Appendix B.2

Noise Impact Assessment Technical Report – October 12, 2021 as Completed for the Updated 2021 Beaver Dam Mine EIS

Updated Noise Impact Assessment Technical Report

Atlantic Mining NS Inc.
Beaver Dam Mine Project
Nova Scotia

Atlantic Mining NS Inc.

October 12, 2021

→ The Power of Commitment

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1. Introduction

GHD Limited (GHD) updated the Noise Impact Study (GHD 2018) for the Beaver Dam Mine Project (Project), based on updates to the project description (AMNS 2021a) and in responses to information requests (IRs) (CEAA 2019). This Updated Noise Impact Assessment Technical Report summarizes updated noise modelling results, assessments, and mitigation measures, based on the current infrastructure design, planned operations, and schedule for the Project. The effects of the following key project changes are summarized in this report:

– Duration of Construction Phase reduced to <1 year (previously 1 to 2 years)
– Duration of Operation Phase extended to 5 years (previously 3 to 4 years)
– Maximum daily volume of truck traffic on the haul road updated
– Updated minor alignments of the haul road to avoid environmentally sensitive areas
– Updated Touquoy Mine Site Property line
– Two options for raw material processing considered at the Beaver Dam Mine Site (Option A: jaw crusher at crusher pad; and Option B: secondary blasting and rock breaking in the pit)

The specific noise related IRs from the Canadian Environmental Effects Assessment Agency (CEAA) 2019 review (CEAA 2019) are included in Table 1.1.

Table 1.1 Canadian Environmental Assessment Agency Round 2, Part 1 Information Requests

Information Request Reference Number	Regulatory Agency/Indigenous Community/Public Community	Revised EIS Reference	Context and Rationale	The Proponent is Required to …	Information Request Response Location
CEAA-2-27	CEAA, KMKNO, ESFW, Save Caribou	Section 8.5 Cumulative Effects Assessment of the Valued Components	Section 8 of the revised EIS does not contain a cumulative effects assessment for noise.	Provide a cumulative effects assessment for noise, including the reasonably foreseeable projects: Fifteen Mile Stream Gold and Cochrane Hill Gold Projects.	Section 3.3
CEAA-2-27	CEAA, KMKNO, ESFW, Save Caribou	Section 8.5 Cumulative Effects Assessment of the Valued Components	The proponent states that residual adverse effects from noise will remain after the application of mitigations. Residual effects of other past, present and reasonably foreseeable projects noted in the revised EIS have the potential to interact with the residual effects of the Beaver Dam Mine Project, both spatially and temporally (Table 8.4-4). Specifically, the proposed Beaver Dam Mine, Fifteen Mile Stream Gold and	Provide a worst-case scenario for noise along the Haul Road in consideration of Beaver Dam, Fifteen Mile Stream Gold, and Cochrane Hill Gold Projects and forestry operations.	Section 3.3

Information Request Reference Number	Regulatory Agency/Indigenous Community/Public Community	Revised EIS Reference	Context and Rationale	The Proponent is Required to …	Information Request Response Location
			Cochrane Hill Gold Projects will be operating concurrently and using the same Haul Roads to transport ore to the existing Touquoy Mine and Facility for final processing.		
CEAA-2-27	CEAA, KMKNO, ESFW, Save Caribou	Section 8.5 Cumulative Effects Assessment of the Valued Components	The proponent's rationale for not carrying noise into the cumulative effects assessment is that the residual effects from noise are anticipated to revert back to baseline conditions upon completion of the Project. The Agency notes that noise levels were close to or exceeded thresholds during the assessment of direct Project effects. As such, the Agency requires that noise be carried forward into the cumulative effects assessment. In addition to Fifteen Mile Stream Gold and Cochrane Hill Gold Projects, the proponent has identified forestry operations as an ongoing project in the area. Although sporadic, the proponent indicated that there is a potential for cumulative effects between forestry and the other mining projects, and stated that an overlap of these projects will likely occur.	Update the direct and cumulative effects assessment of related valued components as appropriate and include additional mitigation to reflect this scenario.	Section 3.3
CEAA-2-30	HC	Section 6.1.9, p223; Appendix B.1 - Section 2.0 Methodology	The EIS states that during construction "noise will be elevated above baseline for limited periods but for a short duration (12-24 months)". According to Section 6.3.1 of Health Canada (2016), construction noise	Provide a quantitative evaluation of construction noise as operational noise using the approach described in Health Canada (2016) given the expected duration of the	GHD 2021 (Technical Memorandum - Beaver Dam Mine Construction Noise Assessment)

Information Request Reference Number	Regulatory Agency/Indigenous Community/Public Community	Revised EIS Reference	Context and Rationale	The Proponent is Required to …	Information Request Response Location
			lasting longer than one year should be assessed as operational noise. The methods to evaluate operational noise are also presented in Health Canada (2016). Guidance for Evaluating Human Health Impacts in Environmental Assessment: NOISE. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.	construction phase (up to 2 years).	
CEAA-2-31	HC	Appendix B.1 Section 6.1; Section 6.1.3.2, p211	Noise Given that the Nova Scotia (NSE) Noise Guidelines are intended not only for dwellings but also for recreational areas, any area used for recreational or traditional purposes by Indigenous peoples located closer to the project site should be included in the noise assessment. This is particularly relevant because of the predicted exceedances of the provincial noise guidelines at the Beaver Dam Mine site property boundary.	Provide further justification for the conclusion that the noise limits in the NSE Pit and Quarry Guidelines (1999) are not valid at the property boundary of the Beaver Dam Mine Site.	Section 3.2
CEAA-2-31	HC	Appendix B.1 - Section 6.2	In terms of noise, section 6.1 of Appendix B.1 states that "the Nova Scotia Guidelines for Environmental Noise Measurement and Assessment state that their guideline limit values are intended to be applied where people normally live, work, or take part in recreation". According to section 6.1.7.3 of the EIS, "activities in the project site area include recreational use (hunting, ATVs, etc.)". According to Table 6.14-1, "Mi'kmaq	Provide additional mitigation measures that reduce noise at the property boundary given the predicted exceedances.	Section 3.2, Section 4

Information Request Reference Number	Regulatory Agency/Indigenous Community/Public Community	Revised EIS Reference	Context and Rationale	The Proponent is Required to …	Information Request Response Location
			families also enjoy camps in the area for recreational purposes."		
CEAA-2-31	HC	Section 6.2.6.4, p235	Additionally, the EIS states that "the highest predicted noise levels at the property boundaries of the Beaver Dam Mine Site exceed the criteria NSE Pit and Quarry Guidelines (1999) for all time periods…. While the limits stated in these guidelines are clear and specific, they are not considered practical to meet for open pit mines with operations located close to property lines."	Update any monitoring or follow up programs at the property boundary to verify predicted noise levels and evaluate the level of conservatism used in the modelling.	Section 3.2
CEAA-2-32	HC	Section 2.3.2.2, p127	Section 6.1.8 states that "traffic on the Haul Road will generally be restricted to 16 hours per day during the operational phase. This will minimize noise along the Haul Road during evening hours."	Confirm that the truck traffic for the noise assessment has been adjusted to reflect 16 hours rather than 12 hours. If noise levels are likely to be elevated during the evening/overnight period, provide a discussion of any additional mitigation measures that may be employed to reduce noise levels at the nearest receptor locations.	Section 3.2

Source: CEAA (2019), AMNS (2021b).

2. Noise Assessment Methodology Update

The acoustic modelling has been updated to reflect the current infrastructure for the Project and current estimates of truck traffic on the Haul Road, which are provided in Appendix B. The updated noise analysis results presented herein include all sensitive receptors (i.e., human receptors – seasonal and permanent dwellings) locations (R1 to R9). Specific non-residential locations of traditional land use and recreation have not been identified for inclusion in the analysis; however, it is understood that traditional and recreational uses such as hunting may occur in areas close to the Project Area. The noise isopleths provided in Figures 3A to 3K indicate the predicted noise levels produced by the Project.

Figures 3A and 3B are used to assess the effects on traditional uses and wildlife (AMNS 2021a, Sections 6.12 to 6.17).

The updated analysis also includes the effects of haul truck traffic from the Project only (Direct Effects), and haul truck traffic on the Haul Road from other projects as well as forestry operations (Cumulative Effects).

2.1 Construction Phase

This Technical Report does not contain a detailed assessment of noise impacts resulting from the Construction Phase of the Project, which now has a planned duration of less than one year (i.e., short duration). A separate Technical Memorandum has been prepared to summarize the noise assessment of the Construction Phase (GHD 2021).

2.2 Operation Phase

The equipment and activities planned for the Operation Phase have been assessed with respect to the applicable Nova Scotia Environment and Labour (NSEL) noise guidelines (NSEL 1990, NSEL 1999). The NSEL (1990) guidelines apply to sensitive receptors, and at property lines of mine sites and the Haul Road.

2.2.1 Sensitive Receptors

Predicted noise impacts during the Operation Phase were assessed at all of the sensitive receptors (i.e., human receptors – seasonal and permanent dwellings) using the NSEL "Guidelines for Environmental Noise Measurement and Assessment" (NSEL 1990). This guideline includes the following criteria:

– $L_{eq} \leq 65$ dBA between 7:00 AM and 7:00 PM
– $L_{eq} \leq 60$ dBA between 7:00 PM and 11:00 PM
– $L_{eq} \leq 55$ dBA between 11:00 PM and 7:00 AM

Nine worst-case sensitive receptors (i.e., human receptors – seasonal and permanent dwellings) receptor locations have been identified for assessment (R1 to R9). These receptor locations are listed below and shown in Figures 1A to 1D:

– R1 – 9 Beaver Dam Mine Road (Marlborough Property)
– R2 – 4112 Highway 224 (Beaver Lake IR 17)
– R3 – 4115 Highway 224 (Cottage on Crown Land)
– R4 – 3492 Highway 224 (Hobbs Property)
– R5 – 3379 Highway 224 (McLeod Property)
– R6 – 3373 Highway 224 (Smith Property)
– R7 – Tangier River (Deepwood Estates Property)
– R8 – Tanger River (Musqudoboit Lumber Co. Ltd. Property/John Dickson Lease)
– R9 – 5579 Mooseland Road (Lloy Property)

2.2.2 Property Lines

Predicted noise levels were also evaluated at the property lines for the Operation Phase. The NSEL regulates noise levels at the property lines of mines using noise level limits contained in the "Pit and Quarry Guidelines" (NSEL 1999). The noise level criteria contained in this guideline are as follows:

– $L_{eq} \leq 65$ dBA between 7:00 AM and 7:00 PM
– $L_{eq} \leq 60$ dBA between 7:00 PM and 11:00 PM
– $L_{eq} \leq 55$ dBA between 11:00 PM and 7:00 AM

2.2.3 Haul Roads – Direct and Cumulative Effects

Direct impacts from the Project and Cumulative Effects have been analysed to evaluate the total cumulative noise levels from Project truck traffic on the Haul Road, as well as truck traffic associated with other projects and industries.

Trucks transporting gold concentrate from the Cochrane Hill and Fifteen Mile Stream mine sites (both more than 15 km from the Project) to the Touquoy Mine Site will pass through the Project Area, and have the potential to increase the cumulative noise levels at the receptors along the Haul Road. Truck traffic from forestry industry operations in the area is also expected to operate on the Haul Road.

Direct impacts from the Project and cumulative truck traffic was evaluated to determine potential noise impacts on receptors, using the criteria for sensitive receptors presented in Section 2.2.1.

3. Project Activities and Noise Assessment Update

The Project will operate as a satellite open pit mine. Crushed ore from the Project will be transported by truck via the Haul Road to the existing and fully permitted Touquoy Mine. Processing of ore from the Beaver Dam gold deposit at the existing the Beaver Dam Mine Site is anticipated to begin construction in 2022, come into production in 2023, cease operations in 2027 and then be reclaimed.

The Touquoy Mine is currently in operation and has been assessed as such. The primary effect of the continued use of the Touquoy Mine Site is the continued generation of noise due to haul truck traffic on the site, and processing of ore from the proposed Beaver Dam Mine. There are no new or additional effects from noise anticipated to be caused by the processing of ore and the management of tailings (exhausted pit) from the Project, as no new construction or disturbance, aside from upgrades to the process plant, is required at the Touquoy Mine related to the processing of ore from the Beaver Dam Mine Site.

Relevant Project activities during the Operation Phase is summarized in Table 3.1.

Table 3.1 Potential Noise Interactions with Project Activities During the Operation Phase

Location	Duration	Relevant Project Activity
Beaver Dam Mine Site	5 years	• Rock blasting to access and extract ore • Management of waste rock produced from crushing and/or blasting and preparing ore for transport • Petroleum products management • Site maintenance and repairs • Equipment to power lighting at Mine and along roads • General management of wastes derived from operation activities
Along Haul Road	5 years	• Ore transport • Road lighting • Equipment to power lighting at Mine Sites and along road • Haul road maintenance and repairs
Touquoy Mine Site	5 years	• Ore management and processing • Lighting equipment for on-site facilities and Mine roads

There are two alternatives currently under consideration by Atlantic Mining NS Inc. (AMNS) for the processing of raw materials at the Beaver Dam Mine Site during the Operation Phase. These alternatives are summarized as follows:

– **Option A:** A jaw crusher (noise model source ID: S120) will be used at the crusher pad of the Beaver Dam Mine. This is consistent with the project activities summarized in this Technical Report.
– **Option B:** Mined material from the pit will be further processed with additional blasting and rock breaking using an excavator-mounted rock breaker, without the need for a crusher at the Beaver Dam Mine. As per the NSEL Pit and Quarry Guidelines (1999), noise due to blasting activities is subject to separate noise level requirements, which are outside of the scope of this Technical Report. However, an explosive management plan is being developed and will be submitted as part of the permitting process to assess and mitigate impacts from the use of explosives. An excavator-mounted rock breaker (noise model source ID: S131) will also be used within the pit, which is a source of noise and has been included in this assessment.

These alternatives have been evaluated separately as part of this Technical Report.

3.1 Operation Phase Noise Impacts at the Sensitive Receptors

During the Operation Phase, predicted noise levels at each of the sensitive receptors are summarized in Table 3.2. The predicted noise levels include equipment and activities at the Beaver Dam Mine Site, the Haul Road, and the Touquoy Mine Site.

Table 3.2 Predicted Noise Effects at the Sensitive Receptors

Receptor ID	Receptor Description	Noise Level (dBA) (Day / Evening / Night)	Sound Level Limit [(a)] (dBA) (Day / Evening / Night)	Compliance
R1	9 Beaver Dam Mine Road (Marlborough Property)	48 / 48 / 27	65 / 60 / 55	Yes
R2	4112 Highway 224 (Beaver Lake IR 17)	30 / 30 / 28	65 / 60 / 55	Yes
R3	4115 Highway 224 (Cottage on Crown land)	32 / 32 / 28	65 / 60 / 55	Yes
R4	3492 Highway 224 (Hobbs Property)	50 / 50 / 27	65 / 60 / 55	Yes
R5	3379 Highway 224 (McLeod Property)	39 / 39 / 27	65 / 60 / 55	Yes
R6	3373 Highway 224 (Smith Property)	37 / 37 / 27	65 / 60 / 55	Yes
R7	Tangier River (Deepwood Estates Property)	53 / 53 / 20	65 / 60 / 55	Yes
R8	Tangier River (Musqudoboit Lumber Co Ltd. Property/John Dickson Lease)	42 / 42 / 20	65 / 60 / 55	Yes
R9	5579 Mooseland Road (Lloy Property)	50 / 50 / 27	65 / 60 / 55	Yes

(a) NSEL 1990

Predicted noise effects during the Operation Phase of the Project are within the applicable sound level limits at all the sensitive receptors (Table 3.2). Most notably, predicted noise levels during the nighttime period are at least 27 dBA below the applicable nighttime sound level limit at all sensitive receptors.

Table 3.2 includes both Option A and Option B for raw material processing at the Beaver Dam Mine Site and includes the effects of required noise mitigation measures.

3.2 Property Line Assessment

Noise levels were evaluated at the property boundaries of the Beaver Dam Mine, Haul Road, and Touquoy Mine Site (Figures 2A to 2D). All of the noise sources from the Operations at both mine sites and on the Haul Road were used in the property line noise level predictions.

Operations, infrastructure, and property boundaries for the Beaver Dam Mine have been updated to mitigate predicted noise levels at the property line. The current proposed property line at the Beaver Dam Mine and the noise source locations are identified in Figures 2B and 2C, with source sound levels and operating conditions summarized in Appendices A and D. The following noise mitigation measures are incorporated into the current design of the Beaver Dam Mine:

– The pit entrance/exit has been relocated to the west side of the pit, farther from the northeast property boundary.
– No more than **four drills** will operate concurrently during any day, evening, or nighttime hour.
– Increase the height of the safety berm along the north boundary of the pit:
    - For **Option A**, the safety berm should be considered. It is recommended that the berm be at least 138.3 metres above sea level (approximately 7.3 metres above existing grade) along the northeast boundary of the pit, and at least 139 metres above sea level (approximately 4.0 metres above existing grade) along the northwest boundary of the pit (Figure 2B).
    - For **Option B**, the safety berm should be considered. It is recommended that the berm be at least 143 metres above sea level (i.e., approximately 13.0 metres above existing grade) along the entire north boundary of the pit (Figure 2C).

The maximum predicted noise levels at the property lines of the Beaver Dam Mine during Operations with the mitigations are presented in Table 3.3.

Table 3.3 Worst-Case Noise Levels at Property Lines

Property Line Description	Maximum Noise Level (dBA) (Day / Evening / Night)	Sound Level Limit (dBA) [(a)] (Day / Evening / Night)	Compliance
Beaver Dam Mine Site Property, Option A	55 / 55 / 55	65 / 60 / 55	Yes
Beaver Dam Mine Site Property, Option B	55 / 55 / 55	65 / 60 / 55	Yes
Haul Road (30 m from centerline of road)	58 / 58 / --	65 / 60 / 55	Yes
Touquoy Mine Site Property	55 / 55 / 54	65 / 60 / 55	Yes

[(a)] NSEL 1990

Predicted noise levels at the property line of the Beaver Dam Mine, along the length of the Haul Road, and the Touquoy Mine Site are within the sound level limits specified in the NSEL Pit and Quarry Guidelines (NSEL 1999) provided that the recommended mitigation measures for Option A or Option B are applied at Beaver Dam Mine Site (Table 3.3). Figures 3A to 3K show the applicable noise level isopleths in areas of sensitive receptors, and at the Beaver Dam Mine Site, Touquoy Mine Site, and Haul Road.

3.3 Haul Road Direct and Cumulative Effects

Truck traffic from other projects operating on the Haul Road, in addition to truck traffic from the Project, have the potential to produce increased cumulative effects noise levels at the identified receptors. As such, a Cumulative Effects analysis has been conducted to determine the potential Cumulative Effects of truck traffic from the proposed Fifteen Mile Stream Gold Project, Cochrane Hill Gold Project and Forestry operations that may use the Haul Road concurrently with trucks from the Beaver Dam Mine Site.

Truck traffic volumes used in the Direct (i.e., Project only) and Cumulative Effects analysis are summarized in Table 3.4 below.

Table 3.4 Summary of Estimated Truck Traffic on Haul Road

Originating Facility / Industry	Truck Traffic Volume (round trips per day, 7:00 AM to 11:00 PM)	
	Direct Effects	Cumulative Effects
Project (Beaver Dam Mine Site)	95	95
Cochrane Hill Mine	-	11
Fifteen Mine Stream Mine	-	11
Forestry	-	7
Total	**95**	**124**

Truck traffic from the Project will operate on the Haul Road 16 hours per day, during day and evening time periods only (7:00 AM to 11:00 PM). It is assumed that trucks originating from the other projects and industries will operate during the same hours for the purposes of the Cumulative Effects analysis.

In addition to the heavy truck traffic summarized above, it is estimated 3/4-ton service trucks would make up to approximately 20 round trips per day on the haul roads. Noise emissions from these service trucks have also been included in the cumulative effects noise model.

Table 3.5 shows the predicted cumulative effects of truck traffic for noise during the Operation Phase of the Project are within the applicable sound level limits at all of the identified sensitive receptors, including noise emissions from equipment and activities at the Beaver Dam Mine Site, Touquoy Mine Site, and Haul Road (Figures 4A to 4F).

Table 3.5 Operation Phase Predicted Cumulative Noise Effects

Receptor ID	Receptor Description	Noise Level (dBA) (Day / Evening / Night)	Sound Level Limit [(a)] (dBA) (Day / Evening / Night)	Compliance?
R1	9 Beaver Dam Mine Road (Marlborough Property)	50 / 50 / 27	65 / 60 / 55	Yes
R2	4112 Highway 224 (Beaver Lake IR 17)	31 / 31 / 28	65 / 60 / 55	Yes
R3	4115 Highway 224 (Cottage on Crown land)	33 / 33 / 28	65 / 60 / 55	Yes
R4	3492 Highway 224 (Hobbs Property)	56 / 56 / 27	65 / 60 / 55	Yes
R5	3379 Highway 224 (McLeod Property)	51 / 51 / 27	65 / 60 / 55	Yes
R6	3373 Highway 224 (Smith Property)	51 / 51 / 27	65 / 60 / 55	Yes
R7	Tangier River (Deepwood Estates Property)	55 / 55 / 20	65 / 60 / 55	Yes
R8	Tangier River (Musqudoboit Lumber Co Ltd. Property/John Dickson)	44 / 44 / 20	65 / 60 / 55	Yes
R9	5579 Mooseland Road (Lloy Property)	51 / 51 / 26	65 / 60 / 55	Yes

[(a)] NSEL 1990

The tables in Appendix B indicate noise levels from each noise source for each of the sensitive receptors for the Direct Effects and Cumulative Effects scenarios, with Option A and Option B. Table 3 in Appendix C documents compliance with the applicable sound level limits for each scenario.

4. Mitigation Measures Update

Equipment that lack effective mufflers are significant sources of noise. Procurement of equipment that meets best practices in terms of noise emissions, and regular maintenance of the equipment will reduce noise levels. Site workers will be trained to ensure equipment is used in ways that minimize noise and are maintained regularly. As part of the workplace health and safety program, noise monitors may be attached to workers from time to time to measure and monitor noise exposure over a shift.

The majority of mining operations will occur in the pit well below ground surface thereby providing noise shielding and blasting will be restricted to daytime hours, per the NSEL Pit and Quarry Guidelines (NSEL 1999). Additionally, traffic on the Haul Road will generally be restricted to 12 to 16 hours per day during the Operation phase, which will minimize noise along the Haul Road during nighttime hours. The dense forest surrounding the Beaver Dam Mine Site and the Haul Road will also provide noise attenuation, which is not accounted for in the noise model to be conservative. Topography and distance from receptors also contribute to a reduction of Project-generated sound at greater distances, and topographical elevation data has been included in the model to account for this effect.

This combination of measures will adequately mitigate potential noise impacts. The mitigation procedures may vary as long as noise levels are in accordance with the regulatory approval.

Additionally, noise and vibration monitoring must be completed during each blasting event, as required by the NSEL Pit and Quarry Guidelines (NSEL 1999). Monitoring and mitigations explicit to blasting will be described in the Explosive Management Plan that will be submitted as part of the permitting process. Elements of this plan will include site specific monitoring triggers and mitigations. An Engagement Plan (AMNS 2021a) will be implemented and based on feedback additional mitigations will be considered. Table 4.1 provides a summary mitigations measures being considered in the Explosive Management Plan to reduce noise.

Table 4.1 Mitigation for Noise

VC	Project Phase	Mitigation Measure
Noise	OP	Blasting will not be undertaken on Sundays, statutory holidays, or any day between the hours of 1800 hours and 0800 hours (NSEL 1999)
	OP	Construct a large safety berm along the entire north boundary of the pit, dependent on how raw materials are processed at the Beaver Dam Mine Site: • Option A: It is recommended that the berm be at least 138.3 metres above sea level (approximately 7.3 metres above existing grade) at the northeast boundary of the pit, and at least 139 metres above sea level (approximately 4.0 metres above existing grade) along the northwest boundary of the pit. • Option B: It is recommended that the berm be at least 143 metres above sea level (i.e., approximately 13.0 metres above existing grade) along the entire north boundary of the pit.
	OP	Operating hours for trucking on the Haul Road will be restricted to the day and evening periods only
	OP	Maximum 4 drills will operate at the Beaver Dam Mine Site pit at any time during the Operation Phase of the Project
	OP	Regular check by site manager for excessive noise on site and in relation to sensitive receptors so that resolution can be timely
	OP, DEC	Implement preventative maintenance plans for all mobile and stationary equipment
	PC	Noise-reduction as criteria in equipment selection
	OP	Speed reduction
	OP	Use equipment that meets appropriate noise emission standards for off-road diesel equipment
	OP	Subcontractor agreements will include an obligation to comply with environmental protection including noise reduction

VC	Project Phase	Mitigation Measure
	OP	Site design to reduce need for reversing and vehicle reversing alarms
	OP	A procedure, including a response plan, will be available for public to be able to register complaints regarding noise concerns

5. Proposed Compliance and Effects Monitoring Program Update

Noise monitoring will be completed as directed by regulators or feedback received from engagement.

6. Conclusions

In general, mining operations often produce elevated noise levels that have the potential to impact the surrounding environment. Thus, noise levels produced by equipment at the proposed Beaver Dam Mine Project have been assessed at the identified worst-case receptors to determine the future impact on residents of the nearest communities. This is not intended to preclude residents at farther distances but rather is presented to document those sensitive receptors (i.e., human receptors – seasonal and permanent dwellings) that are closest and represent a worst-case scenario.

Noise Compliance at Receptors

The predicted noise levels produced by worst-case activities during the Operation of the Project, including noise emissions from the Beaver Dam Mine Site, the Haul Road, and the Touquoy Mine Site, are within the applicable guideline limits for all identified receptors. Based on these predictions, noise levels at nearby sensitive receptors are expected to be within the NSEL noise level limits, provided the mitigation measures identified in this report are followed.

Noise Compliance at Receptors Along Haul Route

Trucks from other projects and forestry operations on the Haul Road have the potential to increase the Cumulative Effect of noise at the receptors. However, noise levels due to Cumulative Effects of trucks on the Haul Road were assessed, and the predicted noise levels remain within the applicable NSEL sound level limits at all identified sensitive receptors.

Noise Compliance at Property Boundaries

The NSEL Pit and Quarry Guidelines also include noise level criteria for assessment at the property boundaries (NSEL 1999). The predicted noise levels from the Project meet the NSEL limits at all locations on the property boundaries of the Beaver Dam Mine Site, the Haul Road, and the Touquoy Mine Site, provided the mitigation measures identified in this report are followed.

Baseline ambient sound level monitoring was conducted at several locations in the Project Area between January 2007 and September 2016 (GHD 2018). Based on the data obtained from these sound level monitors, ambient sound levels in some parts of the Study Area are low, as expected for a characteristically rural environment. Specific non-residential locations of traditional land use and recreation have not been identified for inclusion in the analysis; however, it is understood that traditional uses such as hunting may occur in areas close to the Project Area. The noise isopleths provided in Figures 3A and 3B attached indicate the expected noise levels produced by the Project and may be used to determine where Project noise levels may impact traditional uses and wildlife.

7. References

AMNS (Atlantic Mining NS Inc.). 2019. *Revised Environmental Impact Statement – February 28, 2019.* Submitted to the Canadian Environmental Assessment Agency and Nova Scotia Environment. February 2019. NS.

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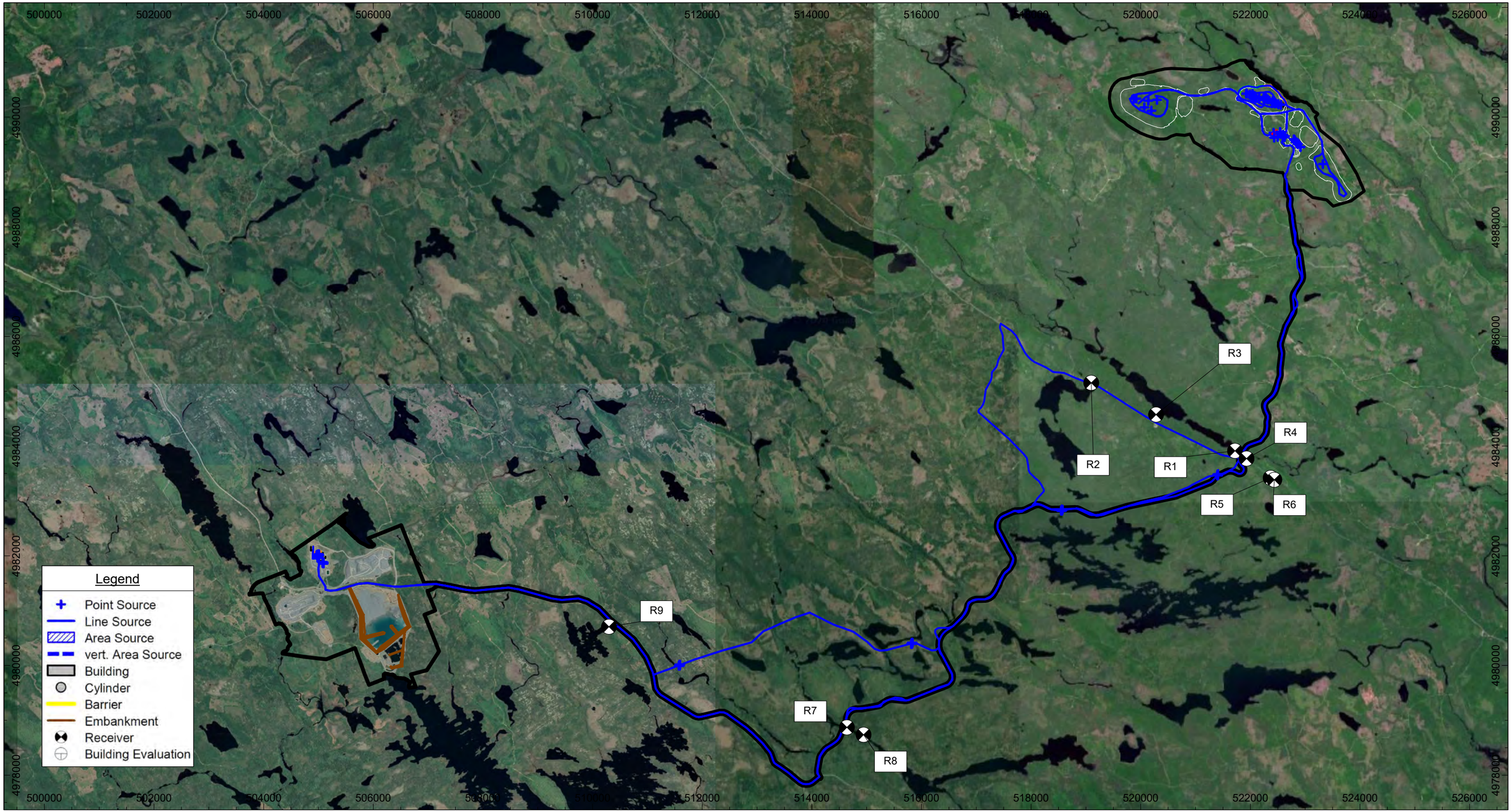

Source: Google Satellite

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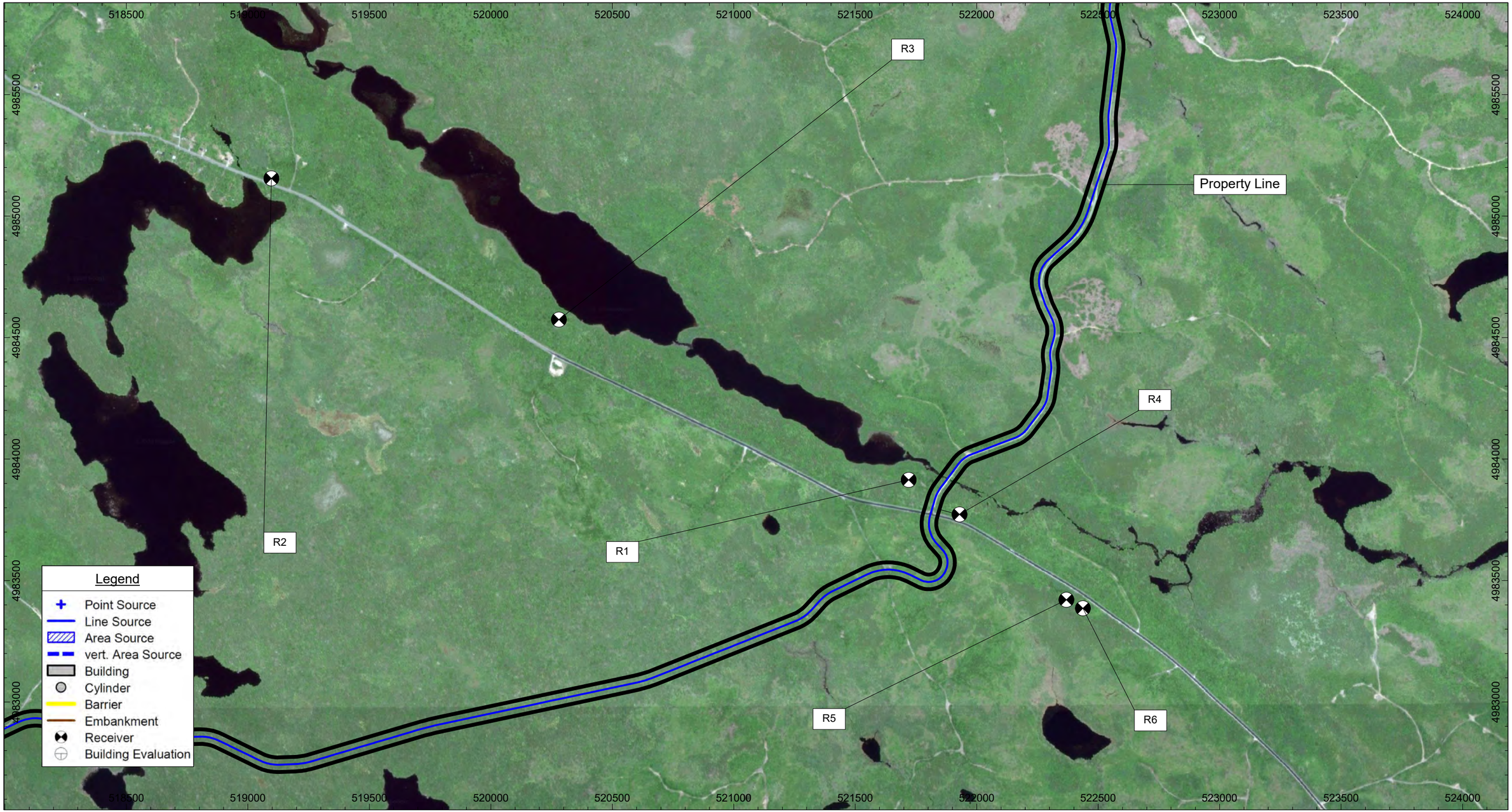
NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

088664
20.09.2021

RECEPTOR LOCATIONS

FIGURE 1A

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



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GHD

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

088664
20.09.2021

RECEPTOR LOCATIONS - R1 to R6 ENLARGED

FIGURE 1B

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

Source: Google Satellite

N

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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RECEPTOR LOCATIONS - R7 & R8 ENLARGED

FIGURE 1C

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

Source: Google Satellite

N

NOISE TECHNICAL REPORT
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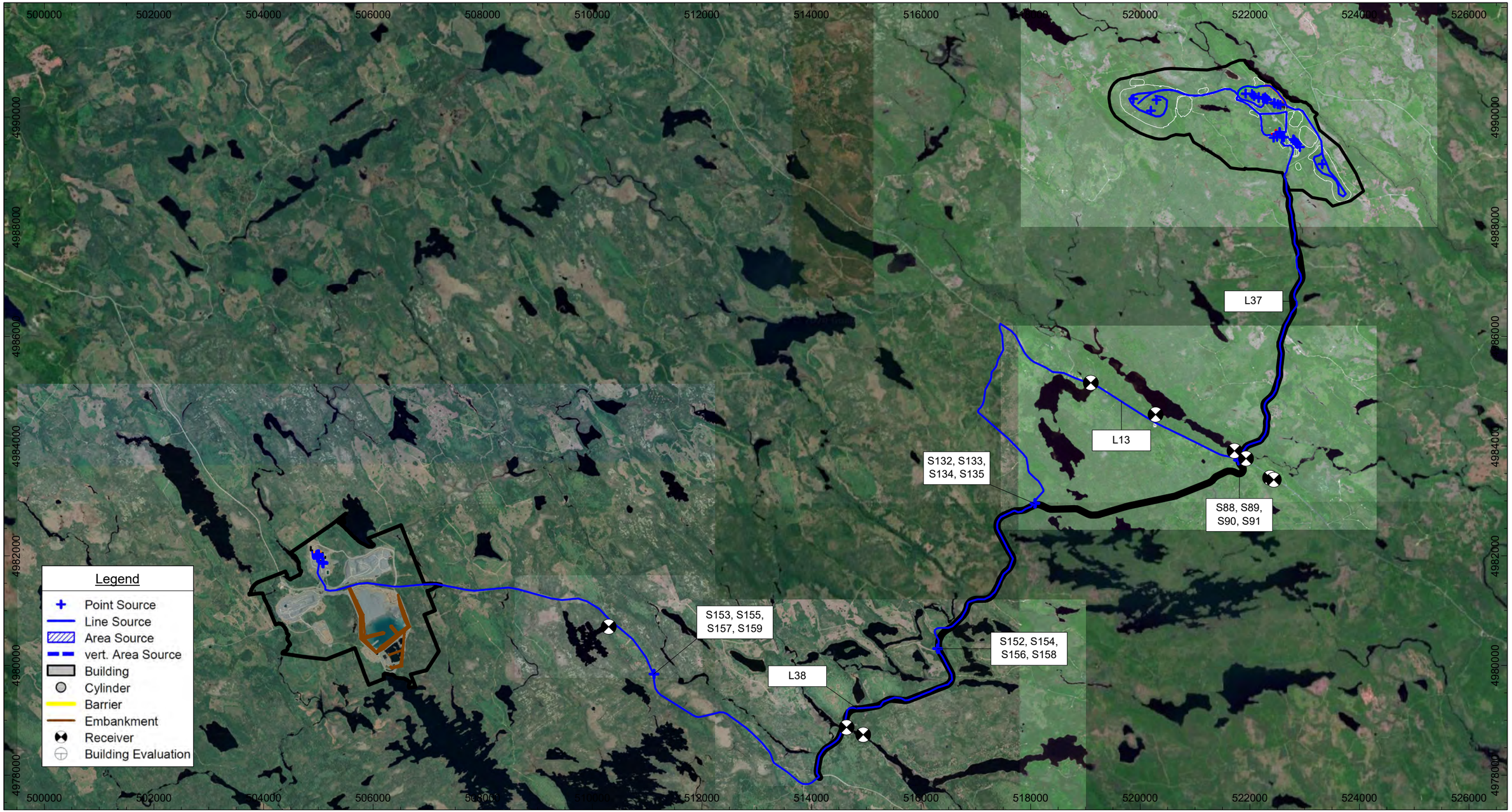
RECEPTOR LOCATIONS - R9 ENLARGED

FIGURE 1D

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

NOISE TECHNICAL REPORT
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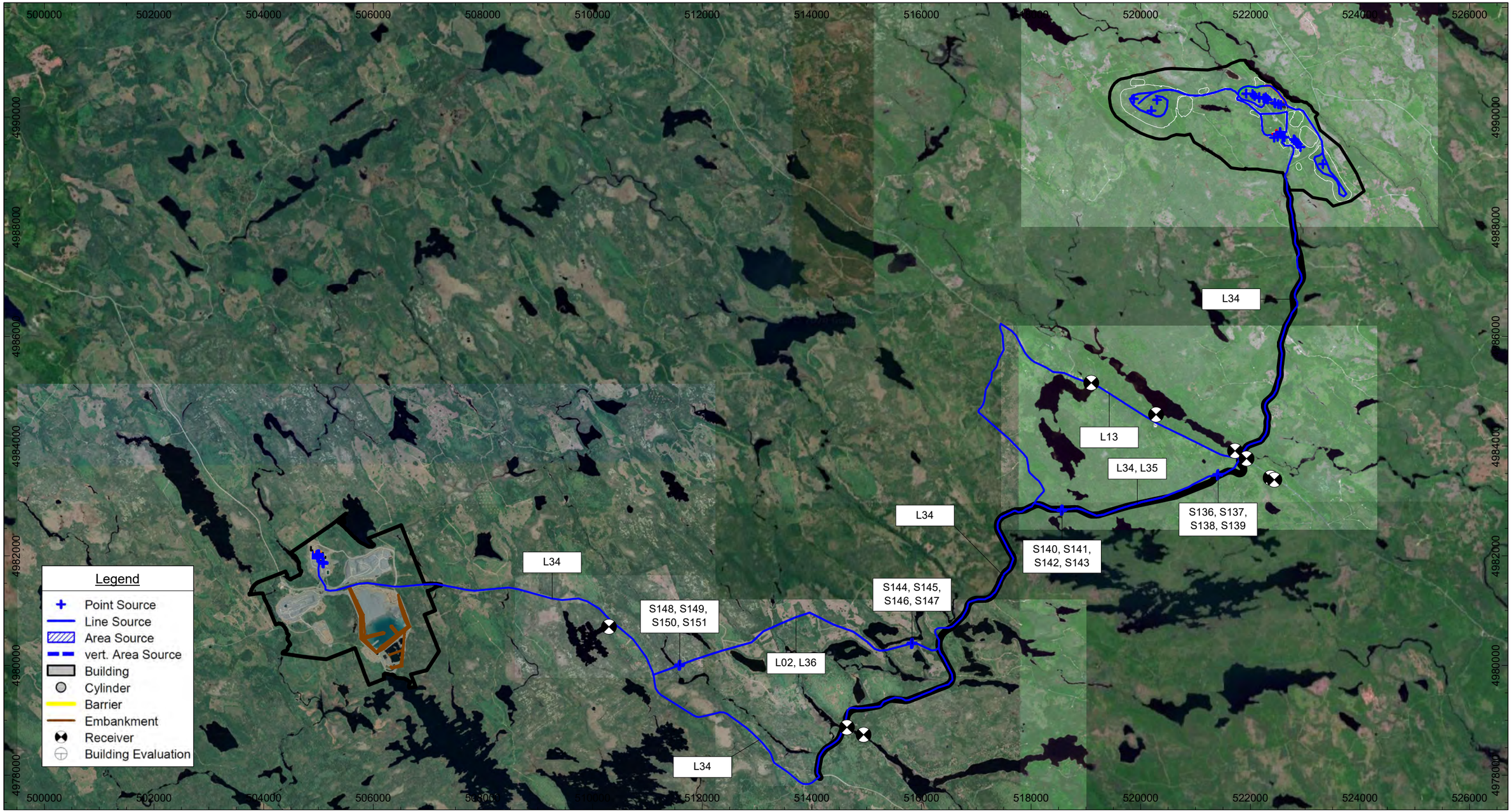
20.09.2021

SOURCE LOCATIONS - SCENARIO A (<2 MONTHS CONSTRUCTION OF HAUL ROAD SECTION 3B

FIGURE 2A

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

GHD

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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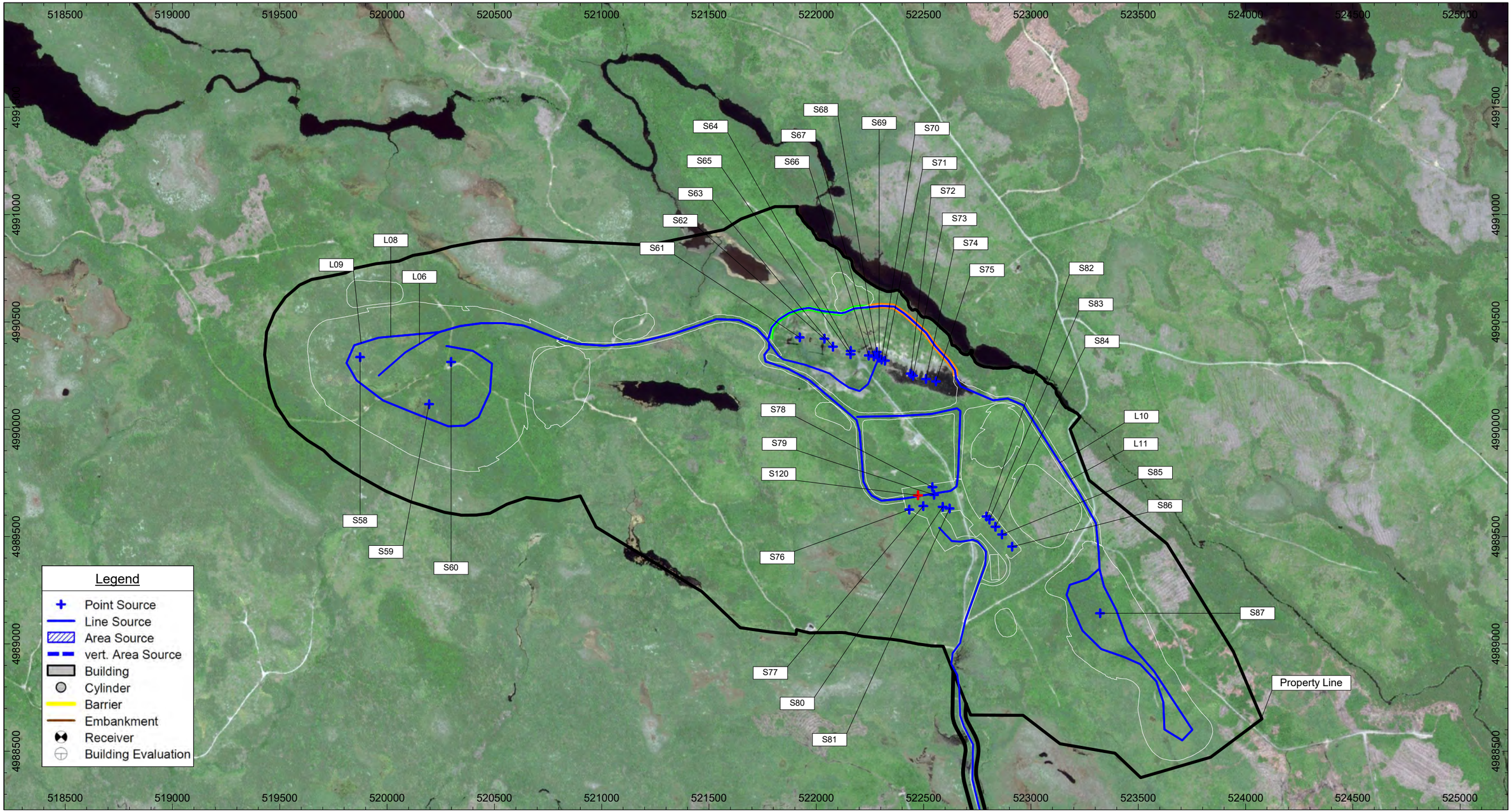
SOURCE LOCATIONS - SCENARIO B (>2 MONTHS CONSTRUCTION OF HAUL ROAD SECTION 3B

FIGURE 2B

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

NOISE TECHNICAL REPORT
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BEAVER DAM MINE, HALIFAX, NS

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SOURCE LOCATIONS - BEAVER DAM MINE SITE ENLARGED

FIGURE 2C

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

Source: Google Satellite

N

NOISE TECHNICAL REPORT
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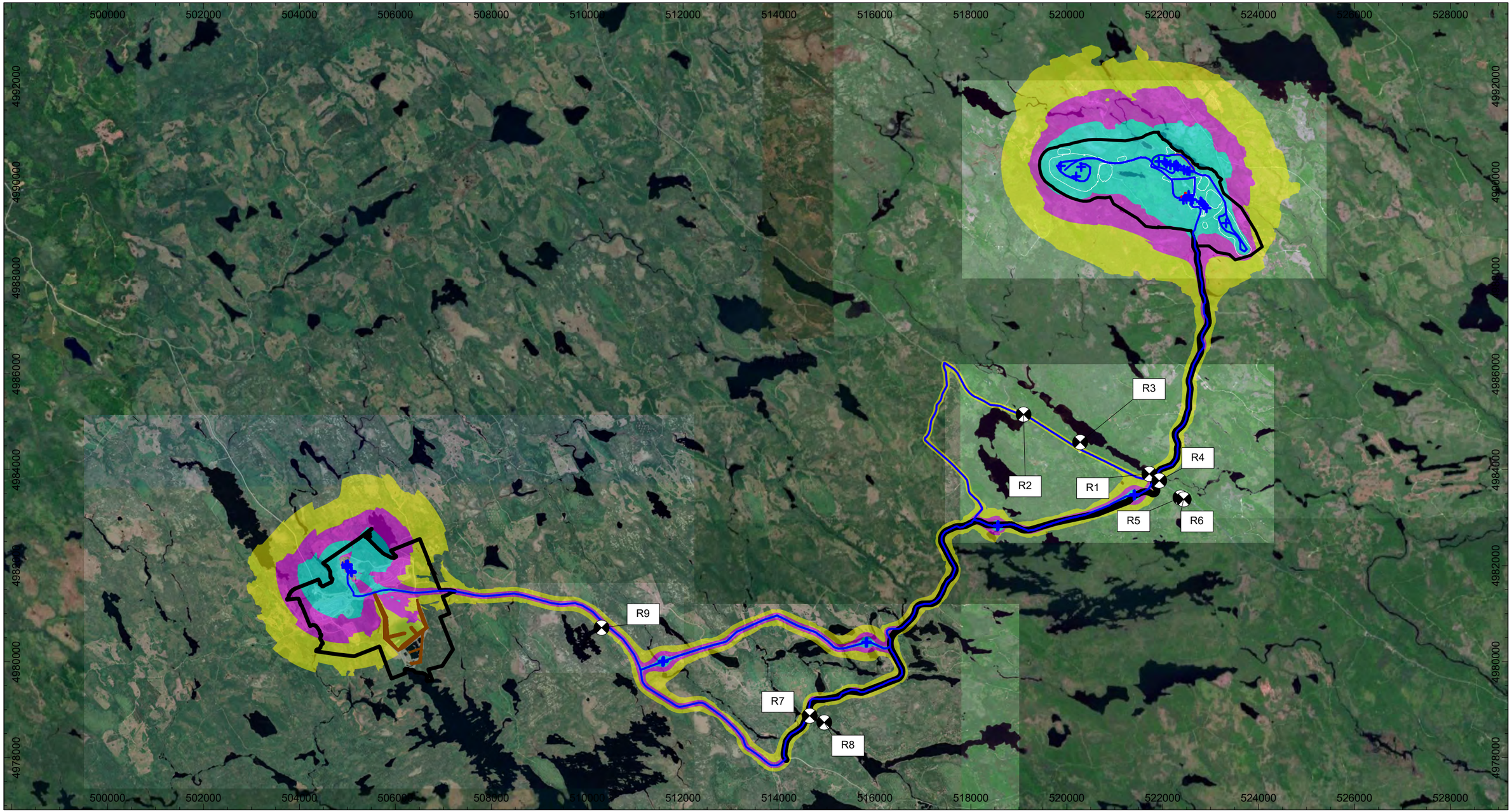
20.09.2021

SOURCE LOCATIONS - TOUQUOY MINE SITE ENLARGED

FIGURE 2D

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 47 dBA Ldn
> 52 dBA Ldn
> 57 dBA Ldn

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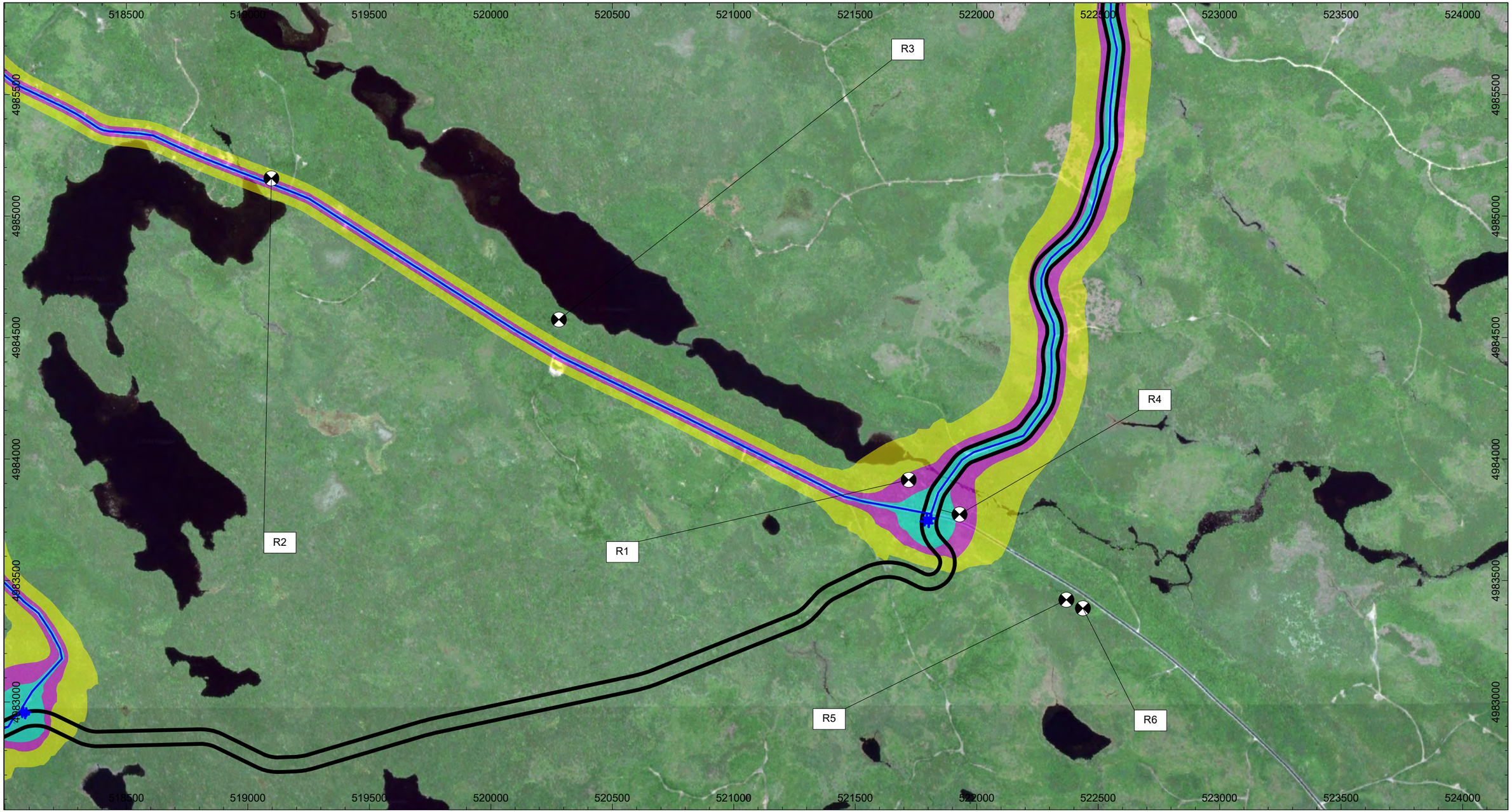
NOISE CONTOUR PLOT - OVERALL STUDY AREA - SCENARIO B

FIGURE 3A

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 47 dBA Ldn
> 52 dBA Ldn
> 57 dBA Ldn

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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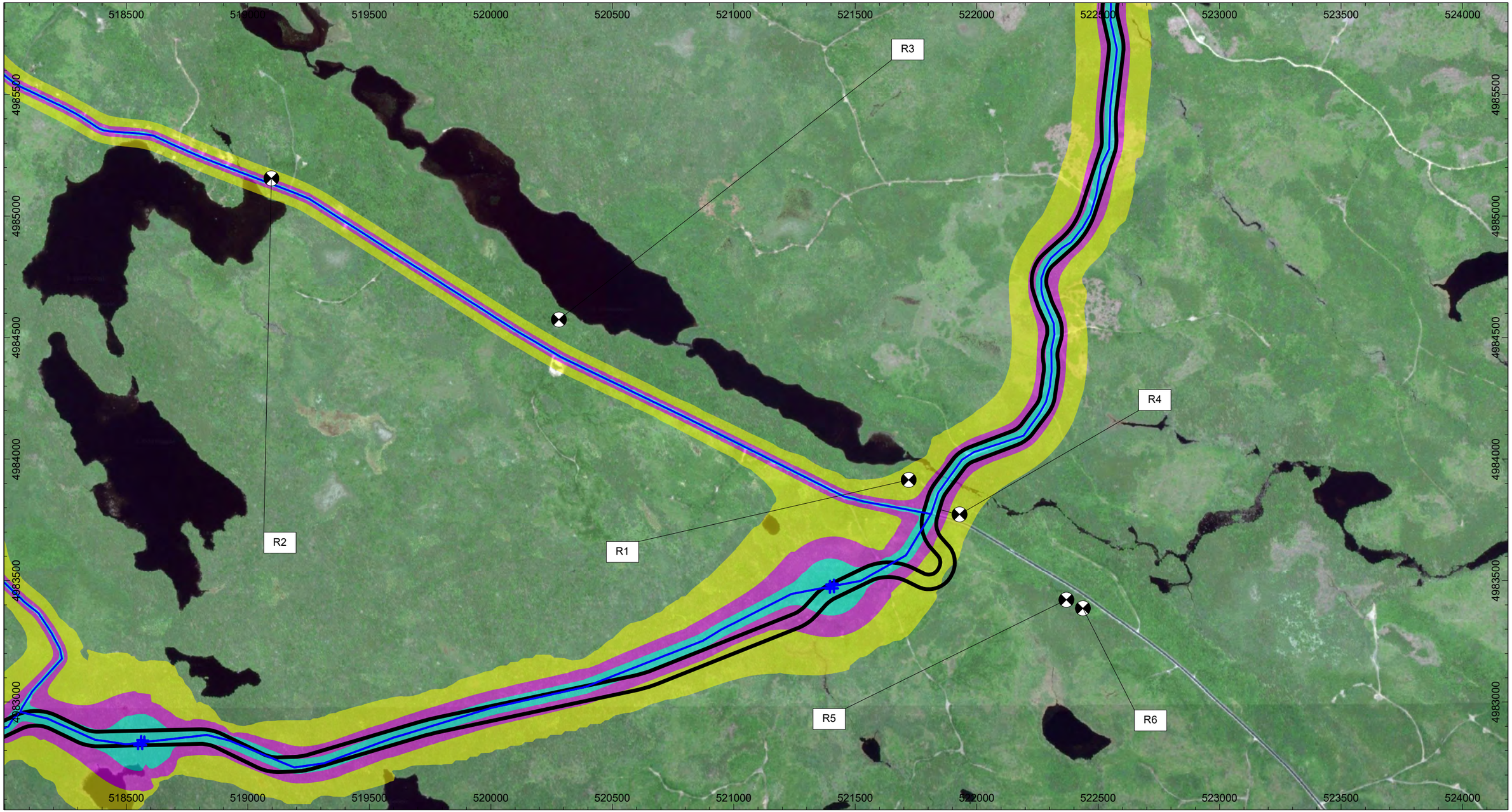
NOISE CONTOUR PLOT - R1 TO R6 ENLARGED - SCENARIO A

FIGURE 3B

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 47 dBA Ldn
> 52 dBA Ldn
> 57 dBA Ldn

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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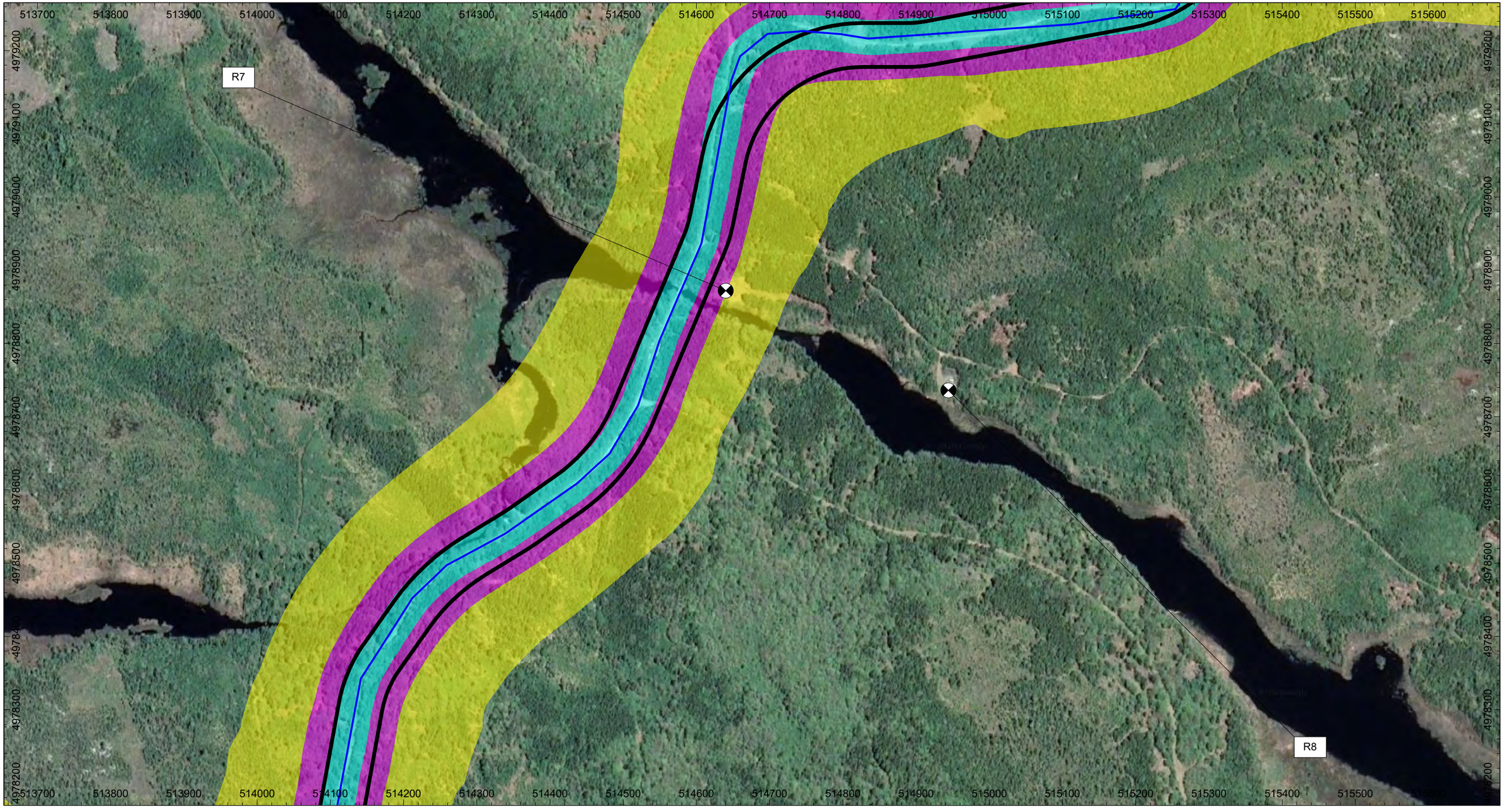
NOISE CONTOUR PLOT - R1 TO R6 ENLARGED - SCENARIO B

FIGURE 3C

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 47 dBA Ldn
> 52 dBA Ldn
> 57 dBA Ldn

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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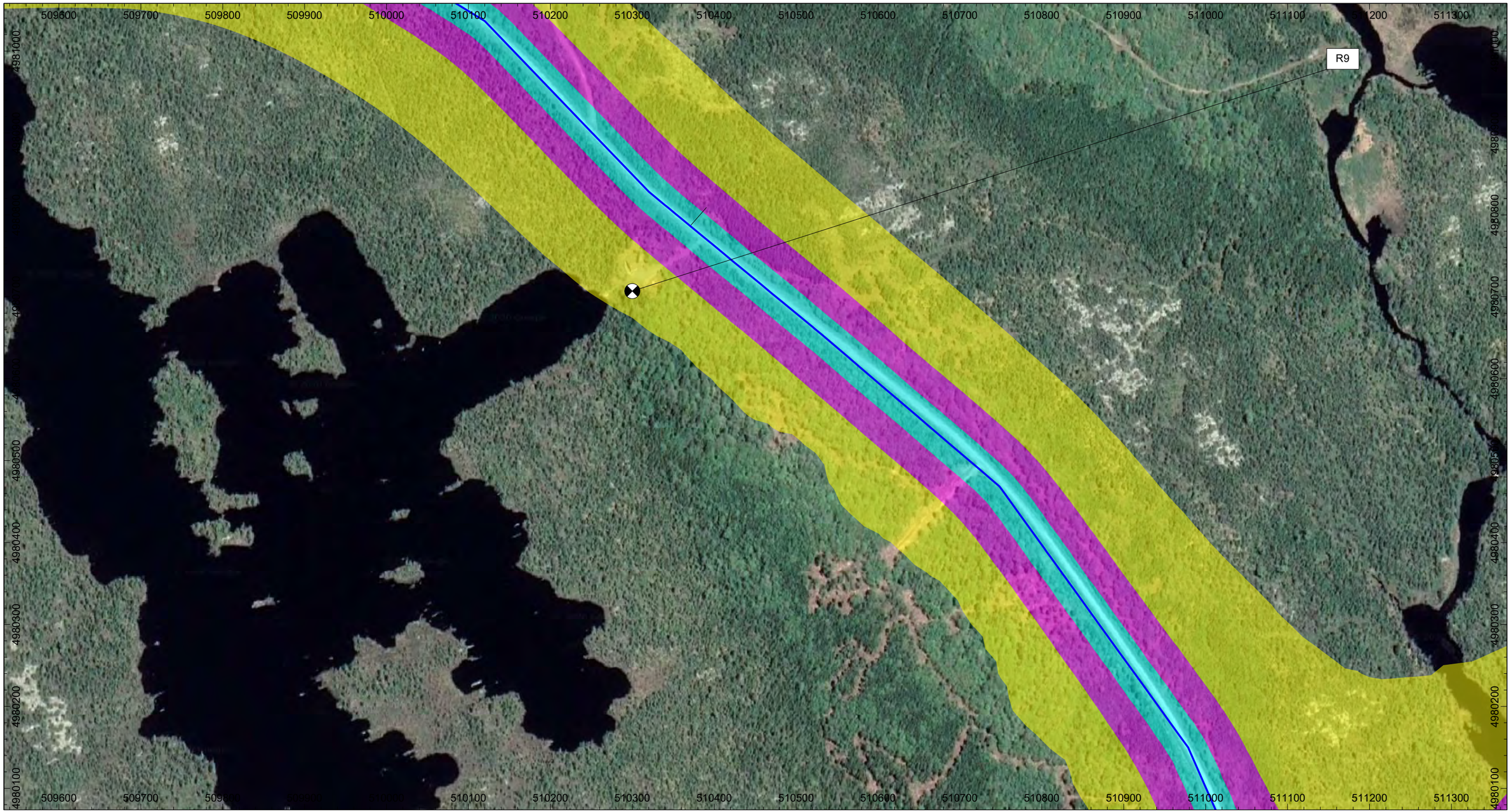
NOISE CONTOUR PLOT - R7 AND R8 ENLARGED

FIGURE 3D

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 47 dBA Ldn
> 52 dBA Ldn
> 57 dBA Ldn

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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NOISE CONTOUR PLOT - R9 ENLARGED

FIGURE 3E

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

518500 519000 519500 520000 520500 521000 521500 522000 522500 523000 523500 524000 524500 525000

4991500 4991000 4990500 4990000 4989500 4989000 4988500

Property Boundary

Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

GHD

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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20.09.2021

NOISE CONTOUR PLOT - BEAVER DAM SITE ENLARGED, OPTION A (DAY/EVENING, 1.5 m A.G.)

FIGURE 3F

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

518500 519000 519500 520000 520500 521000 521500 522000 522500 523000 523500 524000 524500 525000

4991500 4991000 4990500 4990000 4989500 4989000 4988500

Property Boundary

Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

GHD

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

088664
20.09.2021

NOISE CONTOUR PLOT - BEAVER DAM SITE ENLARGED, OPTION A (NIGHT, 1.5 m A.G.)

FIGURE 3G

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

518500 519000 519500 520000 520500 521000 521500 522000 522500 523000 523500 524000 524500 525000

4991500 4991000 4990500 4990000 4989500 4989000 4988500

Property Boundary

Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

GHD

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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NOISE CONTOUR PLOT - BEAVER DAM SITE ENLARGED, OPTION B (DAY/EVENING, 1.5 m A.G.)

FIGURE 3H

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

Property Boundary

Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

NOISE TECHNICAL REPORT
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BEAVER DAM MINE, HALIFAX, NS

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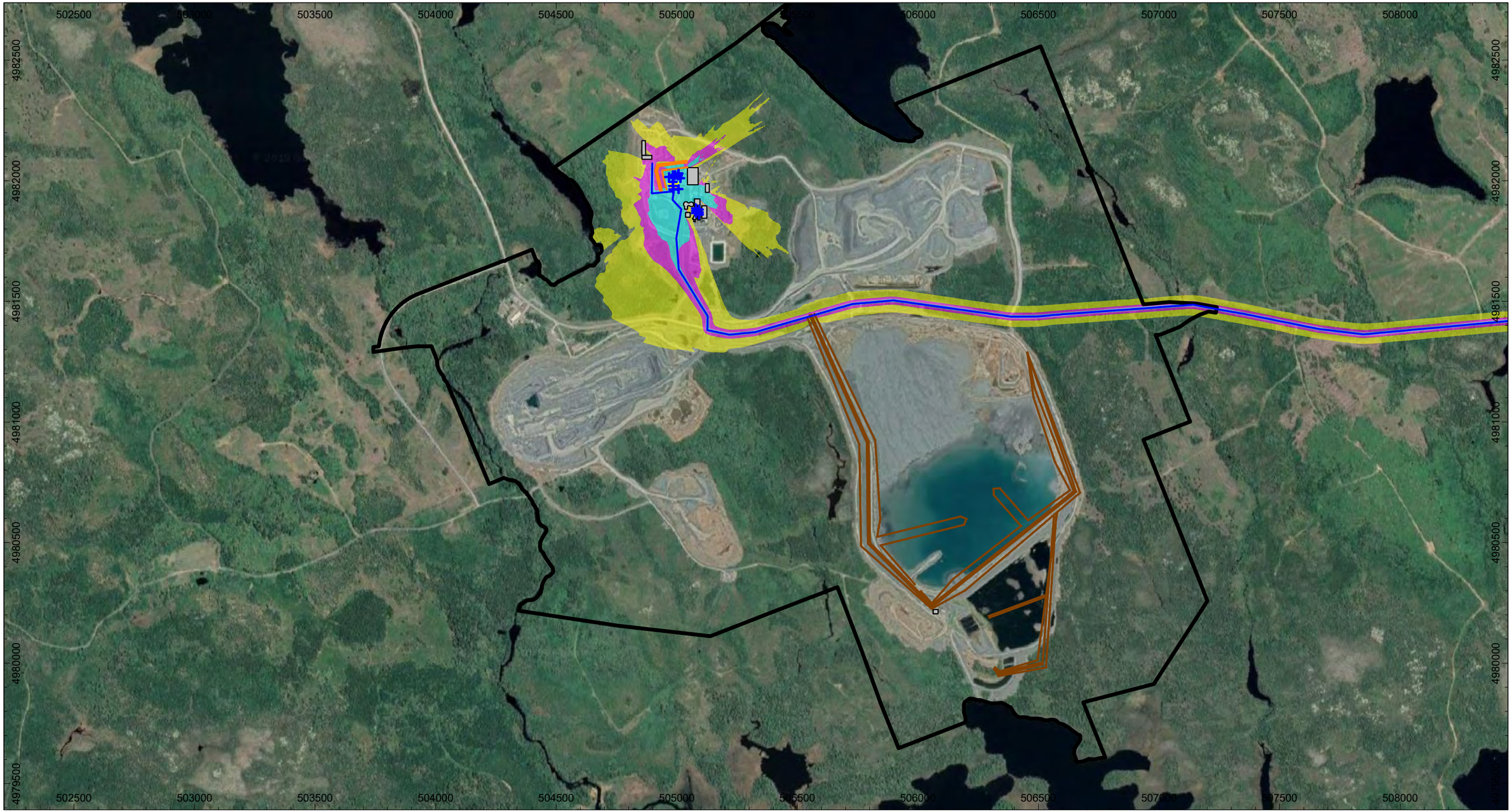
NOISE CONTOUR PLOT - BEAVER DAM SITE ENLARGED, OPTION B (NIGHT, 1.5 m A.G.)

FIGURE 3I

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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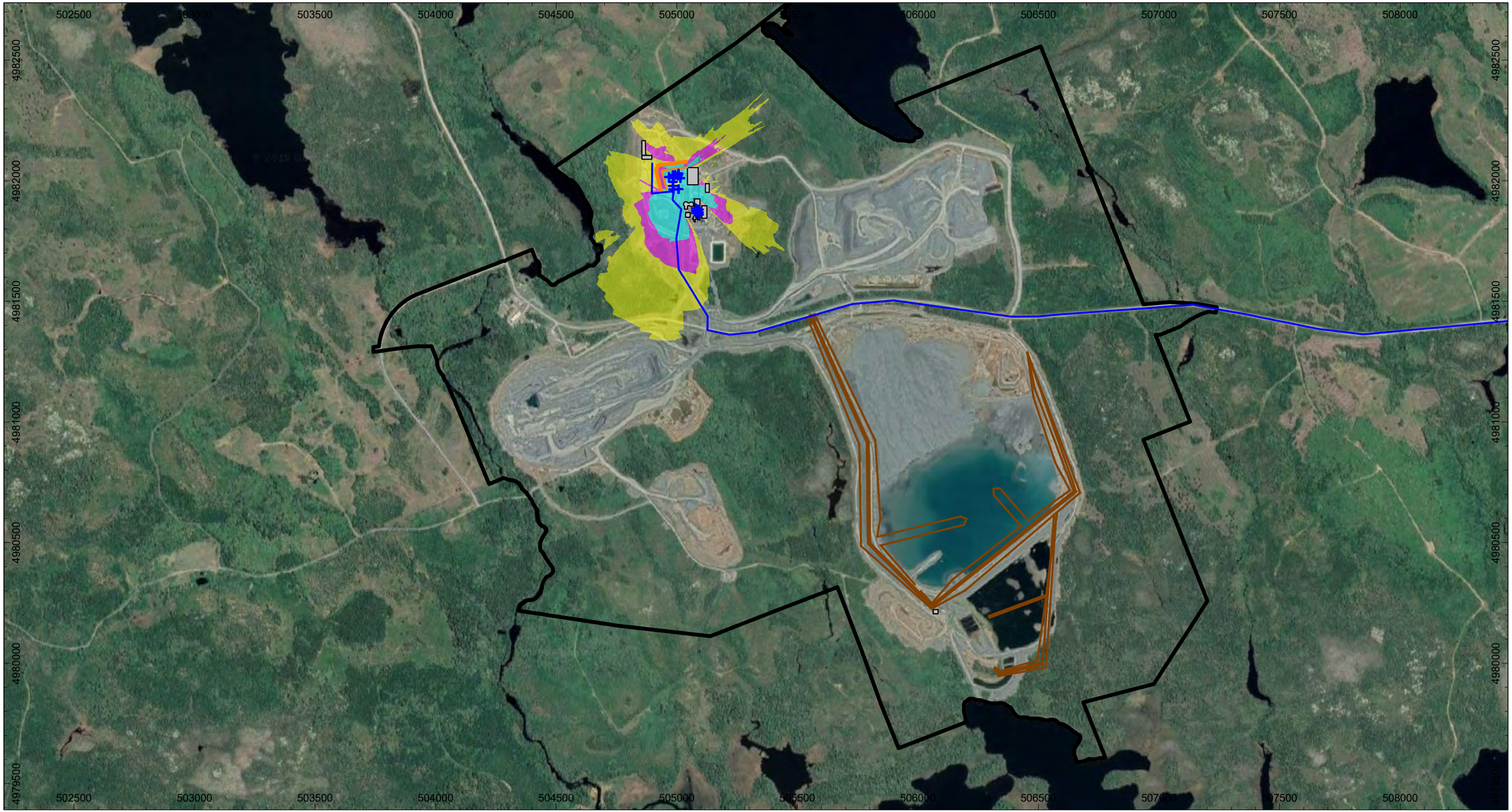
NOISE CONTOUR PLOT - TOUQUOY ENLARGED (DAY/EVENING, 1.5 m A.G.)

FIGURE 3J

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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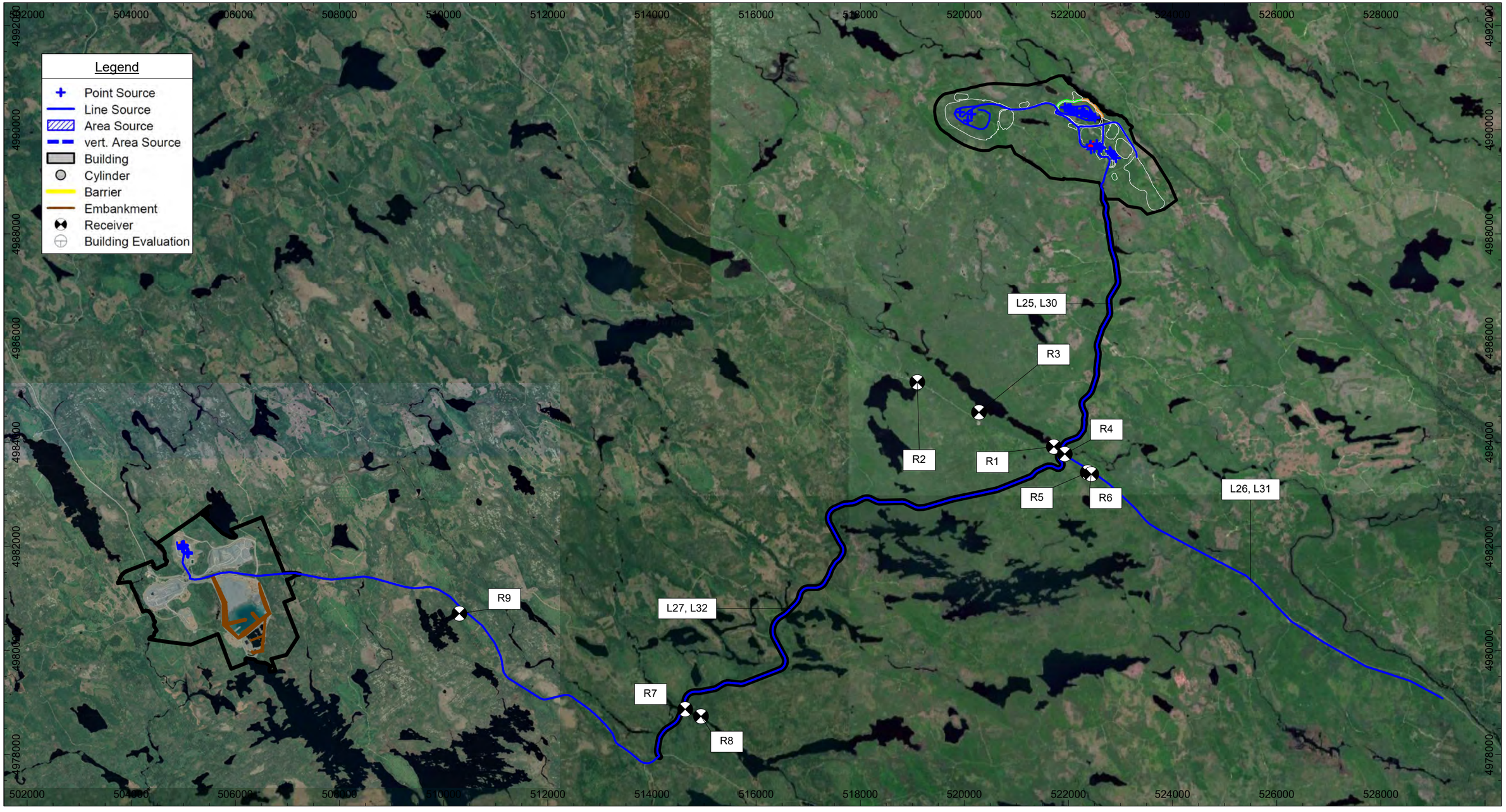
NOISE CONTOUR PLOT - TOUQUOY SITE ENLARGED (NIGHT, 1.5 m A.G.)

FIGURE 3K

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

GHD

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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SOURCE LOCATIONS - CUMULATIVE TRUCK TRAFFIC

FIGURE 4A

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

R3
R4
R2
R1
R5
R6
L26, L31
R9
L27, L32
R7
R8

Source: Google Satellite

N

- > 27 dBA
- > 31 dBA
- > 33 dBA
- > 45 dBA
- > 55 dBA
- > 60 dBA
- > 65 dBA

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

CUMULATIVE EFFECTS NOISE CONTOUR PLOT - OVERALL STUDY AREA
(DAY/EVENING, 1.5 m A.G.)

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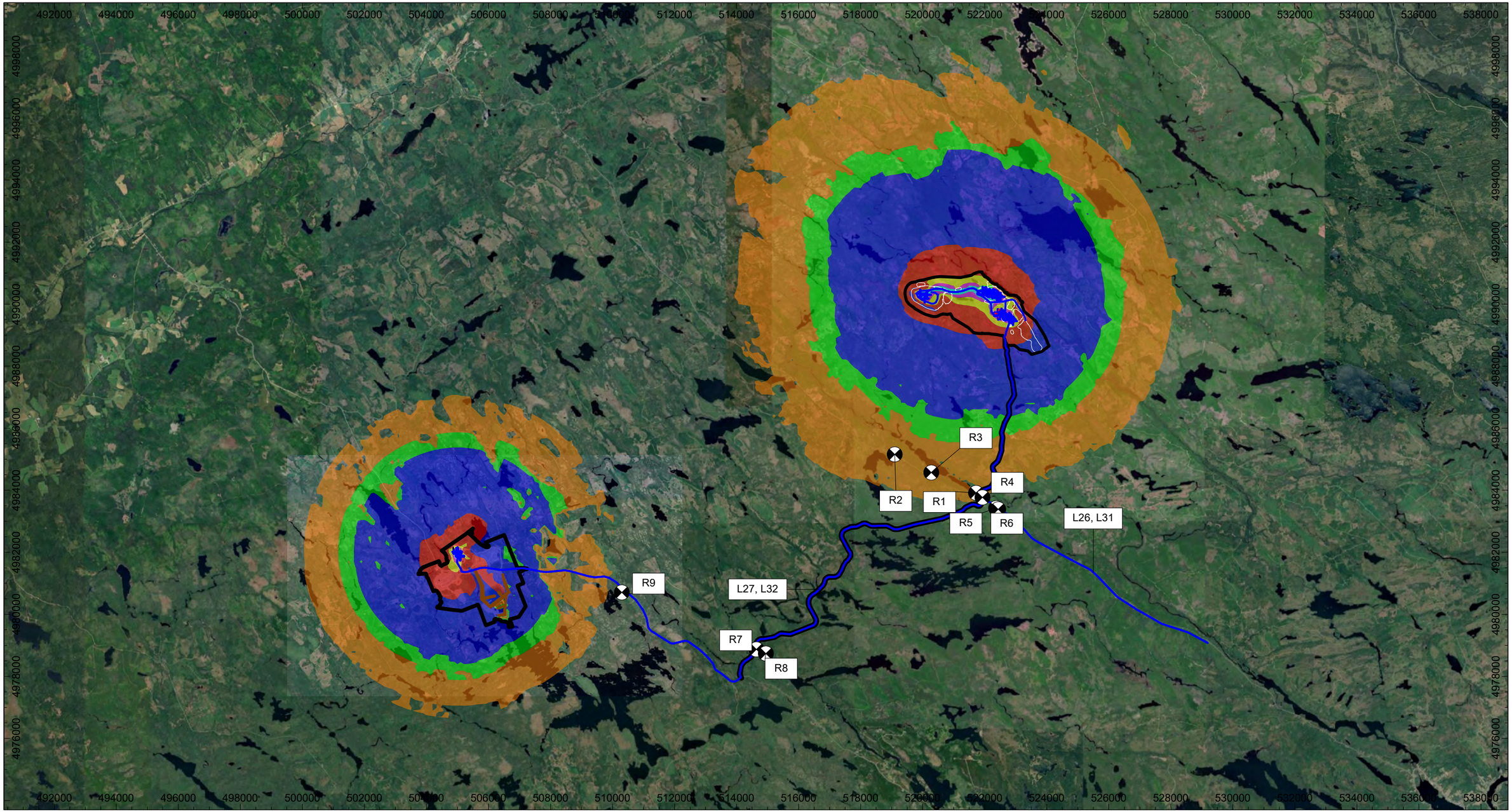
FIGURE 4B

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

- > 27 dBA
- > 31 dBA
- > 33 dBA
- > 45 dBA
- > 55 dBA
- > 60 dBA
- > 65 dBA

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

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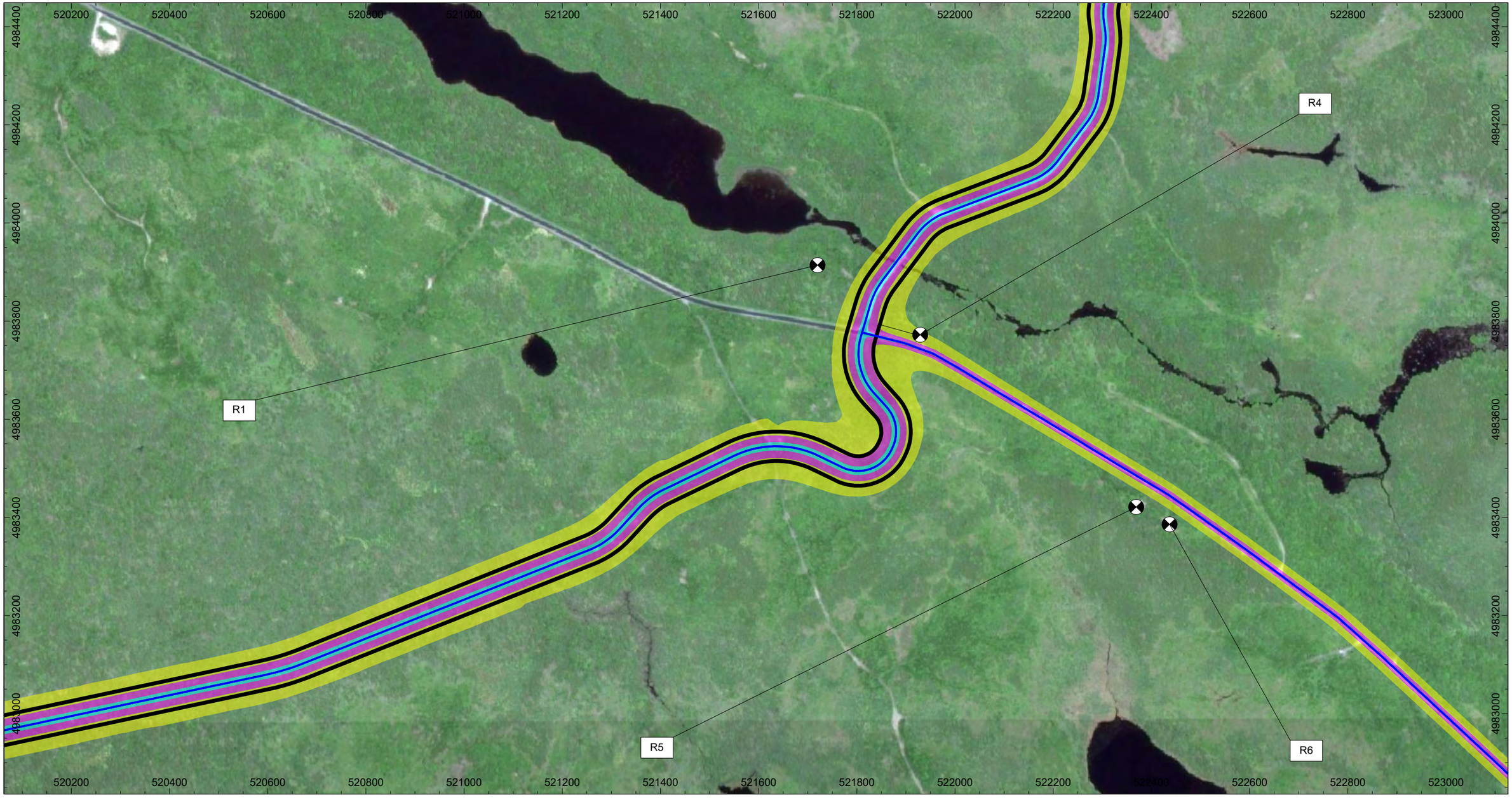
CUMULATIVE EFFECTS NOISE CONTOUR PLOT - OVERALL STUDY AREA (NIGHT, 1.5 m A.G.)

FIGURE 4C

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

CUMULATIVE EFFECTS NOISE CONTOUR PLOT - R1, R4, R5, AND R6 ENLARGED
(DAY/EVENING, 1.5 m A.G.)

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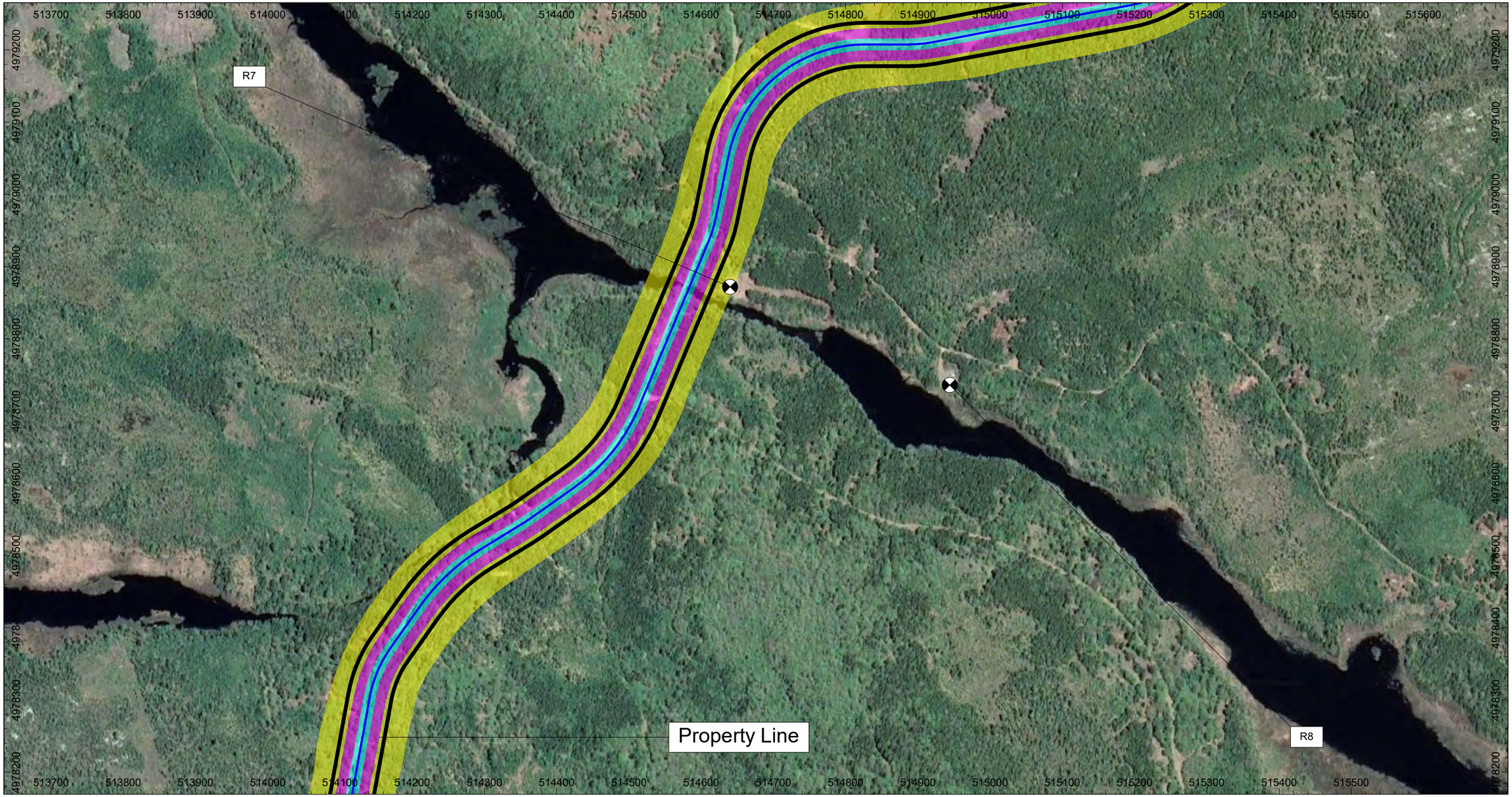
FIGURE 4D

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

CUMULATIVE EFFECTS NOISE CONTOUR PLOT - R7 AND R8 ENLARGED
(DAY/EVENING, 1.5 m A.G.)

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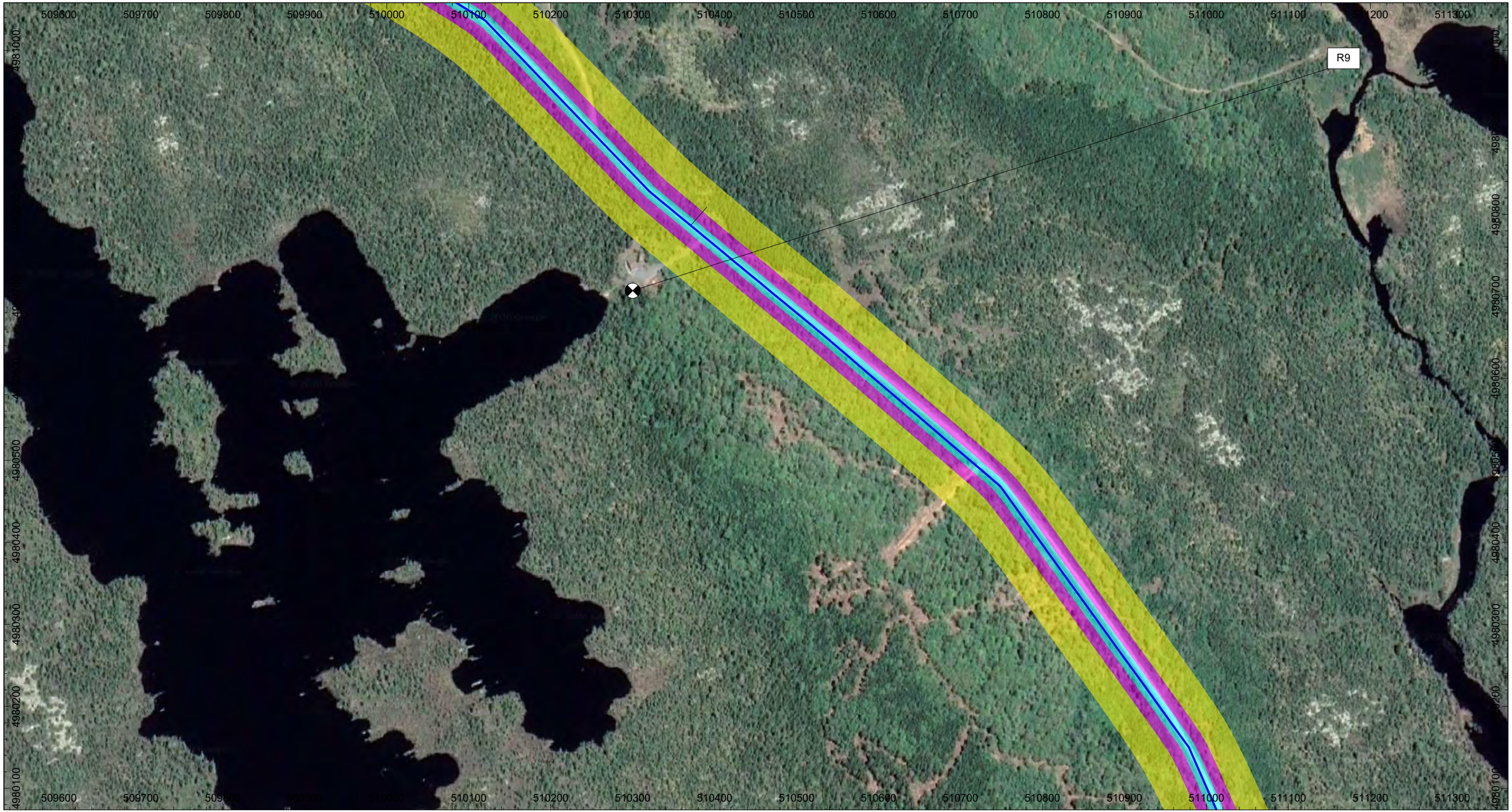
FIGURE 4E

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna



Source: Google Satellite

N

> 55 dBA
> 60 dBA
> 65 dBA

NOISE TECHNICAL REPORT
ATLANTIC GOLD
BEAVER DAM MINE, HALIFAX, NS

088664
20.09.2021

CUMULATIVE EFFECTS NOISE CONTOUR PLOT - R9 ENLARGED (DAY/EVENING, 1.5 m A.G.)

FIGURE 4F

CadnaA File: \\ghdnet\ghd\CA\Halifax\Projects\661\088664\Tech\Noise\CadnaA\088664_Beaver Dam Mine_v2021.04.cna

Appendices

Appendix A

Noise Source Summary

Table 1

Noise Source Summary
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Source Description	Sound Power Level[1] (dBA)	Source Characteristics[2]	Source Location[3]	Noise Control Measures[4]	Source Type
Touquoy Mine Site						
S41	Loader - Transport of Material	116.0	S	O	U	Point
S42	Truck - Unloading Ore	110.2	S	O	U	Point
S43	Loader - Face Shovel	120.9	S	O	U	Point
S44	Truck - Hopper Discharge	115.5	S	O	U	Point
S45	Heavy Duty Hopper	121.5	S	O	U	Point
S46	Jaw Crusher	121.1	S	O	U	Point
S47	Heavy Duty Belt Feeder Hopper	100.2	S	O	U	Point
S48	Cone Crusher	121.1	S	O	U	Point
S49	Twin Screen Plant	112.1	S	O	U	Point
S50	Tunnel Conveyor	107.8	S	O	U	Point
S51	Cone Crusher	121.1	S	O	U	Point
S52	CIL Tank - Electric Motor	97.4	S	O	U	Point
S53	CIL Tank - Electric Motor	97.4	S	O	U	Point
S54	CIL Tank - Electric Motor	97.4	S	O	U	Point
S55	CIL Tank - Electric Motor	97.4	S	O	U	Point
S56	CIL Tank - Electric Motor	97.4	S	O	U	Point
S57	CIL Tank - Electric Motor	97.4	S	O	U	Point
Haul Road						
L24	Truck - Project Traffic on Ore Transport Route	120.8	S	O	U	Line
L25	Truck - Cumulative Traffic on Ore Transport Route	120.8	S	O	U	Line
L26	Truck - Cumulative Traffic on Ore Transport Route	120.8	S	O	U	Line
L27	Truck - Cumulative Traffic on Ore Transport Route	120.8	S	O	U	Line
L30	3/4 Ton Service Truck - Cumulative Traffic	115.8	S	O	U	Line
L31	3/4 Ton Service Truck - Cumulative Traffic	115.8	S	O	U	Line
L32	3/4 Ton Service Truck - Cumulative Traffic	115.8	S	O	U	Line
Beaver Dam Mine Site						
L6	Truck - Haul Roads	120.8	S	O	U	Line
L21	Grader - Haul Roads	119.6	S	O	U	Line
L22	Grader - Haul Roads	119.6	S	O	U	Line
L23	Grader - Haul Roads	119.6	S	O	U	Line
S57	Tracked Mobile Drill	117.8	S	O	U	Point
S60	Tracked Mobile Drill	117.8	S	O	U	Point
S61	Tracked Mobile Drill	117.8	S	O	U	Point
S62	Tracked Mobile Drill	117.8	S	O	U	Point
S104	Tracked Dozer	115.1	S	O	U	Point
S105	Tracked Dozer	115.1	S	O	U	Point
S106	Tracked Dozer	115.1	S	O	U	Point
S107	3m Light Tower	96.5	S	O	U	Point
S108	Hydraulic Excavator	109.8	S	O	U	Point
S109	Wheel Loader	114.2	S	O	U	Point
S110	Dewatering Pump	110.4	S	O	U	Point
S111	Dewatering Pump	110.4	S	O	U	Point
S112	Hydraulic Excavator	109.8	S	O	U	Point
S113	3m Light Tower	96.5	S	O	U	Point
S114	Hydraulic Excavator	109.8	S	O	U	Point
S115	Wheel Loader	114.2	S	O	U	Point
S116	Hydraulic Excavator	109.8	S	O	U	Point
S117	3m Light Tower	96.5	S	O	U	Point
S118	8m Light Tower	96.5	S	O	U	Point
S119	8m Light Tower	96.5	S	O	U	Point
S120	Jaw Crusher	114.7	S	O	U	Point
S121	Wheel Loader	114.2	S	O	U	Point
S122	8m Light Tower	96.5	S	O	U	Point
S123	Truck Unloading	110.2	S	O	U	Point
S124	Wheeled Backhoe Loader	97.8	S	O	U	Point
S125	Skid Steer	109.1	S	O	U	Point
S126	Generator	118.1	S	O	U	Point
S127	Mobile_Crane	112.5	S	O	U	Point
S128	Forklift	99.5	S	O	U	Point
S129	Fuel & Lube Truck	107.5	S	O	U	Point
S130	Fuel & Lube Truck	107.5	S	O	U	Point
S131	Excavator-Mounted Breaker	124.0	S	O	U	Point

Notes:

[1] Sound Power Level (PWL) in dBA, excludes +5 dBA total penalty if applicable.
[2] Sound characteristics:
- S – Steady
- Q – Quasi-steady impulsive
- I – Impulsive
- B – Buzzing
- T – Tonal
- C – Cyclic

[3] Source location:
- O – Outside of building
- I – Inside of building

[4] Noise control measures:
- S – Silencer, acoustic louvre, muffler
- A – Acoustic lining, plenum
- B – Barrier, berm, screening
- L – Lagging
- E – Acoustic enclosure
- O – Other
- U – Uncontrolled
- AC – Administrative control

Appendix B

Point of Reception Noise Impact – Direct Effects and Cumulative Effects for Option A and Option B

Table 2a

Point of Reception Noise Impact – Direct Effects, Option A
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Source Description	Beaver Dam Mine Road (Marlborough Propert R1 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	4112 Highway 224 (Beaver Lake IR 17) R2 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	4115 Highway 224 (Cottage on Crown Land) R3 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	16896	—	—	—	14499	1.8	1.8	1.8	15555	0.6	0.6	0.6
S42	Truck - Unloading Ore	16921	—	—	—	14536	—	—	—	15586	—	—	—
S43	Loader - Face Shovel	16956	—	—	—	14574	1.4	1.4	1.4	15623	0.4	0.4	0.4
S44	Truck - Hopper Discharge	16907	—	—	—	14526	—	—	—	15574	—	—	—
S45	Heavy Duty Hopper	16878	—	—	—	14501	—	—	—	15548	—	—	—
S46	Jaw Crusher	16880	1.0	1.0	1.0	14505	3.0	3.0	3.0	15550	2.1	2.1	2.1
S47	Heavy Duty Belt Feeder Hopper	16880	—	—	—	14505	—	—	—	15551	—	—	—
S48	Cone Crusher	16870	0.3	0.3	0.3	14495	2.8	2.8	2.8	15540	0.9	0.9	0.9
S49	Twin Screen Plant	16879	—	—	—	14505	—	—	—	15550	—	—	—
S50	Tunnel Conveyor	16859	—	—	—	14486	—	—	—	15530	—	—	—
S51	Cone Crusher	16881	0.4	0.4	0.4	14508	2.8	2.8	2.8	15552	1.1	1.1	1.1
S52	CIL Tank - Electric Motor	16788	—	—	—	14429	—	—	—	15467	—	—	—
S53	CIL Tank - Electric Motor	16777	—	—	—	14419	—	—	—	15456	—	—	—
S54	CIL Tank - Electric Motor	16790	—	—	—	14432	—	—	—	15469	—	—	—
S55	CIL Tank - Electric Motor	16778	—	—	—	14421	—	—	—	15458	—	—	—
S56	CIL Tank - Electric Motor	16791	—	—	—	14434	—	—	—	15470	—	—	—
S57	CIL Tank - Electric Motor	16780	—	—	—	14424	—	—	—	15459	—	—	—
Haul Road													
L24	Truck - Project Traffic on Ore Transport Route	137	48.2	48.2	—	2306	26.4	26.4	—	1441	29.5	29.5	—
Beaver Dam Mine Site													
L21	Grader - Haul Roads	5784	5.0	5.0	5.0	5007	6.9	6.9	6.9	5441	6.5	6.5	6.5
L22	Grader - Haul Roads	6307	—	—	—	5938	—	—	—	5978	0.1	0.1	0.1
L23	Grader - Haul Roads	5786	—	—	—	5795	—	—	—	5765	0.2	0.2	0.2
L33	Truck - Haul Roads	5784	14.8	14.8	14.8	5529	15.7	15.7	15.7	5482	15.9	15.9	15.9
L6	Truck - Haul Roads	6382	23.8	23.8	23.8	5225	25.2	25.2	25.2	5731	25.3	25.3	25.3
S104	Tracked Dozer	6672	12.6	12.6	12.6	5248	15.8	15.8	15.8	5776	14.5	14.5	14.5
S105	Tracked Dozer	6580	12.8	12.8	12.8	5250	15.8	15.8	15.8	5728	14.6	14.6	14.6
S106	Tracked Dozer	6479	13.0	13.0	13.0	5116	16.1	16.1	16.1	5608	14.9	14.9	14.9
S107	3m Light Tower	6506	—	—	—	6003	—	—	—	6086	—	—	—
S108	Hydraulic Excavator	6516	4.6	4.6	4.6	6032	5.7	5.7	5.7	6107	5.5	5.5	5.5
S109	Wheel Loader	6447	9.7	9.7	9.7	6003	11.4	11.4	11.4	6057	11.3	11.3	11.3
S110	Dewatering Pump	6466	1.0	1.0	1.0	6044	1.8	1.8	1.8	6089	1.8	1.8	1.8
S111	Dewatering Pump	6451	0.9	0.9	0.9	6031	1.8	1.8	1.8	6074	1.8	1.8	1.8
S112	Hydraulic Excavator	6449	4.7	4.7	4.7	6078	5.5	5.5	5.5	6099	5.5	5.5	5.5
S113	3m Light Tower	6471	—	—	—	6102	—	—	—	6123	—	—	—
S114	Hydraulic Excavator	6438	4.7	4.7	4.7	6084	5.4	5.4	5.4	6097	5.5	5.5	5.5
S115	Wheel Loader	6417	8.2	8.2	8.2	6113	10.6	10.6	10.6	6103	11.1	11.1	11.1
S116	Hydraulic Excavator	6386	2.9	2.9	2.9	6101	5.1	5.1	5.1	6081	5.4	5.4	5.4
S117	3m Light Tower	6370	—	—	—	6120	—	—	—	6084	—	—	—
S118	8m Light Tower	5843	—	—	—	5644	—	—	—	5570	—	—	—
S119	8m Light Tower	5757	—	—	—	5579	—	—	—	5492	—	—	—
S120	Jaw Crusher	5828	11.8	11.8	11.8	5657	12.2	12.2	12.2	5569	12.5	12.5	12.5
S121	Wheel Loader	5781	12.3	12.3	12.3	5631	12.7	12.7	12.7	5533	13.0	13.0	13.0
S122	8m Light Tower	5874	—	—	—	5727	—	—	—	5631	—	—	—
S123	Truck Unloading	5830	8.7	8.7	8.7	5719	8.9	8.9	8.9	5605	9.2	9.2	9.2
S124	Wheeled Backhoe Loader	5790	—	—	—	5683	—	—	—	5566	—	—	—
S125	Skid Steer	5811	3.4	3.4	3.4	5720	3.7	3.7	3.7	5596	4.0	4.0	4.0
S126	Generator	5781	8.4	8.4	8.4	5776	8.4	8.4	8.4	5614	8.9	8.9	8.9
S127	Mobile_Crane	5769	10.3	10.3	10.3	5774	10.3	10.3	10.3	5608	10.6	10.6	10.6
S128	Forklift	5742	—	—	—	5763	—	—	—	5588	—	—	—
S129	Fuel & Lube Truck	5712	3.2	3.2	3.2	5759	3.1	3.1	3.1	5572	3.6	3.6	3.6
S130	Fuel & Lube Truck	5667	3.3	3.3	3.3	5748	3.1	3.1	3.1	5545	3.7	3.7	3.7
S59	Tracked Mobile Drill	6475	9.1	9.1	9.1	6005	11.0	11.0	11.0	6072	10.8	10.8	10.8
S60	Tracked Mobile Drill	6375	5.8	5.8	5.8	6071	9.0	9.0	9.0	6060	10.7	10.7	10.7
S61	Tracked Mobile Drill	6423	9.0	9.0	9.0	6047	10.0	10.0	10.0	6070	10.8	10.8	10.8
S62	Tracked Mobile Drill	6521	9.5	9.5	9.5	5991	11.1	11.1	11.1	6086	10.8	10.8	10.8
Total Facility Sound Level (1-hour Leq):			**48.2**	**48.2**	**26.6**		**30.4**	**30.4**	**28.2**		**31.9**	**31.9**	**28.1**

Cadna A ID	Source Description	3492 Highway 224 (Hobbs Property) R4 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	3379 Highway 224 (McLeod Property) R5 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	3373 Highway 224 (Smith Property) R6 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	17090	—	—	—	17498	—	—	—	17563	—	—	—
S42	Truck - Unloading Ore	17113	—	—	—	17519	—	—	—	17584	—	—	—
S43	Loader - Face Shovel	17148	—	—	—	17553	—	—	—	17618	—	—	—
S44	Truck - Hopper Discharge	17099	—	—	—	17504	—	—	—	17569	—	—	—
S45	Heavy Duty Hopper	17070	—	—	—	17474	—	—	—	17538	—	—	—
S46	Jaw Crusher	17071	0.8	0.8	0.8	17475	0.5	0.5	0.5	17540	0.5	0.5	0.5
S47	Heavy Duty Belt Feeder Hopper	17071	—	—	—	17475	—	—	—	17540	—	—	—
S48	Cone Crusher	17061	0.4	0.4	0.4	17465	0.3	0.3	0.3	17529	0.3	0.3	0.3
S49	Twin Screen Plant	17070	—	—	—	17473	—	—	—	17538	—	—	—
S50	Tunnel Conveyor	17050	—	—	—	17453	—	—	—	17518	—	—	—
S51	Cone Crusher	17072	0.5	0.5	0.5	17475	0.3	0.3	0.3	17540	0.3	0.3	0.3
S52	CIL Tank - Electric Motor	16979	—	—	—	17379	—	—	—	17443	—	—	—
S53	CIL Tank - Electric Motor	16967	—	—	—	17367	—	—	—	17431	—	—	—
S54	CIL Tank - Electric Motor	16980	—	—	—	17380	—	—	—	17444	—	—	—
S55	CIL Tank - Electric Motor	16968	—	—	—	17368	—	—	—	17432	—	—	—
S56	CIL Tank - Electric Motor	16981	—	—	—	17381	—	—	—	17445	—	—	—
S57	CIL Tank - Electric Motor	16969	—	—	—	17369	—	—	—	17434	—	—	—
Haul Road													
L24	Truck - Project Traffic on Ore Transport Route	112	49.8	49.8	—	660	38.3	38.3	38.3	736	36.3	36.3	36.3
Beaver Dam Mine Site													
L21	Grader - Haul Roads	5908	4.7	4.7	4.7	6247	4.7	4.7	4.7	6283	4.5	4.5	4.5
L22	Grader - Haul Roads	6432	—	—	—	6764	—	—	—	6798	—	—	—
L23	Grader - Haul Roads	5870	0.2	0.2	0.2	6129	—	—	—	6153	—	—	—
L33	Truck - Haul Roads	5908	15.0	15.0	15.0	6247	14.4	14.4	14.4	6283	14.3	14.3	14.3
L6	Truck - Haul Roads	6517	23.8	23.8	23.8	6874	23.7	23.7	23.7	6912	23.7	23.7	23.7
S104	Tracked Dozer	6867	12.2	12.2	12.2	7338	13.2	13.2	13.2	7394	13.1	13.1	13.1
S105	Tracked Dozer	6770	12.4	12.4	12.4	7232	13.4	13.4	13.4	7287	13.3	13.3	13.3
S106	Tracked Dozer	6671	12.6	12.6	12.6	7138	13.6	13.6	13.6	7194	13.5	13.5	13.5
S107	3m Light Tower	6643	—	—	—	7003	—	—	—	7042	—	—	—
S108	Hydraulic Excavator	6651	4.5	4.5	4.5	7009	3.8	3.8	3.8	7047	3.7	3.7	3.7
S109	Wheel Loader	6580	9.9	9.9	9.9	6933	9.1	9.1	9.1	6971	9.0	9.0	9.0
S110	Dewatering Pump	6597	0.9	0.9	0.9	6947	0.3	0.3	0.3	6985	0.3	0.3	0.3
S111	Dewatering Pump	6582	0.9	0.9	0.9	6932	0.3	0.3	0.3	6969	0.3	0.3	0.3
S112	Hydraulic Excavator	6577	4.6	4.6	4.6	6920	3.9	3.9	3.9	6956	3.9	3.9	3.9
S113	3m Light Tower	6598	—	—	—	6940	—	—	—	6976	—	—	—
S114	Hydraulic Excavator	6564	4.6	4.6	4.6	6905	4.0	4.0	4.0	6941	3.9	3.9	3.9
S115	Wheel Loader	6540	10.1	10.1	10.1	6874	9.3	9.3	9.3	6909	9.2	9.2	9.2
S116	Hydraulic Excavator	6507	4.7	4.7	4.7	6838	4.1	4.1	4.1	6873	4.0	4.0	4.0
S117	3m Light Tower	6488	—	—	—	6815	—	—	—	6849	—	—	—
S118	8m Light Tower	5963	—	—	—	6294	—	—	—	6329	—	—	—
S119	8m Light Tower	5876	—	—	—	6205	—	—	—	6240	—	—	—
S120	Jaw Crusher	5946	11.5	11.5	11.5	6273	10.7	10.7	10.7	6307	10.6	10.6	10.6
S121	Wheel Loader	5898	12.0	12.0	12.0	6223	11.1	11.1	11.1	6257	11.0	11.0	11.0
S122	8m Light Tower	5990	—	—	—	6312	—	—	—	6345	—	—	—
S123	Truck Unloading	5943	8.5	8.5	8.5	6260	7.8	7.8	7.8	6293	7.8	7.8	7.8
S124	Wheeled Backhoe Loader	5904	—	—	—	6221	—	—	—	6254	—	—	—
S125	Skid Steer	5923	3.1	3.1	3.1	6237	2.3	2.3	2.3	6270	2.2	2.2	2.2
S126	Generator	5886	8.0	8.0	8.0	6188	7.1	7.1	7.1	6218	7.0	7.0	7.0
S127	Mobile_Crane	5874	10.0	10.0	10.0	6174	9.5	9.5	9.5	6205	9.4	9.4	9.4
S128	Forklift	5845	—	—	—	6144	—	—	—	6174	—	—	—
S129	Fuel & Lube Truck	5814	2.9	2.9	2.9	6109	2.1	2.1	2.1	6139	2.0	2.0	2.0
S130	Fuel & Lube Truck	5766	3.1	3.1	3.1	6057	2.3	2.3	2.3	6086	2.2	2.2	2.2
S59	Tracked Mobile Drill	6609	9.3	9.3	9.3	6966	8.3	8.3	8.3	7004	8.2	8.2	8.2
S60	Tracked Mobile Drill	6497	9.6	9.6	9.6	6832	8.6	8.6	8.6	6867	8.5	8.5	8.5
S61	Tracked Mobile Drill	6551	9.4	9.4	9.4	6895	8.4	8.4	8.4	6932	8.3	8.3	8.3
S62	Tracked Mobile Drill	6659	9.1	9.1	9.1	7023	8.1	8.1	8.1	7063	8.0	8.0	8.0
Total Facility Sound Level (1-hour Leq):			**50.5**	**50.5**	**26.7**		**39.7**	**39.7**	**26.5**		**37.9**	**37.9**	**26.4**

Cadna A ID	Source Description	Tangier River (Deepwood Estates Property) R7 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	Tangier River (Musqudoboit Lumber Co Ltd. Property/John D R8 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	5579 Mooseland Road (Lloy Property) R9 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	10249	7.9	7.9	7.9	10581	7.3	7.3	7.3	5564	14.1	14.1	14.1
S42	Truck - Unloading Ore	10223	2.2	2.2	2.2	10554	1.7	1.7	1.7	5545	5.6	5.6	5.6
S43	Loader - Face Shovel	10242	6.7	6.7	6.7	10573	6.2	6.2	6.2	5567	12.0	12.0	12.0
S44	Truck - Hopper Discharge	10195	3.2	3.2	3.2	10526	2.7	2.7	2.7	5520	7.7	7.7	7.7
S45	Heavy Duty Hopper	10152	5.8	5.8	5.8	10483	4.9	4.9	4.9	5479	20.2	20.2	20.2
S46	Jaw Crusher	10147	8.0	8.0	8.0	10478	7.6	7.6	7.6	5475	17.6	17.6	17.6
S47	Heavy Duty Belt Feeder Hopper	10146	—	—	—	10477	—	—	—	5474	—	—	—
S48	Cone Crusher	10135	7.8	7.8	7.8	10466	7.3	7.3	7.3	5464	17.3	17.3	17.3
S49	Twin Screen Plant	10140	—	—	—	10471	—	—	—	5469	9.1	9.1	9.1
S50	Tunnel Conveyor	10121	—	—	—	10452	—	—	—	5450	—	—	—
S51	Cone Crusher	10139	7.7	7.7	7.7	10470	7.3	7.3	7.3	5469	17.3	17.3	17.3
S52	CIL Tank - Electric Motor	10005	—	—	—	10335	—	—	—	5341	—	—	—
S53	CIL Tank - Electric Motor	9991	—	—	—	10322	—	—	—	5328	—	—	—
S54	CIL Tank - Electric Motor	10002	—	—	—	10332	—	—	—	5340	—	—	—
S55	CIL Tank - Electric Motor	9988	—	—	—	10318	—	—	—	5326	—	—	—
S56	CIL Tank - Electric Motor	9999	—	—	—	10330	—	—	—	5338	—	—	—
S57	CIL Tank - Electric Motor	9985	—	—	—	10316	—	—	—	5324	—	—	—
Haul Road													
L24	Truck - Project Traffic on Ore Transport Route	56	53.3	53.3	53.3	389	42.1	42.1	42.1	106	49.7	49.7	49.7
Beaver Dam Mine Site													
L21	Grader - Haul Roads	12465	—	—	—	12462	—	—	—	13496	—	—	—
L22	Grader - Haul Roads	13617	—	—	—	13573	—	—	—	15123	—	—	—
L23	Grader - Haul Roads	13493	—	—	—	13440	—	—	—	15127	—	—	—
L33	Truck - Haul Roads	13233	6.2	6.2	6.2	13173	6.5	6.5	6.5	14957	5.3	5.3	5.3
L6	Truck - Haul Roads	12628	15.7	15.7	15.7	12626	16.4	16.4	16.4	13652	15.6	15.6	15.6
S104	Tracked Dozer	12623	3.6	3.6	3.6	12624	3.6	3.6	3.6	13612	2.5	2.5	2.5
S105	Tracked Dozer	12682	3.6	3.6	3.6	12677	3.6	3.6	3.6	13740	2.4	2.4	2.4
S106	Tracked Dozer	12541	3.7	3.7	3.7	12536	3.7	3.7	3.7	13604	2.6	2.6	2.6
S107	3m Light Tower	13684	—	—	—	13640	—	—	—	15196	—	—	—
S108	Hydraulic Excavator	13716	—	—	—	13671	—	—	—	15237	—	—	—
S109	Wheel Loader	13692	—	—	—	13644	—	—	—	15244	—	—	—
S110	Dewatering Pump	13735	—	—	—	13686	—	—	—	15295	—	—	—
S111	Dewatering Pump	13722	—	—	—	13673	—	—	—	15285	—	—	—
S112	Hydraulic Excavator	13773	—	—	—	13722	—	—	—	15363	—	—	—
S113	3m Light Tower	13797	—	—	—	13746	—	—	—	15386	—	—	—
S114	Hydraulic Excavator	13781	—	—	—	13729	—	—	—	15382	—	—	—
S115	Wheel Loader	13813	—	—	—	13759	—	—	—	15444	—	—	—
S116	Hydraulic Excavator	13802	—	—	—	13746	—	—	—	15447	—	—	—
S117	3m Light Tower	13822	—	—	—	13765	—	—	—	15488	—	—	—
S118	8m Light Tower	13347	—	—	—	13284	—	—	—	15103	—	—	—
S119	8m Light Tower	13281	—	—	—	13217	—	—	—	15059	—	—	—
S120	Jaw Crusher	13359	—	—	—	13295	—	—	—	15131	—	—	—
S121	Wheel Loader	13333	—	—	—	13267	0.0	0.0	0.0	15121	—	—	—
S122	8m Light Tower	13429	—	—	—	13364	—	—	—	15207	—	—	—
S123	Truck Unloading	13420	—	—	—	13353	—	—	—	15222	—	—	—
S124	Wheeled Backhoe Loader	13383	—	—	—	13316	—	—	—	15192	—	—	—
S125	Skid Steer	13419	—	—	—	13351	—	—	—	15233	—	—	—
S126	Generator	13470	—	—	—	13398	—	—	—	15331	—	—	—
S127	Mobile_Crane	13467	1.1	1.1	1.1	13395	1.1	1.1	1.1	15335	—	—	—
S128	Forklift	13454	—	—	—	13381	—	—	—	15333	—	—	—
S129	Fuel & Lube Truck	13447	—	—	—	13373	—	—	—	15342	—	—	—
S130	Fuel & Lube Truck	13431	—	—	—	13355	—	—	—	15348	—	—	—
S59	Tracked Mobile Drill	13691	—	—	—	13645	—	—	—	15225	—	—	—
S60	Tracked Mobile Drill	13772	—	—	—	13717	—	—	—	15408	—	—	—
S61	Tracked Mobile Drill	13742	—	—	—	13691	—	—	—	15333	—	—	—
S62	Tracked Mobile Drill	13669	—	—	—	13625	—	—	—	15164	—	—	—
Total Facility Sound Level (1-hour Leq):			**53.8**	**53.8**	**19.4**		**42.2**	**42.2**	**19.7**		**49.8**	**49.8**	**25.8**

Note:

[1] Sound level at the receptor was calculated using Cadna A acoustical modelling software.

Table 2b

Point of Reception Noise Impact – Direct Effects, Option B
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Source Description	Beaver Dam Mine Road (Marlborough Propert R1 Distance (m)	R1 Partial Sound Levels¹ (dBA) Day 7am–7pm	R1 Evening 7pm–11pm	R1 Night 11pm–7am	4112 Highway 224 (Beaver Lake IR 17) R2 Distance (m)	R2 Partial Sound Levels¹ (dBA) Day 7am–7pm	R2 Evening 7pm–11pm	R2 Night 11pm–7am	4115 Highway 224 (Cottage on Crown Land) R3 Distance (m)	R3 Partial Sound Levels¹ (dBA) Day 7am–7pm	R3 Evening 7pm–11pm	R3 Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	16896	—	—	—	14499	1.8	1.8	1.8	15555	0.6	0.6	0.6
S42	Truck - Unloading Ore	16921	—	—	—	14536	—	—	—	15586	—	—	—
S43	Loader - Face Shovel	16956	—	—	—	14574	1.4	1.4	1.4	15623	0.4	0.4	0.4
S44	Truck - Hopper Discharge	16907	—	—	—	14526	—	—	—	15574	—	—	—
S45	Heavy Duty Hopper	16878	—	—	—	14501	—	—	—	15548	—	—	—
S46	Jaw Crusher	16880	1.0	1.0	1.0	14505	3.0	3.0	3.0	15550	2.1	2.1	2.1
S47	Heavy Duty Belt Feeder Hopper	16880	—	—	—	14505	—	—	—	15551	—	—	—
S48	Cone Crusher	16870	0.3	0.3	0.3	14495	2.8	2.8	2.8	15540	0.9	0.9	0.9
S49	Twin Screen Plant	16879	—	—	—	14505	—	—	—	15550	—	—	—
S50	Tunnel Conveyor	16859	—	—	—	14486	—	—	—	15530	—	—	—
S51	Cone Crusher	16881	0.4	0.4	0.4	14508	2.8	2.8	2.8	15552	1.1	1.1	1.1
S52	CIL Tank - Electric Motor	16788	—	—	—	14429	—	—	—	15467	—	—	—
S53	CIL Tank - Electric Motor	16777	—	—	—	14419	—	—	—	15456	—	—	—
S54	CIL Tank - Electric Motor	16790	—	—	—	14432	—	—	—	15469	—	—	—
S55	CIL Tank - Electric Motor	16778	—	—	—	14421	—	—	—	15458	—	—	—
S56	CIL Tank - Electric Motor	16791	—	—	—	14434	—	—	—	15470	—	—	—
S57	CIL Tank - Electric Motor	16780	—	—	—	14424	—	—	—	15459	—	—	—
Haul Road													
L24	Truck - Project Traffic on Ore Transport Route	137	48.2	48.2	—	2306	26.4	26.4	—	1441	29.5	29.5	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	6382	23.8	23.8	23.8	5225	25.2	25.2	25.2	5731	25.3	25.3	25.3
L21	Grader - Haul Roads	5784	5.0	5.0	5.0	5007	6.9	6.9	6.9	5441	6.5	6.5	6.5
L22	Grader - Haul Roads	6307	—	—	—	5938	—	—	—	5978	0.1	0.1	0.1
L23	Grader - Haul Roads	5786	—	—	—	5795	—	—	—	5765	0.2	0.2	0.2
L33	Truck - Haul Roads	5784	14.8	14.8	14.8	5529	15.7	15.7	15.7	5482	15.9	15.9	15.9
S59	Tracked Mobile Drill	6475	9.1	9.1	9.1	6005	11.0	11.0	11.0	6072	10.8	10.8	10.8
S60	Tracked Mobile Drill	6375	5.8	5.8	5.8	6071	9.0	9.0	9.0	6060	10.7	10.7	10.7
S61	Tracked Mobile Drill	6423	9.0	9.0	9.0	6047	10.0	10.0	10.0	6070	10.8	10.8	10.8
S62	Tracked Mobile Drill	6521	9.5	9.5	9.5	5991	11.1	11.1	11.1	6086	10.8	10.8	10.8
S104	Tracked Dozer	6672	12.6	12.6	12.6	5248	15.8	15.8	15.8	5776	14.5	14.5	14.5
S105	Tracked Dozer	6580	12.8	12.8	12.8	5250	15.8	15.8	15.8	5728	14.6	14.6	14.6
S106	Tracked Dozer	6479	13.0	13.0	13.0	5116	16.1	16.1	16.1	5608	14.9	14.9	14.9
S107	3m Light Tower	6506	—	—	—	6003	—	—	—	6086	—	—	—
S108	Hydraulic Excavator	6516	4.6	4.6	4.6	6032	5.7	5.7	5.7	6107	5.5	5.5	5.5
S109	Wheel Loader	6447	9.7	9.7	9.7	6003	11.4	11.4	11.4	6057	11.3	11.3	11.3
S110	Dewatering Pump	6466	1.0	1.0	1.0	6044	1.8	1.8	1.8	6089	1.8	1.8	1.8
S111	Dewatering Pump	6451	0.9	0.9	0.9	6031	1.8	1.8	1.8	6074	1.8	1.8	1.8
S112	Hydraulic Excavator	6449	4.7	4.7	4.7	6078	5.5	5.5	5.5	6099	5.5	5.5	5.5
S113	3m Light Tower	6471	—	—	—	6102	—	—	—	6123	—	—	—
S114	Hydraulic Excavator	6438	4.7	4.7	4.7	6084	5.4	5.4	5.4	6097	5.5	5.5	5.5
S115	Wheel Loader	6417	8.2	8.2	8.2	6113	10.6	10.6	10.6	6103	11.1	11.1	11.1
S116	Hydraulic Excavator	6386	2.9	2.9	2.9	6101	5.1	5.1	5.1	6081	5.4	5.4	5.4
S117	3m Light Tower	6370	—	—	—	6120	—	—	—	6084	—	—	—
S118	8m Light Tower	5843	—	—	—	5644	—	—	—	5570	—	—	—
S119	8m Light Tower	5757	—	—	—	5579	—	—	—	5492	—	—	—
S121	Wheel Loader	5781	12.3	12.3	12.3	5631	12.7	12.7	12.7	5533	13.0	13.0	13.0
S122	8m Light Tower	5874	—	—	—	5727	—	—	—	5631	—	—	—
S123	Truck Unloading	5830	8.7	8.7	8.7	5719	8.9	8.9	8.9	5605	9.2	9.2	9.2
S124	Wheeled Backhoe Loader	5790	—	—	—	5683	—	—	—	5566	—	—	—
S125	Skid Steer	5811	3.4	3.4	3.4	5720	3.7	3.7	3.7	5596	4.0	4.0	4.0
S126	Generator	5781	8.4	8.4	8.4	5776	8.4	8.4	8.4	5614	8.9	8.9	8.9
S127	Mobile_Crane	5769	10.3	10.3	10.3	5774	10.3	10.3	10.3	5608	10.6	10.6	10.6
S128	Forklift	5742	—	—	—	5763	—	—	—	5588	—	—	—
S129	Fuel & Lube Truck	5712	3.2	3.2	3.2	5759	3.1	3.1	3.1	5572	3.6	3.6	3.6
S130	Fuel & Lube Truck	5667	3.3	3.3	3.3	5748	3.1	3.1	3.1	5545	3.7	3.7	3.7
S131	Excavator-Mounted Breaker	6372	13.0	13.0	13.0	6019	14.1	14.1	14.1	6030	15.9	15.9	15.9
Total Facility Sound Level (1-hour Leq):			**48.2**	**48.2**	**26.7**		**30.4**	**30.4**	**28.2**		**31.8**	**31.8**	**28.2**

Cadna A ID	Source Description	3492 Highway 224 (Hobbs Property) R4 Distance (m)	R4 Partial Sound Levels¹ (dBA) Day 7am–7pm	R4 Evening 7pm–11pm	R4 Night 11pm–7am	3379 Highway 224 (McLeod Property) R5 Distance (m)	R5 Partial Sound Levels¹ (dBA) Day 7am–7pm	R5 Evening 7pm–11pm	R5 Night 11pm–7am	3373 Highway 224 (Smith Property) R6 Distance (m)	R6 Partial Sound Levels¹ (dBA) Day 7am–7pm	R6 Evening 7pm–11pm	R6 Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	17090	—	—	—	17498	—	—	—	17563	—	—	—
S42	Truck - Unloading Ore	17113	—	—	—	17519	—	—	—	17584	—	—	—
S43	Loader - Face Shovel	17148	—	—	—	17553	—	—	—	17618	—	—	—
S44	Truck - Hopper Discharge	17099	—	—	—	17504	—	—	—	17569	—	—	—
S45	Heavy Duty Hopper	17070	—	—	—	17474	—	—	—	17538	—	—	—
S46	Jaw Crusher	17071	0.8	0.8	0.8	17475	0.5	0.5	0.5	17540	0.5	0.5	0.5
S47	Heavy Duty Belt Feeder Hopper	17071	—	—	—	17475	—	—	—	17540	—	—	—
S48	Cone Crusher	17061	0.4	0.4	0.4	17465	0.3	0.3	0.3	17529	0.3	0.3	0.3
S49	Twin Screen Plant	17070	—	—	—	17473	—	—	—	17538	—	—	—
S50	Tunnel Conveyor	17050	—	—	—	17453	—	—	—	17518	—	—	—
S51	Cone Crusher	17072	0.5	0.5	0.5	17475	0.3	0.3	0.3	17540	0.3	0.3	0.3
S52	CIL Tank - Electric Motor	16979	—	—	—	17379	—	—	—	17443	—	—	—
S53	CIL Tank - Electric Motor	16967	—	—	—	17367	—	—	—	17431	—	—	—
S54	CIL Tank - Electric Motor	16980	—	—	—	17380	—	—	—	17444	—	—	—
S55	CIL Tank - Electric Motor	16968	—	—	—	17368	—	—	—	17432	—	—	—
S56	CIL Tank - Electric Motor	16981	—	—	—	17381	—	—	—	17445	—	—	—
S57	CIL Tank - Electric Motor	16969	—	—	—	17369	—	—	—	17434	—	—	—
Haul Road													
L24	Truck - Project Traffic on Ore Transport Route	112	49.8	49.8	—	660	38.3	38.3	—	736	36.3	36.3	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	6517	23.8	23.8	23.8	6874	23.7	23.7	23.7	6912	23.7	23.7	23.7
L21	Grader - Haul Roads	5908	4.7	4.7	4.7	6247	4.7	4.7	4.7	6283	4.5	4.5	4.5
L22	Grader - Haul Roads	6432	—	—	—	6764	—	—	—	6798	—	—	—
L23	Grader - Haul Roads	5870	0.2	0.2	0.2	6129	—	—	—	6153	—	—	—
L33	Truck - Haul Roads	5908	15.0	15.0	15.0	6247	14.4	14.4	14.4	6283	14.3	14.3	14.3
S59	Tracked Mobile Drill	6609	9.3	9.3	9.3	6966	8.3	8.3	8.3	7004	8.2	8.2	8.2
S60	Tracked Mobile Drill	6497	9.6	9.6	9.6	6832	8.6	8.6	8.6	6867	8.5	8.5	8.5
S61	Tracked Mobile Drill	6551	9.4	9.4	9.4	6895	8.4	8.4	8.4	6932	8.3	8.3	8.3
S62	Tracked Mobile Drill	6659	9.1	9.1	9.1	7023	8.1	8.1	8.1	7063	8.0	8.0	8.0
S104	Tracked Dozer	6867	12.2	12.2	12.2	7338	13.2	13.2	13.2	7394	13.1	13.1	13.1
S105	Tracked Dozer	6770	12.4	12.4	12.4	7232	13.4	13.4	13.4	7287	13.3	13.3	13.3
S106	Tracked Dozer	6671	12.6	12.6	12.6	7138	13.6	13.6	13.6	7194	13.5	13.5	13.5
S107	3m Light Tower	6643	—	—	—	7003	—	—	—	7042	—	—	—
S108	Hydraulic Excavator	6651	4.5	4.5	4.5	7009	3.8	3.8	3.8	7047	3.7	3.7	3.7
S109	Wheel Loader	6580	9.9	9.9	9.9	6933	9.1	9.1	9.1	6971	9.0	9.0	9.0
S110	Dewatering Pump	6597	0.9	0.9	0.9	6947	0.3	0.3	0.3	6985	0.3	0.3	0.3
S111	Dewatering Pump	6582	0.9	0.9	0.9	6932	0.3	0.3	0.3	6969	0.3	0.3	0.3
S112	Hydraulic Excavator	6577	4.6	4.6	4.6	6920	3.9	3.9	3.9	6956	3.9	3.9	3.9
S113	3m Light Tower	6598	—	—	—	6940	—	—	—	6976	—	—	—
S114	Hydraulic Excavator	6564	4.6	4.6	4.6	6905	4.0	4.0	4.0	6941	3.9	3.9	3.9
S115	Wheel Loader	6540	10.1	10.1	10.1	6874	9.3	9.3	9.3	6909	9.2	9.2	9.2
S116	Hydraulic Excavator	6507	4.7	4.7	4.7	6838	4.1	4.1	4.1	6873	4.0	4.0	4.0
S117	3m Light Tower	6488	—	—	—	6815	—	—	—	6849	—	—	—
S118	8m Light Tower	5963	—	—	—	6294	—	—	—	6329	—	—	—
S119	8m Light Tower	5876	—	—	—	6205	—	—	—	6240	—	—	—
S121	Wheel Loader	5898	12.0	12.0	12.0	6223	11.1	11.1	11.1	6257	11.0	11.0	11.0
S122	8m Light Tower	5990	—	—	—	6312	—	—	—	6345	—	—	—
S123	Truck Unloading	5943	8.5	8.5	8.5	6260	7.8	7.8	7.8	6293	7.8	7.8	7.8
S124	Wheeled Backhoe Loader	5904	—	—	—	6221	—	—	—	6254	—	—	—
S125	Skid Steer	5923	3.1	3.1	3.1	6237	2.3	2.3	2.3	6270	2.2	2.2	2.2
S126	Generator	5886	8.0	8.0	8.0	6188	7.1	7.1	7.1	6218	7.0	7.0	7.0
S127	Mobile_Crane	5874	10.0	10.0	10.0	6174	9.5	9.5	9.5	6205	9.4	9.4	9.4
S128	Forklift	5845	—	—	—	6144	—	—	—	6174	—	—	—
S129	Fuel & Lube Truck	5814	2.9	2.9	2.9	6109	2.1	2.1	2.1	6139	2.0	2.0	2.0
S130	Fuel & Lube Truck	5766	3.1	3.1	3.1	6057	2.3	2.3	2.3	6086	2.2	2.2	2.2
S131	Excavator-Mounted Breaker	6499	14.6	14.6	14.6	6841	13.7	13.7	13.7	6877	13.7	13.7	13.7
Total Facility Sound Level (1-hour Leq):			**50.5**	**50.5**	**26.8**		**39.7**	**39.7**	**26.6**		**37.9**	**37.9**	**26.6**

Cadna A ID	Source Description	Tangier River (Deepwood Estates Property) R7 Distance (m)	R7 Partial Sound Levels¹ (dBA) Day 7am–7pm	R7 Evening 7pm–11pm	R7 Night 11pm–7am	Tangier River (Musqudoboit Lumber Co Ltd. Property/John D R8 Distance (m)	R8 Partial Sound Levels¹ (dBA) Day 7am–7pm	R8 Evening 7pm–11pm	R8 Night 11pm–7am	5579 Mooseland Road (Lloy Property) R9 Distance (m)	R9 Partial Sound Levels¹ (dBA) Day 7am–7pm	R9 Evening 7pm–11pm	R9 Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	10249	7.9	7.9	7.9	10581	7.3	7.3	7.3	5564	14.1	14.1	14.1
S42	Truck - Unloading Ore	10223	2.2	2.2	2.2	10554	1.7	1.7	1.7	5545	5.6	5.6	5.6
S43	Loader - Face Shovel	10242	6.7	6.7	6.7	10573	6.2	6.2	6.2	5567	12.0	12.0	12.0
S44	Truck - Hopper Discharge	10195	3.2	3.2	3.2	10526	2.7	2.7	2.7	5520	7.7	7.7	7.7
S45	Heavy Duty Hopper	10152	5.8	5.8	5.8	10483	4.9	4.9	4.9	5479	20.2	20.2	20.2
S46	Jaw Crusher	10147	8.0	8.0	8.0	10478	7.6	7.6	7.6	5475	17.6	17.6	17.6
S47	Heavy Duty Belt Feeder Hopper	10146	—	—	—	10477	—	—	—	5474	—	—	—
S48	Cone Crusher	10135	7.8	7.8	7.8	10466	7.3	7.3	7.3	5464	17.3	17.3	17.3
S49	Twin Screen Plant	10140	—	—	—	10471	—	—	—	5469	9.1	9.1	9.1
S50	Tunnel Conveyor	10121	—	—	—	10452	—	—	—	5450	—	—	—
S51	Cone Crusher	10139	7.7	7.7	7.7	10470	7.3	7.3	7.3	5469	17.3	17.3	17.3
S52	CIL Tank - Electric Motor	10005	—	—	—	10335	—	—	—	5341	—	—	—
S53	CIL Tank - Electric Motor	9991	—	—	—	10322	—	—	—	5328	—	—	—
S54	CIL Tank - Electric Motor	10002	—	—	—	10332	—	—	—	5340	—	—	—
S55	CIL Tank - Electric Motor	9988	—	—	—	10318	—	—	—	5326	—	—	—
S56	CIL Tank - Electric Motor	9999	—	—	—	10330	—	—	—	5338	—	—	—
S57	CIL Tank - Electric Motor	9985	—	—	—	10316	—	—	—	5324	—	—	—
Haul Road													
L24	Truck - Project Traffic on Ore Transport Route	56	53.3	53.3	—	389	42.1	42.1	—	106	49.7	49.7	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	12628	15.7	15.7	15.7	12626	16.4	16.4	16.4	13652	15.6	15.6	15.6
L21	Grader - Haul Roads	12465	—	—	—	12462	—	—	—	13496	—	—	—
L22	Grader - Haul Roads	13617	—	—	—	13573	—	—	—	15123	—	—	—
L23	Grader - Haul Roads	13493	—	—	—	13440	—	—	—	15127	—	—	—
L33	Truck - Haul Roads	13233	6.2	6.2	6.2	13173	6.5	6.5	6.5	14957	5.3	5.3	5.3
S59	Tracked Mobile Drill	13691	—	—	—	13645	—	—	—	15225	—	—	—
S60	Tracked Mobile Drill	13772	—	—	—	13717	—	—	—	15408	—	—	—
S61	Tracked Mobile Drill	13742	—	—	—	13691	—	—	—	15333	—	—	—
S62	Tracked Mobile Drill	13669	—	—	—	13625	—	—	—	15164	—	—	—
S104	Tracked Dozer	12623	3.6	3.6	3.6	12624	3.6	3.6	3.6	13612	2.5	2.5	2.5
S105	Tracked Dozer	12682	3.6	3.6	3.6	12677	3.6	3.6	3.6	13740	2.4	2.4	2.4
S106	Tracked Dozer	12541	3.7	3.7	3.7	12536	3.7	3.7	3.7	13604	2.6	2.6	2.6
S107	3m Light Tower	13684	—	—	—	13640	—	—	—	15196	—	—	—
S108	Hydraulic Excavator	13716	—	—	—	13671	—	—	—	15237	—	—	—
S109	Wheel Loader	13692	—	—	—	13644	—	—	—	15244	—	—	—
S110	Dewatering Pump	13735	—	—	—	13686	—	—	—	15295	—	—	—
S111	Dewatering Pump	13722	—	—	—	13673	—	—	—	15285	—	—	—
S112	Hydraulic Excavator	13773	—	—	—	13722	—	—	—	15363	—	—	—
S113	3m Light Tower	13797	—	—	—	13746	—	—	—	15386	—	—	—
S114	Hydraulic Excavator	13781	—	—	—	13729	—	—	—	15382	—	—	—
S115	Wheel Loader	13813	—	—	—	13759	—	—	—	15444	—	—	—
S116	Hydraulic Excavator	13802	—	—	—	13746	—	—	—	15447	—	—	—
S117	3m Light Tower	13822	—	—	—	13765	—	—	—	15488	—	—	—
S118	8m Light Tower	13347	—	—	—	13284	—	—	—	15103	—	—	—
S119	8m Light Tower	13281	—	—	—	13217	—	—	—	15059	—	—	—
S121	Wheel Loader	13333	—	—	—	13267	0.0	0.0	0.0	15121	—	—	—
S122	8m Light Tower	13429	—	—	—	13364	—	—	—	15207	—	—	—
S123	Truck Unloading	13420	—	—	—	13353	—	—	—	15222	—	—	—
S124	Wheeled Backhoe Loader	13383	—	—	—	13316	—	—	—	15192	—	—	—
S125	Skid Steer	13419	—	—	—	13351	—	—	—	15233	—	—	—
S126	Generator	13470	—	—	—	13398	—	—	—	15331	—	—	—
S127	Mobile_Crane	13467	1.1	1.1	1.1	13395	1.1	1.1	1.1	15335	—	—	—
S128	Forklift	13454	—	—	—	13381	—	—	—	15333	—	—	—
S129	Fuel & Lube Truck	13447	—	—	—	13373	—	—	—	15342	—	—	—
S130	Fuel & Lube Truck	13431	—	—	—	13355	—	—	—	15348	—	—	—
S131	Excavator-Mounted Breaker	13716	2.4	2.4	2.4	13664	2.9	2.9	2.9	15326	1.4	1.4	1.4
Total Facility Sound Level (1-hour Leq):			**53.8**	**53.8**	**19.9**		**42.2**	**42.2**	**19.7**		**49.8**	**49.8**	**25.9**

Note:

¹ Sound level at the receptor was calculated using Cadna A acoustical modelling software.

Table 2c

Point of Reception Noise Impact – Cumulative Effects, Option A
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Source Description	Beaver Dam Mine Road (Marlborough Propert R1 Distance (m)	R1 Partial Sound Levels¹ (dBA) Day 7am–7pm	R1 Evening 7pm–11pm	R1 Night 11pm–7am	4112 Highway 224 (Beaver Lake IR 17) R2 Distance (m)	R2 Partial Sound Levels¹ (dBA) Day 7am–7pm	R2 Evening 7pm–11pm	R2 Night 11pm–7am	4115 Highway 224 (Cottage on Crown Land) R3 Distance (m)	R3 Partial Sound Levels¹ (dBA) Day 7am–7pm	R3 Evening 7pm–11pm	R3 Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	16896	—	—	—	14499	1.8	1.8	1.8	15555	0.6	0.6	0.6
S42	Truck - Unloading Ore	16921	—	—	—	14536	—	—	—	15586	—	—	—
S43	Loader - Face Shovel	16956	—	—	—	14574	1.4	1.4	1.4	15623	0.4	0.4	0.4
S44	Truck - Hopper Discharge	16907	—	—	—	14526	—	—	—	15574	—	—	—
S45	Heavy Duty Hopper	16878	—	—	—	14501	—	—	—	15548	—	—	—
S46	Jaw Crusher	16880	1.0	1.0	1.0	14505	3.0	3.0	3.0	15550	2.1	2.1	2.1
S47	Heavy Duty Belt Feeder Hopper	16880	—	—	—	14505	—	—	—	15551	—	—	—
S48	Cone Crusher	16870	0.3	0.3	0.3	14495	2.8	2.8	2.8	15540	0.9	0.9	0.9
S49	Twin Screen Plant	16879	—	—	—	14505	—	—	—	15550	—	—	—
S50	Tunnel Conveyor	16859	—	—	—	14486	—	—	—	15530	—	—	—
S51	Cone Crusher	16881	0.4	0.4	0.4	14508	2.8	2.8	2.8	15552	1.1	1.1	1.1
S52	CIL Tank - Electric Motor	16788	—	—	—	14429	—	—	—	15467	—	—	—
S53	CIL Tank - Electric Motor	16777	—	—	—	14419	—	—	—	15456	—	—	—
S54	CIL Tank - Electric Motor	16790	—	—	—	14432	—	—	—	15469	—	—	—
S55	CIL Tank - Electric Motor	16778	—	—	—	14421	—	—	—	15458	—	—	—
S56	CIL Tank - Electric Motor	16791	—	—	—	14434	—	—	—	15470	—	—	—
S57	CIL Tank - Electric Motor	16780	—	—	—	14424	—	—	—	15459	—	—	—
Haul Road													
L25	Truck - Cumulative Traffic on Ore Transport Route	137	46.9	46.9	—	3037	20.2	20.2	—	1719	25.4	25.4	—
L26	Truck - Cumulative Traffic on Ore Transport Route	186	37.1	37.1	—	3071	11.1	11.1	—	1753	16.5	16.5	—
L27	Truck - Cumulative Traffic on Ore Transport Route	168	44.1	44.1	—	2306	26.4	26.4	—	1441	28.7	28.7	—
L30	3/4 Ton Service Truck - Cumulative Traffic	137	38.9	38.9	—	3037	9.2	9.2	—	1719	15.8	15.8	—
L31	3/4 Ton Service Truck - Cumulative Traffic	186	34.5	34.5	—	3071	4.6	4.6	—	1753	11.8	11.8	—
L32	3/4 Ton Service Truck - Cumulative Traffic	168	36.2	36.2	—	2306	18.5	18.5	—	1441	20.7	20.7	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	6382	23.8	23.8	23.8	5225	25.2	25.2	25.2	5731	25.3	25.3	25.3
L21	Grader - Haul Roads	5784	5.0	5.0	5.0	5007	6.9	6.9	6.9	5441	6.5	6.5	6.5
L22	Grader - Haul Roads	6307	—	—	—	5938	—	—	—	5978	0.1	0.1	0.1
L23	Grader - Haul Roads	5786	—	—	—	5795	—	—	—	5765	0.2	0.2	0.2
L33	Truck - Haul Roads	5784	14.8	14.8	14.8	5529	15.7	15.7	15.7	5482	15.9	15.9	15.9
S59	Tracked Mobile Drill	6475	9.1	9.1	9.1	6005	11.0	11.0	11.0	6072	10.8	10.8	10.8
S60	Tracked Mobile Drill	6375	5.8	5.8	5.8	6071	9.0	9.0	9.0	6060	10.7	10.7	10.7
S61	Tracked Mobile Drill	6423	9.0	9.0	9.0	6047	10.0	10.0	10.0	6070	10.8	10.8	10.8
S62	Tracked Mobile Drill	6521	9.5	9.5	9.5	5991	11.1	11.1	11.1	6086	10.8	10.8	10.8
S104	Tracked Dozer	6672	12.6	12.6	12.6	5248	15.8	15.8	15.8	5776	14.5	14.5	14.5
S105	Tracked Dozer	6580	12.8	12.8	12.8	5250	15.8	15.8	15.8	5728	14.6	14.6	14.6
S106	Tracked Dozer	6479	13.0	13.0	13.0	5116	16.1	16.1	16.1	5608	14.9	14.9	14.9
S107	3m Light Tower	6506	—	—	—	6003	—	—	—	6086	—	—	—
S108	Hydraulic Excavator	6516	4.6	4.6	4.6	6032	5.7	5.7	5.7	6107	5.5	5.5	5.5
S109	Wheel Loader	6447	9.7	9.7	9.7	6003	11.4	11.4	11.4	6057	11.3	11.3	11.3
S110	Dewatering Pump	6466	1.0	1.0	1.0	6044	1.8	1.8	1.8	6089	1.8	1.8	1.8
S111	Dewatering Pump	6451	0.9	0.9	0.9	6031	1.8	1.8	1.8	6074	1.8	1.8	1.8
S112	Hydraulic Excavator	6449	4.7	4.7	4.7	6078	5.5	5.5	5.5	6099	5.5	5.5	5.5
S113	3m Light Tower	6471	—	—	—	6102	—	—	—	6123	—	—	—
S114	Hydraulic Excavator	6438	4.7	4.7	4.7	6084	5.4	5.4	5.4	6097	5.5	5.5	5.5
S115	Wheel Loader	6417	8.2	8.2	8.2	6113	10.6	10.6	10.6	6103	11.1	11.1	11.1
S116	Hydraulic Excavator	6386	2.9	2.9	2.9	6101	5.1	5.1	5.1	6081	5.4	5.4	5.4
S117	3m Light Tower	6370	—	—	—	6120	—	—	—	6084	—	—	—
S118	8m Light Tower	5843	—	—	—	5644	—	—	—	5570	—	—	—
S119	8m Light Tower	5757	—	—	—	5579	—	—	—	5492	—	—	—
S120	Jaw Crusher	5828	11.8	11.8	11.8	5657	12.2	12.2	12.2	5569	12.5	12.5	12.5
S121	Wheel Loader	5781	12.3	12.3	12.3	5631	12.7	12.7	12.7	5533	13.0	13.0	13.0
S122	8m Light Tower	5874	—	—	—	5727	—	—	—	5631	—	—	—
S123	Truck Unloading	5830	8.7	8.7	8.7	5719	8.9	8.9	8.9	5605	9.2	9.2	9.2
S124	Wheeled Backhoe Loader	5790	—	—	—	5683	—	—	—	5566	—	—	—
S125	Skid Steer	5811	3.4	3.4	3.4	5720	3.7	3.7	3.7	5596	4.0	4.0	4.0
S126	Generator	5781	8.4	8.4	8.4	5776	8.4	8.4	8.4	5614	8.9	8.9	8.9
S127	Mobile_Crane	5769	10.3	10.3	10.3	5774	10.3	10.3	10.3	5608	10.6	10.6	10.6
S128	Forklift	5742	—	—	—	5763	—	—	—	5588	—	—	—
S129	Fuel & Lube Truck	5712	3.2	3.2	3.2	5759	3.1	3.1	3.1	5572	3.6	3.6	3.6
S130	Fuel & Lube Truck	5667	3.3	3.3	3.3	5748	3.1	3.1	3.1	5545	3.7	3.7	3.7
Total Facility Sound Level (1-hour Leq):			**49.7**	**49.7**	**26.6**		**31.0**	**31.0**	**28.2**		**32.7**	**32.7**	**28.1**

Cadna A ID	Source Description	3492 Highway 224 (Hobbs Property) R4 Distance (m)	R4 Partial Sound Levels¹ (dBA) Day 7am–7pm	R4 Evening 7pm–11pm	R4 Night 11pm–7am	3379 Highway 224 (McLeod Property) R5 Distance (m)	R5 Partial Sound Levels¹ (dBA) Day 7am–7pm	R5 Evening 7pm–11pm	R5 Night 11pm–7am	3373 Highway 224 (Smith Property) R6 Distance (m)	R6 Partial Sound Levels¹ (dBA) Day 7am–7pm	R6 Evening 7pm–11pm	R6 Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	17090	—	—	—	17498	—	—	—	17563	—	—	—
S42	Truck - Unloading Ore	17113	—	—	—	17519	—	—	—	17584	—	—	—
S43	Loader - Face Shovel	17148	—	—	—	17553	—	—	—	17618	—	—	—
S44	Truck - Hopper Discharge	17099	—	—	—	17504	—	—	—	17569	—	—	—
S45	Heavy Duty Hopper	17070	—	—	—	17474	—	—	—	17538	—	—	—
S46	Jaw Crusher	17071	0.8	0.8	0.8	17475	0.5	0.5	0.5	17540	0.5	0.5	0.5
S47	Heavy Duty Belt Feeder Hopper	17071	—	—	—	17475	—	—	—	17540	—	—	—
S48	Cone Crusher	17061	0.4	0.4	0.4	17465	0.3	0.3	0.3	17529	0.3	0.3	0.3
S49	Twin Screen Plant	17070	—	—	—	17473	—	—	—	17538	—	—	—
S50	Tunnel Conveyor	17050	—	—	—	17453	—	—	—	17518	—	—	—
S51	Cone Crusher	17072	0.5	0.5	0.5	17475	0.3	0.3	0.3	17540	0.3	0.3	0.3
S52	CIL Tank - Electric Motor	16979	—	—	—	17379	—	—	—	17443	—	—	—
S53	CIL Tank - Electric Motor	16967	—	—	—	17367	—	—	—	17431	—	—	—
S54	CIL Tank - Electric Motor	16980	—	—	—	17380	—	—	—	17444	—	—	—
S55	CIL Tank - Electric Motor	16968	—	—	—	17368	—	—	—	17432	—	—	—
S56	CIL Tank - Electric Motor	16981	—	—	—	17381	—	—	—	17445	—	—	—
S57	CIL Tank - Electric Motor	16969	—	—	—	17369	—	—	—	17434	—	—	—
Haul Road													
L25	Truck - Cumulative Traffic on Ore Transport Route	113	48.6	48.6	—	665	36.3	36.3	—	741	33.7	33.7	—
L26	Truck - Cumulative Traffic on Ore Transport Route	27	51.8	51.8	—	55	48.4	48.4	—	48	49.0	49.0	—
L27	Truck - Cumulative Traffic on Ore Transport Route	118	45.7	45.7	—	660	35.5	35.5	—	736	34.3	34.3	—
L30	3/4 Ton Service Truck - Cumulative Traffic	113	40.6	40.6	—	665	27.9	27.9	—	741	25.1	25.1	—
L31	3/4 Ton Service Truck - Cumulative Traffic	27	49.4	49.4	—	55	46.0	46.0	—	48	46.6	46.6	—
L32	3/4 Ton Service Truck - Cumulative Traffic	118	37.7	37.7	—	660	27.6	27.6	—	736	26.4	26.4	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	6517	23.8	23.8	23.8	6874	23.7	23.7	23.7	6912	23.7	23.7	23.7
L21	Grader - Haul Roads	5908	4.7	4.7	4.7	6247	4.7	4.7	4.7	6283	4.5	4.5	4.5
L22	Grader - Haul Roads	6432	—	—	—	6764	—	—	—	6798	—	—	—
L23	Grader - Haul Roads	5870	0.2	0.2	0.2	6129	—	—	—	6153	—	—	—
L33	Truck - Haul Roads	5908	15.0	15.0	15.0	6247	14.4	14.4	14.4	6283	14.3	14.3	14.3
S59	Tracked Mobile Drill	6609	9.3	9.3	9.3	6966	8.3	8.3	8.3	7004	8.2	8.2	8.2
S60	Tracked Mobile Drill	6497	9.6	9.6	9.6	6832	8.6	8.6	8.6	6867	8.5	8.5	8.5
S61	Tracked Mobile Drill	6551	9.4	9.4	9.4	6895	8.4	8.4	8.4	6932	8.3	8.3	8.3
S62	Tracked Mobile Drill	6659	9.1	9.1	9.1	7023	8.1	8.1	8.1	7063	8.0	8.0	8.0
S104	Tracked Dozer	6867	12.2	12.2	12.2	7338	13.2	13.2	13.2	7394	13.1	13.1	13.1
S105	Tracked Dozer	6770	12.4	12.4	12.4	7232	13.4	13.4	13.4	7287	13.3	13.3	13.3
S106	Tracked Dozer	6671	12.6	12.6	12.6	7138	13.6	13.6	13.6	7194	13.5	13.5	13.5
S107	3m Light Tower	6643	—	—	—	7003	—	—	—	7042	—	—	—
S108	Hydraulic Excavator	6651	4.5	4.5	4.5	7009	3.8	3.8	3.8	7047	3.7	3.7	3.7
S109	Wheel Loader	6580	9.9	9.9	9.9	6933	9.1	9.1	9.1	6971	9.0	9.0	9.0
S110	Dewatering Pump	6597	0.9	0.9	0.9	6947	0.3	0.3	0.3	6985	0.3	0.3	0.3
S111	Dewatering Pump	6582	0.9	0.9	0.9	6932	0.3	0.3	0.3	6969	0.3	0.3	0.3
S112	Hydraulic Excavator	6577	4.6	4.6	4.6	6920	3.9	3.9	3.9	6956	3.9	3.9	3.9
S113	3m Light Tower	6598	—	—	—	6940	—	—	—	6976	—	—	—
S114	Hydraulic Excavator	6564	4.6	4.6	4.6	6905	4.0	4.0	4.0	6941	3.9	3.9	3.9
S115	Wheel Loader	6540	10.1	10.1	10.1	6874	9.3	9.3	9.3	6909	9.2	9.2	9.2
S116	Hydraulic Excavator	6507	4.7	4.7	4.7	6838	4.1	4.1	4.1	6873	4.0	4.0	4.0
S117	3m Light Tower	6488	—	—	—	6815	—	—	—	6849	—	—	—
S118	8m Light Tower	5963	—	—	—	6294	—	—	—	6329	—	—	—
S119	8m Light Tower	5876	—	—	—	6205	—	—	—	6240	—	—	—
S120	Jaw Crusher	5946	11.5	11.5	11.5	6273	10.7	10.7	10.7	6307	10.6	10.6	10.6
S121	Wheel Loader	5898	12.0	12.0	12.0	6223	11.1	11.1	11.1	6257	11.0	11.0	11.0
S122	8m Light Tower	5990	—	—	—	6312	—	—	—	6345	—	—	—
S123	Truck Unloading	5943	8.5	8.5	8.5	6260	7.8	7.8	7.8	6293	7.8	7.8	7.8
S124	Wheeled Backhoe Loader	5904	—	—	—	6221	—	—	—	6254	—	—	—
S125	Skid Steer	5923	3.1	3.1	3.1	6237	2.3	2.3	2.3	6270	2.2	2.2	2.2
S126	Generator	5886	8.0	8.0	8.0	6188	7.1	7.1	7.1	6218	7.0	7.0	7.0
S127	Mobile_Crane	5874	10.0	10.0	10.0	6174	9.5	9.5	9.5	6205	9.4	9.4	9.4
S128	Forklift	5845	—	—	—	6144	—	—	—	6174	—	—	—
S129	Fuel & Lube Truck	5814	2.9	2.9	2.9	6109	2.1	2.1	2.1	6139	2.0	2.0	2.0
S130	Fuel & Lube Truck	5766	3.1	3.1	3.1	6057	2.3	2.3	2.3	6086	2.2	2.2	2.2
Total Facility Sound Level (1-hour Leq):			**55.9**	**55.9**	**26.7**		**50.7**	**50.7**	**26.5**		**51.3**	**51.3**	**26.4**

Cadna A ID	Source Description	Tangier River (Deepwood Estates Property) R7 Distance (m)	R7 Partial Sound Levels¹ (dBA) Day 7am–7pm	R7 Evening 7pm–11pm	R7 Night 11pm–7am	Tangier River/Musqudoboit Lumber Co Ltd. Property/John D R8 Distance (m)	R8 Partial Sound Levels¹ (dBA) Day 7am–7pm	R8 Evening 7pm–11pm	R8 Night 11pm–7am	5579 Mooseland Road (Lloy Property) R9 Distance (m)	R9 Partial Sound Levels¹ (dBA) Day 7am–7pm	R9 Evening 7pm–11pm	R9 Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	10249	7.9	7.9	7.9	10581	7.3	7.3	7.3	5564	14.1	14.1	14.1
S42	Truck - Unloading Ore	10223	2.2	2.2	2.2	10554	1.7	1.7	1.7	5545	5.6	5.6	5.6
S43	Loader - Face Shovel	10242	6.7	6.7	6.7	10573	6.2	6.2	6.2	5567	12.0	12.0	12.0
S44	Truck - Hopper Discharge	10195	3.2	3.2	3.2	10526	2.7	2.7	2.7	5520	7.7	7.7	7.7
S45	Heavy Duty Hopper	10152	5.8	5.8	5.8	10483	4.9	4.9	4.9	5479	20.2	20.2	20.2
S46	Jaw Crusher	10147	8.0	8.0	8.0	10478	7.6	7.6	7.6	5475	17.6	17.6	17.6
S47	Heavy Duty Belt Feeder Hopper	10146	—	—	—	10477	—	—	—	5474	—	—	—
S48	Cone Crusher	10135	7.8	7.8	7.8	10466	7.3	7.3	7.3	5464	17.3	17.3	17.3
S49	Twin Screen Plant	10140	—	—	—	10471	—	—	—	5469	9.1	9.1	9.1
S50	Tunnel Conveyor	10121	—	—	—	10452	—	—	—	5450	—	—	—
S51	Cone Crusher	10139	7.7	7.7	7.7	10470	7.3	7.3	7.3	5469	17.3	17.3	17.3
S52	CIL Tank - Electric Motor	10005	—	—	—	10335	—	—	—	5341	—	—	—
S53	CIL Tank - Electric Motor	9991	—	—	—	10322	—	—	—	5328	—	—	—
S54	CIL Tank - Electric Motor	10002	—	—	—	10332	—	—	—	5340	—	—	—
S55	CIL Tank - Electric Motor	9988	—	—	—	10318	—	—	—	5326	—	—	—
S56	CIL Tank - Electric Motor	9999	—	—	—	10330	—	—	—	5338	—	—	—
S57	CIL Tank - Electric Motor	9985	—	—	—	10316	—	—	—	5324	—	—	—
Haul Road													
L25	Truck - Cumulative Traffic on Ore Transport Route	8704	6.3	6.3	—	8535	6.5	6.5	—	11925	3.6	3.6	—
L26	Truck - Cumulative Traffic on Ore Transport Route	8706	2.3	2.3	—	8536	2.4	2.4	—	11937	—	—	—
L27	Truck - Cumulative Traffic on Ore Transport Route	56	54.5	54.5	—	389	43.3	43.3	—	106	50.9	50.9	—
L30	3/4 Ton Service Truck - Cumulative Traffic	8704	—	—	—	8535	—	—	—	11925	—	—	—
L31	3/4 Ton Service Truck - Cumulative Traffic	8706	—	—	—	8536	—	—	—	11937	—	—	—
L32	3/4 Ton Service Truck - Cumulative Traffic	56	46.6	46.6	—	389	35.3	35.3	—	106	43.0	43.0	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	12628	15.7	15.7	15.7	12626	16.4	16.4	16.4	13652	15.6	15.6	15.6
L21	Grader - Haul Roads	12465	—	—	—	12462	—	—	—	13496	—	—	—
L22	Grader - Haul Roads	13617	—	—	—	13573	—	—	—	15123	—	—	—
L23	Grader - Haul Roads	13493	—	—	—	13440	—	—	—	15127	—	—	—
L33	Truck - Haul Roads	13233	6.2	6.2	6.2	13173	6.5	6.5	6.5	14957	5.3	5.3	5.3
S59	Tracked Mobile Drill	13691	—	—	—	13645	—	—	—	15225	—	—	—
S60	Tracked Mobile Drill	13772	—	—	—	13717	—	—	—	15408	—	—	—
S61	Tracked Mobile Drill	13742	—	—	—	13691	—	—	—	15333	—	—	—
S62	Tracked Mobile Drill	13669	—	—	—	13625	—	—	—	15164	—	—	—
S104	Tracked Dozer	12623	3.6	3.6	3.6	12624	3.6	3.6	3.6	13612	2.5	2.5	2.5
S105	Tracked Dozer	12682	3.6	3.6	3.6	12677	3.6	3.6	3.6	13740	2.4	2.4	2.4
S106	Tracked Dozer	12541	3.7	3.7	3.7	12536	3.7	3.7	3.7	13604	2.6	2.6	2.6
S107	3m Light Tower	13684	—	—	—	13640	—	—	—	15196	—	—	—
S108	Hydraulic Excavator	13716	—	—	—	13671	—	—	—	15237	—	—	—
S109	Wheel Loader	13692	—	—	—	13644	—	—	—	15244	—	—	—
S110	Dewatering Pump	13735	—	—	—	13686	—	—	—	15295	—	—	—
S111	Dewatering Pump	13722	—	—	—	13673	—	—	—	15285	—	—	—
S112	Hydraulic Excavator	13773	—	—	—	13722	—	—	—	15363	—	—	—
S113	3m Light Tower	13797	—	—	—	13746	—	—	—	15386	—	—	—
S114	Hydraulic Excavator	13781	—	—	—	13729	—	—	—	15382	—	—	—
S115	Wheel Loader	13813	—	—	—	13759	—	—	—	15444	—	—	—
S116	Hydraulic Excavator	13802	—	—	—	13746	—	—	—	15447	—	—	—
S117	3m Light Tower	13822	—	—	—	13765	—	—	—	15488	—	—	—
S118	8m Light Tower	13347	—	—	—	13284	—	—	—	15103	—	—	—
S119	8m Light Tower	13281	—	—	—	13217	—	—	—	15059	—	—	—
S120	Jaw Crusher	13359	—	—	—	13295	—	—	—	15131	—	—	—
S121	Wheel Loader	13333	—	—	—	13267	0.0	0.0	0.0	15121	—	—	—
S122	8m Light Tower	13429	—	—	—	13364	—	—	—	15207	—	—	—
S123	Truck Unloading	13420	—	—	—	13353	—	—	—	15222	—	—	—
S124	Wheeled Backhoe Loader	13383	—	—	—	13316	—	—	—	15192	—	—	—
S125	Skid Steer	13419	—	—	—	13351	—	—	—	15233	—	—	—
S126	Generator	13470	—	—	—	13398	—	—	—	15331	—	—	—
S127	Mobile_Crane	13467	1.1	1.1	1.1	13395	1.1	1.1	1.1	15335	—	—	—
S128	Forklift	13454	—	—	—	13381	—	—	—	15333	—	—	—
S129	Fuel & Lube Truck	13447	—	—	—	13373	—	—	—	15342	—	—	—
S130	Fuel & Lube Truck	13431	—	—	—	13355	—	—	—	15348	—	—	—
Total Facility Sound Level (1-hour Leq):			**55.5**	**55.5**	**19.4**		**43.9**	**43.9**	**19.7**		**51.4**	**51.4**	**25.8**

Note:

¹ Sound level at the receptor was calculated using Cadna A acoustical modelling software.

Table 2d

Point of Reception Noise Impact – Cumulative Effects, Option B
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Source Description	Beaver Dam Mine Road (Marlborough Propert R1 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	4112 Highway 224 (Beaver Lake IR 17) R2 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	4115 Highway 224 (Cottage on Crown Land) R3 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	16896	—	—	—	14499	1.8	1.8	1.8	15555	0.6	0.6	0.6
S42	Truck - Unloading Ore	16921	—	—	—	14536	—	—	—	15586	—	—	—
S43	Loader - Face Shovel	16956	—	—	—	14574	1.4	1.4	1.4	15623	0.4	0.4	0.4
S44	Truck - Hopper Discharge	16907	—	—	—	14526	—	—	—	15574	—	—	—
S45	Heavy Duty Hopper	16878	—	—	—	14501	—	—	—	15548	—	—	—
S46	Jaw Crusher	16880	1.0	1.0	1.0	14505	3.0	3.0	3.0	15550	2.1	2.1	2.1
S47	Heavy Duty Belt Feeder Hopper	16880	—	—	—	14505	—	—	—	15551	—	—	—
S48	Cone Crusher	16870	0.3	0.3	0.3	14495	2.8	2.8	2.8	15540	0.9	0.9	0.9
S49	Twin Screen Plant	16879	—	—	—	14505	—	—	—	15550	—	—	—
S50	Tunnel Conveyor	16859	—	—	—	14486	—	—	—	15530	—	—	—
S51	Cone Crusher	16881	0.4	0.4	0.4	14508	2.8	2.8	2.8	15552	1.1	1.1	1.1
S52	CIL Tank - Electric Motor	16788	—	—	—	14429	—	—	—	15467	—	—	—
S53	CIL Tank - Electric Motor	16777	—	—	—	14419	—	—	—	15456	—	—	—
S54	CIL Tank - Electric Motor	16790	—	—	—	14432	—	—	—	15469	—	—	—
S55	CIL Tank - Electric Motor	16778	—	—	—	14421	—	—	—	15458	—	—	—
S56	CIL Tank - Electric Motor	16791	—	—	—	14434	—	—	—	15470	—	—	—
S57	CIL Tank - Electric Motor	16780	—	—	—	14424	—	—	—	15459	—	—	—
Haul Road													
L25	Truck - Cumulative Traffic on Ore Transport Route	137	46.9	46.9	—	3037	20.2	20.2	—	1719	25.4	25.4	—
L26	Truck - Cumulative Traffic on Ore Transport Route	186	37.1	37.1	—	3071	11.1	11.1	—	1753	16.5	16.5	—
L27	Truck - Cumulative Traffic on Ore Transport Route	168	44.1	44.1	—	2306	26.4	26.4	—	1441	28.7	28.7	—
L30	3/4 Ton Service Truck - Cumulative Traffic	137	38.9	38.9	—	3037	9.2	9.2	—	1719	15.8	15.8	—
L31	3/4 Ton Service Truck - Cumulative Traffic	186	34.5	34.5	—	3071	4.6	4.6	—	1753	11.8	11.8	—
L32	3/4 Ton Service Truck - Cumulative Traffic	168	36.2	36.2	—	2306	18.5	18.5	—	1441	20.7	20.7	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	6382	23.8	23.8	23.8	5225	25.2	25.2	25.2	5731	25.3	25.3	25.3
L21	Grader - Haul Roads	5784	5.0	5.0	5.0	5007	6.9	6.9	6.9	5441	6.5	6.5	6.5
L22	Grader - Haul Roads	6307	—	—	—	5938	—	—	—	5978	0.1	0.1	0.1
L23	Grader - Haul Roads	5786	—	—	—	5795	—	—	—	5765	0.2	0.2	0.2
L33	Truck - Haul Roads	5784	14.8	14.8	14.8	5529	15.7	15.7	15.7	5482	15.9	15.9	15.9
S59	Tracked Mobile Drill	6475	9.1	9.1	9.1	6005	11.0	11.0	11.0	6072	10.8	10.8	10.8
S60	Tracked Mobile Drill	6375	5.8	5.8	5.8	6071	9.0	9.0	9.0	6060	10.7	10.7	10.7
S61	Tracked Mobile Drill	6423	9.0	9.0	9.0	6047	10.0	10.0	10.0	6070	10.8	10.8	10.8
S62	Tracked Mobile Drill	6521	9.5	9.5	9.5	5991	11.1	11.1	11.1	6086	10.8	10.8	10.8
S104	Tracked Dozer	6672	12.6	12.6	12.6	5248	15.8	15.8	15.8	5776	14.5	14.5	14.5
S105	Tracked Dozer	6580	12.8	12.8	12.8	5250	15.8	15.8	15.8	5728	14.6	14.6	14.6
S106	Tracked Dozer	6479	13.0	13.0	13.0	5116	16.1	16.1	16.1	5608	14.9	14.9	14.9
S107	3m Light Tower	6506	—	—	—	6003	—	—	—	6086	—	—	—
S108	Hydraulic Excavator	6516	4.6	4.6	4.6	6032	5.7	5.7	5.7	6107	5.5	5.5	5.5
S109	Wheel Loader	6447	9.7	9.7	9.7	6003	11.4	11.4	11.4	6057	11.3	11.3	11.3
S110	Dewatering Pump	6466	1.0	1.0	1.0	6044	1.8	1.8	1.8	6089	1.8	1.8	1.8
S111	Dewatering Pump	6451	0.9	0.9	0.9	6031	1.8	1.8	1.8	6074	1.8	1.8	1.8
S112	Hydraulic Excavator	6449	4.7	4.7	4.7	6078	5.5	5.5	5.5	6099	5.5	5.5	5.5
S113	3m Light Tower	6471	—	—	—	6102	—	—	—	6123	—	—	—
S114	Hydraulic Excavator	6438	4.7	4.7	4.7	6084	5.4	5.4	5.4	6097	5.5	5.5	5.5
S115	Wheel Loader	6417	8.2	8.2	8.2	6113	10.6	10.6	10.6	6103	11.1	11.1	11.1
S116	Hydraulic Excavator	6386	2.9	2.9	2.9	6101	5.1	5.1	5.1	6081	5.4	5.4	5.4
S117	3m Light Tower	6370	—	—	—	6120	—	—	—	6084	—	—	—
S118	8m Light Tower	5843	—	—	—	5644	—	—	—	5570	—	—	—
S119	8m Light Tower	5757	—	—	—	5579	—	—	—	5492	—	—	—
S121	Wheel Loader	5781	12.3	12.3	12.3	5631	12.7	12.7	12.7	5533	13.0	13.0	13.0
S122	8m Light Tower	5874	—	—	—	5727	—	—	—	5631	—	—	—
S123	Truck Unloading	5830	8.7	8.7	8.7	5719	8.9	8.9	8.9	5605	9.2	9.2	9.2
S124	Wheeled Backhoe Loader	5790	—	—	—	5683	—	—	—	5566	—	—	—
S125	Skid Steer	5811	3.4	3.4	3.4	5720	3.7	3.7	3.7	5596	4.0	4.0	4.0
S126	Generator	5781	8.4	8.4	8.4	5776	8.4	8.4	8.4	5614	8.9	8.9	8.9
S127	Mobile_Crane	5769	10.3	10.3	10.3	5774	10.3	10.3	10.3	5608	10.6	10.6	10.6
S128	Forklift	5742	—	—	—	5763	—	—	—	5588	—	—	—
S129	Fuel & Lube Truck	5712	3.2	3.2	3.2	5759	3.1	3.1	3.1	5572	3.6	3.6	3.6
S130	Fuel & Lube Truck	5667	3.3	3.3	3.3	5748	3.1	3.1	3.1	5545	3.7	3.7	3.7
S131	Excavator-Mounted Breaker	6372	13.0	13.0	13.0	6019	14.1	14.1	14.1	6030	15.9	15.9	15.9
Total Facility Sound Level (1-hour Leq):			**49.7**	**49.7**	**26.7**		**31.0**	**31.0**	**28.2**		**32.7**	**32.7**	**28.2**

Cadna A ID	Source Description	3492 Highway 224 (Hobbs Property) R4 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	3379 Highway 224 (McLeod Property) R5 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	3373 Highway 224 (Smith Property) R6 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	17090	—	—	—	17498	—	—	—	17563	—	—	—
S42	Truck - Unloading Ore	17113	—	—	—	17519	—	—	—	17584	—	—	—
S43	Loader - Face Shovel	17148	—	—	—	17553	—	—	—	17618	—	—	—
S44	Truck - Hopper Discharge	17099	—	—	—	17504	—	—	—	17569	—	—	—
S45	Heavy Duty Hopper	17070	—	—	—	17474	—	—	—	17538	—	—	—
S46	Jaw Crusher	17071	0.8	0.8	0.8	17475	0.5	0.5	0.5	17540	0.5	0.5	0.5
S47	Heavy Duty Belt Feeder Hopper	17071	—	—	—	17475	—	—	—	17540	—	—	—
S48	Cone Crusher	17061	0.4	0.4	0.4	17465	0.3	0.3	0.3	17529	0.3	0.3	0.3
S49	Twin Screen Plant	17070	—	—	—	17473	—	—	—	17538	—	—	—
S50	Tunnel Conveyor	17050	—	—	—	17453	—	—	—	17518	—	—	—
S51	Cone Crusher	17072	0.5	0.5	0.5	17475	0.3	0.3	0.3	17540	0.3	0.3	0.3
S52	CIL Tank - Electric Motor	16979	—	—	—	17379	—	—	—	17443	—	—	—
S53	CIL Tank - Electric Motor	16967	—	—	—	17367	—	—	—	17431	—	—	—
S54	CIL Tank - Electric Motor	16980	—	—	—	17380	—	—	—	17444	—	—	—
S55	CIL Tank - Electric Motor	16968	—	—	—	17368	—	—	—	17432	—	—	—
S56	CIL Tank - Electric Motor	16981	—	—	—	17381	—	—	—	17445	—	—	—
S57	CIL Tank - Electric Motor	16969	—	—	—	17369	—	—	—	17434	—	—	—
Haul Road													
L25	Truck - Cumulative Traffic on Ore Transport Route	113	48.6	48.6	—	665	36.3	36.3	—	741	33.7	33.7	—
L26	Truck - Cumulative Traffic on Ore Transport Route	27	51.8	51.8	—	55	48.4	48.4	—	48	49.0	49.0	—
L27	Truck - Cumulative Traffic on Ore Transport Route	118	45.7	45.7	—	660	35.5	35.5	—	736	34.3	34.3	—
L30	3/4 Ton Service Truck - Cumulative Traffic	113	40.6	40.6	—	665	27.9	27.9	—	741	25.1	25.1	—
L31	3/4 Ton Service Truck - Cumulative Traffic	27	49.4	49.4	—	55	46.0	46.0	—	48	46.6	46.6	—
L32	3/4 Ton Service Truck - Cumulative Traffic	118	37.7	37.7	—	660	27.6	27.6	—	736	26.4	26.4	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	6517	23.8	23.8	23.8	6874	23.7	23.7	23.7	6912	23.7	23.7	23.7
L21	Grader - Haul Roads	5908	4.7	4.7	4.7	6247	4.7	4.7	4.7	6283	4.5	4.5	4.5
L22	Grader - Haul Roads	6432	—	—	—	6764	—	—	—	6798	—	—	—
L23	Grader - Haul Roads	5870	0.2	0.2	0.2	6129	—	—	—	6153	—	—	—
L33	Truck - Haul Roads	5908	15.0	15.0	15.0	6247	14.4	14.4	14.4	6283	14.3	14.3	14.3
S59	Tracked Mobile Drill	6609	9.3	9.3	9.3	6966	8.3	8.3	8.3	7004	8.2	8.2	8.2
S60	Tracked Mobile Drill	6497	9.6	9.6	9.6	6832	8.6	8.6	8.6	6867	8.5	8.5	8.5
S61	Tracked Mobile Drill	6551	9.4	9.4	9.4	6895	8.4	8.4	8.4	6932	8.3	8.3	8.3
S62	Tracked Mobile Drill	6659	9.1	9.1	9.1	7023	8.1	8.1	8.1	7063	8.0	8.0	8.0
S104	Tracked Dozer	6867	12.2	12.2	12.2	7338	13.2	13.2	13.2	7394	13.1	13.1	13.1
S105	Tracked Dozer	6770	12.4	12.4	12.4	7232	13.4	13.4	13.4	7287	13.3	13.3	13.3
S106	Tracked Dozer	6671	12.6	12.6	12.6	7138	13.6	13.6	13.6	7194	13.5	13.5	13.5
S107	3m Light Tower	6643	—	—	—	7003	—	—	—	7042	—	—	—
S108	Hydraulic Excavator	6651	4.5	4.5	4.5	7009	3.8	3.8	3.8	7047	3.7	3.7	3.7
S109	Wheel Loader	6580	9.9	9.9	9.9	6933	9.1	9.1	9.1	6971	9.0	9.0	9.0
S110	Dewatering Pump	6597	0.9	0.9	0.9	6947	0.3	0.3	0.3	6985	0.3	0.3	0.3
S111	Dewatering Pump	6582	0.9	0.9	0.9	6932	0.3	0.3	0.3	6969	0.3	0.3	0.3
S112	Hydraulic Excavator	6577	4.6	4.6	4.6	6920	3.9	3.9	3.9	6956	3.9	3.9	3.9
S113	3m Light Tower	6598	—	—	—	6940	—	—	—	6976	—	—	—
S114	Hydraulic Excavator	6564	4.6	4.6	4.6	6905	4.0	4.0	4.0	6941	3.9	3.9	3.9
S115	Wheel Loader	6540	10.1	10.1	10.1	6874	9.3	9.3	9.3	6909	9.2	9.2	9.2
S116	Hydraulic Excavator	6507	4.7	4.7	4.7	6838	4.1	4.1	4.1	6873	4.0	4.0	4.0
S117	3m Light Tower	6488	—	—	—	6815	—	—	—	6849	—	—	—
S118	8m Light Tower	5963	—	—	—	6294	—	—	—	6329	—	—	—
S119	8m Light Tower	5876	—	—	—	6205	—	—	—	6240	—	—	—
S121	Wheel Loader	5898	12.0	12.0	12.0	6223	11.1	11.1	11.1	6257	11.0	11.0	11.0
S122	8m Light Tower	5990	—	—	—	6312	—	—	—	6345	—	—	—
S123	Truck Unloading	5943	8.5	8.5	8.5	6260	7.8	7.8	7.8	6293	7.8	7.8	7.8
S124	Wheeled Backhoe Loader	5904	—	—	—	6221	—	—	—	6254	—	—	—
S125	Skid Steer	5923	3.1	3.1	3.1	6237	2.3	2.3	2.3	6270	2.2	2.2	2.2
S126	Generator	5886	8.0	8.0	8.0	6188	7.1	7.1	7.1	6218	7.0	7.0	7.0
S127	Mobile_Crane	5874	10.0	10.0	10.0	6174	9.5	9.5	9.5	6205	9.4	9.4	9.4
S128	Forklift	5845	—	—	—	6144	—	—	—	6174	—	—	—
S129	Fuel & Lube Truck	5814	2.9	2.9	2.9	6109	2.1	2.1	2.1	6139	2.0	2.0	2.0
S130	Fuel & Lube Truck	5766	3.1	3.1	3.1	6057	2.3	2.3	2.3	6086	2.2	2.2	2.2
S131	Excavator-Mounted Breaker	6499	14.6	14.6	14.6	6841	13.7	13.7	13.7	6877	13.7	13.7	13.7
Total Facility Sound Level (1-hour Leq):			**55.9**	**55.9**	**26.8**		**50.8**	**50.8**	**26.6**		**51.3**	**51.3**	**26.6**

Cadna A ID	Source Description	Tangier River (Deepwood Estates Property) R7 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	Tangier River (Musquodoboit Lumber Co Ltd. Property/John D R8 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am	5579 Mooseland Road (Lloy Property) R9 Distance (m)	Partial Sound Levels[1] (dBA) Day 7am–7pm	Evening 7pm–11pm	Night 11pm–7am
Touquoy Mine Site													
S41	Loader - Transport of Material	10249	7.9	7.9	7.9	10581	7.3	7.3	7.3	5564	14.1	14.1	14.1
S42	Truck - Unloading Ore	10223	2.2	2.2	2.2	10554	1.7	1.7	1.7	5545	5.6	5.6	5.6
S43	Loader - Face Shovel	10242	6.7	6.7	6.7	10573	6.2	6.2	6.2	5567	12.0	12.0	12.0
S44	Truck - Hopper Discharge	10195	3.2	3.2	3.2	10526	2.7	2.7	2.7	5520	7.7	7.7	7.7
S45	Heavy Duty Hopper	10152	5.8	5.8	5.8	10483	4.9	4.9	4.9	5479	20.2	20.2	20.2
S46	Jaw Crusher	10147	8.0	8.0	8.0	10478	7.6	7.6	7.6	5475	17.6	17.6	17.6
S47	Heavy Duty Belt Feeder Hopper	10146	—	—	—	10477	—	—	—	5474	—	—	—
S48	Cone Crusher	10135	7.8	7.8	7.8	10466	7.3	7.3	7.3	5464	17.3	17.3	17.3
S49	Twin Screen Plant	10140	—	—	—	10471	—	—	—	5469	9.1	9.1	9.1
S50	Tunnel Conveyor	10121	—	—	—	10452	—	—	—	5450	—	—	—
S51	Cone Crusher	10139	7.7	7.7	7.7	10470	7.3	7.3	7.3	5469	17.3	17.3	17.3
S52	CIL Tank - Electric Motor	10005	—	—	—	10335	—	—	—	5341	—	—	—
S53	CIL Tank - Electric Motor	9991	—	—	—	10322	—	—	—	5328	—	—	—
S54	CIL Tank - Electric Motor	10002	—	—	—	10332	—	—	—	5340	—	—	—
S55	CIL Tank - Electric Motor	9988	—	—	—	10318	—	—	—	5326	—	—	—
S56	CIL Tank - Electric Motor	9999	—	—	—	10330	—	—	—	5338	—	—	—
S57	CIL Tank - Electric Motor	9985	—	—	—	10316	—	—	—	5324	—	—	—
Haul Road													
L25	Truck - Cumulative Traffic on Ore Transport Route	8704	6.3	6.3	—	8535	6.5	6.5	—	11925	3.6	3.6	—
L26	Truck - Cumulative Traffic on Ore Transport Route	8706	2.3	2.3	—	8536	2.4	2.4	—	11937	—	—	—
L27	Truck - Cumulative Traffic on Ore Transport Route	56	54.5	54.5	—	389	43.3	43.3	—	106	50.9	50.9	—
L30	3/4 Ton Service Truck - Cumulative Traffic	8704	—	—	—	8535	—	—	—	11925	—	—	—
L31	3/4 Ton Service Truck - Cumulative Traffic	8706	—	—	—	8536	—	—	—	11937	—	—	—
L32	3/4 Ton Service Truck - Cumulative Traffic	56	46.6	46.6	—	389	35.3	35.3	—	106	43.0	43.0	—
Beaver Dam Mine Site													
L6	Truck - Haul Roads	12628	15.7	15.7	15.7	12626	16.4	16.4	16.4	13652	15.6	15.6	15.6
L21	Grader - Haul Roads	12465	—	—	—	12462	—	—	—	13496	—	—	—
L22	Grader - Haul Roads	13617	—	—	—	13573	—	—	—	15123	—	—	—
L23	Grader - Haul Roads	13493	—	—	—	13440	—	—	—	15127	—	—	—
L33	Truck - Haul Roads	13233	6.2	6.2	6.2	13173	6.5	6.5	6.5	14957	5.3	5.3	5.3
S59	Tracked Mobile Drill	13691	—	—	—	13645	—	—	—	15225	—	—	—
S60	Tracked Mobile Drill	13772	—	—	—	13717	—	—	—	15408	—	—	—
S61	Tracked Mobile Drill	13742	—	—	—	13691	—	—	—	15333	—	—	—
S62	Tracked Mobile Drill	13669	—	—	—	13625	—	—	—	15164	—	—	—
S104	Tracked Dozer	12623	3.6	3.6	3.6	12624	3.6	3.6	3.6	13612	2.5	2.5	2.5
S105	Tracked Dozer	12682	3.6	3.6	3.6	12677	3.6	3.6	3.6	13740	2.4	2.4	2.4
S106	Tracked Dozer	12541	3.7	3.7	3.7	12536	3.7	3.7	3.7	13604	2.6	2.6	2.6
S107	3m Light Tower	13684	—	—	—	13640	—	—	—	15196	—	—	—
S108	Hydraulic Excavator	13716	—	—	—	13671	—	—	—	15237	—	—	—
S109	Wheel Loader	13692	—	—	—	13644	—	—	—	15244	—	—	—
S110	Dewatering Pump	13735	—	—	—	13686	—	—	—	15295	—	—	—
S111	Dewatering Pump	13722	—	—	—	13673	—	—	—	15285	—	—	—
S112	Hydraulic Excavator	13773	—	—	—	13722	—	—	—	15363	—	—	—
S113	3m Light Tower	13797	—	—	—	13746	—	—	—	15386	—	—	—
S114	Hydraulic Excavator	13781	—	—	—	13729	—	—	—	15382	—	—	—
S115	Wheel Loader	13813	—	—	—	13759	—	—	—	15444	—	—	—
S116	Hydraulic Excavator	13802	—	—	—	13746	—	—	—	15447	—	—	—
S117	3m Light Tower	13822	—	—	—	13765	—	—	—	15488	—	—	—
S118	8m Light Tower	13347	—	—	—	13284	—	—	—	15103	—	—	—
S119	8m Light Tower	13281	—	—	—	13217	—	—	—	15059	—	—	—
S121	Wheel Loader	13333	—	—	—	13267	0.0	0.0	0.0	15121	—	—	—
S122	8m Light Tower	13429	—	—	—	13364	—	—	—	15207	—	—	—
S123	Truck Unloading	13420	—	—	—	13353	—	—	—	15222	—	—	—
S124	Wheeled Backhoe Loader	13383	—	—	—	13316	—	—	—	15192	—	—	—
S125	Skid Steer	13419	—	—	—	13351	—	—	—	15233	—	—	—
S126	Generator	13470	—	—	—	13398	—	—	—	15331	—	—	—
S127	Mobile_Crane	13467	1.1	1.1	1.1	13395	1.1	1.1	1.1	15335	—	—	—
S128	Forklift	13454	—	—	—	13381	—	—	—	15333	—	—	—
S129	Fuel & Lube Truck	13447	—	—	—	13373	—	—	—	15342	—	—	—
S130	Fuel & Lube Truck	13431	—	—	—	13355	—	—	—	15348	—	—	—
S131	Excavator-Mounted Breaker	13716	2.4	2.4	2.4	13664	2.9	2.9	2.9	15326	1.4	1.4	1.4
Total Facility Sound Level (1-hour Leq):			**55.5**	**55.5**	**19.5**		**43.8**	**43.8**	**19.7**		**51.4**	**51.4**	**25.9**

Note:

[1] Sound level at the receptor was calculated using Cadna A acoustical modelling software.

Appendix C

Acoustic Assessment Summary

Table 3

Acoustic Assessment Summary
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Point of Reception ID	Point of Reception Description	Time of Day	Predicted Sound Levels (L_{EQ}) (dBA)	Performance Limit[1] (L_{EQ}) (dBA)	Compliance with Performance Limit (Yes/No)
Direct Effects, Option A					
R1	9 Beaver Dam Mine Road (Marlborough Property)	07:00–19:00	48	65	Yes
		19:00–23:00	48	60	Yes
		23:00–07:00	27	55	Yes
R2	4112 Highway 224 (Beaver Lake IR 17)	07:00–19:00	30	65	Yes
		19:00–23:00	30	60	Yes
		23:00–07:00	28	55	Yes
R3	4115 Highway 224 (Cottage on Crown Land)	07:00–19:00	32	65	Yes
		19:00–23:00	32	60	Yes
		23:00–07:00	28	55	Yes
R4	3492 Highway 224 (Hobbs Property)	07:00–19:00	50	65	Yes
		19:00–23:00	50	60	Yes
		23:00–07:00	27	55	Yes
R5	3379 Highway 224 (McLeod Property)	07:00–19:00	40	65	Yes
		19:00–23:00	40	60	Yes
		23:00–07:00	27	55	Yes
R6	3373 Highway 224 (Smith Property)	07:00–19:00	38	65	Yes
		19:00–23:00	38	60	Yes
		23:00–07:00	26	55	Yes
R7	Tangier River (Deepwood Estates Property)	07:00–19:00	54	65	Yes
		19:00–23:00	54	60	Yes
		23:00–07:00	20	55	Yes
R8	Tangier River (Musqudoboit Lumber Co Ltd. Property/John Dickson Lease)	07:00–19:00	42	65	Yes
		19:00–23:00	42	60	Yes
		23:00–07:00	20	55	Yes
R9	5579 Mooseland Road (Lloy Property)	07:00–19:00	50	65	Yes
		19:00–23:00	50	60	Yes
		23:00–07:00	26	55	Yes
Direct Effects, Option B					
R1	9 Beaver Dam Mine Road (Marlborough Property)	07:00–19:00	48	65	Yes
		19:00–23:00	48	60	Yes
		23:00–07:00	27	55	Yes
R2	4112 Highway 224 (Beaver Lake IR 17)	07:00–19:00	30	65	Yes
		19:00–23:00	30	60	Yes
		23:00–07:00	28	55	Yes
R3	4115 Highway 224 (Cottage on Crown Land)	07:00–19:00	32	65	Yes
		19:00–23:00	32	60	Yes
		23:00–07:00	28	55	Yes
R4	3492 Highway 224 (Hobbs Property)	07:00–19:00	50	65	Yes
		19:00–23:00	50	60	Yes
		23:00–07:00	27	55	Yes

Table 3

Acoustic Assessment Summary
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Point of Reception ID	Point of Reception Description	Time of Day	Predicted Sound Levels (L_{EQ}) (dBA)	Performance Limit[1] (L_{EQ}) (dBA)	Compliance with Performance Limit (Yes/No)
R5	3379 Highway 224 (McLeod Property)	07:00–19:00	40	65	Yes
		19:00–23:00	40	60	Yes
		23:00–07:00	27	55	Yes
R6	3373 Highway 224 (Smith Property)	07:00–19:00	38	65	Yes
		19:00–23:00	38	60	Yes
		23:00–07:00	27	55	Yes
R7	Tangier River (Deepwood Estates Property)	07:00–19:00	54	65	Yes
		19:00–23:00	54	60	Yes
		23:00–07:00	20	55	Yes
R8	Tangier River (Musqudoboit Lumber Co Ltd. Property/John Dickson Lease)	07:00–19:00	42	65	Yes
		19:00–23:00	42	60	Yes
		23:00–07:00	20	55	Yes
R9	5579 Mooseland Road (Lloy Property)	07:00–19:00	50	65	Yes
		19:00–23:00	50	60	Yes
		23:00–07:00	27	55	Yes
Cumulative Effects, Option A					
R1	9 Beaver Dam Mine Road (Marlborough Property)	07:00–19:00	50	65	Yes
		19:00–23:00	50	60	Yes
		23:00–07:00	27	55	Yes
R2	4112 Highway 224 (Beaver Lake IR 17)	07:00–19:00	31	65	Yes
		19:00–23:00	31	60	Yes
		23:00–07:00	28	55	Yes
R3	4115 Highway 224 (Cottage on Crown Land)	07:00–19:00	33	65	Yes
		19:00–23:00	33	60	Yes
		23:00–07:00	28	55	Yes
R4	3492 Highway 224 (Hobbs Property)	07:00–19:00	56	65	Yes
		19:00–23:00	56	60	Yes
		23:00–07:00	27	55	Yes
R5	3379 Highway 224 (McLeod Property)	07:00–19:00	51	65	Yes
		19:00–23:00	51	60	Yes
		23:00–07:00	27	55	Yes
R6	3373 Highway 224 (Smith Property)	07:00–19:00	51	65	Yes
		19:00–23:00	51	60	Yes
		23:00–07:00	26	55	Yes
R7	Tangier River (Deepwood Estates Property)	07:00–19:00	55	65	Yes
		19:00–23:00	55	60	Yes
		23:00–07:00	20	55	Yes
R8	Tangier River (Musqudoboit Lumber Co Ltd. Property/John Dickson Lease)	07:00–19:00	44	65	Yes
		19:00–23:00	44	60	Yes
		23:00–07:00	20	55	Yes

Table 3

Acoustic Assessment Summary
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Point of Reception ID	Point of Reception Description	Time of Day	Predicted Sound Levels (L_{EQ}) (dBA)	Performance Limit[1] (L_{EQ}) (dBA)	Compliance with Performance Limit (Yes/No)
R9	5579 Mooseland Road (Lloy Property)	07:00–19:00	51	65	Yes
		19:00–23:00	51	60	Yes
		23:00–07:00	26	55	Yes
Cumulative Effects, Option B					
R1	9 Beaver Dam Mine Road (Marlborough Property)	07:00–19:00	50	65	Yes
		19:00–23:00	50	60	Yes
		23:00–07:00	27	55	Yes
R2	4112 Highway 224 (Beaver Lake IR 17)	07:00–19:00	31	65	Yes
		19:00–23:00	31	60	Yes
		23:00–07:00	28	55	Yes
R3	4115 Highway 224 (Cottage on Crown Land)	07:00–19:00	33	65	Yes
		19:00–23:00	33	60	Yes
		23:00–07:00	28	55	Yes
R4	3492 Highway 224 (Hobbs Property)	07:00–19:00	56	65	Yes
		19:00–23:00	56	60	Yes
		23:00–07:00	27	55	Yes
R5	3379 Highway 224 (McLeod Property)	07:00–19:00	51	65	Yes
		19:00–23:00	51	60	Yes
		23:00–07:00	27	55	Yes
R6	3373 Highway 224 (Smith Property)	07:00–19:00	51	65	Yes
		19:00–23:00	51	60	Yes
		23:00–07:00	27	55	Yes
R7	Tangier River (Deepwood Estates Property)	07:00–19:00	55	65	Yes
		19:00–23:00	55	60	Yes
		23:00–07:00	20	55	Yes
R8	Tangier River (Musqudoboit Lumber Co Ltd. Property/John Dickson Lease)	07:00–19:00	44	65	Yes
		19:00–23:00	44	60	Yes
		23:00–07:00	20	55	Yes
R9	5579 Mooseland Road (Lloy Property)	07:00–19:00	51	65	Yes
		19:00–23:00	51	60	Yes
		23:00–07:00	26	55	Yes

Note:

[1] Minimum NSEL sound level limits as defined in "Guidelines for Environmental Noise Measurement and Assessment"

Appendix D

Noise Source Sound Level Summary

Table 4

Noise Source Sound Level Summary
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Noise Source Description		1/1 Octave Band Data									Unadjusted Total Sound Power Level	Tonal Penalty Assessment		Height Absolute	Operating Time Day	Operating Time Evening	Operating Time Night	Speed	Vehicles Per Hour Day	Vehicles Per Hour Evening	Vehicles Per Hour Night	Reference/Comments
			32	63	125	250	500	1000	2000	4000	8000	(dBA)		(dBA)	(m)	(min)	(min)	(min)	(km/h)	(min)	(min)	(min)	
L6	Truck - Haul Roads	PWL (dB)	31.0	117.0	112.0	105.0	107.0	104.0	103.0	100.0	91.0	119.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												Noise Database for Construction Noise document
		PWL (dBA)	—	90.8	95.9	96.4	103.8	104.0	104.2	101.0	89.9	**109.9**	No	0	188.0	—	—	—	40	66.2	66.2	66.2	Transport Truck Route - 26ton 235kw - DEFRA Table 1(c)#16
L21	Grader - Haul Roads	PWL (dB)	-6.1	81.9	80.9	76.9	72.9	77.9	71.9	77.9	58.9	86.8											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-45.5	55.7	64.8	68.3	69.7	77.9	73.1	78.9	57.8	**82.5**	No	0	188.0	—	—	—	15	1.0	1.0	1.0	GHD Reference Spectra
L22	Grader - Haul Roads	PWL (dB)	-3.0	85.0	84.0	80.0	76.0	81.0	75.0	81.0	62.0	90.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-42.4	58.8	67.9	71.4	72.8	81.0	76.2	82.0	60.9	**85.7**	No	0	132.9	—	—	—	15	1.0	1.0	1.0	GHD Reference Spectra
L23	Grader - Haul Roads	PWL (dB)	1.1	89.1	88.1	84.1	80.1	85.1	79.1	85.1	66.1	94.1											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-38.3	62.9	72.0	75.5	76.9	85.1	80.3	86.1	65.0	**89.8**	No	0	146.2	—	—	—	15	1.0	1.0	1.0	GHD Reference Spectra
L24	Truck - Project Traffic on Ore Transport Route	PWL (dB)	31.0	117.0	112.0	105.0	107.0	104.0	103.0	100.0	91.0	119.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												Noise Database for Construction Noise document
		PWL (dBA)	—	90.8	95.9	96.4	103.8	104.0	104.2	101.0	89.9	**109.9**	No	0	97.0	—	—	—	70	11.9	11.9	—	Transport Truck Route - 26ton 235kw - DEFRA Table 1(c)#16
L25	Truck - Cumulative Traffic on Ore Transport Route	PWL (dB)	31.0	117.0	112.0	105.0	107.0	104.0	103.0	100.0	91.0	119.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												Noise Database for Construction Noise document
		PWL (dBA)	—	90.8	95.9	96.4	103.8	104.0	104.2	101.0	89.9	**109.9**	No	0	97.0	—	—	—	70	12.7	12.7	—	Transport Truck Route - 26ton 235kw - DEFRA Table 1(c)#16
L26	Truck - Cumulative Traffic on Ore Transport Route	PWL (dB)	31.0	117.0	112.0	105.0	107.0	104.0	103.0	100.0	91.0	119.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												Noise Database for Construction Noise document
		PWL (dBA)	—	90.8	95.9	96.4	103.8	104.0	104.2	101.0	89.9	**109.9**	No	0	100.6	—	—	—	70	3.6	3.6	—	Transport Truck Route - 26ton 235kw - DEFRA Table 1(c)#16
L27	Truck - Cumulative Traffic on Ore Transport Route	PWL (dB)	31.0	117.0	112.0	105.0	107.0	104.0	103.0	100.0	91.0	119.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												Noise Database for Construction Noise document
		PWL (dBA)	—	90.8	95.9	96.4	103.8	104.0	104.2	101.0	89.9	**109.9**	No	0	100.6	—	—	—	70	15.5	15.5	—	Transport Truck Route - 26ton 235kw - DEFRA Table 1(c)#16
L30	3/4 Ton Service Truck - Cumulative Traffic	PWL (dB)	47.4	54.4	71.4	72.4	82.4	82.4	79.4	75.4	66.4	87.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	8.0	28.2	55.3	63.8	79.2	82.4	80.6	76.4	65.3	**86.2**	No	0	97.0	—	—	—	70	2.5	2.5	—	GHD Reference Spectra
L31	3/4 Ton Service Truck - Cumulative Traffic	PWL (dB)	47.7	54.7	71.7	72.7	82.7	82.7	79.7	75.7	66.7	87.4											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	8.3	28.5	55.6	64.1	79.5	82.7	80.9	76.7	65.6	**86.6**	No	0	100.6	—	—	—	70	2.5	2.5	—	GHD Reference Spectra
L32	3/4 Ton Service Truck - Cumulative Traffic	PWL (dB)	7.4	98.4	97.4	90.4	90.4	88.4	86.4	77.4	68.4	102.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-32.0	72.2	81.3	81.8	87.2	88.4	87.6	78.4	67.3	**93.4**	No	0	119.1	—	—	—	70	2.5	2.5	—	GHD Reference Spectra
L33	Truck - Haul Roads	PWL (dB)	31.0	117.0	112.0	105.0	107.0	104.0	103.0	100.0	91.0	119.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												Noise Database for Construction Noise document
		PWL (dBA)	—	90.8	95.9	96.4	103.8	104.0	104.2	101.0	89.9	**109.9**	No	0	171.6	—	—	—	40	10.0	10.0	10.0	Transport Truck Route - 26ton 235kw - DEFRA Table 1(c)#16
S41	Loader - Transport of Material	PWL (dB)	31.0	114.0	120.0	123.0	111.0	102.0	100.0	95.0	89.0	125.3											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	87.8	103.9	114.4	107.8	102.0	101.2	96.0	87.9	**116.0**	No	0	163.0	60	60	60	—	—	—	—	GHD Reference Spectra
S42	Truck - Unloading Ore	PWL (dB)	31.0	119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	120.9											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	92.8	98.9	97.4	100.8	106.0	104.2	100.0	89.9	**110.2**	No	0	149.7	60	60	60	—	—	—	—	GHD Reference Spectra
S43	Loader - Face Shovel	PWL (dB)	31.0	119.0	119.0	118.0	116.0	117.0	114.0	108.0	101.0	125.4											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	92.8	102.9	109.4	112.8	117.0	115.2	109.0	99.9	**120.9**	No	0	163.0	60	60	60	—	—	—	—	GHD Reference Spectra
S44	Truck - Hopper Discharge	PWL (dB)	31.0	119.0	113.0	108.0	110.0	111.0	110.0	104.0	98.0	121.5											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	92.8	96.9	99.4	106.8	111.0	111.2	105.0	96.9	**115.5**	No	0	163.0	60	60	60	—	—	—	—	GHD Reference Spectra
S45	Heavy Duty Hopper	PWL (dB)	—	—	—	—	124.7	—	—	—	—	124.7											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	—	—	—	—	121.5	—	—	—	—	**121.5**	No	0	147.8	60	60	60	—	—	—	—	GHD Reference Spectra
S46	Jaw Crusher	PWL (dB)	31.0	122.0	122.0	119.0	118.0	116.0	114.0	109.0	100.0	127.3											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	95.8	105.9	110.4	114.8	116.0	115.2	110.0	98.9	**121.1**	No	0	148.2	60	60	60	—	—	—	—	GHD Reference Spectra
S47	Heavy Duty Belt Feeder Hopper	PWL (dB)	31.0	102.0	99.0	93.0	94.0	97.0	93.0	89.0	82.0	105.6											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	75.8	82.9	84.4	90.8	97.0	94.2	90.0	80.9	**100.2**	No	0	147.0	60	60	60	—	—	—	—	GHD Reference Spectra
S48	Cone Crusher	PWL (dB)	31.0	122.0	122.0	119.0	118.0	116.0	114.0	109.0	100.0	127.3											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	95.8	105.9	110.4	114.8	116.0	115.2	110.0	98.9	**121.1**	No	0	146.7	60	60	60	—	—	—	—	GHD Reference Spectra
S49	Twin Screen Plant	PWL (dB)	31.0	115.0	113.0	110.0	110.0	105.0	105.0	102.0	95.0	119.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	88.8	96.9	101.4	106.8	105.0	106.2	103.0	93.9	**112.1**	No	0	146.5	60	60	60	—	—	—	—	GHD Reference Spectra
S50	Tunnel Conveyor	PWL (dB)	31.0	102.0	100.0	99.0	102.0	106.0	98.0	94.0	88.0	110.0											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	75.8	83.9	90.4	98.8	106.0	99.2	95.0	86.9	**107.8**	No	0	144.0	60	60	60	—	—	—	—	GHD Reference Spectra
S51	Cone Crusher	PWL (dB)	31.0	122.0	122.0	119.0	118.0	116.0	114.0	109.0	100.0	127.3											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	95.8	105.9	110.4	114.8	116.0	115.2	110.0	98.9	**121.1**	No	0	146.1	60	60	60	—	—	—	—	GHD Reference Spectra
S52	CIL Tank - Electric Motor	PWL (dB)	10.1	80.1	83.1	85.1	94.1	88.1	94.1	82.1	74.1	98.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-29.3	53.9	67.0	76.5	90.9	88.1	95.3	83.1	73.0	**97.4**	No	0	165.5	60	60	60	—	—	—	—	GHD Reference Spectra
S53	CIL Tank - Electric Motor	PWL (dB)	10.1	80.1	83.1	85.1	94.1	88.1	94.1	82.1	74.1	98.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-29.3	53.9	67.0	76.5	90.9	88.1	95.3	83.1	73.0	**97.4**	No	0	165.5	60	60	60	—	—	—	—	GHD Reference Spectra

Table 4

Noise Source Sound Level Summary
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Noise Source Description		1/1 Octave Band Data									Unadjusted Total Sound Power Level	Tonal Penalty Assessment		Height Absolute	Operating Time Day	Operating Time Evening	Operating Time Night	Speed	Vehicles Per Hour Day	Vehicles Per Hour Evening	Vehicles Per Hour Night	Reference/Comments
			32	63	125	250	500	1000	2000	4000	8000	(dBA)		(dBA)	(m)	(min)	(min)	(min)	(km/h)	(min)	(min)	(min)	
S54	CIL Tank - Electric Motor	PWL (dB)	10.1	80.1	83.1	85.1	94.1	88.1	94.1	82.1	74.1	98.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-29.3	53.9	67.0	76.5	90.9	88.1	95.3	83.1	73.0	**97.4**	No	0	165.5	60	60	60	—	—	—	—	GHD Reference Spectra
S55	CIL Tank - Electric Motor	PWL (dB)	10.1	80.1	83.1	85.1	94.1	88.1	94.1	82.1	74.1	98.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-29.3	53.9	67.0	76.5	90.9	88.1	95.3	83.1	73.0	**97.4**	No	0	165.5	60	60	60	—	—	—	—	GHD Reference Spectra
S56	CIL Tank - Electric Motor	PWL (dB)	10.1	80.1	83.1	85.1	94.1	88.1	94.1	82.1	74.1	98.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-29.3	53.9	67.0	76.5	90.9	88.1	95.3	83.1	73.0	**97.4**	No	0	165.5	60	60	60	—	—	—	—	GHD Reference Spectra
S57	CIL Tank - Electric Motor	PWL (dB)	10.1	80.1	83.1	85.1	94.1	88.1	94.1	82.1	74.1	98.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-29.3	53.9	67.0	76.5	90.9	88.1	95.3	83.1	73.0	**97.4**	No	0	165.5	60	60	60	—	—	—	—	GHD Reference Spectra
S59	Tracked Mobile Drill	PWL (dB)	31.0	114.0	115.0	110.0	116.0	113.0	110.0	106.0	102.0	121.5											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	87.8	98.9	101.4	112.8	113.0	111.2	107.0	100.9	**117.8**	No	0	133.0	60	60	60	—	—	—	—	GHD Reference Spectra
S60	Tracked Mobile Drill	PWL (dB)	31.0	114.0	115.0	110.0	116.0	113.0	110.0	106.0	102.0	121.5											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	87.8	98.9	101.4	112.8	113.0	111.2	107.0	100.9	**117.8**	No	0	133.0	60	60	60	—	—	—	—	GHD Reference Spectra
S61	Tracked Mobile Drill	PWL (dB)	31.0	114.0	115.0	110.0	116.0	113.0	110.0	106.0	102.0	121.5											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	87.8	98.9	101.4	112.8	113.0	111.2	107.0	100.9	**117.8**	No	0	132.8	60	60	60	—	—	—	—	GHD Reference Spectra
S62	Tracked Mobile Drill	PWL (dB)	31.0	114.0	115.0	110.0	116.0	113.0	110.0	106.0	102.0	121.5											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	87.8	98.9	101.4	112.8	113.0	111.2	107.0	100.9	**117.8**	No	0	133.0	60	60	60	—	—	—	—	GHD Reference Spectra
S104	Tracked Dozer	PWL (dB)	31.0	120.0	121.0	122.0	104.0	105.0	101.0	99.0	95.0	125.9											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	93.8	104.9	113.4	100.8	105.0	102.2	100.0	93.9	**115.1**	No	0	189.0	60	60	60	—	—	—	—	GHD Reference Spectra
S105	Tracked Dozer	PWL (dB)	31.0	120.0	121.0	122.0	104.0	105.0	101.0	99.0	95.0	125.9											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	93.8	104.9	113.4	100.8	105.0	102.2	100.0	93.9	**115.1**	No	0	189.0	60	60	60	—	—	—	—	GHD Reference Spectra
S106	Tracked Dozer	PWL (dB)	31.0	120.0	121.0	122.0	104.0	105.0	101.0	99.0	95.0	125.9											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	93.8	104.9	113.4	100.8	105.0	102.2	100.0	93.9	**115.1**	No	0	189.0	60	60	60	—	—	—	—	GHD Reference Spectra
S107	3m Light Tower	PWL (dB)	31.0	109.0	102.0	97.0	93.0	90.0	86.0	87.0	80.0	110.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	82.8	85.9	88.4	89.8	90.0	87.2	88.0	78.9	**96.5**	No	0	133.0	60	60	60	—	—	—	—	GHD Reference Spectra
S108	Hydraulic Excavator	PWL (dB)	31.0	116.0	109.0	108.0	108.0	104.0	102.0	96.0	94.0	118.1											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	89.8	92.9	99.4	104.8	104.0	103.2	97.0	92.9	**109.8**	No	0	132.0	60	60	60	—	—	—	—	GHD Reference Spectra
S109	Wheel Loader	PWL (dB)	31.0	119.0	115.0	112.0	115.0	107.0	101.0	99.0	92.0	122.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	92.8	98.9	103.4	111.8	107.0	102.2	100.0	90.9	**114.2**	No	0	133.0	60	60	60	—	—	—	—	GHD Reference Spectra
S110	Dewatering Pump	PWL (dB)	31.0	112.0	113.0	98.0	103.0	102.0	105.0	104.0	97.0	116.6											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	85.8	96.9	89.4	99.8	102.0	106.2	105.0	95.9	**110.4**	No	0	131.0	60	60	60	—	—	—	—	GHD Reference Spectra
S111	Dewatering Pump	PWL (dB)	31.0	112.0	113.0	98.0	103.0	102.0	105.0	104.0	97.0	116.6											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	85.8	96.9	89.4	99.8	102.0	106.2	105.0	95.9	**110.4**	No	0	131.0	60	60	60	—	—	—	—	GHD Reference Spectra
S112	Hydraulic Excavator	PWL (dB)	31.0	116.0	109.0	108.0	108.0	104.0	102.0	96.0	94.0	118.1											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	89.8	92.9	99.4	104.8	104.0	103.2	97.0	92.9	**109.8**	No	0	131.6	60	60	60	—	—	—	—	GHD Reference Spectra
S113	3m Light Tower	PWL (dB)	31.0	109.0	102.0	97.0	93.0	90.0	86.0	87.0	80.0	110.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	82.8	85.9	88.4	89.8	90.0	87.2	88.0	78.9	**96.5**	No	0	132.5	60	60	60	—	—	—	—	GHD Reference Spectra
S114	Hydraulic Excavator	PWL (dB)	31.0	116.0	109.0	108.0	108.0	104.0	102.0	96.0	94.0	118.1											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	89.8	92.9	99.4	104.8	104.0	103.2	97.0	92.9	**109.8**	No	0	131.3	60	60	60	—	—	—	—	GHD Reference Spectra
S115	Wheel Loader	PWL (dB)	31.0	119.0	115.0	112.0	115.0	107.0	101.0	99.0	92.0	122.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	92.8	98.9	103.4	111.8	107.0	102.2	100.0	90.9	**114.2**	No	0	133.0	60	60	60	—	—	—	—	GHD Reference Spectra
S116	Hydraulic Excavator	PWL (dB)	31.0	116.0	109.0	108.0	108.0	104.0	102.0	96.0	94.0	118.1											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	89.8	92.9	99.4	104.8	104.0	103.2	97.0	92.9	**109.8**	No	0	132.0	60	60	60	—	—	—	—	GHD Reference Spectra
S117	3m Light Tower	PWL (dB)	31.0	109.0	102.0	97.0	93.0	90.0	86.0	87.0	80.0	110.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	82.8	85.9	88.4	89.8	90.0	87.2	88.0	78.9	**96.5**	No	0	133.0	60	60	60	—	—	—	—	GHD Reference Spectra
S118	8m Light Tower	PWL (dB)	31.0	109.0	102.0	97.0	93.0	90.0	86.0	87.0	80.0	110.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	82.8	85.9	88.4	89.8	90.0	87.2	88.0	78.9	**96.5**	No	0	178.0	60	60	60	—	—	—	—	GHD Reference Spectra
S119	8m Light Tower	PWL (dB)	31.0	109.0	102.0	97.0	93.0	90.0	86.0	87.0	80.0	110.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	82.8	85.9	88.4	89.8	90.0	87.2	88.0	78.9	**96.5**	No	0	176.5	60	60	60	—	—	—	—	GHD Reference Spectra
S120	Jaw Crusher	PWL (dB)	109.9	118.0	117.0	114.4	113.5	108.6	105.6	100.3	93.8	122.7											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	70.5	91.8	100.9	105.8	110.3	108.6	106.8	101.3	92.7	**114.7**	No	0	173.4	60	60	60	—	—	—	—	GHD Reference Spectra
S121	Wheel Loader	PWL (dB)	31.0	119.0	115.0	112.0	115.0	107.0	101.0	99.0	92.0	122.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	92.8	98.9	103.4	111.8	107.0	102.2	100.0	90.9	**114.2**	No	0	172.5	60	60	60	—	—	—	—	GHD Reference Spectra
S122	8m Light Tower	PWL (dB)	31.0	109.0	102.0	97.0	93.0	90.0	86.0	87.0	80.0	110.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	82.8	85.9	88.4	89.8	90.0	87.2	88.0	78.9	**96.5**	No	0	176.4	60	60	60	—	—	—	—	GHD Reference Spectra
S123	Truck Unloading	PWL (dB)	31.0	119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	120.9											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	92.8	98.9	97.4	100.8	106.0	104.2	100.0	89.9	**110.2**	No	0	170.9	60	60	60	—	—	—	—	GHD Reference Spectra

Table 4

Noise Source Sound Level Summary
Atlantic Mining NS Inc.
Beaver Dam Mine, Halifax, NS

Cadna A ID	Noise Source Description		1/1 Octave Band Data									Unadjusted Total Sound Power Level	Tonal Penalty Assessment		Height Absolute	Operating Time Day	Operating Time Evening	Operating Time Night	Speed	Vehicles Per Hour Day	Vehicles Per Hour Evening	Vehicles Per Hour Night	Reference/Comments
			32	63	125	250	500	1000	2000	4000	8000	(dBA)		(dBA)	(m)	(min)	(min)	(min)	(km/h)	(min)	(min)	(min)	
S124	Wheeled Backhoe Loader	PWL (dB)	31.0	99.0	98.0	94.0	93.0	93.0	92.0	85.0	78.0	103.6											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	72.8	81.9	85.4	89.8	93.0	93.2	86.0	76.9	**97.8**	No	0	169.7	60	60	60	—	—	—	—	GHD Reference Spectra
S125	Skid Steer	PWL (dB)	—	103.0	115.0	106.0	107.0	103.0	101.0	97.0	87.0	116.7											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-39.4	76.8	98.9	97.4	103.8	103.0	102.2	98.0	85.9	**109.1**	No	0	168.1	60	60	60	—	—	—	—	GHD Reference Spectra
S126	Generator	PWL (dB)	103.3	110.5	115.2	116.0	114.9	112.8	110.7	108.1	95.1	121.9											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	63.9	84.3	99.1	107.4	111.7	112.8	111.9	109.1	94.0	**118.1**	No	0	165.7	60	60	60	—	—	—	—	GHD Reference Spectra
S127	Mobile_Crane	PWL (dB)	31.0	121.0	112.0	109.0	105.0	108.0	107.0	100.0	92.0	122.2											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	94.8	95.9	100.4	101.8	108.0	108.2	101.0	90.9	**112.5**	No	0	168.3	60	60	60	—	—	—	—	GHD Reference Spectra
S128	Forklift	PWL (dB)	87.8	101.1	97.2	98.7	95.1	93.3	93.8	87.9	83.4	105.4											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	48.4	74.9	81.1	90.1	91.9	93.3	95.0	88.9	82.3	**99.5**	No	0	166.6	60	60	60	—	—	—	—	GHD Reference Spectra
S129	Fuel & Lube Truck	PWL (dB)	31.0	110.0	104.0	102.0	106.0	103.0	100.0	90.0	81.0	113.3											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	83.8	87.9	93.4	102.8	103.0	101.2	91.0	79.9	**107.5**	No	0	167.5	60	60	60	—	—	—	—	GHD Reference Spectra
S130	Fuel & Lube Truck	PWL (dB)	31.0	110.0	104.0	102.0	106.0	103.0	100.0	90.0	81.0	113.3											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	83.8	87.9	93.4	102.8	103.0	101.2	91.0	79.9	**107.5**	No	0	167.4	60	60	60	—	—	—	—	GHD Reference Spectra
S131	Excavator-Mounted Breaker	PWL (dB)	31.0	122.0	120.0	116.0	120.0	118.0	118.0	115.0	111.0	127.5											
		A-weighted correction	-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1												
		PWL (dBA)	-8.4	95.8	103.9	107.4	116.8	118.0	119.2	116.0	109.9	**124.0**	No	0	132.5	60	60	60	—	—	—	—	GHD Reference Spectra


GHD