(
37	18423768.71	5014779.26	130.13	0	32	53.3	-88.0	0.0	0.0	73.1	0.0	-5.5	0.0	0.0	4.9	0.0	-0.0	-19.3	-88.(
38	18423768.71	5014779.26	130.13	0	63	73.6	-88.0	0.0	0.0	73.1	0.2	-5.5	0.0	0.0	5.1	0.0	-0.0	0.7	-88.(
39	18423768.71	5014779.26	130.13	0	125	81.3	-88.0	0.0	0.0	73.1	0.5	2.7	0.0	0.0	2.7	0.0	-0.0	2.2	-88.(
40	18423768.71	5014779.26	130.13	0	250	92.3	-88.0	0.0	0.0	73.1	1.3	0.9	0.0	0.0	5.1	0.0	-0.0	11.8	-88.(
41	18423768.71	5014779.26	130.13	0	500	93.9	-88.0	0.0	0.0	73.1	2.4	-2.0	0.0	0.0	7.0	0.0	-0.0	13.3	-88.(
42	18423768.71	5014779.26	130.13	0	1000	93.9	-88.0	0.0	0.0	73.1	4.7	-2.2	0.0	0.0	8.5	0.0	-0.0	9.8	-88.(
43	18423768.71	5014779.26	130.13	0	2000	94.0	-88.0	0.0	0.0	73.1	12.3	-2.2	0.0	0.0	10.5	0.0	-0.0	0.3	-88.(
44	18423768.71	5014779.26	130.13	0	4000	91.7	-88.0	0.0	0.0	73.1	41.7	-2.2	0.0	0.0	12.9	0.0	-0.0	-33.8	-88.(
45	18423768.71	5014779.26	130.13	0	8000	86.7	-88.0	0.0	0.0	73.1	148.8	-2.2	0.0	0.0	15.6	0.0	-0.0	-148.6	-88.(
46	18423984.66	5015302.53	129.67	0	32	51.3	-88.0	0.0	0.0	75.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-22.9	-88.(
47	18423984.66	5015302.53	129.67	0	63	71.6	-88.0	0.0	0.0	75.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-2.7	-88.(
48	18423984.66	5015302.53	129.67	0	125	79.3	-88.0	0.0	0.0	75.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-1.1	-88.(

Line Source, ISO 9613, Name: "WTPF Outbound C&D Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "WTPF_HR5_outCD																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A
49	18423984.66	5015302.53	129.67	0	250	90.3	-88.0	0.0	0.0	75.0	1.6	0.9	0.0	0.0	3.9	0.0	-0.0	8.9	-88.(
50	18423984.66	5015302.53	129.67	0	500	91.9	-88.0	0.0	0.0	75.0	3.0	-2.1	0.0	0.0	4.9	0.0	-0.0	11.2	-88.(
51	18423984.66	5015302.53	129.67	0	1000	91.9	-88.0	0.0	0.0	75.0	5.8	-2.2	0.0	0.0	5.0	0.0	-0.0	8.5	-88.(
52	18423984.66	5015302.53	129.67	0	2000	92.0	-88.0	0.0	0.0	75.0	15.2	-2.2	0.0	0.0	5.2	0.0	-0.0	-1.1	-88.(
53	18423984.66	5015302.53	129.67	0	4000	89.7	-88.0	0.0	0.0	75.0	51.6	-2.2	0.0	0.0	5.6	0.0	-0.0	-40.3	-88.(
54	18423984.66	5015302.53	129.67	0	8000	84.7	-88.0	0.0	0.0	75.0	184.2	-2.2	0.0	0.0	6.4	0.0	-0.0	-178.5	-88.(
55	18424080.67	5015390.27	127.51	0	32	51.1	-88.0	0.0	0.0	75.6	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-23.7	-88.(
56	18424080.67	5015390.27	127.51	0	63	71.4	-88.0	0.0	0.0	75.6	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-3.5	-88.(
57	18424080.67	5015390.27	127.51	0	125	79.1	-88.0	0.0	0.0	75.6	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-1.9	-88.(
58	18424080.67	5015390.27	127.51	0	250	90.1	-88.0	0.0	0.0	75.6	1.8	0.9	0.0	0.0	3.9	0.0	-0.0	8.0	-88.(
59	18424080.67	5015390.27	127.51	0	500	91.7	-88.0	0.0	0.0	75.6	3.3	-2.1	0.0	0.0	4.8	0.0	-0.0	10.2	-88.(
60	18424080.67	5015390.27	127.51	0	1000	91.7	-88.0	0.0	0.0	75.6	6.2	-2.2	0.0	0.0	4.8	0.0	-0.0	7.4	-88.(
61	18424080.67	5015390.27	127.51	0	2000	91.8	-88.0	0.0	0.0	75.6	16.4	-2.2	0.0	0.0	4.8	0.0	-0.0	-2.7	-88.(
62	18424080.67	5015390.27	127.51	0	4000	89.5	-88.0	0.0	0.0	75.6	55.6	-2.2	0.0	0.0	4.8	0.0	-0.0	-44.2	-88.(
63	18424080.67	5015390.27	127.51	0	8000	84.5	-88.0	0.0	0.0	75.6	198.2	-2.2	0.0	0.0	4.8	0.0	-0.0	-191.8	-88.(
64	18424017.84	5015164.03	132.19	0	32	54.1	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-20.2	-88.(
65	18424017.84	5015164.03	132.19	0	63	74.4	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	-0.1	-88.(
66	18424017.84	5015164.03	132.19	0	125	82.1	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.4	0.0	-0.0	1.4	-88.(
67	18424017.84	5015164.03	132.19	0	250	93.1	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.5	0.0	-0.0	11.1	-88.(
68	18424017.84	5015164.03	132.19	0	500	94.7	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	6.0	0.0	-0.0	12.9	-88.(
69	18424017.84	5015164.03	132.19	0	1000	94.7	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	6.9	0.0	-0.0	9.3	-88.(
70	18424017.84	5015164.03	132.19	0	2000	94.8	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	8.3	0.0	-0.0	-1.4	-88.(
71	18424017.84	5015164.03	132.19	0	4000	92.5	-88.0	0.0	0.0	74.9	51.4	-2.2	0.0	0.0	10.3	0.0	-0.0	-41.9	-88.(
72	18424017.84	5015164.03	132.19	0	8000	87.5	-88.0	0.0	0.0	74.9	183.3	-2.2	0.0	0.0	12.6	0.0	-0.0	-181.1	-88.(
73	18423671.15	5014194.36	131.50	0	32	51.7	-88.0	0.0	0.0	73.4	0.0	-5.5	0.0	0.0	0.0	0.0	-0.0	-16.2	-88.(
74	18423671.15	5014194.36	131.50	0	63	72.0	-88.0	0.0	0.0	73.4	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	3.9	-88.(
75	18423671.15	5014194.36	131.50	0	125	79.7	-88.0	0.0	0.0	73.4	0.5	2.7	0.0	0.0	0.0	0.0	-0.0	3.0	-88.(
76	18423671.15	5014194.36	131.50	0	250	90.7	-88.0	0.0	0.0	73.4	1.4	0.9	0.0	0.0	0.0	0.0	-0.0	15.0	-88.(
77	18423671.15	5014194.36	131.50	0	500	92.3	-88.0	0.0	0.0	73.4	2.5	-2.1	0.0	0.0	0.0	0.0	-0.0	18.4	-88.(
78	18423671.15	5014194.36	131.50	0	1000	92.3	-88.0	0.0	0.0	73.4	4.8	-2.2	0.0	0.0	0.0	0.0	-0.0	16.3	-88.(
79	18423671.15	5014194.36	131.50	0	2000	92.4	-88.0	0.0	0.0	73.4	12.7	-2.2	0.0	0.0	0.0	0.0	-0.0	8.5	-88.(
80	18423671.15	5014194.36	131.50	0	4000	90.1	-88.0	0.0	0.0	73.4	43.1	-2.2	0.0	0.0	0.0	0.0	-0.0	-24.2	-88.(
81	18423671.15	5014194.36	131.50	0	8000	85.1	-88.0	0.0	0.0	73.4	153.8	-2.2	0.0	0.0	0.0	0.0	-0.0	-139.9	-88.(
82	18423769.16	5014130.86	132.13	0	32	49.6	-88.0	0.0	0.0	74.1	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-19.1	-88.(
83	18423769.16	5014130.86	132.13	0	63	69.9	-88.0	0.0	0.0	74.1	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	1.1	-88.(
84	18423769.16	5014130.86	132.13	0	125	77.6	-88.0	0.0	0.0	74.1	0.6	2.7	0.0	0.0	0.0	0.0	-0.0	0.2	-88.(
85	18423769.16	5014130.86	132.13	0	250	88.6	-88.0	0.0	0.0	74.1	1.5	0.9	0.0	0.0	0.0	0.0	-0.0	12.0	-88.(
86	18423769.16	5014130.86	132.13	0	500	90.2	-88.0	0.0	0.0	74.1	2.8	-2.1	0.0	0.0	0.0	0.0	-0.0	15.4	-88.(
87	18423769.16	5014130.86	132.13	0	1000	90.2	-88.0	0.0	0.0	74.1	5.2	-2.2	0.0	0.0	0.0	0.0	-0.0	13.0	-88.(
88	18423769.16	5014130.86	132.13	0	2000	90.3	-88.0	0.0	0.0	74.1	13.8	-2.2	0.0	0.0	0.0	0.0	-0.0	4.5	-88.(
89	18423769.16	5014130.86	132.13	0	4000	88.0	-88.0	0.0	0.0	74.1	46.9	-2.2	0.0	0.0	0.0	0.0	-0.0	-30.9	-88.(
90	18423769.16	5014130.86	132.13	0	8000	83.0	-88.0	0.0	0.0	74.1	167.4	-2.2	0.0	0.0	0.0	0.0	-0.0	-156.3	-88.(
91	18423419.97	5014464.62	130.00	0	32	42.8	-88.0	0.0	0.0	70.8	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-22.8	-88.(
92	18423419.97	5014464.62	130.00	0	63	63.1	-88.0	0.0	0.0	70.8	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-2.6	-88.(
93	18423419.97	5014464.62	130.00	0	125	70.8	-88.0	0.0	0.0	70.8	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-3.1	-88.(
94	18423419.97	5014464.62	130.00	0	250	81.8	-88.0	0.0	0.0	70.8	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	8.9	-88.(
95	18423419.97	5014464.62	130.00	0	500	83.4	-88.0	0.0	0.0	70.8	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	12.7	-88.(
96	18423419.97	5014464.62	130.00	0	1000	83.4	-88.0	0.0	0.0	70.8	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	11.1	-88.(
97	18423419.97	5014464.62	130.00	0	2000	83.5	-88.0	0.0	0.0	70.8	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	5.3	-88.(
98	18423419.97	5014464.62	130.00	0	4000	81.2	-88.0	0.0	0.0	70.8	32.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-19.6	-88.(
99	18423419.97	5014464.62	130.00	0	8000	76.2	-88.0	0.0	0.0	70.8	114.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-106.9	-88.(
100	18423421.38	5014447.85	130.39	0	32	42.6	-88.0	0.0	0.0	70.9	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-22.9	-88.(
101	18423421.38	5014447.85	130.39	0	63	62.9	-88.0	0.0	0.0	70.9	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-2.7	-88.(
102	18423421.38	5014447.85	130.39	0	125	70.6	-88.0	0.0	0.0	70.9	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	-3.3	-88.(
103	18423421.38	5014447.85	130.39	0	250	81.6	-88.0	0.0	0.0	70.9	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	8.7	-88.(
104	18423421.38	5014447.85	130.39	0	500	83.2	-88.0	0.0	0.0	70.9	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	12.5	-88.(
105	18423421.38	5014447.85	130.39	0	1000	83.2	-88.0	0.0	0.0	70.9	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	10.9	-88.(
106	18423421.38	5014447.85	130.39	0	2000	83.3	-88.0	0.0	0.0	70.9	9.5	-2.1	0.0	0.0	0.0	0.0	-0.0	5.1	-88.(
107	18423421.38	5014447.85	130.39	0	4000	81.0	-88.0	0.0	0.0	70.9	32.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-20.0	-88.(
108	18423421.38	5014447.85	130.39	0	8000	76.0	-88.0	0.0	0.0	70.9	115.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-107.9	-88.(
109	18424148.78	5015443.60	124.90	0	32	46.9	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-28.4	-88.(
110	18424148.78	5015443.60	124.90	0	63	67.2	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-8.2	-88.(
111	18424148.78	5015443.60	124.90	0	125	74.9	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-6.7	-88.(

Line Source, ISO 9613, Name: "WTPF Outbound C&D Recyclable Trucks #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "WTPF_HR5_outCD																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A
112	18424148.78	5015443.60	124.90	0	250	85.9	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	3.2	-88.(
113	18424148.78	5015443.60	124.90	0	500	87.5	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	5.3	-88.(
114	18424148.78	5015443.60	124.90	0	1000	87.5	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.0	0.0	-0.0	2.2	-88.(
115	18424148.78	5015443.60	124.90	0	2000	87.6	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.2	0.0	-0.0	-8.6	-88.(
116	18424148.78	5015443.60	124.90	0	4000	85.3	-88.0	0.0	0.0	76.0	58.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-52.4	-88.(
117	18424148.78	5015443.60	124.90	0	8000	80.3	-88.0	0.0	0.0	76.0	207.9	-2.3	0.0	0.0	6.3	0.0	-0.0	-207.7	-88.(
118	18423814.25	5014097.69	132.28	0	32	43.9	-88.0	0.0	0.0	74.5	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-25.1	-88.(
119	18423814.25	5014097.69	132.28	0	63	64.2	-88.0	0.0	0.0	74.5	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-4.9	-88.(
120	18423814.25	5014097.69	132.28	0	125	71.9	-88.0	0.0	0.0	74.5	0.6	2.5	0.0	0.0	0.0	0.0	-0.0	-5.7	-88.(
121	18423814.25	5014097.69	132.28	0	250	82.9	-88.0	0.0	0.0	74.5	1.6	0.8	0.0	0.0	0.0	0.0	-0.0	6.1	-88.(
122	18423814.25	5014097.69	132.28	0	500	84.5	-88.0	0.0	0.0	74.5	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	9.3	-88.(
123	18423814.25	5014097.69	132.28	0	1000	84.5	-88.0	0.0	0.0	74.5	5.4	-2.3	0.0	0.0	0.0	0.0	-0.0	6.8	-88.(
124	18423814.25	5014097.69	132.28	0	2000	84.6	-88.0	0.0	0.0	74.5	14.4	-2.3	0.0	0.0	0.0	0.0	-0.0	-2.0	-88.(
125	18423814.25	5014097.69	132.28	0	4000	82.3	-88.0	0.0	0.0	74.5	48.7	-2.3	0.0	0.0	0.0	0.0	-0.0	-38.6	-88.(
126	18423814.25	5014097.69	132.28	0	8000	77.3	-88.0	0.0	0.0	74.5	173.8	-2.3	0.0	0.0	0.0	0.0	-0.0	-168.8	-88.(
127	18424181.29	5015463.31	122.69	0	32	44.7	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-30.7	-88.(
128	18424181.29	5015463.31	122.69	0	63	65.0	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-10.5	-88.(
129	18424181.29	5015463.31	122.69	0	125	72.7	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	-9.0	-88.(
130	18424181.29	5015463.31	122.69	0	250	83.7	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	0.8	-88.(
131	18424181.29	5015463.31	122.69	0	500	85.3	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	2.9	-88.(
132	18424181.29	5015463.31	122.69	0	1000	85.3	-88.0	0.0	0.0	76.2	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	-0.2	-88.(
133	18424181.29	5015463.31	122.69	0	2000	85.4	-88.0	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	5.0	0.0	-0.0	-11.1	-88.(
134	18424181.29	5015463.31	122.69	0	4000	83.1	-88.0	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	5.2	0.0	-0.0	-55.5	-88.(
135	18424181.29	5015463.31	122.69	0	8000	78.1	-88.0	0.0	0.0	76.2	212.3	-2.3	0.0	0.0	5.6	0.0	-0.0	-213.7	-88.(
136	18423810.79	5014078.39	132.52	0	32	38.7	-88.0	0.0	0.0	74.5	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-30.3	-88.(
137	18423810.79	5014078.39	132.52	0	63	59.0	-88.0	0.0	0.0	74.5	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-10.1	-88.(
138	18423810.79	5014078.39	132.52	0	125	66.7	-88.0	0.0	0.0	74.5	0.6	1.1	0.0	0.0	0.0	0.0	-0.0	-9.5	-88.(
139	18423810.79	5014078.39	132.52	0	250	77.7	-88.0	0.0	0.0	74.5	1.6	-0.6	0.0	0.0	0.0	0.0	-0.0	2.3	-88.(
140	18423810.79	5014078.39	132.52	0	500	79.3	-88.0	0.0	0.0	74.5	2.9	-2.6	0.0	0.0	0.0	0.0	-0.0	4.5	-88.(
141	18423810.79	5014078.39	132.52	0	1000	79.3	-88.0	0.0	0.0	74.5	5.5	-2.6	0.0	0.0	0.0	0.0	-0.0	2.0	-88.(
142	18423810.79	5014078.39	132.52	0	2000	79.4	-88.0	0.0	0.0	74.5	14.4	-2.6	0.0	0.0	0.0	0.0	-0.0	-6.9	-88.(
143	18423810.79	5014078.39	132.52	0	4000	77.1	-88.0	0.0	0.0	74.5	48.9	-2.6	0.0	0.0	0.0	0.0	-0.0	-43.7	-88.(
144	18423810.79	5014078.39	132.52	0	8000	72.1	-88.0	0.0	0.0	74.5	174.5	-2.6	0.0	0.0	0.0	0.0	-0.0	-174.3	-88.(
145	18423816.32	5014083.42	132.41	0	32	38.9	-88.0	0.0	0.0	74.5	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-30.1	-88.(
146	18423816.32	5014083.42	132.41	0	63	59.2	-88.0	0.0	0.0	74.5	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-9.9	-88.(
147	18423816.32	5014083.42	132.41	0	125	66.9	-88.0	0.0	0.0	74.5	0.6	1.5	0.0	0.0	0.0	0.0	-0.0	-9.7	-88.(
148	18423816.32	5014083.42	132.41	0	250	77.9	-88.0	0.0	0.0	74.5	1.6	-0.2	0.0	0.0	0.0	0.0	-0.0	2.0	-88.(
149	18423816.32	5014083.42	132.41	0	500	79.5	-88.0	0.0	0.0	74.5	2.9	-2.4	0.0	0.0	0.0	0.0	-0.0	4.6	-88.(
150	18423816.32	5014083.42	132.41	0	1000	79.5	-88.0	0.0	0.0	74.5	5.5	-2.5	0.0	0.0	0.0	0.0	-0.0	2.1	-88.(
151	18423816.32	5014083.42	132.41	0	2000	79.6	-88.0	0.0	0.0	74.5	14.5	-2.5	0.0	0.0	0.0	0.0	-0.0	-6.8	-88.(
152	18423816.32	5014083.42	132.41	0	4000	77.3	-88.0	0.0	0.0	74.5	49.0	-2.5	0.0	0.0	0.0	0.0	-0.0	-43.7	-88.(
153	18423816.32	5014083.42	132.41	0	8000	72.3	-88.0	0.0	0.0	74.5	174.8	-2.5	0.0	0.0	0.0	0.0	-0.0	-174.5	-88.(
154	18423820.68	5014087.39	132.32	0	32	36.3	-88.0	0.0	0.0	74.5	0.1	-5.5	0.0	0.0	0.0	0.0	-0.0	-32.7	-88.(
155	18423820.68	5014087.39	132.32	0	63	56.6	-88.0	0.0	0.0	74.5	0.2	-5.5	0.0	0.0	0.0	0.0	-0.0	-12.6	-88.(
156	18423820.68	5014087.39	132.32	0	125	64.3	-88.0	0.0	0.0	74.5	0.6	2.0	0.0	0.0	0.0	0.0	-0.0	-12.9	-88.(
157	18423820.68	5014087.39	132.32	0	250	75.3	-88.0	0.0	0.0	74.5	1.6	0.3	0.0	0.0	0.0	0.0	-0.0	-1.1	-88.(
158	18423820.68	5014087.39	132.32	0	500	76.9	-88.0	0.0	0.0	74.5	2.9	-2.3	0.0	0.0	0.0	0.0	-0.0	1.8	-88.(
159	18423820.68	5014087.39	132.32	0	1000	76.9	-88.0	0.0	0.0	74.5	5.5	-2.4	0.0	0.0	0.0	0.0	-0.0	-0.7	-88.(
160	18423820.68	5014087.39	132.32	0	2000	77.0	-88.0	0.0	0.0	74.5	14.5	-2.4	0.0	0.0	0.0	0.0	-0.0	-9.6	-88.(
161	18423820.68	5014087.39	132.32	0	4000	74.7	-88.0	0.0	0.0	74.5	49.1	-2.4	0.0	0.0	0.0	0.0	-0.0	-46.5	-88.(
162	18423820.68	5014087.39	132.32	0	8000	69.7	-88.0	0.0	0.0	74.5	175.1	-2.4	0.0	0.0	0.0	0.0	-0.0	-177.5	-88.(

Line Source, ISO 9613, Name: "Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "SS2_HR1_rfpv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423589.34	5014627.59	129.00	0	32	65.9	-88.0	0.0	0.0	71.9	0.0	-5.4	0.0	0.0	5.5	0.0	-0.0	-6.1	-88.0
2	18423589.34	5014627.59	129.00	0	63	81.7	-88.0	0.0	0.0	71.9	0.1	-5.4	0.0	0.0	6.6	0.0	-0.0	8.5	-88.0
3	18423589.34	5014627.59	129.00	0	125	96.3	-88.0	0.0	0.0	71.9	0.5	2.7	0.0	0.0	5.5	0.0	-0.0	15.9	-88.0
4	18423589.34	5014627.59	129.00	0	250	95.7	-88.0	0.0	0.0	71.9	1.2	1.0	0.0	0.0	9.2	0.0	-0.0	12.6	-88.0
5	18423589.34	5014627.59	129.00	0	500	103.0	-88.0	0.0	0.0	71.9	2.1	-2.0	0.0	0.0	12.5	0.0	-0.0	18.5	-88.0
6	18423589.34	5014627.59	129.00	0	1000	107.8	-88.0	0.0	0.0	71.9	4.0	-2.1	0.0	0.0	15.2	0.0	-0.0	18.9	-88.0
7	18423589.34	5014627.59	129.00	0	2000	104.8	-88.0	0.0	0.0	71.9	10.7	-2.2	0.0	0.0	18.0	0.0	-0.0	6.5	-88.0
8	18423589.34	5014627.59	129.00	0	4000	100.0	-88.0	0.0	0.0	71.9	36.2	-2.2	0.0	0.0	20.9	0.0	-0.0	-26.8	-88.0

Line Source, ISO 9613, Name: "Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "SS2_HR1_rfpv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
9	18423589.34	5014627.59	129.00	0	8000	89.6	-88.0	0.0	0.0	71.9	129.1	-2.2	0.0	0.0	23.9	0.0	-0.0	-133.1	-88.0
10	18423317.63	5014603.74	129.88	0	32	62.2	-88.0	0.0	0.0	69.5	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-2.1	-88.0
11	18423317.63	5014603.74	129.88	0	63	78.0	-88.0	0.0	0.0	69.5	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	13.6	-88.0
12	18423317.63	5014603.74	129.88	0	125	92.6	-88.0	0.0	0.0	69.5	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	20.2	-88.0
13	18423317.63	5014603.74	129.88	0	250	92.0	-88.0	0.0	0.0	69.5	0.9	1.1	0.0	0.0	0.0	0.0	-0.0	20.6	-88.0
14	18423317.63	5014603.74	129.88	0	500	99.3	-88.0	0.0	0.0	69.5	1.6	-1.9	0.0	0.0	0.0	0.0	-0.0	30.1	-88.0
15	18423317.63	5014603.74	129.88	0	1000	104.1	-88.0	0.0	0.0	69.5	3.1	-2.1	0.0	0.0	0.0	0.0	-0.0	33.6	-88.0
16	18423317.63	5014603.74	129.88	0	2000	101.1	-88.0	0.0	0.0	69.5	8.1	-2.1	0.0	0.0	0.0	0.0	-0.0	25.6	-88.0
17	18423317.63	5014603.74	129.88	0	4000	96.3	-88.0	0.0	0.0	69.5	27.6	-2.1	0.0	0.0	0.0	0.0	-0.0	1.3	-88.0
18	18423317.63	5014603.74	129.88	0	8000	85.9	-88.0	0.0	0.0	69.5	98.4	-2.1	0.0	0.0	0.0	0.0	-0.0	-79.9	-88.0
19	18423691.53	5014717.64	129.00	0	32	65.1	-88.0	0.0	0.0	72.6	0.0	-5.4	0.0	0.0	5.4	0.0	-0.0	-7.5	-88.0
20	18423691.53	5014717.64	129.00	0	63	80.9	-88.0	0.0	0.0	72.6	0.2	-5.4	0.0	0.0	6.3	0.0	-0.0	7.3	-88.0
21	18423691.53	5014717.64	129.00	0	125	95.5	-88.0	0.0	0.0	72.6	0.5	2.7	0.0	0.0	5.0	0.0	-0.0	14.7	-88.0
22	18423691.53	5014717.64	129.00	0	250	94.9	-88.0	0.0	0.0	72.6	1.3	1.0	0.0	0.0	8.7	0.0	-0.0	11.4	-88.0
23	18423691.53	5014717.64	129.00	0	500	102.2	-88.0	0.0	0.0	72.6	2.3	-2.0	0.0	0.0	12.0	0.0	-0.0	17.4	-88.0
24	18423691.53	5014717.64	129.00	0	1000	107.0	-88.0	0.0	0.0	72.6	4.4	-2.2	0.0	0.0	14.6	0.0	-0.0	17.7	-88.0
25	18423691.53	5014717.64	129.00	0	2000	104.0	-88.0	0.0	0.0	72.6	11.6	-2.2	0.0	0.0	17.3	0.0	-0.0	4.7	-88.0
26	18423691.53	5014717.64	129.00	0	4000	99.2	-88.0	0.0	0.0	72.6	39.2	-2.2	0.0	0.0	20.2	0.0	-0.0	-30.7	-88.0
27	18423691.53	5014717.64	129.00	0	8000	88.8	-88.0	0.0	0.0	72.6	140.0	-2.2	0.0	0.0	23.2	0.0	-0.0	-144.8	-88.0
28	18423790.35	5014804.63	129.95	0	32	65.7	-88.0	0.0	0.0	73.2	0.0	-5.5	0.0	0.0	5.0	0.0	-0.0	-7.1	-88.0
29	18423790.35	5014804.63	129.95	0	63	81.5	-88.0	0.0	0.0	73.2	0.2	-5.5	0.0	0.0	5.2	0.0	-0.0	8.4	-88.0
30	18423790.35	5014804.63	129.95	0	125	96.1	-88.0	0.0	0.0	73.2	0.5	2.7	0.0	0.0	2.9	0.0	-0.0	16.7	-88.0
31	18423790.35	5014804.63	129.95	0	250	95.5	-88.0	0.0	0.0	73.2	1.4	0.9	0.0	0.0	5.4	0.0	-0.0	14.6	-88.0
32	18423790.35	5014804.63	129.95	0	500	102.8	-88.0	0.0	0.0	73.2	2.5	-2.1	0.0	0.0	7.5	0.0	-0.0	21.6	-88.0
33	18423790.35	5014804.63	129.95	0	1000	107.6	-88.0	0.0	0.0	73.2	4.7	-2.2	0.0	0.0	9.1	0.0	-0.0	22.7	-88.0
34	18423790.35	5014804.63	129.95	0	2000	104.6	-88.0	0.0	0.0	73.2	12.5	-2.2	0.0	0.0	11.2	0.0	-0.0	9.8	-88.0
35	18423790.35	5014804.63	129.95	0	4000	99.8	-88.0	0.0	0.0	73.2	42.4	-2.2	0.0	0.0	13.7	0.0	-0.0	-27.4	-88.0
36	18423790.35	5014804.63	129.95	0	8000	89.4	-88.0	0.0	0.0	73.2	151.3	-2.2	0.0	0.0	16.4	0.0	-0.0	-149.4	-88.0
37	18423359.47	5014556.27	129.85	0	32	62.2	-88.0	0.0	0.0	70.0	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-2.6	-88.0
38	18423359.47	5014556.27	129.85	0	63	78.0	-88.0	0.0	0.0	70.0	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	13.1	-88.0
39	18423359.47	5014556.27	129.85	0	125	92.6	-88.0	0.0	0.0	70.0	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	19.6	-88.0
40	18423359.47	5014556.27	129.85	0	250	92.0	-88.0	0.0	0.0	70.0	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	20.0	-88.0
41	18423359.47	5014556.27	129.85	0	500	99.3	-88.0	0.0	0.0	70.0	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	29.5	-88.0
42	18423359.47	5014556.27	129.85	0	1000	104.1	-88.0	0.0	0.0	70.0	3.3	-2.1	0.0	0.0	0.0	0.0	-0.0	32.9	-88.0
43	18423359.47	5014556.27	129.85	0	2000	101.1	-88.0	0.0	0.0	70.0	8.6	-2.1	0.0	0.0	0.0	0.0	-0.0	24.5	-88.0
44	18423359.47	5014556.27	129.85	0	4000	96.3	-88.0	0.0	0.0	70.0	29.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-0.9	-88.0
45	18423359.47	5014556.27	129.85	0	8000	85.9	-88.0	0.0	0.0	70.0	104.4	-2.1	0.0	0.0	0.0	0.0	-0.0	-86.5	-88.0
46	18423280.13	5014646.41	129.92	0	32	61.2	-88.0	0.0	0.0	69.0	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-2.7	-88.0
47	18423280.13	5014646.41	129.92	0	63	77.0	-88.0	0.0	0.0	69.0	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	13.0	-88.0
48	18423280.13	5014646.41	129.92	0	125	91.6	-88.0	0.0	0.0	69.0	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	19.7	-88.0
49	18423280.13	5014646.41	129.92	0	250	91.0	-88.0	0.0	0.0	69.0	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	20.1	-88.0
50	18423280.13	5014646.41	129.92	0	500	98.3	-88.0	0.0	0.0	69.0	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	29.7	-88.0
51	18423280.13	5014646.41	129.92	0	1000	103.1	-88.0	0.0	0.0	69.0	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	33.2	-88.0
52	18423280.13	5014646.41	129.92	0	2000	100.1	-88.0	0.0	0.0	69.0	7.7	-2.1	0.0	0.0	0.0	0.0	-0.0	25.4	-88.0
53	18423280.13	5014646.41	129.92	0	4000	95.3	-88.0	0.0	0.0	69.0	26.1	-2.1	0.0	0.0	0.0	0.0	-0.0	2.2	-88.0
54	18423280.13	5014646.41	129.92	0	8000	84.9	-88.0	0.0	0.0	69.0	93.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-75.2	-88.0
55	18423402.85	5014507.32	129.92	0	32	62.5	-88.0	0.0	0.0	70.5	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-2.8	-88.0
56	18423402.85	5014507.32	129.92	0	63	78.3	-88.0	0.0	0.0	70.5	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	12.9	-88.0
57	18423402.85	5014507.32	129.92	0	125	92.9	-88.0	0.0	0.0	70.5	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	19.3	-88.0
58	18423402.85	5014507.32	129.92	0	250	92.3	-88.0	0.0	0.0	70.5	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	19.8	-88.0
59	18423402.85	5014507.32	129.92	0	500	99.6	-88.0	0.0	0.0	70.5	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	29.2	-88.0
60	18423402.85	5014507.32	129.92	0	1000	104.4	-88.0	0.0	0.0	70.5	3.5	-2.1	0.0	0.0	0.0	0.0	-0.0	32.5	-88.0
61	18423402.85	5014507.32	129.92	0	2000	101.4	-88.0	0.0	0.0	70.5	9.2	-2.1	0.0	0.0	0.0	0.0	-0.0	23.8	-88.0
62	18423402.85	5014507.32	129.92	0	4000	96.6	-88.0	0.0	0.0	70.5	31.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-2.9	-88.0
63	18423402.85	5014507.32	129.92	0	8000	86.2	-88.0	0.0	0.0	70.5	110.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-93.1	-88.0
64	18423503.16	5014551.40	129.74	0	32	63.2	-88.0	0.0	0.0	71.3	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-2.7	-88.0
65	18423503.16	5014551.40	129.74	0	63	79.0	-88.0	0.0	0.0	71.3	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	13.0	-88.0
66	18423503.16	5014551.40	129.74	0	125	93.6	-88.0	0.0	0.0	71.3	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	19.2	-88.0
67	18423503.16	5014551.40	129.74	0	250	93.0	-88.0	0.0	0.0	71.3	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	19.7	-88.0
68	18423503.16	5014551.40	129.74	0	500	100.3	-88.0	0.0	0.0	71.3	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	29.1	-88.0
69	18423503.16	5014551.40	129.74	0	1000	105.1	-88.0	0.0	0.0	71.3	3.8	-2.1	0.0	0.0	0.0	0.0	-0.0	32.2	-88.0
70	18423503.16	5014551.40	129.74	0	2000	102.1	-88.0	0.0	0.0	71.3	10.0	-2.1	0.0	0.0	0.0	0.0	-0.0	23.0	-88.0
71	18423503.16	5014551.40	129.74	0	4000	97.3	-88.0	0.0	0.0	71.3	33.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-5.7	-88.0

Line Source, ISO 9613, Name: "Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "SS2_HR1_rfpv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
72	18423503.16	5014551.40	129.74	0	8000	86.9	-88.0	0.0	0.0	71.3	120.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-103.1	-88.0
73	18423893.68	5014895.43	130.63	0	32	65.5	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	4.8	0.0	-0.0	-7.8	-88.0
74	18423893.68	5014895.43	130.63	0	63	81.3	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	4.9	0.0	-0.0	7.8	-88.0
75	18423893.68	5014895.43	130.63	0	125	95.9	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	2.3	0.0	-0.0	16.4	-88.0
76	18423893.68	5014895.43	130.63	0	250	95.3	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	4.3	0.0	-0.0	14.7	-88.0
77	18423893.68	5014895.43	130.63	0	500	102.6	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	5.6	0.0	-0.0	22.4	-88.0
78	18423893.68	5014895.43	130.63	0	1000	107.4	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	6.3	0.0	-0.0	24.2	-88.0
79	18423893.68	5014895.43	130.63	0	2000	104.4	-88.0	0.0	0.0	73.9	13.6	-2.2	0.0	0.0	7.4	0.0	-0.0	11.7	-88.0
80	18423893.68	5014895.43	130.63	0	4000	99.6	-88.0	0.0	0.0	73.9	45.9	-2.2	0.0	0.0	9.1	0.0	-0.0	-27.2	-88.0
81	18423893.68	5014895.43	130.63	0	8000	89.2	-88.0	0.0	0.0	73.9	163.9	-2.2	0.0	0.0	11.2	0.0	-0.0	-157.6	-88.0
82	18423449.28	5014503.31	130.24	0	32	62.2	-88.0	0.0	0.0	71.0	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-3.4	-88.0
83	18423449.28	5014503.31	130.24	0	63	78.0	-88.0	0.0	0.0	71.0	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	12.3	-88.0
84	18423449.28	5014503.31	130.24	0	125	92.6	-88.0	0.0	0.0	71.0	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	18.6	-88.0
85	18423449.28	5014503.31	130.24	0	250	92.0	-88.0	0.0	0.0	71.0	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	19.1	-88.0
86	18423449.28	5014503.31	130.24	0	500	99.3	-88.0	0.0	0.0	71.0	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	28.5	-88.0
87	18423449.28	5014503.31	130.24	0	1000	104.1	-88.0	0.0	0.0	71.0	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	31.7	-88.0
88	18423449.28	5014503.31	130.24	0	2000	101.1	-88.0	0.0	0.0	71.0	9.6	-2.1	0.0	0.0	0.0	0.0	-0.0	22.7	-88.0
89	18423449.28	5014503.31	130.24	0	4000	96.3	-88.0	0.0	0.0	71.0	32.6	-2.1	0.0	0.0	0.0	0.0	-0.0	-5.1	-88.0
90	18423449.28	5014503.31	130.24	0	8000	85.9	-88.0	0.0	0.0	71.0	116.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-99.1	-88.0
91	18423368.04	5014913.67	143.00	0	32	61.3	-88.0	0.0	0.0	69.9	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-3.4	-88.0
92	18423368.04	5014913.67	143.00	0	63	77.1	-88.0	0.0	0.0	69.9	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	12.3	-88.0
93	18423368.04	5014913.67	143.00	0	125	91.7	-88.0	0.0	0.0	69.9	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	18.8	-88.0
94	18423368.04	5014913.67	143.00	0	250	91.1	-88.0	0.0	0.0	69.9	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	19.2	-88.0
95	18423368.04	5014913.67	143.00	0	500	98.4	-88.0	0.0	0.0	69.9	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	28.7	-88.0
96	18423368.04	5014913.67	143.00	0	1000	103.2	-88.0	0.0	0.0	69.9	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	32.1	-88.0
97	18423368.04	5014913.67	143.00	0	2000	100.2	-88.0	0.0	0.0	69.9	8.5	-2.1	0.0	0.0	0.0	0.0	-0.0	23.8	-88.0
98	18423368.04	5014913.67	143.00	0	4000	95.4	-88.0	0.0	0.0	69.9	28.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-1.3	-88.0
99	18423368.04	5014913.67	143.00	0	8000	85.0	-88.0	0.0	0.0	69.9	103.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-85.9	-88.0
100	18423404.99	5014791.09	143.00	0	32	61.1	-88.0	0.0	0.0	70.2	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-3.8	-88.0
101	18423404.99	5014791.09	143.00	0	63	76.9	-88.0	0.0	0.0	70.2	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	11.9	-88.0
102	18423404.99	5014791.09	143.00	0	125	91.5	-88.0	0.0	0.0	70.2	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	18.3	-88.0
103	18423404.99	5014791.09	143.00	0	250	90.9	-88.0	0.0	0.0	70.2	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	18.8	-88.0
104	18423404.99	5014791.09	143.00	0	500	98.2	-88.0	0.0	0.0	70.2	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	28.3	-88.0
105	18423404.99	5014791.09	143.00	0	1000	103.0	-88.0	0.0	0.0	70.2	3.3	-2.1	0.0	0.0	0.0	0.0	-0.0	31.6	-88.0
106	18423404.99	5014791.09	143.00	0	2000	100.0	-88.0	0.0	0.0	70.2	8.8	-2.1	0.0	0.0	0.0	0.0	-0.0	23.2	-88.0
107	18423404.99	5014791.09	143.00	0	4000	95.2	-88.0	0.0	0.0	70.2	29.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-2.7	-88.0
108	18423404.99	5014791.09	143.00	0	8000	84.8	-88.0	0.0	0.0	70.2	106.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-89.5	-88.0
109	18423412.00	5014829.79	143.00	0	32	61.2	-88.0	0.0	0.0	70.3	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-3.8	-88.0
110	18423412.00	5014829.79	143.00	0	63	77.0	-88.0	0.0	0.0	70.3	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	11.9	-88.0
111	18423412.00	5014829.79	143.00	0	125	91.6	-88.0	0.0	0.0	70.3	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	18.4	-88.0
112	18423412.00	5014829.79	143.00	0	250	91.0	-88.0	0.0	0.0	70.3	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	18.8	-88.0
113	18423412.00	5014829.79	143.00	0	500	98.3	-88.0	0.0	0.0	70.3	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	28.3	-88.0
114	18423412.00	5014829.79	143.00	0	1000	103.1	-88.0	0.0	0.0	70.3	3.3	-2.1	0.0	0.0	0.0	0.0	-0.0	31.6	-88.0
115	18423412.00	5014829.79	143.00	0	2000	100.1	-88.0	0.0	0.0	70.3	8.9	-2.1	0.0	0.0	0.0	0.0	-0.0	23.1	-88.0
116	18423412.00	5014829.79	143.00	0	4000	95.3	-88.0	0.0	0.0	70.3	30.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-2.9	-88.0
117	18423412.00	5014829.79	143.00	0	8000	84.9	-88.0	0.0	0.0	70.3	107.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-90.4	-88.0
118	18423390.30	5014871.76	143.00	0	32	60.6	-88.0	0.0	0.0	70.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-4.2	-88.0
119	18423390.30	5014871.76	143.00	0	63	76.4	-88.0	0.0	0.0	70.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	11.5	-88.0
120	18423390.30	5014871.76	143.00	0	125	91.0	-88.0	0.0	0.0	70.1	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	18.0	-88.0
121	18423390.30	5014871.76	143.00	0	250	90.4	-88.0	0.0	0.0	70.1	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	18.4	-88.0
122	18423390.30	5014871.76	143.00	0	500	97.7	-88.0	0.0	0.0	70.1	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	27.9	-88.0
123	18423390.30	5014871.76	143.00	0	1000	102.5	-88.0	0.0	0.0	70.1	3.3	-2.1	0.0	0.0	0.0	0.0	-0.0	31.3	-88.0
124	18423390.30	5014871.76	143.00	0	2000	99.5	-88.0	0.0	0.0	70.1	8.7	-2.1	0.0	0.0	0.0	0.0	-0.0	22.9	-88.0
125	18423390.30	5014871.76	143.00	0	4000	94.7	-88.0	0.0	0.0	70.1	29.4	-2.1	0.0	0.0	0.0	0.0	-0.0	-2.7	-88.0
126	18423390.30	5014871.76	143.00	0	8000	84.3	-88.0	0.0	0.0	70.1	105.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-88.7	-88.0
127	18423294.15	5014691.77	130.00	0	32	59.5	-88.0	0.0	0.0	69.1	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-4.4	-88.0
128	18423294.15	5014691.77	130.00	0	63	75.3	-88.0	0.0	0.0	69.1	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	11.3	-88.0
129	18423294.15	5014691.77	130.00	0	125	89.9	-88.0	0.0	0.0	69.1	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	18.0	-88.0
130	18423294.15	5014691.77	130.00	0	250	89.3	-88.0	0.0	0.0	69.1	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	18.3	-88.0
131	18423294.15	5014691.77	130.00	0	500	96.6	-88.0	0.0	0.0	69.1	1.6	-1.9	0.0	0.0	0.0	0.0	-0.0	27.9	-88.0
132	18423294.15	5014691.77	130.00	0	1000	101.4	-88.0	0.0	0.0	69.1	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	31.5	-88.0
133	18423294.15	5014691.77	130.00	0	2000	98.4	-88.0	0.0	0.0	69.1	7.8	-2.1	0.0	0.0	0.0	0.0	-0.0	23.6	-88.0
134	18423294.15	5014691.77	130.00	0	4000	93.6	-88.0	0.0	0.0	69.1	26.3	-2.1	0.0	0.0	0.0	0.0	-0.0	0.3	-88.0

Line Source, ISO 9613, Name: "Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "SS2_HR1_rfpv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
135	18423294.15	5014691.77	130.00	0	8000	83.2	-88.0	0.0	0.0	69.1	93.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-77.7	-88.0
136	18424044.14	5015028.29	131.15	0	32	65.0	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-9.2	-88.0
137	18424044.14	5015028.29	131.15	0	63	80.8	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	6.5	-88.0
138	18424044.14	5015028.29	131.15	0	125	95.4	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.2	0.0	-0.0	15.0	-88.0
139	18424044.14	5015028.29	131.15	0	250	94.8	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.2	0.0	-0.0	13.2	-88.0
140	18424044.14	5015028.29	131.15	0	500	102.1	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	5.3	0.0	-0.0	21.0	-88.0
141	18424044.14	5015028.29	131.15	0	1000	106.9	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	5.9	0.0	-0.0	22.7	-88.0
142	18424044.14	5015028.29	131.15	0	2000	103.9	-88.0	0.0	0.0	74.9	15.1	-2.2	0.0	0.0	6.7	0.0	-0.0	9.4	-88.0
143	18424044.14	5015028.29	131.15	0	4000	99.1	-88.0	0.0	0.0	74.9	51.3	-2.2	0.0	0.0	8.1	0.0	-0.0	-32.9	-88.0
144	18424044.14	5015028.29	131.15	0	8000	88.7	-88.0	0.0	0.0	74.9	183.1	-2.2	0.0	0.0	9.9	0.0	-0.0	-177.0	-88.0
145	18424004.60	5015329.69	131.01	0	32	59.7	-88.0	0.0	0.0	75.1	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-14.7	-88.0
146	18424004.60	5015329.69	131.01	0	63	75.5	-88.0	0.0	0.0	75.1	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	1.0	-88.0
147	18424004.60	5015329.69	131.01	0	125	90.1	-88.0	0.0	0.0	75.1	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	9.6	-88.0
148	18424004.60	5015329.69	131.01	0	250	89.5	-88.0	0.0	0.0	75.1	1.7	0.9	0.0	0.0	3.9	0.0	-0.0	7.9	-88.0
149	18424004.60	5015329.69	131.01	0	500	96.8	-88.0	0.0	0.0	75.1	3.1	-2.1	0.0	0.0	4.8	0.0	-0.0	15.9	-88.0
150	18424004.60	5015329.69	131.01	0	1000	101.6	-88.0	0.0	0.0	75.1	5.9	-2.2	0.0	0.0	4.8	0.0	-0.0	18.1	-88.0
151	18424004.60	5015329.69	131.01	0	2000	98.6	-88.0	0.0	0.0	75.1	15.5	-2.2	0.0	0.0	4.8	0.0	-0.0	5.4	-88.0
152	18424004.60	5015329.69	131.01	0	4000	93.8	-88.0	0.0	0.0	75.1	52.5	-2.2	0.0	0.0	4.9	0.0	-0.0	-36.5	-88.0
153	18424004.60	5015329.69	131.01	0	8000	83.4	-88.0	0.0	0.0	75.1	187.4	-2.2	0.0	0.0	5.0	0.0	-0.0	-181.9	-88.0
154	18424046.46	5015367.67	130.63	0	32	63.1	-88.0	0.0	0.0	75.4	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-11.5	-88.0
155	18424046.46	5015367.67	130.63	0	63	78.9	-88.0	0.0	0.0	75.4	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	4.1	-88.0
156	18424046.46	5015367.67	130.63	0	125	93.5	-88.0	0.0	0.0	75.4	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	12.7	-88.0
157	18424046.46	5015367.67	130.63	0	250	92.9	-88.0	0.0	0.0	75.4	1.7	0.9	0.0	0.0	3.9	0.0	-0.0	11.0	-88.0
158	18424046.46	5015367.67	130.63	0	500	100.2	-88.0	0.0	0.0	75.4	3.2	-2.1	0.0	0.0	4.8	0.0	-0.0	18.9	-88.0
159	18424046.46	5015367.67	130.63	0	1000	105.0	-88.0	0.0	0.0	75.4	6.1	-2.2	0.0	0.0	4.8	0.0	-0.0	21.0	-88.0
160	18424046.46	5015367.67	130.63	0	2000	102.0	-88.0	0.0	0.0	75.4	16.0	-2.2	0.0	0.0	4.8	0.0	-0.0	8.1	-88.0
161	18424046.46	5015367.67	130.63	0	4000	97.2	-88.0	0.0	0.0	75.4	54.3	-2.2	0.0	0.0	4.8	0.0	-0.0	-35.0	-88.0
162	18424046.46	5015367.67	130.63	0	8000	86.8	-88.0	0.0	0.0	75.4	193.5	-2.2	0.0	0.0	4.8	0.0	-0.0	-184.7	-88.0
163	18423957.56	5015287.37	130.62	0	32	63.8	-88.0	0.0	0.0	74.8	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-10.3	-88.0
164	18423957.56	5015287.37	130.62	0	63	79.6	-88.0	0.0	0.0	74.8	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	5.4	-88.0
165	18423957.56	5015287.37	130.62	0	125	94.2	-88.0	0.0	0.0	74.8	0.6	2.7	0.0	0.0	2.1	0.0	-0.0	13.9	-88.0
166	18423957.56	5015287.37	130.62	0	250	93.6	-88.0	0.0	0.0	74.8	1.6	0.9	0.0	0.0	4.0	0.0	-0.0	12.3	-88.0
167	18423957.56	5015287.37	130.62	0	500	100.9	-88.0	0.0	0.0	74.8	3.0	-2.1	0.0	0.0	5.1	0.0	-0.0	20.1	-88.0
168	18423957.56	5015287.37	130.62	0	1000	105.7	-88.0	0.0	0.0	74.8	5.6	-2.2	0.0	0.0	5.3	0.0	-0.0	22.1	-88.0
169	18423957.56	5015287.37	130.62	0	2000	102.7	-88.0	0.0	0.0	74.8	14.9	-2.2	0.0	0.0	5.9	0.0	-0.0	9.3	-88.0
170	18423957.56	5015287.37	130.62	0	4000	97.9	-88.0	0.0	0.0	74.8	50.6	-2.2	0.0	0.0	6.7	0.0	-0.0	-32.0	-88.0
171	18423957.56	5015287.37	130.62	0	8000	87.5	-88.0	0.0	0.0	74.8	180.6	-2.2	0.0	0.0	8.1	0.0	-0.0	-173.7	-88.0
172	18423316.70	5014712.35	130.00	0	32	58.5	-88.0	0.0	0.0	69.3	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-5.7	-88.0
173	18423316.70	5014712.35	130.00	0	63	74.3	-88.0	0.0	0.0	69.3	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	10.0	-88.0
174	18423316.70	5014712.35	130.00	0	125	88.9	-88.0	0.0	0.0	69.3	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	16.6	-88.0
175	18423316.70	5014712.35	130.00	0	250	88.3	-88.0	0.0	0.0	69.3	0.9	1.1	0.0	0.0	0.0	0.0	-0.0	17.0	-88.0
176	18423316.70	5014712.35	130.00	0	500	95.6	-88.0	0.0	0.0	69.3	1.6	-1.9	0.0	0.0	0.0	0.0	-0.0	26.6	-88.0
177	18423316.70	5014712.35	130.00	0	1000	100.4	-88.0	0.0	0.0	69.3	3.0	-2.1	0.0	0.0	0.0	0.0	-0.0	30.1	-88.0
178	18423316.70	5014712.35	130.00	0	2000	97.4	-88.0	0.0	0.0	69.3	8.0	-2.1	0.0	0.0	0.0	0.0	-0.0	22.1	-88.0
179	18423316.70	5014712.35	130.00	0	4000	92.6	-88.0	0.0	0.0	69.3	27.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-1.7	-88.0
180	18423316.70	5014712.35	130.00	0	8000	82.2	-88.0	0.0	0.0	69.3	96.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-81.4	-88.0
181	18423272.49	5014672.77	129.97	0	32	57.9	-88.0	0.0	0.0	68.9	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-5.9	-88.0
182	18423272.49	5014672.77	129.97	0	63	73.7	-88.0	0.0	0.0	68.9	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	9.8	-88.0
183	18423272.49	5014672.77	129.97	0	125	88.3	-88.0	0.0	0.0	68.9	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	16.5	-88.0
184	18423272.49	5014672.77	129.97	0	250	87.7	-88.0	0.0	0.0	68.9	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	16.9	-88.0
185	18423272.49	5014672.77	129.97	0	500	95.0	-88.0	0.0	0.0	68.9	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	26.5	-88.0
186	18423272.49	5014672.77	129.97	0	1000	99.8	-88.0	0.0	0.0	68.9	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	30.0	-88.0
187	18423272.49	5014672.77	129.97	0	2000	96.8	-88.0	0.0	0.0	68.9	7.6	-2.1	0.0	0.0	0.0	0.0	-0.0	22.3	-88.0
188	18423272.49	5014672.77	129.97	0	4000	92.0	-88.0	0.0	0.0	68.9	25.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-0.6	-88.0
189	18423272.49	5014672.77	129.97	0	8000	81.6	-88.0	0.0	0.0	68.9	91.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-77.0	-88.0
190	18423336.54	5014730.17	130.00	0	32	58.4	-88.0	0.0	0.0	69.5	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-5.9	-88.0
191	18423336.54	5014730.17	130.00	0	63	74.2	-88.0	0.0	0.0	69.5	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	9.8	-88.0
192	18423336.54	5014730.17	130.00	0	125	88.8	-88.0	0.0	0.0	69.5	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	16.4	-88.0
193	18423336.54	5014730.17	130.00	0	250	88.2	-88.0	0.0	0.0	69.5	0.9	1.1	0.0	0.0	0.0	0.0	-0.0	16.8	-88.0
194	18423336.54	5014730.17	130.00	0	500	95.5	-88.0	0.0	0.0	69.5	1.6	-1.9	0.0	0.0	0.0	0.0	-0.0	26.4	-88.0
195	18423336.54	5014730.17	130.00	0	1000	100.3	-88.0	0.0	0.0	69.5	3.1	-2.1	0.0	0.0	0.0	0.0	-0.0	29.8	-88.0
196	18423336.54	5014730.17	130.00	0	2000	97.3	-88.0	0.0	0.0	69.5	8.1	-2.1	0.0	0.0	0.0	0.0	-0.0	21.8	-88.0
197	18423336.54	5014730.17	130.00	0	4000	92.5	-88.0	0.0	0.0	69.5	27.6	-2.1	0.0	0.0	0.0	0.0	-0.0	-2.5	-88.0

Line Source, ISO 9613, Name: "Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "SS2_HR1_rfpv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
198	18423336.54	5014730.17	130.00	0	8000	82.1	-88.0	0.0	0.0	69.5	98.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-83.8	-88.0
199	18424033.53	5015127.43	130.50	0	32	63.7	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	5.0	0.0	-0.0	-10.7	-88.0
200	18424033.53	5015127.43	130.50	0	63	79.5	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	5.3	0.0	-0.0	4.7	-88.0
201	18424033.53	5015127.43	130.50	0	125	94.1	-88.0	0.0	0.0	74.9	0.7	2.7	0.0	0.0	3.0	0.0	-0.0	12.8	-88.0
202	18424033.53	5015127.43	130.50	0	250	93.5	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	5.6	0.0	-0.0	10.5	-88.0
203	18424033.53	5015127.43	130.50	0	500	100.8	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	7.7	0.0	-0.0	17.2	-88.0
204	18424033.53	5015127.43	130.50	0	1000	105.6	-88.0	0.0	0.0	74.9	5.8	-2.2	0.0	0.0	9.5	0.0	-0.0	17.7	-88.0
205	18424033.53	5015127.43	130.50	0	2000	102.6	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	11.7	0.0	-0.0	3.0	-88.0
206	18424033.53	5015127.43	130.50	0	4000	97.8	-88.0	0.0	0.0	74.9	51.6	-2.2	0.0	0.0	14.2	0.0	-0.0	-40.7	-88.0
207	18424033.53	5015127.43	130.50	0	8000	87.4	-88.0	0.0	0.0	74.9	184.1	-2.2	0.0	0.0	17.0	0.0	-0.0	-186.3	-88.0
208	18423971.39	5014963.93	130.43	0	32	62.8	-88.0	0.0	0.0	74.4	0.1	-5.5	0.0	0.0	4.8	0.0	-0.0	-11.0	-88.0
209	18423971.39	5014963.93	130.43	0	63	78.6	-88.0	0.0	0.0	74.4	0.2	-5.5	0.0	0.0	4.8	0.0	-0.0	4.7	-88.0
210	18423971.39	5014963.93	130.43	0	125	93.2	-88.0	0.0	0.0	74.4	0.6	2.7	0.0	0.0	2.2	0.0	-0.0	13.2	-88.0
211	18423971.39	5014963.93	130.43	0	250	92.6	-88.0	0.0	0.0	74.4	1.6	0.9	0.0	0.0	4.2	0.0	-0.0	11.5	-88.0
212	18423971.39	5014963.93	130.43	0	500	99.9	-88.0	0.0	0.0	74.4	2.9	-2.1	0.0	0.0	5.4	0.0	-0.0	19.3	-88.0
213	18423971.39	5014963.93	130.43	0	1000	104.7	-88.0	0.0	0.0	74.4	5.4	-2.2	0.0	0.0	5.9	0.0	-0.0	21.1	-88.0
214	18423971.39	5014963.93	130.43	0	2000	101.7	-88.0	0.0	0.0	74.4	14.4	-2.2	0.0	0.0	6.8	0.0	-0.0	8.3	-88.0
215	18423971.39	5014963.93	130.43	0	4000	96.9	-88.0	0.0	0.0	74.4	48.7	-2.2	0.0	0.0	8.2	0.0	-0.0	-32.2	-88.0
216	18423971.39	5014963.93	130.43	0	8000	86.5	-88.0	0.0	0.0	74.4	173.7	-2.2	0.0	0.0	10.0	0.0	-0.0	-169.5	-88.0
217	18423942.67	5015232.23	130.08	0	32	62.1	-88.0	0.0	0.0	74.6	0.1	-5.5	0.0	0.0	4.9	0.0	-0.0	-11.9	-88.0
218	18423942.67	5015232.23	130.08	0	63	77.9	-88.0	0.0	0.0	74.6	0.2	-5.5	0.0	0.0	5.1	0.0	-0.0	3.5	-88.0
219	18423942.67	5015232.23	130.08	0	125	92.5	-88.0	0.0	0.0	74.6	0.6	2.7	0.0	0.0	2.8	0.0	-0.0	11.8	-88.0
220	18423942.67	5015232.23	130.08	0	250	91.9	-88.0	0.0	0.0	74.6	1.6	0.9	0.0	0.0	5.3	0.0	-0.0	9.5	-88.0
221	18423942.67	5015232.23	130.08	0	500	99.2	-88.0	0.0	0.0	74.6	2.9	-2.1	0.0	0.0	7.4	0.0	-0.0	16.4	-88.0
222	18423942.67	5015232.23	130.08	0	1000	104.0	-88.0	0.0	0.0	74.6	5.5	-2.2	0.0	0.0	9.0	0.0	-0.0	17.2	-88.0
223	18423942.67	5015232.23	130.08	0	2000	101.0	-88.0	0.0	0.0	74.6	14.6	-2.2	0.0	0.0	11.1	0.0	-0.0	3.0	-88.0
224	18423942.67	5015232.23	130.08	0	4000	96.2	-88.0	0.0	0.0	74.6	49.6	-2.2	0.0	0.0	13.5	0.0	-0.0	-39.3	-88.0
225	18423942.67	5015232.23	130.08	0	8000	85.8	-88.0	0.0	0.0	74.6	176.9	-2.2	0.0	0.0	16.3	0.0	-0.0	-179.7	-88.0
226	18423981.85	5015183.54	130.05	0	32	62.2	-88.0	0.0	0.0	74.7	0.1	-5.6	0.0	0.0	5.0	0.0	-0.0	-12.1	-88.0
227	18423981.85	5015183.54	130.05	0	63	78.0	-88.0	0.0	0.0	74.7	0.2	-5.6	0.0	0.0	5.3	0.0	-0.0	3.3	-88.0
228	18423981.85	5015183.54	130.05	0	125	92.6	-88.0	0.0	0.0	74.7	0.6	2.7	0.0	0.0	3.1	0.0	-0.0	11.4	-88.0
229	18423981.85	5015183.54	130.05	0	250	92.0	-88.0	0.0	0.0	74.7	1.6	0.9	0.0	0.0	5.7	0.0	-0.0	9.0	-88.0
230	18423981.85	5015183.54	130.05	0	500	99.3	-88.0	0.0	0.0	74.7	3.0	-2.1	0.0	0.0	7.9	0.0	-0.0	15.7	-88.0
231	18423981.85	5015183.54	130.05	0	1000	104.1	-88.0	0.0	0.0	74.7	5.6	-2.2	0.0	0.0	9.7	0.0	-0.0	16.2	-88.0
232	18423981.85	5015183.54	130.05	0	2000	101.1	-88.0	0.0	0.0	74.7	14.9	-2.2	0.0	0.0	12.0	0.0	-0.0	1.7	-88.0
233	18423981.85	5015183.54	130.05	0	4000	96.3	-88.0	0.0	0.0	74.7	50.4	-2.2	0.0	0.0	14.5	0.0	-0.0	-41.2	-88.0
234	18423981.85	5015183.54	130.05	0	8000	85.9	-88.0	0.0	0.0	74.7	179.8	-2.2	0.0	0.0	17.3	0.0	-0.0	-183.7	-88.0
235	18423379.32	5014768.19	141.50	0	32	57.2	-88.0	0.0	0.0	69.9	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-7.5	-88.0
236	18423379.32	5014768.19	141.50	0	63	73.0	-88.0	0.0	0.0	69.9	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	8.2	-88.0
237	18423379.32	5014768.19	141.50	0	125	87.6	-88.0	0.0	0.0	69.9	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	14.7	-88.0
238	18423379.32	5014768.19	141.50	0	250	87.0	-88.0	0.0	0.0	69.9	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	15.1	-88.0
239	18423379.32	5014768.19	141.50	0	500	94.3	-88.0	0.0	0.0	69.9	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	24.6	-88.0
240	18423379.32	5014768.19	141.50	0	1000	99.1	-88.0	0.0	0.0	69.9	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	28.0	-88.0
241	18423379.32	5014768.19	141.50	0	2000	96.1	-88.0	0.0	0.0	69.9	8.5	-2.1	0.0	0.0	0.0	0.0	-0.0	19.7	-88.0
242	18423379.32	5014768.19	141.50	0	4000	91.3	-88.0	0.0	0.0	69.9	28.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-5.5	-88.0
243	18423379.32	5014768.19	141.50	0	8000	80.9	-88.0	0.0	0.0	69.9	103.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-90.2	-88.0
244	18424099.18	5015415.79	128.07	0	32	62.3	-88.0	0.0	0.0	75.7	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-12.6	-88.0
245	18424099.18	5015415.79	128.07	0	63	78.1	-88.0	0.0	0.0	75.7	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	3.0	-88.0
246	18424099.18	5015415.79	128.07	0	125	92.7	-88.0	0.0	0.0	75.7	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	11.5	-88.0
247	18424099.18	5015415.79	128.07	0	250	92.1	-88.0	0.0	0.0	75.7	1.8	0.9	0.0	0.0	4.0	0.0	-0.0	9.7	-88.0
248	18424099.18	5015415.79	128.07	0	500	99.4	-88.0	0.0	0.0	75.7	3.3	-2.1	0.0	0.0	5.0	0.0	-0.0	17.5	-88.0
249	18424099.18	5015415.79	128.07	0	1000	104.2	-88.0	0.0	0.0	75.7	6.3	-2.2	0.0	0.0	5.3	0.0	-0.0	19.2	-88.0
250	18424099.18	5015415.79	128.07	0	2000	101.2	-88.0	0.0	0.0	75.7	16.6	-2.2	0.0	0.0	5.7	0.0	-0.0	5.4	-88.0
251	18424099.18	5015415.79	128.07	0	4000	96.4	-88.0	0.0	0.0	75.7	56.4	-2.2	0.0	0.0	6.5	0.0	-0.0	-40.0	-88.0
252	18424099.18	5015415.79	128.07	0	8000	86.0	-88.0	0.0	0.0	75.7	201.3	-2.2	0.0	0.0	7.8	0.0	-0.0	-196.5	-88.0
253	18424144.74	5015448.80	124.39	0	32	61.0	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-14.2	-88.0
254	18424144.74	5015448.80	124.39	0	63	76.8	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	1.5	-88.0
255	18424144.74	5015448.80	124.39	0	125	91.4	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	9.9	-88.0
256	18424144.74	5015448.80	124.39	0	250	90.8	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	4.0	0.0	-0.0	8.1	-88.0
257	18424144.74	5015448.80	124.39	0	500	98.1	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	15.9	-88.0
258	18424144.74	5015448.80	124.39	0	1000	102.9	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.1	0.0	-0.0	17.6	-88.0
259	18424144.74	5015448.80	124.39	0	2000	99.9	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.4	0.0	-0.0	3.6	-88.0
260	18424144.74	5015448.80	124.39	0	4000	95.1	-88.0	0.0	0.0	76.0	58.2	-2.3	0.0	0.0	5.9	0.0	-0.0	-42.8	-88.0

Line Source, ISO 9613, Name: "Refuse Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 2.1 km long)", ID: "SS2_HR1_rfpv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
261	18424144.74	5015448.80	124.39	0	8000	84.7	-88.0	0.0	0.0	76.0	207.7	-2.3	0.0	0.0	6.8	0.0	-0.0	-203.5	-88.0
262	18423364.19	5014754.40	137.79	0	32	54.6	-88.0	0.0	0.0	69.8	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-10.0	-88.0
263	18423364.19	5014754.40	137.79	0	63	70.4	-88.0	0.0	0.0	69.8	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	5.8	-88.0
264	18423364.19	5014754.40	137.79	0	125	85.0	-88.0	0.0	0.0	69.8	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	12.3	-88.0
265	18423364.19	5014754.40	137.79	0	250	84.4	-88.0	0.0	0.0	69.8	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	12.7	-88.0
266	18423364.19	5014754.40	137.79	0	500	91.7	-88.0	0.0	0.0	69.8	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	22.2	-88.0
267	18423364.19	5014754.40	137.79	0	1000	96.5	-88.0	0.0	0.0	69.8	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	25.7	-88.0
268	18423364.19	5014754.40	137.79	0	2000	93.5	-88.0	0.0	0.0	69.8	8.4	-2.1	0.0	0.0	0.0	0.0	-0.0	17.4	-88.0
269	18423364.19	5014754.40	137.79	0	4000	88.7	-88.0	0.0	0.0	69.8	28.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-7.4	-88.0
270	18423364.19	5014754.40	137.79	0	8000	78.3	-88.0	0.0	0.0	69.8	101.6	-2.1	0.0	0.0	0.0	0.0	-0.0	-90.9	-88.0
271	18424077.38	5015081.93	131.38	0	32	59.8	-88.0	0.0	0.0	75.1	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-14.6	-88.0
272	18424077.38	5015081.93	131.38	0	63	75.6	-88.0	0.0	0.0	75.1	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	1.0	-88.0
273	18424077.38	5015081.93	131.38	0	125	90.2	-88.0	0.0	0.0	75.1	0.7	2.7	0.0	0.0	2.3	0.0	-0.0	9.4	-88.0
274	18424077.38	5015081.93	131.38	0	250	89.6	-88.0	0.0	0.0	75.1	1.7	0.9	0.0	0.0	4.3	0.0	-0.0	7.5	-88.0
275	18424077.38	5015081.93	131.38	0	500	96.9	-88.0	0.0	0.0	75.1	3.1	-2.1	0.0	0.0	5.7	0.0	-0.0	15.1	-88.0
276	18424077.38	5015081.93	131.38	0	1000	101.7	-88.0	0.0	0.0	75.1	5.9	-2.2	0.0	0.0	6.4	0.0	-0.0	16.5	-88.0
277	18424077.38	5015081.93	131.38	0	2000	98.7	-88.0	0.0	0.0	75.1	15.6	-2.2	0.0	0.0	7.6	0.0	-0.0	2.7	-88.0
278	18424077.38	5015081.93	131.38	0	4000	93.9	-88.0	0.0	0.0	75.1	52.7	-2.2	0.0	0.0	9.3	0.0	-0.0	-41.0	-88.0
279	18424077.38	5015081.93	131.38	0	8000	83.5	-88.0	0.0	0.0	75.1	188.0	-2.2	0.0	0.0	11.5	0.0	-0.0	-188.9	-88.0
280	18423356.81	5014747.89	133.93	0	32	54.2	-88.0	0.0	0.0	69.7	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-10.3	-88.0
281	18423356.81	5014747.89	133.93	0	63	70.0	-88.0	0.0	0.0	69.7	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	5.4	-88.0
282	18423356.81	5014747.89	133.93	0	125	84.6	-88.0	0.0	0.0	69.7	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	12.0	-88.0
283	18423356.81	5014747.89	133.93	0	250	84.0	-88.0	0.0	0.0	69.7	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	12.4	-88.0
284	18423356.81	5014747.89	133.93	0	500	91.3	-88.0	0.0	0.0	69.7	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	21.9	-88.0
285	18423356.81	5014747.89	133.93	0	1000	96.1	-88.0	0.0	0.0	69.7	3.1	-2.1	0.0	0.0	0.0	0.0	-0.0	25.4	-88.0
286	18423356.81	5014747.89	133.93	0	2000	93.1	-88.0	0.0	0.0	69.7	8.3	-2.1	0.0	0.0	0.0	0.0	-0.0	17.2	-88.0
287	18423356.81	5014747.89	133.93	0	4000	88.3	-88.0	0.0	0.0	69.7	28.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-7.5	-88.0
288	18423356.81	5014747.89	133.93	0	8000	77.9	-88.0	0.0	0.0	69.7	100.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-90.4	-88.0
289	18423349.94	5014741.88	131.00	0	32	53.8	-88.0	0.0	0.0	69.6	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-10.6	-88.0
290	18423349.94	5014741.88	131.00	0	63	69.6	-88.0	0.0	0.0	69.6	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	5.1	-88.0
291	18423349.94	5014741.88	131.00	0	125	84.2	-88.0	0.0	0.0	69.6	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	11.6	-88.0
292	18423349.94	5014741.88	131.00	0	250	83.6	-88.0	0.0	0.0	69.6	0.9	1.1	0.0	0.0	0.0	0.0	-0.0	12.0	-88.0
293	18423349.94	5014741.88	131.00	0	500	90.9	-88.0	0.0	0.0	69.6	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	21.6	-88.0
294	18423349.94	5014741.88	131.00	0	1000	95.7	-88.0	0.0	0.0	69.6	3.1	-2.1	0.0	0.0	0.0	0.0	-0.0	25.0	-88.0
295	18423349.94	5014741.88	131.00	0	2000	92.7	-88.0	0.0	0.0	69.6	8.3	-2.1	0.0	0.0	0.0	0.0	-0.0	16.9	-88.0
296	18423349.94	5014741.88	131.00	0	4000	87.9	-88.0	0.0	0.0	69.6	28.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-7.7	-88.0
297	18423349.94	5014741.88	131.00	0	8000	77.5	-88.0	0.0	0.0	69.6	99.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-90.0	-88.0
298	18424176.85	5015469.36	122.51	0	32	58.7	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-16.6	-88.0
299	18424176.85	5015469.36	122.51	0	63	74.5	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-1.0	-88.0
300	18424176.85	5015469.36	122.51	0	125	89.1	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	7.4	-88.0
301	18424176.85	5015469.36	122.51	0	250	88.5	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	5.7	-88.0
302	18424176.85	5015469.36	122.51	0	500	95.8	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	13.5	-88.0
303	18424176.85	5015469.36	122.51	0	1000	100.6	-88.0	0.0	0.0	76.2	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	15.2	-88.0
304	18424176.85	5015469.36	122.51	0	2000	97.6	-88.0	0.0	0.0	76.2	17.5	-2.3	0.0	0.0	5.0	0.0	-0.0	1.2	-88.0
305	18424176.85	5015469.36	122.51	0	4000	92.8	-88.0	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	5.1	0.0	-0.0	-45.7	-88.0
306	18424176.85	5015469.36	122.51	0	8000	82.4	-88.0	0.0	0.0	76.2	212.1	-2.3	0.0	0.0	5.5	0.0	-0.0	-209.0	-88.0
307	18423370.07	5014759.70	139.85	0	32	51.5	-88.0	0.0	0.0	69.8	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-13.1	-88.0
308	18423370.07	5014759.70	139.85	0	63	67.3	-88.0	0.0	0.0	69.8	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	2.6	-88.0
309	18423370.07	5014759.70	139.85	0	125	81.9	-88.0	0.0	0.0	69.8	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	9.2	-88.0
310	18423370.07	5014759.70	139.85	0	250	81.3	-88.0	0.0	0.0	69.8	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	9.6	-88.0
311	18423370.07	5014759.70	139.85	0	500	88.6	-88.0	0.0	0.0	69.8	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	19.1	-88.0
312	18423370.07	5014759.70	139.85	0	1000	93.4	-88.0	0.0	0.0	69.8	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	22.5	-88.0
313	18423370.07	5014759.70	139.85	0	2000	90.4	-88.0	0.0	0.0	69.8	8.5	-2.1	0.0	0.0	0.0	0.0	-0.0	14.3	-88.0
314	18423370.07	5014759.70	139.85	0	4000	85.6	-88.0	0.0	0.0	69.8	28.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-10.8	-88.0
315	18423370.07	5014759.70	139.85	0	8000	75.2	-88.0	0.0	0.0	69.8	102.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-94.7	-88.0

Line Source, ISO 9613, Name: "Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 1.4 km long)", ID: "SS2_HR2_cspv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423762.61	5014776.96	130.01	0	32	67.0	-88.0	0.0	0.0	73.0	0.0	-5.5	0.0	0.0	4.9	0.0	-0.0	-5.5	-88.0
2	18423762.61	5014776.96	130.01	0	63	81.6	-88.0	0.0	0.0	73.0	0.2	-5.5	0.0	0.0	5.1	0.0	-0.0	8.7	-88.0
3	18423762.61	5014776.96	130.01	0	125	89.1	-88.0	0.0	0.0	73.0	0.5	2.7	0.0	0.0	2.8	0.0	-0.0	10.0	-88.0
4	18423762.61	5014776.96	130.01	0	250	86.8	-88.0	0.0	0.0	73.0	1.3	0.9	0.0	0.0	5.3	0.0	-0.0	6.2	-88.0

Line Source, ISO 9613, Name: "Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 1.4 km long)", ID: "SS2_HR2_cspv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
5	18423762.61	5014776.96	130.01	0	500	91.6	-88.0	0.0	0.0	73.0	2.4	-2.0	0.0	0.0	7.3	0.0	-0.0	10.8	-88.0
6	18423762.61	5014776.96	130.01	0	1000	95.9	-88.0	0.0	0.0	73.0	4.6	-2.2	0.0	0.0	9.0	0.0	-0.0	11.4	-88.0
7	18423762.61	5014776.96	130.01	0	2000	92.2	-88.0	0.0	0.0	73.0	12.2	-2.2	0.0	0.0	11.1	0.0	-0.0	-2.0	-88.0
8	18423762.61	5014776.96	130.01	0	4000	88.4	-88.0	0.0	0.0	73.0	41.5	-2.2	0.0	0.0	13.5	0.0	-0.0	-37.5	-88.0
9	18423762.61	5014776.96	130.01	0	8000	84.6	-88.0	0.0	0.0	73.0	148.1	-2.2	0.0	0.0	16.2	0.0	-0.0	-150.6	-88.0
10	18423623.60	5014654.49	129.07	0	32	65.9	-88.0	0.0	0.0	72.1	0.0	-5.4	0.0	0.0	5.3	0.0	-0.0	-6.1	-88.0
11	18423623.60	5014654.49	129.07	0	63	80.5	-88.0	0.0	0.0	72.1	0.1	-5.4	0.0	0.0	6.0	0.0	-0.0	7.7	-88.0
12	18423623.60	5014654.49	129.07	0	125	88.0	-88.0	0.0	0.0	72.1	0.5	2.7	0.0	0.0	4.3	0.0	-0.0	8.4	-88.0
13	18423623.60	5014654.49	129.07	0	250	85.7	-88.0	0.0	0.0	72.1	1.2	1.0	0.0	0.0	7.6	0.0	-0.0	3.9	-88.0
14	18423623.60	5014654.49	129.07	0	500	90.5	-88.0	0.0	0.0	72.1	2.2	-2.0	0.0	0.0	10.6	0.0	-0.0	7.7	-88.0
15	18423623.60	5014654.49	129.07	0	1000	94.8	-88.0	0.0	0.0	72.1	4.1	-2.2	0.0	0.0	12.9	0.0	-0.0	7.8	-88.0
16	18423623.60	5014654.49	129.07	0	2000	91.1	-88.0	0.0	0.0	72.1	11.0	-2.2	0.0	0.0	15.6	0.0	-0.0	-5.4	-88.0
17	18423623.60	5014654.49	129.07	0	4000	87.3	-88.0	0.0	0.0	72.1	37.2	-2.2	0.0	0.0	18.4	0.0	-0.0	-38.3	-88.0
18	18423623.60	5014654.49	129.07	0	8000	83.5	-88.0	0.0	0.0	72.1	132.7	-2.2	0.0	0.0	21.4	0.0	-0.0	-140.5	-88.0
19	18423922.15	5014917.81	130.75	0	32	67.2	-88.0	0.0	0.0	74.1	0.1	-5.5	0.0	0.0	4.8	0.0	-0.0	-6.3	-88.0
20	18423922.15	5014917.81	130.75	0	63	81.8	-88.0	0.0	0.0	74.1	0.2	-5.5	0.0	0.0	4.9	0.0	-0.0	8.2	-88.0
21	18423922.15	5014917.81	130.75	0	125	89.3	-88.0	0.0	0.0	74.1	0.6	2.7	0.0	0.0	2.2	0.0	-0.0	9.6	-88.0
22	18423922.15	5014917.81	130.75	0	250	87.0	-88.0	0.0	0.0	74.1	1.5	0.9	0.0	0.0	4.2	0.0	-0.0	6.3	-88.0
23	18423922.15	5014917.81	130.75	0	500	91.8	-88.0	0.0	0.0	74.1	2.8	-2.1	0.0	0.0	5.4	0.0	-0.0	11.6	-88.0
24	18423922.15	5014917.81	130.75	0	1000	96.1	-88.0	0.0	0.0	74.1	5.2	-2.2	0.0	0.0	6.0	0.0	-0.0	13.0	-88.0
25	18423922.15	5014917.81	130.75	0	2000	92.4	-88.0	0.0	0.0	74.1	13.8	-2.2	0.0	0.0	6.9	0.0	-0.0	-0.3	-88.0
26	18423922.15	5014917.81	130.75	0	4000	88.6	-88.0	0.0	0.0	74.1	46.9	-2.2	0.0	0.0	8.4	0.0	-0.0	-38.6	-88.0
27	18423922.15	5014917.81	130.75	0	8000	84.8	-88.0	0.0	0.0	74.1	167.4	-2.2	0.0	0.0	10.3	0.0	-0.0	-164.8	-88.0
28	18423977.27	5015300.48	129.68	0	32	65.0	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-9.2	-88.0
29	18423977.27	5015300.48	129.68	0	63	79.6	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	5.3	-88.0
30	18423977.27	5015300.48	129.68	0	125	87.1	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.1	0.0	-0.0	6.7	-88.0
31	18423977.27	5015300.48	129.68	0	250	84.8	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	3.9	0.0	-0.0	3.4	-88.0
32	18423977.27	5015300.48	129.68	0	500	89.6	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	4.9	0.0	-0.0	8.8	-88.0
33	18423977.27	5015300.48	129.68	0	1000	93.9	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	5.1	0.0	-0.0	10.4	-88.0
34	18423977.27	5015300.48	129.68	0	2000	90.2	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	5.4	0.0	-0.0	-3.0	-88.0
35	18423977.27	5015300.48	129.68	0	4000	86.4	-88.0	0.0	0.0	74.9	51.4	-2.2	0.0	0.0	5.9	0.0	-0.0	-43.6	-88.0
36	18423977.27	5015300.48	129.68	0	8000	82.6	-88.0	0.0	0.0	74.9	183.3	-2.2	0.0	0.0	6.8	0.0	-0.0	-180.2	-88.0
37	18424075.61	5015390.08	127.30	0	32	65.1	-88.0	0.0	0.0	75.6	0.1	-5.6	0.0	0.0	6.6	0.0	-0.0	-11.5	-88.0
38	18424075.61	5015390.08	127.30	0	63	79.7	-88.0	0.0	0.0	75.6	0.2	-5.6	0.0	0.0	8.0	0.0	-0.0	1.6	-88.0
39	18424075.61	5015390.08	127.30	0	125	87.2	-88.0	0.0	0.0	75.6	0.7	2.7	0.0	0.0	7.1	0.0	-0.0	1.2	-88.0
40	18424075.61	5015390.08	127.30	0	250	84.9	-88.0	0.0	0.0	75.6	1.8	0.9	0.0	0.0	11.2	0.0	-0.0	-4.5	-88.0
41	18424075.61	5015390.08	127.30	0	500	89.7	-88.0	0.0	0.0	75.6	3.3	-2.1	0.0	0.0	14.7	0.0	-0.0	-1.6	-88.0
42	18424075.61	5015390.08	127.30	0	1000	94.0	-88.0	0.0	0.0	75.6	6.2	-2.2	0.0	0.0	17.4	0.0	-0.0	-2.9	-88.0
43	18424075.61	5015390.08	127.30	0	2000	90.3	-88.0	0.0	0.0	75.6	16.3	-2.2	0.0	0.0	20.3	0.0	-0.0	-19.7	-88.0
44	18424075.61	5015390.08	127.30	0	4000	86.5	-88.0	0.0	0.0	75.6	55.4	-2.2	0.0	0.0	23.3	0.0	-0.0	-65.5	-88.0
45	18424075.61	5015390.08	127.30	0	8000	82.7	-88.0	0.0	0.0	75.6	197.7	-2.2	0.0	0.0	25.0	0.0	-0.0	-213.2	-88.0
46	18424032.54	5015134.63	131.28	0	32	66.3	-88.0	0.0	0.0	75.0	0.1	-5.6	0.0	0.0	4.9	0.0	-0.0	-8.0	-88.0
47	18424032.54	5015134.63	131.28	0	63	80.9	-88.0	0.0	0.0	75.0	0.2	-5.6	0.0	0.0	5.1	0.0	-0.0	6.2	-88.0
48	18424032.54	5015134.63	131.28	0	125	88.4	-88.0	0.0	0.0	75.0	0.7	2.7	0.0	0.0	2.7	0.0	-0.0	7.4	-88.0
49	18424032.54	5015134.63	131.28	0	250	86.1	-88.0	0.0	0.0	75.0	1.6	0.9	0.0	0.0	5.1	0.0	-0.0	3.5	-88.0
50	18424032.54	5015134.63	131.28	0	500	90.9	-88.0	0.0	0.0	75.0	3.0	-2.1	0.0	0.0	7.0	0.0	-0.0	8.1	-88.0
51	18424032.54	5015134.63	131.28	0	1000	95.2	-88.0	0.0	0.0	75.0	5.8	-2.2	0.0	0.0	8.4	0.0	-0.0	8.3	-88.0
52	18424032.54	5015134.63	131.28	0	2000	91.5	-88.0	0.0	0.0	75.0	15.2	-2.2	0.0	0.0	10.3	0.0	-0.0	-6.8	-88.0
53	18424032.54	5015134.63	131.28	0	4000	87.7	-88.0	0.0	0.0	75.0	51.6	-2.2	0.0	0.0	12.7	0.0	-0.0	-49.3	-88.0
54	18424032.54	5015134.63	131.28	0	8000	83.9	-88.0	0.0	0.0	75.0	184.2	-2.2	0.0	0.0	15.4	0.0	-0.0	-188.3	-88.0
55	18424048.47	5015029.80	131.55	0	32	64.6	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-9.6	-88.0
56	18424048.47	5015029.80	131.55	0	63	79.2	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	4.8	-88.0
57	18424048.47	5015029.80	131.55	0	125	86.7	-88.0	0.0	0.0	74.9	0.7	2.7	0.0	0.0	2.2	0.0	-0.0	6.3	-88.0
58	18424048.47	5015029.80	131.55	0	250	84.4	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.1	0.0	-0.0	2.8	-88.0
59	18424048.47	5015029.80	131.55	0	500	89.2	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	5.2	0.0	-0.0	8.1	-88.0
60	18424048.47	5015029.80	131.55	0	1000	93.5	-88.0	0.0	0.0	74.9	5.8	-2.2	0.0	0.0	5.6	0.0	-0.0	9.4	-88.0
61	18424048.47	5015029.80	131.55	0	2000	89.8	-88.0	0.0	0.0	74.9	15.2	-2.2	0.0	0.0	6.4	0.0	-0.0	-4.4	-88.0
62	18424048.47	5015029.80	131.55	0	4000	86.0	-88.0	0.0	0.0	74.9	51.5	-2.2	0.0	0.0	7.5	0.0	-0.0	-45.7	-88.0
63	18424048.47	5015029.80	131.55	0	8000	82.2	-88.0	0.0	0.0	74.9	183.7	-2.2	0.0	0.0	9.2	0.0	-0.0	-183.4	-88.0
64	18423950.31	5015228.08	130.46	0	32	62.3	-88.0	0.0	0.0	74.6	0.1	-5.6	0.0	0.0	4.9	0.0	-0.0	-11.7	-88.0
65	18423950.31	5015228.08	130.46	0	63	76.9	-88.0	0.0	0.0	74.6	0.2	-5.6	0.0	0.0	5.1	0.0	-0.0	2.6	-88.0
66	18423950.31	5015228.08	130.46	0	125	84.4	-88.0	0.0	0.0	74.6	0.6	2.7	0.0	0.0	2.7	0.0	-0.0	3.8	-88.0
67	18423950.31	5015228.08	130.46	0	250	82.1	-88.0	0.0	0.0	74.6	1.6	0.9	0.0	0.0	5.1	0.0	-0.0	-0.1	-88.0

Line Source, ISO 9613, Name: "Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 1.4 km long)", ID: "SS2_HR2_cspv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
68	18423950.31	5015228.08	130.46	0	500	86.9	-88.0	0.0	0.0	74.6	2.9	-2.1	0.0	0.0	6.9	0.0	-0.0	4.5	-88.0
69	18423950.31	5015228.08	130.46	0	1000	91.2	-88.0	0.0	0.0	74.6	5.6	-2.2	0.0	0.0	8.4	0.0	-0.0	4.9	-88.0
70	18423950.31	5015228.08	130.46	0	2000	87.5	-88.0	0.0	0.0	74.6	14.7	-2.2	0.0	0.0	10.3	0.0	-0.0	-9.9	-88.0
71	18423950.31	5015228.08	130.46	0	4000	83.7	-88.0	0.0	0.0	74.6	49.8	-2.2	0.0	0.0	12.7	0.0	-0.0	-51.2	-88.0
72	18423950.31	5015228.08	130.46	0	8000	79.9	-88.0	0.0	0.0	74.6	177.7	-2.2	0.0	0.0	15.3	0.0	-0.0	-185.5	-88.0
73	18423529.97	5014642.45	141.70	0	32	56.6	-88.0	0.0	0.0	71.4	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-9.4	-88.0
74	18423529.97	5014642.45	141.70	0	63	71.2	-88.0	0.0	0.0	71.4	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	5.1	-88.0
75	18423529.97	5014642.45	141.70	0	125	78.7	-88.0	0.0	0.0	71.4	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	4.2	-88.0
76	18423529.97	5014642.45	141.70	0	250	76.4	-88.0	0.0	0.0	71.4	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	3.0	-88.0
77	18423529.97	5014642.45	141.70	0	500	81.2	-88.0	0.0	0.0	71.4	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	9.9	-88.0
78	18423529.97	5014642.45	141.70	0	1000	85.5	-88.0	0.0	0.0	71.4	3.8	-2.1	0.0	0.0	0.0	0.0	-0.0	12.5	-88.0
79	18423529.97	5014642.45	141.70	0	2000	81.8	-88.0	0.0	0.0	71.4	10.1	-2.1	0.0	0.0	0.0	0.0	-0.0	2.5	-88.0
80	18423529.97	5014642.45	141.70	0	4000	78.0	-88.0	0.0	0.0	71.4	34.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-25.4	-88.0
81	18423529.97	5014642.45	141.70	0	8000	74.2	-88.0	0.0	0.0	71.4	122.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-117.0	-88.0
82	18423541.60	5014627.61	140.06	0	32	56.5	-88.0	0.0	0.0	71.5	0.0	-5.4	0.0	0.0	4.8	0.0	-0.0	-14.4	-88.0
83	18423541.60	5014627.61	140.06	0	63	71.1	-88.0	0.0	0.0	71.5	0.1	-5.4	0.0	0.0	4.8	0.0	-0.0	0.1	-88.0
84	18423541.60	5014627.61	140.06	0	125	78.6	-88.0	0.0	0.0	71.5	0.4	2.7	0.0	0.0	2.1	0.0	-0.0	2.0	-88.0
85	18423541.60	5014627.61	140.06	0	250	76.3	-88.0	0.0	0.0	71.5	1.1	1.0	0.0	0.0	3.8	0.0	-0.0	-1.0	-88.0
86	18423541.60	5014627.61	140.06	0	500	81.1	-88.0	0.0	0.0	71.5	2.0	-2.0	0.0	0.0	4.8	0.0	-0.0	4.8	-88.0
87	18423541.60	5014627.61	140.06	0	1000	85.4	-88.0	0.0	0.0	71.5	3.9	-2.1	0.0	0.0	4.8	0.0	-0.0	7.5	-88.0
88	18423541.60	5014627.61	140.06	0	2000	81.7	-88.0	0.0	0.0	71.5	10.2	-2.1	0.0	0.0	4.8	0.0	-0.0	-2.6	-88.0
89	18423541.60	5014627.61	140.06	0	4000	77.9	-88.0	0.0	0.0	71.5	34.7	-2.1	0.0	0.0	4.8	0.0	-0.0	-30.8	-88.0
90	18423541.60	5014627.61	140.06	0	8000	74.1	-88.0	0.0	0.0	71.5	123.6	-2.1	0.0	0.0	4.8	0.0	-0.0	-123.6	-88.0
91	18423518.76	5014656.95	143.00	0	32	56.3	-88.0	0.0	0.0	71.3	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-9.7	-88.0
92	18423518.76	5014656.95	143.00	0	63	70.9	-88.0	0.0	0.0	71.3	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	4.8	-88.0
93	18423518.76	5014656.95	143.00	0	125	78.4	-88.0	0.0	0.0	71.3	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	4.0	-88.0
94	18423518.76	5014656.95	143.00	0	250	76.1	-88.0	0.0	0.0	71.3	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	2.8	-88.0
95	18423518.76	5014656.95	143.00	0	500	80.9	-88.0	0.0	0.0	71.3	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	9.6	-88.0
96	18423518.76	5014656.95	143.00	0	1000	85.2	-88.0	0.0	0.0	71.3	3.8	-2.1	0.0	0.0	0.0	0.0	-0.0	12.3	-88.0
97	18423518.76	5014656.95	143.00	0	2000	81.5	-88.0	0.0	0.0	71.3	10.0	-2.1	0.0	0.0	0.0	0.0	-0.0	2.4	-88.0
98	18423518.76	5014656.95	143.00	0	4000	77.7	-88.0	0.0	0.0	71.3	33.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-25.2	-88.0
99	18423518.76	5014656.95	143.00	0	8000	73.9	-88.0	0.0	0.0	71.3	120.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-115.7	-88.0
100	18424147.32	5015446.21	124.62	0	32	60.6	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-14.6	-88.0
101	18424147.32	5015446.21	124.62	0	63	75.2	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-0.2	-88.0
102	18424147.32	5015446.21	124.62	0	125	82.7	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	1.2	-88.0
103	18424147.32	5015446.21	124.62	0	250	80.4	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	4.0	0.0	-0.0	-2.3	-88.0
104	18424147.32	5015446.21	124.62	0	500	85.2	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	3.0	-88.0
105	18424147.32	5015446.21	124.62	0	1000	89.5	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.1	0.0	-0.0	4.2	-88.0
106	18424147.32	5015446.21	124.62	0	2000	85.8	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.3	0.0	-0.0	-10.5	-88.0
107	18424147.32	5015446.21	124.62	0	4000	82.0	-88.0	0.0	0.0	76.0	58.3	-2.3	0.0	0.0	5.9	0.0	-0.0	-55.8	-88.0
108	18424147.32	5015446.21	124.62	0	8000	78.2	-88.0	0.0	0.0	76.0	207.9	-2.3	0.0	0.0	6.7	0.0	-0.0	-210.1	-88.0
109	18423558.34	5014606.80	129.50	0	32	55.6	-88.0	0.0	0.0	71.6	0.0	-5.4	0.0	0.0	5.6	0.0	-0.0	-16.3	-88.0
110	18423558.34	5014606.80	129.50	0	63	70.2	-88.0	0.0	0.0	71.6	0.1	-5.4	0.0	0.0	6.8	0.0	-0.0	-3.0	-88.0
111	18423558.34	5014606.80	129.50	0	125	77.7	-88.0	0.0	0.0	71.6	0.4	2.7	0.0	0.0	6.3	0.0	-0.0	-3.4	-88.0
112	18423558.34	5014606.80	129.50	0	250	75.4	-88.0	0.0	0.0	71.6	1.1	1.0	0.0	0.0	10.8	0.0	-0.0	-9.1	-88.0
113	18423558.34	5014606.80	129.50	0	500	80.2	-88.0	0.0	0.0	71.6	2.1	-2.0	0.0	0.0	14.5	0.0	-0.0	-6.0	-88.0
114	18423558.34	5014606.80	129.50	0	1000	84.5	-88.0	0.0	0.0	71.6	3.9	-2.1	0.0	0.0	17.4	0.0	-0.0	-6.3	-88.0
115	18423558.34	5014606.80	129.50	0	2000	80.8	-88.0	0.0	0.0	71.6	10.4	-2.1	0.0	0.0	20.3	0.0	-0.0	-19.4	-88.0
116	18423558.34	5014606.80	129.50	0	4000	77.0	-88.0	0.0	0.0	71.6	35.3	-2.1	0.0	0.0	23.2	0.0	-0.0	-51.0	-88.0
117	18423558.34	5014606.80	129.50	0	8000	73.2	-88.0	0.0	0.0	71.6	125.9	-2.1	0.0	0.0	25.0	0.0	-0.0	-147.2	-88.0
118	18423550.62	5014616.59	134.86	0	32	55.2	-88.0	0.0	0.0	71.6	0.0	-5.4	0.0	0.0	5.2	0.0	-0.0	-16.3	-88.0
119	18423550.62	5014616.59	134.86	0	63	69.8	-88.0	0.0	0.0	71.6	0.1	-5.4	0.0	0.0	6.0	0.0	-0.0	-2.5	-88.0
120	18423550.62	5014616.59	134.86	0	125	77.3	-88.0	0.0	0.0	71.6	0.4	2.7	0.0	0.0	4.6	0.0	-0.0	-2.1	-88.0
121	18423550.62	5014616.59	134.86	0	250	75.0	-88.0	0.0	0.0	71.6	1.1	1.0	0.0	0.0	8.3	0.0	-0.0	-6.9	-88.0
122	18423550.62	5014616.59	134.86	0	500	79.8	-88.0	0.0	0.0	71.6	2.1	-2.0	0.0	0.0	11.5	0.0	-0.0	-3.3	-88.0
123	18423550.62	5014616.59	134.86	0	1000	84.1	-88.0	0.0	0.0	71.6	3.9	-2.1	0.0	0.0	14.1	0.0	-0.0	-3.3	-88.0
124	18423550.62	5014616.59	134.86	0	2000	80.4	-88.0	0.0	0.0	71.6	10.3	-2.1	0.0	0.0	16.8	0.0	-0.0	-16.2	-88.0
125	18423550.62	5014616.59	134.86	0	4000	76.6	-88.0	0.0	0.0	71.6	35.0	-2.1	0.0	0.0	19.7	0.0	-0.0	-47.5	-88.0
126	18423550.62	5014616.59	134.86	0	8000	72.8	-88.0	0.0	0.0	71.6	124.8	-2.1	0.0	0.0	22.6	0.0	-0.0	-144.1	-88.0
127	18424179.50	5015466.09	122.58	0	32	58.3	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-17.1	-88.0
128	18424179.50	5015466.09	122.58	0	63	72.9	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-2.6	-88.0
129	18424179.50	5015466.09	122.58	0	125	80.4	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	-1.3	-88.0
130	18424179.50	5015466.09	122.58	0	250	78.1	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	-4.8	-88.0

Line Source, ISO 9613, Name: "Soil Truck on Paved Route #trips/hr; Entry and Exit (20 km/h, 1.4 km long)", ID: "SS2_HR2_cspv"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
131	18424179.50	5015466.09	122.58	0	500	82.9	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	0.5	-88.0
132	18424179.50	5015466.09	122.58	0	1000	87.2	-88.0	0.0	0.0	76.2	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	1.8	-88.0
133	18424179.50	5015466.09	122.58	0	2000	83.5	-88.0	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	5.0	0.0	-0.0	-13.0	-88.0
134	18424179.50	5015466.09	122.58	0	4000	79.7	-88.0	0.0	0.0	76.2	59.5	-2.3	0.0	0.0	5.2	0.0	-0.0	-58.9	-88.0
135	18424179.50	5015466.09	122.58	0	8000	75.9	-88.0	0.0	0.0	76.2	212.2	-2.3	0.0	0.0	5.6	0.0	-0.0	-215.8	-88.0

Line Source, ISO 9613, Name: "Daily Cover Soil Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 300 m long)", ID: "SS2_HR3_lst"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423398.40	5014871.18	143.00	0	32	57.8	-88.0	0.0	0.0	70.1	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-7.1	-88.0
2	18423398.40	5014871.18	143.00	0	63	72.3	-88.0	0.0	0.0	70.1	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	7.3	-88.0
3	18423398.40	5014871.18	143.00	0	125	80.2	-88.0	0.0	0.0	70.1	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	7.1	-88.0
4	18423398.40	5014871.18	143.00	0	250	83.9	-88.0	0.0	0.0	70.1	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	11.8	-88.0
5	18423398.40	5014871.18	143.00	0	500	91.8	-88.0	0.0	0.0	70.1	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	21.9	-88.0
6	18423398.40	5014871.18	143.00	0	1000	88.6	-88.0	0.0	0.0	70.1	3.3	-2.1	0.0	0.0	0.0	0.0	-0.0	17.2	-88.0
7	18423398.40	5014871.18	143.00	0	2000	88.7	-88.0	0.0	0.0	70.1	8.8	-2.1	0.0	0.0	0.0	0.0	-0.0	11.9	-88.0
8	18423398.40	5014871.18	143.00	0	4000	85.9	-88.0	0.0	0.0	70.1	29.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-11.8	-88.0
9	18423398.40	5014871.18	143.00	0	8000	76.1	-88.0	0.0	0.0	70.1	106.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-97.9	-88.0
10	18423430.91	5014809.97	143.00	0	32	57.7	-88.0	0.0	0.0	70.4	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-7.5	-88.0
11	18423430.91	5014809.97	143.00	0	63	72.2	-88.0	0.0	0.0	70.4	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	6.9	-88.0
12	18423430.91	5014809.97	143.00	0	125	80.1	-88.0	0.0	0.0	70.4	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	6.6	-88.0
13	18423430.91	5014809.97	143.00	0	250	83.8	-88.0	0.0	0.0	70.4	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	11.3	-88.0
14	18423430.91	5014809.97	143.00	0	500	91.7	-88.0	0.0	0.0	70.4	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	21.4	-88.0
15	18423430.91	5014809.97	143.00	0	1000	88.5	-88.0	0.0	0.0	70.4	3.4	-2.1	0.0	0.0	0.0	0.0	-0.0	16.7	-88.0
16	18423430.91	5014809.97	143.00	0	2000	88.6	-88.0	0.0	0.0	70.4	9.0	-2.1	0.0	0.0	0.0	0.0	-0.0	11.2	-88.0
17	18423430.91	5014809.97	143.00	0	4000	85.8	-88.0	0.0	0.0	70.4	30.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-13.2	-88.0
18	18423430.91	5014809.97	143.00	0	8000	76.0	-88.0	0.0	0.0	70.4	109.3	-2.1	0.0	0.0	0.0	0.0	-0.0	-101.7	-88.0
19	18423463.72	5014750.16	143.00	0	32	57.7	-88.0	0.0	0.0	70.7	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-7.8	-88.0
20	18423463.72	5014750.16	143.00	0	63	72.2	-88.0	0.0	0.0	70.7	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	6.6	-88.0
21	18423463.72	5014750.16	143.00	0	125	80.1	-88.0	0.0	0.0	70.7	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	6.3	-88.0
22	18423463.72	5014750.16	143.00	0	250	83.8	-88.0	0.0	0.0	70.7	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	11.0	-88.0
23	18423463.72	5014750.16	143.00	0	500	91.7	-88.0	0.0	0.0	70.7	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	21.1	-88.0
24	18423463.72	5014750.16	143.00	0	1000	88.5	-88.0	0.0	0.0	70.7	3.5	-2.1	0.0	0.0	0.0	0.0	-0.0	16.3	-88.0
25	18423463.72	5014750.16	143.00	0	2000	88.6	-88.0	0.0	0.0	70.7	9.4	-2.1	0.0	0.0	0.0	0.0	-0.0	10.6	-88.0
26	18423463.72	5014750.16	143.00	0	4000	85.8	-88.0	0.0	0.0	70.7	31.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-14.6	-88.0
27	18423463.72	5014750.16	143.00	0	8000	76.0	-88.0	0.0	0.0	70.7	113.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-105.8	-88.0
28	18423371.64	5014921.77	143.00	0	32	55.7	-88.0	0.0	0.0	70.0	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-9.0	-88.0
29	18423371.64	5014921.77	143.00	0	63	70.2	-88.0	0.0	0.0	70.0	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	5.4	-88.0
30	18423371.64	5014921.77	143.00	0	125	78.1	-88.0	0.0	0.0	70.0	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	5.2	-88.0
31	18423371.64	5014921.77	143.00	0	250	81.8	-88.0	0.0	0.0	70.0	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	9.9	-88.0
32	18423371.64	5014921.77	143.00	0	500	89.7	-88.0	0.0	0.0	70.0	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	20.1	-88.0
33	18423371.64	5014921.77	143.00	0	1000	86.5	-88.0	0.0	0.0	70.0	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	15.5	-88.0
34	18423371.64	5014921.77	143.00	0	2000	86.6	-88.0	0.0	0.0	70.0	8.6	-2.1	0.0	0.0	0.0	0.0	-0.0	10.2	-88.0
35	18423371.64	5014921.77	143.00	0	4000	83.8	-88.0	0.0	0.0	70.0	29.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-13.1	-88.0
36	18423371.64	5014921.77	143.00	0	8000	74.0	-88.0	0.0	0.0	70.0	103.6	-2.1	0.0	0.0	0.0	0.0	-0.0	-97.4	-88.0
37	18423493.78	5014696.59	143.00	0	32	56.7	-88.0	0.0	0.0	71.0	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-9.0	-88.0
38	18423493.78	5014696.59	143.00	0	63	71.2	-88.0	0.0	0.0	71.0	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	5.4	-88.0
39	18423493.78	5014696.59	143.00	0	125	79.1	-88.0	0.0	0.0	71.0	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	5.0	-88.0
40	18423493.78	5014696.59	143.00	0	250	82.8	-88.0	0.0	0.0	71.0	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	9.7	-88.0
41	18423493.78	5014696.59	143.00	0	500	90.7	-88.0	0.0	0.0	71.0	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	19.7	-88.0
42	18423493.78	5014696.59	143.00	0	1000	87.5	-88.0	0.0	0.0	71.0	3.7	-2.1	0.0	0.0	0.0	0.0	-0.0	14.9	-88.0
43	18423493.78	5014696.59	143.00	0	2000	87.6	-88.0	0.0	0.0	71.0	9.7	-2.1	0.0	0.0	0.0	0.0	-0.0	9.0	-88.0
44	18423493.78	5014696.59	143.00	0	4000	84.8	-88.0	0.0	0.0	71.0	32.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-16.9	-88.0
45	18423493.78	5014696.59	143.00	0	8000	75.0	-88.0	0.0	0.0	71.0	117.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-111.0	-88.0

Line Source, ISO 9613, Name: "Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 330 m long)", ID: "SS2_HR3_cst"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423235.22	5014791.80	130.00	0	32	50.7	-88.0	0.0	0.0	68.4	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-12.6	-88.0
2	18423235.22	5014791.80	130.00	0	63	65.2	-88.0	0.0	0.0	68.4	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	1.8	-88.0
3	18423235.22	5014791.80	130.00	0	125	73.1	-88.0	0.0	0.0	68.4	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	2.0	-88.0
4	18423235.22	5014791.80	130.00	0	250	76.8	-88.0	0.0	0.0	68.4	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	6.6	-88.0
5	18423235.22	5014791.80	130.00	0	500	84.7	-88.0	0.0	0.0	68.4	1.4	-1.9	0.0	0.0	0.0	0.0	-0.0	16.8	-88.0

Line Source, ISO 9613, Name: "Overburden Haul Truck Route #trips/hr; To and From Stockpile (20 km/h, 330 m long)", ID: "SS2_HR3_cst"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
6	18423235.22	5014791.80	130.00	0	1000	81.5	-88.0	0.0	0.0	68.4	2.7	-2.0	0.0	0.0	0.0	0.0	-0.0	12.5	-88.0
7	18423235.22	5014791.80	130.00	0	2000	81.6	-88.0	0.0	0.0	68.4	7.1	-2.0	0.0	0.0	0.0	0.0	-0.0	8.1	-88.0
8	18423235.22	5014791.80	130.00	0	4000	78.8	-88.0	0.0	0.0	68.4	24.2	-2.0	0.0	0.0	0.0	0.0	-0.0	-11.8	-88.0
9	18423235.22	5014791.80	130.00	0	8000	69.0	-88.0	0.0	0.0	68.4	86.4	-2.0	0.0	0.0	0.0	0.0	-0.0	-83.7	-88.0
10	18423311.75	5014701.59	130.00	0	32	51.5	-88.0	0.0	0.0	69.3	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-12.6	-88.0
11	18423311.75	5014701.59	130.00	0	63	66.0	-88.0	0.0	0.0	69.3	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	1.8	-88.0
12	18423311.75	5014701.59	130.00	0	125	73.9	-88.0	0.0	0.0	69.3	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	1.8	-88.0
13	18423311.75	5014701.59	130.00	0	250	77.6	-88.0	0.0	0.0	69.3	0.9	1.1	0.0	0.0	0.0	0.0	-0.0	6.4	-88.0
14	18423311.75	5014701.59	130.00	0	500	85.5	-88.0	0.0	0.0	69.3	1.6	-1.9	0.0	0.0	0.0	0.0	-0.0	16.6	-88.0
15	18423311.75	5014701.59	130.00	0	1000	82.3	-88.0	0.0	0.0	69.3	3.0	-2.1	0.0	0.0	0.0	0.0	-0.0	12.1	-88.0
16	18423311.75	5014701.59	130.00	0	2000	82.4	-88.0	0.0	0.0	69.3	7.9	-2.1	0.0	0.0	0.0	0.0	-0.0	7.3	-88.0
17	18423311.75	5014701.59	130.00	0	4000	79.6	-88.0	0.0	0.0	69.3	26.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-14.5	-88.0
18	18423311.75	5014701.59	130.00	0	8000	69.8	-88.0	0.0	0.0	69.3	95.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-93.3	-88.0
19	18423271.85	5014749.01	130.00	0	32	50.9	-88.0	0.0	0.0	68.8	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-12.8	-88.0
20	18423271.85	5014749.01	130.00	0	63	65.4	-88.0	0.0	0.0	68.8	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	1.6	-88.0
21	18423271.85	5014749.01	130.00	0	125	73.3	-88.0	0.0	0.0	68.8	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	1.7	-88.0
22	18423271.85	5014749.01	130.00	0	250	77.0	-88.0	0.0	0.0	68.8	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	6.3	-88.0
23	18423271.85	5014749.01	130.00	0	500	84.9	-88.0	0.0	0.0	68.8	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	16.5	-88.0
24	18423271.85	5014749.01	130.00	0	1000	81.7	-88.0	0.0	0.0	68.8	2.8	-2.0	0.0	0.0	0.0	0.0	-0.0	12.1	-88.0
25	18423271.85	5014749.01	130.00	0	2000	81.8	-88.0	0.0	0.0	68.8	7.5	-2.0	0.0	0.0	0.0	0.0	-0.0	7.5	-88.0
26	18423271.85	5014749.01	130.00	0	4000	79.0	-88.0	0.0	0.0	68.8	25.4	-2.0	0.0	0.0	0.0	0.0	-0.0	-13.2	-88.0
27	18423271.85	5014749.01	130.00	0	8000	69.2	-88.0	0.0	0.0	68.8	90.8	-2.0	0.0	0.0	0.0	0.0	-0.0	-88.3	-88.0
28	18423353.97	5014652.05	130.00	0	32	51.4	-88.0	0.0	0.0	69.8	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-13.2	-88.0
29	18423353.97	5014652.05	130.00	0	63	65.9	-88.0	0.0	0.0	69.8	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	1.2	-88.0
30	18423353.97	5014652.05	130.00	0	125	73.8	-88.0	0.0	0.0	69.8	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	1.0	-88.0
31	18423353.97	5014652.05	130.00	0	250	77.5	-88.0	0.0	0.0	69.8	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	5.7	-88.0
32	18423353.97	5014652.05	130.00	0	500	85.4	-88.0	0.0	0.0	69.8	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	15.9	-88.0
33	18423353.97	5014652.05	130.00	0	1000	82.2	-88.0	0.0	0.0	69.8	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	11.3	-88.0
34	18423353.97	5014652.05	130.00	0	2000	82.3	-88.0	0.0	0.0	69.8	8.4	-2.1	0.0	0.0	0.0	0.0	-0.0	6.2	-88.0
35	18423353.97	5014652.05	130.00	0	4000	79.5	-88.0	0.0	0.0	69.8	28.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-16.7	-88.0
36	18423353.97	5014652.05	130.00	0	8000	69.7	-88.0	0.0	0.0	69.8	101.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-99.5	-88.0
37	18423205.72	5014826.91	130.00	0	32	49.0	-88.0	0.0	0.0	68.0	0.0	-5.0	0.0	0.0	0.0	0.0	-0.0	-14.1	-88.0
38	18423205.72	5014826.91	130.00	0	63	63.5	-88.0	0.0	0.0	68.0	0.1	-5.0	0.0	0.0	0.0	0.0	-0.0	0.4	-88.0
39	18423205.72	5014826.91	130.00	0	125	71.4	-88.0	0.0	0.0	68.0	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	0.6	-88.0
40	18423205.72	5014826.91	130.00	0	250	75.1	-88.0	0.0	0.0	68.0	0.7	1.1	0.0	0.0	0.0	0.0	-0.0	5.2	-88.0
41	18423205.72	5014826.91	130.00	0	500	83.0	-88.0	0.0	0.0	68.0	1.4	-1.9	0.0	0.0	0.0	0.0	-0.0	15.4	-88.0
42	18423205.72	5014826.91	130.00	0	1000	79.8	-88.0	0.0	0.0	68.0	2.6	-2.0	0.0	0.0	0.0	0.0	-0.0	11.1	-88.0
43	18423205.72	5014826.91	130.00	0	2000	79.9	-88.0	0.0	0.0	68.0	6.9	-2.0	0.0	0.0	0.0	0.0	-0.0	7.0	-88.0
44	18423205.72	5014826.91	130.00	0	4000	77.1	-88.0	0.0	0.0	68.0	23.3	-2.0	0.0	0.0	0.0	0.0	-0.0	-12.3	-88.0
45	18423205.72	5014826.91	130.00	0	8000	67.3	-88.0	0.0	0.0	68.0	83.1	-2.0	0.0	0.0	0.0	0.0	-0.0	-81.8	-88.0
46	18423390.41	5014610.32	130.00	0	32	50.0	-88.0	0.0	0.0	70.2	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-15.0	-88.0
47	18423390.41	5014610.32	130.00	0	63	64.5	-88.0	0.0	0.0	70.2	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	-0.5	-88.0
48	18423390.41	5014610.32	130.00	0	125	72.4	-88.0	0.0	0.0	70.2	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	-0.8	-88.0
49	18423390.41	5014610.32	130.00	0	250	76.1	-88.0	0.0	0.0	70.2	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	3.9	-88.0
50	18423390.41	5014610.32	130.00	0	500	84.0	-88.0	0.0	0.0	70.2	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	14.0	-88.0
51	18423390.41	5014610.32	130.00	0	1000	80.8	-88.0	0.0	0.0	70.2	3.3	-2.1	0.0	0.0	0.0	0.0	-0.0	9.4	-88.0
52	18423390.41	5014610.32	130.00	0	2000	80.9	-88.0	0.0	0.0	70.2	8.8	-2.1	0.0	0.0	0.0	0.0	-0.0	4.0	-88.0
53	18423390.41	5014610.32	130.00	0	4000	78.1	-88.0	0.0	0.0	70.2	29.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-19.9	-88.0
54	18423390.41	5014610.32	130.00	0	8000	68.3	-88.0	0.0	0.0	70.2	106.5	-2.1	0.0	0.0	0.0	0.0	-0.0	-106.3	-88.0

Line Source, ISO 9613, Name: "Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "SS2_HR4_cht"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	18423573.08	5014617.10	129.25	0	32	56.3	-88.0	0.0	0.0	71.8	0.0	-5.4	0.0	0.0	5.7	0.0	-0.0	-15.8	-88.0
2	18423573.08	5014617.10	129.25	0	63	76.6	-88.0	0.0	0.0	71.8	0.1	-5.4	0.0	0.0	6.9	0.0	-0.0	3.2	-88.0
3	18423573.08	5014617.10	129.25	0	125	84.3	-88.0	0.0	0.0	71.8	0.5	2.7	0.0	0.0	6.2	0.0	-0.0	3.2	-88.0
4	18423573.08	5014617.10	129.25	0	250	95.3	-88.0	0.0	0.0	71.8	1.1	1.0	0.0	0.0	10.3	0.0	-0.0	11.1	-88.0
5	18423573.08	5014617.10	129.25	0	500	96.9	-88.0	0.0	0.0	71.8	2.1	-2.0	0.0	0.0	13.9	0.0	-0.0	11.2	-88.0
6	18423573.08	5014617.10	129.25	0	1000	96.9	-88.0	0.0	0.0	71.8	4.0	-2.1	0.0	0.0	16.6	0.0	-0.0	6.7	-88.0
7	18423573.08	5014617.10	129.25	0	2000	97.0	-88.0	0.0	0.0	71.8	10.5	-2.1	0.0	0.0	19.5	0.0	-0.0	-2.6	-88.0
8	18423573.08	5014617.10	129.25	0	4000	94.7	-88.0	0.0	0.0	71.8	35.7	-2.1	0.0	0.0	22.4	0.0	-0.0	-33.0	-88.0
9	18423573.08	5014617.10	129.25	0	8000	89.7	-88.0	0.0	0.0	71.8	127.4	-2.1	0.0	0.0	25.0	0.0	-0.0	-132.3	-88.0
10	18423254.12	5014762.12	130.00	0	32	52.9	-88.0	0.0	0.0	68.6	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-10.7	-88.0

Line Source, ISO 9613, Name: "Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "SS2_HR4_cht"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
11	18423254.12	5014762.12	130.00	0	63	73.2	-88.0	0.0	0.0	68.6	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	9.6	-88.0
12	18423254.12	5014762.12	130.00	0	125	80.9	-88.0	0.0	0.0	68.6	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	9.5	-88.0
13	18423254.12	5014762.12	130.00	0	250	91.9	-88.0	0.0	0.0	68.6	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	21.4	-88.0
14	18423254.12	5014762.12	130.00	0	500	93.5	-88.0	0.0	0.0	68.6	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	25.3	-88.0
15	18423254.12	5014762.12	130.00	0	1000	93.5	-88.0	0.0	0.0	68.6	2.8	-2.0	0.0	0.0	0.0	0.0	-0.0	24.1	-88.0
16	18423254.12	5014762.12	130.00	0	2000	93.6	-88.0	0.0	0.0	68.6	7.3	-2.0	0.0	0.0	0.0	0.0	-0.0	19.7	-88.0
17	18423254.12	5014762.12	130.00	0	4000	91.3	-88.0	0.0	0.0	68.6	24.9	-2.0	0.0	0.0	0.0	0.0	-0.0	-0.2	-88.0
18	18423254.12	5014762.12	130.00	0	8000	86.3	-88.0	0.0	0.0	68.6	88.6	-2.0	0.0	0.0	0.0	0.0	-0.0	-69.0	-88.0
19	18423346.35	5014561.26	129.09	0	32	53.8	-88.0	0.0	0.0	69.9	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-10.9	-88.0
20	18423346.35	5014561.26	129.09	0	63	74.1	-88.0	0.0	0.0	69.9	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	9.4	-88.0
21	18423346.35	5014561.26	129.09	0	125	81.8	-88.0	0.0	0.0	69.9	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	9.0	-88.0
22	18423346.35	5014561.26	129.09	0	250	92.8	-88.0	0.0	0.0	69.9	0.9	1.0	0.0	0.0	0.0	0.0	-0.0	21.0	-88.0
23	18423346.35	5014561.26	129.09	0	500	94.4	-88.0	0.0	0.0	69.9	1.7	-2.0	0.0	0.0	0.0	0.0	-0.0	24.8	-88.0
24	18423346.35	5014561.26	129.09	0	1000	94.4	-88.0	0.0	0.0	69.9	3.2	-2.1	0.0	0.0	0.0	0.0	-0.0	23.4	-88.0
25	18423346.35	5014561.26	129.09	0	2000	94.5	-88.0	0.0	0.0	69.9	8.5	-2.1	0.0	0.0	0.0	0.0	-0.0	18.2	-88.0
26	18423346.35	5014561.26	129.09	0	4000	92.2	-88.0	0.0	0.0	69.9	28.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-4.4	-88.0
27	18423346.35	5014561.26	129.09	0	8000	87.2	-88.0	0.0	0.0	69.9	102.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-83.4	-88.0
28	18423394.28	5014507.72	129.63	0	32	54.1	-88.0	0.0	0.0	70.5	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-11.1	-88.0
29	18423394.28	5014507.72	129.63	0	63	74.4	-88.0	0.0	0.0	70.5	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	9.1	-88.0
30	18423394.28	5014507.72	129.63	0	125	82.1	-88.0	0.0	0.0	70.5	0.4	2.6	0.0	0.0	0.0	0.0	-0.0	8.6	-88.0
31	18423394.28	5014507.72	129.63	0	250	93.1	-88.0	0.0	0.0	70.5	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	20.6	-88.0
32	18423394.28	5014507.72	129.63	0	500	94.7	-88.0	0.0	0.0	70.5	1.8	-2.0	0.0	0.0	0.0	0.0	-0.0	24.4	-88.0
33	18423394.28	5014507.72	129.63	0	1000	94.7	-88.0	0.0	0.0	70.5	3.4	-2.1	0.0	0.0	0.0	0.0	-0.0	22.9	-88.0
34	18423394.28	5014507.72	129.63	0	2000	94.8	-88.0	0.0	0.0	70.5	9.1	-2.1	0.0	0.0	0.0	0.0	-0.0	17.4	-88.0
35	18423394.28	5014507.72	129.63	0	4000	92.5	-88.0	0.0	0.0	70.5	30.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-6.7	-88.0
36	18423394.28	5014507.72	129.63	0	8000	87.5	-88.0	0.0	0.0	70.5	109.9	-2.1	0.0	0.0	0.0	0.0	-0.0	-90.8	-88.0
37	18423304.29	5014608.02	128.80	0	32	52.9	-88.0	0.0	0.0	69.4	0.0	-5.2	0.0	0.0	0.0	0.0	-0.0	-11.3	-88.0
38	18423304.29	5014608.02	128.80	0	63	73.2	-88.0	0.0	0.0	69.4	0.1	-5.2	0.0	0.0	0.0	0.0	-0.0	8.9	-88.0
39	18423304.29	5014608.02	128.80	0	125	80.9	-88.0	0.0	0.0	69.4	0.3	2.6	0.0	0.0	0.0	0.0	-0.0	8.7	-88.0
40	18423304.29	5014608.02	128.80	0	250	91.9	-88.0	0.0	0.0	69.4	0.9	1.1	0.0	0.0	0.0	0.0	-0.0	20.6	-88.0
41	18423304.29	5014608.02	128.80	0	500	93.5	-88.0	0.0	0.0	69.4	1.6	-1.9	0.0	0.0	0.0	0.0	-0.0	24.5	-88.0
42	18423304.29	5014608.02	128.80	0	1000	93.5	-88.0	0.0	0.0	69.4	3.0	-2.1	0.0	0.0	0.0	0.0	-0.0	23.2	-88.0
43	18423304.29	5014608.02	128.80	0	2000	93.6	-88.0	0.0	0.0	69.4	8.0	-2.1	0.0	0.0	0.0	0.0	-0.0	18.3	-88.0
44	18423304.29	5014608.02	128.80	0	4000	91.3	-88.0	0.0	0.0	69.4	27.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-3.1	-88.0
45	18423304.29	5014608.02	128.80	0	8000	86.3	-88.0	0.0	0.0	69.4	96.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-77.7	-88.0
46	18423269.21	5014647.09	128.56	0	32	52.3	-88.0	0.0	0.0	68.9	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-11.5	-88.0
47	18423269.21	5014647.09	128.56	0	63	72.6	-88.0	0.0	0.0	68.9	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	8.7	-88.0
48	18423269.21	5014647.09	128.56	0	125	80.3	-88.0	0.0	0.0	68.9	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	8.6	-88.0
49	18423269.21	5014647.09	128.56	0	250	91.3	-88.0	0.0	0.0	68.9	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	20.5	-88.0
50	18423269.21	5014647.09	128.56	0	500	92.9	-88.0	0.0	0.0	68.9	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	24.4	-88.0
51	18423269.21	5014647.09	128.56	0	1000	92.9	-88.0	0.0	0.0	68.9	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	23.2	-88.0
52	18423269.21	5014647.09	128.56	0	2000	93.0	-88.0	0.0	0.0	68.9	7.6	-2.1	0.0	0.0	0.0	0.0	-0.0	18.6	-88.0
53	18423269.21	5014647.09	128.56	0	4000	90.7	-88.0	0.0	0.0	68.9	25.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-1.9	-88.0
54	18423269.21	5014647.09	128.56	0	8000	85.7	-88.0	0.0	0.0	68.9	91.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-73.0	-88.0
55	18423223.08	5014798.74	130.00	0	32	51.5	-88.0	0.0	0.0	68.2	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-11.7	-88.0
56	18423223.08	5014798.74	130.00	0	63	71.8	-88.0	0.0	0.0	68.2	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	8.5	-88.0
57	18423223.08	5014798.74	130.00	0	125	79.5	-88.0	0.0	0.0	68.2	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	8.5	-88.0
58	18423223.08	5014798.74	130.00	0	250	90.5	-88.0	0.0	0.0	68.2	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	20.4	-88.0
59	18423223.08	5014798.74	130.00	0	500	92.1	-88.0	0.0	0.0	68.2	1.4	-1.9	0.0	0.0	0.0	0.0	-0.0	24.3	-88.0
60	18423223.08	5014798.74	130.00	0	1000	92.1	-88.0	0.0	0.0	68.2	2.7	-2.0	0.0	0.0	0.0	0.0	-0.0	23.2	-88.0
61	18423223.08	5014798.74	130.00	0	2000	92.2	-88.0	0.0	0.0	68.2	7.0	-2.0	0.0	0.0	0.0	0.0	-0.0	18.9	-88.0
62	18423223.08	5014798.74	130.00	0	4000	89.9	-88.0	0.0	0.0	68.2	23.8	-2.0	0.0	0.0	0.0	0.0	-0.0	-0.2	-88.0
63	18423223.08	5014798.74	130.00	0	8000	84.9	-88.0	0.0	0.0	68.2	85.0	-2.0	0.0	0.0	0.0	0.0	-0.0	-66.3	-88.0
64	18423722.25	5014747.68	129.04	0	32	55.8	-88.0	0.0	0.0	72.8	0.0	-5.5	0.0	0.0	4.9	0.0	-0.0	-16.5	-88.0
65	18423722.25	5014747.68	129.04	0	63	76.1	-88.0	0.0	0.0	72.8	0.2	-5.5	0.0	0.0	5.2	0.0	-0.0	3.4	-88.0
66	18423722.25	5014747.68	129.04	0	125	83.8	-88.0	0.0	0.0	72.8	0.5	2.7	0.0	0.0	3.1	0.0	-0.0	4.7	-88.0
67	18423722.25	5014747.68	129.04	0	250	94.8	-88.0	0.0	0.0	72.8	1.3	1.0	0.0	0.0	6.1	0.0	-0.0	13.8	-88.0
68	18423722.25	5014747.68	129.04	0	500	96.4	-88.0	0.0	0.0	72.8	2.4	-2.0	0.0	0.0	8.6	0.0	-0.0	14.7	-88.0
69	18423722.25	5014747.68	129.04	0	1000	96.4	-88.0	0.0	0.0	72.8	4.5	-2.2	0.0	0.0	10.7	0.0	-0.0	10.6	-88.0
70	18423722.25	5014747.68	129.04	0	2000	96.5	-88.0	0.0	0.0	72.8	11.9	-2.2	0.0	0.0	13.1	0.0	-0.0	1.0	-88.0
71	18423722.25	5014747.68	129.04	0	4000	94.2	-88.0	0.0	0.0	72.8	40.2	-2.2	0.0	0.0	15.8	0.0	-0.0	-32.4	-88.0
72	18423722.25	5014747.68	129.04	0	8000	89.2	-88.0	0.0	0.0	72.8	143.4	-2.2	0.0	0.0	18.6	0.0	-0.0	-143.4	-88.0
73	18423286.48	5014723.64	130.00	0	32	51.9	-88.0	0.0	0.0	69.0	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-11.9	-88.0

Line Source, ISO 9613, Name: "Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "SS2_HR4_cht"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
74	18423286.48	5014723.64	130.00	0	63	72.2	-88.0	0.0	0.0	69.0	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	8.3	-88.0
75	18423286.48	5014723.64	130.00	0	125	79.9	-88.0	0.0	0.0	69.0	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	8.1	-88.0
76	18423286.48	5014723.64	130.00	0	250	90.9	-88.0	0.0	0.0	69.0	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	20.1	-88.0
77	18423286.48	5014723.64	130.00	0	500	92.5	-88.0	0.0	0.0	69.0	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	23.9	-88.0
78	18423286.48	5014723.64	130.00	0	1000	92.5	-88.0	0.0	0.0	69.0	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	22.7	-88.0
79	18423286.48	5014723.64	130.00	0	2000	92.6	-88.0	0.0	0.0	69.0	7.7	-2.1	0.0	0.0	0.0	0.0	-0.0	18.1	-88.0
80	18423286.48	5014723.64	130.00	0	4000	90.3	-88.0	0.0	0.0	69.0	26.0	-2.1	0.0	0.0	0.0	0.0	-0.0	-2.6	-88.0
81	18423286.48	5014723.64	130.00	0	8000	85.3	-88.0	0.0	0.0	69.0	92.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-74.3	-88.0
82	18423498.72	5014551.73	129.67	0	32	54.2	-88.0	0.0	0.0	71.3	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-11.8	-88.0
83	18423498.72	5014551.73	129.67	0	63	74.5	-88.0	0.0	0.0	71.3	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	8.4	-88.0
84	18423498.72	5014551.73	129.67	0	125	82.2	-88.0	0.0	0.0	71.3	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	7.8	-88.0
85	18423498.72	5014551.73	129.67	0	250	93.2	-88.0	0.0	0.0	71.3	1.1	1.0	0.0	0.0	0.0	0.0	-0.0	19.8	-88.0
86	18423498.72	5014551.73	129.67	0	500	94.8	-88.0	0.0	0.0	71.3	2.0	-2.0	0.0	0.0	0.0	0.0	-0.0	23.5	-88.0
87	18423498.72	5014551.73	129.67	0	1000	94.8	-88.0	0.0	0.0	71.3	3.8	-2.1	0.0	0.0	0.0	0.0	-0.0	21.9	-88.0
88	18423498.72	5014551.73	129.67	0	2000	94.9	-88.0	0.0	0.0	71.3	10.0	-2.1	0.0	0.0	0.0	0.0	-0.0	15.8	-88.0
89	18423498.72	5014551.73	129.67	0	4000	92.6	-88.0	0.0	0.0	71.3	33.8	-2.1	0.0	0.0	0.0	0.0	-0.0	-10.3	-88.0
90	18423498.72	5014551.73	129.67	0	8000	87.6	-88.0	0.0	0.0	71.3	120.4	-2.1	0.0	0.0	0.0	0.0	-0.0	-101.9	-88.0
91	18423444.81	5014503.42	130.00	0	32	53.8	-88.0	0.0	0.0	70.9	0.0	-5.3	0.0	0.0	0.0	0.0	-0.0	-11.8	-88.0
92	18423444.81	5014503.42	130.00	0	63	74.1	-88.0	0.0	0.0	70.9	0.1	-5.3	0.0	0.0	0.0	0.0	-0.0	8.4	-88.0
93	18423444.81	5014503.42	130.00	0	125	81.8	-88.0	0.0	0.0	70.9	0.4	2.7	0.0	0.0	0.0	0.0	-0.0	7.8	-88.0
94	18423444.81	5014503.42	130.00	0	250	92.8	-88.0	0.0	0.0	70.9	1.0	1.0	0.0	0.0	0.0	0.0	-0.0	19.9	-88.0
95	18423444.81	5014503.42	130.00	0	500	94.4	-88.0	0.0	0.0	70.9	1.9	-2.0	0.0	0.0	0.0	0.0	-0.0	23.6	-88.0
96	18423444.81	5014503.42	130.00	0	1000	94.4	-88.0	0.0	0.0	70.9	3.6	-2.1	0.0	0.0	0.0	0.0	-0.0	22.0	-88.0
97	18423444.81	5014503.42	130.00	0	2000	94.5	-88.0	0.0	0.0	70.9	9.6	-2.1	0.0	0.0	0.0	0.0	-0.0	16.2	-88.0
98	18423444.81	5014503.42	130.00	0	4000	92.2	-88.0	0.0	0.0	70.9	32.4	-2.1	0.0	0.0	0.0	0.0	-0.0	-9.0	-88.0
99	18423444.81	5014503.42	130.00	0	8000	87.2	-88.0	0.0	0.0	70.9	115.7	-2.1	0.0	0.0	0.0	0.0	-0.0	-97.3	-88.0
100	18423803.69	5014818.77	129.95	0	32	55.7	-88.0	0.0	0.0	73.3	0.0	-5.5	0.0	0.0	5.0	0.0	-0.0	-17.2	-88.0
101	18423803.69	5014818.77	129.95	0	63	76.0	-88.0	0.0	0.0	73.3	0.2	-5.5	0.0	0.0	5.2	0.0	-0.0	2.8	-88.0
102	18423803.69	5014818.77	129.95	0	125	83.7	-88.0	0.0	0.0	73.3	0.5	2.7	0.0	0.0	2.9	0.0	-0.0	4.2	-88.0
103	18423803.69	5014818.77	129.95	0	250	94.7	-88.0	0.0	0.0	73.3	1.4	0.9	0.0	0.0	5.4	0.0	-0.0	13.6	-88.0
104	18423803.69	5014818.77	129.95	0	500	96.3	-88.0	0.0	0.0	73.3	2.5	-2.1	0.0	0.0	7.5	0.0	-0.0	14.9	-88.0
105	18423803.69	5014818.77	129.95	0	1000	96.3	-88.0	0.0	0.0	73.3	4.8	-2.2	0.0	0.0	9.2	0.0	-0.0	11.1	-88.0
106	18423803.69	5014818.77	129.95	0	2000	96.4	-88.0	0.0	0.0	73.3	12.6	-2.2	0.0	0.0	11.4	0.0	-0.0	1.2	-88.0
107	18423803.69	5014818.77	129.95	0	4000	94.1	-88.0	0.0	0.0	73.3	42.9	-2.2	0.0	0.0	13.9	0.0	-0.0	-33.8	-88.0
108	18423803.69	5014818.77	129.95	0	8000	89.1	-88.0	0.0	0.0	73.3	152.9	-2.2	0.0	0.0	16.6	0.0	-0.0	-151.6	-88.0
109	18423199.68	5014826.26	130.00	0	32	50.4	-88.0	0.0	0.0	68.0	0.0	-5.0	0.0	0.0	0.0	0.0	-0.0	-12.5	-88.0
110	18423199.68	5014826.26	130.00	0	63	70.7	-88.0	0.0	0.0	68.0	0.1	-5.0	0.0	0.0	0.0	0.0	-0.0	7.7	-88.0
111	18423199.68	5014826.26	130.00	0	125	78.4	-88.0	0.0	0.0	68.0	0.3	2.4	0.0	0.0	0.0	0.0	-0.0	7.8	-88.0
112	18423199.68	5014826.26	130.00	0	250	89.4	-88.0	0.0	0.0	68.0	0.7	1.1	0.0	0.0	0.0	0.0	-0.0	19.6	-88.0
113	18423199.68	5014826.26	130.00	0	500	91.0	-88.0	0.0	0.0	68.0	1.4	-1.9	0.0	0.0	0.0	0.0	-0.0	23.6	-88.0
114	18423199.68	5014826.26	130.00	0	1000	91.0	-88.0	0.0	0.0	68.0	2.6	-2.0	0.0	0.0	0.0	0.0	-0.0	22.5	-88.0
115	18423199.68	5014826.26	130.00	0	2000	91.1	-88.0	0.0	0.0	68.0	6.8	-2.0	0.0	0.0	0.0	0.0	-0.0	18.4	-88.0
116	18423199.68	5014826.26	130.00	0	4000	88.8	-88.0	0.0	0.0	68.0	23.1	-2.0	0.0	0.0	0.0	0.0	-0.0	-0.2	-88.0
117	18423199.68	5014826.26	130.00	0	8000	83.8	-88.0	0.0	0.0	68.0	82.4	-2.0	0.0	0.0	0.0	0.0	-0.0	-64.5	-88.0
118	18423650.14	5014684.45	129.13	0	32	54.5	-88.0	0.0	0.0	72.3	0.0	-5.4	0.0	0.0	5.5	0.0	-0.0	-17.9	-88.0
119	18423650.14	5014684.45	129.13	0	63	74.8	-88.0	0.0	0.0	72.3	0.1	-5.4	0.0	0.0	6.2	0.0	-0.0	1.6	-88.0
120	18423650.14	5014684.45	129.13	0	125	82.5	-88.0	0.0	0.0	72.3	0.5	2.7	0.0	0.0	4.6	0.0	-0.0	2.4	-88.0
121	18423650.14	5014684.45	129.13	0	250	93.5	-88.0	0.0	0.0	72.3	1.2	1.0	0.0	0.0	8.0	0.0	-0.0	11.0	-88.0
122	18423650.14	5014684.45	129.13	0	500	95.1	-88.0	0.0	0.0	72.3	2.2	-2.0	0.0	0.0	11.1	0.0	-0.0	11.5	-88.0
123	18423650.14	5014684.45	129.13	0	1000	95.1	-88.0	0.0	0.0	72.3	4.2	-2.2	0.0	0.0	13.6	0.0	-0.0	7.2	-88.0
124	18423650.14	5014684.45	129.13	0	2000	95.2	-88.0	0.0	0.0	72.3	11.2	-2.2	0.0	0.0	16.3	0.0	-0.0	-2.4	-88.0
125	18423650.14	5014684.45	129.13	0	4000	92.9	-88.0	0.0	0.0	72.3	38.0	-2.2	0.0	0.0	19.2	0.0	-0.0	-34.3	-88.0
126	18423650.14	5014684.45	129.13	0	8000	87.9	-88.0	0.0	0.0	72.3	135.4	-2.2	0.0	0.0	22.1	0.0	-0.0	-139.7	-88.0
127	18423882.74	5014888.20	130.58	0	32	55.6	-88.0	0.0	0.0	73.9	0.0	-5.5	0.0	0.0	4.8	0.0	-0.0	-17.6	-88.0
128	18423882.74	5014888.20	130.58	0	63	75.9	-88.0	0.0	0.0	73.9	0.2	-5.5	0.0	0.0	4.9	0.0	-0.0	2.5	-88.0
129	18423882.74	5014888.20	130.58	0	125	83.6	-88.0	0.0	0.0	73.9	0.6	2.7	0.0	0.0	2.3	0.0	-0.0	4.1	-88.0
130	18423882.74	5014888.20	130.58	0	250	94.6	-88.0	0.0	0.0	73.9	1.5	0.9	0.0	0.0	4.3	0.0	-0.0	14.0	-88.0
131	18423882.74	5014888.20	130.58	0	500	96.2	-88.0	0.0	0.0	73.9	2.7	-2.1	0.0	0.0	5.7	0.0	-0.0	16.0	-88.0
132	18423882.74	5014888.20	130.58	0	1000	96.2	-88.0	0.0	0.0	73.9	5.1	-2.2	0.0	0.0	6.5	0.0	-0.0	12.9	-88.0
133	18423882.74	5014888.20	130.58	0	2000	96.3	-88.0	0.0	0.0	73.9	13.4	-2.2	0.0	0.0	7.8	0.0	-0.0	3.4	-88.0
134	18423882.74	5014888.20	130.58	0	4000	94.0	-88.0	0.0	0.0	73.9	45.6	-2.2	0.0	0.0	9.5	0.0	-0.0	-32.7	-88.0
135	18423882.74	5014888.20	130.58	0	8000	89.0	-88.0	0.0	0.0	73.9	162.5	-2.2	0.0	0.0	11.7	0.0	-0.0	-156.9	-88.0
136	18423288.24	5014695.55	130.00	0	32	50.6	-88.0	0.0	0.0	69.0	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-13.3	-88.0

Line Source, ISO 9613, Name: "Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "SS2_HR4_cht"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
137	18423288.24	5014695.55	130.00	0	63	70.9	-88.0	0.0	0.0	69.0	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	7.0	-88.0
138	18423288.24	5014695.55	130.00	0	125	78.6	-88.0	0.0	0.0	69.0	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	6.8	-88.0
139	18423288.24	5014695.55	130.00	0	250	89.6	-88.0	0.0	0.0	69.0	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	18.7	-88.0
140	18423288.24	5014695.55	130.00	0	500	91.2	-88.0	0.0	0.0	69.0	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	22.6	-88.0
141	18423288.24	5014695.55	130.00	0	1000	91.2	-88.0	0.0	0.0	69.0	2.9	-2.1	0.0	0.0	0.0	0.0	-0.0	21.3	-88.0
142	18423288.24	5014695.55	130.00	0	2000	91.3	-88.0	0.0	0.0	69.0	7.7	-2.1	0.0	0.0	0.0	0.0	-0.0	16.7	-88.0
143	18423288.24	5014695.55	130.00	0	4000	89.0	-88.0	0.0	0.0	69.0	26.1	-2.1	0.0	0.0	0.0	0.0	-0.0	-4.1	-88.0
144	18423288.24	5014695.55	130.00	0	8000	84.0	-88.0	0.0	0.0	69.0	93.2	-2.1	0.0	0.0	0.0	0.0	-0.0	-76.1	-88.0
145	18423961.16	5014957.87	130.30	0	32	55.6	-88.0	0.0	0.0	74.4	0.1	-5.5	0.0	0.0	4.8	0.0	-0.0	-18.1	-88.0
146	18423961.16	5014957.87	130.30	0	63	75.9	-88.0	0.0	0.0	74.4	0.2	-5.5	0.0	0.0	4.9	0.0	-0.0	2.1	-88.0
147	18423961.16	5014957.87	130.30	0	125	83.6	-88.0	0.0	0.0	74.4	0.6	2.7	0.0	0.0	2.2	0.0	-0.0	3.7	-88.0
148	18423961.16	5014957.87	130.30	0	250	94.6	-88.0	0.0	0.0	74.4	1.5	0.9	0.0	0.0	4.2	0.0	-0.0	13.6	-88.0
149	18423961.16	5014957.87	130.30	0	500	96.2	-88.0	0.0	0.0	74.4	2.8	-2.1	0.0	0.0	5.5	0.0	-0.0	15.6	-88.0
150	18423961.16	5014957.87	130.30	0	1000	96.2	-88.0	0.0	0.0	74.4	5.4	-2.2	0.0	0.0	6.1	0.0	-0.0	12.6	-88.0
151	18423961.16	5014957.87	130.30	0	2000	96.3	-88.0	0.0	0.0	74.4	14.3	-2.2	0.0	0.0	7.1	0.0	-0.0	2.8	-88.0
152	18423961.16	5014957.87	130.30	0	4000	94.0	-88.0	0.0	0.0	74.4	48.3	-2.2	0.0	0.0	8.6	0.0	-0.0	-35.0	-88.0
153	18423961.16	5014957.87	130.30	0	8000	89.0	-88.0	0.0	0.0	74.4	172.4	-2.2	0.0	0.0	10.6	0.0	-0.0	-166.1	-88.0
154	18423264.24	5014675.01	129.23	0	32	50.2	-88.0	0.0	0.0	68.8	0.0	-5.1	0.0	0.0	0.0	0.0	-0.0	-13.5	-88.0
155	18423264.24	5014675.01	129.23	0	63	70.5	-88.0	0.0	0.0	68.8	0.1	-5.1	0.0	0.0	0.0	0.0	-0.0	6.7	-88.0
156	18423264.24	5014675.01	129.23	0	125	78.2	-88.0	0.0	0.0	68.8	0.3	2.5	0.0	0.0	0.0	0.0	-0.0	6.5	-88.0
157	18423264.24	5014675.01	129.23	0	250	89.2	-88.0	0.0	0.0	68.8	0.8	1.1	0.0	0.0	0.0	0.0	-0.0	18.5	-88.0
158	18423264.24	5014675.01	129.23	0	500	90.8	-88.0	0.0	0.0	68.8	1.5	-1.9	0.0	0.0	0.0	0.0	-0.0	22.4	-88.0
159	18423264.24	5014675.01	129.23	0	1000	90.8	-88.0	0.0	0.0	68.8	2.8	-2.0	0.0	0.0	0.0	0.0	-0.0	21.2	-88.0
160	18423264.24	5014675.01	129.23	0	2000	90.9	-88.0	0.0	0.0	68.8	7.5	-2.0	0.0	0.0	0.0	0.0	-0.0	16.6	-88.0
161	18423264.24	5014675.01	129.23	0	4000	88.6	-88.0	0.0	0.0	68.8	25.4	-2.0	0.0	0.0	0.0	0.0	-0.0	-3.6	-88.0
162	18423264.24	5014675.01	129.23	0	8000	83.6	-88.0	0.0	0.0	68.8	90.7	-2.0	0.0	0.0	0.0	0.0	-0.0	-73.9	-88.0
163	18424042.75	5015030.20	130.65	0	32	55.9	-88.0	0.0	0.0	74.9	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-18.3	-88.0
164	18424042.75	5015030.20	130.65	0	63	76.2	-88.0	0.0	0.0	74.9	0.2	-5.6	0.0	0.0	4.9	0.0	-0.0	1.8	-88.0
165	18424042.75	5015030.20	130.65	0	125	83.9	-88.0	0.0	0.0	74.9	0.6	2.7	0.0	0.0	2.3	0.0	-0.0	3.4	-88.0
166	18424042.75	5015030.20	130.65	0	250	94.9	-88.0	0.0	0.0	74.9	1.6	0.9	0.0	0.0	4.3	0.0	-0.0	13.2	-88.0
167	18424042.75	5015030.20	130.65	0	500	96.5	-88.0	0.0	0.0	74.9	3.0	-2.1	0.0	0.0	5.5	0.0	-0.0	15.2	-88.0
168	18424042.75	5015030.20	130.65	0	1000	96.5	-88.0	0.0	0.0	74.9	5.7	-2.2	0.0	0.0	6.2	0.0	-0.0	12.0	-88.0
169	18424042.75	5015030.20	130.65	0	2000	96.6	-88.0	0.0	0.0	74.9	15.1	-2.2	0.0	0.0	7.2	0.0	-0.0	1.6	-88.0
170	18424042.75	5015030.20	130.65	0	4000	94.3	-88.0	0.0	0.0	74.9	51.3	-2.2	0.0	0.0	8.8	0.0	-0.0	-38.4	-88.0
171	18424042.75	5015030.20	130.65	0	8000	89.3	-88.0	0.0	0.0	74.9	183.0	-2.2	0.0	0.0	10.8	0.0	-0.0	-177.2	-88.0
172	18423954.89	5015291.10	130.42	0	32	55.4	-88.0	0.0	0.0	74.8	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-18.6	-88.0
173	18423954.89	5015291.10	130.42	0	63	75.7	-88.0	0.0	0.0	74.8	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	1.5	-88.0
174	18423954.89	5015291.10	130.42	0	125	83.4	-88.0	0.0	0.0	74.8	0.6	2.7	0.0	0.0	2.1	0.0	-0.0	3.2	-88.0
175	18423954.89	5015291.10	130.42	0	250	94.4	-88.0	0.0	0.0	74.8	1.6	0.9	0.0	0.0	4.0	0.0	-0.0	13.1	-88.0
176	18423954.89	5015291.10	130.42	0	500	96.0	-88.0	0.0	0.0	74.8	3.0	-2.1	0.0	0.0	5.1	0.0	-0.0	15.3	-88.0
177	18423954.89	5015291.10	130.42	0	1000	96.0	-88.0	0.0	0.0	74.8	5.6	-2.2	0.0	0.0	5.4	0.0	-0.0	12.5	-88.0
178	18423954.89	5015291.10	130.42	0	2000	96.1	-88.0	0.0	0.0	74.8	14.9	-2.2	0.0	0.0	5.9	0.0	-0.0	2.8	-88.0
179	18423954.89	5015291.10	130.42	0	4000	93.8	-88.0	0.0	0.0	74.8	50.6	-2.2	0.0	0.0	6.8	0.0	-0.0	-36.1	-88.0
180	18423954.89	5015291.10	130.42	0	8000	88.8	-88.0	0.0	0.0	74.8	180.4	-2.2	0.0	0.0	8.2	0.0	-0.0	-172.3	-88.0
181	18423998.95	5015331.09	131.20	0	32	48.1	-88.0	0.0	0.0	75.1	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-26.2	-88.0
182	18423998.95	5015331.09	131.20	0	63	68.4	-88.0	0.0	0.0	75.1	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-6.1	-88.0
183	18423998.95	5015331.09	131.20	0	125	76.1	-88.0	0.0	0.0	75.1	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-4.4	-88.0
184	18423998.95	5015331.09	131.20	0	250	87.1	-88.0	0.0	0.0	75.1	1.7	0.9	0.0	0.0	3.9	0.0	-0.0	5.6	-88.0
185	18423998.95	5015331.09	131.20	0	500	88.7	-88.0	0.0	0.0	75.1	3.1	-2.1	0.0	0.0	4.8	0.0	-0.0	7.8	-88.0
186	18423998.95	5015331.09	131.20	0	1000	88.7	-88.0	0.0	0.0	75.1	5.8	-2.2	0.0	0.0	4.8	0.0	-0.0	5.2	-88.0
187	18423998.95	5015331.09	131.20	0	2000	88.8	-88.0	0.0	0.0	75.1	15.5	-2.2	0.0	0.0	4.8	0.0	-0.0	-4.3	-88.0
188	18423998.95	5015331.09	131.20	0	4000	86.5	-88.0	0.0	0.0	75.1	52.4	-2.2	0.0	0.0	4.9	0.0	-0.0	-43.6	-88.0
189	18423998.95	5015331.09	131.20	0	8000	81.5	-88.0	0.0	0.0	75.1	186.9	-2.2	0.0	0.0	5.0	0.0	-0.0	-183.2	-88.0
190	18424037.09	5015365.28	130.78	0	32	54.6	-88.0	0.0	0.0	75.3	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-19.9	-88.0
191	18424037.09	5015365.28	130.78	0	63	74.9	-88.0	0.0	0.0	75.3	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	0.2	-88.0
192	18424037.09	5015365.28	130.78	0	125	82.6	-88.0	0.0	0.0	75.3	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	1.9	-88.0
193	18424037.09	5015365.28	130.78	0	250	93.6	-88.0	0.0	0.0	75.3	1.7	0.9	0.0	0.0	3.9	0.0	-0.0	11.8	-88.0
194	18424037.09	5015365.28	130.78	0	500	95.2	-88.0	0.0	0.0	75.3	3.2	-2.1	0.0	0.0	4.8	0.0	-0.0	14.1	-88.0
195	18424037.09	5015365.28	130.78	0	1000	95.2	-88.0	0.0	0.0	75.3	6.0	-2.2	0.0	0.0	4.8	0.0	-0.0	11.4	-88.0
196	18424037.09	5015365.28	130.78	0	2000	95.3	-88.0	0.0	0.0	75.3	15.9	-2.2	0.0	0.0	4.8	0.0	-0.0	1.6	-88.0
197	18424037.09	5015365.28	130.78	0	4000	93.0	-88.0	0.0	0.0	75.3	53.9	-2.2	0.0	0.0	4.8	0.0	-0.0	-38.8	-88.0
198	18424037.09	5015365.28	130.78	0	8000	88.0	-88.0	0.0	0.0	75.3	192.4	-2.2	0.0	0.0	4.8	0.0	-0.0	-182.3	-88.0
199	18423992.22	5015167.14	130.05	0	32	55.1	-88.0	0.0	0.0	74.8	0.1	-5.6	0.0	0.0	5.1	0.0	-0.0	-19.2	-88.0

Line Source, ISO 9613, Name: "Construction Haul Truck #trips/hr; Entry and Exit (20 km/h, 2 km long)", ID: "SS2_HR4_cht"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
200	18423992.22	5015167.14	130.05	0	63	75.4	-88.0	0.0	0.0	74.8	0.2	-5.6	0.0	0.0	5.4	0.0	-0.0	0.6	-88.0
201	18423992.22	5015167.14	130.05	0	125	83.1	-88.0	0.0	0.0	74.8	0.6	2.7	0.0	0.0	3.3	0.0	-0.0	1.8	-88.0
202	18423992.22	5015167.14	130.05	0	250	94.1	-88.0	0.0	0.0	74.8	1.6	0.9	0.0	0.0	6.0	0.0	-0.0	10.9	-88.0
203	18423992.22	5015167.14	130.05	0	500	95.7	-88.0	0.0	0.0	74.8	3.0	-2.1	0.0	0.0	8.3	0.0	-0.0	11.8	-88.0
204	18423992.22	5015167.14	130.05	0	1000	95.7	-88.0	0.0	0.0	74.8	5.6	-2.2	0.0	0.0	10.3	0.0	-0.0	7.3	-88.0
205	18423992.22	5015167.14	130.05	0	2000	95.8	-88.0	0.0	0.0	74.8	14.9	-2.2	0.0	0.0	12.6	0.0	-0.0	-4.2	-88.0
206	18423992.22	5015167.14	130.05	0	4000	93.5	-88.0	0.0	0.0	74.8	50.6	-2.2	0.0	0.0	15.2	0.0	-0.0	-44.8	-88.0
207	18423992.22	5015167.14	130.05	0	8000	88.5	-88.0	0.0	0.0	74.8	180.5	-2.2	0.0	0.0	18.0	0.0	-0.0	-182.5	-88.0
208	18424054.12	5015099.72	130.50	0	32	54.9	-88.0	0.0	0.0	75.0	0.1	-5.6	0.0	0.0	5.0	0.0	-0.0	-19.6	-88.0
209	18424054.12	5015099.72	130.50	0	63	75.2	-88.0	0.0	0.0	75.0	0.2	-5.6	0.0	0.0	5.3	0.0	-0.0	0.2	-88.0
210	18424054.12	5015099.72	130.50	0	125	82.9	-88.0	0.0	0.0	75.0	0.7	2.7	0.0	0.0	3.1	0.0	-0.0	1.4	-88.0
211	18424054.12	5015099.72	130.50	0	250	93.9	-88.0	0.0	0.0	75.0	1.7	0.9	0.0	0.0	5.8	0.0	-0.0	10.6	-88.0
212	18424054.12	5015099.72	130.50	0	500	95.5	-88.0	0.0	0.0	75.0	3.1	-2.1	0.0	0.0	8.0	0.0	-0.0	11.5	-88.0
213	18424054.12	5015099.72	130.50	0	1000	95.5	-88.0	0.0	0.0	75.0	5.8	-2.2	0.0	0.0	9.8	0.0	-0.0	7.1	-88.0
214	18424054.12	5015099.72	130.50	0	2000	95.6	-88.0	0.0	0.0	75.0	15.4	-2.2	0.0	0.0	12.1	0.0	-0.0	-4.6	-88.0
215	18424054.12	5015099.72	130.50	0	4000	93.3	-88.0	0.0	0.0	75.0	52.1	-2.2	0.0	0.0	14.7	0.0	-0.0	-46.2	-88.0
216	18424054.12	5015099.72	130.50	0	8000	88.3	-88.0	0.0	0.0	75.0	185.8	-2.2	0.0	0.0	17.4	0.0	-0.0	-187.7	-88.0
217	18423939.43	5015229.81	129.80	0	32	53.9	-88.0	0.0	0.0	74.6	0.1	-5.5	0.0	0.0	5.0	0.0	-0.0	-20.2	-88.0
218	18423939.43	5015229.81	129.80	0	63	74.2	-88.0	0.0	0.0	74.6	0.2	-5.5	0.0	0.0	5.3	0.0	-0.0	-0.3	-88.0
219	18423939.43	5015229.81	129.80	0	125	81.9	-88.0	0.0	0.0	74.6	0.6	2.7	0.0	0.0	3.1	0.0	-0.0	0.9	-88.0
220	18423939.43	5015229.81	129.80	0	250	92.9	-88.0	0.0	0.0	74.6	1.6	0.9	0.0	0.0	5.7	0.0	-0.0	10.1	-88.0
221	18423939.43	5015229.81	129.80	0	500	94.5	-88.0	0.0	0.0	74.6	2.9	-2.1	0.0	0.0	7.9	0.0	-0.0	11.1	-88.0
222	18423939.43	5015229.81	129.80	0	1000	94.5	-88.0	0.0	0.0	74.6	5.5	-2.2	0.0	0.0	9.7	0.0	-0.0	6.8	-88.0
223	18423939.43	5015229.81	129.80	0	2000	94.6	-88.0	0.0	0.0	74.6	14.6	-2.2	0.0	0.0	12.0	0.0	-0.0	-4.4	-88.0
224	18423939.43	5015229.81	129.80	0	4000	92.3	-88.0	0.0	0.0	74.6	49.5	-2.2	0.0	0.0	14.6	0.0	-0.0	-44.1	-88.0
225	18423939.43	5015229.81	129.80	0	8000	87.3	-88.0	0.0	0.0	74.6	176.5	-2.2	0.0	0.0	17.3	0.0	-0.0	-178.9	-88.0
226	18424094.48	5015417.24	128.07	0	32	53.9	-88.0	0.0	0.0	75.7	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-21.0	-88.0
227	18424094.48	5015417.24	128.07	0	63	74.2	-88.0	0.0	0.0	75.7	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-0.9	-88.0
228	18424094.48	5015417.24	128.07	0	125	81.9	-88.0	0.0	0.0	75.7	0.7	2.7	0.0	0.0	2.2	0.0	-0.0	0.6	-88.0
229	18424094.48	5015417.24	128.07	0	250	92.9	-88.0	0.0	0.0	75.7	1.8	0.9	0.0	0.0	4.1	0.0	-0.0	10.4	-88.0
230	18424094.48	5015417.24	128.07	0	500	94.5	-88.0	0.0	0.0	75.7	3.3	-2.1	0.0	0.0	5.2	0.0	-0.0	12.4	-88.0
231	18424094.48	5015417.24	128.07	0	1000	94.5	-88.0	0.0	0.0	75.7	6.3	-2.2	0.0	0.0	5.6	0.0	-0.0	9.2	-88.0
232	18424094.48	5015417.24	128.07	0	2000	94.6	-88.0	0.0	0.0	75.7	16.6	-2.2	0.0	0.0	6.3	0.0	-0.0	-1.7	-88.0
233	18424094.48	5015417.24	128.07	0	4000	92.3	-88.0	0.0	0.0	75.7	56.3	-2.2	0.0	0.0	7.4	0.0	-0.0	-44.8	-88.0
234	18424094.48	5015417.24	128.07	0	8000	87.3	-88.0	0.0	0.0	75.7	200.9	-2.2	0.0	0.0	9.0	0.0	-0.0	-196.0	-88.0
235	18424142.13	5015452.06	124.37	0	32	52.2	-88.0	0.0	0.0	76.0	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-23.0	-88.0
236	18424142.13	5015452.06	124.37	0	63	72.5	-88.0	0.0	0.0	76.0	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-2.8	-88.0
237	18424142.13	5015452.06	124.37	0	125	80.2	-88.0	0.0	0.0	76.0	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-1.3	-88.0
238	18424142.13	5015452.06	124.37	0	250	91.2	-88.0	0.0	0.0	76.0	1.9	0.9	0.0	0.0	4.0	0.0	-0.0	8.6	-88.0
239	18424142.13	5015452.06	124.37	0	500	92.8	-88.0	0.0	0.0	76.0	3.4	-2.1	0.0	0.0	4.9	0.0	-0.0	10.6	-88.0
240	18424142.13	5015452.06	124.37	0	1000	92.8	-88.0	0.0	0.0	76.0	6.5	-2.3	0.0	0.0	5.1	0.0	-0.0	7.5	-88.0
241	18424142.13	5015452.06	124.37	0	2000	92.9	-88.0	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	5.4	0.0	-0.0	-3.3	-88.0
242	18424142.13	5015452.06	124.37	0	4000	90.6	-88.0	0.0	0.0	76.0	58.2	-2.3	0.0	0.0	5.9	0.0	-0.0	-47.2	-88.0
243	18424142.13	5015452.06	124.37	0	8000	85.6	-88.0	0.0	0.0	76.0	207.5	-2.3	0.0	0.0	6.8	0.0	-0.0	-202.4	-88.0
244	18424171.73	5015470.10	122.64	0	32	48.8	-88.0	0.0	0.0	76.1	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-26.6	-88.0
245	18424171.73	5015470.10	122.64	0	63	69.1	-88.0	0.0	0.0	76.1	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-6.5	-88.0
246	18424171.73	5015470.10	122.64	0	125	76.8	-88.0	0.0	0.0	76.1	0.7	2.7	0.0	0.0	2.1	0.0	-0.0	-4.9	-88.0
247	18424171.73	5015470.10	122.64	0	250	87.8	-88.0	0.0	0.0	76.1	1.9	0.9	0.0	0.0	3.9	0.0	-0.0	4.9	-88.0
248	18424171.73	5015470.10	122.64	0	500	89.4	-88.0	0.0	0.0	76.1	3.5	-2.1	0.0	0.0	4.8	0.0	-0.0	7.0	-88.0
249	18424171.73	5015470.10	122.64	0	1000	89.4	-88.0	0.0	0.0	76.1	6.6	-2.3	0.0	0.0	4.9	0.0	-0.0	4.0	-88.0
250	18424171.73	5015470.10	122.64	0	2000	89.5	-88.0	0.0	0.0	76.1	17.5	-2.3	0.0	0.0	5.0	0.0	-0.0	-6.9	-88.0
251	18424171.73	5015470.10	122.64	0	4000	87.2	-88.0	0.0	0.0	76.1	59.3	-2.3	0.0	0.0	5.1	0.0	-0.0	-51.2	-88.0
252	18424171.73	5015470.10	122.64	0	8000	82.2	-88.0	0.0	0.0	76.1	211.5	-2.3	0.0	0.0	5.5	0.0	-0.0	-208.7	-88.0
253	18424182.38	5015479.54	122.10	0	32	43.8	-88.0	0.0	0.0	76.2	0.1	-5.6	0.0	0.0	4.8	0.0	-0.0	-31.7	-88.0
254	18424182.38	5015479.54	122.10	0	63	64.1	-88.0	0.0	0.0	76.2	0.2	-5.6	0.0	0.0	4.8	0.0	-0.0	-11.6	-88.0
255	18424182.38	5015479.54	122.10	0	125	71.8	-88.0	0.0	0.0	76.2	0.8	2.7	0.0	0.0	2.1	0.0	-0.0	-10.0	-88.0
256	18424182.38	5015479.54	122.10	0	250	82.8	-88.0	0.0	0.0	76.2	1.9	0.9	0.0	0.0	4.0	0.0	-0.0	-0.3	-88.0
257	18424182.38	5015479.54	122.10	0	500	84.4	-88.0	0.0	0.0	76.2	3.5	-2.1	0.0	0.0	5.0	0.0	-0.0	1.7	-88.0
258	18424182.38	5015479.54	122.10	0	1000	84.4	-88.0	0.0	0.0	76.2	6.7	-2.3	0.0	0.0	5.2	0.0	-0.0	-1.5	-88.0
259	18424182.38	5015479.54	122.10	0	2000	84.5	-88.0	0.0	0.0	76.2	17.6	-2.3	0.0	0.0	5.6	0.0	-0.0	-12.8	-88.0
260	18424182.38	5015479.54	122.10	0	4000	82.2	-88.0	0.0	0.0	76.2	59.8	-2.3	0.0	0.0	6.4	0.0	-0.0	-57.9	-88.0
261	18424182.38	5015479.54	122.10	0	8000	77.2	-88.0	0.0	0.0	76.2	213.1	-2.3	0.0	0.0	7.5	0.0	-0.0	-217.4	-88.0