



Supporting Document 1-2

Noise Existing Conditions Report

Eastern Ontario Waste Handling Facility Future Development Environmental Assessment

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Moose Creek, Ontario

February 18, 2022

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GFL – Eastern Ontario Waste Handling Facility Landfill Expansion Environmental Assessment Noise – Existing Conditions Study

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EXECUTIVE SUMMARY

This report comprises an Existing Conditions study of noise emissions, as part of an Environmental Assessment of the Eastern Ontario Waste Handling Facility (“EOWHF”) being undertaken by GFL Environmental Inc., for additional landfill disposal capacity as part of the future development of the facility. The existing EOWHF is located southwest of the intersection of Provincial Highways 417 and 138, with a municipal address of 17125 Laflèche Road, Moose Creek, Ontario.

With respect to environmental noise, the existing conditions of the EOWHF were established by measuring the sound emission levels close to each of the sound sources on site during regular operations, measuring the overall sound levels at the neighbouring offsite points of reception (although the facility was not audible or measurable offsite over the background sound in the vicinity), and using computational acoustical modelling based on the measured sound emissions, in order to isolate the sound of the facility from the background sound. Acoustic assessment criteria were established in accordance with the guidelines of the Ontario Ministry of the Environment, Conservation and Parks (“MECP”).

The measurements and analysis demonstrate that the existing sound levels from operations at the EOWHF are well within the applicable MECP limits at the noise-sensitive (residential) points of reception and are less than the characteristic background sound levels in the vicinity. At the closest residence, the sound levels from landfill operations were found to be 42 dBA during daytime hours (defined as 07:00 to 19:00 in the MECP noise guidelines) and 38 dBA in the early morning period (06:30 to 07:00, technically nighttime under MECP guidelines), relative to the limits of 55 dBA and 45 dBA, respectively, during those times. Sound from stationary sound sources at the EOWHF were found to be 25/24 dBA, day/night, at the closest residence, relative to the applicable limits of 51/45 dBA, (day/night). Impulse sounds from occasional bin deliveries by a roll-off truck and from landfill truck tailgates – both of which occur during daytime hours only – were found to be 19 dBAI and 44 dBAI, respectively, relative to applicable the limits of 80 dBAI and 65 dBAI.

The sound levels attributable to the facility, as established in this study, can serve as a baseline to inform the later Noise Effects Assessment Report that will be prepared as part of the EA, once the proposed alternatives for the undertaking have been confirmed.

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1 INTRODUCTION

This report comprises an Existing Conditions study of noise emissions, as part of an Environmental Assessment of the Eastern Ontario Waste Handling Facility (“EOWHF”) being undertaken by GFL Environmental Inc., for additional landfill disposal capacity as part of the future development of the facility. The existing EOWHF is located southwest of the intersection of Provincial Highways 417 and 138, with a municipal address of 17125 Laflèche Road, Moose Creek, Ontario.

Figure 1 shows a scaled area of the facility and surrounding vicinity. The landfill component of the EOWHF is permitted under Environmental Compliance Approval (“ECA”) number A420018 to accept for disposal solid non-hazardous municipal, industrial, commercial, and institutional wastes generated within the Province of Ontario to a maximum rate of 4,000 tonnes per day (landfill and compost material) and 755,000 tonnes per year. Additional waste quantities are accepted at the EOWHF composting operation in accordance with ECA number A420018. Site operations are also governed by the following ECAs:

- Number 8583-B9ZRZ8 (Air & Noise), covering two waste LFG flares;
- Number 5665-8STRV7 (Air & Noise), covering the energy from LFG generating plant;
- Number 9112-9DMTGX (Air), covering composting air emissions;
- Number 7899-CBQP6L (Industrial Sewage Works), covering the treatment and off-site release of landfill leachate.

The proposed undertaking that is the subject of the EA is to provide approximately 15.1 million cubic metres (m³) of additional landfill disposal capacity, on land currently owned by GFL and potentially including an area in the northeast corner of the existing EOWHF. In that respect, the equipment, operations, and tonnages of the facility are not anticipated to change, nor are the sound emission levels of the facility, although some landfilling activities would occur at different locations on site relative to existing conditions.



2 STUDY AREA & SURROUNDING ACOUSTIC ENVIRONMENT

The existing EOWHF is located on the western half of Lot 16 and Lots 17 and 18, Concession 10, Township of North Stormont, United Counties of Stormont, Dundas and Glengarry, near the intersection of Highway 417 and Highway 138. The municipal street address for the facility is 17125 Laflèche Road, Moose Creek, Ontario.

The study area of environmental (i.e., offsite) noise is shown in Figure 1, and encompasses an extent within 1 kilometre of the site boundary. Zoning information from the Township of North Stormont and the Municipality of Nation shows that the lands within the study area to the south of the EOWHF are zoned Area of Natural or Scientific Interest (“ANSI”), and to the east, west and north of the EOWHF are zoned for Agriculture (“A”) use. The zoning bylaws for lands designated for Agriculture allow residential dwellings, which comprise noise-sensitive points of reception, under MECP noise guidelines [1, 2].

Within the study area, nine receptors were identified shown as R1 through R9 in Figure 1. Four of these receptors comprise the closest and most-potentially impacted points of reception, with respect to noise – R1 through R4. Assessment locations have been considered at those four receptors. The other receptors are further and less exposed to the sound of the EOWHF.

The EOWHF encompasses a site area of 189 hectares which includes the following waste management related activities and services:

- 66-hectare landfill site;
- composting facility;
- wastewater treatment facility;
- small vehicle waste drop off;
- landfill gas to energy facility;
- Resource Productivity and Recovery Authority (“RPRA”) tire drop-off; and
- supporting facilities (office, vehicle maintenance).



Waste and compostable materials are received at the EOWHF between the hours of 07:00 and 17:00 on weekdays and 08:00 to 14:00 on Saturday, with occasional extended hours to 18:00 on weekdays¹. On-site landfilling equipment can operate from 06:30 to 18:30 on weekdays and 07:30 to 14:30 on Saturdays². Some of the ancillary operations on site, including the energy from the landfill gas generating facility, the biofilter system associated with the composting facility, and the leachate wastewater treatment plant can operate continuously, day and night.

Potential sources of environmental noise at the facility include:

- trucks bringing waste and compostable materials to the site and taking finished compost away;
- onsite vehicles associated with landfilling operations such as loaders, compactors, bulldozers, and onsite trucks; and
- mechanical “stationary” sources associated with the energy from landfill gas generating facility, the compost facility, and the leachate wastewater treatment facility, such as engines/generators, waste gas flares, compressors, coolers, and fans.

There are two ancillary operations permitted on site, which do not receive or ship materials by heavy trucks and which are acoustically insignificant: the waste transfer and processing station, and the small vehicle waste drop off.

In the eastern quadrant of the study area, between the east boundary of the existing EOWHF and Highway 138, there are existing operations associated with Champion Mushrooms and Manderley Turf Products, on lands that will form part of the future landfill expansion. However, as those

¹ These are current actual operating hours; however, the ECA allows waste receipt on weekdays from 7:00 AM to 6:00 PM and on Saturday from 7:00 AM to 5:00 PM.

² The ECA allows on-site equipment to operate for a half-hour before and after waste-receipt hours to carry out regular site activities such as site preparation and placement and removal of daily/interim cover. The hours provided are based on current operations.



operations are agricultural in nature and not subject to the MECP noise assessment guidelines, they are not considered further in this existing conditions noise study.

3 STUDY METHODOLOGY

This study adopts as its basis the noise assessment guidelines and sound level limits set out by the MECP [1, 2, 3].

Information from GFL confirms that there have been no noise complaints at the EOWHF since operations began in 1999. In order to isolate the sound attributable to the EOWHF from other background sound offsite, a combination of measurements and computational modelling was necessary. The modelling was based on sound emission levels measured close to each operation, activity, or item of equipment on site. In order to determine the overall, cumulative sound levels of all operations on site, a representative operating scenario was determined, on the basis of the information in the previous Conceptual Design Report [4], observations on site, and discussions with GFL management.

Given that the most recent prior inventory of sound emission levels from landfill operations at the EOWHF was measured more than ten years ago [5 – 9], this current study undertook to re-measure the sound emission levels of all equipment and activities currently operating at the site.

In addition to the on-site measurements of sound emissions, background sound levels were monitored in the vicinity of R1 through R4, for the purposes of establishing the applicable sound level limits, in accordance with the guidelines of the MECP.

The modelled sound levels were assessed with respect to the applicable sound level limits, which vary by location, as discussed in Section 5, below.

An investigation of sound from trucking haul routes offsite has not been included as these routes and trucking volumes have long since been established and are not planned to change as part of the proposed landfill expansion.



4 ACOUSTICAL MEASUREMENTS

4.1 Measurement Methods

At the closest points of reception, R1 and R2, sound levels were measured during full operations at the EOWHF, on February 9 and 12, 2021, in terms of the energy-equivalent sound exposure level (“ L_{EQ} ”), in accordance with the methods set out in MECP Publication NPC-103, “Procedures” [3]. The measurement location at R1 was selected to be near the rear of the dwelling in the outdoor amenity area which faces the EOWHF and is shielded from the primary source of background sound, Highway 417 to the north. Conversely, location R2 is situated east of both the EOWHF and the primary source of background sound in the vicinity, Highway 138; so in that case the measurement position was selected to be in line with the west façade of the dwelling, exposed to both of those potential sources of sound. This location is also representative of the sound levels at R3 and R4.

For further characterization of the background sound, automated sound level monitors were deployed at R1 and R2 to measure sound levels continuously for a period of three days. For practical reasons, the automated monitor at R2 had to be placed in front of the west façade of the building, several metres away; accordingly the measured results have been conservatively adjusted by -3 dBA, in post-processing, to account for the possibility of reflections from the building façade.

The sound emission levels of each of the sources associated with landfill activities were measured on February 12, 2021, by measuring sound pressure levels, following typical acoustical engineering methods. The sound pressure levels were converted to sound power emission levels based on the distance from the respective sources at which the sound levels were measured. Likewise, the sound emissions from the mobile equipment on site not associated with landfill activities were measured in terms of sound pressure level, in January 2019, as part of a prior Acoustic Assessment supporting the ECA of the “stationary” noise sources on site. For safety reasons, sound emissions from trucks were not measured on site, but were based on a compendium of past similar sound level measurements by HGC Engineering.

The sound emission levels of the majority of stationary mechanical sources at the site were measured by HGC Engineering in January 2019, using sound intensity techniques, following methods from



ISO Standard 9614-2 [10]. Sound intensity measurement instrumentation has a high inherent ability to reject extraneous sounds originating from outside the measurement control-volume, and can therefore separate the sound emitted by each component. A new flare at the energy from landfill gas generating plant was not yet constructed in 2019, so its sound emissions were measured on February 9, 2021.

4.2 Instrumentation

All instrumentation was within its annual laboratory calibration period and correct calibration was verified in the field before and after the measurements, using a *Brüel & Kjær* model 4231 Acoustic Calibrator. The weather was suitable for outdoor acoustical measurements – little to no wind, no precipitation and moderately cold temperatures.

Sound Pressure Measurements

Some of the sources at the facility were simple in nature and were spaced far enough apart that the sound levels near any one source were not influenced by other sources on site or background sound. Those sources included the outlets of the flares, and the on-site vehicles and landfill equipment. Sound pressure levels were measured near each of these sources, and at the closest residences, R1 and R2, in third octave bands using a *Norsonic* model Nor140 precision integrating sound level analyzer, equipped with an integral ½” condenser microphone.

Background Sound Monitoring

Background sound from road traffic was monitored using two *Norsonic* model Nor140 precision integrating sound level meters, equipped with integral ½” condenser microphones.

Source Sound Intensity Measurements

Except as noted otherwise, above, sound power emission levels for each operating, non-negligible source on site were measured using a *Brüel & Kjær* model 2270 Real Time Frequency Analyzer equipped with a *Brüel & Kjær* model ZH 0632 Sound Intensity Probe incorporating a *Brüel & Kjær* matched intensity microphone pair.



4.3 Measurement Results & Observations

Attended Offsite Measurements

The acoustic environment during the attended measurements was entirely dominated by traffic sound, and the EOWHF was inaudible. In that respect, the attended measurements are representative of the background sound levels from road traffic. Table I lists the attended measurements conducted near locations R1 and R2.

Table I: Attended Offsite Sound Level Measurements, L_{EQ} [dBA]

Location	Date	Time	Sound Level	Observations
R1	9-Feb-21	12:15	55	EOWHF inaudible; traffic sound dominant
	12-Feb-21	13:15	52	
R2	9-Feb-21	10:45	60	
	12-Feb-21	12:30	62	

Automated Monitoring of Background Sound

Figures 2 and 3 show the one-hour background L_{EQ} sound levels monitored at R1 and R2 from February 9 to 12, 2021. The results show the typical diurnal variation in sound levels characteristic of road traffic, and are consistent with the annual noise monitoring reports by others [11, 12]. The background sound levels at R3 have been conservatively derived from those monitored at R2 by adjusting for the additional distance from the centreline of Highway 138 (107 m vs 38 m = -4 dBA), plus an additional -3 dBA to account for a smaller angular exposure to Highway 138 (0 to 90 degrees versus -90 to 90 degrees). As R4 is has similar exposure to Highway 138 as R2, the background sound levels monitored at R2 are also representative of those at R4.

Measured Sound Power Emission Levels

Table A1 in Appendix A lists the sound power emission levels of each sound source at the EOWHF. The location of each sound source is shown in Figures 4 through 4c.

5 ACOUSTIC ASSESSMENT CRITERIA

The MECP has set out separate noise guidelines for landfill operations versus “stationary” noise sources [1, 2]. Landfill operations are defined to include “construction equipment” and “conveyances” – which denotes vehicles bringing landfill waste to the facility while on site, and mobile equipment for moving and handling landfill waste and soil. Stationary sources include mechanical equipment, fixed sound sources, and vehicles operating on or visiting the site, other than those bringing landfill waste or taking away finished compost.

The majority of sound sources at the EOWHF produce sound that is steady or slowly varying in nature, which is defined in the MECP guidelines as “non-impulsive” sound. However, the monthly pick-up of waste bins by a roll-off truck at the RPRA tire drop-off area (source IS-01), and tail-gate impacts during occasional tipping of waste by a dump-truck in the active landfill area (IS-02), produce *impulse sound*, which is defined as a single pressure pulse or a single burst of pressure pulses. Under MECP noise assessment guidelines, non-impulsive sounds and impulse sounds are assessed separately, using two distinct measurement/ evaluation methods. Non-impulsive sounds are measured and assessed using the one-hour L_{EQ} sound level. Impulse sounds are quantified in terms of the Logarithmic-Mean Impulse Sound Level (“ L_{LM} ”), in units of dBAI. (The “I” suffix denotes an impulse sound level.) The MECP Publication, “Noise Guidelines for Landfill Sites” [1], provides impulse sound limits only for pest control devices (such as “bird bangers”), but not other activities. The EOWHF currently uses birds of prey for pest control, so there are no impulse sounds associated with pest control. For the other impulsive sources at the EOWHF (IS-01 and IS-02), this study adopts the MECP limits for general impulse sounds, set out in MECP “Publication NPC-300” [2], as discussed in Section 5.3.

The MECP sound level limits for both landfill activities and stationary sources apply at any neighbouring noise-sensitive points of reception, and are location-specific, varying depending on the characteristic background sound at that location. Specifically, the applicable limit is the greater of the minimum one-hour L_{EQ} background sound level occurring during the hours that the facility is operational, or the applicable “exclusion limit.” The different exclusion limits that apply to landfill operations versus stationary sources are discussed respectively in Sections 5.1 and 5.2, below.



Background sound is defined to include natural sounds, road traffic, and other man-made sounds but to exclude the sound of the facility under assessment. The characteristic background sound level can be determined through automated long-term measurement for a period of at least 48 hours, or by computational modelling based on road traffic volume counts, in cases where the background sound is dominated by road traffic. Given that no sound from the EOWHF was audible or measurable at the points of reception, the monitored background sound levels discussed in Section 4 were used to establish the applicable sound level limits. Table II lists the minimum one-hour L_{EQ} sound levels measured during the monitoring period at R1 and R2, along with the levels at R3 determined from those at R2, by adjusting for the additional distance setback from Highway 138, and angle of exposure. The levels at R2 are also representative of those at R4.

**Table II: Minimum One-Hour
Background Sound Levels, L_{EQ} [dBA]**

Location	Daytime	Evening	Nighttime
R1	51	49	44
R2, R4	63	59	54
R3	56	51	47

The MECP noise assessment guidelines require that the sound levels of the facility be assessed assuming a “predictable worst case” operating scenario, which is defined as an hour when typically busy operation of the facility could coincide with an hour of low background sound.

5.1 Landfill Operations

Sound level limits for landfill sites are set out in the MECP publication, “Noise Guidelines for Landfill Sites” [1]. The normal landfill operations at EOWHF entail vehicles and mobile equipment, which are defined in the guideline as “conveyances” and “construction equipment,” for which the exclusion limits of 55 dBA during daytime hours (07:00 to 19:00), and 45 dBA during the evening and night (19:00 to 23:00 and 23:00 to 07:00) apply. Table III shows the exclusion limits, minimum background sound levels and applicable sound level limits at the points of reception, for landfill operations.

Table III: Sound Level Limits for Landfill Operations
 L_{EQ} , [dBA] (Day / Evening / Night)

Location	Minimum Background Sound Level	Exclusion Limits	Applicable Limits [1]
R1	51 / 49 / 44	55 / 45 / 45	55 / 49 / 45
R2	63 / 59 / 54		63 / 59 / 54
R3	56 / 51 / 47		56 / 51 / 47
R4	63 / 59 / 54		63 / 59 / 54

5.2 Stationary Sources

MECP Publication NPC-300 is the applicable guideline for establishing sound level limits for stationary sources. For non-impulsive sound, the exclusion limits depend on the character of the acoustical environment at the point of reception, categorized as Class 1, 2, 3, or 4. Because the acoustic environment at the points of reception neighbouring the EOWHF are dominated by road traffic on Highways 417 and 138 during both daytime and nighttime hours, the vicinity is best categorized as a Class 1 area. The exclusion limits applicable in a Class 1 area for stationary sound sources are 50 dBA during daytime and evening hours (07:00 to 23:00) and 45 dBA at night (23:00 to 07:00). Table IV shows the exclusion limits, minimum measured background sound levels and applicable sound level limits at the points of reception, for stationary sources.

Table IV: Sound Level Limits for Stationary, Non-Impulsive Sources
 L_{EQ} , [dBA] (Day / Evening / Night)

Location	Minimum Background Sound Level	Exclusion Limits	Applicable Limits [2]
R1	51 / 49 / 44	50 / 50 / 45	51 / 50 / 45
R2	63 / 59 / 54		63 / 59 / 54
R3	56 / 51 / 47		56 / 51 / 47
R4	63 / 59 / 54		63 / 59 / 54

5.3 Impulse Sounds

Under NPC-300, the limits for impulse sounds differ depending on how frequently the impulses could occur. Both sources of impulse sound at the EOWHF are associated with trucks visiting the site, which occurs only during daytime hours, in which case only the daytime limits are relevant. For infrequent impulses, occurring no more than once per hour, the daytime exclusion limit at a point of reception is 80 dBAI. For frequent impulses, potentially occurring 9 or more times per hour, the exclusion limit for impulse sounds is numerically the same as that for non-impulsive sound – i.e., 50 dBAI. For impulses occurring at a rate between 2 and 8 per hour, there is a stepped set of limits, which varies between the maximum and minimum limits, depending on the number of impulses that could occur per hour, as listed in Table V.

Table V: Class 1 Daytime Exclusion Limits for Impulse Sounds, L_{LM} , [dBAI]

Number of Impulses per hour	Applicable Exclusion Limit [2]
9 or more	50
7 to 8	55
5 to 6	60
4	65
3	70
2	75
1	80

The truck that drops off and picks up the roll-off bin at the RPRA area visits the site only once per month. Based on measurements and observations of roll-off trucks in operation, a single impulse can occur during pick up, when the bin locks into place on the truck bed. Therefore, a maximum of one impulse per hour can be expected from this activity (source ID IS-01), and the applicable exclusion limit is 80 dBAI.

Similarly, dump trucks bringing waste to the tipping face only visit the facility occasionally – the majority of landfill trucks use a hydraulic ram to push the waste out of the back of the truck, which produces negligible sound. One dump truck was observed during the site visit on February 12, 2021.

During dumping of waste, three impulses from the banging tailgate were observed. From past observations of dump trucks at multiple other sites, it is typically the case that zero to four impulses could occur from the tailgate, with a typical maximum of three to four. On that basis the applicable exclusion limit for the tailgate impulses (source IS-02) is 65 dBAI.

Table VI lists the applicable limits for impulse sound levels from the EOWHF.

Table VI: Impulse Sound Level Limits, L_{LM} , [dBAI] (Day-Evening / Night)

Location	Min Daytime Background Sound Level	Roll-off Truck (IS-01)		Tailgate Impulses (IS-02)	
		Exclusion Limit [2]	Applicable Limit [2]	Exclusion Limit [2]	Applicable Limit [2]
R1	51	80	80	65	65
R2	63				
R3	56				
R4	63				

6 COMPUTATIONAL ACOUSTICAL MODELLING

6.1 Modelling Methods & Input Parameters

The sound power emission levels were used as input (in full-octave frequency bands), along with the geometry and topography of the site and surrounding area, to create a 3-dimensional, computational acoustical model of the site and vicinity. The model was developed using Cadna/A software (version 2021 MR1), which is a computer implementation of ISO Standard 9613-2 [13] and which accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures (or by topography and foliage where applicable) and is accepted by the MECP for modelling outdoor sound propagation.

Contours of existing on-site topography were obtained from GFL, with a vertical resolution of 0.3 metres. For the topography external to the site, Ontario Base Maps were purchased in digital format, with a vertical resolution of 5 metres.

Ground attenuation was assumed to be spectral for all sources, with the ground factor (G) assumed to be 1.0, globally, representative of primarily grass covered areas and soft soil, 0.25 for paved areas at

the facility and 0.7 for unpaved gravel areas. The temperature and relative humidity were assumed to be 10° C and 70%, respectively.

The modelling considered first order acoustical reflections, the sufficiency of which was verified via an iterative convergence analysis. Absorptive characteristics were applied to the onsite buildings, typically with values representative of corrugated steel or brick/concrete block.

Sound sources associated with the landfill operations have been given an identifier of the form, “NL-##.” For stationary sources that are also sources of air emissions, the source identifiers (EF-1, EF-2, G1 through G8, and SF) follow those in the 2018 Emission Summary and Dispersion Modelling report [14], prepared to support an application for an ECA (since granted in March 2019 – number 8583-B9ZRZ8). The remaining non-impulsive stationary sources were given an identifier of the form, “NS-##”, consistent with the 2019 Acoustic Assessment Report [15] prepared by HGC Engineering to support the application for ECA number 8583-B9ZRZ8. Impulsive sources have been given an identifier of the form, “IS-##.”

Based on the 2018 Conceptual Design Report [4], the Noise Effects Assessment Report [6], information provided by GFL, and on-site observations, the following equipment and operations were assumed to be active during a predictable worst case hour.

- A maximum of 33 visits by landfill trucks (NL-01 and NL-02);
- Three rock trucks (NL-03);
- Two landfill compactors (NL-04);
- Two bulldozers (NL-05 and NL-06);
- Two loaders (NL-07 and NL-08);
- Two excavators (NL-09 and NL-10);
- A portable grinder that periodically operates on site (NL-11);
- A trommel/screener for compost (NL-12);
- A compost windrow turner (NL-13);
- RPRA bin drop-off/pickup, non-impulsive sound (NL-14);
- One water truck (occasional and acoustically insignificant, not modelled);
- Two landfill gas flares and associated equipment (NS-01 through NS-14);



- Four landfill gas electrical generators and associated equipment (NS-15 through NS-26);
- Leachate wastewater treatment facility (NS-39 through NS-45);
- A maximum of 12 visits by trucks to the compost facility (NS-46 and NS-47);
- Composting operations (NS-50 to NS-54);
- Impulse sounds from RPRA bin pickup (IS-01);
- Impulse sounds from dump truck tail gates (IS-02).

All items of mechanical equipment and vehicles or mobile sources operating essentially in a fixed area were modelled as point sources of sound (shown as crosses, in Figures 4 through 10). Items of mobile equipment that were observed to operate over a wider area were modelled as extended area sources (NL-04 through NL-08). Likewise, the sound from the odour control blowers transmitting through the lightweight walls of the composting building was modelled as an area source (NS-55). Truck movements on site were modelled as line sources, with time-weighting factors based on the number of trucks per hour and the speed limit of 19 km/h which is enforced on site.

Of the maximum 33 landfill trucks that may visit the site in a busy hour, 27 of those trucks per hour (source NL-01) were assumed to travel to and from the primary (central) tipping location and 6 per hour (NL-02) were assumed to travel to the secondary (northwest) tipping location, based on observations on site. As noted in Section 2, above, the EOWHF accepts landfill trucks during daytime hours only, although the on-site mobile landfill equipment can begin operations at 06:30 on weekdays. In that respect, the only nighttime operation of the landfill (as shown in the subsequent tables of results and assessment) is the on-site mobile equipment in the half hour between 06:30 and 07:00. The impulse sounds (IS-01 and IS-02) are associated with trucking activities, and therefore are included only in the modelling of daytime operations.

Similarly, the compost trucks (NS-46) travelling between the front gate and the compost area, visit the site during daytime hours only, at a maximum of 12 trucks in a busy hour.

One of the two existing flares, EF-01, is not currently in operation and is not planned to operate in the foreseeable future, so it has not been included in the current analysis. The composting operations



occur during daytime and evening hours only. All other stationary sources of sound on site were assumed to operate steadily during daytime, evening, and nighttime hours.

6.2 Modelling Results

Table VII lists the sound levels from landfill operations, stationary sources, and impulses at the points of reception, as determined via acoustical modelling based on the measured sound emission levels. Figures 5 and 6 show the daytime and nighttime sound levels from landfill operations (there are no landfill operations during evening hours). Figures 7 and 8 show the daytime and evening-nighttime sound levels from stationary sources (nighttime and evening sound levels are essentially the same, from the ensemble of stationary sources). Figures 9 and 10 show the impulse sound levels from the RPRA bin pickup and dump truck tailgate impacts, which occur only during daytime hours. Modelling output results are presented in Appendices B and C.

Table VII: EOWHF Sound Levels at the Points of Reception

Location	Landfill LEQ [dBA] Day / Eve / Night	Stationary Sources LEQ [dBA] Day / Eve / Night	Daytime Impulses RPRA Bin Pickup LLM [dBAI]	Daytime Impulses Tailgates LLM [dBAI]
R1	42 / -- / 38	25 / 25 / 24	19	44
R2	36 / -- / 28	29 / 29 / 24	20	32
R3	36 / -- / 30	29 / 29 / 25	21	33
R4	35 / -- / 30	27 / 27 / 24	20	34

7 ACOUSTIC ASSESSMENT

Site visits were made by HGC Engineering to the study area on February 9 and 12, 2021 (in addition to prior visits in 2019), to investigate the existing acoustic environment. In the vicinity of the residences, the background sound was dominated by the relatively heavy volumes of traffic on Highways 417 and 138; operations at the EOWHF were not audible offsite.

7.1 Landfill Operations

Table VIII presents an assessment of sound levels from landfill operations. At all points of reception, the sound levels are well within the applicable limits.

Table VIII: Assessment of Sound Levels from Landfill Operations, L_{EQ} [dBA]

Location	Sound Levels Day / Eve / Night	Sound Level Limits [1] Day / Eve / Night	Within Limits?
R1	42 / -- / 38	55 / 49 / 45	Y / Y / Y
R2	36 / -- / 28	63 / 59 / 54	Y / Y / Y
R3	36 / -- / 30	56 / 51 / 47	Y / Y / Y
R4	35 / -- / 30	63 / 59 / 54	Y / Y / Y

7.2 Stationary Sources

Table IX presents an assessment of sound levels from the stationary sources at EOWHF. At all points of reception, the sound levels are well within the applicable limits.

Table IX: Assessment of Sound Levels from Stationary Sources, L_{EQ} [dBA]

Location	Sound Levels Day / Eve / Night	Sound Level Limits [2] Day / Eve / Night	Within Limits?
R1	25 / 25 / 24	51 / 50 / 45	Y / Y / Y
R2	29 / 29 / 24	63 / 59 / 54	Y / Y / Y
R3	29 / 29 / 25	56 / 51 / 47	Y / Y / Y
R4	27 / 27 / 24	63 / 59 / 54	Y / Y / Y

7.3 Impulse Sounds

Table X presents an assessment of impulse sound levels. At all points of reception, the sound levels are well within the applicable limits.

Table X: Assessment of Impulse Sound Levels, L_{LM} [dBA]

Location	Sound Levels IS-01 / IS-02	Sound Level Limits IS-01 / IS-02 [2]	Within Limits?
R1	19 / 44	80 / 65	Y / Y
R2	20 / 32		Y / Y
R3	21 / 33		Y / Y
R4	20 / 34		Y / Y



8 CONCLUSIONS

The sound level measurements and analysis in this report document the existing conditions with respect to environmental sound levels of the EOWHF and show that those levels are well within the applicable limits of the MECP.



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6. RWDI, “Noise Effects Assessment Report – Eastern Ontario Waste Handling Facility – Landfill Expansion Environmental Assessment – GFL Environmental Inc.,” May 11, 2018.
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9. Golder Associates Inc., “Acoustic Assessment – Lafleche Environmental Inc., Moose Creek, Ontario,” February, 2009.
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13. International Organization for Standardization, Standard 9613-2, “Acoustics – Attenuation of Sound during Propagation Outdoors – Part 2: General Method of Calculation,” Switzerland, 1996.
14. Comcor Environmental Limited, “Emission Summary & Dispersion Modelling Report – Eastern Ontario Waste Handling Facility – Landfill Gas Flaring Facility – Moose Creek, Ontario,” September 21, 2018.
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LIMITATIONS

This report was prepared by HGC Engineering solely for use by GFL Environmental Inc. and is to be used exclusively for the purposes set out in the report. Any conclusions and/or recommendations herein reflect the judgment of HGC Engineering based on information available at the time of preparation, and were developed in good faith on information provided by others, as noted in the report, which has been assumed to be factual and accurate. Any changes in conditions or information becoming known after the date of this report could affect the results and conclusions presented.

Any use, reliance or decisions made based on this report by any third party are the responsibilities of such third parties. HGC Engineering accepts no responsibility for damages, if any, suffered by any third party that may arise through the use, reliance or decisions made based on this report. If a third party requires reliance on this report, written authorization from HGC Engineering must be sought and granted. HGC Engineering disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.



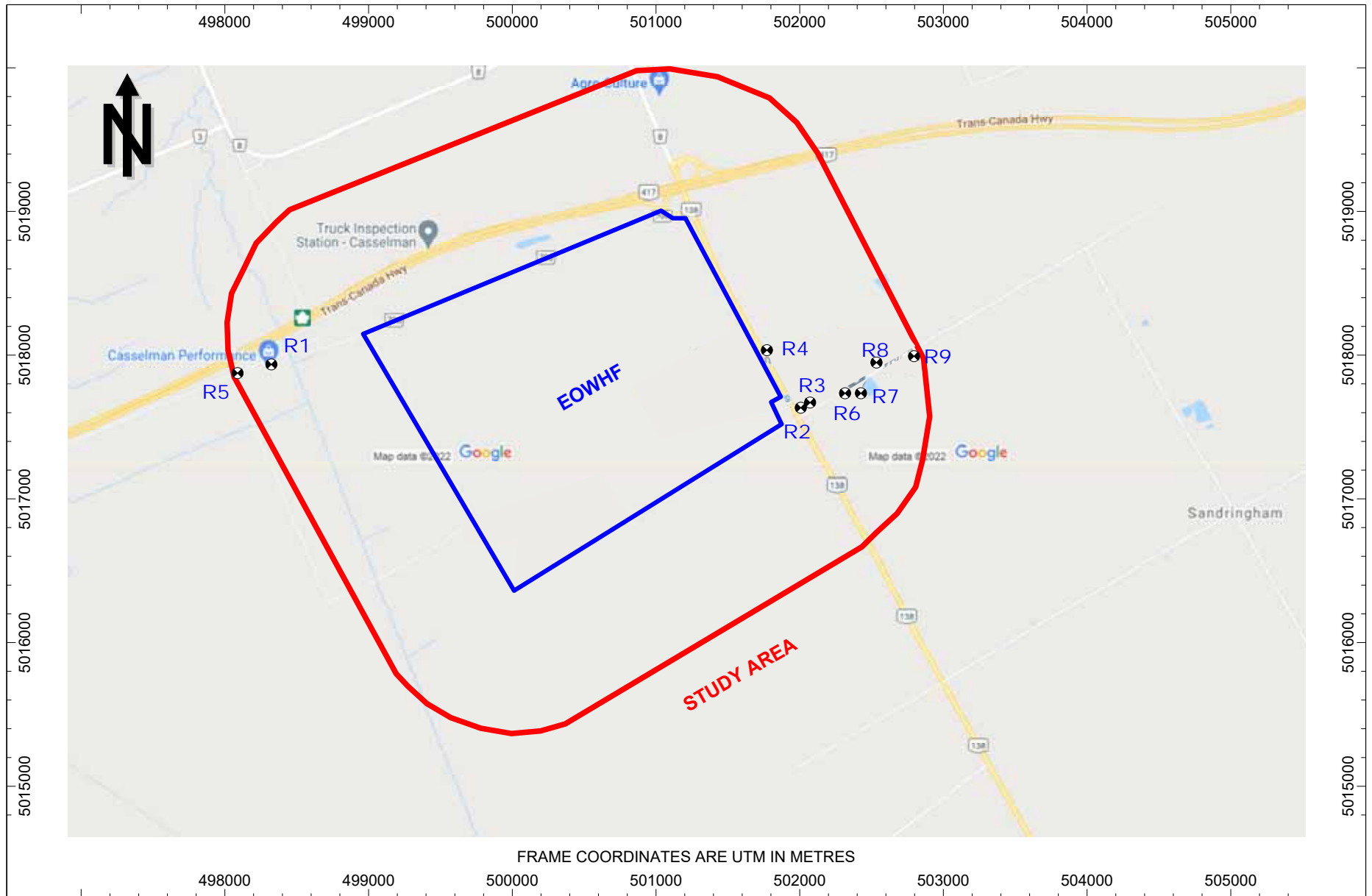


Figure 1: Area Map Showing Site, Study Area, and Points of Reception



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Figure 2: Monitored Background Sound at R1 -- February 9 to 12, 2021

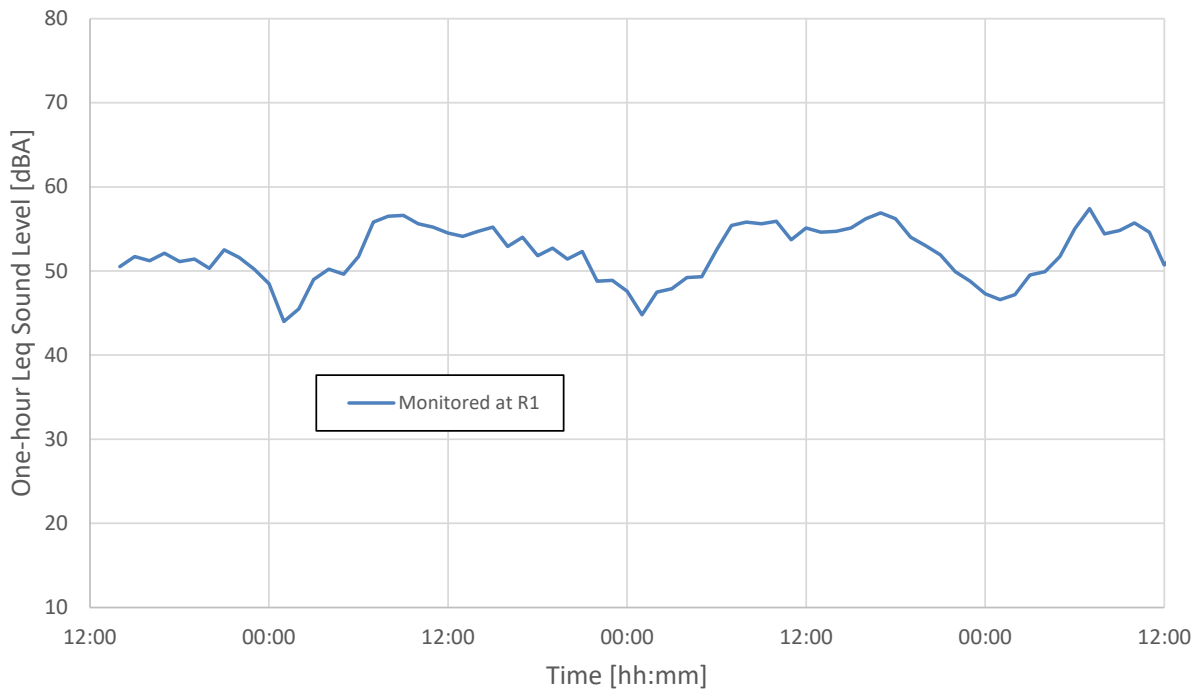


Figure 3: Monitored Background Sound at R2, R3 & R4 -- February 9 to 12, 2021

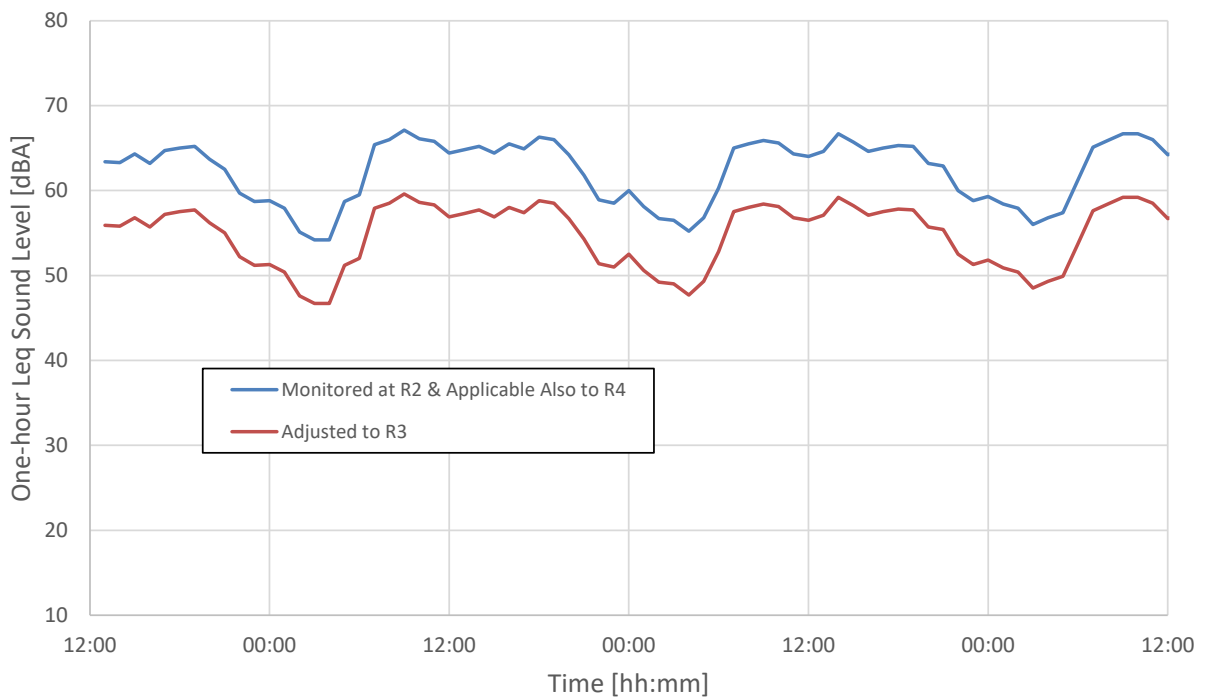




Figure 4: Source Locations -- Overview

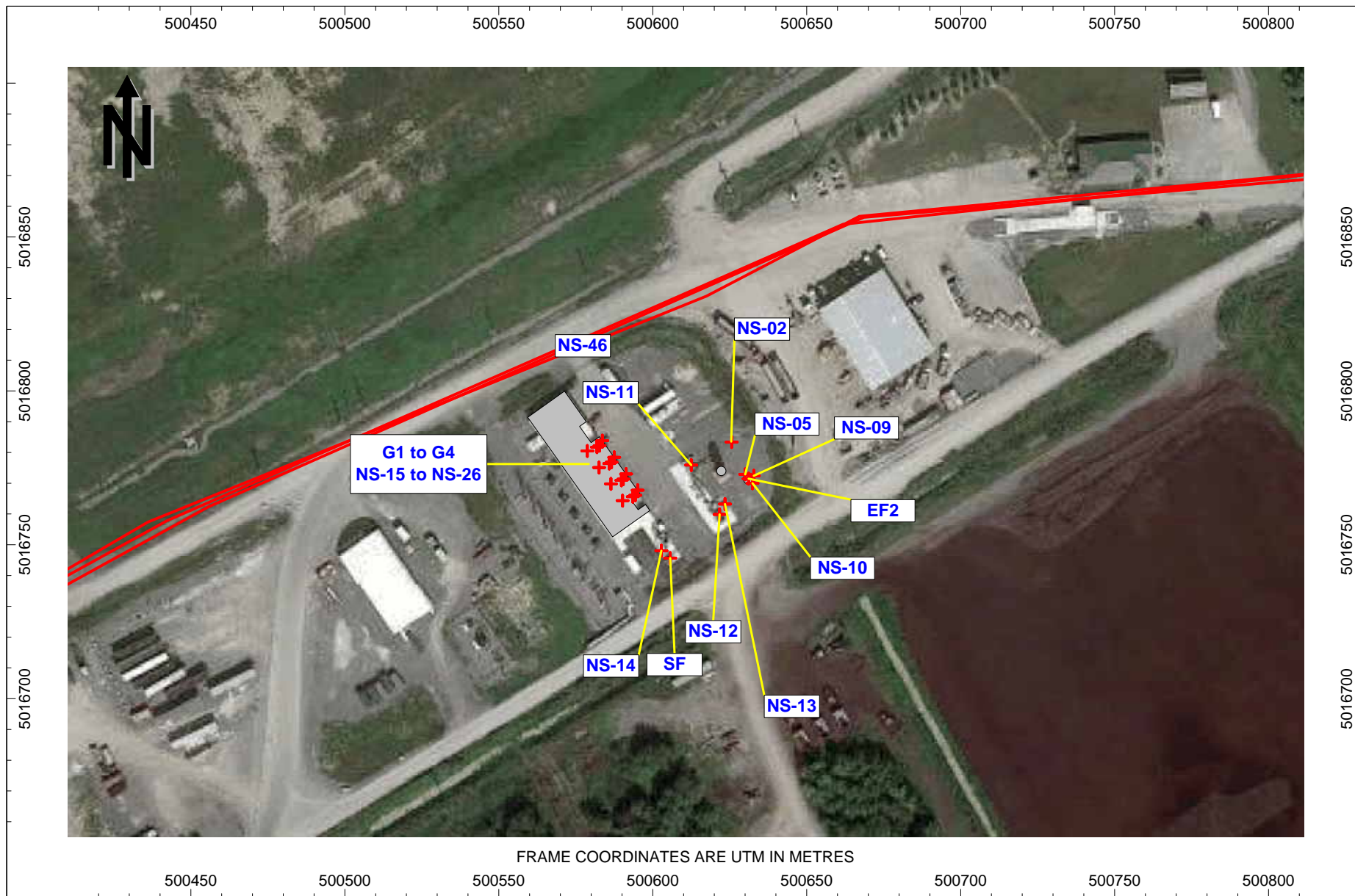


Figure 4a: Source Locations -- LFG Flares & Generating Plant



Figure 4b: Source Locations -- Leachate Waste Water Treatment Plant



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Figure 4c: Source Locations -- Composting Operations



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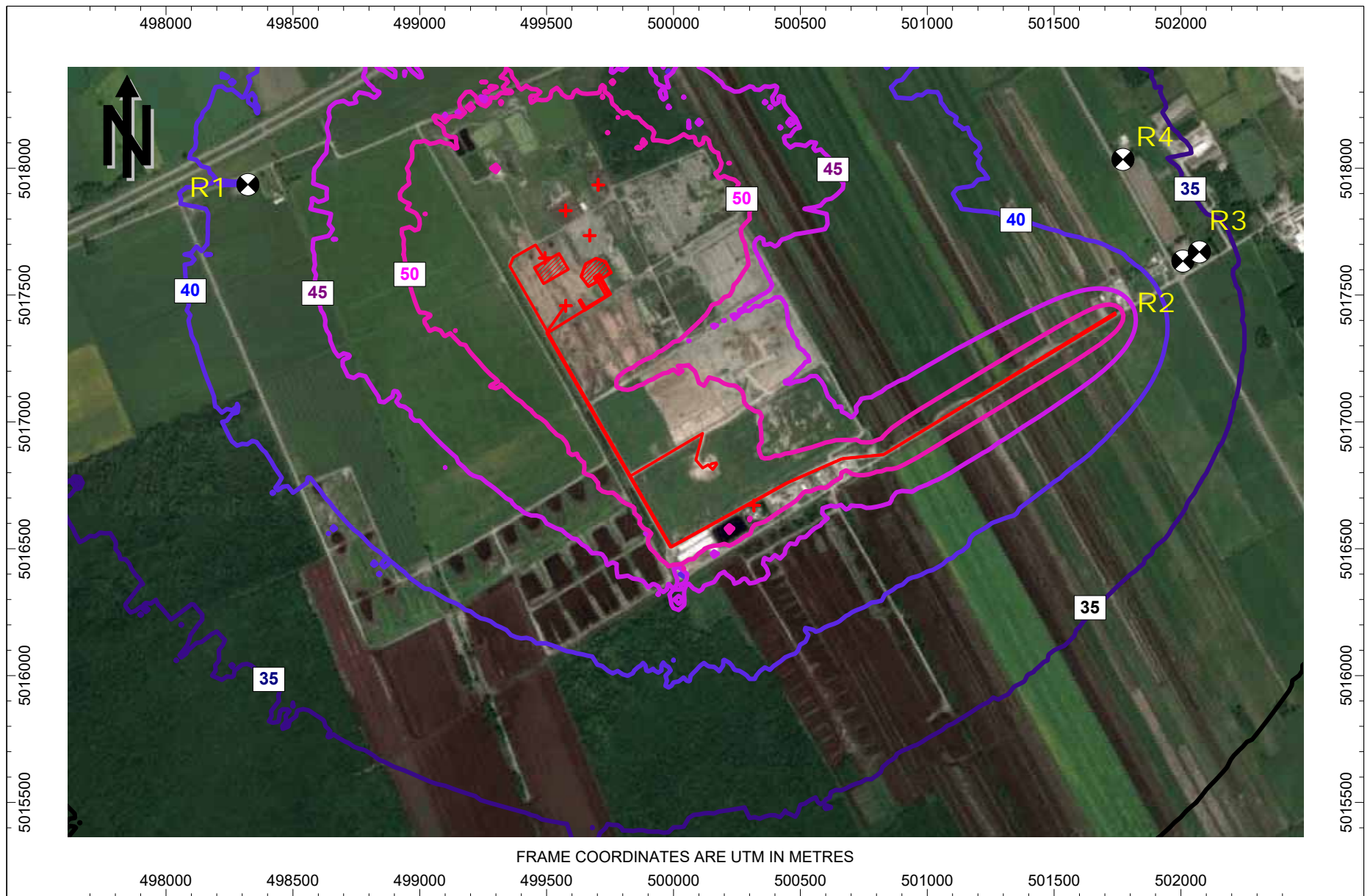


Figure 5: Daytime Sound Levels, Landfill Operations, Leq [dBA]
Contours at 4.5 m Above Grade

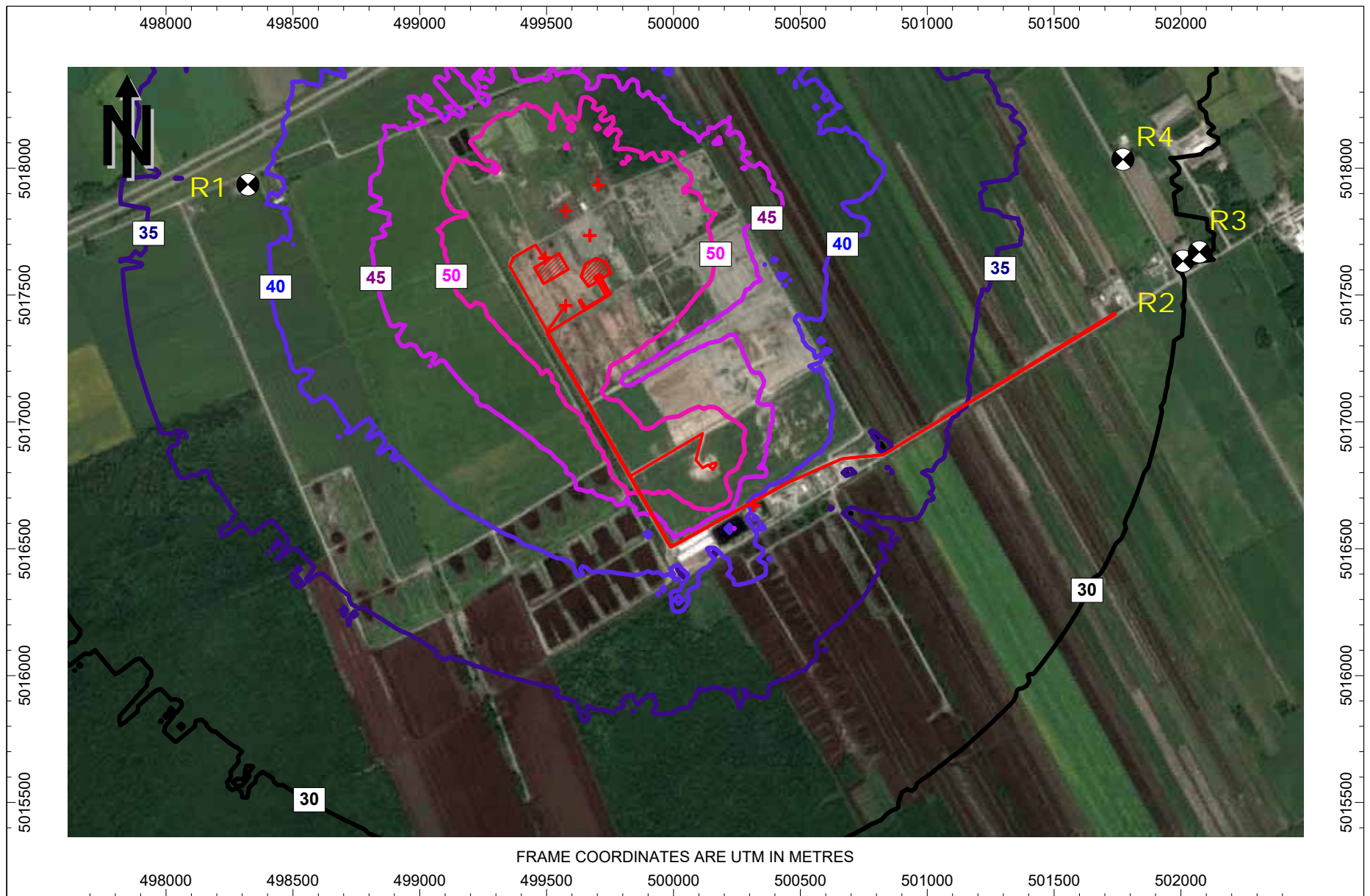


Figure 6: Nighttime Sound Levels, Landfill Operations, Leq [dBA]
Contours at 4.5 m Above Grade



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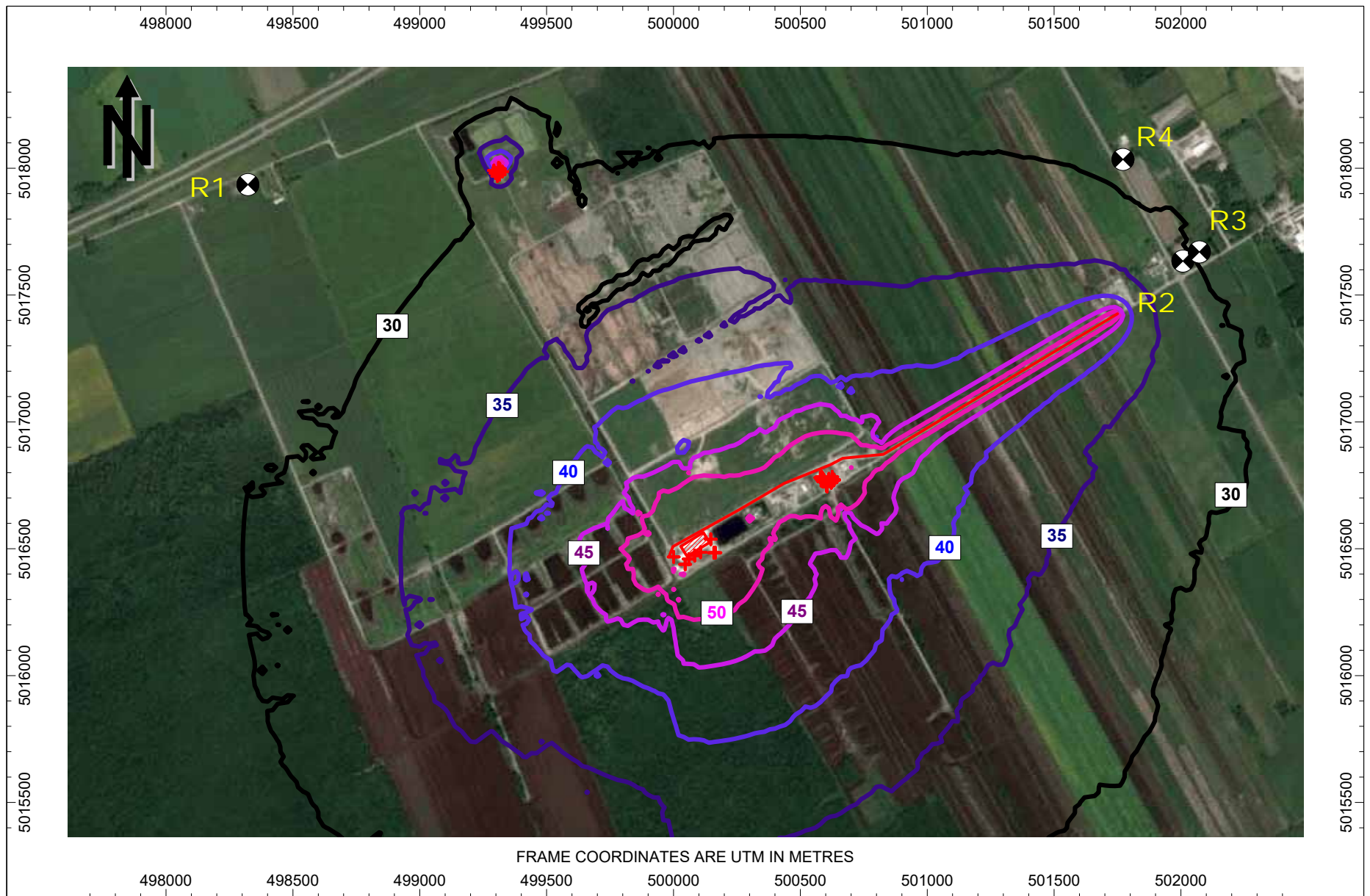


Figure 7: Daytime Sound Levels, Stationary Sources, Leq [dBA]
Contours at 4.5 m Above Grade

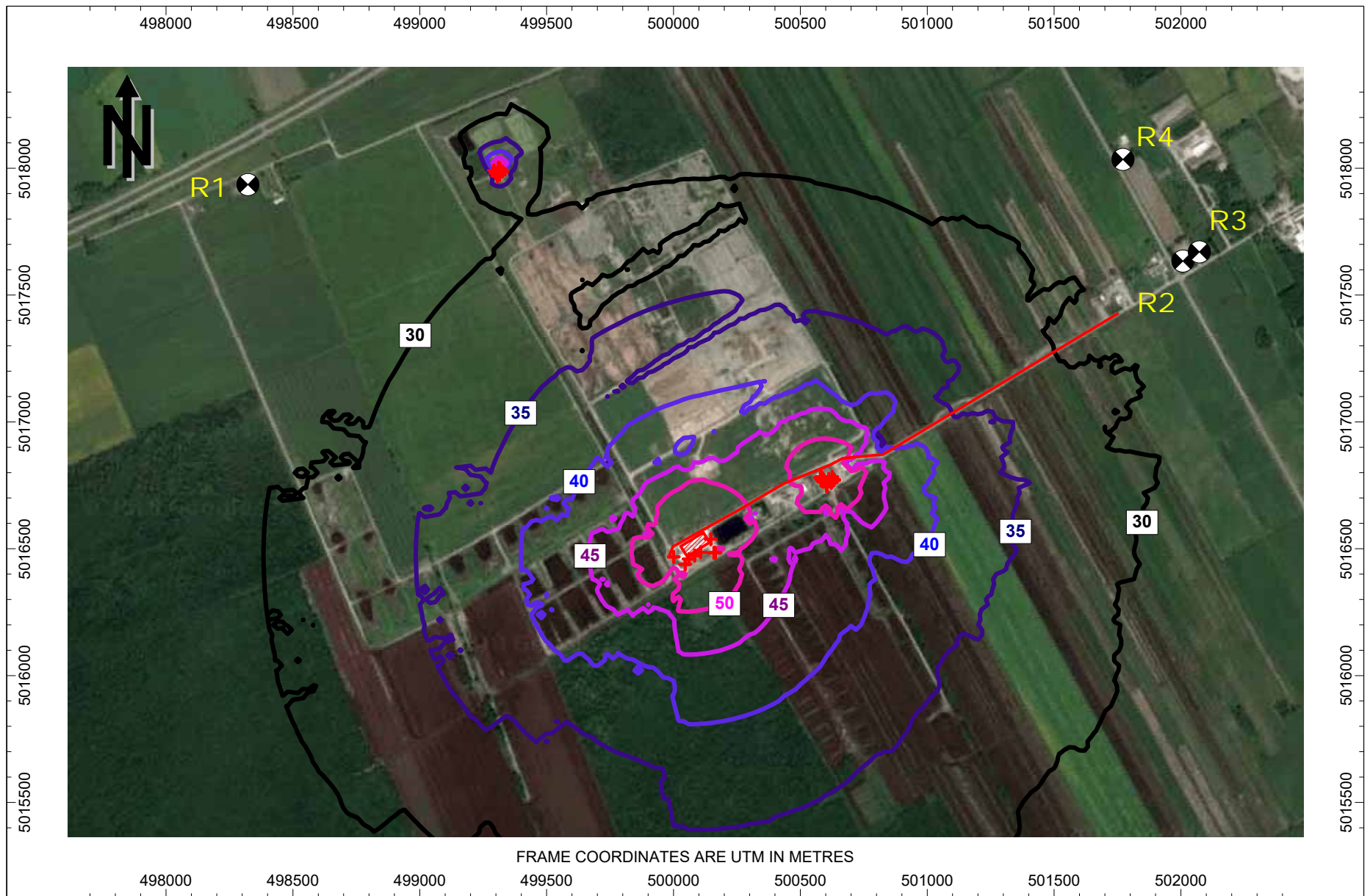


Figure 8: Nighttime Sound Levels, Stationary Sources, Leq [dBA]
Contours at 4.5 m Above Grade

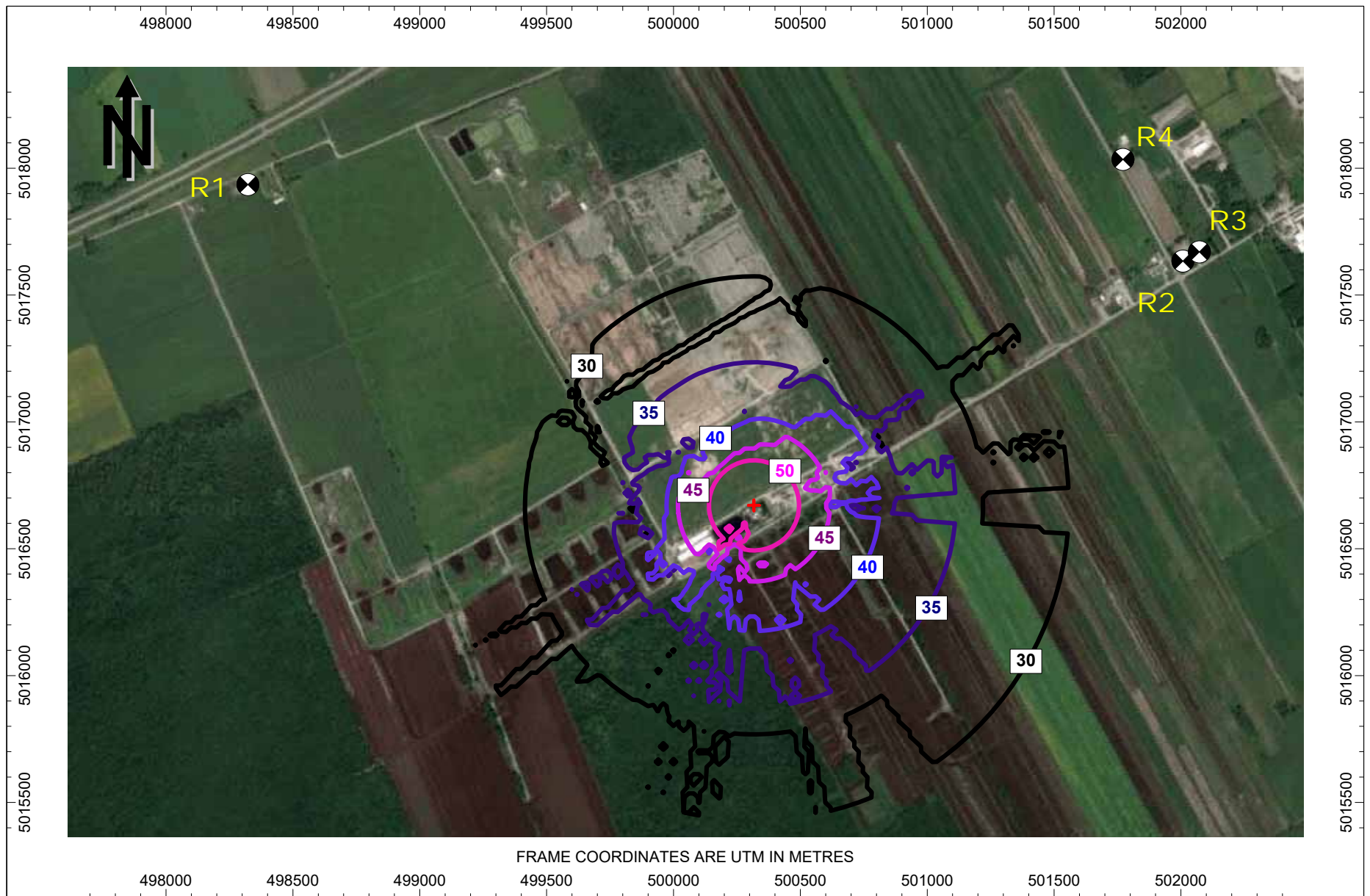


Figure 9: Daytime Impulse Sound Levels, RPR Bin Pickup, LLM [dBAI]
Contours at 4.5 m Above Grade



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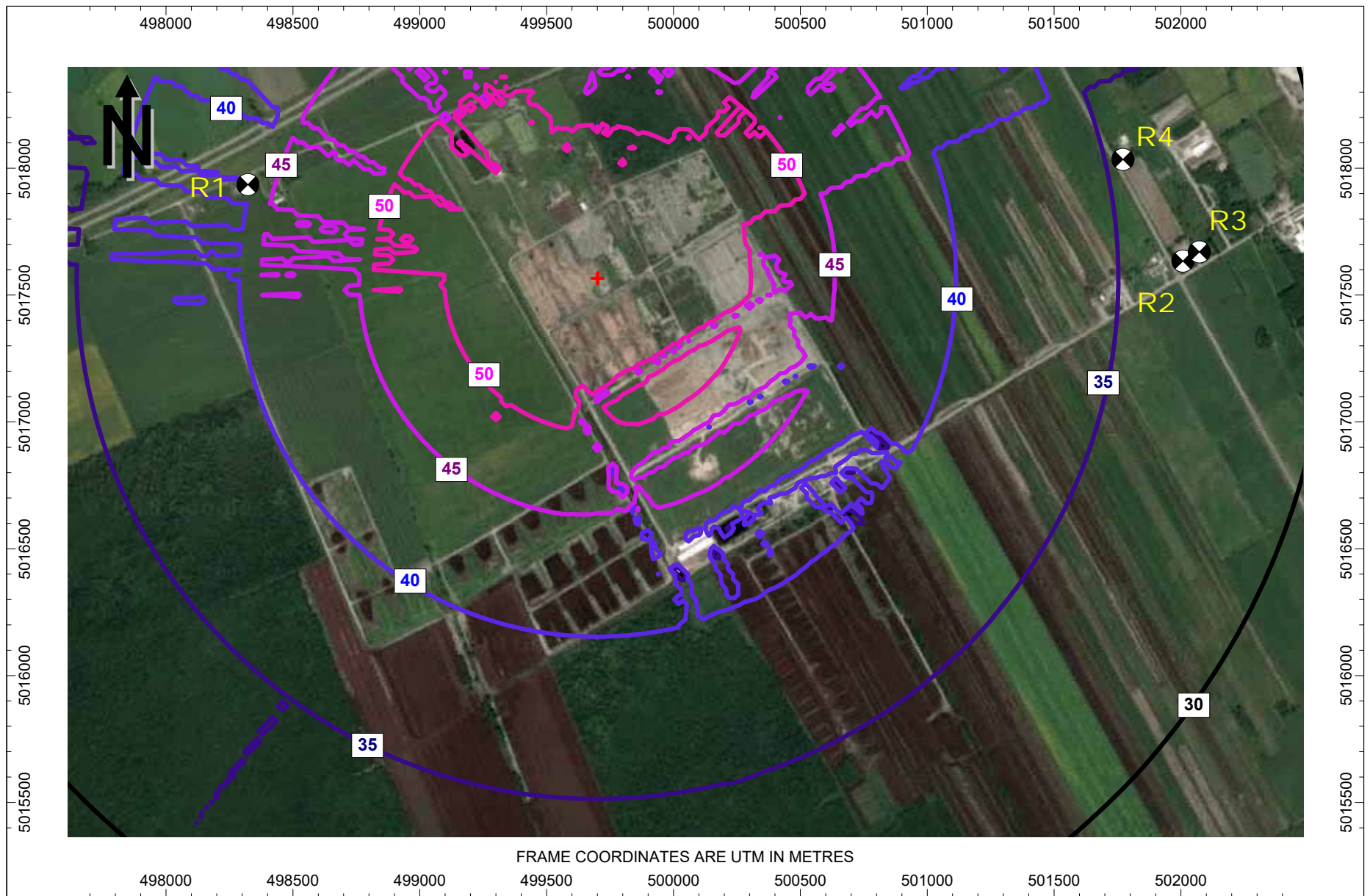


Figure 10: Daytime Impulse Sound Levels, Tail Gate Impacts, LLM [dBA]
Contours at 4.5 m Above Grade



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APPENDIX A

Sound Emission Levels



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Table A1: Source Sound Power Emission Levels

Source ID	Source Description	Sound Power Level [dBA re 10 ⁻¹² W]
EF2	Enclosed Flare 2 -- 4500 CFM	92
G1	LFG Generator 1 Combustion Exhaust	93
G2	LFG Generator 2 Combustion Exhaust	93
G3	LFG Generator 3 Combustion Exhaust	93
G4	LFG Generator 4 Combustion Exhaust	93
SF	Siloxane Flare	77
NL-01	Landfill Trucks to Primary Tipping Location (each)	101
NL-02	Landfill Trucks to Secondary Tipping Location (each)	101
NL-03	Rock Trucks (Sum of 3)	112
NL-04	Compactors (Sum of 2)	117
NL-05	Dozer at Primary Tipping Area	106
NL-06	Dozer at Secondary Tipping Area	116
NL-07	Loader	103
NL-08	Loader	110
NL-09	Excavator	105
NL-10	Excavator	104
NL-11	Vermeer Grinder	117
NL-12	Wildcat Trommel/Screenner	109
NL-13	Compost Windrow Turner	118
NL-14	RPRA Bin Drop-off/Pickup	101
NS-02	LFG Flare #2 Blower & Motor	97
NS-05	LFG Flare #2 NW Induction Air Intake	79
NS-06	LFG Flare #2 SW Induction Air Intake	79
NS-09	LFG Flare #2 NE Induction Air Intake	79
NS-10	LFG Flare #2 SW Induction Air Intake	79
NS-11	LFG Blower Skid	101
NS-12	LFG Chiller	92
NS-13	Dry Cooler	87
NS-14	Siloxane Flare Blower & Motor	82
NS-15	LFG Generator 1 Exhaust Duct Expansion Joint	93
NS-16	LFG Generator 2 Exhaust Duct Expansion Joint	93
NS-17	LFG Generator 3 Exhaust Duct Expansion Joint	93
NS-18	LFG Generator 4 Exhaust Duct Expansion Joint	93
NS-19	LFG Generator 1 Remote Radiator	81
NS-20	LFG Generator 2 Remote Radiator	81
NS-21	LFG Generator 3 Remote Radiator	81
NS-22	LFG Generator 4 Remote Radiator	81
NS-23	LFG Generator 1 Ventilation Outlet	73
NS-24	LFG Generator 2 Ventilation Outlet	73



Source ID	Source Description	Sound Power Level [dBA re 10 ⁻¹² W]
NS-25	LFG Generator 3 Ventilation Outlet	73
NS-26	LFG Generator 4 Ventilation Outlet	73
NS-39	WTP -- Wall Exhauster EF-1a	54
NS-40	WTP -- Wall Exhauster EF-1b	54
NS-41	WTP -- Wall Exhauster EF-1c	54
NS-42	WTP -- Wall Exhauster EF-1d	54
NS-43	WTP -- Wall Exhauster EF-1e	54
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	78
NS-45	WTP -- Blower Intake	89
NS-46	Compost Trucks in/out (each)	103
NS-47	Compost -- Trucks Unloading	102
NS-48	Compost -- Two FELs at Intake	100
NS-49	Compost -- FEL at East End of Bldgs	100
NS-50	O/H Door Screener Building	87
NS-51	Compost -- Truck Idling at Screener	99
NS-52	Compost -- West Bio-Blower (Housing & Motor)	102
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	94
NS-54	Compost -- East Bio-Blower (Housing & Motor)	97
NS-55	Compost -- Indoor Blower Sound thru Walls	111
IS-01	Impulse During OTS Pickup	108
IS-02	Impulse From Dump Truck Tail Gate (Occasional)	125



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APPENDIX B

Calculation Results – Overall A-weighted Format

In the following tables of calculation results, the column headings for the various sound attenuation mechanisms follow the terminology of ISO Standard 9613-2. LxD, LxE, and LxN are the A-weighted, one-hour energy-equivalent source sound power levels for day, evening, and night, respectively, which include the effects of any source-abatement measures included in the model, and any time-averaging effects for intermittent sources. LrD, LrE, and LrN are the A-weighted, one-hour energy-equivalent sound levels at the point of reception. The results are presented in terms of single number A-weighted spectrally summed sound levels, at the off-site points of reception.



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Table with columns: R4, Src ID, Src Name, 501772, 5018035, 70.2, X, Y, Z, LxD, LxE, LxN, Adv, KO, Dc, Agnd, Abar, Aatm, Afol, Ahaus, Cmet, Refl, LrD, LrE, LrN. Rows include equipment like 'Enclosed Flare 2 -- 4500 CFM', 'LFG Generator 1 Combustion Exhaust', etc.

Where: Lr = Lx - Adv + KO + Dc - Agnd - Abar - Aatm - Afol - Ahaus + Cmet + Refl

APPENDIX C

Sample Calculation Results – Octave Frequency Band Format

In the following tables of calculation results, the column headings for the various sound attenuation mechanisms follow the terminology of ISO Standard 9613-2. LxD, LxE, and LxN are the A-weighted, one-hour energy-equivalent source sound power levels for day, evening, and night, respectively, which include the effects of any source-abatement measures included in the model, and any time-averaging effects for intermittent sources. LrD, LrE, and LrN are the A-weighted, one-hour energy-equivalent sound levels at the point of reception. The results are presented in terms of A-weighted full octave band sound levels, at the most impacted off-site point of reception.



Src ID	Src Name	Band	X	Y	Z	LxD	LxE	LxN	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahou	Cmet	Refi	LrD	LrE	LrN	Band
NL-04	Compactors (Sum of 2)	8000	499682	5017595	67.2	105	--	102	73.9	0	0.0	0.0	4.4	164.0	0.0	0.0	0.0	0.0	--	--	--	8000
NL-05	Dozer at Primary Tipping Area	31.5	499682	5017595	67.2	70	--	67	74.0	0	0.0	-5.6	4.4	0.0	0.0	0.0	0.0	0.0	--	--	--	31.5
NL-05	Dozer at Primary Tipping Area	63	499682	5017595	67.2	77	--	74	74.0	0	0.0	-5.6	4.4	0.2	0.0	0.0	0.0	0.0	4	--	1	63
NL-05	Dozer at Primary Tipping Area	125	499682	5017595	67.2	92	--	89	74.0	0	0.0	8.8	0.0	0.6	0.0	0.0	0.0	0.0	9	--	1	125
NL-05	Dozer at Primary Tipping Area	250	499682	5017595	67.2	93	--	90	74.0	0	0.0	7.4	0.0	1.5	0.0	0.0	0.0	0.0	11	--	8	250
NL-05	Dozer at Primary Tipping Area	500	499682	5017595	67.2	100	--	97	74.0	0	0.0	2.2	2.4	2.7	0.0	0.0	0.0	0.0	19	--	15	500
NL-05	Dozer at Primary Tipping Area	1000	499682	5017595	67.2	101	--	98	74.0	0	0.0	0.1	4.3	5.2	0.0	0.0	0.0	0.0	17	--	14	1000
NL-05	Dozer at Primary Tipping Area	2000	499682	5017595	67.2	98	--	95	74.0	0	0.0	0.0	4.4	13.6	0.0	0.0	0.0	0.0	6	--	3	2000
NL-05	Dozer at Primary Tipping Area	4000	499682	5017595	67.2	94	--	91	74.0	0	0.0	0.0	4.4	46.1	0.0	0.0	0.0	0.0	--	--	--	4000
NL-05	Dozer at Primary Tipping Area	8000	499682	5017595	67.2	89	--	86	73.9	0	0.0	0.0	4.4	164.0	0.0	0.0	0.0	0.0	--	--	--	8000
NL-06	Dozer at Secondary Tipping Area	31.5	499523	5017604	66.8	--	--	--	73.0	0	0.0	-5.5	4.8	0.0	0.0	0.0	0.0	0.0	0	--	--	31.5
NL-06	Dozer at Secondary Tipping Area	63	499523	5017604	66.8	88	--	85	72.9	0	0.0	-5.5	4.8	0.2	0.0	0.0	0.0	0.0	16	--	13	63
NL-06	Dozer at Secondary Tipping Area	125	499523	5017604	66.8	101	--	98	72.9	0	0.0	8.8	0.0	0.5	0.0	0.0	0.0	0.0	19	--	16	125
NL-06	Dozer at Secondary Tipping Area	250	499523	5017604	66.8	104	--	101	72.9	0	0.0	7.4	0.0	1.3	0.0	0.0	0.0	0.0	23	--	20	250
NL-06	Dozer at Secondary Tipping Area	500	499523	5017604	66.8	109	--	106	72.9	0	0.0	2.2	2.5	2.4	0.0	0.0	0.0	0.0	29	--	26	500
NL-06	Dozer at Secondary Tipping Area	1000	499523	5017604	66.8	112	--	109	72.9	0	0.0	0.1	4.6	4.5	0.0	0.0	0.0	0.0	30	--	27	1000
NL-06	Dozer at Secondary Tipping Area	2000	499523	5017604	66.8	110	--	107	72.9	0	0.0	0.0	4.8	12.0	0.0	0.0	0.0	0.0	21	--	18	2000
NL-06	Dozer at Secondary Tipping Area	4000	499523	5017604	66.8	104	--	101	72.8	0	0.0	0.0	4.8	40.6	0.0	0.0	0.0	0.0	--	--	--	4000
NL-06	Dozer at Secondary Tipping Area	8000	499523	5017604	66.8	96	--	93	72.8	0	0.0	0.0	4.8	144.4	0.0	0.0	0.0	0.0	--	--	--	8000
NL-07	Loader	31.5	499699	5017514	67.3	63	--	60	74.2	0	0.0	-5.6	4.2	0.0	0.0	0.0	0.0	0.0	--	--	--	31.5
NL-07	Loader	63	499699	5017514	67.3	83	--	80	74.2	0	0.0	-5.6	4.2	0.2	0.0	0.0	0.0	0.0	10	--	7	63
NL-07	Loader	125	499699	5017514	67.3	88	--	85	74.2	0	0.0	9.2	0.0	0.6	0.0	0.0	0.0	0.0	4	--	1	125
NL-07	Loader	250	499699	5017514	67.3	92	--	89	74.2	0	0.0	8.4	0.0	1.5	0.0	0.0	0.0	0.0	8	--	5	250
NL-07	Loader	500	499699	5017514	67.3	97	--	94	74.2	0	0.0	5.0	0.0	2.8	0.0	0.0	0.0	0.0	15	--	12	500
NL-07	Loader	1000	499699	5017514	67.3	97	--	94	74.2	0	0.0	0.7	3.6	5.3	0.0	0.0	0.0	0.0	13	--	10	1000
NL-07	Loader	2000	499699	5017514	67.3	98	--	95	74.2	0	0.0	0.0	4.2	14.0	0.0	0.0	0.0	0.0	6	--	3	2000
NL-07	Loader	4000	499699	5017514	67.3	91	--	88	74.2	0	0.0	0.0	4.2	47.3	0.0	0.0	0.0	0.0	--	--	--	4000
NL-07	Loader	8000	499699	5017514	67.3	81	--	78	74.1	0	0.0	0.0	4.3	168.1	0.0	0.0	0.0	0.0	--	--	--	8000
NL-08	Loader	31.5	500156	5016830	77.6	65	--	62	77.6	0	0.0	-5.7	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NL-08	Loader	63	500156	5016830	77.6	88	--	85	77.6	0	0.0	-5.7	4.8	0.3	0.0	0.0	0.0	0.0	11	--	8	63
NL-08	Loader	125	500156	5016830	77.6	89	--	86	77.6	0	0.0	9.2	0.0	0.9	0.0	0.0	0.0	0.0	1	--	--	125
NL-08	Loader	250	500156	5016830	77.6	93	--	90	77.6	0	0.0	8.4	0.0	2.2	0.0	0.0	0.0	0.0	5	--	2	250
NL-08	Loader	500	500156	5016830	77.6	98	--	95	77.6	0	0.0	5.0	0.0	4.1	0.0	0.0	0.0	0.0	11	--	8	500
NL-08	Loader	1000	500156	5016830	77.6	104	--	101	77.6	0	0.0	0.7	4.1	7.8	0.0	0.0	0.0	0.0	14	--	11	1000
NL-08	Loader	2000	500156	5016830	77.6	107	--	104	77.6	0	0.0	0.0	4.8	20.7	0.0	0.0	0.0	0.0	4	--	1	2000
NL-08	Loader	4000	500156	5016830	77.6	94	--	91	77.6	0	0.0	0.0	4.8	70.2	0.0	0.0	0.0	0.0	--	--	--	4000
NL-08	Loader	8000	500156	5016830	77.6	91	--	88	77.6	0	0.0	0.0	4.8	250.4	0.0	0.0	0.0	0.0	--	--	--	8000
NL-09	Excavator	31.5	499493	5017646	66.6	61	--	58	72.6	0	0.0	-5.6	4.8	0.0	0.0	0.0	0.0	0.0	--	--	--	31.5
NL-09	Excavator	63	499493	5017646	66.6	79	--	76	72.6	0	0.0	-5.6	4.8	0.1	0.0	0.0	0.0	0.0	7	--	4	63
NL-09	Excavator	125	499493	5017646	66.6	100	--	97	72.6	0	0.0	9.1	0.0	0.5	0.0	0.0	0.0	0.0	18	--	15	125
NL-09	Excavator	250	499493	5017646	66.6	96	--	93	72.6	0	0.0	8.4	0.0	1.3	0.0	0.0	0.0	0.0	14	--	11	250
NL-09	Excavator	500	499493	5017646	66.6	99	--	96	72.6	0	0.0	5.0	0.0	2.3	0.0	0.0	0.0	0.0	19	--	16	500
NL-09	Excavator	1000	499493	5017646	66.6	97	--	94	72.6	0	0.0	0.7	4.1	4.4	0.0	0.0	0.0	0.0	15	--	12	1000
NL-09	Excavator	2000	499493	5017646	66.6	96	--	93	72.6	0	0.0	0.0	4.8	11.7	0.0	0.0	0.0	0.0	7	--	4	2000
NL-09	Excavator	4000	499493	5017646	66.6	92	--	89	72.6	0	0.0	0.0	4.8	39.5	0.0	0.0	0.0	0.0	--	--	--	4000
NL-09	Excavator	8000	499493	5017646	66.6	89	--	86	72.6	0	0.0	0.0	4.8	140.9	0.0	0.0	0.0	0.0	--	--	--	8000
NL-10	Excavator	31.5	499576	5017458	65.7	55	--	52	73.5	0	0.0	-5.6	4.8	0.0	0.0	0.0	0.0	0.0	--	--	--	31.5
NL-10	Excavator	63	499576	5017458	65.7	79	--	76	73.5	0	0.0	-5.6	4.8	0.2	0.0	0.0	0.0	0.0	6	--	3	63
NL-10	Excavator	125	499576	5017458	65.7	91	--	88	73.5	0	0.0	9.1	0.0	0.6	0.0	0.0	0.0	0.0	8	--	5	125
NL-10	Excavator	250	499576	5017458	65.7	87	--	84	73.5	0	0.0	8.4	0.0	1.4	0.0	0.0	0.0	0.0	4	--	1	250
NL-10	Excavator	500	499576	5017458	65.7	102	--	99	73.5	0	0.0	5.0	0.0	2.6	0.0	0.0	0.0	0.0	21	--	18	500
NL-10	Excavator	1000	499576	5017458	65.7	98	--	95	73.5	0	0.0	0.7	4.1	4.9	0.0	0.0	0.0	0.0	15	--	12	1000
NL-10	Excavator	2000	499576	5017458	65.7	95	--	92	73.5	0	0.0	0.0	4.8	13.0	0.0	0.0	0.0	0.0	4	--	1	2000
NL-10	Excavator	4000	499576	5017458	65.7	90	--	87	73.5	0	0.0	0.0	4.8	43.9	0.0	0.0	0.0	0.0	--	--	--	4000
NL-10	Excavator	8000	499576	5017458	65.7	85	--	82	73.5	0	0.0	0.0	4.8	156.7	0.0	0.0	0.0	0.0	--	--	--	8000
NL-11	Vermeer Grinder	31.5	499670	5017735	69.8	70	--	67	73.7	0	0.0	-5.5	4.8	0.0	0.0	0.0	0.0	0.0	--	--	--	31.5
NL-11	Vermeer Grinder	63	499670	5017735	69.8	82	--	79	73.7	0	0.0	-5.5	4.8	0.2	0.0	0.0	0.0	0.0	9	--	6	63
NL-11	Vermeer Grinder	125	499670	5017735	69.8	101	--	98	73.7	0	0.0	8.5	0.0	0.6	0.0	0.0	0.0	0.0	19	--	16	125
NL-11	Vermeer Grinder	250	499670	5017735	69.8	110	--	107	73.7	0	0.0	6.3	0.0	1.4	0.0	0.0	0.0	0.0	29	--	26	250
NL-11	Vermeer Grinder	500	499670	5017735	69.8	110	--	107	73.7	0	0.0	0.8	4.0	2.6	0.0	0.0	0.0	0.0	29	--	26	500
NL-11	Vermeer Grinder	1000	499670	5017735	69.8	111	--	108	73.7	0	0.0	0.0	4.8	5.0	0.0	0.0	0.0	0.0	28	--	25	1000
NL-11	Vermeer Grinder	2000	499670	5017735	69.8	110	--	107	73.7	0	0.0	0.0	4.8	13.2	0.0	0.0	0.0	0.0	19	--	16	2000
NL-11	Vermeer Grinder	4000	499670	5017735	69.8	105	--	102	73.7	0	0.0	0.0	4.8	44.6	0.0	0.0	0.0	0.0	--	--	--	4000
NL-11	Vermeer Grinder	8000	499670	5017735	69.8	95	--	92	73.7	0	0.0	0.0	4.8	159.2	0.0	0.0	0.0	0.0	--	--	--	8000
NL-12	Wildcat Trommel/Screener	31.5	499703	5017934	67.1	66	--	63	73.8	0	0.0	-5.6										

SrcID	Src Name	Band	X	Y	Z	LxD	LxE	LxN	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahou	Cmet	RefI	LrD	LrE	LrN	Band
NS-05	LFG Flare #2 NW Induction Air Intake	31.5	500630	5016773	68.7	59	59	59	79.2	3	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-05	LFG Flare #2 NW Induction Air Intake	63	500630	5016773	68.7	66	66	66	79.2	3	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	--	--	--	63
NS-05	LFG Flare #2 NW Induction Air Intake	125	500630	5016773	68.7	68	68	68	79.2	3	0.0	7.2	0.0	1.1	0.0	0.0	0.0	0.0	--	--	--	125
NS-05	LFG Flare #2 NW Induction Air Intake	250	500630	5016773	68.7	72	72	72	79.2	3	0.0	6.2	0.0	2.7	0.0	0.0	0.0	0.0	--	--	--	250
NS-05	LFG Flare #2 NW Induction Air Intake	500	500630	5016773	68.7	72	72	72	79.2	3	0.0	4.6	0.2	5.0	0.0	0.0	0.0	0.0	--	--	--	500
NS-05	LFG Flare #2 NW Induction Air Intake	1000	500630	5016773	68.7	72	72	72	79.2	3	0.0	0.5	4.3	9.4	0.0	0.0	0.0	0.0	--	--	--	1000
NS-05	LFG Flare #2 NW Induction Air Intake	2000	500630	5016773	68.7	72	72	72	79.2	3	0.0	-0.5	4.9	25.0	0.0	0.0	0.0	0.0	--	--	--	2000
NS-05	LFG Flare #2 NW Induction Air Intake	4000	500630	5016773	68.7	70	70	70	79.2	3	0.0	-0.5	5.0	84.7	0.0	0.0	0.0	0.0	--	--	--	4000
NS-05	LFG Flare #2 NW Induction Air Intake	8000	500630	5016773	68.7	58	58	58	79.2	3	0.0	-0.5	5.2	302.0	0.0	0.0	0.0	0.0	--	--	--	8000
NS-06	LFG Flare #2 SW Induction Air Intake	31.5	500630	5016770	68.4	59	59	59	79.2	3	0.0	-5.8	12.6	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-06	LFG Flare #2 SW Induction Air Intake	63	500630	5016770	68.4	66	66	66	79.2	3	0.0	-5.8	15.2	0.3	0.0	0.0	0.0	0.0	--	--	--	63
NS-06	LFG Flare #2 SW Induction Air Intake	125	500630	5016770	68.4	68	68	68	79.2	3	0.0	7.2	10.7	1.1	0.0	0.0	0.0	0.0	--	--	--	125
NS-06	LFG Flare #2 SW Induction Air Intake	250	500630	5016770	68.4	72	72	72	79.2	3	0.0	6.2	14.7	2.7	0.0	0.0	0.0	0.0	--	--	--	250
NS-06	LFG Flare #2 SW Induction Air Intake	500	500630	5016770	68.4	72	72	72	79.2	3	0.0	4.6	19.3	5.0	0.0	0.0	0.0	0.0	--	--	--	500
NS-06	LFG Flare #2 SW Induction Air Intake	1000	500630	5016770	68.4	72	72	72	79.2	3	0.0	0.5	24.5	9.5	0.0	0.0	0.0	0.0	--	--	--	1000
NS-06	LFG Flare #2 SW Induction Air Intake	2000	500630	5016770	68.4	72	72	72	79.2	3	0.0	-0.5	25.0	25.0	0.0	0.0	0.0	0.0	--	--	--	2000
NS-06	LFG Flare #2 SW Induction Air Intake	4000	500630	5016770	68.4	70	70	70	79.2	3	0.0	-0.5	25.0	84.7	0.0	0.0	0.0	0.0	--	--	--	4000
NS-06	LFG Flare #2 SW Induction Air Intake	8000	500630	5016770	68.4	58	58	58	79.2	3	0.0	-0.5	25.0	302.1	0.0	0.0	0.0	0.0	--	--	--	8000
NS-09	LFG Flare #2 NE Induction Air Intake	31.5	500633	5016773	68.6	59	59	59	79.3	3	0.0	-5.8	16.1	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-09	LFG Flare #2 NE Induction Air Intake	63	500633	5016773	68.6	66	66	66	79.3	3	0.0	-5.8	19.0	0.3	0.0	0.0	0.0	0.0	--	--	--	63
NS-09	LFG Flare #2 NE Induction Air Intake	125	500633	5016773	68.6	68	68	68	79.3	3	0.0	7.2	14.7	1.1	0.0	0.0	0.0	0.0	--	--	--	125
NS-09	LFG Flare #2 NE Induction Air Intake	250	500633	5016773	68.6	72	72	72	79.3	3	0.0	6.2	18.7	2.7	0.0	0.0	0.0	0.0	--	--	--	250
NS-09	LFG Flare #2 NE Induction Air Intake	500	500633	5016773	68.6	72	72	72	79.3	3	0.0	4.6	20.4	5.0	0.0	0.0	0.0	0.0	--	--	--	500
NS-09	LFG Flare #2 NE Induction Air Intake	1000	500633	5016773	68.6	72	72	72	79.3	3	0.0	0.5	24.5	9.5	0.0	0.0	0.0	0.0	--	--	--	1000
NS-09	LFG Flare #2 NE Induction Air Intake	2000	500633	5016773	68.6	72	72	72	79.3	3	0.0	-0.5	25.0	25.0	0.0	0.0	0.0	0.0	--	--	--	2000
NS-09	LFG Flare #2 NE Induction Air Intake	4000	500633	5016773	68.6	70	70	70	79.3	3	0.0	-0.5	25.0	84.8	0.0	0.0	0.0	0.0	--	--	--	4000
NS-09	LFG Flare #2 NE Induction Air Intake	8000	500633	5016773	68.6	58	58	58	79.3	3	0.0	-0.5	25.0	302.3	0.0	0.0	0.0	0.0	--	--	--	8000
NS-10	LFG Flare #2 SW Induction Air Intake	31.5	500632	5016770	68.5	59	59	59	79.3	3	0.0	-5.8	16.2	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-10	LFG Flare #2 SW Induction Air Intake	63	500632	5016770	68.5	66	66	66	79.3	3	0.0	-5.8	19.1	0.3	0.0	0.0	0.0	0.0	--	--	--	63
NS-10	LFG Flare #2 SW Induction Air Intake	125	500632	5016770	68.5	68	68	68	79.3	3	0.0	7.2	14.7	1.1	0.0	0.0	0.0	0.0	--	--	--	125
NS-10	LFG Flare #2 SW Induction Air Intake	250	500632	5016770	68.5	72	72	72	79.3	3	0.0	6.2	18.7	2.7	0.0	0.0	0.0	0.0	--	--	--	250
NS-10	LFG Flare #2 SW Induction Air Intake	500	500632	5016770	68.5	72	72	72	79.3	3	0.0	4.6	20.4	5.0	0.0	0.0	0.0	0.0	--	--	--	500
NS-10	LFG Flare #2 SW Induction Air Intake	1000	500632	5016770	68.5	72	72	72	79.3	3	0.0	0.5	24.5	9.5	0.0	0.0	0.0	0.0	--	--	--	1000
NS-10	LFG Flare #2 SW Induction Air Intake	2000	500632	5016770	68.5	72	72	72	79.3	3	0.0	-0.5	25.0	25.0	0.0	0.0	0.0	0.0	--	--	--	2000
NS-10	LFG Flare #2 SW Induction Air Intake	4000	500632	5016770	68.5	70	70	70	79.3	3	0.0	-0.5	25.0	84.8	0.0	0.0	0.0	0.0	--	--	--	4000
NS-10	LFG Flare #2 SW Induction Air Intake	8000	500632	5016770	68.5	58	58	58	79.3	3	0.0	-0.5	25.0	302.4	0.0	0.0	0.0	0.0	--	--	--	8000
NS-11	LFG Blower Skid	31.5	500613	5016776	69.0	--	--	--	79.2	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	0	--	--	31.5
NS-11	LFG Blower Skid	63	500613	5016776	69.0	--	--	--	79.2	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	0	--	--	63
NS-11	LFG Blower Skid	125	500613	5016776	69.0	--	--	--	79.2	0	0.0	7.3	0.0	1.1	0.0	0.0	0.0	0.0	0	--	--	125
NS-11	LFG Blower Skid	250	500613	5016776	69.0	85	85	85	79.2	0	0.0	6.4	0.0	2.7	0.0	0.0	0.0	0.0	--	--	--	250
NS-11	LFG Blower Skid	500	500613	5016776	69.0	95	95	95	79.2	0	0.0	5.7	0.0	4.9	0.0	0.0	0.0	0.0	5	5	5	500
NS-11	LFG Blower Skid	1000	500613	5016776	69.0	95	95	95	79.2	0	0.0	1.0	3.8	9.4	0.0	0.0	0.0	0.0	2	2	2	1000
NS-11	LFG Blower Skid	2000	500613	5016776	69.0	95	95	95	79.2	0	0.0	-0.5	4.8	24.8	0.0	0.0	0.0	0.0	--	--	--	2000
NS-11	LFG Blower Skid	4000	500613	5016776	69.0	92	92	92	79.2	0	0.0	-0.5	4.8	84.1	0.0	0.0	0.0	0.0	--	--	--	4000
NS-11	LFG Blower Skid	8000	500613	5016776	69.0	86	86	86	79.2	0	0.0	-0.5	4.8	300.0	0.0	0.0	0.0	0.0	--	--	--	8000
NS-12	LFG Chiller	31.5	500622	5016760	69.0	--	--	--	79.2	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	0	--	--	31.5
NS-12	LFG Chiller	63	500622	5016760	69.0	62	62	62	79.2	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	--	--	--	63
NS-12	LFG Chiller	125	500622	5016760	69.0	71	71	71	79.2	0	0.0	7.1	0.0	1.1	0.0	0.0	0.0	0.0	--	--	--	125
NS-12	LFG Chiller	250	500622	5016760	69.0	77	77	77	79.2	0	0.0	5.8	0.0	2.7	0.0	0.0	0.0	0.0	--	--	--	250
NS-12	LFG Chiller	500	500622	5016760	69.0	87	87	87	79.2	0	0.0	3.0	1.7	5.0	0.0	0.0	0.0	0.0	--	--	--	500
NS-12	LFG Chiller	1000	500622	5016760	69.0	88	88	88	79.2	0	0.0	0.0	4.8	9.4	0.0	0.0	0.0	0.0	--	--	--	1000
NS-12	LFG Chiller	2000	500622	5016760	69.0	86	86	86	79.2	0	0.0	-0.5	4.8	25.0	0.0	0.0	0.0	0.0	--	--	--	2000
NS-12	LFG Chiller	4000	500622	5016760	69.0	81	81	81	79.2	0	0.0	-0.5	4.8	84.6	0.0	0.0	0.0	0.0	--	--	--	4000
NS-12	LFG Chiller	8000	500622	5016760	69.0	72	72	72	79.2	0	0.0	-0.5	4.8	301.8	0.0	0.0	0.0	0.0	--	--	--	8000
NS-13	Dry Cooler	31.5	500623	5016763	68.6	62	62	62	79.2	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-13	Dry Cooler	63	500623	5016763	68.6	77	77	77	79.2	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0				

Table with columns: Src ID, Src Name, Band, X, Y, Z, Lx, Lx, Lx, Adv, K0, Dc, Agnd, Abar, Aatm, Afol, Ahous, Cmet, Refl, Lr, Lr, Lr, Lr, Band. It contains 1000 rows of data for various LFG Generator and WTP units.

Where: Lr = Lx - Adviv + K0 + Dc - Agnd - Abar - Aatm - Afol - Ahous + Cmet + Refl



Src ID	Src Name	Band	X	Y	Z	LxD	LxE	LxN	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahou	Cmet	Refi	LrD	LrE	LrN	Band
NS-41	WTP -- Wall Exhauster EF-1c	125	499293	5017992	71.4	44	44	44	70.7	3	0.0	7.0	0.0	0.4	0.0	0.0	0.0	0.0	--	--	--	125
NS-41	WTP -- Wall Exhauster EF-1c	250	499293	5017992	71.4	45	45	45	70.7	3	0.0	2.0	0.0	1.0	0.0	0.0	0.0	0.0	--	--	--	250
NS-41	WTP -- Wall Exhauster EF-1c	500	499293	5017992	71.4	46	46	46	70.7	3	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	--	--	--	500
NS-41	WTP -- Wall Exhauster EF-1c	1000	499293	5017992	71.4	49	49	49	70.7	3	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	--	--	--	1000
NS-41	WTP -- Wall Exhauster EF-1c	2000	499293	5017992	71.4	45	45	45	70.7	3	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	--	--	--	2000
NS-41	WTP -- Wall Exhauster EF-1c	4000	499293	5017992	71.4	41	41	41	70.7	3	0.0	0.0	0.0	31.8	0.0	0.0	0.0	0.0	--	--	--	4000
NS-41	WTP -- Wall Exhauster EF-1c	8000	499293	5017992	71.4	35	35	35	70.7	3	0.0	0.0	0.0	113.5	0.0	0.0	0.0	0.0	--	--	--	8000
NS-42	WTP -- Wall Exhauster EF-1d	31.5	499299	5017981	71.7	--	--	--	70.8	3	0.0	-5.1	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	31.5
NS-42	WTP -- Wall Exhauster EF-1d	63	499299	5017981	71.7	40	40	40	70.8	3	0.0	-5.1	0.0	0.1	0.0	0.0	0.0	0.0	--	--	--	63
NS-42	WTP -- Wall Exhauster EF-1d	125	499299	5017981	71.7	44	44	44	70.8	3	0.0	7.0	0.0	0.4	0.0	0.0	0.0	0.0	--	--	--	125
NS-42	WTP -- Wall Exhauster EF-1d	250	499299	5017981	71.7	45	45	45	70.8	3	0.0	2.0	0.0	1.0	0.0	0.0	0.0	0.0	--	--	--	250
NS-42	WTP -- Wall Exhauster EF-1d	500	499299	5017981	71.7	46	46	46	70.8	3	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	--	--	--	500
NS-42	WTP -- Wall Exhauster EF-1d	1000	499299	5017981	71.7	49	49	49	70.8	3	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	--	--	--	1000
NS-42	WTP -- Wall Exhauster EF-1d	2000	499299	5017981	71.7	45	45	45	70.8	3	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	--	--	--	2000
NS-42	WTP -- Wall Exhauster EF-1d	4000	499299	5017981	71.7	41	41	41	70.8	3	0.0	0.0	0.0	32.0	0.0	0.0	0.0	0.0	--	--	--	4000
NS-42	WTP -- Wall Exhauster EF-1d	8000	499299	5017981	71.7	35	35	35	70.8	3	0.0	0.0	0.0	114.2	0.0	0.0	0.0	0.0	--	--	--	8000
NS-43	WTP -- Wall Exhauster EF-1e	31.5	499306	5017969	71.2	--	--	--	70.9	3	0.0	-5.1	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	31.5
NS-43	WTP -- Wall Exhauster EF-1e	63	499306	5017969	71.2	40	40	40	70.9	3	0.0	-5.1	0.0	0.1	0.0	0.0	0.0	0.0	--	--	--	63
NS-43	WTP -- Wall Exhauster EF-1e	125	499306	5017969	71.2	44	44	44	70.9	3	0.0	7.0	0.0	0.4	0.0	0.0	0.0	0.0	--	--	--	125
NS-43	WTP -- Wall Exhauster EF-1e	250	499306	5017969	71.2	45	45	45	70.9	3	0.0	2.0	0.0	1.0	0.0	0.0	0.0	0.0	--	--	--	250
NS-43	WTP -- Wall Exhauster EF-1e	500	499306	5017969	71.2	46	46	46	70.9	3	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	--	--	--	500
NS-43	WTP -- Wall Exhauster EF-1e	1000	499306	5017969	71.2	49	49	49	70.9	3	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	--	--	--	1000
NS-43	WTP -- Wall Exhauster EF-1e	2000	499306	5017969	71.2	45	45	45	70.9	3	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	--	--	--	2000
NS-43	WTP -- Wall Exhauster EF-1e	4000	499306	5017969	71.2	41	41	41	70.9	3	0.0	0.0	0.0	32.2	0.0	0.0	0.0	0.0	--	--	--	4000
NS-43	WTP -- Wall Exhauster EF-1e	8000	499306	5017969	71.2	35	35	35	70.9	3	0.0	0.0	0.0	115.0	0.0	0.0	0.0	0.0	--	--	--	8000
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	31.5	499314	5017975	73.2	--	--	--	70.9	0	0.0	-5.3	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	31.5
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	63	499314	5017975	73.2	66	66	66	70.9	0	0.0	-5.3	0.0	0.1	0.0	0.0	0.0	0.0	0	0	0	63
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	125	499314	5017975	73.2	65	65	65	70.9	0	0.0	8.1	0.0	0.4	0.0	0.0	0.0	0.0	--	--	--	125
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	250	499314	5017975	73.2	72	72	72	70.9	0	0.0	5.9	0.0	1.0	0.0	0.0	0.0	0.0	--	--	--	250
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	500	499314	5017975	73.2	73	73	73	70.9	0	0.0	0.5	0.0	1.9	0.0	0.0	0.0	0.0	--	--	--	500
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	1000	499314	5017975	73.2	72	72	72	70.9	0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	--	--	--	1000
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	2000	499314	5017975	73.2	68	68	68	70.9	0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	--	--	--	2000
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	4000	499314	5017975	73.2	65	65	65	70.9	0	0.0	0.0	0.0	32.5	0.0	0.0	0.0	0.0	--	--	--	4000
NS-44	WTP -- Wall Rooftop Exhaust Fan EF-2	8000	499314	5017975	73.2	59	59	59	70.9	0	0.0	0.0	0.0	116.0	0.0	0.0	0.0	0.0	--	--	--	8000
NS-45	WTP -- Blower Intake	31.5	499311	5018002	68.5	--	--	--	70.9	3	0.0	-5.4	5.9	0.0	0.0	0.0	0.0	0.0	0	0	0	31.5
NS-45	WTP -- Blower Intake	63	499311	5018002	68.5	54	54	54	70.9	3	0.0	-5.4	6.9	0.1	0.0	0.0	0.0	0.0	--	--	--	63
NS-45	WTP -- Blower Intake	125	499311	5018002	68.5	75	75	75	70.9	3	0.0	8.5	2.7	0.4	0.0	0.0	0.0	0.0	--	--	--	125
NS-45	WTP -- Blower Intake	250	499311	5018002	68.5	88	88	88	70.9	3	0.0	7.4	6.9	1.0	0.0	0.0	0.0	0.0	5	5	5	250
NS-45	WTP -- Blower Intake	500	499311	5018002	68.5	54	54	54	70.9	3	0.0	2.2	13.1	1.9	0.0	0.0	0.0	0.0	--	--	--	500
NS-45	WTP -- Blower Intake	1000	499311	5018002	68.5	61	61	61	70.9	3	0.0	0.1	16.8	3.6	0.0	0.0	0.0	0.0	--	--	--	1000
NS-45	WTP -- Blower Intake	2000	499311	5018002	68.5	61	61	61	70.9	3	0.0	0.0	19.3	9.6	0.0	0.0	0.0	0.0	--	--	--	2000
NS-45	WTP -- Blower Intake	4000	499311	5018002	68.5	51	51	51	70.9	3	0.0	0.0	21.2	32.4	0.0	0.0	0.0	0.0	--	--	--	4000
NS-45	WTP -- Blower Intake	8000	499311	5018002	68.5	38	38	38	70.9	3	0.0	0.0	23.7	115.7	0.0	0.0	0.0	0.0	--	--	--	8000
NS-46	Compost Trucks in/out (Outside Gate)	31.5	501290	5017150	70.8	64	64	--	80.7	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-46	Compost Trucks in/out (Inside Gate)	31.5	500459	5016735	69.6	67	--	--	79.7	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-46	Compost Trucks in/out (Outside Gate)	63	501290	5017150	70.8	73	73	--	80.7	0	0.0	-5.8	4.8	0.4	0.0	0.0	0.0	0.0	--	--	--	63
NS-46	Compost Trucks in/out (Inside Gate)	63	500459	5016735	69.6	77	--	--	79.7	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	--	--	--	63
NS-46	Compost Trucks in/out (Outside Gate)	125	501290	5017150	70.8	80	80	--	80.7	0	0.0	8.8	0.0	1.3	0.0	0.0	0.0	0.0	--	--	--	125
NS-46	Compost Trucks in/out (Inside Gate)	125	500459	5016735	69.6	84	--	--	79.7	0	0.0	8.8	0.0	1.1	0.0	0.0	0.0	0.0	--	--	--	125
NS-46	Compost Trucks in/out (Outside Gate)	250	501290	5017150	70.8	85	85	--	80.7	0	0.0	7.4	0.0	3.2	0.0	0.0	0.0	0.0	--	--	--	250
NS-46	Compost Trucks in/out (Inside Gate)	250	500459	5016735	69.6	88	--	--	79.7	0	0.0	7.4	0.0	2.8	0.0	0.0	0.0	0.0	--	--	--	250
NS-46	Compost Trucks in/out (Outside Gate)	500	501290	5017150	70.8	91	91	--	80.7	0	0.0	2.2	2.5	5.9	0.0	0.0	0.0	0.0	--	--	--	500
NS-46	Compost Trucks in/out (Inside Gate)	500	500459	5016735	69.6	95	--	--	79.7	0	0.0	2.2	2.5	5.2	0.0	0.0	0.0	0.0	6	--	--	500
NS-46	Compost Trucks in/out (Outside Gate)	1000	501290	5017150	70.8	97	97	--	80.6	0	0.0	0.1	4.6	11.2	0.0	0.0	0.0	0.0	1	1	--	1000
NS-46	Compost Trucks in/out (Inside Gate)	1000	500459	5016735	69.6	101	--	--	79.7	0	0.0	0.1	4.6	10.0	0.0	0.0	0.0	0.0	8	--	--	1000
NS-46	Compost Trucks in/out (Outside Gate)	2000	501290	5017150	70.8	93	93	--	80.5	0	0.0	0.0	4.8	29.4	0.0	0.0	0.0	0.0	--	--	--	2000
NS-46	Compost Trucks in/out (Inside Gate)	2000	500459	5016735	69.6	97	--	--	79.7	0	0.0	0.0	4.8	26.3	0.0	0.0	0.0	0.0	--	--	--	2000
NS-46	Compost Trucks in/out (Outside Gate)	4000	501290	5017150	70.8	87	87	--	80.3	0	0.0	0.0	4.8	97.4	0.0	0.0	0.0	0.0	--	--	--	4000
NS-46	Compost Trucks in/out (Inside Gate)	4000	500459	5016735	69.6	91	--	--	79.7	0	0.0	0.0	4.8	89.2	0.0	0.0	0.0	0.0	--	--	--	4000
NS-46	Compost Trucks in/out (Outside Gate)	8000	501290	5017150	70.8	77	77	--	80.2	0	0.0	0.0	4.8	340.6	0.0	0.0	0.0	0.0	--	--	0	8000
NS-46	Compost Trucks in/out (Inside Gate)	8000	500459	5016735	69.6	81	--	--	79.7	0	0.0	0.0	4.8	318.1	0.0	0.0	0.0	0.0	--	--	--	8000
NS-47	Compost -- Trucks Unloading	31.5	500001	5016468	69.0	63	63	--	78.0	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-47	Compost -- Trucks Unloading	63	500001	5016468	69.0	81	81	--	78.0	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	4	4	--	63
NS-47	Compost -- Trucks Unloading	125	500001																			

Src ID	Src Name	Band	X	Y	Z	LxD	LxE	LxN	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahou	Cmet	Refi	LrD	LrE	LrN	Band
NS-51	Compost -- Truck Idling at Screener	250	500165	5016485	70.3	83	83	--	78.4	0	0.0	8.4	5.6	2.4	0.0	0.0	0.0	0.0	--	--	--	250
NS-51	Compost -- Truck Idling at Screener	500	500165	5016485	70.3	91	91	--	78.4	0	0.0	5.0	11.8	4.5	0.0	0.0	0.0	0.0	--	--	--	500
NS-51	Compost -- Truck Idling at Screener	1000	500165	5016485	70.3	96	96	--	78.4	0	0.0	0.7	19.0	8.6	0.0	0.0	0.0	0.0	--	--	--	1000
NS-51	Compost -- Truck Idling at Screener	2000	500165	5016485	70.3	94	94	--	78.4	0	0.0	0.0	22.6	22.7	0.0	0.0	0.0	0.0	--	--	--	2000
NS-51	Compost -- Truck Idling at Screener	4000	500165	5016485	70.3	85	85	--	78.4	0	0.0	0.0	25.0	76.8	0.0	0.0	0.0	0.0	--	--	--	4000
NS-51	Compost -- Truck Idling at Screener	8000	500165	5016485	70.3	72	72	--	78.4	0	0.0	0.0	25.0	274.1	0.0	0.0	0.0	0.0	--	--	0	8000
NS-52	Compost -- West Bio-Blower (Housing & Motor)	31.5	500060	5016460	68.8	--	--	--	78.2	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	0	--	--	31.5
NS-52	Compost -- West Bio-Blower (Housing & Motor)	63	500060	5016460	68.8	--	--	--	78.2	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	0	--	--	63
NS-52	Compost -- West Bio-Blower (Housing & Motor)	125	500060	5016460	68.8	--	--	--	78.2	0	0.0	9.3	0.0	0.9	0.0	0.0	0.0	0.0	0	--	--	125
NS-52	Compost -- West Bio-Blower (Housing & Motor)	250	500060	5016460	68.8	83	83	83	78.2	0	0.0	8.8	0.0	2.4	0.0	0.0	0.0	0.0	0	--	--	250
NS-52	Compost -- West Bio-Blower (Housing & Motor)	500	500060	5016460	68.8	94	94	94	78.2	0	0.0	6.8	0.0	4.4	0.0	0.0	0.0	0.0	4	4	4	500
NS-52	Compost -- West Bio-Blower (Housing & Motor)	1000	500060	5016460	68.8	95	95	95	78.2	0	0.0	1.2	3.6	8.3	0.0	0.0	0.0	0.0	4	4	4	1000
NS-52	Compost -- West Bio-Blower (Housing & Motor)	2000	500060	5016460	68.8	94	94	94	78.2	0	0.0	0.0	4.8	22.0	0.0	0.0	0.0	0.0	--	--	--	2000
NS-52	Compost -- West Bio-Blower (Housing & Motor)	4000	500060	5016460	68.8	97	97	97	78.2	0	0.0	0.0	4.8	74.7	0.0	0.0	0.0	0.0	--	--	--	4000
NS-52	Compost -- West Bio-Blower (Housing & Motor)	8000	500060	5016460	68.8	91	91	91	78.2	0	0.0	0.0	4.8	266.5	0.0	0.0	0.0	0.0	--	--	--	8000
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	31.5	500083	5016474	68.5	--	--	--	78.2	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	0	--	--	31.5
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	63	500083	5016474	68.5	--	--	--	78.2	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	0	--	--	63
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	125	500083	5016474	68.5	--	--	--	78.2	0	0.0	9.5	0.0	0.9	0.0	0.0	0.0	0.0	0	--	--	125
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	250	500083	5016474	68.5	74	74	74	78.2	0	0.0	9.2	0.0	2.4	0.0	0.0	0.0	0.0	--	--	--	250
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	500	500083	5016474	68.5	2	2	2	78.2	0	0.0	8.8	0.0	4.4	0.0	0.0	0.0	0.0	--	--	--	500
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	1000	500083	5016474	68.5	86	86	86	78.2	0	0.0	2.0	2.7	8.4	0.0	0.0	0.0	0.0	--	--	--	1000
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	2000	500083	5016474	68.5	84	84	84	78.2	0	0.0	0.0	4.8	22.1	0.0	0.0	0.0	0.0	--	--	--	2000
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	4000	500083	5016474	68.5	92	92	92	78.2	0	0.0	0.0	4.8	75.0	0.0	0.0	0.0	0.0	--	--	--	4000
NS-53	Compost -- Mid Bio-Blower (Housing & Motor)	8000	500083	5016474	68.5	74	74	74	78.2	0	0.0	0.0	4.8	267.5	0.0	0.0	0.0	0.0	--	--	--	8000
NS-54	Compost -- East Bio-Blower (Housing & Motor)	31.5	500107	5016486	68.6	--	--	--	78.2	0	0.0	-5.8	4.8	0.1	0.0	0.0	0.0	0.0	0	--	--	31.5
NS-54	Compost -- East Bio-Blower (Housing & Motor)	63	500107	5016486	68.6	--	--	--	78.2	0	0.0	-5.8	4.8	0.3	0.0	0.0	0.0	0.0	0	--	--	63
NS-54	Compost -- East Bio-Blower (Housing & Motor)	125	500107	5016486	68.6	81	81	81	78.2	0	0.0	9.5	0.0	0.9	0.0	0.0	0.0	0.0	0	--	--	125
NS-54	Compost -- East Bio-Blower (Housing & Motor)	250	500107	5016486	68.6	78	78	78	78.2	0	0.0	9.2	0.0	2.4	0.0	0.0	0.0	0.0	--	--	--	250
NS-54	Compost -- East Bio-Blower (Housing & Motor)	500	500107	5016486	68.6	2	2	2	78.2	0	0.0	8.8	0.0	4.4	0.0	0.0	0.0	0.0	--	--	--	500
NS-54	Compost -- East Bio-Blower (Housing & Motor)	1000	500107	5016486	68.6	93	93	93	78.2	0	0.0	2.0	2.7	8.4	0.0	0.0	0.0	0.0	2	2	2	1000
NS-54	Compost -- East Bio-Blower (Housing & Motor)	2000	500107	5016486	68.6	89	89	89	78.2	0	0.0	0.0	4.8	22.2	0.0	0.0	0.0	0.0	--	--	--	2000
NS-54	Compost -- East Bio-Blower (Housing & Motor)	4000	500107	5016486	68.6	92	92	92	78.2	0	0.0	0.0	4.8	75.3	0.0	0.0	0.0	0.0	--	--	--	4000
NS-54	Compost -- East Bio-Blower (Housing & Motor)	8000	500107	5016486	68.6	77	77	77	78.2	0	0.0	0.0	4.8	268.7	0.0	0.0	0.0	0.0	--	--	--	8000
NS-55	Compost -- Indoor Blower Sound thru Walls	31.5	500086	5016517	71.6	72	72	72	78.1	0	0.0	-5.7	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
NS-55	Compost -- Indoor Blower Sound thru Walls	63	500086	5016517	71.6	87	87	87	78.1	0	0.0	-5.7	4.8	0.3	0.0	0.0	0.0	0.0	9	9	9	63
NS-55	Compost -- Indoor Blower Sound thru Walls	125	500086	5016517	71.6	87	87	87	78.1	0	0.0	8.8	0.0	0.9	0.0	0.0	0.0	0.0	--	--	--	125
NS-55	Compost -- Indoor Blower Sound thru Walls	250	500086	5016517	71.6	94	94	94	78.1	0	0.0	7.4	0.0	2.4	0.0	0.0	0.0	0.0	7	7	7	250
NS-55	Compost -- Indoor Blower Sound thru Walls	500	500086	5016517	71.6	110	110	110	78.1	0	0.0	2.2	2.5	4.4	0.0	0.0	0.0	0.0	23	23	23	500
NS-55	Compost -- Indoor Blower Sound thru Walls	1000	500086	5016517	71.6	102	102	102	78.1	0	0.0	0.1	4.6	8.3	0.0	0.0	0.0	0.0	11	11	11	1000
NS-55	Compost -- Indoor Blower Sound thru Walls	2000	500086	5016517	71.6	97	97	97	78.1	0	0.0	0.0	4.8	21.9	0.0	0.0	0.0	0.0	--	--	--	2000
NS-55	Compost -- Indoor Blower Sound thru Walls	4000	500086	5016517	71.6	6	6	6	78.1	0	0.0	0.0	4.8	74.6	0.0	0.0	0.0	0.0	--	--	--	4000
NS-55	Compost -- Indoor Blower Sound thru Walls	8000	500086	5016517	71.6	4	4	4	78.1	0	0.0	0.0	4.8	266.0	0.0	0.0	0.0	0.0	--	--	--	8000
SF	Siloxane Flare	31.5	500606	5016746	77.0	59	59	59	79.2	0	0.0	-5.5	4.8	0.1	0.0	0.0	0.0	0.0	--	--	--	31.5
SF	Siloxane Flare	63	500606	5016746	77.0	63	63	63	79.2	0	0.0	-5.5	4.8	0.3	0.0	0.0	0.0	0.0	--	--	--	63
SF	Siloxane Flare	125	500606	5016746	77.0	71	71	71	79.2	0	0.0	4.1	0.7	1.1	0.0	0.0	0.0	0.0	--	--	--	125
SF	Siloxane Flare	250	500606	5016746	77.0	72	72	72	79.2	0	0.0	1.3	3.5	2.7	0.0	0.0	0.0	0.0	--	--	--	250
SF	Siloxane Flare	500	500606	5016746	77.0	72	72	72	79.2	0	0.0	-0.1	4.8	5.0	0.0	0.0	0.0	0.0	--	--	--	500
SF	Siloxane Flare	1000	500606	5016746	77.0	0	0	0	79.2	0	0.0	-0.1	4.8	9.4	0.0	0.0	0.0	0.0	0	--	--	1000
SF	Siloxane Flare	2000	500606	5016746	77.0	1	1	1	79.2	0	0.0	-0.1	4.8	24.9	0.0	0.0	0.0	0.0	--	--	--	2000
SF	Siloxane Flare	4000	500606	5016746	77.0	69	69	69	79.2	0	0.0	-0.1	4.8	84.4	0.0	0.0	0.0	0.0	--	--	--	4000
SF	Siloxane Flare	8000	500606	5016746	77.0	--	--	--	79.2	0	0.0	-0.1	4.8	300.9	0.0	0.0	0.0	0.0	0	--	--	8000

Where: Lr = Lx - Adiv + K0 + Dc - Agnd - Abar - Aatm - Afol - Ahous + Cmet + Refi