Sound Impact Analysis

Violet Hill Pit

Proposed Sand and Gravel Pit

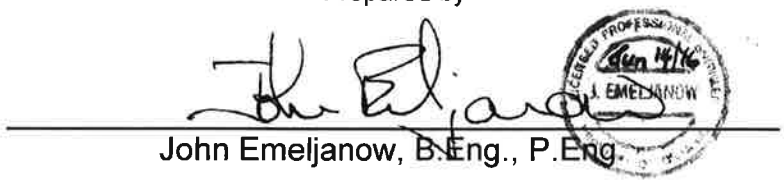
Town of Mono
Dufferin County

June 14, 2016
Project: 114-310

Prepared for

Greenwood Aggregates Company Limited

Prepared by



John Emeljanow, B.Eng., P.Eng.

VALCOUSTICS
Canada Ltd.

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1.0 INTRODUCTION

1.1 PURPOSE

Valcoustics Canada Ltd. has been retained to complete a sound impact analysis of the proposed Violet Hill Pit operations.

The purpose of this report is to:

- identify the potential noise sources;
- outline the sound exposure levels expected at surrounding neighbours during the operation of the sand and gravel pit; and
- provide recommendations for mitigation measures required to meet the Ministry of the Environment and Climate Change (MOE) environmental noise guidelines.

1.2 SITE

The site of the proposed sand and gravel pit is on the south side of Highway 89 between 3rd Line East and 4th Line East, in the Town of Mono. The site is divided into a north portion and a south portion by 30th Sideroad.

The site is identified as:

Part Lots 30, 31 and 32
Concession 4 E.H.S.
Town of Mono
Dufferin County

See Figure 1 for a Key Plan.

The land uses in the general area include agricultural lands, wooded areas and residential dwellings.

This report was completed using the Operational Concept Plan prepared by Rollings Hyland Consulting. See Figure 2.

1.3 NOISE SENSITIVE RECEPTORS

The MOE defines noise sensitive receptors as permanent or seasonal residences, hotels/motels, nursing/retirement homes, rental residences, hospitals, campgrounds and noise sensitive buildings such as schools and places of worship. There are existing residential dwellings in the vicinity of the Violet Hill Pit site.

Detailed noise analyses have been completed for the closest noise sensitive receptors in each direction from the Violet Hill Pit site. There are other sensitive receptors in the area located further away. However, as they are further removed from the Violet Hill Pit site, they will benefit from increased distance attenuation and would receive lower sound exposures than the analysis receptor(s) in the same general direction. Thus, compliance with the MOE noise guideline limits at the receptors analysed in detail would inherently result in compliance with the MOE guideline limits at all receptors.

See Figure 3 for the noise sensitive receptor locations that were analysed in detail. All of the receptors are single family detached residential dwellings. The receptors analysed in detail are:

- Receptor 1 is a two-storey dwelling located on the south side of Highway 89. It is located within the "cutout" on the northern portion of the site.

- Receptors 2, 3, 4 and 5 are to the east of the site, on the east side of 4th Line East. Receptors 2 and 4 are two-storey dwellings while Receptors 3 and 5 are single storey dwellings.

- Receptor 6 is a two-storey dwelling at the northwest corner of 4th Line East and 30th Sideroad.

- Receptors 7, 8 and 9 are on the south side of 30th Sideroad to the east of the south portion of the site. Receptors 7 and 8 are two-storey dwellings and Receptor 9 is a single storey dwelling.

- Receptors 10 and 11 are on the south side of 30th Sideroad, near the southeast intersection of 30th Sideroad and 3rd Line East. Receptor 10 is a two-storey dwelling. Receptor 11 is a single storey dwelling.

- Receptor 12 is a single storey dwelling to the south of the southern portion of the site, on the east side of 3rd Line East.

- Receptor 13 is a two-storey dwelling at the northwest intersection of 30th Sideroad and 3rd Line East. This dwelling is to the west of the northern portion of the site.

- Receptor 14 is to the west of the northern portion of the site, on the east side of 3rd Line East. This dwelling was not visible from the public roadways. Thus, it was assumed to be two-storeys to be conservative.

- Receptor 15 is a single storey dwelling on the south side of Highway 89 to the east of 3rd Line East.

- Receptor 16 is a two-storey dwelling to the north of Highway 89.

- Receptor 17 is a two-storey dwelling located on the northern portion of the site. It is owned by the owner of the proposed gravel pit site. It is on the north side of 30th Sideroad.

- Receptor 18 is a two-storey dwelling located on the southern portion of the site. It is owned by the owner of the proposed gravel pit site. It is on the south side of 30th Sideroad.

- Receptor 19 is a two-storey dwelling located on the northern portion of the site. It is owned by the owner of the proposed gravel pit site. It is on the west side of 4th Line East.

- Receptor 20 is a two-storey dwelling, located to the west of 3rd Line East, north of 30th Sideroad.

2.0 PROGRAMME OF OPERATION

2.1 HOURS OF OPERATIONS

The typical hours of operation at the proposed sand and gravel pit will extend from 0700 to 1900 hours except for shipping, which could extend into the nighttime period (i.e., 0600 to 0700 hours).

2.2 OVERALL OPERATION

Aggregate extraction will commence at the proposed permanent processing plant location. Extraction will progress from west to east and will gradually move to the north for the northern portion of the site. In the southern portion of the site, extraction will generally be from north to south.

Extraction will be in multiple lifts. The minimum depth of the first lift is 6 m. Extraction, processing and loading operations will be done at the elevation of the bottom of a particular lift. This will maximize the inherent acoustical screening to the off-site receptor locations.

Trucks used to ship material off-site will use Highway 89 to the north. The on-site access road is shown on Figure 2.

In the worst case, a maximum of 200 loads of aggregate could be shipped in a worst case day. Based on this daily maximum, a worst case hourly volume of 33.33 loads was used in the noise impact assessment.

The worst case noise impact assessment accounts for this equipment operating on the site:

- one front-end loader at the extraction face;
- one portable crushing and screening plant at the extraction face;
- four dedicated haul trucks moving material from the extraction face to the permanent processing plant location;
- one permanent processing plant which includes crushers, screens and a wash plant;

- two front-end loaders at the permanent processing plant; and
- 33.33 trucks per hour travelling from Highway 89 to the processing plant, where they are loaded with aggregate, then travelling back to Highway 89.

3.0 ENVIRONMENTAL NOISE GUIDELINES

The MOE noise guidelines, as outlined in MOE Publication NPC-300, *"Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning"* require that the noise assessment determine the "predictable worst case" impacts. Thus, the assessment needs to evaluate the largest possible excess over the noise guideline limits based on the proposed operations in any hour of operation.

3.1 ON-SITE OPERATIONS

3.1.1 Site Preparation and Rehabilitation

Site preparation activities such as the removal of topsoil and overburden, building of the scale house, scales and storage shed, erection of perimeter fences, construction of berms, etc., as well as rehabilitation are defined as construction activities. Thus, the noise impacts from these activities are excluded from being assessed as part of a stationary noise source.

The MOE noise guidelines for construction are outlined in Publication NPC-115, *"Construction Equipment"*. This publication establishes maximum sound emission levels for any equipment that is used for construction.

Equipment used for construction activity at the Violet Hill Pit will need to comply with the sound emission limits outlined in MOE Publication NPC-115.

3.1.2 Extraction, Processing and Shipping

The MOE defines an aggregate extraction facility such as the Violet Hill Pit as a stationary noise source. Please note that the MOE terminology "stationary source" refers to the site as a whole including the composite effect of all of the individual sound sources (excluding construction activity), even if the latter can actually move around the site. Thus, source, as referred to above, means the site (operation) as a whole.

The stationary source noise guidelines establish limits on the sound exposures that a source can produce at a sensitive receptor location.

The noise sensitive receptors in this case are the residential uses. The area around the site is a combination of a "Class 2 area" and a "Class 3 area," according to MOE definitions.

A Class 2 area has an acoustical environment that has qualities representative of both Class 1 and Class 3 areas, and in which a low ambient sound level will typically be realized as early as 1900 hours. A Class 1 area has an acoustical environment that is dominated by man-made sounds. A Class 3 area is a rural area with an acoustic environment dominated by natural sounds and having little or no road traffic. See Glossary of Terms for definitions of Class 1, Class 2 and Class 3 areas. The sensitive receptors located close to Highway 89 (i.e., Receptors 1, 2, 15

and 16) are in a Class 2 area due to the road traffic noise from Highway 89. All other receptors are further removed from Highway 89 and are considered to be in a Class 3 area.

The environmental sound level guidelines are found in MOE Publication NPC-300. In all cases, the sound from the source (L_{eq} in any hour) should not exceed the ambient one hour L_{eq} at the receptors of concern, in the corresponding hours.

For a Class 2 area, no mitigation is required for any source that does not exceed 50 dBA (one hour L_{eq}), at any plane of window receptor between the hours of 0700 and 2300 hours. Between 1900 and 0700 hours, a 45 dBA limit is applicable. For outdoor points of reception, the criteria are the same as for planes of window except between 1900 and 2300 hours where a 45 dBA limit is applicable. For a Class 3 area, no mitigation is required for any source that does not exceed 45 dBA (one-hour L_{eq}) at any off-site receptor between the hours of 0700 and 1900 hours. Between 1900 and 0700 hours, a 40 dBA limit is applicable. These guideline sound limits are referred to as "exclusion limits".

The MOE exclusion limits have been used as the guideline limit at the off-site receptor locations for the proposed sand and gravel pit operation.

3.2 OFF-SITE HAUL ROUTE

There are no specific statutes, regulations, formal policies under the Planning Act or guidelines applicable to adding licensed motor vehicles to public roadways and dealing with noise.

The only MOE guideline addressing off-site vehicles on a haul route in a similar context is the draft noise guidelines for landfill sites. This guideline is generally used to assess the noise impacts along haul routes associated with pits and quarries. The landfill guideline requires that an access route for off-site vehicles be selected which will result in a minimum noise impact.

4.0 ANALYSIS

A sand and gravel pit operation is a dynamic, continually changing process, that moves across the site. The site operations consist of various components:

- site preparation;
- the excavating, processing and transporting of aggregate;
- the rehabilitation of the sand and gravel pit; and
- miscellaneous maintenance activities.

The excavation and transport of material from the working face and the processing of material have been assessed. Construction activities are excluded from the assessment as per the MOE guidelines. Instead, as indicated above, equipment used for construction must comply with the maximum sound emission levels outlined in MOE Publication NPC-115.

Sound emission levels for various types of construction equipment such as dozers and front end loaders are typically rated in accordance with the test procedures of SAE (Society of Automotive Engineers Inc.) Standard J88. Maximum sound level potential for various operating conditions is determined. The maximum sound emission level data for equipment to be used at the site was

obtained from information in our database or provided by the equipment manufacturer. The data used in our analysis is found in Table 1.

Existing topography was used in the acoustical model. The inherent acoustical screening of the operations occurring on the pit floor as well as for trucks travelling along the pit floor has been taken into account.

All equipment was assumed to operate continuously, except for the trucks operating on the site. This is conservative since, in practice, the equipment would not operate continuously and would also not operate at maximum sound emission levels continuously. The shipping trucks were assumed to travel at 20 kph when on the site. The peak hour volume of 33.33 loads was used. Thus, in the worst case hour, 33.33 trucks travel at 20 kph to the processing area where they are loaded and then travel at 20 kph to the site entrance where they leave the site.

To access the noise impact at the noise sensitive receptor locations, a 3-dimensional acoustical model of the proposed sand and gravel pit operations was developed using the CadnaA Version 4.4 environmental noise modelling software. The model uses the prediction algorithms outlined in International Standards Organization Standard 9613-2:1996, *"Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation"*. The modelling technique is an approach that is acceptable to the MOE.

5.0 RESULTS

5.1 ON-SITE OPERATIONS

The results of our analyses indicates that the MOE noise guideline limits will be exceeded at most of the noise sensitive analysis locations. See Table 2. Thus, noise mitigation is needed for the sound emissions from the proposed sand and gravel pit to comply with the MOE noise guideline limits.

5.1.1 NOISE MITIGATION

As indicated above, noise mitigation measures are needed for the proposed sand and gravel pit to comply with the noise guideline limits. To comply with the noise guideline limits, noise mitigation measures as shown on Figure 4 are recommended. The recommended mitigation measures include a combination of:

- perimeter berms;
- extraction direction for certain areas to maximize the acoustical screening provided by the working face to the closest receptor locations; and
- restrictions on areas where portable crushing and screening are permitted.

In addition to the above, Receptor 17 should be removed prior to commencing any extraction activities on the site. Receptor 18 can remain until extraction commences in the south portion of the sand and gravel pit when it should also be removed. Receptor 19 can remain for the life of the sand and gravel pit.

5.2 OFF-SITE HAUL ROUTE

Highway 89 will be used as the haul route from the site.

Road traffic information for Highway 89 applicable to the year 2010 was obtained from the Ontario Ministry of Transportation.

The noise impact along the off-site haul route was determined by comparing the existing sound exposures produced by road traffic on Highway 89 with the sound exposures that will occur when the pit truck traffic is added to the background traffic. Note that significant sound exposures are already generated by the existing traffic on Highway 89.

The worst case analysis indicates that the sand and gravel pit traffic will increase the minimum existing sound exposure by 5 dBA. According to the *Noise Guidelines for Landfill Sites*, this is within the "noticeable" range.

The off-site haul route noise impact indicated above conservatively estimates the "predictable worst case" as required by the MOE guidelines. The worst case assessment reflects the impact of adding the maximum hourly truck volume to/from the Violet Hill Pit (i.e.,33.33 loads or 66.66 pass-bys) to the minimum hourly background traffic volume. This maximizes the predicted noise impact.

The noise impacts will generally be less since:

- the maximum hourly truck volume to/from the Violet Hill Pit would occur rarely, if ever;
- even if the maximum hourly truck volume were to occur, it is unlikely that it would occur during the minimum background traffic hour; and
- the truck traffic added to Highway 89 from the Violet Hill Pit will mostly be replacing aggregate truck traffic from pits further to the west. Thus, the introduction of the Violet Hill Pit could even reduce sound exposures along Highway 89 to the west since there could be a reduction in truck traffic.

As indicated above, the worst case assessment predicts noticeable noise impacts along the off-site haul route. However, for the majority of the time, insignificant noise impacts are anticipated.

The use of Highway 89 as the haul route is preferred acoustically. If other roads were used as the haul route, significantly greater noise impacts would be predicted since the background traffic volumes are considerably less on other area roadways.

5.3 NOISE MITIGATION RECOMMENDATIONS

To mitigate the resultant sound exposures at the off-site receptor locations to comply with the MOE guidelines and to minimize the potential off-site noise impacts, we recommend:

- Typical hours of operation be restricted to between 0700 and 1900 hours.

- The shipping activity can also occur during the nighttime (0600 to 0700 hours) period.

- The noise mitigation measures shown on Figure 4 be incorporated in site plans for the proposed sand and gravel pit. Figure 5 shows top of berm elevations. It should be noted that all of the berms are not required all of the time. Figures are included in Appendix A which illustrate which berms are required when extraction is occurring in different areas within the gravel pit. The berms for any area must be constructed prior to extraction in any area within the pit. For example, if extraction is to commence in Area 1, then the berms shown on Figure A1 must be constructed prior to this extraction. If extraction were to move into Area 2 prior to completing extraction in all of Area 1, then the berms shown on both Figures A1 and A2 are needed.

- Equipment that is used for the construction and rehabilitation activities must comply with the maximum sound emission limits outlined in MOE Publication NPC-115.

- Construction and rehabilitation activities should only be permitted during the daytime period (i.e., 0700 to 1900 hours), Monday to Friday.

- If additional or other equipment is to be used on the site for non-construction or rehabilitation activities, the noise impact assessment needs to be updated and any mitigation recommendations implemented prior to this equipment operating on the site.

With the noise mitigation measures outlined above, the worst case sound exposures will comply with the MOE noise guidelines at all off-site receptor locations. Table 3 outlines the mitigated sound exposures at the receptor locations.

A sample sound exposure calculation is included as Appendix B.

6.0 CONCLUSIONS

With the appropriate implementation of the mitigation measures outlined herein, the sound exposures from the worst case daily operations will be in compliance with MOE noise guideline limits.

As the operation moves over the site, elevation, distance and sound exposure vary relative to off-site receptors. Thus, the noise analysis has been approached on the basis of determining worst case conditions to ensure that the data presented does not under-predict the potential off-site sound exposures. The interpretation of the sound exposure predictions must take this into account.

Along the off-site haul route, noise impacts of up to 5 dBA are predicted. The off-site haul route of minimum noise impact has been selected in accordance with the MOE (draft) landfill guidelines.

7.0 REFERENCES

1. "Model Municipal Noise Control By-Law", Final Report, Ontario Ministry of the Environment, August 1978.

2. "Noise Emission Levels for Vehicles in Ontario", Ontario Ministry of Transportation and Communications, November 1985, H05-85-02.

3. “Environmental Noise Guideline – Stationary and Transportation Sources, Approval and Planning”, Ontario Ministry of the Environment, Publication NPC-300, October 2013.

4. "Information to be Submitted for Approval of Stationary Sources of Sound", Ontario Ministry of the Environment, Publication NPC-233, October 1995.

5. “Construction Equipment”, Ontario Ministry of the Environment, Publication NPC-115, August 1978.

6. “Noise Guidelines for Landfill Sites (Draft)”, Ontario Ministry of the Environment, October 1998.

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GLOSSARY OF TERMS

Class 1 Area (MOE definition):

means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the urban hum.

Class 2 Area (MOE definition):

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 infrequency human activity; and
- no clearly audible sound from stationary sources other than from those under impact assessment.

Class 3 Area (MOE definition):

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 1000 population;
- agricultural area;
- a rural recreational area such as a cottage or a resort area; or
- a wilderness area.

Construction (MOE definition):

"Construction" includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, moving, land clearing, earthmoving, grading, excavating, the laying of pipe and conduit whether above or below ground level, street and highway building, concreting, equipment installation and alteration and the structural installation of construction components and materials in any form or for any purpose, and includes any work in connection therewith.

Construction Equipment (MOE definition):

"Construction equipment" means any equipment or device designed and intended for use in construction, or material handling, including but not limited to, air compressors, pile drivers, pneumatic or hydraulic tools, bulldozers, tractors, excavators, trenchers, cranes, derricks, loaders, scrapers, pavers, generators, off-highway haulers or trucks, ditchers, compactors and rollers, pumps, concrete mixers, graders, or other material handling equipment.

Conveyance (MOE definition):

"Conveyance" includes a vehicle and any other device employed to transport a person or persons or goods from place to place but does not include any such device or vehicle if operated only within the premises of a person.

dB - Decibel:

See Sound (Pressure) Level.

dBA - A weighted decibel:

A nationally and internationally standardized frequency weighting applied to the sound level spectrum to approximate the sensitivity of the human hearing mechanism as a function of frequency (pitch).

L_{eq} - The energy equivalent continuous sound level:

The constant sound level over the time period in question, that results in the same total sound energy as the actually varying sound. Must be associated with a time period.

L_x - Statistical Sound Level Descriptor:

The sound level exceeded for x% of the time. For all practical purposes, L_{90} is the residual (lowest) ambient sound level.

Sound (Pressure) Level:

Measured in decibels (dB) it is the logarithmic ratio of the instantaneous energy of a sound to the energy at the threshold of hearing. Mathematically:

$$SPL\ (dB) = 20\ \log\ (\frac{p}{p_0})$$

where p is the pressure due to the sound and p_o is the pressure at the threshold of hearing, taken as 20 micro Pascals.

Stationary Source (MOE definition):

"Stationary source" means a source of sound which does not normally move from place to place and includes the premises of a person as one stationary source, unless the dominant source of sound on those premises is construction or a conveyance.

TABLE 1

EQUIPMENT REFERENCE SOUND LEVELS

Equipment	Reference Sound Level at 15 m (dBA)	Quantity
Front End Loader at Working Face	75	1
Portable Crusher	84	1
Screening Plant	88	1
Haul Truck	82	4
Permanent Processing Plant	90	1
Front End Loader at Permanent Processing Plant	75	2
Shipping Truck	78	33

TABLE 2

WORST CASE UNMITIGATED SOUND EXPOSURES

Receptor[1]	Daytime (0700-1900 Hours)		Nighttime (1900-2300 Hours) – Shipping Only	
	Sound Exposure (dBA)	Guideline Limit (dBA)	Sound Exposure (dBA)	Guideline Limit (dBA)
R01	53	50	50	45
R02	45	50	29	45
R03	50	45	37	40
R04	52	45	37	40
R05	48	45	33	40
R06	45	45	29	40
R07	54	45	39	40
R08	52	45	38	40
R09	47	45	33	40
R10	55	45	26	40
R11	51	45	22	40
R12	51	45	17	40
R13	43	45	20	40
R14	46	45	13	40
R15	42	50	33	45
R16	50	50	44	45
R17[2]	N/A	N/A	N/A	N/A
R18[3]	57	45	34	40
R19	55	45	39	40
R20	36	45	16	40

Notes:

1) See Figure 3 for receptor locations.
2) Receptor R17 to be removed prior to commencement of extraction activities.
3) Receptor R18 to be removed prior to commencement of extraction activities on south extraction area.

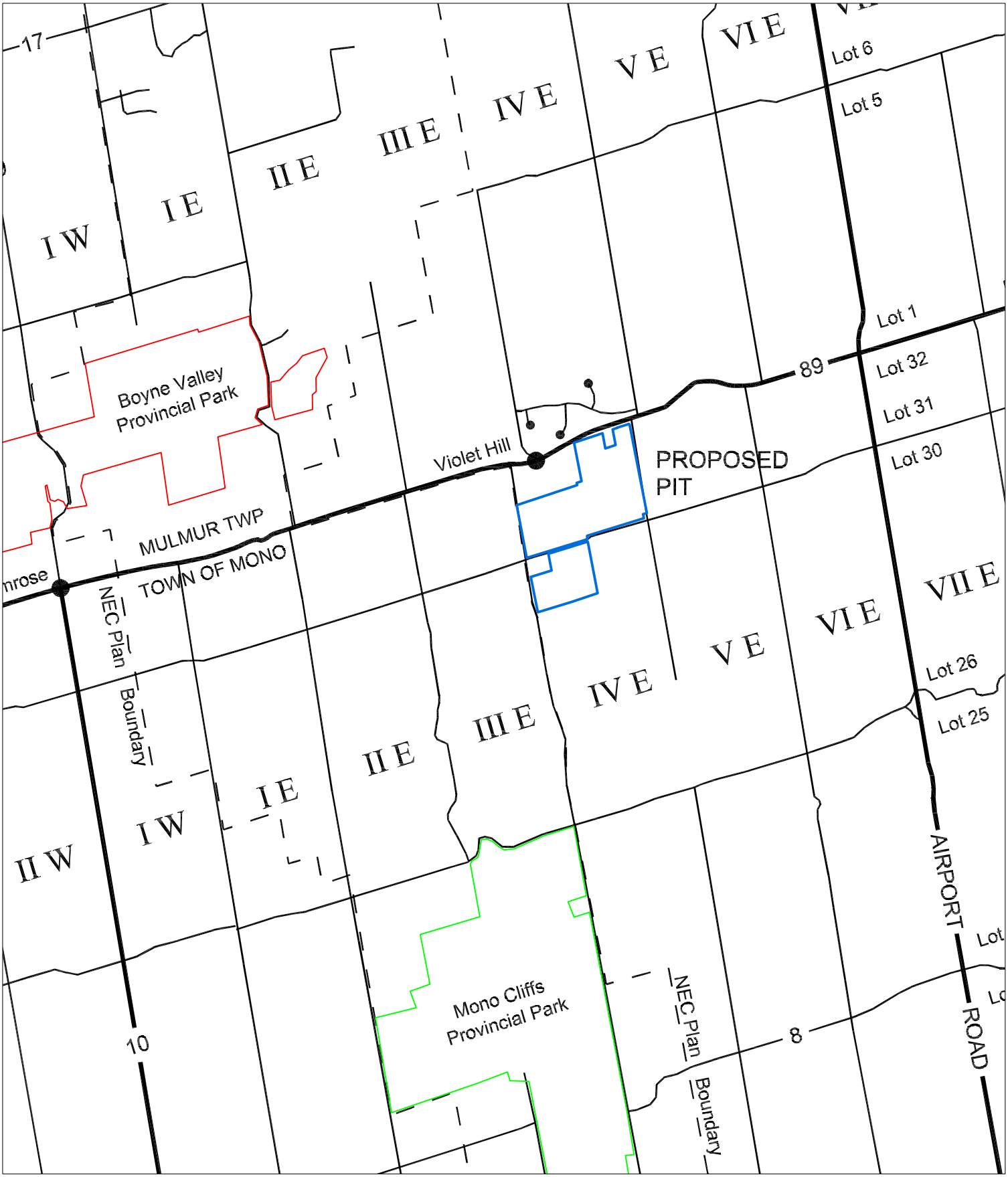
TABLE 3

WORST CASE MITIGATED SOUND EXPOSURES

Receptor[1]	Daytime (0700-1900 Hours)		Nighttime (1900-2300 Hours) – Shipping Only	
	Sound Exposure (dBA)	Guideline Limit (dBA)	Sound Exposure (dBA)	Guideline Limit (dBA)
R01	44	50	37	45
R02	41	50	27	45
R03	44	45	30	40
R04	45	45	30	40
R05	45	45	31	40
R06	41	45	28	40
R07	44	45	30	40
R08	44	45	30	40
R09	43	45	27	40
R10	44	45	22	40
R11	45	45	22	40
R12	45	45	14	40
R13	41	45	19	40
R14	45	45	13	40
R15	42	50	30	45
R16	49	50	42	45
R17[2]	N/A	N/A	N/A	N/A
R18[3]	44	45	26	40
R19	45	45	31	40
R20	36	45	15	40

Notes:

1) See Figure 3 for receptor locations.
2) Receptor R17 to be removed prior to commencement of extraction activities.
3) Receptor R18 to be removed prior to commencement of extraction activities on south extraction area.



No.	Revision/Issue	Date

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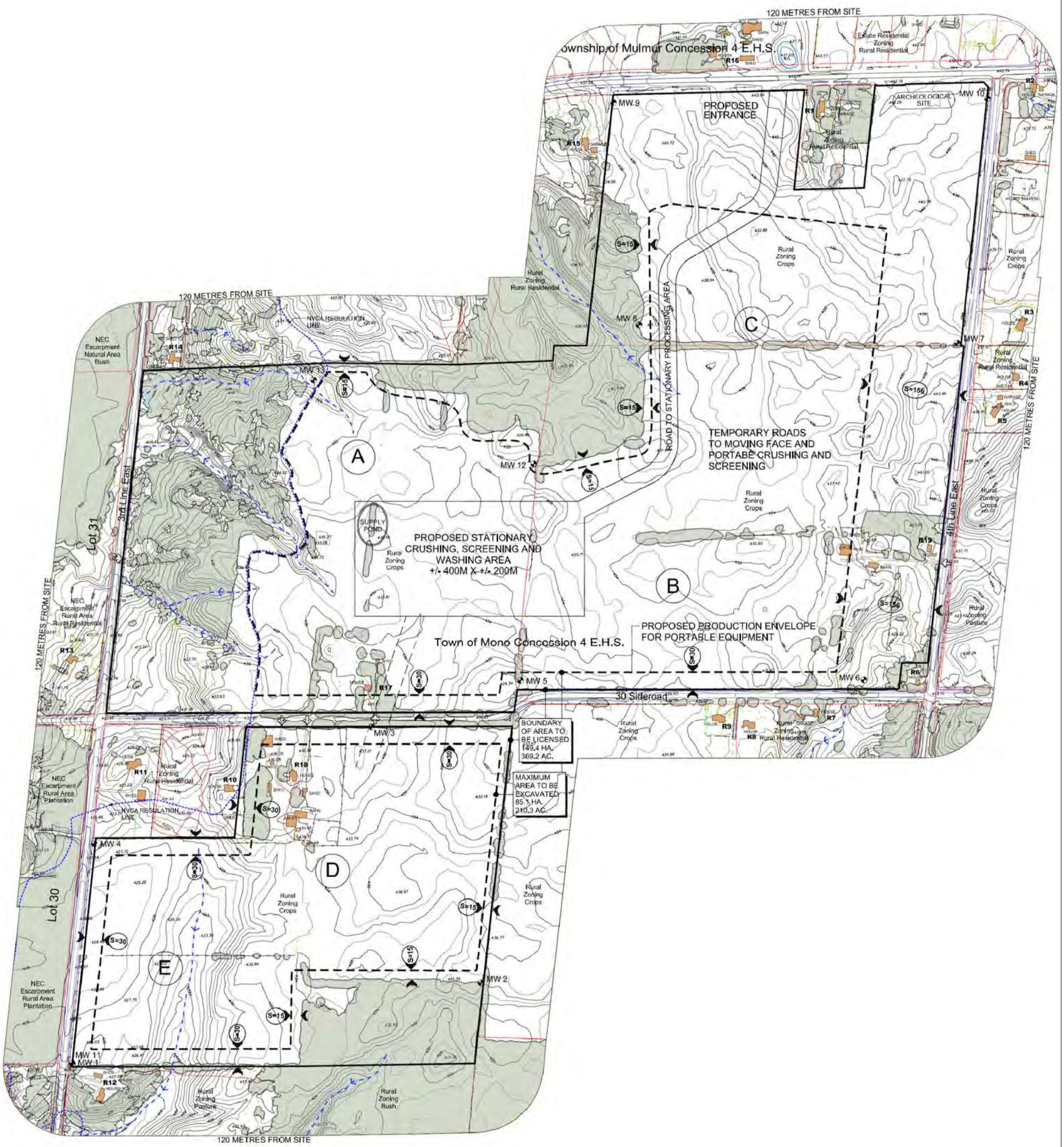
Title	Project No.	Date
Key Plan	104-315	2015-05-28
Project Name	**Scale**	**Figure**
Violet Hill Pit	N.T.S.	1



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Title	Project No.	Date
Operational Concept	114-310	2015-05-28
Project Name	**Scale**	**Figure**
Violet Hill Pit	N.T.S.	2

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Title	Date	Figure
Noise Sensitive Receptors	**2015-05-28**	**3**
Project Name: **Violet Hill Pit/Town of Mono**	Project No.: **114-310**	

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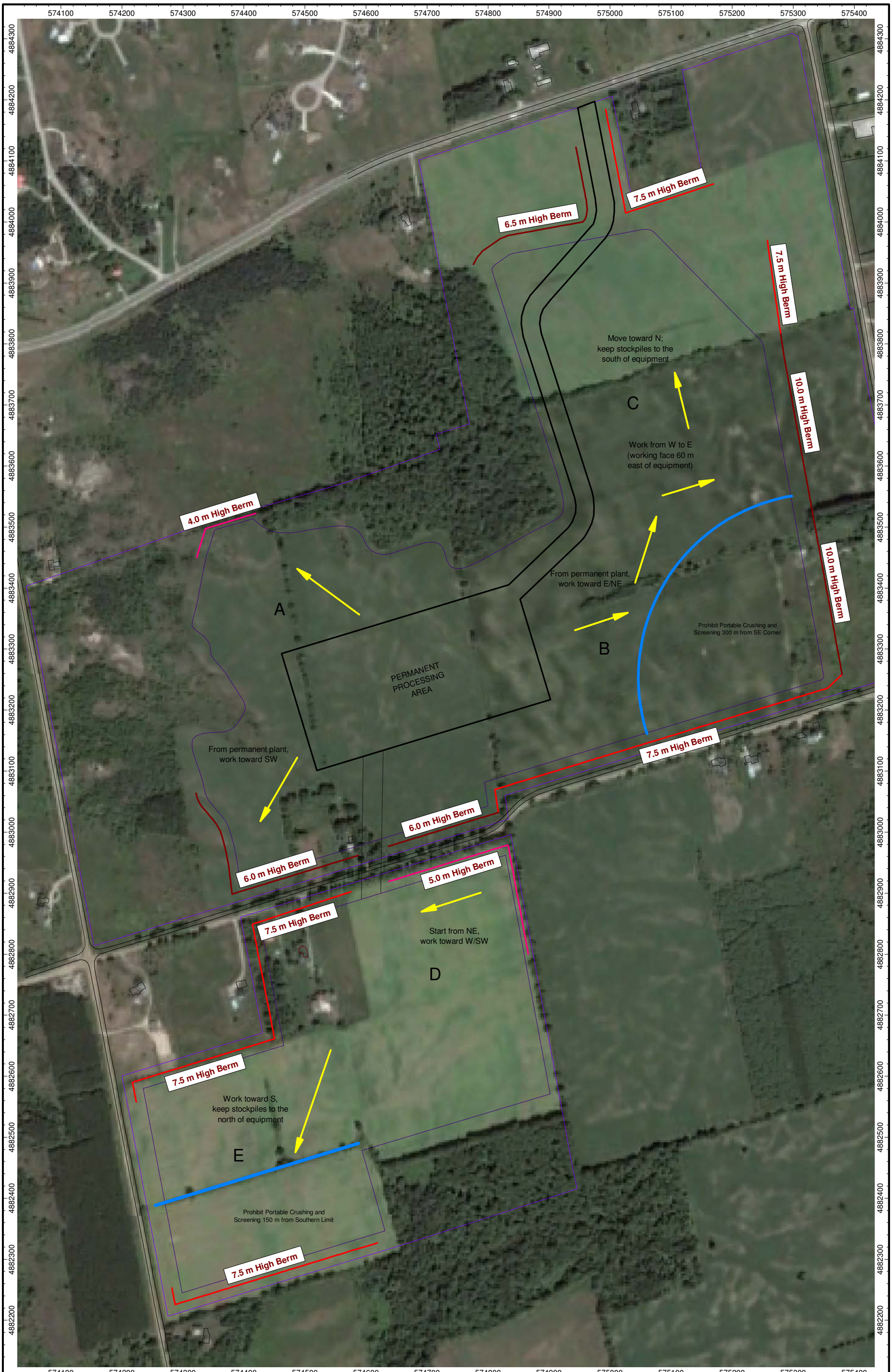
Date Plotted: 28.05.15



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Title	Date	Figure
Mitigation Requirements	**2015-05-28**	**4**
Project Name	Project No.	
Violet Hill Pit/Town of Mono	**114-310**	

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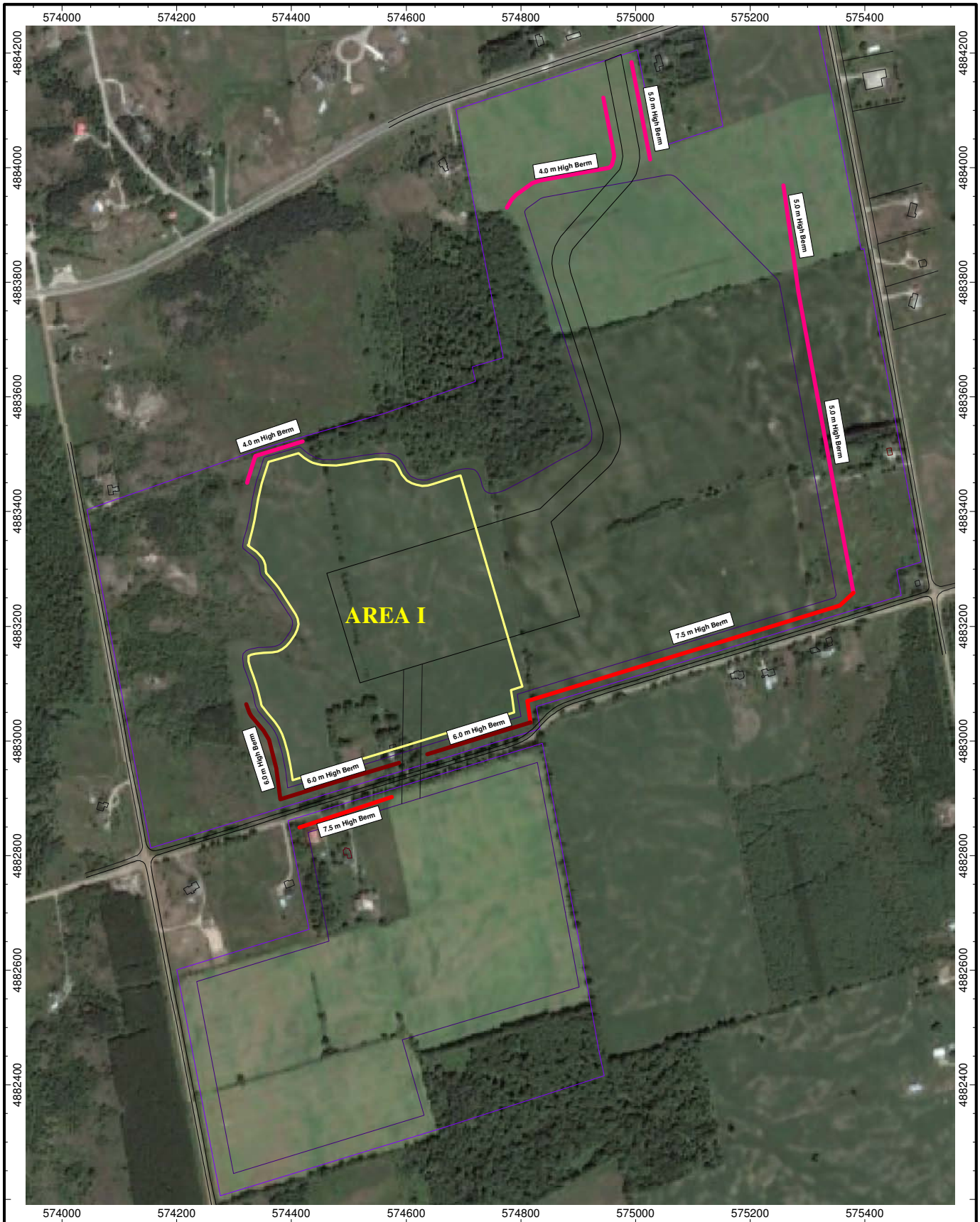
APPENDIX A

BERM PHASING



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Title	Date	Figure
Berm Requirements - Area I	**2015-06-12**	**A1**
Project Name: **Violet Hill Pit/Town of Mono**	Project No.: **114-310**	

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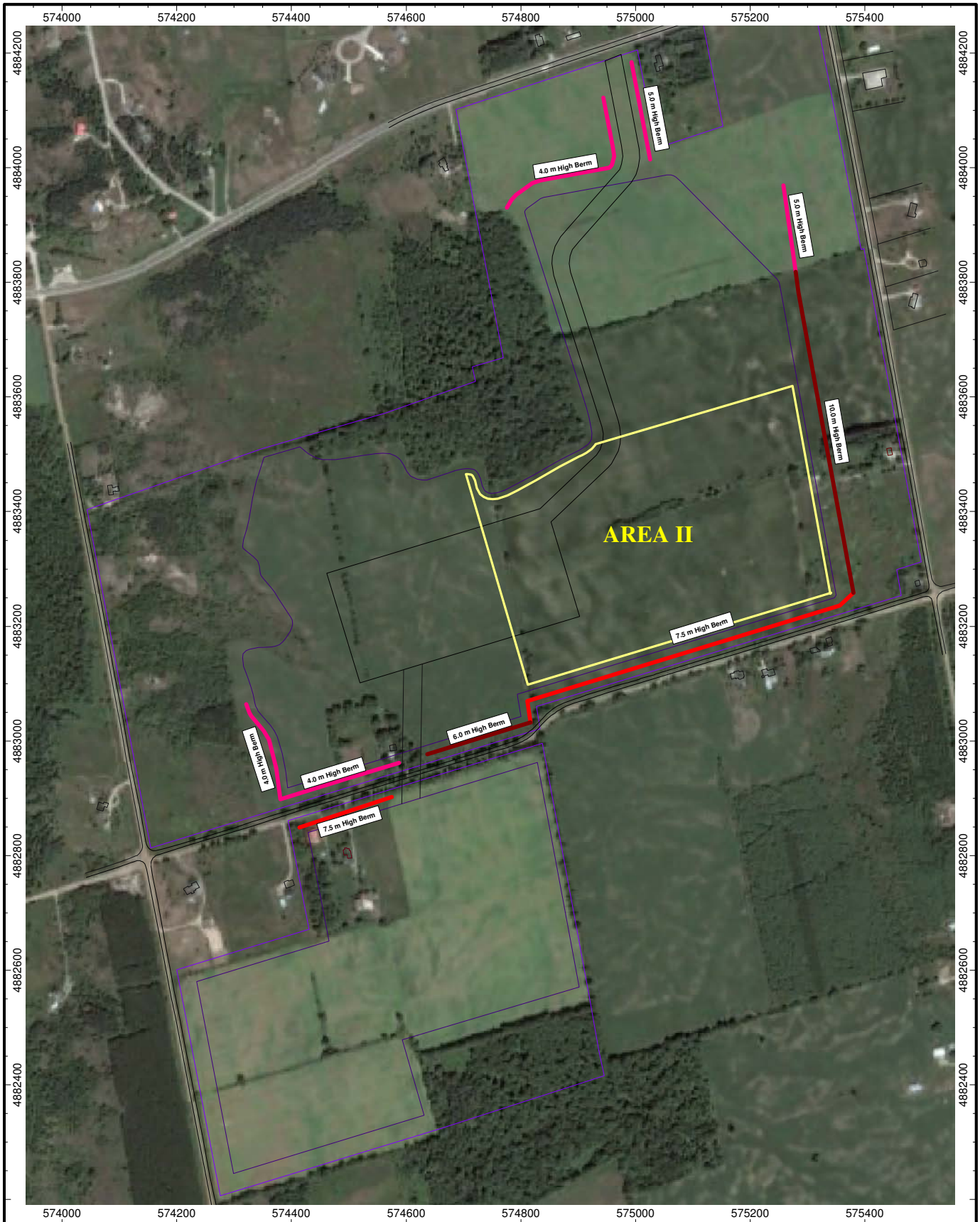

VALCOUSTICS Canada Ltd. consulting acoustical engineers	Title: **Berm Requirements - Area II**	Date: **2015-06-12**	Figure: **A2**
	Project Name: **Violet Hill Pit/Town of Mono**	Project No.: **114-310**	

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Title	Date	Figure
Berm Requirements - Area III	**2015-06-12**	**A3**
Project Name	Project No.	
Violet Hill Pit/Town of Mono	**114-310**	

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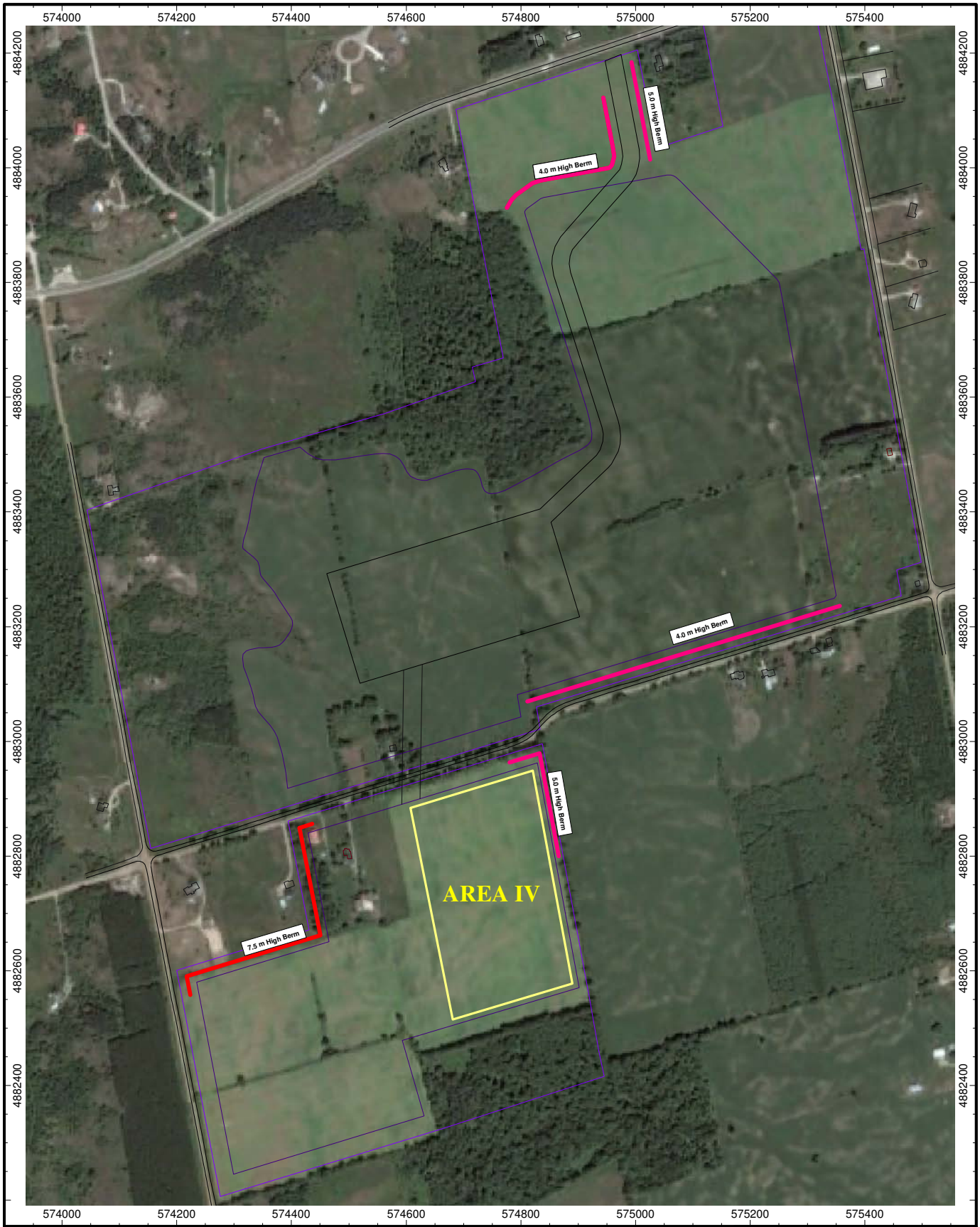

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Title	Date	Figure
Berm Requirements - Area IV	**2015-06-12**	**A4**
Project Name	Project No.	
Violet Hill Pit/Town of Mono	**114-310**	

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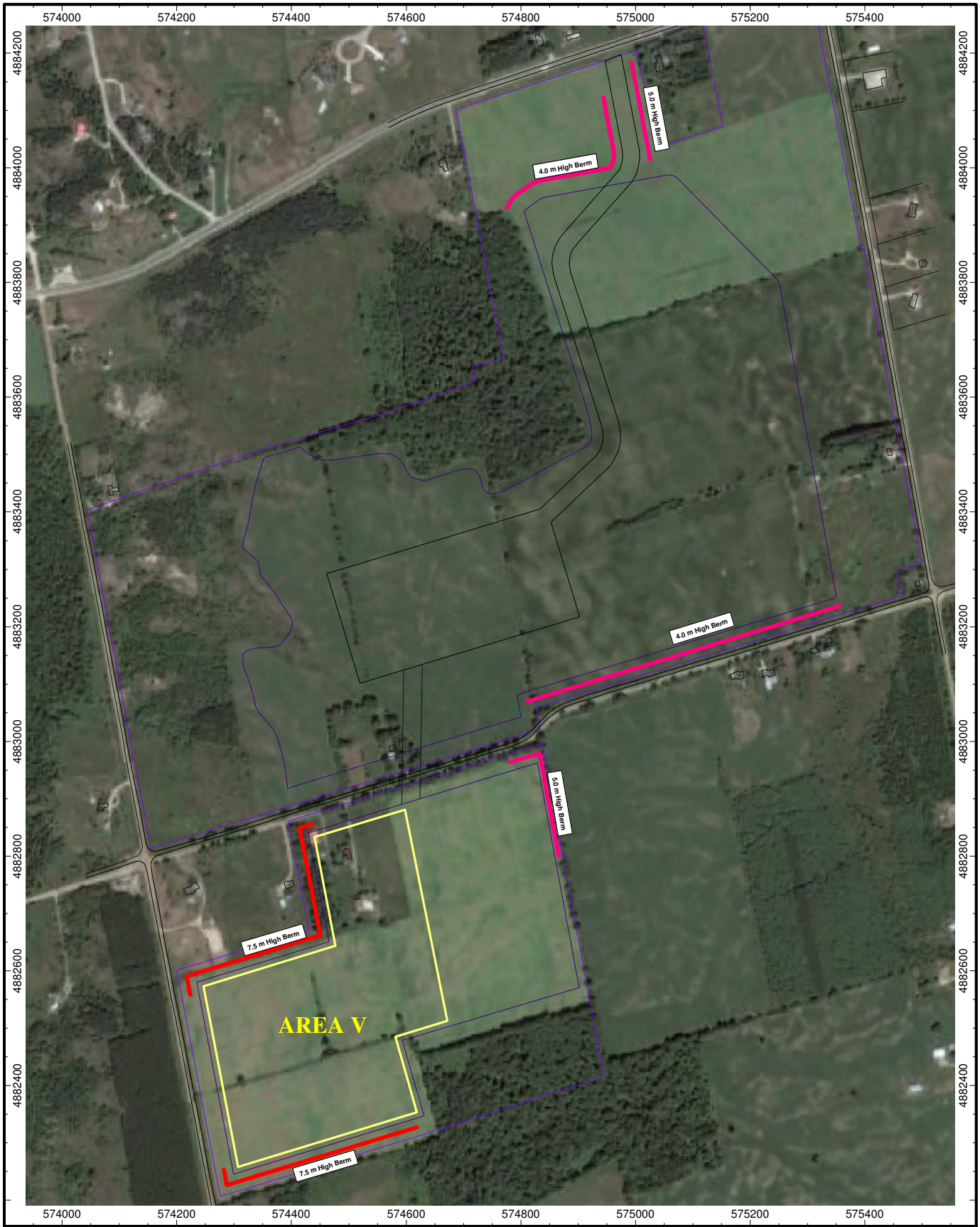
Date Plotted: 12.06.15



VALCOUSTICS Canada Ltd.
consulting acoustical engineers

Title	Date	Figure
Berm Requirements - Area V	**2015-06-12**	**A5**
Project Name	Project No.	
Violet Hill Pit/Town of Mono	**114-310**	

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Date Plotted: 12.06.15

APPENDIX B

SAMPLE CALCULATIONS

Configuration	
Parameter	Value
General	
Country	International
Max. Error (dB)	0.00
Max. Search Radius (m)	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (m)	1000.00
Min. Length of Section (m)	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	60.00
Reference Time Night (min)	60.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	370.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (°C)	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (m/s)	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (Schall 03)	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

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Receiver
Name: R05
ID: R05
X: 575476.15
Y: 4883760.44
Z: 441.50

Point Source, ISO 9613, Name: "Permanent Processing Plant", ID: "PERM"																			
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	574682.08	4883254.84	425.50	0	32	-39.4	-88.0	0.0	0.0	70.5	0.0	-5.5	0.0	0.0	10.3	0.0	-0.0	-114.7	-88.0
2	574682.08	4883254.84	425.50	0	63	81.8	-88.0	0.0	0.0	70.5	0.1	-5.5	0.0	0.0	10.3	0.0	-0.0	6.4	-88.0
3	574682.08	4883254.84	425.50	0	125	89.9	-88.0	0.0	0.0	70.5	0.4	1.6	0.0	0.0	3.2	0.0	-0.0	14.3	-88.0
4	574682.08	4883254.84	425.50	0	250	96.4	-88.0	0.0	0.0	70.5	1.0	3.6	0.0	0.0	1.2	0.0	-0.0	20.2	-88.0
5	574682.08	4883254.84	425.50	0	500	104.8	-88.0	0.0	0.0	70.5	1.8	1.6	0.0	0.0	3.2	0.0	-0.0	27.7	-88.0
6	574682.08	4883254.84	425.50	0	1000	112.0	-88.0	0.0	0.0	70.5	3.4	-2.8	0.0	0.0	7.5	0.0	-0.0	33.3	-88.0
7	574682.08	4883254.84	425.50	0	2000	105.2	-88.0	0.0	0.0	70.5	9.1	-3.4	0.0	0.0	8.2	0.0	-0.0	20.9	-88.0
8	574682.08	4883254.84	425.50	0	4000	101.0	-88.0	0.0	0.0	70.5	30.9	-3.4	0.0	0.0	8.2	0.0	-0.0	-5.1	-88.0
9	574682.08	4883254.84	425.50	0	8000	92.9	-88.0	0.0	0.0	70.5	110.0	-3.4	0.0	0.0	8.2	0.0	-0.0	-92.4	-88.0

Point Source, ISO 9613, Name: "Front End Loaders @ Processing Plant", ID: "PERM_FEL"																			
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	574707.78	4883260.32	424.50	0	32	-36.4	-36.4	0.0	0.0	70.3	0.0	-5.6	0.0	0.0	10.4	0.0	-0.0	-111.5	-111.5
2	574707.78	4883260.32	424.50	0	63	87.8	87.8	0.0	0.0	70.3	0.1	-5.6	0.0	0.0	10.4	0.0	-0.0	12.7	12.7
3	574707.78	4883260.32	424.50	0	125	101.9	101.9	0.0	0.0	70.3	0.4	1.5	0.0	0.0	3.3	0.0	-0.0	26.5	26.5
4	574707.78	4883260.32	424.50	0	250	102.4	102.4	0.0	0.0	70.3	1.0	3.6	0.0	0.0	1.2	0.0	-0.0	26.4	26.4
5	574707.78	4883260.32	424.50	0	500	100.8	100.8	0.0	0.0	70.3	1.8	1.5	0.0	0.0	3.3	0.0	-0.0	24.0	24.0
6	574707.78	4883260.32	424.50	0	1000	104.0	104.0	0.0	0.0	70.3	3.3	-2.8	0.0	0.0	7.6	0.0	-0.0	25.6	25.6
7	574707.78	4883260.32	424.50	0	2000	102.2	102.2	0.0	0.0	70.3	8.9	-3.5	0.0	0.0	8.3	0.0	-0.0	18.3	18.3
8	574707.78	4883260.32	424.50	0	4000	97.0	97.0	0.0	0.0	70.3	30.1	-3.5	0.0	0.0	8.3	0.0	-0.0	-8.1	-8.1
9	574707.78	4883260.32	424.50	0	8000	93.9	93.9	0.0	0.0	70.3	107.2	-3.5	0.0	0.0	8.3	0.0	-0.0	-88.3	-88.3

Point Source, ISO 9613, Name: "Working Face", ID: "EX5_FEL"																			
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	575116.18	4883619.71	430.96	0	32	-39.4	-88.0	0.0	0.0	62.8	0.0	-5.1	0.0	0.0	10.0	0.0	-0.0	-107.1	-88.0
2	575116.18	4883619.71	430.96	0	63	84.8	-88.0	0.0	0.0	62.8	0.1	-5.1	0.0	0.0	10.3	0.0	-0.0	16.8	-88.0
3	575116.18	4883619.71	430.96	0	125	98.9	-88.0	0.0	0.0	62.8	0.2	0.1	0.0	0.0	5.6	0.0	-0.0	30.3	-88.0
4	575116.18	4883619.71	430.96	0	250	99.4	-88.0	0.0	0.0	62.8	0.4	4.8	0.0	0.0	1.7	0.0	-0.0	29.8	-88.0
5	575116.18	4883619.71	430.96	0	500	97.8	-88.0	0.0	0.0	62.8	0.8	2.8	0.0	0.0	4.9	0.0	-0.0	26.6	-88.0
6	575116.18	4883619.71	430.96	0	1000	101.0	-88.0	0.0	0.0	62.8	1.4	-1.6	0.0	0.0	11.0	0.0	-0.0	27.4	-88.0
7	575116.18	4883619.71	430.96	0	2000	99.2	-88.0	0.0	0.0	62.8	3.7	-2.2	0.0	0.0	13.8	0.0	-0.0	21.1	-88.0
8	575116.18	4883619.71	430.96	0	4000	94.0	-88.0	0.0	0.0	62.8	12.7	-2.2	0.0	0.0	16.4	0.0	-0.0	4.4	-88.0
9	575116.18	4883619.71	430.96	0	8000	90.9	-88.0	0.0	0.0	62.8	45.2	-2.2	0.0	0.0	19.1	0.0	-0.0	-33.9	-88.0

Point Source, ISO 9613, Name: "Working Face", ID: "EX5_CRSH"																			
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	575107.52	4883622.00	432.30	0	32	-39.4	-88.0	0.0	0.0	62.9	0.0	-4.9	0.0	0.0	9.7	0.0	-0.0	-107.2	-88.0
2	575107.52	4883622.00	432.30	0	63	92.2	-88.0	0.0	0.0	62.9	0.1	-4.9	0.0	0.0	9.8	0.0	-0.0	24.3	-88.0
3	575107.52	4883622.00	432.30	0	125	97.0	-88.0	0.0	0.0	62.9	0.2	0.3	0.0	0.0	4.8	0.0	-0.0	28.8	-88.0
4	575107.52	4883622.00	432.30	0	250	101.1	-88.0	0.0	0.0	62.9	0.4	5.0	0.0	0.0	0.5	0.0	-0.0	32.3	-88.0
5	575107.52	4883622.00	432.30	0	500	108.0	-88.0	0.0	0.0	62.9	0.8	2.9	0.0	0.0	3.2	0.0	-0.0	38.2	-88.0
6	575107.52	4883622.00	432.30	0	1000	108.3	-88.0	0.0	0.0	62.9	1.4	-1.4	0.0	0.0	8.6	0.0	-0.0	36.8	-88.0
7	575107.52	4883622.00	432.30	0	2000	109.7	-88.0	0.0	0.0	62.9	3.8	-2.0	0.0	0.0	10.8	0.0	-0.0	34.3	-88.0
8	575107.52	4883622.00	432.30	0	4000	109.7	-88.0	0.0	0.0	62.9	12.9	-2.0	0.0	0.0	12.8	0.0	-0.0	23.1	-88.0
9	575107.52	4883622.00	432.30	0	8000	100.7	-88.0	0.0	0.0	62.9	46.0	-2.0	0.0	0.0	15.2	0.0	-0.0	-21.4	-88.0

Point Source, ISO 9613, Name: "Working Face", ID: "EX5_SCREEN"																			
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	575097.49	4883620.00	432.50	0	32	-39.4	-88.0	0.0	0.0	63.1	0.0	-4.9	0.0	0.0	9.7	0.0	-0.0	-107.3	-88.0

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Point Source, ISO 9613, Name: "Working Face", ID: "EX5_SCREEN"																			
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	575097.49	4883620.00	432.50	0	63	90.6	-88.0	0.0	0.0	63.1	0.1	-4.9	0.0	0.0	9.7	0.0	-0.0	22.7	-88.0
3	575097.49	4883620.00	432.50	0	125	94.3	-88.0	0.0	0.0	63.1	0.2	0.3	0.0	0.0	4.5	0.0	-0.0	26.2	-88.0
4	575097.49	4883620.00	432.50	0	250	94.4	-88.0	0.0	0.0	63.1	0.4	4.9	0.0	0.0	0.0	0.0	-0.0	25.9	-88.0
5	575097.49	4883620.00	432.50	0	500	99.4	-88.0	0.0	0.0	63.1	0.8	2.9	0.0	0.0	2.0	0.0	-0.0	30.7	-88.0
6	575097.49	4883620.00	432.50	0	1000	101.2	-88.0	0.0	0.0	63.1	1.5	-1.4	0.0	0.0	6.3	0.0	-0.0	31.7	-88.0
7	575097.49	4883620.00	432.50	0	2000	100.3	-88.0	0.0	0.0	63.1	3.9	-2.1	0.0	0.0	7.1	0.0	-0.0	28.3	-88.0
8	575097.49	4883620.00	432.50	0	4000	95.9	-88.0	0.0	0.0	63.1	13.2	-2.1	0.0	0.0	7.3	0.0	-0.0	14.3	-88.0
9	575097.49	4883620.00	432.50	0	8000	89.8	-88.0	0.0	0.0	63.1	47.2	-2.1	0.0	0.0	7.7	0.0	-0.0	-26.2	-88.0

Line Source, ISO 9613, Name: "Shipping Trucks", ID: "SHIP"																			
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	574914.12	4883685.90	429.43	0	32	-42.7	-42.7	0.0	0.0	66.1	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-113.6	-113.6
2	574914.12	4883685.90	429.43	0	63	68.7	68.7	0.0	0.0	66.1	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	-2.3	-2.3
3	574914.12	4883685.90	429.43	0	125	77.9	77.9	0.0	0.0	66.1	0.2	0.5	0.0	0.0	4.3	0.0	-0.0	6.8	6.8
4	574914.12	4883685.90	429.43	0	250	79.4	79.4	0.0	0.0	66.1	0.6	4.0	0.0	0.0	0.7	0.0	-0.0	7.9	7.9
5	574914.12	4883685.90	429.43	0	500	88.5	88.5	0.0	0.0	66.1	1.1	2.0	0.0	0.0	2.8	0.0	-0.0	16.5	16.5
6	574914.12	4883685.90	429.43	0	1000	93.9	93.9	0.0	0.0	66.1	2.1	-2.3	0.0	0.0	7.1	0.0	-0.0	20.9	20.9
7	574914.12	4883685.90	429.43	0	2000	99.7	99.7	0.0	0.0	66.1	5.5	-3.0	0.0	0.0	7.8	0.0	-0.0	23.3	23.3
8	574914.12	4883685.90	429.43	0	4000	103.4	103.4	0.0	0.0	66.1	18.6	-3.0	0.0	0.0	7.9	0.0	-0.0	13.8	13.8
9	574914.12	4883685.90	429.43	0	8000	99.9	99.9	0.0	0.0	66.1	66.3	-3.0	0.0	0.0	8.0	0.0	-0.0	-37.5	-37.5
10	574990.05	4884031.46	438.72	0	32	-58.4	-58.4	0.0	0.0	65.9	0.0	-5.4	0.0	0.0	10.1	0.0	-0.0	-129.1	-129.1
11	574990.05	4884031.46	438.72	0	63	53.0	53.0	0.0	0.0	65.9	0.1	-5.4	0.0	0.0	10.1	0.0	-0.0	-17.8	-17.8
12	574990.05	4884031.46	438.72	0	125	62.2	62.2	0.0	0.0	65.9	0.2	6.7	0.0	0.0	0.0	0.0	-0.0	-10.7	-10.7
13	574990.05	4884031.46	438.72	0	250	63.7	63.7	0.0	0.0	65.9	0.6	12.1	0.0	0.0	0.0	0.0	-0.0	-15.0	-15.0
14	574990.05	4884031.46	438.72	0	500	72.8	72.8	0.0	0.0	65.9	1.1	6.0	0.0	0.0	0.0	0.0	-0.0	-0.2	-0.2
15	574990.05	4884031.46	438.72	0	1000	78.2	78.2	0.0	0.0	65.9	2.0	0.7	0.0	0.0	4.1	0.0	-0.0	5.4	5.4
16	574990.05	4884031.46	438.72	0	2000	84.0	84.0	0.0	0.0	65.9	5.4	-0.0	0.0	0.0	4.8	0.0	-0.0	7.9	7.9
17	574990.05	4884031.46	438.72	0	4000	87.7	87.7	0.0	0.0	65.9	18.2	-0.0	0.0	0.0	4.8	0.0	-0.0	-1.3	-1.3
18	574990.05	4884031.46	438.72	0	8000	84.2	84.2	0.0	0.0	65.9	65.0	-0.0	0.0	0.0	4.8	0.0	-0.0	-51.6	-51.6
19	574976.40	4884111.82	440.80	0	32	-45.3	-45.3	0.0	0.0	66.7	0.0	-5.4	0.0	0.0	10.5	0.0	-0.0	-117.1	-117.1
20	574976.40	4884111.82	440.80	0	63	66.1	66.1	0.0	0.0	66.7	0.1	-5.4	0.0	0.0	10.8	0.0	-0.0	-6.0	-6.0
21	574976.40	4884111.82	440.80	0	125	75.3	75.3	0.0	0.0	66.7	0.3	7.2	0.0	0.0	0.0	0.0	-0.0	1.1	1.1
22	574976.40	4884111.82	440.80	0	250	76.8	76.8	0.0	0.0	66.7	0.6	12.1	0.0	0.0	0.0	0.0	-0.0	-2.7	-2.7
23	574976.40	4884111.82	440.80	0	500	85.9	85.9	0.0	0.0	66.7	1.2	6.0	0.0	0.0	2.0	0.0	-0.0	10.1	10.1
24	574976.40	4884111.82	440.80	0	1000	91.3	91.3	0.0	0.0	66.7	2.2	0.7	0.0	0.0	9.1	0.0	-0.0	12.6	12.6
25	574976.40	4884111.82	440.80	0	2000	97.1	97.1	0.0	0.0	66.7	5.9	0.0	0.0	0.0	12.0	0.0	-0.0	12.5	12.5
26	574976.40	4884111.82	440.80	0	4000	100.8	100.8	0.0	0.0	66.7	20.0	0.0	0.0	0.0	14.6	0.0	-0.0	-0.5	-0.5
27	574976.40	4884111.82	440.80	0	8000	97.3	97.3	0.0	0.0	66.7	71.4	0.0	0.0	0.0	17.4	0.0	-0.0	-58.2	-58.2
28	574785.21	4883341.23	426.90	0	32	-43.9	-43.9	0.0	0.0	69.1	0.0	-5.6	0.0	0.0	10.3	0.0	-0.0	-117.8	-117.8
29	574785.21	4883341.23	426.90	0	63	67.5	67.5	0.0	0.0	69.1	0.1	-5.6	0.0	0.0	10.3	0.0	-0.0	-6.5	-6.5
30	574785.21	4883341.23	426.90	0	125	76.7	76.7	0.0	0.0	69.1	0.3	1.4	0.0	0.0	3.4	0.0	-0.0	2.5	2.5
31	574785.21	4883341.23	426.90	0	250	78.2	78.2	0.0	0.0	69.1	0.8	3.8	0.0	0.0	1.0	0.0	-0.0	3.5	3.5
32	574785.21	4883341.23	426.90	0	500	87.3	87.3	0.0	0.0	69.1	1.6	1.7	0.0	0.0	3.1	0.0	-0.0	11.9	11.9
33	574785.21	4883341.23	426.90	0	1000	92.7	92.7	0.0	0.0	69.1	3.0	-2.7	0.0	0.0	7.5	0.0	-0.0	15.9	15.9
34	574785.21	4883341.23	426.90	0	2000	98.5	98.5	0.0	0.0	69.1	7.8	-3.3	0.0	0.0	8.1	0.0	-0.0	16.8	16.8
35	574785.21	4883341.23	426.90	0	4000	102.2	102.2	0.0	0.0	69.1	26.5	-3.3	0.0	0.0	8.1	0.0	-0.0	1.8	1.8
36	574785.21	4883341.23	426.90	0	8000	98.7	98.7	0.0	0.0	69.1	94.5	-3.3	0.0	0.0	8.1	0.0	-0.0	-69.6	-69.6
37	574906.93	4883455.64	428.54	0	32	-46.4	-46.4	0.0	0.0	67.2	0.0	-5.5	0.0	0.0	10.2	0.0	-0.0	-118.4	-118.4
38	574906.93	4883455.64	428.54	0	63	65.0	65.0	0.0	0.0	67.2	0.1	-5.5	0.0	0.0	10.2	0.0	-0.0	-7.1	-7.1
39	574906.93	4883455.64	428.54	0	125	74.2	74.2	0.0	0.0	67.2	0.3	0.8	0.0	0.0	4.0	0.0	-0.0	1.9	1.9
40	574906.93	4883455.64	428.54	0	250	75.7	75.7	0.0	0.0	67.2	0.7	3.9	0.0	0.0	0.9	0.0	-0.0	3.0	3.0
41	574906.93	4883455.64	428.54	0	500	84.8	84.8	0.0	0.0	67.2	1.3	1.9	0.0	0.0	2.9	0.0	-0.0	11.6	11.6
42	574906.93	4883455.64	428.54	0	1000	90.2	90.2	0.0	0.0	67.2	2.4	-2.5	0.0	0.0	7.2	0.0	-0.0	15.8	15.8
43	574906.93	4883455.64	428.54	0	2000	96.0	96.0	0.0	0.0	67.2	6.2	-3.1	0.0	0.0	7.9	0.0	-0.0	17.8	17.8
44	574906.93	4883455.64	428.54	0	4000	99.7	99.7	0.0	0.0	67.2	21.2	-3.1	0.0	0.0	7.9	0.0	-0.0	6.5	6.5
45	574906.93	4883455.64	428.54	0	8000	96.2	96.2	0.0	0.0	67.2	75.5	-3.1	0.0	0.0	7.9	0.0	-0.0	-51.3	-51.3
46	574917.43	4883910.86	432.29	0	32	-46.9	-46.9	0.0	0.0	66.3	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-118.0	-118.0
47	574917.43	4883910.86	432.29	0	63	64.5	64.5	0.0	0.0	66.3	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	-6.6	-6.6
48	574917.43	4883910.86	432.29	0	125	73.7	73.7	0.0	0.0	66.3	0.2	0.9	0.0	0.0	3.9	0.0	-0.0	2.4	2.4
49	574917.43	4883910.86	432.29	0	250	75.2	75.2	0.0	0.0	66.3	0.6	4.4	0.0	0.0	0.4	0.0	-0.0	3.5	3.5
50	574917.43	4883910.86	432.29	0	500	84.3	84.3	0.0	0.0	66.3	1.1	2.3	0.0	0.0	2.5	0.0	-0.0	12.1	12.1
51	574917.43	4883910.86	432.29	0	1000	89.7	89.7	0.0	0.0	66.3	2.1	-2.0	0.0	0.0	6.9	0.0	-0.0	16.4	16.4

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Line Source, ISO 9613, Name: "Shipping Trucks", ID: "SHIP"																			
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)
52	574917.43	4883910.86	432.29	0	2000	95.5	95.5	0.0	0.0	66.3	5.6	-2.7	0.0	0.0	7.7	0.0	-0.0	18.7	18.7
53	574917.43	4883910.86	432.29	0	4000	99.2	99.2	0.0	0.0	66.3	19.0	-2.7	0.0	0.0	7.8	0.0	-0.0	8.8	8.8
54	574917.43	4883910.86	432.29	0	8000	95.7	95.7	0.0	0.0	66.3	67.6	-2.7	0.0	0.0	8.2	0.0	-0.0	-43.7	-43.7
55	574965.81	4883965.84	434.29	0	32	-51.0	-51.0	0.0	0.0	65.8	0.0	-5.4	0.0	0.0	10.1	0.0	-0.0	-121.6	-121.6
56	574965.81	4883965.84	434.29	0	63	60.4	60.4	0.0	0.0	65.8	0.1	-5.4	0.0	0.0	10.1	0.0	-0.0	-10.3	-10.3
57	574965.81	4883965.84	434.29	0	125	69.6	69.6	0.0	0.0	65.8	0.2	1.1	0.0	0.0	3.7	0.0	-0.0	-1.2	-1.2
58	574965.81	4883965.84	434.29	0	250	71.1	71.1	0.0	0.0	65.8	0.6	4.8	0.0	0.0	0.0	0.0	-0.0	-0.1	-0.1
59	574965.81	4883965.84	434.29	0	500	80.2	80.2	0.0	0.0	65.8	1.1	2.7	0.0	0.0	2.1	0.0	-0.0	8.5	8.5
60	574965.81	4883965.84	434.29	0	1000	85.6	85.6	0.0	0.0	65.8	2.0	-1.6	0.0	0.0	6.4	0.0	-0.0	13.0	13.0
61	574965.81	4883965.84	434.29	0	2000	91.4	91.4	0.0	0.0	65.8	5.3	-2.3	0.0	0.0	7.1	0.0	-0.0	15.5	15.5
62	574965.81	4883965.84	434.29	0	4000	95.1	95.1	0.0	0.0	65.8	18.0	-2.3	0.0	0.0	7.1	0.0	-0.0	6.4	6.4
63	574965.81	4883965.84	434.29	0	8000	91.6	91.6	0.0	0.0	65.8	64.3	-2.3	0.0	0.0	7.2	0.0	-0.0	-43.4	-43.4
64	574959.17	4883538.96	426.64	0	32	-52.4	-52.4	0.0	0.0	66.0	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-123.2	-123.2
65	574959.17	4883538.96	426.64	0	63	59.0	59.0	0.0	0.0	66.0	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	-11.9	-11.9
66	574959.17	4883538.96	426.64	0	125	68.2	68.2	0.0	0.0	66.0	0.2	0.5	0.0	0.0	4.3	0.0	-0.0	-2.8	-2.8
67	574959.17	4883538.96	426.64	0	250	69.7	69.7	0.0	0.0	66.0	0.6	4.1	0.0	0.0	0.7	0.0	-0.0	-1.7	-1.7
68	574959.17	4883538.96	426.64	0	500	78.8	78.8	0.0	0.0	66.0	1.1	2.0	0.0	0.0	2.7	0.0	-0.0	6.9	6.9
69	574959.17	4883538.96	426.64	0	1000	84.2	84.2	0.0	0.0	66.0	2.1	-2.3	0.0	0.0	7.1	0.0	-0.0	11.3	11.3
70	574959.17	4883538.96	426.64	0	2000	90.0	90.0	0.0	0.0	66.0	5.4	-2.9	0.0	0.0	7.7	0.0	-0.0	13.7	13.7
71	574959.17	4883538.96	426.64	0	4000	93.7	93.7	0.0	0.0	66.0	18.4	-2.9	0.0	0.0	7.8	0.0	-0.0	4.4	4.4
72	574959.17	4883538.96	426.64	0	8000	90.2	90.2	0.0	0.0	66.0	65.8	-2.9	0.0	0.0	7.8	0.0	-0.0	-46.5	-46.5
73	574955.99	4883510.55	427.11	0	32	-52.4	-52.4	0.0	0.0	66.2	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-123.4	-123.4
74	574955.99	4883510.55	427.11	0	63	59.0	59.0	0.0	0.0	66.2	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	-12.1	-12.1
75	574955.99	4883510.55	427.11	0	125	68.2	68.2	0.0	0.0	66.2	0.2	0.6	0.0	0.0	4.2	0.0	-0.0	-3.0	-3.0
76	574955.99	4883510.55	427.11	0	250	69.7	69.7	0.0	0.0	66.2	0.6	4.1	0.0	0.0	0.6	0.0	-0.0	-1.9	-1.9
77	574955.99	4883510.55	427.11	0	500	78.8	78.8	0.0	0.0	66.2	1.1	2.0	0.0	0.0	2.8	0.0	-0.0	6.7	6.7
78	574955.99	4883510.55	427.11	0	1000	84.2	84.2	0.0	0.0	66.2	2.1	-2.3	0.0	0.0	7.1	0.0	-0.0	11.1	11.1
79	574955.99	4883510.55	427.11	0	2000	90.0	90.0	0.0	0.0	66.2	5.6	-3.0	0.0	0.0	7.8	0.0	-0.0	13.4	13.4
80	574955.99	4883510.55	427.11	0	4000	93.7	93.7	0.0	0.0	66.2	18.9	-3.0	0.0	0.0	7.8	0.0	-0.0	3.8	3.8
81	574955.99	4883510.55	427.11	0	8000	90.2	90.2	0.0	0.0	66.2	67.5	-3.0	0.0	0.0	7.8	0.0	-0.0	-48.3	-48.3
82	574985.54	4883993.52	436.87	0	32	-52.8	-52.8	0.0	0.0	65.7	0.0	-5.3	0.0	0.0	10.1	0.0	-0.0	-123.3	-123.3
83	574985.54	4883993.52	436.87	0	63	58.6	58.6	0.0	0.0	65.7	0.1	-5.3	0.0	0.0	10.1	0.0	-0.0	-12.0	-12.0
84	574985.54	4883993.52	436.87	0	125	67.8	67.8	0.0	0.0	65.7	0.2	3.4	0.0	0.0	1.3	0.0	-0.0	-2.9	-2.9
85	574985.54	4883993.52	436.87	0	250	69.3	69.3	0.0	0.0	65.7	0.6	8.0	0.0	0.0	0.0	0.0	-0.0	-5.0	-5.0
86	574985.54	4883993.52	436.87	0	500	78.4	78.4	0.0	0.0	65.7	1.1	4.1	0.0	0.0	0.7	0.0	-0.0	6.9	6.9
87	574985.54	4883993.52	436.87	0	1000	83.8	83.8	0.0	0.0	65.7	2.0	-0.6	0.0	0.0	5.4	0.0	-0.0	11.3	11.3
88	574985.54	4883993.52	436.87	0	2000	89.6	89.6	0.0	0.0	65.7	5.3	-1.3	0.0	0.0	6.1	0.0	-0.0	13.9	13.9
89	574985.54	4883993.52	436.87	0	4000	93.3	93.3	0.0	0.0	65.7	17.8	-1.3	0.0	0.0	6.1	0.0	-0.0	5.0	5.0
90	574985.54	4883993.52	436.87	0	8000	89.8	89.8	0.0	0.0	65.7	63.5	-1.3	0.0	0.0	6.1	0.0	-0.0	-44.2	-44.2
91	574991.38	4884016.65	437.98	0	32	-53.7	-53.7	0.0	0.0	65.8	0.0	-5.4	0.0	0.0	10.1	0.0	-0.0	-124.3	-124.3
92	574991.38	4884016.65	437.98	0	63	57.7	57.7	0.0	0.0	65.8	0.1	-5.4	0.0	0.0	10.1	0.0	-0.0	-12.9	-12.9
93	574991.38	4884016.65	437.98	0	125	66.9	66.9	0.0	0.0	65.8	0.2	6.1	0.0	0.0	0.0	0.0	-0.0	-5.2	-5.2
94	574991.38	4884016.65	437.98	0	250	68.4	68.4	0.0	0.0	65.8	0.6	11.5	0.0	0.0	0.0	0.0	-0.0	-9.5	-9.5
95	574991.38	4884016.65	437.98	0	500	77.5	77.5	0.0	0.0	65.8	1.1	5.6	0.0	0.0	0.0	0.0	-0.0	5.0	5.0
96	574991.38	4884016.65	437.98	0	1000	82.9	82.9	0.0	0.0	65.8	2.0	0.4	0.0	0.0	4.4	0.0	-0.0	10.4	10.4
97	574991.38	4884016.65	437.98	0	2000	88.7	88.7	0.0	0.0	65.8	5.3	-0.3	0.0	0.0	5.0	0.0	-0.0	12.9	12.9
98	574991.38	4884016.65	437.98	0	4000	92.4	92.4	0.0	0.0	65.8	18.0	-0.3	0.0	0.0	5.0	0.0	-0.0	3.9	3.9
99	574991.38	4884016.65	437.98	0	8000	88.9	88.9	0.0	0.0	65.8	64.1	-0.3	0.0	0.0	5.0	0.0	-0.0	-45.7	-45.7
100	574877.46	4883861.21	432.40	0	32	-53.6	-53.6	0.0	0.0	66.7	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-125.1	-125.1
101	574877.46	4883861.21	432.40	0	63	57.8	57.8	0.0	0.0	66.7	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	-13.7	-13.7
102	574877.46	4883861.21	432.40	0	125	67.0	67.0	0.0	0.0	66.7	0.3	0.9	0.0	0.0	3.8	0.0	-0.0	-4.7	-4.7
103	574877.46	4883861.21	432.40	0	250	68.5	68.5	0.0	0.0	66.7	0.6	4.3	0.0	0.0	0.5	0.0	-0.0	-3.6	-3.6
104	574877.46	4883861.21	432.40	0	500	77.6	77.6	0.0	0.0	66.7	1.2	2.2	0.0	0.0	2.6	0.0	-0.0	5.0	5.0
105	574877.46	4883861.21	432.40	0	1000	83.0	83.0	0.0	0.0	66.7	2.2	-2.1	0.0	0.0	7.0	0.0	-0.0	9.3	9.3
106	574877.46	4883861.21	432.40	0	2000	88.8	88.8	0.0	0.0	66.7	5.9	-2.8	0.0	0.0	7.6	0.0	-0.0	11.4	11.4
107	574877.46	4883861.21	432.40	0	4000	92.5	92.5	0.0	0.0	66.7	19.9	-2.8	0.0	0.0	7.7	0.0	-0.0	1.1	1.1
108	574877.46	4883861.21	432.40	0	8000	89.0	89.0	0.0	0.0	66.7	71.0	-2.8	0.0	0.0	7.8	0.0	-0.0	-53.6	-53.6
109	574871.54	4883826.58	432.25	0	32	-55.0	-55.0	0.0	0.0	66.7	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-126.4	-126.4
110	574871.54	4883826.58	432.25	0	63	56.4	56.4	0.0	0.0	66.7	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	-15.1	-15.1
111	574871.54	4883826.58	432.25	0	125	65.6	65.6	0.0	0.0	66.7	0.3	0.9	0.0	0.0	3.9	0.0	-0.0	-6.1	-6.1
112	574871.54	4883826.58	432.25	0	250	67.1	67.1	0.0	0.0	66.7	0.6	4.2	0.0	0.0	0.6	0.0	-0.0	-4.9	-4.9
113	574871.54	4883826.58	432.25	0	500	76.2	76.2	0.0	0.0	66.7	1.2	2.1	0.0	0.0	2.6	0.0	-0.0	3.6	3.6
114	574871.54	4883826.58	432.25	0	1000	81.6	81.6	0.0	0.0	66.7	2.2	-2.2	0.0	0.0	7.0	0.0	-0.0	8.0	8.0

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Line Source, ISO 9613, Name: "Shipping Trucks", ID: "SHIP"																			
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)
115	574871.54	4883826.58	432.25	0	2000	87.4	87.4	0.0	0.0	66.7	5.9	-2.8	0.0	0.0	7.6	0.0	-0.0	10.1	10.1
116	574871.54	4883826.58	432.25	0	4000	91.1	91.1	0.0	0.0	66.7	19.9	-2.8	0.0	0.0	7.7	0.0	-0.0	-0.3	-0.3
117	574871.54	4883826.58	432.25	0	8000	87.6	87.6	0.0	0.0	66.7	71.1	-2.8	0.0	0.0	7.8	0.0	-0.0	-55.0	-55.0
118	574871.89	4883842.89	432.40	0	32	-55.1	-55.1	0.0	0.0	66.7	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-126.6	-126.6
119	574871.89	4883842.89	432.40	0	63	56.3	56.3	0.0	0.0	66.7	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	-15.3	-15.3
120	574871.89	4883842.89	432.40	0	125	65.5	65.5	0.0	0.0	66.7	0.3	0.9	0.0	0.0	3.9	0.0	-0.0	-6.3	-6.3
121	574871.89	4883842.89	432.40	0	250	67.0	67.0	0.0	0.0	66.7	0.6	4.2	0.0	0.0	0.6	0.0	-0.0	-5.2	-5.2
122	574871.89	4883842.89	432.40	0	500	76.1	76.1	0.0	0.0	66.7	1.2	2.1	0.0	0.0	2.6	0.0	-0.0	3.4	3.4
123	574871.89	4883842.89	432.40	0	1000	81.5	81.5	0.0	0.0	66.7	2.2	-2.2	0.0	0.0	7.0	0.0	-0.0	7.7	7.7
124	574871.89	4883842.89	432.40	0	2000	87.3	87.3	0.0	0.0	66.7	5.9	-2.8	0.0	0.0	7.6	0.0	-0.0	9.9	9.9
125	574871.89	4883842.89	432.40	0	4000	91.0	91.0	0.0	0.0	66.7	20.0	-2.8	0.0	0.0	7.7	0.0	-0.0	-0.6	-0.6
126	574871.89	4883842.89	432.40	0	8000	87.5	87.5	0.0	0.0	66.7	71.3	-2.8	0.0	0.0	7.8	0.0	-0.0	-55.4	-55.4

Line Source, ISO 9613, Name: "Haul Trucks", ID: "EX5_HAUL"																			
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	574945.78	4883494.73	429.72	0	32	-53.2	-159.2	0.0	0.0	66.5	0.0	-5.4	0.0	0.0	10.2	0.0	-0.0	-124.5	-230.5
2	574945.78	4883494.73	429.72	0	63	77.0	-29.0	0.0	0.0	66.5	0.1	-5.4	0.0	0.0	10.2	0.0	-0.0	5.7	-100.3
3	574945.78	4883494.73	429.72	0	125	85.1	-20.9	0.0	0.0	66.5	0.2	0.6	0.0	0.0	4.1	0.0	-0.0	13.6	-92.4
4	574945.78	4883494.73	429.72	0	250	90.6	-15.4	0.0	0.0	66.5	0.6	4.1	0.0	0.0	0.7	0.0	-0.0	18.7	-87.3
5	574945.78	4883494.73	429.72	0	500	94.0	-12.0	0.0	0.0	66.5	1.1	2.0	0.0	0.0	2.8	0.0	-0.0	21.6	-84.4
6	574945.78	4883494.73	429.72	0	1000	94.2	-11.8	0.0	0.0	66.5	2.2	-2.3	0.0	0.0	7.1	0.0	-0.0	20.8	-85.3
7	574945.78	4883494.73	429.72	0	2000	91.4	-14.6	0.0	0.0	66.5	5.7	-3.0	0.0	0.0	7.8	0.0	-0.0	14.4	-91.6
8	574945.78	4883494.73	429.72	0	4000	88.2	-17.8	0.0	0.0	66.5	19.4	-3.0	0.0	0.0	7.8	0.0	-0.0	-2.5	-108.5
9	574945.78	4883494.73	429.72	0	8000	81.1	-24.9	0.0	0.0	66.5	69.3	-3.0	0.0	0.0	7.8	0.0	-0.0	-59.5	-165.5
10	574790.25	4883349.28	426.90	0	32	-53.0	-159.0	0.0	0.0	69.1	0.0	-5.6	0.0	0.0	10.3	0.0	-0.0	-126.8	-232.9
11	574790.25	4883349.28	426.90	0	63	77.2	-28.8	0.0	0.0	69.1	0.1	-5.6	0.0	0.0	10.3	0.0	-0.0	3.3	-102.7
12	574790.25	4883349.28	426.90	0	125	85.3	-20.7	0.0	0.0	69.1	0.3	1.2	0.0	0.0	3.6	0.0	-0.0	11.2	-94.9
13	574790.25	4883349.28	426.90	0	250	90.8	-15.2	0.0	0.0	69.1	0.8	3.6	0.0	0.0	1.1	0.0	-0.0	16.1	-89.9
14	574790.25	4883349.28	426.90	0	500	94.2	-11.8	0.0	0.0	69.1	1.5	1.6	0.0	0.0	3.2	0.0	-0.0	18.8	-87.2
15	574790.25	4883349.28	426.90	0	1000	94.4	-11.6	0.0	0.0	69.1	2.9	-2.7	0.0	0.0	7.5	0.0	-0.0	17.7	-88.4
16	574790.25	4883349.28	426.90	0	2000	91.6	-14.4	0.0	0.0	69.1	7.7	-3.4	0.0	0.0	8.1	0.0	-0.0	10.1	-96.0
17	574790.25	4883349.28	426.90	0	4000	88.4	-17.6	0.0	0.0	69.1	26.2	-3.4	0.0	0.0	8.1	0.0	-0.0	-11.6	-117.6
18	574790.25	4883349.28	426.90	0	8000	81.3	-24.7	0.0	0.0	69.1	93.5	-3.4	0.0	0.0	8.1	0.0	-0.0	-86.0	-192.0
19	575043.09	4883588.64	430.78	0	32	-58.4	-164.4	0.0	0.0	64.4	0.0	-5.3	0.0	0.0	10.0	0.0	-0.0	-127.5	-233.6
20	575043.09	4883588.64	430.78	0	63	71.8	-34.2	0.0	0.0	64.4	0.1	-5.3	0.0	0.0	10.0	0.0	-0.0	2.6	-103.4
21	575043.09	4883588.64	430.78	0	125	79.9	-26.1	0.0	0.0	64.4	0.2	0.3	0.0	0.0	4.5	0.0	-0.0	10.6	-95.4
22	575043.09	4883588.64	430.78	0	250	85.4	-20.6	0.0	0.0	64.4	0.5	4.5	0.0	0.0	0.3	0.0	-0.0	15.8	-90.2
23	575043.09	4883588.64	430.78	0	500	88.8	-17.2	0.0	0.0	64.4	0.9	2.4	0.0	0.0	2.4	0.0	-0.0	18.8	-87.3
24	575043.09	4883588.64	430.78	0	1000	89.0	-17.0	0.0	0.0	64.4	1.7	-1.9	0.0	0.0	6.8	0.0	-0.0	18.1	-87.9
25	575043.09	4883588.64	430.78	0	2000	86.2	-19.8	0.0	0.0	64.4	4.5	-2.6	0.0	0.0	7.5	0.0	-0.0	12.5	-93.5
26	575043.09	4883588.64	430.78	0	4000	83.0	-23.0	0.0	0.0	64.4	15.3	-2.6	0.0	0.0	7.5	0.0	-0.0	-1.5	-107.6
27	575043.09	4883588.64	430.78	0	8000	75.9	-30.1	0.0	0.0	64.4	54.5	-2.6	0.0	0.0	7.7	0.0	-0.0	-48.0	-154.0

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Receiver
Name: R12
ID: R12
X: 574337.26
Y: 4882186.64
Z: 428.42

Point Source, ISO 9613, Name: "Permanent Processing Plant", ID: "PERM"

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	574682.08	4883254.84	425.50	0	32	-39.4	-88.0	0.0	0.0	72.0	0.0	-5.6	0.0	0.0	11.1	0.0	-0.0	-117.0	-88.0
2	574682.08	4883254.84	425.50	0	63	81.8	-88.0	0.0	0.0	72.0	0.1	-5.6	0.0	0.0	11.8	0.0	-0.0	3.5	-88.0
3	574682.08	4883254.84	425.50	0	125	89.9	-88.0	0.0	0.0	72.0	0.5	3.3	0.0	0.0	3.9	0.0	-0.0	10.2	-88.0
4	574682.08	4883254.84	425.50	0	250	96.4	-88.0	0.0	0.0	72.0	1.2	5.1	0.0	0.0	3.7	0.0	-0.0	14.5	-88.0
5	574682.08	4883254.84	425.50	0	500	104.8	-88.0	0.0	0.0	72.0	2.2	3.1	0.0	0.0	7.8	0.0	-0.0	19.8	-88.0
6	574682.08	4883254.84	425.50	0	1000	112.0	-88.0	0.0	0.0	72.0	4.1	-1.3	0.0	0.0	14.5	0.0	-0.0	22.6	-88.0
7	574682.08	4883254.84	425.50	0	2000	105.2	-88.0	0.0	0.0	72.0	10.9	-1.9	0.0	0.0	17.9	0.0	-0.0	6.4	-88.0
8	574682.08	4883254.84	425.50	0	4000	101.0	-88.0	0.0	0.0	72.0	36.8	-1.9	0.0	0.0	20.7	0.0	-0.0	-26.6	-88.0
9	574682.08	4883254.84	425.50	0	8000	92.9	-88.0	0.0	0.0	72.0	131.2	-1.9	0.0	0.0	23.6	0.0	-0.0	-132.0	-88.0

Point Source, ISO 9613, Name: "Front End Loaders @ Processing Plant", ID: "PERM_FEL"

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	574707.78	4883260.32	424.50	0	32	-36.4	-36.4	0.0	0.0	72.1	0.0	-5.7	0.0	0.0	10.8	0.0	-0.0	-113.7	-113.7
2	574707.78	4883260.32	424.50	0	63	87.8	87.8	0.0	0.0	72.1	0.1	-5.7	0.0	0.0	11.2	0.0	-0.0	10.1	10.1
3	574707.78	4883260.32	424.50	0	125	101.9	101.9	0.0	0.0	72.1	0.5	3.2	0.0	0.0	2.8	0.0	-0.0	23.3	23.3
4	574707.78	4883260.32	424.50	0	250	102.4	102.4	0.0	0.0	72.1	1.2	5.0	0.0	0.0	2.0	0.0	-0.0	22.1	22.1
5	574707.78	4883260.32	424.50	0	500	100.8	100.8	0.0	0.0	72.1	2.2	2.9	0.0	0.0	5.6	0.0	-0.0	18.0	18.0
6	574707.78	4883260.32	424.50	0	1000	104.0	104.0	0.0	0.0	72.1	4.1	-1.4	0.0	0.0	11.9	0.0	-0.0	17.2	17.2
7	574707.78	4883260.32	424.50	0	2000	102.2	102.2	0.0	0.0	72.1	11.0	-2.0	0.0	0.0	15.0	0.0	-0.0	6.2	6.2
8	574707.78	4883260.32	424.50	0	4000	97.0	97.0	0.0	0.0	72.1	37.2	-2.0	0.0	0.0	17.6	0.0	-0.0	-27.9	-27.9
9	574707.78	4883260.32	424.50	0	8000	93.9	93.9	0.0	0.0	72.1	132.8	-2.0	0.0	0.0	20.5	0.0	-0.0	-129.4	-129.4

Point Source, ISO 9613, Name: "Working Face", ID: "EX6_FEL"

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	574535.23	4882481.74	426.99	0	32	-39.4	-88.0	0.0	0.0	62.0	0.0	-5.0	0.0	0.0	7.6	0.0	-0.0	-104.1	-88.0
2	574535.23	4882481.74	426.99	0	63	84.8	-88.0	0.0	0.0	62.0	0.0	-5.0	0.0	0.0	8.6	0.0	-0.0	19.2	-88.0
3	574535.23	4882481.74	426.99	0	125	98.9	-88.0	0.0	0.0	62.0	0.2	4.5	0.0	0.0	0.6	0.0	-0.0	31.7	-88.0
4	574535.23	4882481.74	426.99	0	250	99.4	-88.0	0.0	0.0	62.0	0.4	11.9	0.0	0.0	0.0	0.0	-0.0	25.1	-88.0
5	574535.23	4882481.74	426.99	0	500	97.8	-88.0	0.0	0.0	62.0	0.7	5.8	0.0	0.0	0.2	0.0	-0.0	29.1	-88.0
6	574535.23	4882481.74	426.99	0	1000	101.0	-88.0	0.0	0.0	62.0	1.3	0.7	0.0	0.0	6.2	0.0	-0.0	30.8	-88.0
7	574535.23	4882481.74	426.99	0	2000	99.2	-88.0	0.0	0.0	62.0	3.4	0.0	0.0	0.0	8.4	0.0	-0.0	25.4	-88.0
8	574535.23	4882481.74	426.99	0	4000	94.0	-88.0	0.0	0.0	62.0	11.7	0.0	0.0	0.0	10.3	0.0	-0.0	10.0	-88.0
9	574535.23	4882481.74	426.99	0	8000	90.9	-88.0	0.0	0.0	62.0	41.5	0.0	0.0	0.0	12.7	0.0	-0.0	-25.4	-88.0

Point Source, ISO 9613, Name: "Working Face", ID: "EX6_CRSH"

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	574546.23	4882485.98	428.08	0	32	-39.4	-88.0	0.0	0.0	62.3	0.0	-4.8	0.0	0.0	7.1	0.0	-0.0	-104.0	-88.0
2	574546.23	4882485.98	428.08	0	63	92.2	-88.0	0.0	0.0	62.3	0.0	-4.8	0.0	0.0	8.0	0.0	-0.0	26.6	-88.0
3	574546.23	4882485.98	428.08	0	125	97.0	-88.0	0.0	0.0	62.3	0.2	5.0	0.0	0.0	0.0	0.0	-0.0	29.6	-88.0
4	574546.23	4882485.98	428.08	0	250	101.1	-88.0	0.0	0.0	62.3	0.4	9.9	0.0	0.0	0.0	0.0	-0.0	28.6	-88.0
5	574546.23	4882485.98	428.08	0	500	108.0	-88.0	0.0	0.0	62.3	0.7	5.0	0.0	0.0	0.6	0.0	-0.0	39.4	-88.0
6	574546.23	4882485.98	428.08	0	1000	108.3	-88.0	0.0	0.0	62.3	1.3	0.7	0.0	0.0	5.6	0.0	-0.0	38.4	-88.0
7	574546.23	4882485.98	428.08	0	2000	109.7	-88.0	0.0	0.0	62.3	3.5	0.0	0.0	0.0	7.5	0.0	-0.0	36.4	-88.0
8	574546.23	4882485.98	428.08	0	4000	109.7	-88.0	0.0	0.0	62.3	12.0	0.0	0.0	0.0	9.2	0.0	-0.0	26.3	-88.0
9	574546.23	4882485.98	428.08	0	8000	100.7	-88.0	0.0	0.0	62.3	42.7	0.0	0.0	0.0	11.3	0.0	-0.0	-15.5	-88.0

Point Source, ISO 9613, Name: "Working Face", ID: "EX6_SCREEN"

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	574524.48	4882482.26	427.82	0	32	-39.4	-88.0	0.0	0.0	61.9	0.0	-4.7	0.0	0.0	7.6	0.0	-0.0	-104.2	-88.0

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Point Source, ISO 9613, Name: "Working Face", ID: "EX6_SCREEN"																			
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	574524.48	4882482.26	427.82	0	63	90.6	-88.0	0.0	0.0	61.9	0.0	-4.7	0.0	0.0	8.5	0.0	-0.0	24.9	-88.0
3	574524.48	4882482.26	427.82	0	125	94.3	-88.0	0.0	0.0	61.9	0.1	4.9	0.0	0.0	0.2	0.0	-0.0	27.2	-88.0
4	574524.48	4882482.26	427.82	0	250	94.4	-88.0	0.0	0.0	61.9	0.4	9.9	0.0	0.0	0.0	0.0	-0.0	22.3	-88.0
5	574524.48	4882482.26	427.82	0	500	99.4	-88.0	0.0	0.0	61.9	0.7	5.0	0.0	0.0	1.0	0.0	-0.0	30.8	-88.0
6	574524.48	4882482.26	427.82	0	1000	101.2	-88.0	0.0	0.0	61.9	1.3	0.7	0.0	0.0	6.4	0.0	-0.0	31.0	-88.0
7	574524.48	4882482.26	427.82	0	2000	100.3	-88.0	0.0	0.0	61.9	3.4	-0.0	0.0	0.0	8.5	0.0	-0.0	26.5	-88.0
8	574524.48	4882482.26	427.82	0	4000	95.9	-88.0	0.0	0.0	61.9	11.5	-0.0	0.0	0.0	10.6	0.0	-0.0	12.0	-88.0
9	574524.48	4882482.26	427.82	0	8000	89.8	-88.0	0.0	0.0	61.9	40.9	-0.0	0.0	0.0	13.0	0.0	-0.0	-25.9	-88.0

Line Source, ISO 9613, Name: "Shipping Trucks", ID: "SHIP"																			
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	574785.21	4883341.23	426.90	0	32	-43.9	-43.9	0.0	0.0	72.9	0.0	-5.7	0.0	0.0	10.8	0.0	-0.0	-121.8	-121.8
2	574785.21	4883341.23	426.90	0	63	67.5	67.5	0.0	0.0	72.9	0.2	-5.7	0.0	0.0	11.1	0.0	-0.0	-10.9	-10.9
3	574785.21	4883341.23	426.90	0	125	76.7	76.7	0.0	0.0	72.9	0.5	3.1	0.0	0.0	2.9	0.0	-0.0	-2.5	-2.5
4	574785.21	4883341.23	426.90	0	250	78.2	78.2	0.0	0.0	72.9	1.3	4.8	0.0	0.0	2.0	0.0	-0.0	-2.8	-2.8
5	574785.21	4883341.23	426.90	0	500	87.3	87.3	0.0	0.0	72.9	2.4	2.8	0.0	0.0	5.5	0.0	-0.0	3.8	3.8
6	574785.21	4883341.23	426.90	0	1000	92.7	92.7	0.0	0.0	72.9	4.5	-1.6	0.0	0.0	11.7	0.0	-0.0	5.2	5.2
7	574785.21	4883341.23	426.90	0	2000	98.5	98.5	0.0	0.0	72.9	12.0	-2.2	0.0	0.0	14.7	0.0	-0.0	1.2	1.2
8	574785.21	4883341.23	426.90	0	4000	102.2	102.2	0.0	0.0	72.9	40.6	-2.2	0.0	0.0	17.3	0.0	-0.0	-26.3	-26.3
9	574785.21	4883341.23	426.90	0	8000	98.7	98.7	0.0	0.0	72.9	144.8	-2.2	0.0	0.0	20.1	0.0	-0.0	-136.8	-136.8
10	574914.12	4883685.90	429.43	0	32	-42.7	-42.7	0.0	0.0	75.1	0.1	-5.8	0.7	0.0	12.0	0.0	-0.0	-124.8	-124.8
11	574914.12	4883685.90	429.43	0	63	68.7	68.7	0.0	0.0	75.1	0.2	-5.8	0.7	0.0	13.0	0.0	-0.0	-14.6	-14.6
12	574914.12	4883685.90	429.43	0	125	77.9	77.9	0.0	0.0	75.1	0.7	4.9	1.1	0.0	3.9	0.0	-0.0	-7.8	-7.8
13	574914.12	4883685.90	429.43	0	250	79.4	79.4	0.0	0.0	75.1	1.7	6.7	1.4	0.0	4.1	0.0	-0.0	-9.7	-9.7
14	574914.12	4883685.90	429.43	0	500	88.5	88.5	0.0	0.0	75.1	3.1	3.3	1.7	0.0	10.0	0.0	-0.0	-4.8	-4.8
15	574914.12	4883685.90	429.43	0	1000	93.9	93.9	0.0	0.0	75.1	5.9	-1.3	2.1	0.0	17.3	0.0	-0.0	-5.2	-5.2
16	574914.12	4883685.90	429.43	0	2000	99.7	99.7	0.0	0.0	75.1	15.5	-2.0	2.8	0.0	20.8	0.0	-0.0	-12.6	-12.6
17	574914.12	4883685.90	429.43	0	4000	103.4	103.4	0.0	0.0	75.1	52.6	-2.0	3.1	0.0	23.7	0.0	-0.0	-49.3	-49.3
18	574914.12	4883685.90	429.43	0	8000	99.9	99.9	0.0	0.0	75.1	187.8	-2.0	4.2	0.0	26.7	0.0	-0.0	-191.9	-191.9
19	574906.93	4883455.64	428.54	0	32	-46.4	-46.4	0.0	0.0	73.9	0.0	-5.8	0.0	0.0	10.6	0.0	-0.0	-125.2	-125.2
20	574906.93	4883455.64	428.54	0	63	65.0	65.0	0.0	0.0	73.9	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-14.0	-14.0
21	574906.93	4883455.64	428.54	0	125	74.2	74.2	0.0	0.0	73.9	0.6	2.9	0.0	0.0	2.1	0.0	-0.0	-5.3	-5.3
22	574906.93	4883455.64	428.54	0	250	75.7	75.7	0.0	0.0	73.9	1.5	4.6	0.0	0.0	0.6	0.0	-0.0	-4.9	-4.9
23	574906.93	4883455.64	428.54	0	500	84.8	84.8	0.0	0.0	73.9	2.7	2.6	0.0	0.0	3.0	0.0	-0.0	2.6	2.6
24	574906.93	4883455.64	428.54	0	1000	90.2	90.2	0.0	0.0	73.9	5.1	-1.7	0.0	0.0	8.1	0.0	-0.0	4.9	4.9
25	574906.93	4883455.64	428.54	0	2000	96.0	96.0	0.0	0.0	73.9	13.4	-2.4	0.0	0.0	9.9	0.0	-0.0	1.2	1.2
26	574906.93	4883455.64	428.54	0	4000	99.7	99.7	0.0	0.0	73.9	45.6	-2.4	0.0	0.0	11.5	0.0	-0.0	-28.9	-28.9
27	574906.93	4883455.64	428.54	0	8000	96.2	96.2	0.0	0.0	73.9	162.6	-2.4	0.0	0.0	13.6	0.0	-0.0	-151.5	-151.5
28	574986.79	4884050.65	439.21	0	32	-50.5	-50.5	0.0	0.0	76.9	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-132.3	-132.3
29	574986.79	4884050.65	439.21	0	63	60.9	60.9	0.0	0.0	76.9	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-21.0	-21.0
30	574986.79	4884050.65	439.21	0	125	70.1	70.1	0.0	0.0	76.9	0.8	9.0	0.0	0.0	0.0	0.0	-0.0	-16.6	-16.6
31	574986.79	4884050.65	439.21	0	250	71.6	71.6	0.0	0.0	76.9	2.1	11.0	0.0	0.0	0.0	0.0	-0.0	-18.4	-18.4
32	574986.79	4884050.65	439.21	0	500	80.7	80.7	0.0	0.0	76.9	3.8	4.8	0.0	0.0	0.0	0.0	-0.0	-4.9	-4.9
33	574986.79	4884050.65	439.21	0	1000	86.1	86.1	0.0	0.0	76.9	7.2	-0.4	0.0	0.0	5.2	0.0	-0.0	-2.8	-2.8
34	574986.79	4884050.65	439.21	0	2000	91.9	91.9	0.0	0.0	76.9	19.1	-1.1	0.0	0.0	5.9	0.0	-0.0	-8.9	-8.9
35	574986.79	4884050.65	439.21	0	4000	95.6	95.6	0.0	0.0	76.9	64.7	-1.1	0.0	0.0	5.9	0.0	-0.0	-50.8	-50.8
36	574986.79	4884050.65	439.21	0	8000	92.1	92.1	0.0	0.0	76.9	230.7	-1.1	0.0	0.0	6.0	0.0	-0.0	-220.4	-220.4
37	574973.14	4884131.01	441.30	0	32	-46.5	-46.5	0.0	0.0	77.2	0.1	-5.8	0.0	0.0	11.8	0.0	-0.0	-129.8	-129.8
38	574973.14	4884131.01	441.30	0	63	64.9	64.9	0.0	0.0	77.2	0.3	-5.8	0.0	0.0	12.8	0.0	-0.0	-19.5	-19.5
39	574973.14	4884131.01	441.30	0	125	74.1	74.1	0.0	0.0	77.2	0.8	9.1	0.0	0.0	0.0	0.0	-0.0	-13.1	-13.1
40	574973.14	4884131.01	441.30	0	250	75.6	75.6	0.0	0.0	77.2	2.1	11.2	0.0	0.0	0.0	0.0	-0.0	-15.0	-15.0
41	574973.14	4884131.01	441.30	0	500	84.7	84.7	0.0	0.0	77.2	3.9	5.0	0.0	0.0	7.7	0.0	-0.0	-9.2	-9.2
42	574973.14	4884131.01	441.30	0	1000	90.1	90.1	0.0	0.0	77.2	7.5	-0.3	0.0	0.0	15.6	0.0	-0.0	-10.0	-10.0
43	574973.14	4884131.01	441.30	0	2000	95.9	95.9	0.0	0.0	77.2	19.8	-1.0	0.0	0.0	19.1	0.0	-0.0	-19.3	-19.3
44	574973.14	4884131.01	441.30	0	4000	99.6	99.6	0.0	0.0	77.2	67.0	-1.0	0.0	0.0	22.0	0.0	-0.0	-65.7	-65.7
45	574973.14	4884131.01	441.30	0	8000	96.1	96.1	0.0	0.0	77.2	239.1	-1.0	0.0	0.0	25.0	0.0	-0.0	-244.3	-244.3
46	574888.39	4883878.43	432.38	0	32	-54.5	-54.5	0.0	0.0	76.0	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-135.4	-135.4
47	574888.39	4883878.43	432.38	0	63	56.9	56.9	0.0	0.0	76.0	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-24.1	-24.1
48	574888.39	4883878.43	432.38	0	125	66.1	66.1	0.0	0.0	76.0	0.7	3.1	0.0	0.0	1.7	0.0	-0.0	-15.5	-15.5
49	574888.39	4883878.43	432.38	0	250	67.6	67.6	0.0	0.0	76.0	1.9	4.8	0.0	0.0	0.1	0.0	-0.0	-15.1	-15.1
50	574888.39	4883878.43	432.38	0	500	76.7	76.7	0.0	0.0	76.0	3.4	2.7	0.0	0.0	2.2	0.0	-0.0	-7.7	-7.7
51	574888.39	4883878.43	432.38	0	1000	82.1	82.1	0.0	0.0	76.0	6.5	-1.7	0.0	0.0	6.7	0.0	-0.0	-5.5	-5.5

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Line Source, ISO 9613, Name: "Shipping Trucks", ID: "SHIP"																			
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)
52	574888.39	4883878.43	432.38	0	2000	87.9	87.9	0.0	0.0	76.0	17.2	-2.3	0.0	0.0	7.6	0.0	-0.0	-10.6	-10.6
53	574888.39	4883878.43	432.38	0	4000	91.6	91.6	0.0	0.0	76.0	58.3	-2.3	0.0	0.0	8.1	0.0	-0.0	-48.5	-48.5
54	574888.39	4883878.43	432.38	0	8000	88.1	88.1	0.0	0.0	76.0	208.0	-2.3	0.0	0.0	8.9	0.0	-0.0	-202.5	-202.5
55	574923.58	4883917.72	432.27	0	32	-47.8	-47.8	0.0	0.0	76.2	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-128.9	-128.9
56	574923.58	4883917.72	432.27	0	63	63.6	63.6	0.0	0.0	76.2	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-17.7	-17.7
57	574923.58	4883917.72	432.27	0	125	72.8	72.8	0.0	0.0	76.2	0.8	2.9	0.0	0.0	2.0	0.0	-0.0	-9.0	-9.0
58	574923.58	4883917.72	432.27	0	250	74.3	74.3	0.0	0.0	76.2	1.9	4.6	0.0	0.0	0.4	0.0	-0.0	-8.8	-8.8
59	574923.58	4883917.72	432.27	0	500	83.4	83.4	0.0	0.0	76.2	3.5	2.5	0.0	0.0	2.6	0.0	-0.0	-1.5	-1.5
60	574923.58	4883917.72	432.27	0	1000	88.8	88.8	0.0	0.0	76.2	6.7	-1.8	0.0	0.0	7.2	0.0	-0.0	0.5	0.5
61	574923.58	4883917.72	432.27	0	2000	94.6	94.6	0.0	0.0	76.2	17.7	-2.4	0.0	0.0	8.5	0.0	-0.0	-5.3	-5.3
62	574923.58	4883917.72	432.27	0	4000	98.3	98.3	0.0	0.0	76.2	59.9	-2.4	0.0	0.0	9.4	0.0	-0.0	-44.8	-44.8
63	574923.58	4883917.72	432.27	0	8000	94.8	94.8	0.0	0.0	76.2	213.6	-2.4	0.0	0.0	10.9	0.0	-0.0	-203.5	-203.5
64	574955.99	4883510.55	427.11	0	32	-52.4	-52.4	0.0	0.0	74.3	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-131.5	-131.5
65	574955.99	4883510.55	427.11	0	63	59.0	59.0	0.0	0.0	74.3	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-20.3	-20.3
66	574955.99	4883510.55	427.11	0	125	68.2	68.2	0.0	0.0	74.3	0.6	3.0	0.0	0.0	1.9	0.0	-0.0	-11.6	-11.6
67	574955.99	4883510.55	427.11	0	250	69.7	69.7	0.0	0.0	74.3	1.5	4.7	0.0	0.0	0.4	0.0	-0.0	-11.2	-11.2
68	574955.99	4883510.55	427.11	0	500	78.8	78.8	0.0	0.0	74.3	2.8	2.5	0.0	0.0	2.8	0.0	-0.0	-3.6	-3.6
69	574955.99	4883510.55	427.11	0	1000	84.2	84.2	0.0	0.0	74.3	5.3	-1.8	0.0	0.0	7.6	0.0	-0.0	-1.2	-1.2
70	574955.99	4883510.55	427.11	0	2000	90.0	90.0	0.0	0.0	74.3	14.1	-2.4	0.0	0.0	9.1	0.0	-0.0	-5.0	-5.0
71	574955.99	4883510.55	427.11	0	4000	93.7	93.7	0.0	0.0	74.3	47.9	-2.4	0.0	0.0	10.4	0.0	-0.0	-36.4	-36.4
72	574955.99	4883510.55	427.11	0	8000	90.2	90.2	0.0	0.0	74.3	170.8	-2.4	0.0	0.0	12.2	0.0	-0.0	-164.7	-164.7
73	574959.17	4883538.96	426.64	0	32	-52.4	-52.4	0.0	0.0	74.5	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-131.8	-131.8
74	574959.17	4883538.96	426.64	0	63	59.0	59.0	0.0	0.0	74.5	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-20.5	-20.5
75	574959.17	4883538.96	426.64	0	125	68.2	68.2	0.0	0.0	74.5	0.6	3.0	0.0	0.0	2.0	0.0	-0.0	-11.8	-11.8
76	574959.17	4883538.96	426.64	0	250	69.7	69.7	0.0	0.0	74.5	1.6	4.7	0.0	0.0	0.4	0.0	-0.0	-11.4	-11.4
77	574959.17	4883538.96	426.64	0	500	78.8	78.8	0.0	0.0	74.5	2.9	2.5	0.0	0.0	2.8	0.0	-0.0	-3.9	-3.9
78	574959.17	4883538.96	426.64	0	1000	84.2	84.2	0.0	0.0	74.5	5.4	-1.8	0.0	0.0	7.6	0.0	-0.0	-1.5	-1.5
79	574959.17	4883538.96	426.64	0	2000	90.0	90.0	0.0	0.0	74.5	14.4	-2.5	0.0	0.0	9.1	0.0	-0.0	-5.5	-5.5
80	574959.17	4883538.96	426.64	0	4000	93.7	93.7	0.0	0.0	74.5	48.8	-2.5	0.0	0.0	10.3	0.0	-0.0	-37.4	-37.4
81	574959.17	4883538.96	426.64	0	8000	90.2	90.2	0.0	0.0	74.5	174.0	-2.5	0.0	0.0	12.1	0.0	-0.0	-167.9	-167.9
82	574965.81	4883965.84	434.29	0	32	-51.0	-51.0	0.0	0.0	76.5	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-132.4	-132.4
83	574965.81	4883965.84	434.29	0	63	60.4	60.4	0.0	0.0	76.5	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-21.2	-21.2
84	574965.81	4883965.84	434.29	0	125	69.6	69.6	0.0	0.0	76.5	0.8	2.8	0.0	0.0	2.0	0.0	-0.0	-12.5	-12.5
85	574965.81	4883965.84	434.29	0	250	71.1	71.1	0.0	0.0	76.5	2.0	4.4	0.0	0.0	0.3	0.0	-0.0	-12.2	-12.2
86	574965.81	4883965.84	434.29	0	500	80.2	80.2	0.0	0.0	76.5	3.6	2.4	0.0	0.0	2.4	0.0	-0.0	-4.8	-4.8
87	574965.81	4883965.84	434.29	0	1000	85.6	85.6	0.0	0.0	76.5	6.9	-1.9	0.0	0.0	6.7	0.0	-0.0	-2.6	-2.6
88	574965.81	4883965.84	434.29	0	2000	91.4	91.4	0.0	0.0	76.5	18.2	-2.6	0.0	0.0	7.4	0.0	-0.0	-8.2	-8.2
89	574965.81	4883965.84	434.29	0	4000	95.1	95.1	0.0	0.0	76.5	61.8	-2.6	0.0	0.0	7.5	0.0	-0.0	-48.1	-48.1
90	574965.81	4883965.84	434.29	0	8000	91.6	91.6	0.0	0.0	76.5	220.6	-2.6	0.0	0.0	7.5	0.0	-0.0	-210.5	-210.5
91	574985.54	4883993.52	436.87	0	32	-52.8	-52.8	0.0	0.0	76.7	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-134.3	-134.3
92	574985.54	4883993.52	436.87	0	63	58.6	58.6	0.0	0.0	76.7	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-23.1	-23.1
93	574985.54	4883993.52	436.87	0	125	67.8	67.8	0.0	0.0	76.7	0.8	4.7	0.0	0.0	0.1	0.0	-0.0	-14.4	-14.4
94	574985.54	4883993.52	436.87	0	250	69.3	69.3	0.0	0.0	76.7	2.0	6.5	0.0	0.0	0.0	0.0	-0.0	-15.9	-15.9
95	574985.54	4883993.52	436.87	0	500	78.4	78.4	0.0	0.0	76.7	3.7	3.1	0.0	0.0	1.6	0.0	-0.0	-6.8	-6.8
96	574985.54	4883993.52	436.87	0	1000	83.8	83.8	0.0	0.0	76.7	7.0	-1.5	0.0	0.0	6.3	0.0	-0.0	-4.7	-4.7
97	574985.54	4883993.52	436.87	0	2000	89.6	89.6	0.0	0.0	76.7	18.6	-2.2	0.0	0.0	7.0	0.0	-0.0	-10.4	-10.4
98	574985.54	4883993.52	436.87	0	4000	93.3	93.3	0.0	0.0	76.7	62.9	-2.2	0.0	0.0	7.0	0.0	-0.0	-51.1	-51.1
99	574985.54	4883993.52	436.87	0	8000	89.8	89.8	0.0	0.0	76.7	224.4	-2.2	0.0	0.0	7.0	0.0	-0.0	-216.1	-216.1
100	574877.46	4883861.21	432.40	0	32	-53.6	-53.6	0.0	0.0	75.9	0.1	-5.8	0.0	0.0	11.2	0.0	-0.0	-134.9	-134.9
101	574877.46	4883861.21	432.40	0	63	57.8	57.8	0.0	0.0	75.9	0.2	-5.8	0.0	0.0	11.7	0.0	-0.0	-24.2	-24.2
102	574877.46	4883861.21	432.40	0	125	67.0	67.0	0.0	0.0	75.9	0.7	3.1	0.0	0.0	3.7	0.0	-0.0	-16.4	-16.4
103	574877.46	4883861.21	432.40	0	250	68.5	68.5	0.0	0.0	75.9	1.8	4.7	0.0	0.0	3.4	0.0	-0.0	-17.4	-17.4
104	574877.46	4883861.21	432.40	0	500	77.6	77.6	0.0	0.0	75.9	3.4	2.7	0.0	0.0	7.3	0.0	-0.0	-11.7	-11.7
105	574877.46	4883861.21	432.40	0	1000	83.0	83.0	0.0	0.0	75.9	6.4	-1.6	0.0	0.0	13.9	0.0	-0.0	-11.6	-11.6
106	574877.46	4883861.21	432.40	0	2000	88.8	88.8	0.0	0.0	75.9	17.0	-2.3	0.0	0.0	17.2	0.0	-0.0	-19.0	-19.0
107	574877.46	4883861.21	432.40	0	4000	92.5	92.5	0.0	0.0	75.9	57.7	-2.3	0.0	0.0	19.9	0.0	-0.0	-58.7	-58.7
108	574877.46	4883861.21	432.40	0	8000	89.0	89.0	0.0	0.0	75.9	205.7	-2.3	0.0	0.0	22.8	0.0	-0.0	-213.1	-213.1
109	574991.38	4884016.65	437.98	0	32	-53.7	-53.7	0.0	0.0	76.8	0.1	-5.8	0.0	0.0	10.6	0.0	-0.0	-135.3	-135.3
110	574991.38	4884016.65	437.98	0	63	57.7	57.7	0.0	0.0	76.8	0.2	-5.8	0.0	0.0	10.6	0.0	-0.0	-24.1	-24.1
111	574991.38	4884016.65	437.98	0	125	66.9	66.9	0.0	0.0	76.8	0.8	6.7	0.0	0.0	0.0	0.0	-0.0	-17.4	-17.4
112	574991.38	4884016.65	437.98	0	250	68.4	68.4	0.0	0.0	76.8	2.0	8.7	0.0	0.0	0.0	0.0	-0.0	-19.0	-19.0
113	574991.38	4884016.65	437.98	0	500	77.5	77.5	0.0	0.0	76.8	3.8	3.9	0.0	0.0	0.9	0.0	-0.0	-7.8	-7.8
114	574991.38	4884016.65	437.98	0	1000	82.9	82.9	0.0	0.0	76.8	7.1	-1.0	0.0	0.0	5.8	0.0	-0.0	-5.8	-5.8

(c) Valcoustics Canada Ltd.

Line Source, ISO 9613, Name: "Shipping Trucks", ID: "SHIP"																			
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)
115	574991.38	4884016.65	437.98	0	2000	88.7	88.7	0.0	0.0	76.8	18.8	-1.7	0.0	0.0	6.5	0.0	-0.0	-11.6	-11.6
116	574991.38	4884016.65	437.98	0	4000	92.4	92.4	0.0	0.0	76.8	63.7	-1.7	0.0	0.0	6.5	0.0	-0.0	-52.9	-52.9
117	574991.38	4884016.65	437.98	0	8000	88.9	88.9	0.0	0.0	76.8	227.2	-1.7	0.0	0.0	6.5	0.0	-0.0	-219.9	-219.9
118	574871.54	4883826.58	432.25	0	32	-55.0	-55.0	0.0	0.0	75.7	0.1	-5.8	0.0	0.0	11.4	0.0	-0.0	-136.3	-136.3
119	574871.54	4883826.58	432.25	0	63	56.4	56.4	0.0	0.0	75.7	0.2	-5.8	0.0	0.0	12.0	0.0	-0.0	-25.7	-25.7
120	574871.54	4883826.58	432.25	0	125	65.6	65.6	0.0	0.0	75.7	0.7	4.4	0.0	0.0	2.9	0.0	-0.0	-18.1	-18.1
121	574871.54	4883826.58	432.25	0	250	67.1	67.1	0.0	0.0	75.7	1.8	6.1	0.0	0.0	2.7	0.0	-0.0	-19.3	-19.3
122	574871.54	4883826.58	432.25	0	500	76.2	76.2	0.0	0.0	75.7	3.3	3.2	0.0	0.0	7.7	0.0	-0.0	-13.8	-13.8
123	574871.54	4883826.58	432.25	0	1000	81.6	81.6	0.0	0.0	75.7	6.3	-1.3	0.0	0.0	14.7	0.0	-0.0	-13.8	-13.8
124	574871.54	4883826.58	432.25	0	2000	87.4	87.4	0.0	0.0	75.7	16.7	-2.0	0.0	0.0	18.1	0.0	-0.0	-21.0	-21.0
125	574871.54	4883826.58	432.25	0	4000	91.1	91.1	0.0	0.0	75.7	56.5	-2.0	0.0	0.0	20.9	0.0	-0.0	-60.0	-60.0
126	574871.54	4883826.58	432.25	0	8000	87.6	87.6	0.0	0.0	75.7	201.6	-2.0	0.0	0.0	23.8	0.0	-0.0	-211.5	-211.5
127	574871.89	4883842.89	432.40	0	32	-55.1	-55.1	0.0	0.0	75.8	0.1	-5.8	0.0	0.0	11.3	0.0	-0.0	-136.5	-136.5
128	574871.89	4883842.89	432.40	0	63	56.3	56.3	0.0	0.0	75.8	0.2	-5.8	0.0	0.0	11.9	0.0	-0.0	-25.9	-25.9
129	574871.89	4883842.89	432.40	0	125	65.5	65.5	0.0	0.0	75.8	0.7	3.7	0.0	0.0	3.5	0.0	-0.0	-18.2	-18.2
130	574871.89	4883842.89	432.40	0	250	67.0	67.0	0.0	0.0	75.8	1.8	5.4	0.0	0.0	3.3	0.0	-0.0	-19.3	-19.3
131	574871.89	4883842.89	432.40	0	500	76.1	76.1	0.0	0.0	75.8	3.4	2.9	0.0	0.0	7.7	0.0	-0.0	-13.8	-13.8
132	574871.89	4883842.89	432.40	0	1000	81.5	81.5	0.0	0.0	75.8	6.4	-1.5	0.0	0.0	14.6	0.0	-0.0	-13.8	-13.8
133	574871.89	4883842.89	432.40	0	2000	87.3	87.3	0.0	0.0	75.8	16.8	-2.1	0.0	0.0	17.9	0.0	-0.0	-21.1	-21.1
134	574871.89	4883842.89	432.40	0	4000	91.0	91.0	0.0	0.0	75.8	57.0	-2.1	0.0	0.0	20.7	0.0	-0.0	-60.5	-60.5
135	574871.89	4883842.89	432.40	0	8000	87.5	87.5	0.0	0.0	75.8	203.4	-2.1	0.0	0.0	23.7	0.0	-0.0	-213.3	-213.3

Line Source, ISO 9613, Name: "Shipping Trucks", ID: "EX6_HAUL"																			
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	574557.59	4882520.05	426.84	0	32	-66.2	-172.2	0.0	0.0	63.0	0.0	-5.1	0.0	0.0	7.7	0.0	-0.0	-131.8	-237.9
2	574557.59	4882520.05	426.84	0	63	64.0	-42.0	0.0	0.0	63.0	0.1	-5.1	0.0	0.0	8.6	0.0	-0.0	-2.6	-108.6
3	574557.59	4882520.05	426.84	0	125	72.1	-33.9	0.0	0.0	63.0	0.2	4.9	0.0	0.0	0.0	0.0	-0.0	4.0	-102.1
4	574557.59	4882520.05	426.84	0	250	77.6	-28.4	0.0	0.0	63.0	0.4	12.1	0.0	0.0	0.0	0.0	-0.0	2.0	-104.0
5	574557.59	4882520.05	426.84	0	500	81.0	-25.0	0.0	0.0	63.0	0.8	6.0	0.0	0.0	0.0	0.0	-0.0	11.2	-94.8
6	574557.59	4882520.05	426.84	0	1000	81.2	-24.8	0.0	0.0	63.0	1.5	0.7	0.0	0.0	5.7	0.0	-0.0	10.3	-95.7
7	574557.59	4882520.05	426.84	0	2000	78.4	-27.6	0.0	0.0	63.0	3.9	0.0	0.0	0.0	7.7	0.0	-0.0	3.8	-102.2
8	574557.59	4882520.05	426.84	0	4000	75.2	-30.8	0.0	0.0	63.0	13.1	0.0	0.0	0.0	9.4	0.0	-0.0	-10.3	-116.3
9	574557.59	4882520.05	426.84	0	8000	68.1	-37.9	0.0	0.0	63.0	46.7	0.0	0.0	0.0	11.6	0.0	-0.0	-53.2	-159.3
10	574567.70	4882551.97	426.95	0	32	-58.9	-164.9	0.0	0.0	63.7	0.0	-5.2	0.0	0.0	9.6	0.0	-0.0	-127.0	-233.1
11	574567.70	4882551.97	426.95	0	63	71.3	-34.7	0.0	0.0	63.7	0.1	-5.2	0.0	0.0	10.8	0.0	-0.0	1.9	-104.1
12	574567.70	4882551.97	426.95	0	125	79.4	-26.6	0.0	0.0	63.7	0.2	5.3	0.0	0.0	2.2	0.0	-0.0	8.1	-98.0
13	574567.70	4882551.97	426.95	0	250	84.9	-21.1	0.0	0.0	63.7	0.5	12.1	0.0	0.0	0.0	0.0	-0.0	8.6	-97.4
14	574567.70	4882551.97	426.95	0	500	88.3	-17.7	0.0	0.0	63.7	0.8	6.0	0.0	0.0	5.4	0.0	-0.0	12.4	-93.6
15	574567.70	4882551.97	426.95	0	1000	88.5	-17.5	0.0	0.0	63.7	1.6	0.7	0.0	0.0	13.1	0.0	-0.0	9.4	-96.6
16	574567.70	4882551.97	426.95	0	2000	85.7	-20.3	0.0	0.0	63.7	4.2	0.0	0.0	0.0	16.5	0.0	-0.0	1.3	-104.7
17	574567.70	4882551.97	426.95	0	4000	82.5	-23.5	0.0	0.0	63.7	14.2	0.0	0.0	0.0	19.4	0.0	-0.0	-14.7	-120.8
18	574567.70	4882551.97	426.95	0	8000	75.4	-30.6	0.0	0.0	63.7	50.5	0.0	0.0	0.0	22.4	0.0	-0.0	-61.1	-167.1
19	574603.51	4882761.19	429.52	0	32	-55.5	-161.6	0.0	0.0	67.0	0.0	-5.5	0.0	0.0	10.2	0.0	-0.0	-127.4	-233.4
20	574603.51	4882761.19	429.52	0	63	74.7	-31.4	0.0	0.0	67.0	0.1	-5.5	0.0	0.0	10.3	0.0	-0.0	2.8	-103.3
21	574603.51	4882761.19	429.52	0	125	82.8	-23.3	0.0	0.0	67.0	0.3	7.5	0.0	0.0	0.0	0.0	-0.0	8.0	-98.0
22	574603.51	4882761.19	429.52	0	250	88.3	-17.8	0.0	0.0	67.0	0.7	12.1	0.0	0.0	0.0	0.0	-0.0	8.4	-97.6
23	574603.51	4882761.19	429.52	0	500	91.7	-14.4	0.0	0.0	67.0	1.2	6.0	0.0	0.0	0.0	0.0	-0.0	17.4	-88.6
24	574603.51	4882761.19	429.52	0	1000	91.9	-14.2	0.0	0.0	67.0	2.3	0.7	0.0	0.0	4.6	0.0	-0.0	17.2	-88.8
25	574603.51	4882761.19	429.52	0	2000	89.1	-17.0	0.0	0.0	67.0	6.1	0.0	0.0	0.0	5.8	0.0	-0.0	10.1	-96.0
26	574603.51	4882761.19	429.52	0	4000	85.9	-20.2	0.0	0.0	67.0	20.8	0.0	0.0	0.0	6.7	0.0	-0.0	-8.6	-114.6
27	574603.51	4882761.19	429.52	0	8000	78.8	-27.3	0.0	0.0	67.0	74.0	0.0	0.0	0.0	8.0	0.0	-0.0	-70.3	-176.3
28	574580.89	4882605.32	427.48	0	32	-59.1	-165.1	0.0	0.0	64.7	0.0	-5.3	0.0	0.0	9.5	0.0	-0.0	-128.1	-234.1
29	574580.89	4882605.32	427.48	0	63	71.1	-34.9	0.0	0.0	64.7	0.1	-5.3	0.0	0.0	10.3	0.0	-0.0	1.3	-104.8
30	574580.89	4882605.32	427.48	0	125	79.2	-26.8	0.0	0.0	64.7	0.2	5.9	0.0	0.0	0.4	0.0	-0.0	8.1	-98.0
31	574580.89	4882605.32	427.48	0	250	84.7	-21.3	0.0	0.0	64.7	0.5	12.1	0.0	0.0	0.0	0.0	-0.0	7.3	-98.7
32	574580.89	4882605.32	427.48	0	500	88.1	-17.9	0.0	0.0	64.7	0.9	6.0	0.0	0.0	3.0	0.0	-0.0	13.5	-92.6
33	574580.89	4882605.32	427.48	0	1000	88.3	-17.7	0.0	0.0	64.7	1.8	0.7	0.0	0.0	10.4	0.0	-0.0	10.7	-95.3
34	574580.89	4882605.32	427.48	0	2000	85.5	-20.5	0.0	0.0	64.7	4.7	0.0	0.0	0.0	13.6	0.0	-0.0	2.6	-103.5
35	574580.89	4882605.32	427.48	0	4000	82.3	-23.7	0.0	0.0	64.7	15.9	0.0	0.0	0.0	16.3	0.0	-0.0	-14.6	-120.6
36	574580.89	4882605.32	427.48	0	8000	75.2	-30.8	0.0	0.0	64.7	56.6	0.0	0.0	0.0	19.1	0.0	-0.0	-65.3	-171.3
37	574586.32	4882636.08	427.99	0	32	-66.9	-172.9	0.0	0.0	65.2	0.0	-5.3	0.0	0.0	9.4	0.0	-0.0	-136.2	-242.2
38	574586.32	4882636.08	427.99	0	63	63.3	-42.7	0.0	0.0	65.2	0.1	-5.3	0.0	0.0	9.8	0.0	-0.0	-6.5	-112.5

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Line Source, ISO 9613, Name: "Shipping Trucks", ID: "EX6_HAUL"																			
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)
39	574586.32	4882636.08	427.99	0	125	71.4	-34.6	0.0	0.0	65.2	0.2	6.2	0.0	0.0	0.0	0.0	-0.0	-0.3	-106.3
40	574586.32	4882636.08	427.99	0	250	76.9	-29.1	0.0	0.0	65.2	0.5	12.1	0.0	0.0	0.0	0.0	-0.0	-1.0	-107.1
41	574586.32	4882636.08	427.99	0	500	80.3	-25.7	0.0	0.0	65.2	1.0	6.0	0.0	0.0	0.0	0.0	-0.0	8.1	-97.9
42	574586.32	4882636.08	427.99	0	1000	80.5	-25.5	0.0	0.0	65.2	1.9	0.7	0.0	0.0	5.1	0.0	-0.0	7.6	-98.4
43	574586.32	4882636.08	427.99	0	2000	77.7	-28.3	0.0	0.0	65.2	5.0	0.0	0.0	0.0	6.6	0.0	-0.0	0.9	-105.1
44	574586.32	4882636.08	427.99	0	4000	74.5	-31.5	0.0	0.0	65.2	16.8	0.0	0.0	0.0	7.9	0.0	-0.0	-15.5	-121.5
45	574586.32	4882636.08	427.99	0	8000	67.4	-38.6	0.0	0.0	65.2	60.1	0.0	0.0	0.0	9.7	0.0	-0.0	-67.6	-173.6
46	574546.52	4882502.53	426.81	0	32	-61.4	-167.4	0.0	0.0	62.6	0.0	-5.1	0.0	0.0	7.7	0.0	-0.0	-126.6	-232.7
47	574546.52	4882502.53	426.81	0	63	68.8	-37.2	0.0	0.0	62.6	0.1	-5.1	0.0	0.0	8.6	0.0	-0.0	2.6	-103.4
48	574546.52	4882502.53	426.81	0	125	76.9	-29.1	0.0	0.0	62.6	0.2	4.7	0.0	0.0	0.3	0.0	-0.0	9.2	-96.8
49	574546.52	4882502.53	426.81	0	250	82.4	-23.6	0.0	0.0	62.6	0.4	12.1	0.0	0.0	0.0	0.0	-0.0	7.3	-98.7
50	574546.52	4882502.53	426.81	0	500	85.8	-20.2	0.0	0.0	62.6	0.7	6.0	0.0	0.0	0.0	0.0	-0.0	16.5	-89.5
51	574546.52	4882502.53	426.81	0	1000	86.0	-20.0	0.0	0.0	62.6	1.4	0.7	0.0	0.0	6.0	0.0	-0.0	15.3	-90.7
52	574546.52	4882502.53	426.81	0	2000	83.2	-22.8	0.0	0.0	62.6	3.7	0.0	0.0	0.0	8.0	0.0	-0.0	8.9	-97.1
53	574546.52	4882502.53	426.81	0	4000	80.0	-26.0	0.0	0.0	62.6	12.4	0.0	0.0	0.0	9.9	0.0	-0.0	-4.9	-110.9
54	574546.52	4882502.53	426.81	0	8000	72.9	-33.1	0.0	0.0	62.6	44.3	0.0	0.0	0.0	12.2	0.0	-0.0	-46.2	-152.2
55	574592.46	4882670.51	428.23	0	32	-58.5	-164.5	0.0	0.0	65.8	0.0	-5.4	0.0	0.0	9.5	0.0	-0.0	-128.4	-234.5
56	574592.46	4882670.51	428.23	0	63	71.7	-34.3	0.0	0.0	65.8	0.1	-5.4	0.0	0.0	9.9	0.0	-0.0	1.4	-104.7
57	574592.46	4882670.51	428.23	0	125	79.8	-26.2	0.0	0.0	65.8	0.2	6.6	0.0	0.0	0.0	0.0	-0.0	7.2	-98.8
58	574592.46	4882670.51	428.23	0	250	85.3	-20.7	0.0	0.0	65.8	0.6	12.1	0.0	0.0	0.0	0.0	-0.0	6.8	-99.2
59	574592.46	4882670.51	428.23	0	500	88.7	-17.3	0.0	0.0	65.8	1.1	6.0	0.0	0.0	0.0	0.0	-0.0	15.9	-90.1
60	574592.46	4882670.51	428.23	0	1000	88.9	-17.1	0.0	0.0	65.8	2.0	0.7	0.0	0.0	5.0	0.0	-0.0	15.5	-90.5
61	574592.46	4882670.51	428.23	0	2000	86.1	-19.9	0.0	0.0	65.8	5.3	0.0	0.0	0.0	6.4	0.0	-0.0	8.7	-97.4
62	574592.46	4882670.51	428.23	0	4000	82.9	-23.1	0.0	0.0	65.8	17.9	0.0	0.0	0.0	7.5	0.0	-0.0	-8.4	-114.4
63	574592.46	4882670.51	428.23	0	8000	75.8	-30.2	0.0	0.0	65.8	63.9	0.0	0.0	0.0	9.2	0.0	-0.0	-63.1	-169.2
64	574609.18	4882869.56	434.52	0	32	-56.6	-162.6	0.0	0.0	68.3	0.0	-5.5	0.0	0.0	10.3	0.0	-0.0	-129.7	-235.7
65	574609.18	4882869.56	434.52	0	63	73.6	-32.4	0.0	0.0	68.3	0.1	-5.5	0.0	0.0	10.3	0.0	-0.0	0.4	-105.6
66	574609.18	4882869.56	434.52	0	125	81.7	-24.3	0.0	0.0	68.3	0.3	8.3	0.0	0.0	0.0	0.0	-0.0	4.8	-101.2
67	574609.18	4882869.56	434.52	0	250	87.2	-18.8	0.0	0.0	68.3	0.8	12.1	0.0	0.0	0.0	0.0	-0.0	6.0	-100.0
68	574609.18	4882869.56	434.52	0	500	90.6	-15.4	0.0	0.0	68.3	1.4	6.0	0.0	0.0	0.0	0.0	-0.0	14.9	-91.1
69	574609.18	4882869.56	434.52	0	1000	90.8	-15.2	0.0	0.0	68.3	2.7	0.7	0.0	0.0	4.4	0.0	-0.0	14.8	-91.3
70	574609.18	4882869.56	434.52	0	2000	88.0	-18.0	0.0	0.0	68.3	7.1	0.0	0.0	0.0	5.3	0.0	-0.0	7.3	-98.7
71	574609.18	4882869.56	434.52	0	4000	84.8	-21.2	0.0	0.0	68.3	24.1	0.0	0.0	0.0	5.8	0.0	-0.0	-13.4	-119.4
72	574609.18	4882869.56	434.52	0	8000	77.7	-28.3	0.0	0.0	68.3	85.9	0.0	0.0	0.0	6.6	0.0	-0.0	-83.1	-189.1

Line Source, ISO 9613, Name: "Haul Trucks", ID: "EX6_HAUL"																			
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	574618.25	4883027.81	429.71	0	32	-58.7	-164.7	0.0	0.0	70.0	0.0	-5.6	0.0	0.0	12.8	0.0	-0.0	-135.8	-241.9
2	574618.25	4883027.81	429.71	0	63	71.5	-34.5	0.0	0.0	70.0	0.1	-5.6	0.0	0.0	14.3	0.0	-0.0	-7.3	-113.3
3	574618.25	4883027.81	429.71	0	125	79.6	-26.4	0.0	0.0	70.0	0.4	6.4	0.0	0.0	4.3	0.0	-0.0	-1.4	-107.5
4	574618.25	4883027.81	429.71	0	250	85.1	-20.9	0.0	0.0	70.0	0.9	9.0	0.0	0.0	4.1	0.0	-0.0	1.1	-104.9
5	574618.25	4883027.81	429.71	0	500	88.5	-17.5	0.0	0.0	70.0	1.7	4.8	0.0	0.0	11.0	0.0	-0.0	1.0	-105.0
6	574618.25	4883027.81	429.71	0	1000	88.7	-17.3	0.0	0.0	70.0	3.2	-0.0	0.0	0.0	18.7	0.0	-0.0	-3.2	-109.2
7	574618.25	4883027.81	429.71	0	2000	85.9	-20.1	0.0	0.0	70.0	8.6	-0.7	0.0	0.0	22.3	0.0	-0.0	-14.2	-120.2
8	574618.25	4883027.81	429.71	0	4000	82.7	-23.3	0.0	0.0	70.0	29.1	-0.7	0.0	0.0	25.3	0.0	-0.0	-40.9	-146.9
9	574618.25	4883027.81	429.71	0	8000	75.6	-30.4	0.0	0.0	70.0	103.7	-0.7	0.0	0.0	25.7	0.0	-0.0	-123.0	-229.0
10	574617.83	4883097.32	429.72	0	32	-57.4	-163.4	0.0	0.0	70.6	0.0	-5.6	0.0	0.0	11.6	0.0	-0.0	-133.9	-239.9
11	574617.83	4883097.32	429.72	0	63	72.8	-33.2	0.0	0.0	70.6	0.1	-5.6	0.0	0.0	13.1	0.0	-0.0	-5.3	-111.3
12	574617.83	4883097.32	429.72	0	125	80.9	-25.1	0.0	0.0	70.6	0.4	3.5	0.0	0.0	6.1	0.0	-0.0	0.4	-105.6
13	574617.83	4883097.32	429.72	0	250	86.4	-19.6	0.0	0.0	70.6	1.0	5.5	0.0	0.0	6.3	0.0	-0.0	3.0	-103.0
14	574617.83	4883097.32	429.72	0	500	89.8	-16.2	0.0	0.0	70.6	1.8	3.5	0.0	0.0	10.9	0.0	-0.0	3.0	-103.0
15	574617.83	4883097.32	429.72	0	1000	90.0	-16.0	0.0	0.0	70.6	3.5	-0.9	0.0	0.0	18.0	0.0	-0.0	-1.1	-107.2
16	574617.83	4883097.32	429.72	0	2000	87.2	-18.8	0.0	0.0	70.6	9.2	-1.5	0.0	0.0	21.5	0.0	-0.0	-12.5	-118.6
17	574617.83	4883097.32	429.72	0	4000	84.0	-22.0	0.0	0.0	70.6	31.2	-1.5	0.0	0.0	24.5	0.0	-0.0	-40.7	-146.7
18	574617.83	4883097.32	429.72	0	8000	76.9	-29.1	0.0	0.0	70.6	111.4	-1.5	0.0	0.0	26.4	0.0	-0.0	-129.9	-236.0
19	574629.38	4883171.07	427.47	0	32	-57.8	-163.9	0.0	0.0	71.2	0.0	-5.7	0.0	0.0	11.7	0.0	-0.0	-135.2	-241.2
20	574629.38	4883171.07	427.47	0	63	72.4	-33.7	0.0	0.0	71.2	0.1	-5.7	0.0	0.0	12.8	0.0	-0.0	-6.1	-112.1
21	574629.38	4883171.07	427.47	0	125	80.5	-25.6	0.0	0.0	71.2	0.4	3.4	0.0	0.0	5.2	0.0	-0.0	0.2	-105.8
22	574629.38	4883171.07	427.47	0	250	86.0	-20.1	0.0	0.0	71.2	1.1	5.3	0.0	0.0	5.3	0.0	-0.0	3.0	-103.0
23	574629.38	4883171.07	427.47	0	500	89.4	-16.7	0.0	0.0	71.2	2.0	3.3	0.0	0.0	9.7	0.0	-0.0	3.1	-102.9
24	574629.38	4883171.07	427.47	0	1000	89.6	-16.5	0.0	0.0	71.2	3.8	-1.0	0.0	0.0	16.7	0.0	-0.0	-1.1	-107.1
25	574629.38	4883171.07	427.47	0	2000	86.8	-19.3	0.0	0.0	71.2	9.9	-1.7	0.0	0.0	20.2	0.0	-0.0	-12.9	-118.9

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Line Source, ISO 9613, Name: "Haul Trucks", ID: "EX6_HAUL"																			
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)
26	574629.38	4883171.07	427.47	0	4000	83.6	-22.5	0.0	0.0	71.2	33.6	-1.7	0.0	0.0	23.1	0.0	-0.0	-42.8	-148.8
27	574629.38	4883171.07	427.47	0	8000	76.5	-29.6	0.0	0.0	71.2	120.0	-1.7	0.0	0.0	26.1	0.0	-0.0	-139.2	-245.2
28	574657.19	4883222.89	424.80	0	32	-59.5	-165.6	0.0	0.0	71.7	0.0	-5.7	0.0	0.0	11.6	0.0	-0.0	-137.3	-243.3
29	574657.19	4883222.89	424.80	0	63	70.7	-35.4	0.0	0.0	71.7	0.1	-5.7	0.0	0.0	12.6	0.0	-0.0	-8.1	-114.1
30	574657.19	4883222.89	424.80	0	125	78.8	-27.3	0.0	0.0	71.7	0.5	3.4	0.0	0.0	5.0	0.0	-0.0	-1.7	-107.7
31	574657.19	4883222.89	424.80	0	250	84.3	-21.8	0.0	0.0	71.7	1.1	5.2	0.0	0.0	5.0	0.0	-0.0	1.2	-104.8
32	574657.19	4883222.89	424.80	0	500	87.7	-18.4	0.0	0.0	71.7	2.1	3.1	0.0	0.0	9.5	0.0	-0.0	1.3	-104.8
33	574657.19	4883222.89	424.80	0	1000	87.9	-18.2	0.0	0.0	71.7	4.0	-1.2	0.0	0.0	16.4	0.0	-0.0	-3.0	-109.1
34	574657.19	4883222.89	424.80	0	2000	85.1	-21.0	0.0	0.0	71.7	10.5	-1.9	0.0	0.0	19.9	0.0	-0.0	-15.2	-121.2
35	574657.19	4883222.89	424.80	0	4000	81.9	-24.2	0.0	0.0	71.7	35.5	-1.9	0.0	0.0	22.8	0.0	-0.0	-46.3	-152.4
36	574657.19	4883222.89	424.80	0	8000	74.8	-31.3	0.0	0.0	71.7	126.8	-1.9	0.0	0.0	25.8	0.0	-0.0	-147.6	-253.6
37	574618.01	4882989.07	433.79	0	32	-63.3	-169.3	0.0	0.0	69.6	0.0	-5.6	0.0	0.0	13.7	0.0	-0.0	-141.0	-247.0
38	574618.01	4882989.07	433.79	0	63	66.9	-39.1	0.0	0.0	69.6	0.1	-5.6	0.0	0.0	15.5	0.0	-0.0	-12.8	-118.8
39	574618.01	4882989.07	433.79	0	125	75.0	-31.0	0.0	0.0	69.6	0.4	8.7	0.0	0.0	3.5	0.0	-0.0	-7.2	-113.2
40	574618.01	4882989.07	433.79	0	250	80.5	-25.5	0.0	0.0	69.6	0.9	11.8	0.0	0.0	3.0	0.0	-0.0	-4.8	-110.8
41	574618.01	4882989.07	433.79	0	500	83.9	-22.1	0.0	0.0	69.6	1.6	5.8	0.0	0.0	11.8	0.0	-0.0	-4.9	-111.0
42	574618.01	4882989.07	433.79	0	1000	84.1	-21.9	0.0	0.0	69.6	3.1	0.6	0.0	0.0	19.9	0.0	-0.0	-9.1	-115.1
43	574618.01	4882989.07	433.79	0	2000	81.3	-24.7	0.0	0.0	69.6	8.2	-0.1	0.0	0.0	23.5	0.0	-0.0	-20.0	-126.0
44	574618.01	4882989.07	433.79	0	4000	78.1	-27.9	0.0	0.0	69.6	27.9	-0.1	0.0	0.0	25.1	0.0	-0.0	-44.4	-150.4
45	574618.01	4882989.07	433.79	0	8000	71.0	-35.0	0.0	0.0	69.6	99.4	-0.1	0.0	0.0	25.1	0.0	-0.0	-123.0	-229.0

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APPENDIX C

CURRICULUM VITAE

VALCOUSTICS
Canada Ltd.
Sound solutions to acoustical challenges

JOHN EMELJANOW, P.Eng.

Principal Acoustical Engineer

Mr. Emeljanow (John) has been employed with Valcoustics Canada Ltd. for over 27 years. He is a Principal Engineer, a Designated Consulting Engineer with the Professional Engineers of Ontario, a graduate of the Ministry of the Environment's Acoustics Technology in Land Use Planning Course and has given evidence as an expert witness before the Ontario Municipal Board, dealing with environmental acoustics issues in land use planning. John has acted as project manager on a number of major architectural and environmental projects. His responsibilities include noise/vibration measurement, analysis, design computations, and report preparation. In addition, John was an active contributor to the acoustics section of the Architectural Design Standards for Ontario Courthouses prepared for the Ministry of the Attorney General.

EXPERIENCE:

Architectural acoustics involving the interaction of sound and architectural elements within a space to obtain the desired acoustical environment. This involves control of reverberation, ambient sound level, location of sound absorbing and sound reflecting surfaces as well as isolation of sound to and from adjacent spaces. Representative projects are: Niagara Convention Centre; Durham Consolidated Courthouse; Brampton Consolidated Courthouses; Upper Canada College Expansion, Toronto; Toronto Stock Exchange Renovations (The Design Exchange); Sunnybrook Health Science Centre Expansion and Renovation, Toronto; Metro Convention Centre Expansion, Toronto; Canary Wharf (DS5), London; Sudbury Regional Hospital; and GTAA Infield Development, Mississauga.

Environmental noise and vibration studies to determine impact of ground and air transportation and stationary sources of sound on adjacent land use, both existing and proposed, as well as selection and analysis of noise mitigation measures, including sound barriers, architectural elements, and operational techniques. Projects are prepared for private and government sectors, involving residential, industrial and commercial development. Representative projects include: Walker Brothers Quarry, Thorold; Keele Valley Landfill Vertical Expansion, Maple; Canadian National Railway Lands Redevelopment, Toronto; The Woodbridge Expansion Area, Vaughan; Rimply Manufacturing Plant, Newmarket; Honda Canada Manufacturing Minivan Plant, Alliston; Sheppard Subway, Toronto; and Highway 11, Burk's Falls to Powassin.

Mechanical system noise and vibration analyses to control the impact of air-borne and structure-borne sound from mechanical equipment on adjacent spaces through the design of demising surfaces, as well as the control of noise generated and transmitted through HVAC systems. Representative projects include: the New Princess Margaret Hospital, Toronto; National Trade Centre, Toronto; IBM Facility for Software Development, Markham; Niagara College – Glendale Campus, Niagara Falls; The American School, Shanghai; Guelph General Hospital; and Xiamen Conference Centre, China.

EDUCATION:

B.Eng.
McMaster University, June 1989, Mechanical Engineering

Course on Noise Control in Land Use Planning; Ministry of the Environment and Energy, Toronto, June 1989

PROFESSIONAL AFFILIATION:

Registered Professional Engineer, Professional Engineers of Ontario
Designated Consulting Engineer, Professional Engineers of Ontario

PUBLICATIONS & PRESENTATIONS:

- "A Technique for Comparing Alternative Transportation Corridor Alignments Based on Noise Impact", presented at Inter-Noise 92, Toronto, Ontario, July 1992.
- "Environmental Noise Aspects of Landfill Site Selection", Canadian Acoustics, Vol. 21, No. 3, September 1993.
- "Acoustical Challenge of Quarry Design", Canadian Acoustics, Vol. 22, No. 3, September 1994.
- "NPC-300 Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning", Seminar for Municipalities, December 9, 2013 (co-presenter).
- "Environmental Acoustics in Land Use Planning", Seminar in Acoustics for the City of Mississauga, June 24-26, 2014 (co-presenter).
- "Environmental Acoustics in Land Use Planning", Seminar in Acoustics for the City of London, July 9-11, 2014 (co-presenter).
- "Environmental Acoustics in Land Use Planning", Seminar in Acoustics for the City of London, July 9-11, 2014 (co-presenter).
- "Workshop: Noise and Vibration for New Development in Proximity to Railway Operations", Prepared for the FCM-RAC Proximity Steering Committee, June 26, 2015 (co-presenter).