Appendix 41

Meadowbank and Whale Tail 2024 Noise Monitoring Report

AGNICO EAGLE

MEADOWBANK COMPLEX

2024 Noise Monitoring Report

In Accordance with NIRB Project Certificates No.004 and No. 008

Prepared by:
Agnico Eagle Mines Limited – Meadowbank Complex

March, 2025

EXECUTIVE SUMMARY

The 2024 noise monitoring program at the Meadowbank Complex was conducted according to the Noise Monitoring and Abatement Plan (Version 4, December 2018). The objective of this program is to measure noise levels at 11 previously determined monitoring locations (R1 – R11) around the Meadowbank Complex, over at least two 24 h periods annually. One additional far-field station at the Whale Tail Mine Local Study Area boundary (R12) is also surveyed periodically. Since high winds in the area tend to substantially reduce the quantity of available valid data, Agnico Eagle aims to conduct a minimum of two monitoring events of two or more days per station to fulfill monitoring objectives.

In 2024, at least two surveys were successfully completed for nine of 11 monitoring locations. One survey was successfully completed for each of the remaining two stations, with five additional attempts invalidated for a variety of reasons (e.g. fallen microphone).

After data processing in keeping with standard methods (Alberta Energy Resource Conservation Board Directive 038), monitoring results collected under specified weather conditions were compared to the site's daytime and night-time target sound levels. Measured values were also compared to FEIS predictions for Project + background sound levels at the monitoring locations.

In 2024, all monitoring results (Table 1) met daytime and nighttime design targets. For one of the two surveys at station R5, one hourly L_{eq} values (11 am – 12 pm on August 9; 59 dBA) marginally exceeded the FEIS-predicted maximum (57 dBA). This was caused by a brief (<2 minute) aircraft fly-over. Aircraft were not included in FEIS noise models since they are an occasional occurrence. They may also be related to exploration activities in the region, rather than mine operation. Results for all other surveys and monitoring stations were less than FEIS predictions. Historical comparisons indicate no clear trends towards increasing sound levels above predictions.

No human receptors (e.g. cabins) are located in the vicinity of noise monitoring stations, and no noise-related complaints have been received to date. Impacts of sensory disturbance on wildlife are determined separately through the Terrestrial Ecosystem Monitoring Plan (TEMP) and reported annually in the Wildlife Summary Report.

Based on these results, no changes to noise abatement or mitigation measures are proposed at this time.

Table 1. Daytime, night-time, and 24-h L_{eq} values for monitoring locations R1 – R11.

Monitoring Station and Survey Start Date (MM/DD)		$L_{eq,\ day}$ (dBA)	$L_{eq,\ night}$ (dBA)	*FEIS Prediction (dBA)*	$L_{eq,\ 24h}$ (dBA)
		Design Target = 55 dBA	*Design Target = 45 dBA*		
R1	Jun. 27 - 29	40.1	-	*58 - 63*	-
	Jul. 16 - 19	(IS)	(IS)		(IS)
R2	Jul. 6 - 9	38.6	-	*58 - 63*	-
	Aug. 7 - 9	48.3	33.4		46.0
R3	Aug. 2 - 5	33.7	32.9	*49 - 53*	33.3
	Aug. 17 - 19	32.9	36.1		34.2
R4	Jul. 20 - 22	34.0	38.2	*58 - 63*	36.5
	Aug. 22 - 24	-	36.1		-
R5	Jul. 15 - 17	48.2	-	*57**	54.1*
	Aug. 7 - 9	49.7	35.3		*(59.9)*^*
	Sept. 4	(IS)	(IS)		(IS)
R6	Aug. 2 - 5	31.7	24.2	*40.5 - 42.5*	29.2
	Aug. 11 - 14	35.7	32.1		34.8
R7	Jun. 18 - 20	(IS)	(IS)	*36.2 - 40.4*	(IS)
	Jul. 26 - 29	(IS)	(IS)		(IS)
	Aug. 27	-	(IS)		-
	Sep. 24 - 26	35.8	34.9		35.5
R8a	Jul. 12 - 13	36.2	28.3	*36.2 - 40.4*	34.8
	Aug. 11 - 14	35.0	36.6		35.9
	Aug. 27 - 30	37.0	35.6		36.6
R9a	Jul. 12 - 14	34.7	28.9	*40.4 - 45.1*	33.5
	Jul. 21 - 23	34.7	30.7		33.5
R10a	Jul. 1 – 3	35.0	31.4	*36.2 - 40.4*	33.4
	Sept. 6 - 7	35.8	38.1		37.3
	Sept. 24 - 26	30.9	31.5		31.1
R11a	Jun. 25 - 29	(IS)	(IS)	*45.1 - 50.0*	(IS)
	Jul. 26 - 29	36.3	36.5		36.3
	Aug 17 - 19	28.0	26.4		27.4

(-) Monitoring period with insufficient valid data due to weather conditions outside targets.
*R5 values are max. 1-h L_{eq}.
^L_{eq} elevated due to helicopter flyovers; not suitable for comparison to FEIS prediction (see text).
IS = Invalid survey due to incomplete data set (R1), battery failure (R7, R11) or a fallen microphone (R5, R7)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

SECTION 1 • INTRODUCTION

Since 2008, Agnico Eagle Mines Ltd. (Agnico Eagle) has conducted outdoor noise monitoring at the Meadowbank Complex, near Baker Lake, Nunavut, in accordance with NIRB Project Certificate No. 004. The Noise Monitoring and Abatement Plan (Version 4; December, 2018) was updated to include monitoring for the Whale Tail Pit Expansion Project, according to NIRB Project Certificate No. 008. The objective of this monitoring program is to measure representative ambient outdoor sound levels at the Meadowbank Complex, to inform the implementation of noise mitigation measures.

1.1 MONITORING STATIONS

To fulfill monitoring objectives, the Noise Monitoring and Abatement Plan (the Plan) indicates that at least two 24 h surveys of ambient outdoor noise will be conducted annually at 11 representative locations site-wide. However, due to a tendency towards sub-optimal weather conditions for noise monitoring (see Section 2.2), Agnico Eagle aims to conduct a minimum of two 48-h surveys for each location. In addition to the annual monitoring stations, noise surveys are to be conducted periodically at a far-field station (R12) to confirm impact assessment predictions for noise levels at the Whale Tail Mine Local Study Area boundary.

Survey dates in 2024 and UTM coordinates for the monitoring stations are provided in Table 2. Stations are shown in relation to mine site features in Figures 1 and 2. Photos of the monitoring locations in 2024 are provided in Appendix A.

Noise monitoring stations R1 – R5 for the Meadowbank Mine have been in place with minor adjustments since 2008. Stations R6 – R11 were added in 2018 in response to development of the Whale Tail Pit and Haul Road, and sited according to the Noise Monitoring and Abatement Plan (Version 3 – June, 2018). Stations R8 – R11 were ultimately moved according to the Noise Monitoring and Abatement Plan (Version 4 – December, 2018) to accommodate the Whale Tail Pit Expansion Project. For clarity, Version 4 locations are referred to here as R8a, R9a, R10a, and R11a, and monitoring at those locations began in 2021 (R11a) or 2022 (R8a, R9a, R10a). Both Version 3 and Version 4 locations are shown in Figure 2.

Table 2. UTM coordinates and successful sound recording start/stop times for the Meadowbank Complex noise monitoring locations in 2024.

Monitoring Location	UTM Coordinates	Event #	Recording Start Time (Local)	Recording Stop Time (Local)
R1	14N 636151 7217333	1	2024-06-27 15:14	2024-06-29 3:51
R2	14N 636795 7214435	1	2024-07-06 10:43	2024-07-09 6:52
		2	2024-08-07 14:42	2024-08-09 14:57
R3	14N 641121 7214417	1	2024-08-02 8:33	2024-08-05 9:04
		2	2024-08-17 8:45	2024-08-19 14:59
R4	14N 639441 7218750	1	2024-07-20 13:42	2024-07-22 13:22
		2	2024-08-22 10:56	2024-08-23 11:23
R5	14N 633779 7214494	1	2024-07-15 16:24	2024-07-17 1:03
		2	2024-08-07 13:45	2024-08-09 14:22
R6	14N 640708 7221964	1	2024-08-02 8:55	2024-08-05 8:44
		2	2024-08-11 14:53	2024-08-14 9:11

Monitoring Location	UTM Coordinates	Event #	Recording Start Time (Local)	Recording Stop Time (Local)
R7	14N 620194 7239038	1	2024-08-27 10:52	2024-08-27 17:14
		2	2024-09-24 13:55	2024-09-26 7:38
R8a	14N 612414 7256890	1	2024-07-12 11:21	2024-07-13 13:47
		2	2024-08-11 14:00	2024-08-14 10:08
		3	2024-08-27 10:12	2024-08-30 5:32
R9a	14N 603301 7256750	1	2024-07-12 10:56	2024-07-14 13:33
		2	2024-07-21 12:00	2024-07-23 10:39
R10a	14N 608154 7250529	1	2024-07-01 15:28	2024-07-03 14:27
		2	2024-09-06 10:17	2024-09-07 10:47
		3	2024-09-24 14:25	2024-09-26 8:03
R11a	14N 606756 7258558	1	2024-07-26 9:04	2024-07-29 12:17
		2	2024-08-17 14:10	2024-08-19 10:04

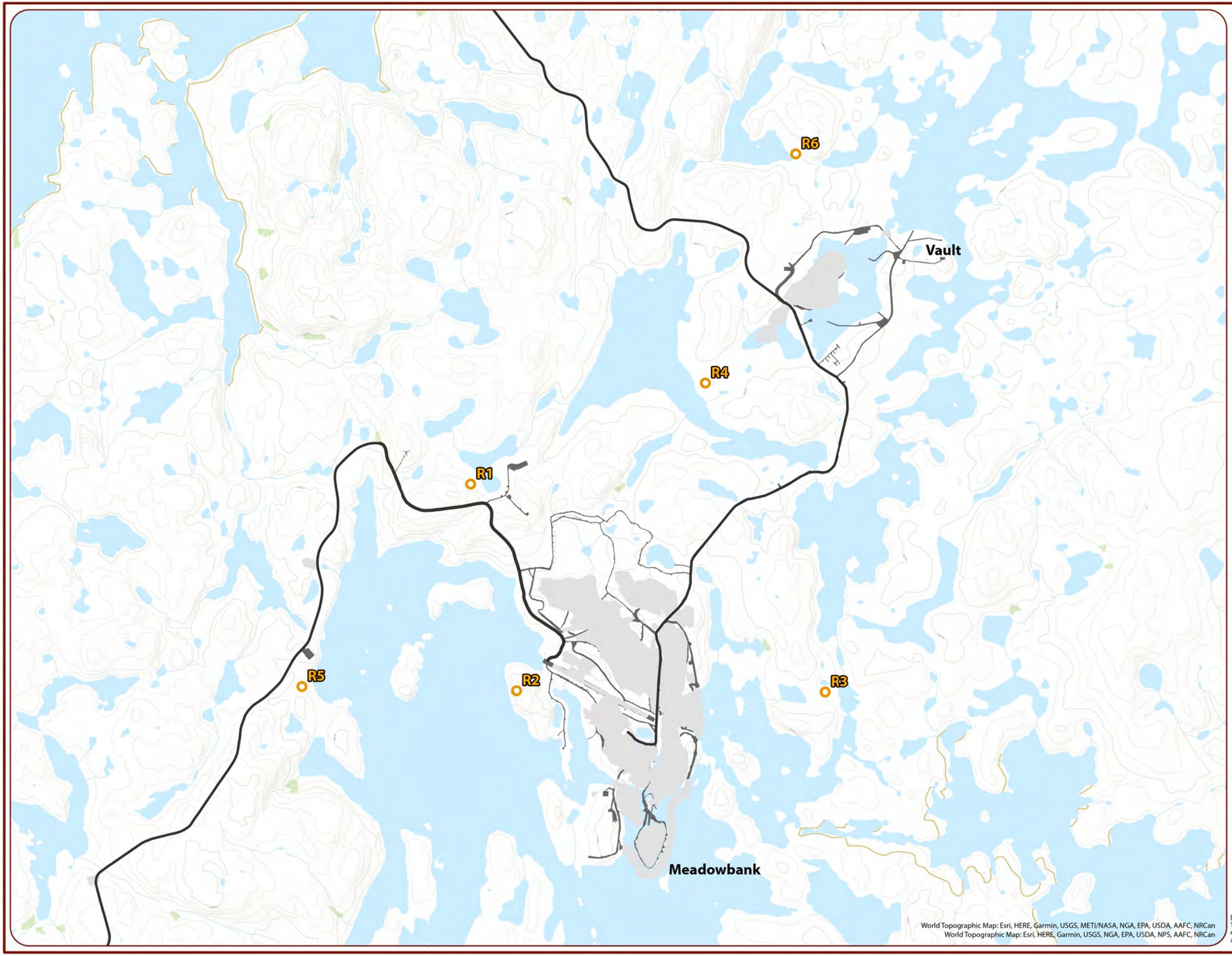
PROJECT: DA11-062-08

CLIENT: Agnico-Eagle Mines Ltd. Meadowbank Division

DATE: 12, March 2022

DRAWN BY: Janel Sauder/Nicole White

Figure 1:
Noise Monitoring
Locations R1 - R6



- Noise Monitoring Location
- Road
- Mine Site

0 0.5 1 2

Kilometres

SCALE: 1:50,000

N

UTM Zone 17N NAD83

World Topographic Map: Esri, HERE, Garmin, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCan
World Topographic Map: Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, AAFC, NRCan

PROJECT: DA11-062-08

CLIENT: Agnico-Eagle Mines Ltd. Meadowbank Division

DATE: 12, February 2023

DRAWN BY: Janel Sauder/Nicole White

Figure 2
Noise Monitoring
Locations R7 - R12

- Noise Monitoring Location

Mine Plan (2025)

- Whale Tail Haul Road
- Road
- Mine Site

0 0.75 1.5 3

Kilometres

SCALE: 1:80,000

N

UTM Zone 17N NAD83

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN
77 Wyndham Street South
Guelph, ON N1E 5R1
T 519.822.1609 • F 519.822.5389
www.dougan.ca

1.1.1 R1

Monitoring station R1 was initially approximately 700 m south of the explosive storage area, and 400 m northeast of the all-weather access road. A spur road and a storage area were constructed within 100 m of this location in 2011. As a result, in 2014 Agnico Eagle moved this station approximately 700 m northwest of the explosives storage area to better represent the originally intended orientation.

1.1.2 R2

Monitoring station R2 is approximately 600 m west of the airstrip. Third Portage Lake is to the west and southwest and surrounding terrain is vegetated tundra with rocky outcrops.

1.1.3 R3

Monitoring station R3 is approximately 1,800 m east of the East Dike. Second Portage Lake is to the west and east, and surrounding terrain is vegetated tundra with rocky outcrops.

1.1.4 R4

Monitoring station R4 is approximately 1,500 m southwest of Vault Pit, 1,000 m from Phaser Pit, and less than 1 km from the Vault Haul Road. Turn Lake is to the west, and surrounding terrain is vegetated tundra with rocky outcrops.

1.1.5 R5

Monitoring station R5 is approximately 500 m south of the exploration camp and 300 m east of the all-weather access road. Third Portage Lake is immediately to the east, and surrounding terrain away from the shoreline is vegetated tundra with rocky outcrops. This location is situated on a known caribou migration route.

1.1.6 R6

Monitoring station R6 is located approximately 1,500 m east from the Whale Tail Haul Road and approximately 1,500 m north from the centre of Vault Pit. The terrain is relatively flat and covered by vegetation typical of tundra (i.e., low vegetation). In addition, the ground surface near the receptor is covered by scattered rocks. The waste rock storage area of the Vault Pit is located approximately 750 m south from the monitoring site.

1.1.7 R7

Monitoring station R7 is located approximately 1,500 m east from the Whale Tail Haul Road. The ground surface around the monitoring site is generally covered by typical tundra vegetation and scattered rocks.

1.1.8 R8 and R8a

From 2018 – 2021, station R8 was located on an elevated plateau approximately 1,500 m northeast from the Whale Tail Pit site. The ground surface in that area is covered by typical tundra vegetation and scattered rocks. This monitoring station was 150 m east of the original baseline monitoring location due to ongoing quarrying activities.

Beginning in 2022, this station was moved to approximately 1,500 m east from the Whale Tail Pit Expansion Project, in accordance with the Noise Monitoring and Abatement Plan, Version 4 (December, 2018). This location is referred to as R8a.

1.1.9 R9 and R9a

From 2018 – 2021, station R9 was located approximately 1,500 m northwest from Whale Tail Pit. The ground surface in that area is covered by typical tundra vegetation and scattered rocks.

Beginning in 2022, this station was re-located to approximately 1,500 m west from the Whale Tail Pit Expansion Project, in accordance with the Noise Monitoring and Abatement Plan, Version 4 (December, 2018). This location is referred to as R9a.

1.1.10 R10 and R10a

From 2018 – 2021, station R10 was located approximately 1,000 m southeast from the Whale Tail Pit site, on the east side of Whale Tail Lake.

Beginning in 2022, this station was re-located to approximately 1,500 m south from the Whale Tail Pit Expansion Project, in accordance with the Noise Monitoring and Abatement Plan, Version 4 (December, 2018). This location is referred to as R10a.

1.1.11 R11 and R11a

From 2018 – 2020, station R11 was located approximately 1,000 m north from the Whale Tail Pit site, on the east side of Nemo Lake.

Beginning in 2021, station R11 was re-located to approximately 1,500 m north from the Whale Tail Pit Expansion Project in accordance with the Noise Monitoring and Abatement Plan, Version 4 (December, 2018). This location is referred to as R11a.

1.1.12 R12

R12 corresponds to the location on the Local Study Area boundary with the maximum predicted Project noise levels (Rmax in Agnico Eagle, 2018 – Section 4.4.3.1.1). This station is located approximately 5 km west from the Whale Tail Pit Expansion Project site, and the surrounding terrain is a gently sloping tundra plateau with scattered small boulders. Monitoring for this location is required periodically, and was conducted in 2022, to correspond with the year of highest predicted noise impact. One survey was also conducted opportunistically in 2023. None were required in 2024.

SECTION 2 • METHODS

In 2024, Agnico Eagle technicians aimed to conduct two or more noise surveys at each of the locations described in Section 1.1. These surveys provide data on average noise levels during a typical day, as well as variability of noise levels within the day.

Two or more 24 h+ surveys were successfully completed for nine of the 11 stations. For stations R1 and R7,, multiple survey attempts were made but were only one per station was completed successfully for a variety of reasons (fallen microphone, battery failure, accidental data loss).

2.1 SOUND LEVEL METER

For all stations a Bruel and Kjaer Model 2250 integrating sound level meter was used to conduct the noise survey. As in the past, the sound level logging rate was set at one-minute intervals.

The parameters logged each minute included:

- Equivalent continuous A-weighted sound level – L_{Aeq}
- Absolute maximum sound level, in dBA – L_{max}
- Absolute minimum sound level, in dBA – L_{min}
- Statistical data – e.g. L_{10}, L_{90}

Sound recordings were also obtained for the complete duration of all monitoring events to facilitate data interpretation.

Calibration of the instrument was performed before and after each monitoring event using a Bruel and Kjaer Type 4231 Calibrator, to ensure variance was within 0.5 dB (see field notes, Appendix C). Estimated uncertainty of the calibrator is ± 0.12 dB at a 99% confidence level.

2.2 WEATHER DATA

Weather data for the noise monitoring periods was collected using the mine site's permanent weather stations. The Meadowbank Mine weather station data was used for analysis of noise monitoring stations R1 – R6, and the Whale Tail Mine weather station data was used for analysis of noise monitoring stations R7 – R12. Hourly data for wind, temperature, and relative humidity was available from these stations. Precipitation events were recorded for each site using a rain gauge, read approximately daily.

The Alberta Energy Regulator Directive 038 (AER, 2023) identifies preferred weather conditions for data validity in noise complaint investigations, because wind and precipitation can affect sound levels. Based on these guidelines and the intent of the annual ambient noise monitoring program, recorded data was filtered to remove measurements when average measured wind speed exceeded 15 km/h (4.17 m/s). This is the highest acceptable wind speed over an extended period for use in noise monitoring complaint situations in AER (2023). Although this value is specified for sites located in closer proximity to noise sources than most Meadowbank Complex monitoring stations, and AER (2023) recommends different wind speed limits depending on wind direction, this screening approach is considered appropriate here for general comparison with site noise targets, since higher winds dominate in this area (e.g. summertime average of 20 km/h in 2024), no residential receptors (e.g.

cabins) are located in the vicinity of the Project, and no noise-related complaints have been received. This approach also facilitates comparison with historical values, which were screened in the same manner according to recommendations in AER (2007).

Average hourly wind speed values from onsite weather stations were used since filtering based on maximum values has historically resulted in exclusion of nearly the entire noise dataset. As a result, the possibility for undocumented local gusts in excess of 15 km/h is noted. Data filtering for precipitation occurs on an as-needed basis, through review of field notes and sound recordings, and cross-referencing hourly humidity data with recorded precipitation events. Any data filtered out on this basis is described in the Results section, below.

Weather data (wind speed, wind direction, temperature, and humidity) for the monitoring periods are provided in Appendix B.

2.3 FIELD NOTES

A pocket weather meter (Kestrel 3000) was used by field staff to record wind speed, direction, relative humidity, and temperature at the beginning and end of each monitoring period. Other observations included precipitation, cloud cover and observed noise sources during instrument set-up and take-down. All field observations are provided in Appendix C.

2.4 DATA ANALYSIS

Since noise levels vary constantly over time, the monitoring instruments used at the Meadowbank Complex measure continuously and record a single-number value for each minute, representing the equivalent A-weighted sound level (referred to here as L_{eq}).

All datapoints associated with the first and last hour of measurement were filtered out to remove noise from technicians, and to ensure more than 30 min of data contributed to hourly averages. Recorded one-minute L_{eq} values were then used to calculate hourly equivalent noise levels ($L_{eq, 1h}$). After filtering based on weather considerations (Section 2.2), valid hourly L_{eq} values were energy-averaged across calendar days within a monitoring event (usually two sequential 24-h periods) and average values for each hour were used to calculate daytime (7am-11pm), night-time (11pm-7am) and 24 h L_{eq} values for each event. This approach was taken beginning in 2016 due to the frequency of high-wind conditions, in order to maximize the utility of the available data, and obtain day- and night-time L_{eq} values with at least 3 h of coverage.

When calculated L_{eq} values exceeded FEIS predictions or noise targets, sound recordings were reviewed to identify and if appropriate, remove noise data dominated by background noise sources unrelated to mine activity, and causing recorded L_{eq} values in excess of FEIS predictions or noise targets (e.g. wind gusts, ongoing animal disturbance in close proximity to the microphone, human interference, steady precipitation). Sounds from aircraft were not specifically removed, but a discussion of their impact on results is provided when necessary. Since these are occasional occurrences, often related to exploration rather than operational activities, they are not generally included in FEIS noise modelling exercises. After this second data filtering, hourly L_{eq} values with less than 30 min of valid data were excluded from calculations, in accordance with Directive 038. Similarly, day- and night-time, and 24-h L_{eq} values were only calculated when more than 180 valid minutes were available from each of the daytime and nighttime periods.

These final L_{eq} values were compared to FEIS predictions and the site's noise-related design targets (see Table 3).

2.5 AMBIENT NOISE TARGETS AND FEIS PREDICTIONS

Although no residential receptors are located nearby, Agnico Eagle aims to meet target sound levels identified in Environment Canada's "Environmental Code of Practice for Metal Mines" (2009) for all monitoring locations. These values are 55 dBA (daytime) and 45 dBA (night-time).

For all monitoring stations, results are also compared to predictions of sound levels made in the Project FEIS documents for the Meadowbank and Whale Tail Mines (Cumberland, 2005; Agnico Eagle, 2016; 2018) (Table 3). Table 3 identifies FEIS (Agnico Eagle, 2016) predictions for Phase 1 of the Whale Tail Project, which are applied to results obtained in 2018 and 2019, and FEIS Addendum (Agnico Eagle, 2018 – Whale Tail Pit Expansion Project) predictions for both *Noise Abatement and Monitoring Plan* Version 3 locations (R8 – R11) and Version 4 locations (R8a – R11a), which are applied to results obtained in 2020+, as indicated in the table.

Predictions for Whale Tail Mine sites R6 – R12 have been adjusted to include contributions from background sound levels (39 dBA for R6, 30 dBA for R7-R12), as measured in the impact assessment for that project (Agnico Eagle, 2018). For the initial Meadowbank EIS (sites R1 – R5; Cumberland, 2005), contributions from background noise were not measured and assumed to be negligible in comparison to project-related noise, and were not quantified, so no adjustment was made.

It is noted that noise modeling for EIS purposes determined a single sound pressure level produced by a specified combination of Project-related activities at a given location under certain assumed atmospheric conditions. In reality, measured noise levels vary over time, depending on contributions from background sources, wind direction, ongoing or punctual activities, etc. Thus while FEIS predictions are not specifically time-averaged, they are compared here to the 24-h L_{eq} calculated from monitoring results, which represents the average sound pressure level produced by all sources over the course of a day, under varying climatic conditions including wind speeds and direction. This evaluation is therefore considered a screening-level comparison for the purposes of noise management, and not a comprehensive validation of those model predictions.

Finally, in the FEIS Addendum for the Whale Tail Pit (Agnico Eagle, 2018), noise impacts were assessed by comparing modeled Project sound levels at the noise local study area (LSA) boundary (5 km from the Project footprint) with Permissible Sound Levels (PSLs) from AER Directive 038 (40 dBA night-time, 50 dBA daytime). Since all the regular monitoring locations for the Whale Tail Mine are located well within the noise LSA (closer to project infrastructure), annual monitoring results are not compared to the PSL at this time. In accordance with noise mitigation measures listed in the FEIS Addendum (Volume 3, Appendix 3-C, Table 3-C-1), periodic far-field monitoring is conducted at the LSA boundary to confirm adherence with the PSLs. This far-field monitoring (station R12) occurred for the first time in 2022, to coincide with the anticipated year of maximum production and maximum sound emissions, as indicated in the FEIS Addendum. One survey was also conducted opportunistically at this station in 2023. None were conducted in 2024, with the next far-field survey scheduled for 2025.

Table 3. FEIS predictions and target sound levels for the Meadowbank and Whale Tail Mines (R1 – R5 predictions from Cumberland, 2005; 2018 & 2019 R6 – R11 predictions from Agnico Eagle, 2016; 2020+ R6 - R12 predictions from Agnico Eagle, 2018).

Location	Monitoring Years	FEIS Prediction (dBA)	Design Target	
			$L_{eq\text{-}daytime}$ (dBA)	$L_{eq\text{-}night\text{-}time}$ (dBA)
R1	2008+	58-63	55	45
R2	2008+	58-63	55	45
R3	2008+	49-53	55	45
R4	2008+	58-63	55	45
R5	2008+	(all 1 hr L_{eq} < 57)	55	45
R6	2018 & 2019	46.0 - 50.3	55	45
	2020+	40.5 - 42.5	55	45
R7	2018 & 2019	45.1 – 50.0	55	45
	2020+	36.2 - 40.4	55	45
R8	2018 - 2021	40.4 - 45.1	55	45
R8a	2022+	36.2 – 40.4	55	45
R9	2018 & 2019	36.2 - 40.4	55	45
	2020 & 2021	40.4 - 45.1	55	45
R9a	2022+	40.4 - 45.1	55	45
R10	2018 - 2021	45.1 – 50.0	55	45
R10a	2022+	36.2 – 40.4	55	45
R11	2018 - 2020	45.1 – 50.0	55	45
R11a	2021+	45.1 – 50.0	55	45
Location	**Monitoring Years**	**FEIS Prediction (dBA)**	**Permissible Sound Level**	
			$L_{eq\text{-}daytime}$ (dBA)	$L_{eq\text{-}night\text{-}time}$ (dBA)
R12	2022, 2023	<35	50	40

SECTION 3 • RESULTS

3.1 R1

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during the single successful monitoring event at R1 are shown in Figure 3. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered). One additional survey was conducted at this station (July 16 – 19) but the dataset was incomplete and unavailable for analysis.

For the successful monitoring event (June 27 – 29), 4 h of valid data were available after 33 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary data filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 4. Since only one hour was available from the night-time period for event 1, the $L_{eq\text{-}night}$ and $L_{eq\text{-}24h}$ could not be calculated. The day-time design target was not exceeded.

Weather data and hourly L_{eq} values are provided in Appendix B.

Noise sources noted in the field log at this location include helicopters and birds (Appendix C).

Table 4. Daytime, night-time, and 24-h L_{eq} values for monitoring locations R1.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R1	1: 6/27	*55*	40.1	*45*	-	*58 - 63*	-

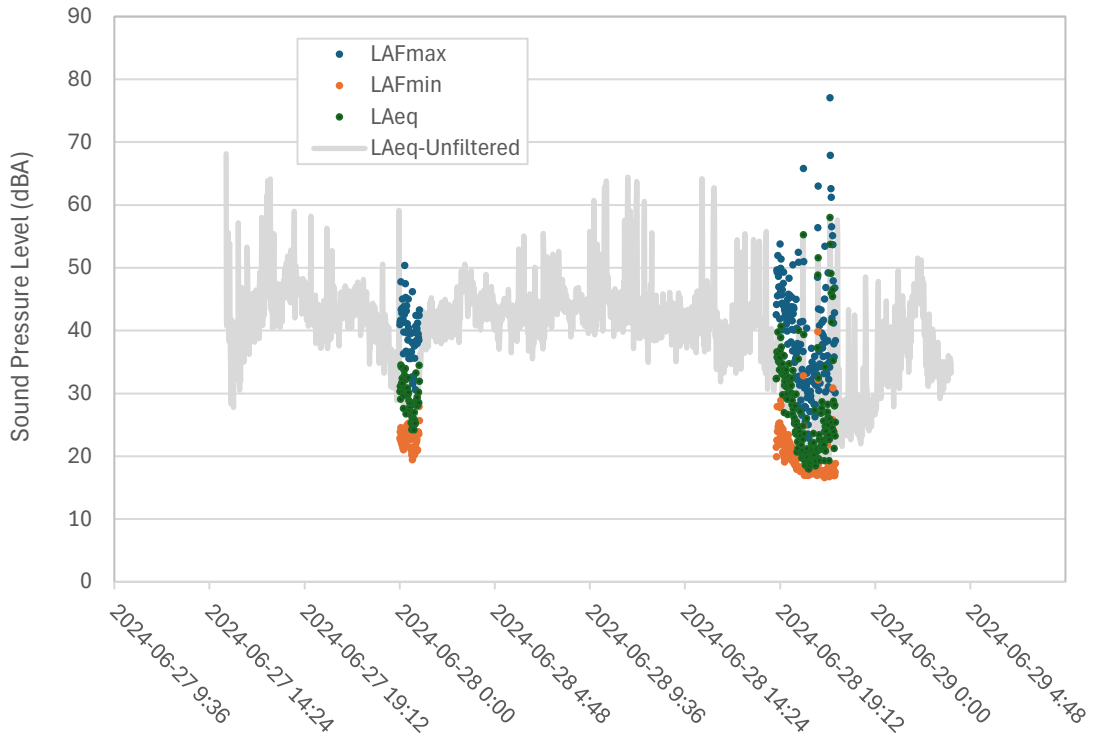


Figure 3. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R1 during monitoring event 1.

3.2 R2

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1 and 2 at R2 are shown in Figures 4 and 5. Invalid data points filtered out prior to data analyses (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered).

For monitoring event 1 (July 6 – 9), 8 h of valid data were available after 37 h were filtered out due to recorded weather conditions or set up/take down. For event 2, 31 h of valid data were available after 18 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 5. For event 1, only one hour of valid data was available from the night-time period, so the $L_{eq\text{-}night}$ and $L_{eq\ 24\ h}$ could not be calculated. The day-time design target was not exceeded. For event 2, neither the design targets nor the FEIS prediction were exceeded.

Weather data and hourly L_{eq} values for all noise monitoring events are provided in Appendix B.

Potential noise sources noted in the field log at this location include helicopters and birds (Appendix C).

Table 5. Daytime, night-time, and 24-h L_{eq} values for monitoring location R2.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R2	1: 7/06	*55*	38.6	*45*	-	*58 - 63*	-
	2: 8/07		48.3		33.4		46.0

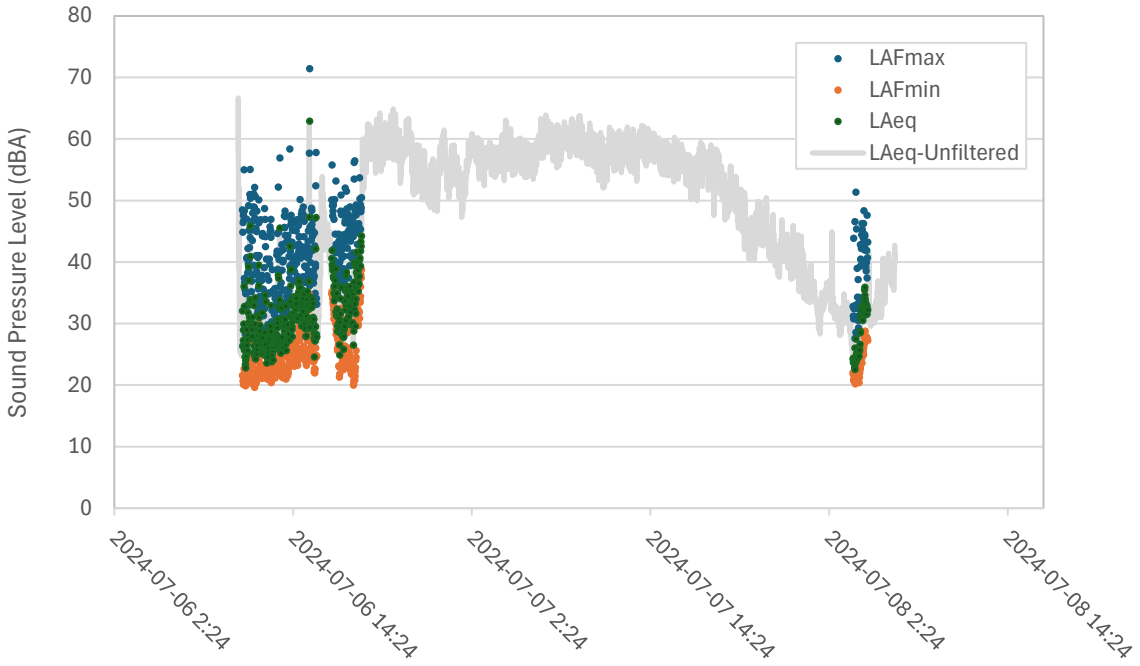


Figure 4. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R2 during monitoring event 1.

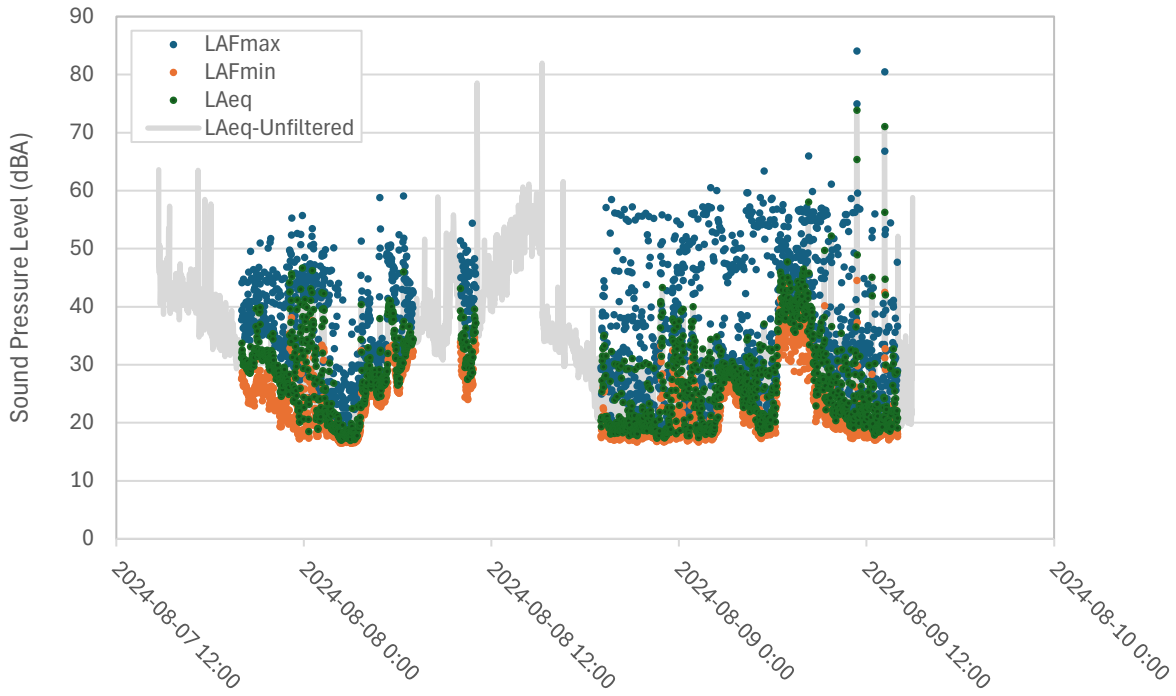


Figure 5. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R2 during monitoring event 2.

3.3 R3

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1 and 2 at R3 are shown in Figures 6 and 7. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered).

For monitoring event 1 (August 2 – 5), 19 h of valid data were available after 55 h were filtered out due to recorded weather conditions or set-up/take-down. For event 2 (August 17 – 19), 33 h of valid data were available after 22 h were filtered out. No secondary filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 6.

Weather data and hourly L_{eq} values for both events are provided in Appendix B.

Noises noted in the field log for this location include aircraft, waves, and animals (Appendix C).

Table 6. Daytime, night-time, and 24-h L_{eq} values for monitoring location R3. Periods with insufficient valid data are excluded (-).

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R3	1: 8/02	*55*	33.7	*45*	32.9	*58 - 63*	33.3
	2: 8/17		32.9		36.1		34.2

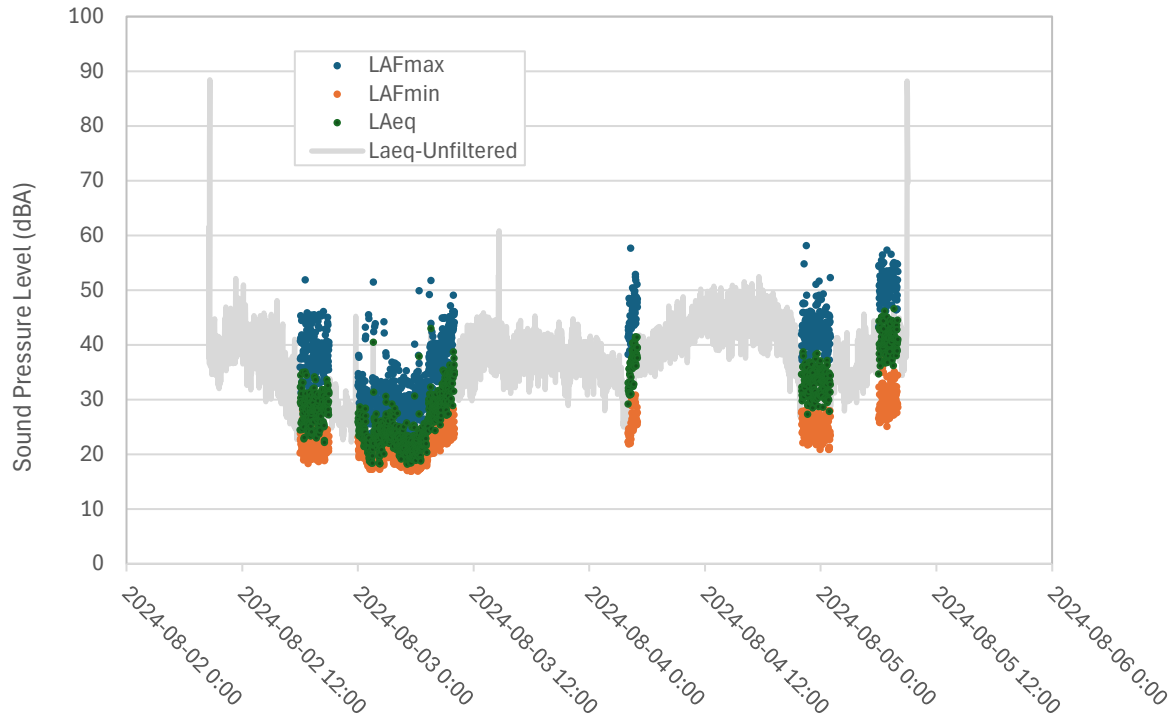


Figure 6. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R3 during monitoring event 1.

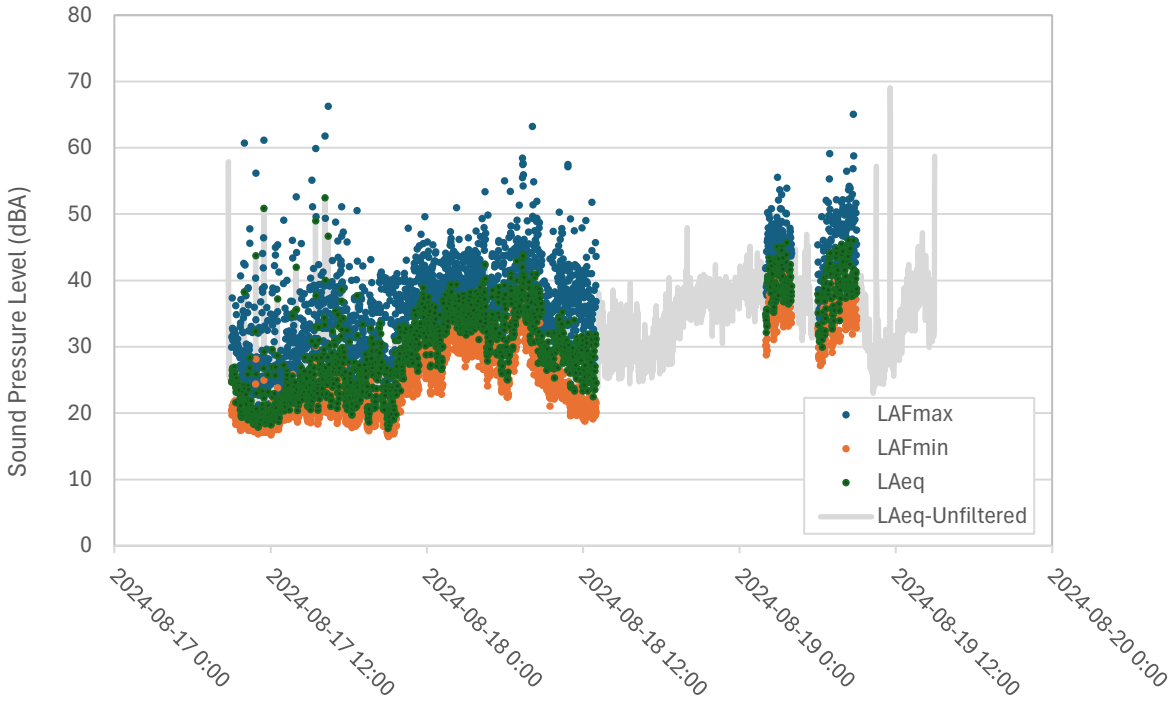


Figure 7. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R3 during monitoring event 2.

3.4 R4

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1 and 2 at R4 are shown in Figures 8 and 9. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered).

For event 1 (July 20 – 22), 31 h of valid data were available after 22 h were filtered out due to recorded weather conditions or set-up/take-down. For event 2 (August 22 – 23), 3 h of valid data were available after 23 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 7. Only a night-time L_{eq} could be calculated for event 2 because no valid daytime hours were available after data filtering for weather conditions. No exceedances of design targets or FEIS predictions occurred.

Weather data and hourly L_{eq} values for both events are provided in Appendix B.

Noise sources noted in the field log for this location include helicopters and rain (Appendix C).

Table 7. Daytime, night-time, and 24-h L_{eq} values for monitoring location R4.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R4	1: 7/20	*55*	34.0	*45*	38.2	*58 - 63*	36.5
	2: 8/22		-		36.1		-

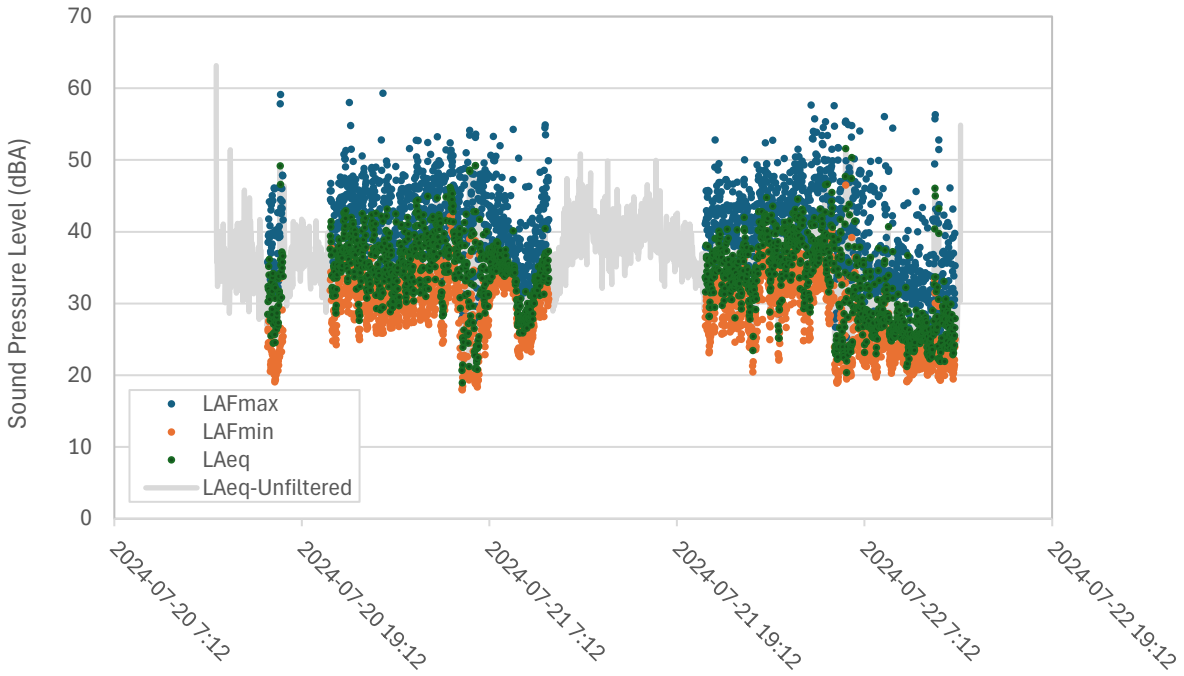


Figure 8. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R4 during monitoring event 1.

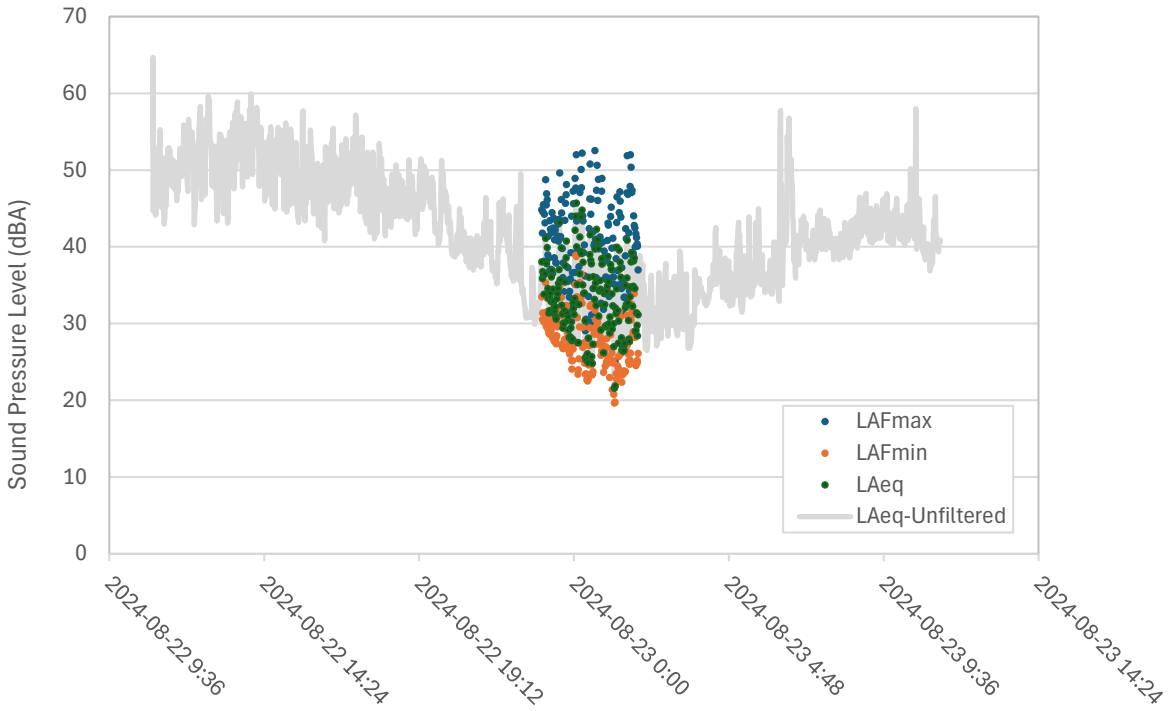


Figure 9. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R4 during monitoring event 2.

3.5 R5

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1 and 2 at R5 are shown in Figures 10 and 11. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered). One additional survey was conducted at this station (September 4) but upon retrieval the microphone was found to have fallen over so the survey was invalidated.

For event 1 (July 15 – 17), 6 h of valid data were available after 27 h were filtered out due to recorded weather conditions or set-up/take-down. The Meadowbank weather station wind sensor was down during this period, so wind speeds from the Whale Tail weather station were used in data screening. For event 2 (August 7 – 9), 31 h of valid data were available after 19 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 8. For event 1, insufficient valid data was available to calculate a night-time L_{eq}. Neither the daytime design target nor the FEIS prediction was exceeded in monitoring event 1. In event 2, the maximum predicted 1 h L_{eq} value of 57 dBA was exceeded in one hour of the 31 h dataset (11 am – 12 pm on August 9). Review of the data and sound recordings indicated this was caused by an aircraft flyover, which lasted less than 2 minutes. Aircraft were not included in FEIS noise models because of their infrequent occurrence and short duration. Helicopters are also frequently used as part of exploration activities in the region, so this flyover may not be attributable to mine operation.

Weather data and hourly L_{eq} values for both events are provided in Appendix B.

Noise sources noted in the field log for this location include helicopters, wildlife, and traffic (Appendix C).

Table 8. Daytime, night-time, and 24-h L_{eq} values for monitoring location R5. ^One 1-h L_{eq} value for event 2 exceeded the FEIS prediction, but this was caused by an aircraft flyover, which were not included in FEIS models (Cumberland, 2005) due to their infrequent occurrence and short duration.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		Max $L_{eq,\ 1h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R5	1: 7/15	*55*	48.2	*45*	-	*57*	54.1
	2: 8/07		49.7		35.3		**(59.9)^**

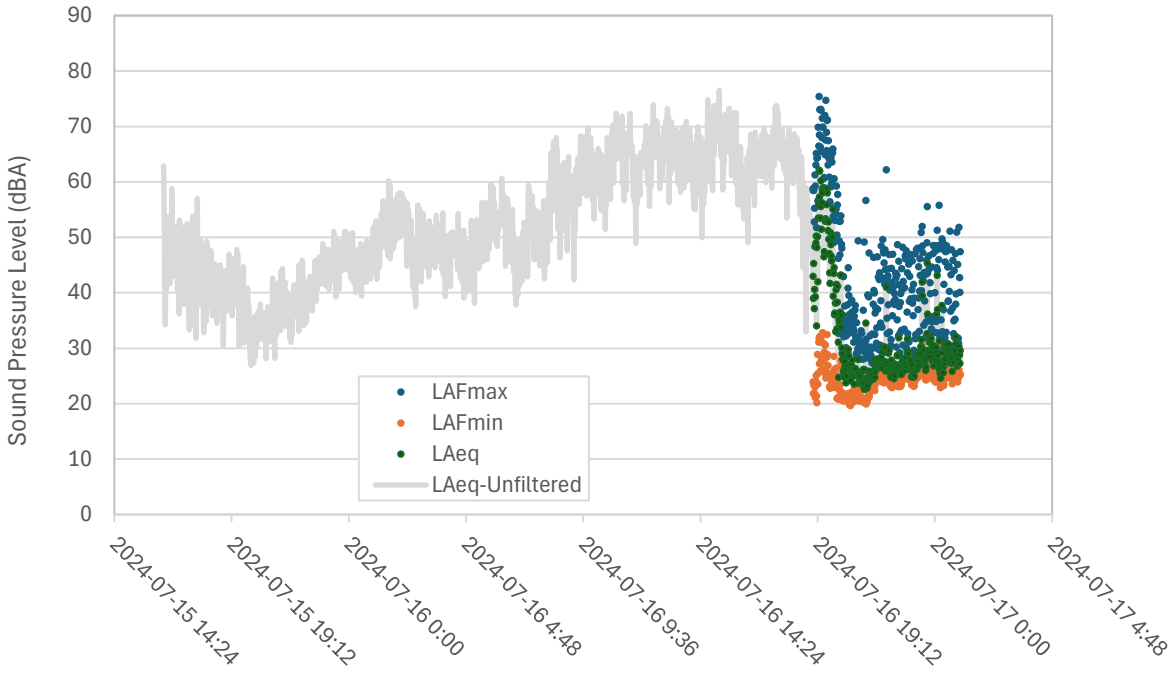


Figure 10. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R5 during monitoring event 1.

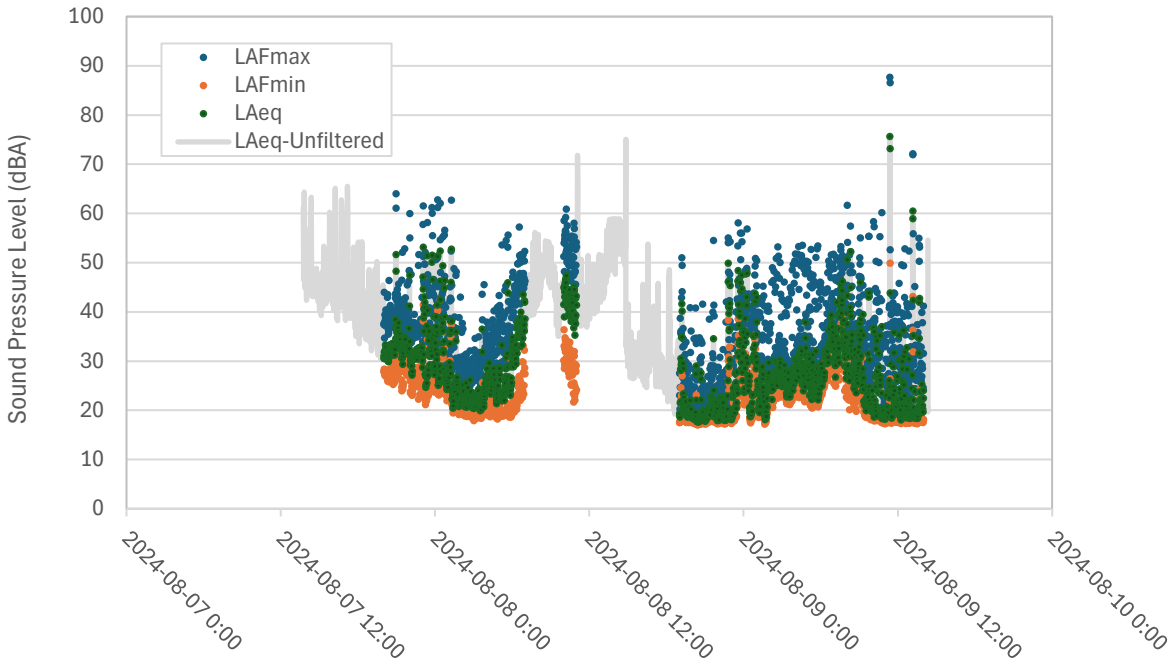


Figure 11. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R5 during monitoring event 2.

3.6 R6

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1 and 2 at R6 are shown in Figure 12 and 13. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered).

For event 1 (August 2 – 5), 17 h of valid data were available after 56 h were filtered out due to recorded weather conditions or set-up/take-down. For event 2 (August 11 – 14), 25 h of valid data were available after 43 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 9. Results were less than site noise targets and FEIS predictions in all cases.

Weather data and hourly L_{eq} values are provided in Appendix B.

Noise sources noted in the field log at this location include helicopters and birds (Appendix C).

Table 9. Daytime, night-time, and 24-h L_{eq} values for monitoring location R6.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R6	1: 8/02	*55*	31.7	*45*	24.2	*40.5 - 42.5*	29.2
	2: 8/11		35.7		32.1		34.8

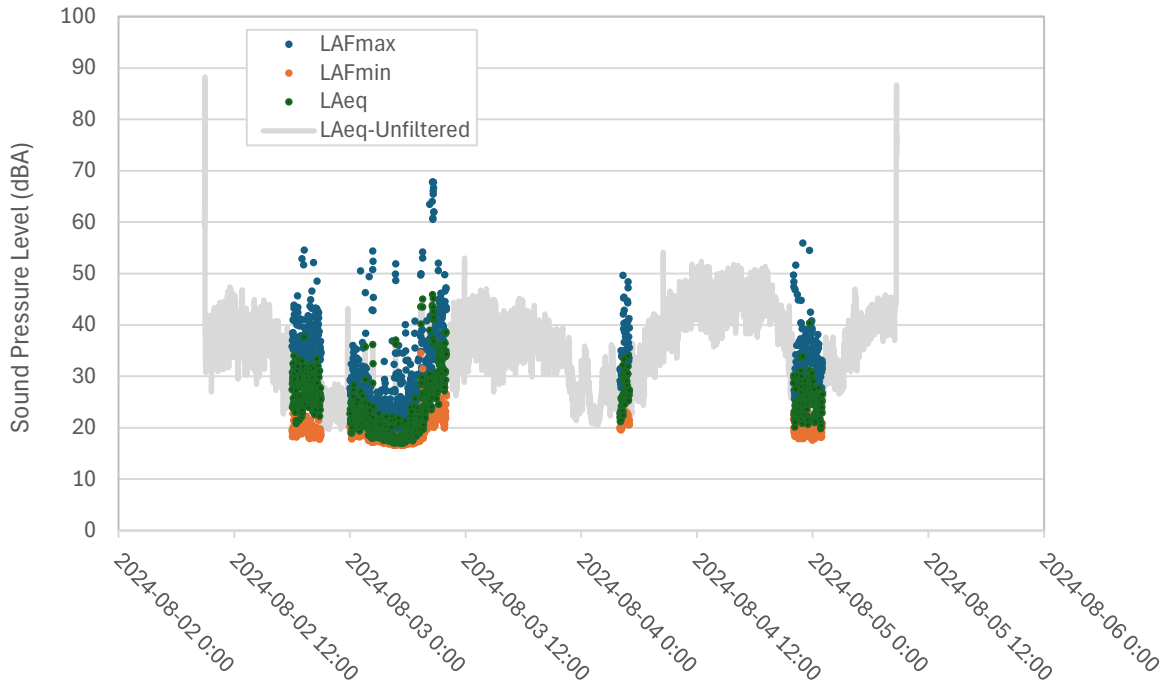


Figure 12. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R6 during monitoring event 1.

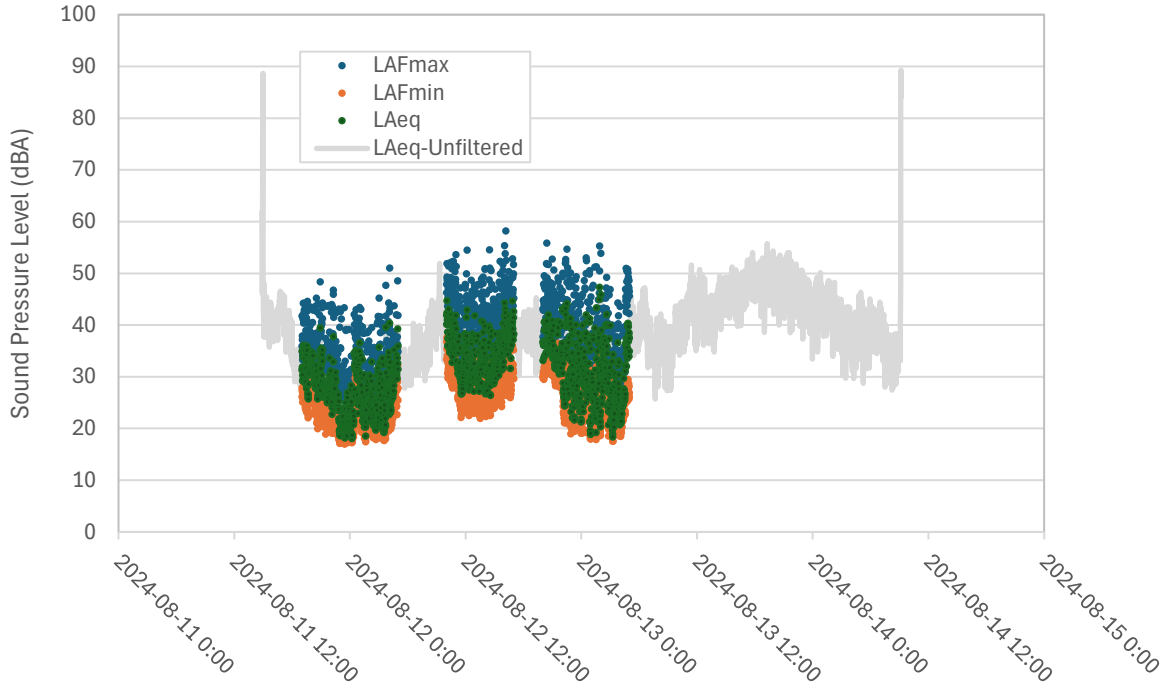


Figure 13. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R6 during monitoring event 2.

3.7 R7

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1 and 2 at R7 are shown in Figures 14 and 15. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered). Two additional surveys were attempted for this station (June 18 – 20 and July 26 – 29), but both were invalidated due to (1) battery failure after 1 h (June survey) and (2) a fallen microphone (July survey). For the July survey, sound recordings and profiles were reviewed in attempts to identify when the fall occurred, but since no clear evidence was found, this survey was conservatively eliminated from analysis.

For event 1 (August 27), 0 h of valid data were available after 6 h were filtered out due to recorded weather conditions or set-up/take-down. This event was terminated after 6 h due to a failure of the unit's battery. For event 2 (September 24 – 26), 27 h of valid data were available after 16 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary data filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 10. No exceedances of site noise targets or FEIS predictions occurred.

Weather data and hourly L_{eq} values are provided in Appendix B.

No noise sources were specifically noted in the field log at this location in 2024 (Appendix C), but historically the acoustic environment has included animals and traffic.

Table 10. Daytime, night-time, and 24-h L_{eq} values for monitoring location R7.

Monitoring Station and Start Date (M/DD)		**$L_{eq,\ day}$ (dBA)**		**$L_{eq,\ night}$ (dBA)**		**$L_{eq,\ 24h}$ (dBA)**	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R7	1: 8/27	*55*	-	*45*	-	*36.2 - 40.4*	-
	2: 9/24		35.8		34.9		35.5

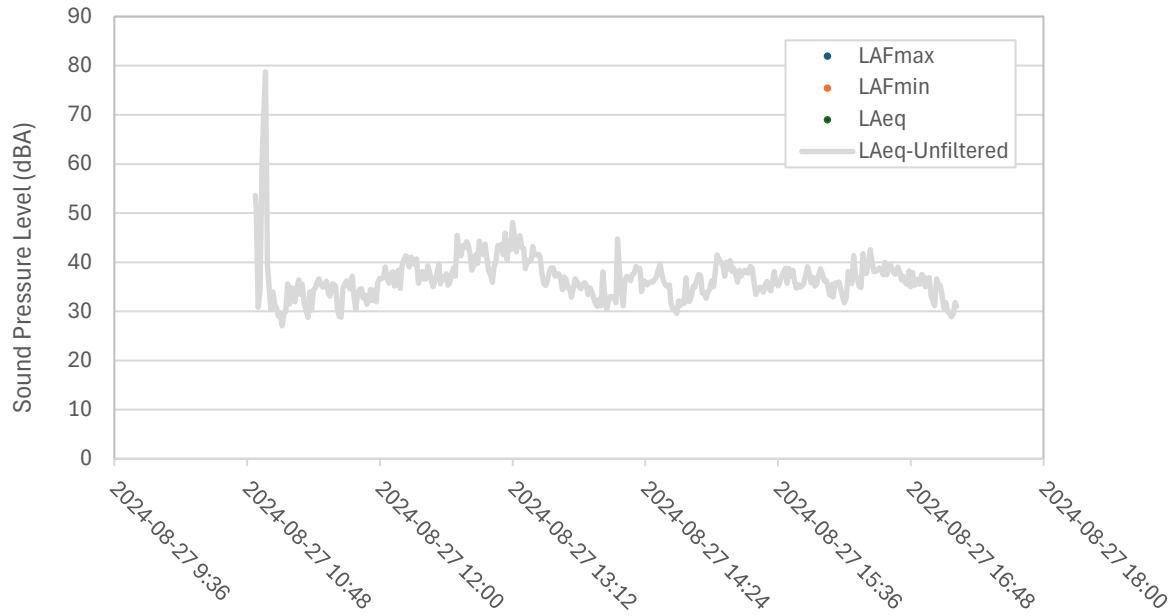


Figure 14. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R7 during monitoring event 1. The entire dataset was filtered out due to weather conditions.

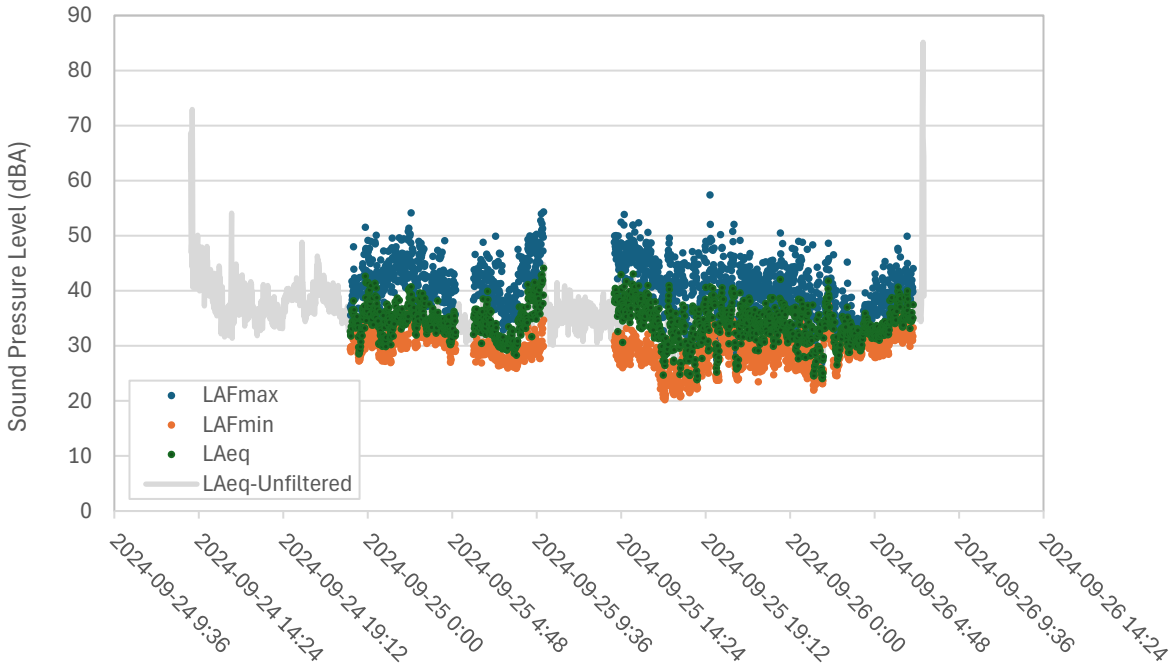


Figure 15. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R7 during monitoring event 2.

3.8 R8A

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1, 2, and 3 at R8a are shown in Figures 16, 17, and 18. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered).

For monitoring event 1 (July 12 – 13), 26 h of valid data were available after 1 h was filtered out due to weather conditions or set-up/take-down. No secondary filtering was required.

For event 2 (August 11 – 14), 44 h of valid data were initially available after 25 h were filtered out due to recorded weather conditions or set-up/take-down. For event 2, the FEIS prediction (40.4 dBA) was initially exceeded (42.4 dBA) so recorded data and sound files were investigated further. For the time period of 9 am – midnight on August 13, hourly L_{eq} values exceeded the FEIS prediction. During this time, wind interference was audible in sound recordings, with no mine-related noise. While the Whale Tail Mine weather station recorded wind speeds < 4.17 m/s during this period (so data was not initially filtered out), the Meadowbank Mine weather station recorded elevated winds (7 - 9 m/s). Further, recorded L90 values during this period exceeded 30 dBA, the assumed background noise level, with recorded values up to 46 dBA. Therefore, on the basis of apparent localized elevated wind speeds during this event, a further 15 h were filtered from the dataset (as indicated in in Appendix B). The remaining available data was used to calculate final daytime, night-time, and 24-h L_{eq} values.

For event 3 (August 27 – 30), 23 h of valid data were initially available after 45 h were filtered out due to recorded weather conditions or set-up/take-down. the FEIS prediction (40.4 dBA) was initially exceeded (42.9 dBA) so recorded data and sound files were investigated further. For the time period of 11:53 – noon on August 28, bird calls were audible in close proximity to the microphone, resulting in an elevated L_{eq}, so 8 min of data were filtered out. For the time period of 5 – 7 am on August 29, hourly L_{eq} values exceeded the FEIS prediction. During this time, wind interference was audible in sound recordings, with no mine-related noise. While the Whale Tail Mine weather station recorded wind speeds < 4.17 m/s during this period (so data was not initially filtered out), the Meadowbank Mine weather station recorded elevated winds (4.2 – 5.9 m/s). Further, recorded L90 values during this period exceeded 30 dBA, the assumed background noise level, with recorded values up to 51 dBA. Therefore, on the basis of apparent localized elevated wind speeds during this event, a further 2 h were filtered from the dataset (as indicated in in Appendix B). The remaining available data was used to calculate final daytime, night-time, and 24-h L_{eq} values.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 11. Results did not exceed the site's day-time and night-time sound targets or FEIS prediction for this monitoring station.

Weather data and hourly L_{eq} values for both events are provided in Appendix B.

Audible noises noted in the field log for this location include helicopters and blasts (Appendix C).

Table 11. Daytime, night-time, and 24-h L_{eq} values for monitoring location R8a.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R8a	1: 7/12	*55*	36.2	*45*	28.3	*36.2 – 40.4*	34.8
	2: 8/11		35.0		36.6		35.9
	2: 8/27		37.0		35.6		36.6

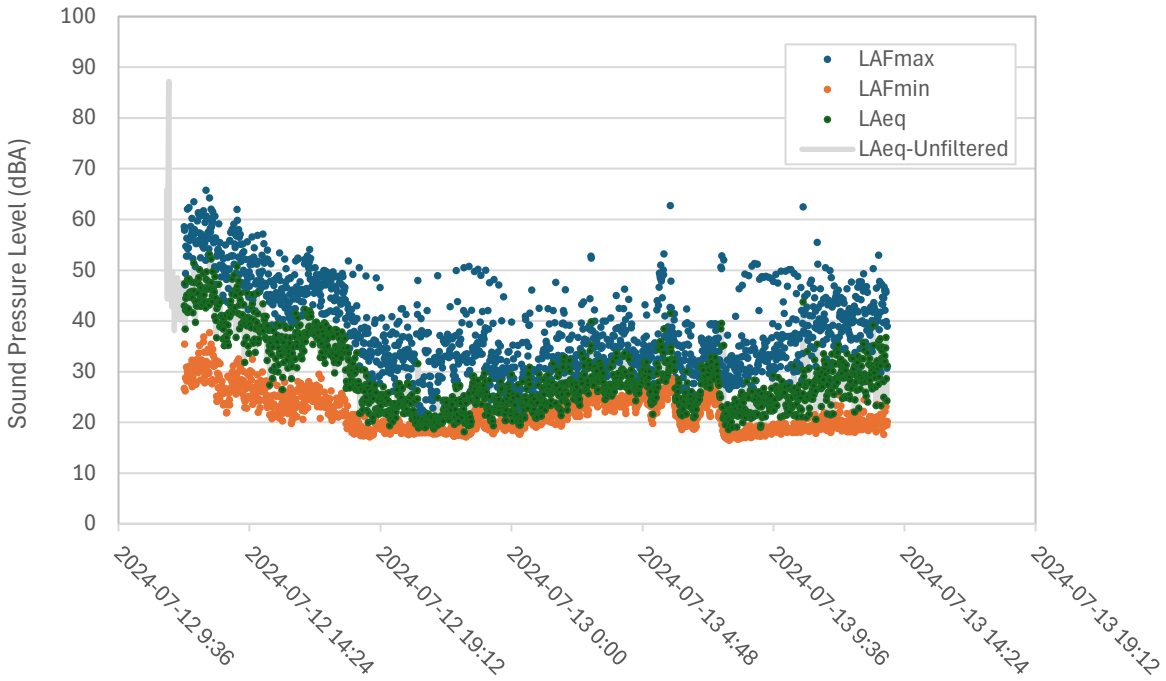


Figure 16. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R8a during monitoring event 1.

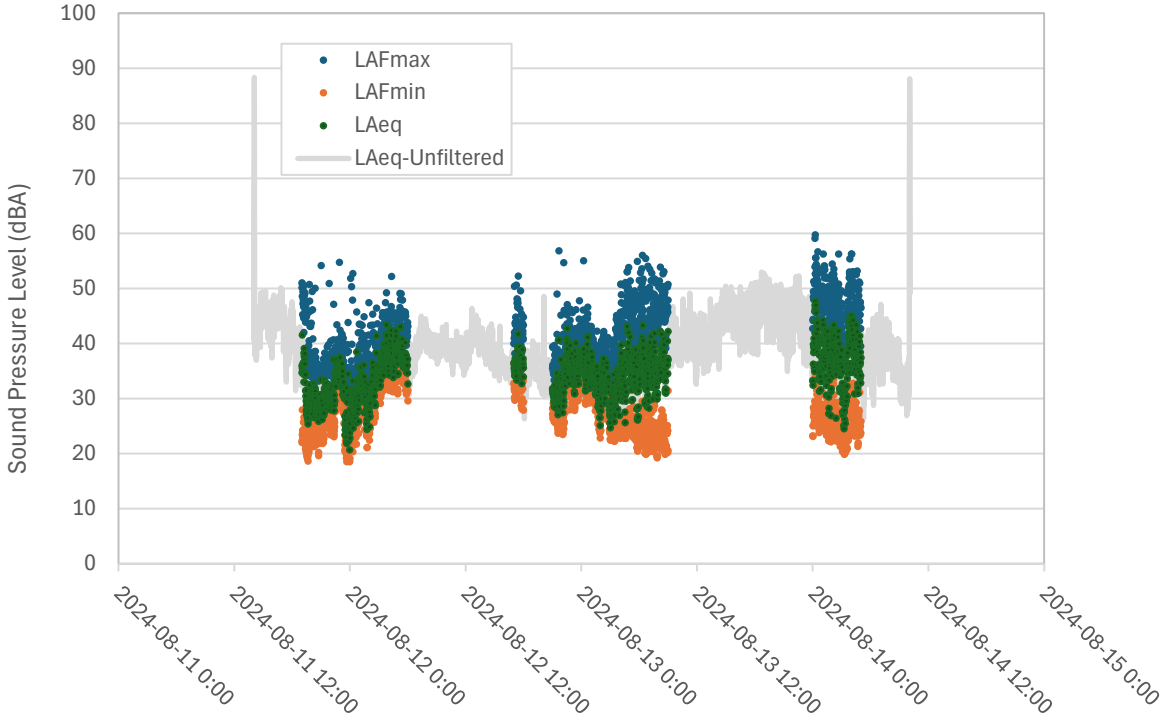


Figure 17. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R8a during monitoring event 2.

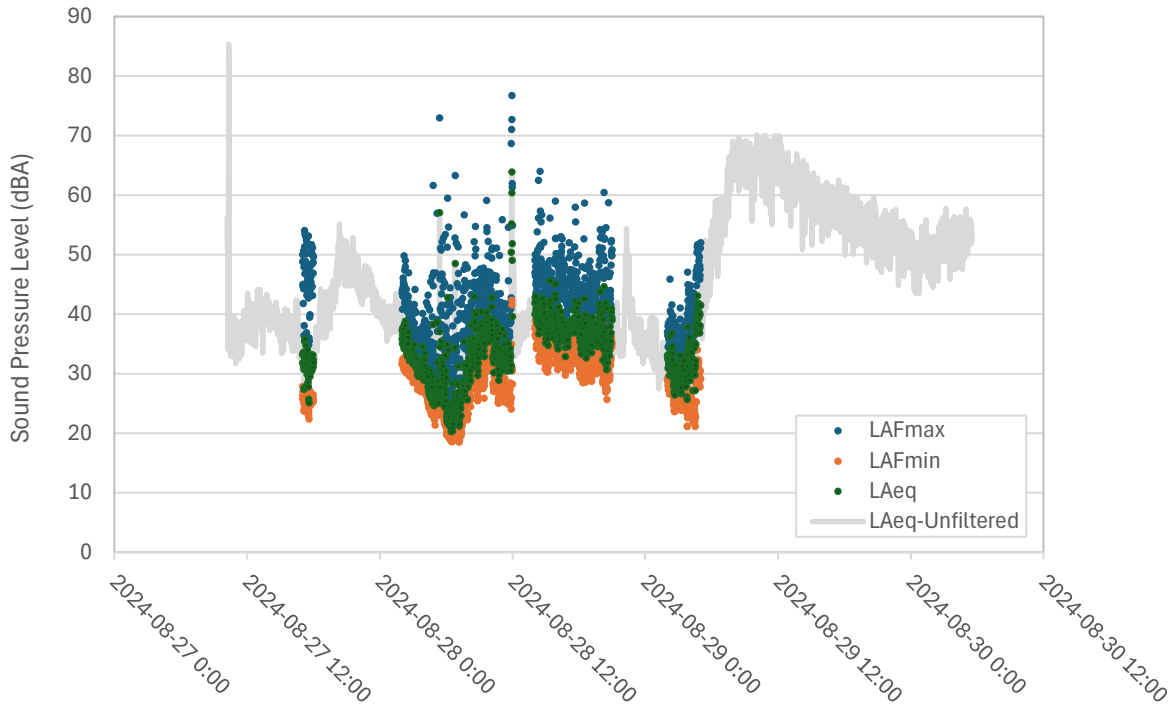


Figure 18. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R8a during monitoring event 3.

3.9 R9A

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1 and 2 at R9a are shown in Figure 19 and 20. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered).

For event 1 (July 12 -14), 49 h of valid data were available after 3 h were filtered out due to recorded weather conditions or set-up/take-down. For event 2 (July 21 – 23), 30 h of valid data were available after 19 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 12. All results were less than site noise targets and FEIS predictions.

Weather data and hourly L_{eq} values for the monitoring events are provided in Appendix B.

Audible noises noted in the field log for this location include birds and other animals (Appendix C).

Table 12. Daytime, night-time, and 24-h L_{eq} values for monitoring location R9a.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R9a	1: 7/12	*55*	34.7	*45*	28.9	*40.4 - 45.1*	33.5
	2: 7/21		34.7		30.7		33.5

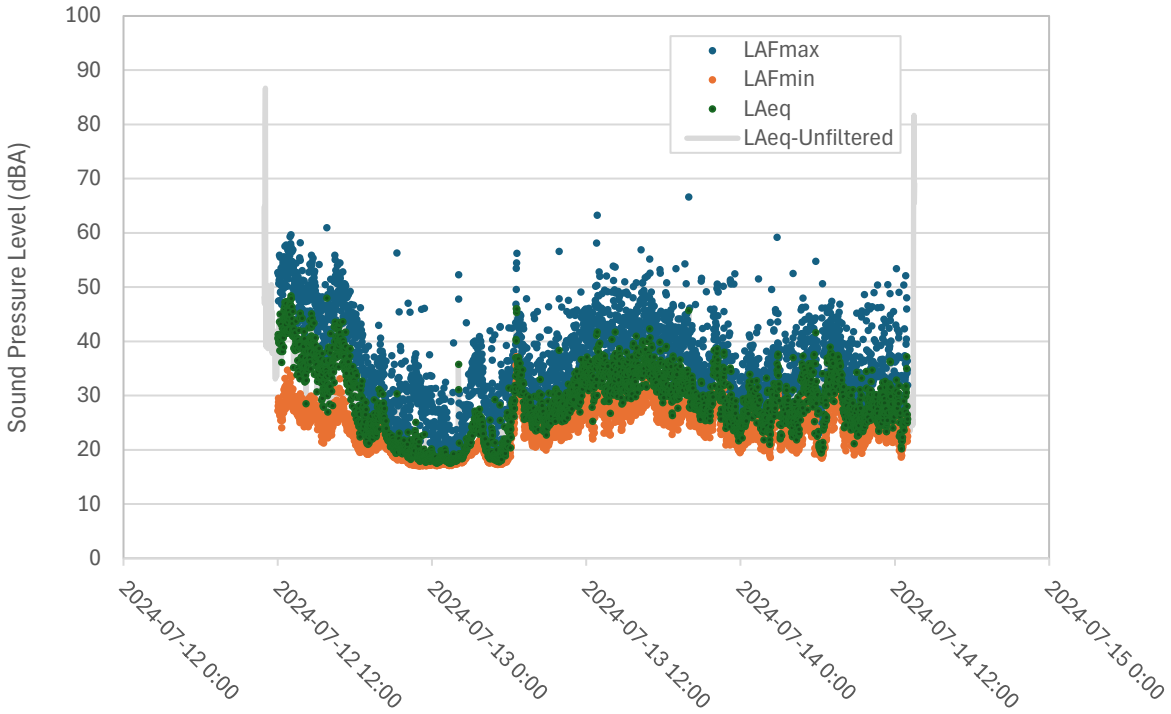


Figure 19. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R9a during monitoring event 1.

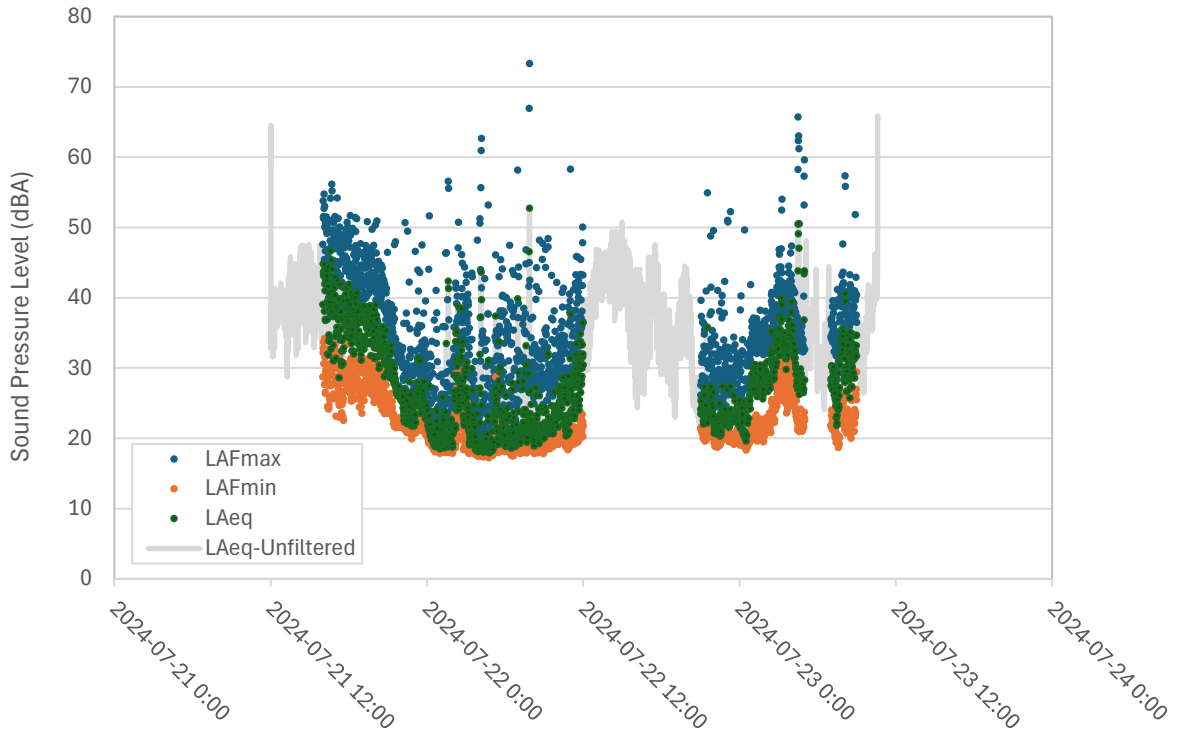


Figure 20. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R9a during monitoring event 2.

3.10 R10A

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events 1, 2, and 3 at R10a are shown in Figures 21, 22, and 23. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered).

For event 1 (July 1 – 3), 30 h of valid data were initially available after 18 h were filtered out due to recorded weather conditions or set-up/take-down. For this event, the FEIS prediction (40.4 dBA) was initially exceeded (44.6 dBA) so recorded data and sound files were investigated further. For the time period of 11 am to 9 pm on July 2, hourly L_{eq} values exceeded the FEIS prediction. During this time, wind interference and bird calls were audible in sound recordings, with no mine-related noise. While the Whale Tail Mine weather station recorded wind speeds < 4.17 m/s during this period (so data was not initially filtered out), the Meadowbank Mine weather station recorded elevated winds (7 - 10 m/s). Further, recorded L90 values during this period exceeded 30 dBA, the assumed background noise level, with recorded values up to 44 dBA. Therefore, on the basis of apparent localized elevated wind speeds during this event, a further 10 h were filtered from the dataset (as indicated in in Appendix B). The remaining available data was used to calculate final daytime, night-time, and 24-h L_{eq} values.

For event 2 (September 6 – 7), 10 h of valid data were available after 15 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

For event 3 (September 24 – 26), 27 h of valid data were available after 16 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 13. Neither the FEIS prediction nor the site target sound levels were exceeded.

Weather data and hourly L_{eq} values are provided in Appendix B.

Audible noise sources noted in the field logs for this location included waves, animals, and helicopters (Appendix C).

Table 13. Daytime, night-time, and 24-h L_{eq} values for monitoring location R10a.

Monitoring Station and Start Date (M/DD)		$L_{eq,\ day}$ (dBA)		$L_{eq,\ night}$ (dBA)		$L_{eq,\ 24h}$ (dBA)	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R10a	1: 7/01	*55*	35.0	*45*	31.4	*36.2 – 40.4*	33.4
	2: 9/06		35.8		38.1		37.3
	3: 9/24		30.9		31.5		31.1

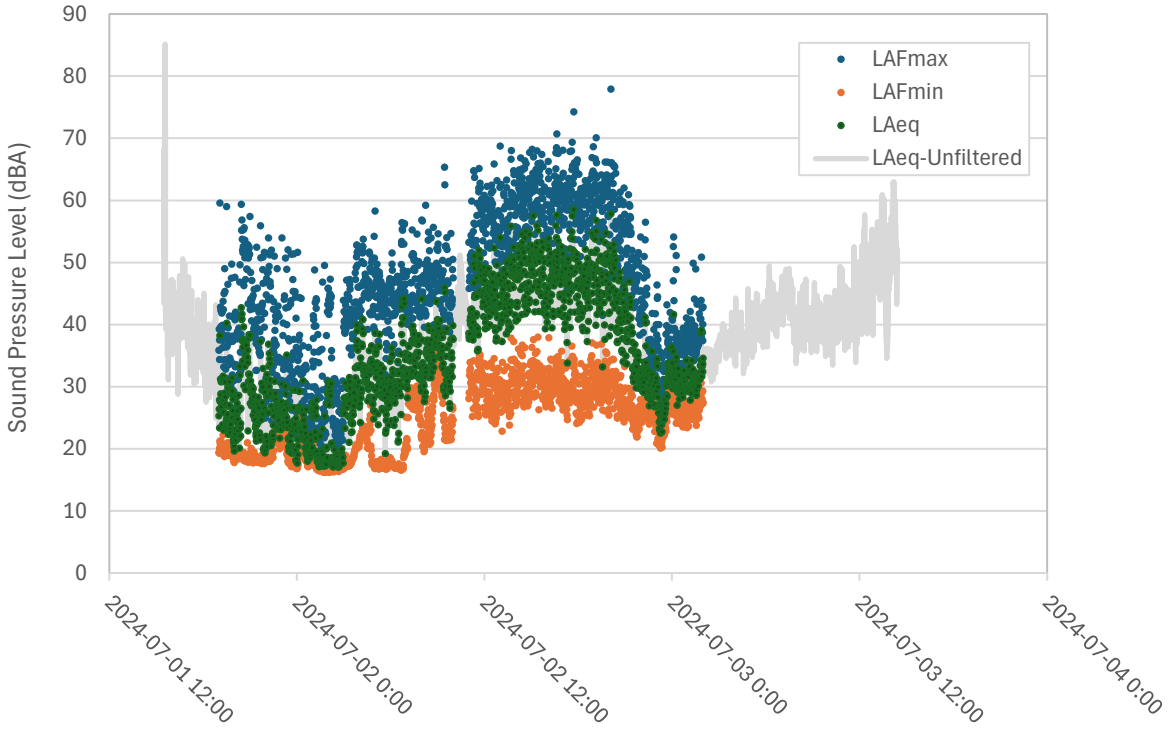


Figure 21. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R10a during monitoring event 1.

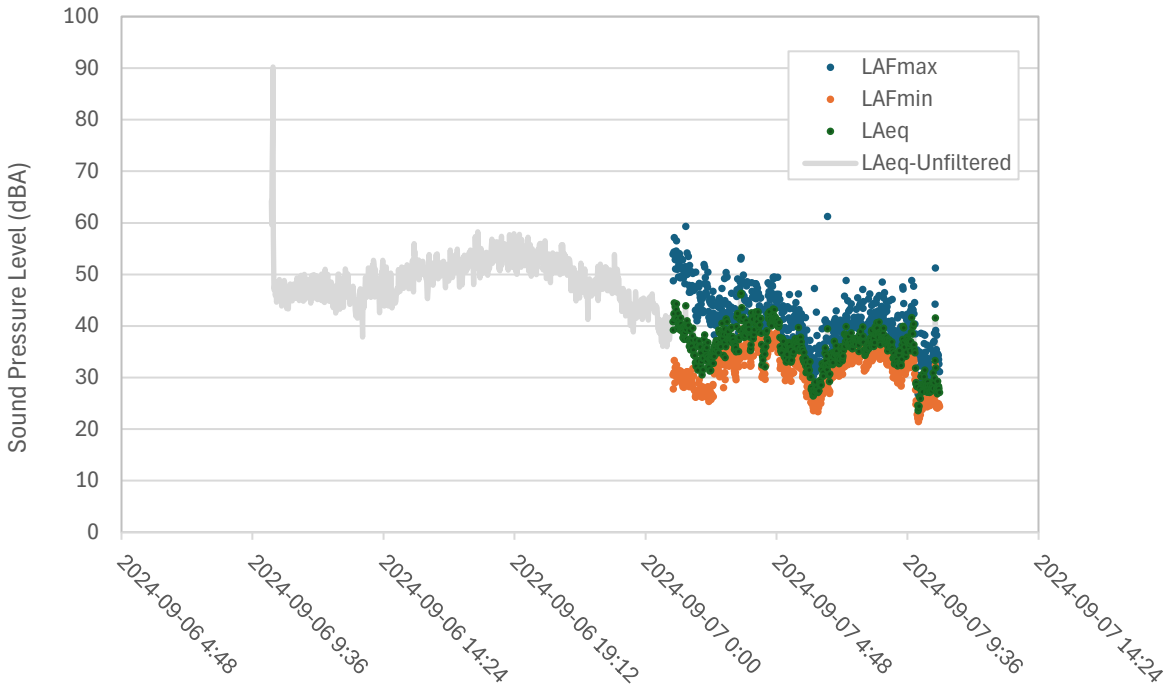


Figure 22. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R10a during monitoring event 2.

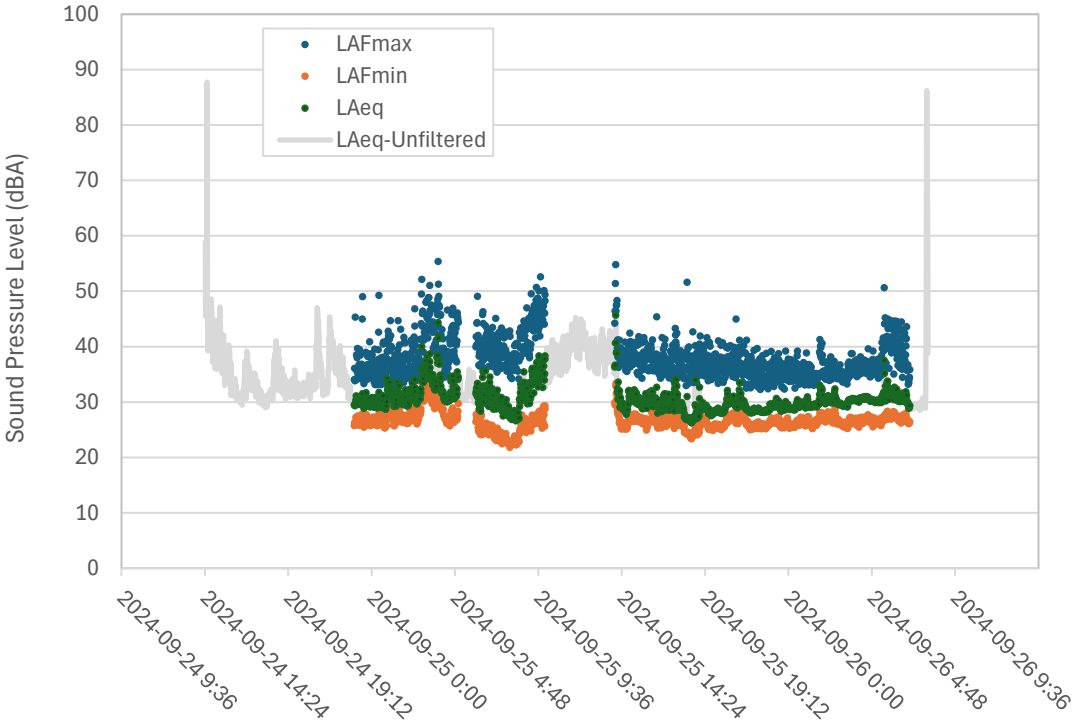


Figure 23. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R10a during monitoring event 3.

3.11 R11A

Recorded 1-min L_{eq} values, maximum sound levels (L_{max}), and minimum sound levels (L_{min}) during monitoring events one and two at R11a are shown in Figure 24 and 25. Invalid data points filtered out prior to data analysis (as described in Section 2.4) are indicated for reference (LA_{eq}-unfiltered). One additional survey was attempted at this station (June 25 – 29) but battery failure occurred after 4 h and the data was not retained for further analysis.

For event 1 (July 26 – 29), 54 h of valid data were available after 22 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

For this event (August 17 – 19), 24 h of valid data were available after 21 h were filtered out due to recorded weather conditions or set-up/take-down. No secondary filtering was required.

Although one additional survey was attempted, it was invalidated due to an interrupted power supply.

Final calculated daytime, night-time, and 24-h L_{eq} values are provided in Table 14. Neither the FEIS prediction nor the site target sound levels were exceeded.

Weather data and hourly L_{eq} values are provided in Appendix B.

No specific noise sources were noted in the field logs for this location in 2024 (Appendix C).

Table 14. Daytime, night-time, and 24-h L_{eq} values for monitoring location R11a.

Monitoring Station and Start Date (M/DD)		**$L_{eq,\ day}$ (dBA)**		**$L_{eq,\ night}$ (dBA)**		**$L_{eq,\ 24h}$ (dBA)**	
		Design Target	**Measured Value**	***Design Target***	**Measured Value**	***FEIS Prediction***	**Measured Value**
R11a	1: 7/26	*55*	36.3	*45*	36.5	*36.2 – 40.4*	36.3
	2: 8/17		28.0		26.4		27.4

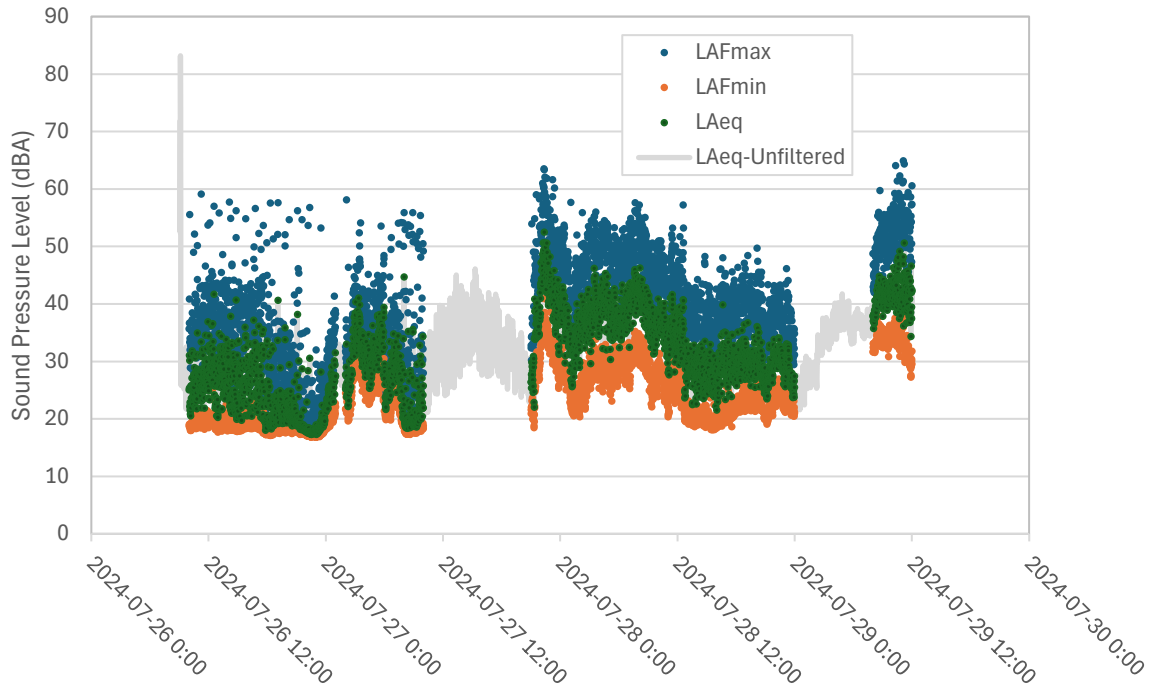


Figure 24. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R11a during monitoring event 1

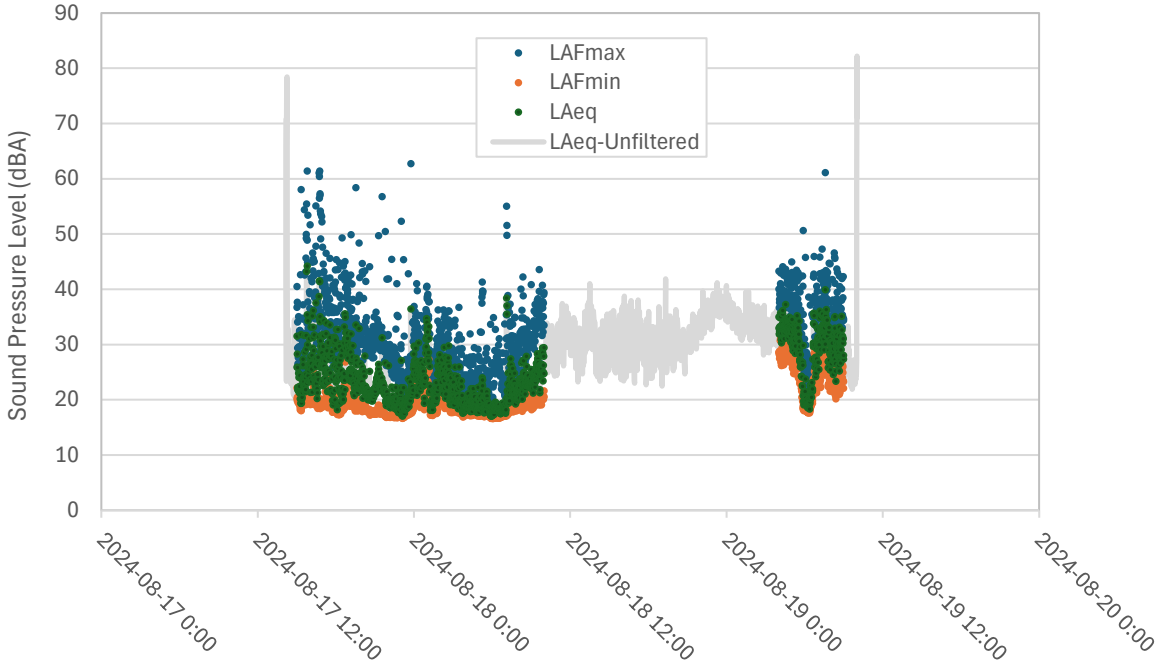


Figure 25. 1-min L_{eq}, L_{max} and L_{min} values recorded at station R11a during monitoring event 2.

3.12 R12

Noise surveys were not required at far-field station R12 in 2024.

SECTION 4 • HISTORICAL DATA

4.1 MEADOWBANK SITE

Historical 24-h L_{eq} measurements (2009 – 2024) for Meadowbank Mine monitoring stations R1 – R5 are shown in Figures 26 - 30 in relation to FEIS (Cumberland, 2005) predictions.

No clear trends towards increasing or unpredicted excess noise levels above FEIS predictions are evident. For all sites except one instance at R4 in 2018, measured 24-h L_{eq} values have remained below FEIS-modeled sound levels.

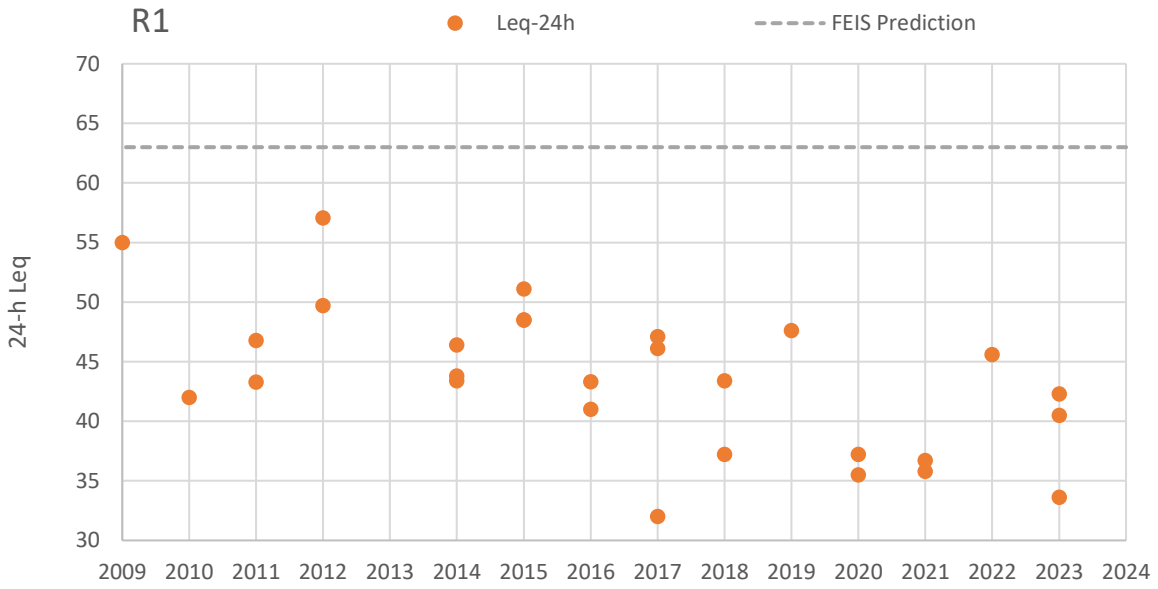


Figure 26. Historical 24-h L_{eq} values for monitoring station R1 at the Meadowbank Mine. Dashed line indicates the maximum FEIS prediction. No measurement was available in 2013 or 2024.

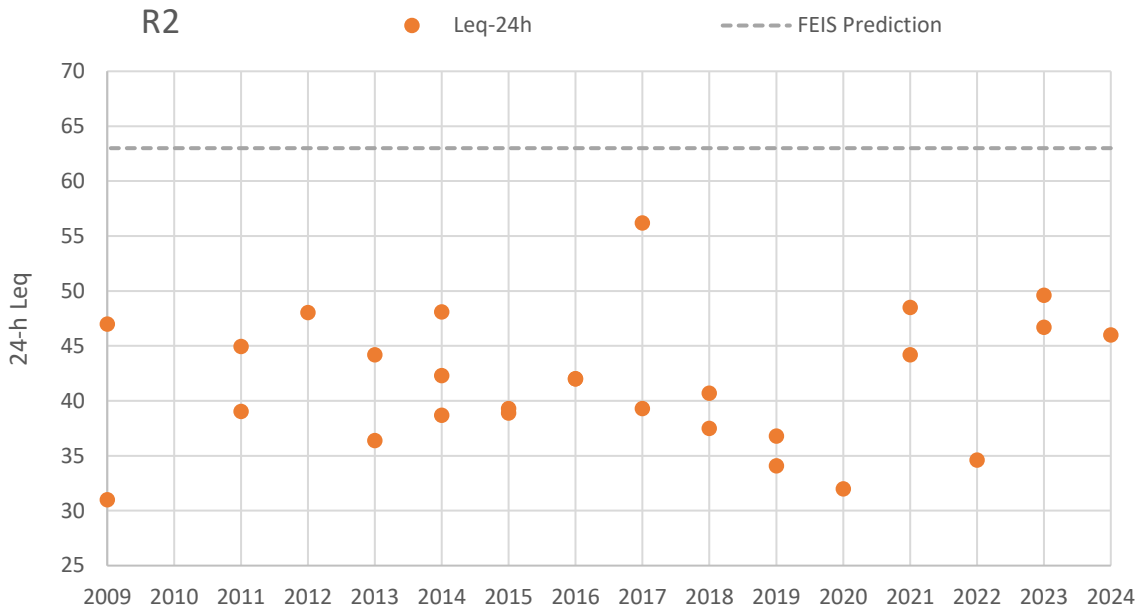


Figure 27. Historical 24-h L_{eq} values for monitoring station R2 at the Meadowbank Mine. Dashed line indicates the maximum FEIS prediction. No measurement was available in 2010.

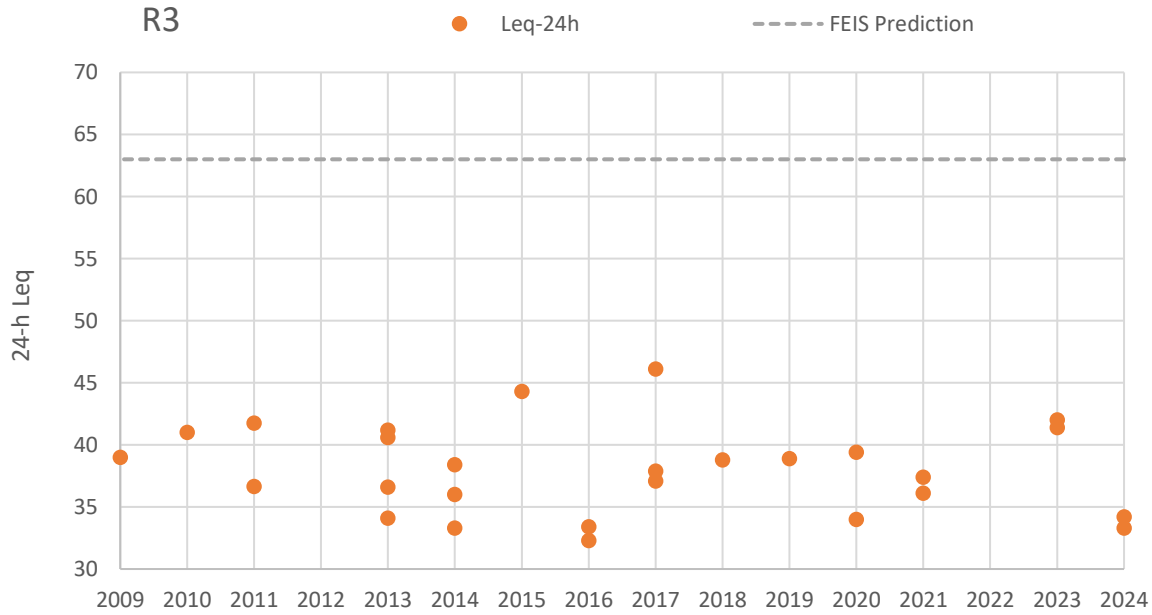


Figure 28. Historical 24-h L_{eq} values for monitoring station R3 at the Meadowbank Mine. Dashed line indicates the maximum FEIS prediction. No measurement was available in 2012 or 2022.

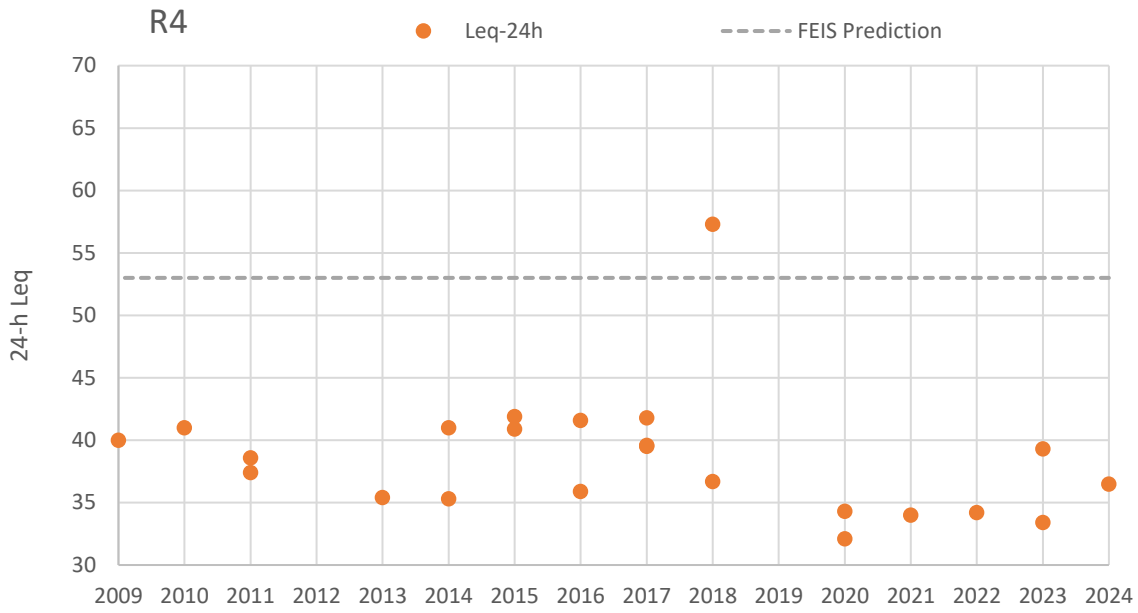


Figure 29. Historical 24-h L_{eq} values for monitoring station R4 at the Meadowbank site. Dashed line indicates the maximum FEIS prediction. No measurement was available in 2012 or 2019.

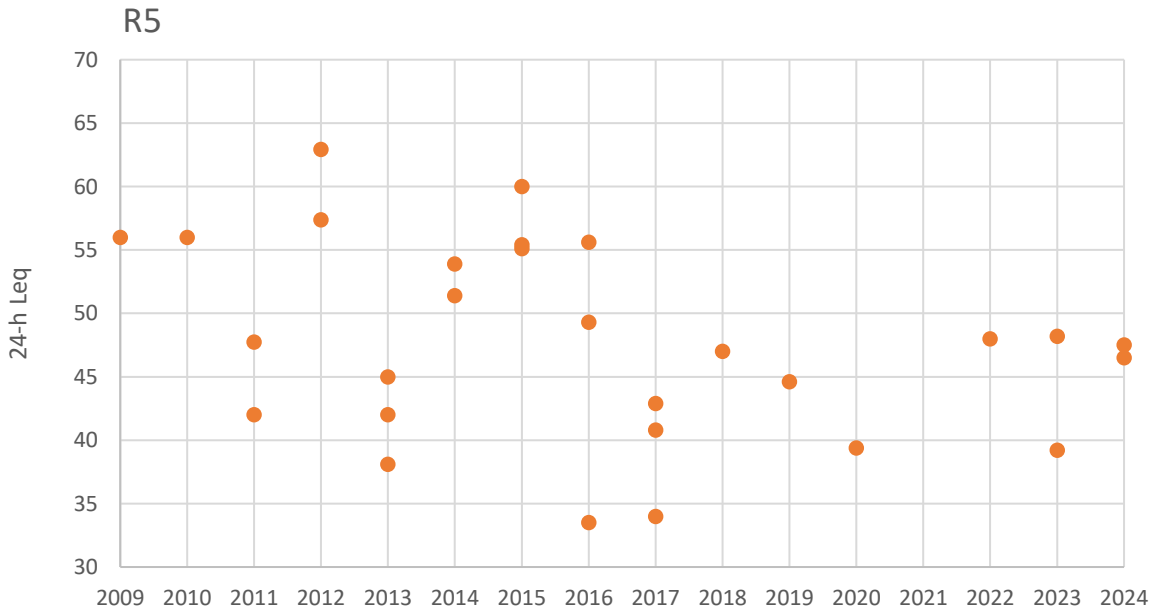


Figure 30. Historical 24-h L_{eq} values for monitoring station R5 at the Meadowbank site. No FEIS prediction for the 24-h L_{eq} was available. No measurement was available in 2021.

4.2 WHALE TAIL SITE

For stations R6 – R11, available historical results are shown in Figures 31 - 36 along with maximum FEIS predictions for 2018/2019 (Agnico Eagle, 2016), and FEIS Addendum predictions for 2020 onwards (Agnico Eagle, 2018). Monitoring data was not available for R7 – R11 in 2019. R12 is not included here because it was only evaluated in 2022, with a single opportunistic survey in 2023.

Overall, no clear trends towards unpredicted noise levels above FEIS predictions are evident at this time.

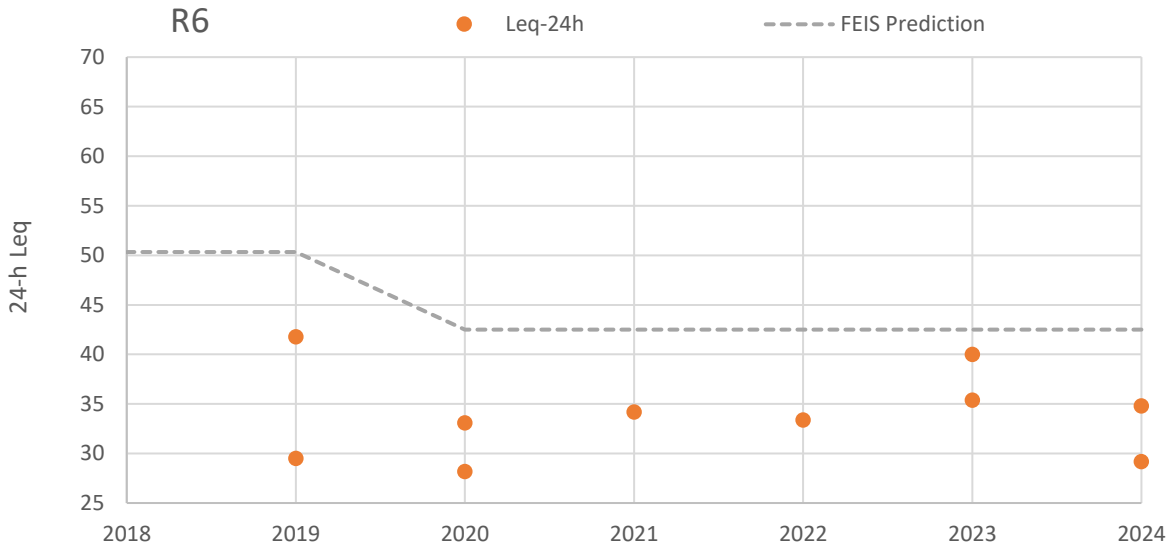


Figure 31. Historical 24-h L_{eq} values for monitoring station R6 at the Meadowbank site. Dashed line indicates the maximum FEIS prediction (2018, 2019 – Agnico Eagle, 2016; 2020+ - Agnico Eagle, 2018). No measurement was available in 2018.

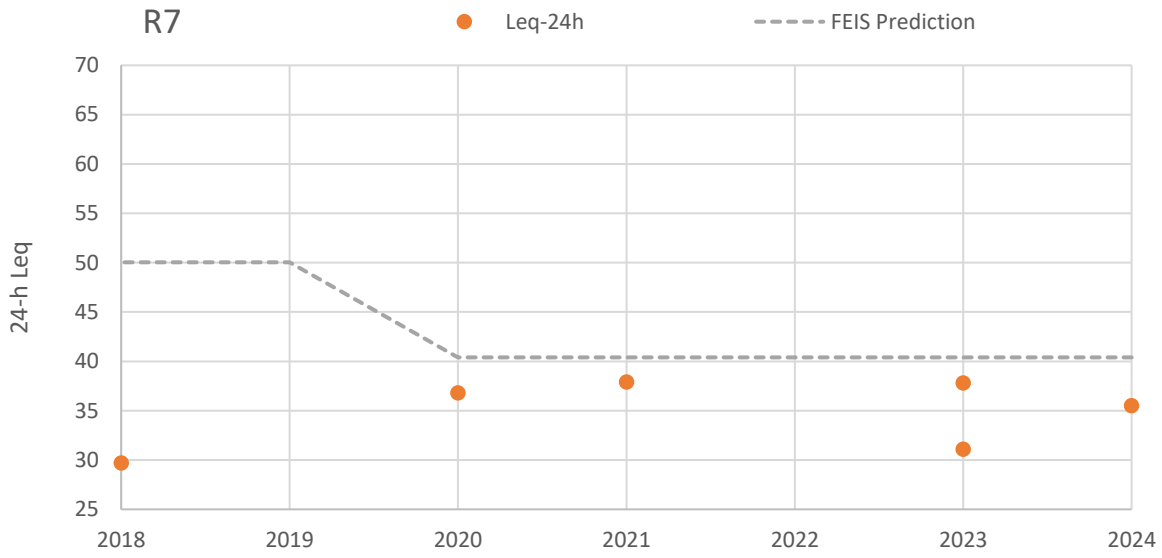


Figure 32. Historical 24-h L_{eq} values for monitoring station R7 along the Whale Tail Haul Road. Dashed line indicates the maximum FEIS prediction (2018, 2019 – Agnico Eagle, 2016; 2020+ - Agnico Eagle, 2018). No measurement was available in 2019 or 2022.

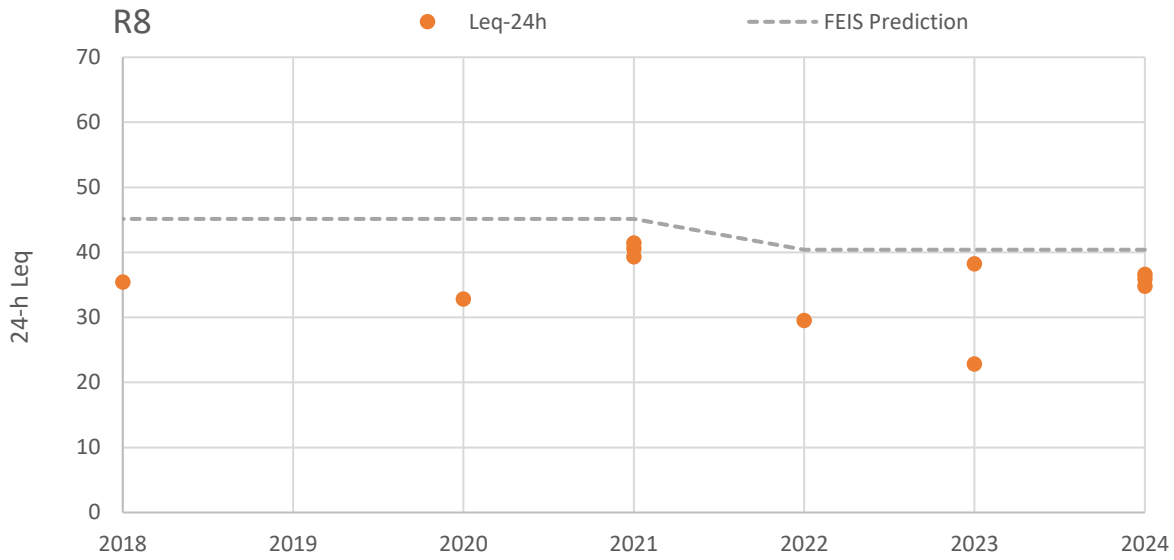


Figure 33. Historical 24-h L_{eq} values for monitoring station R8 (2018 – 2021) and R8a (2022+) at the Whale Tail site. Dashed line indicates the maximum FEIS prediction (2018, 2019 – Agnico Eagle, 2016; 2020+ - Agnico Eagle, 2018). No measurement was available in 2019.

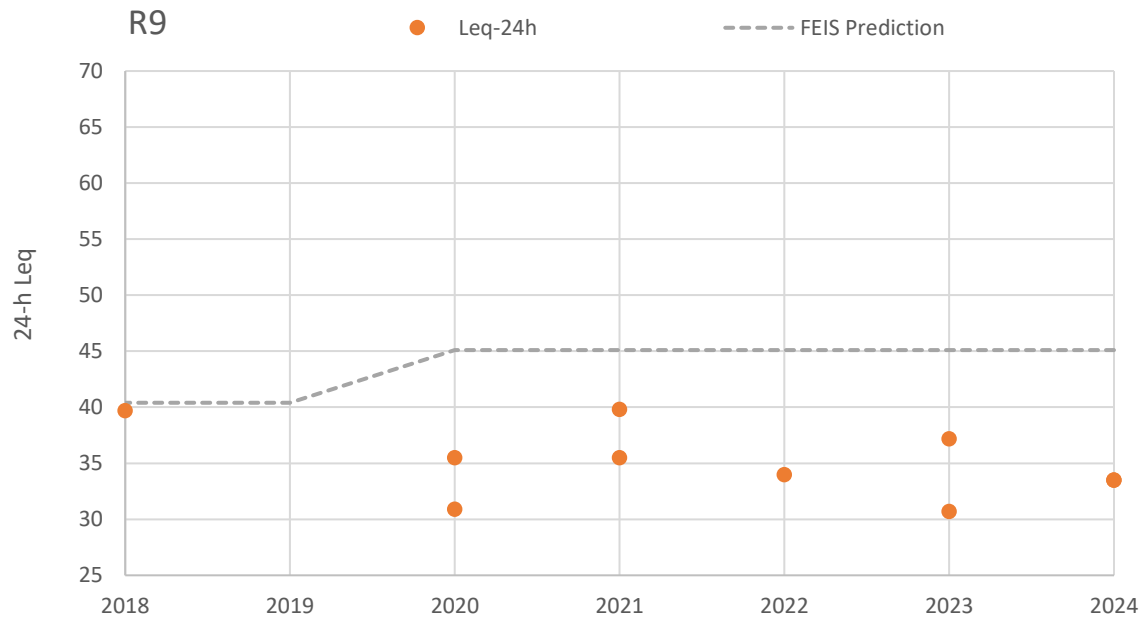


Figure 34. Historical 24-h L_{eq} values for monitoring station R9 (2018 – 2021) and R9a (2022+) at the Meadowbank site. Dashed line indicates the maximum FEIS prediction (2018, 2019 – Agnico Eagle, 2016; 2020+ - Agnico Eagle, 2018). No measurement was available in 2019.

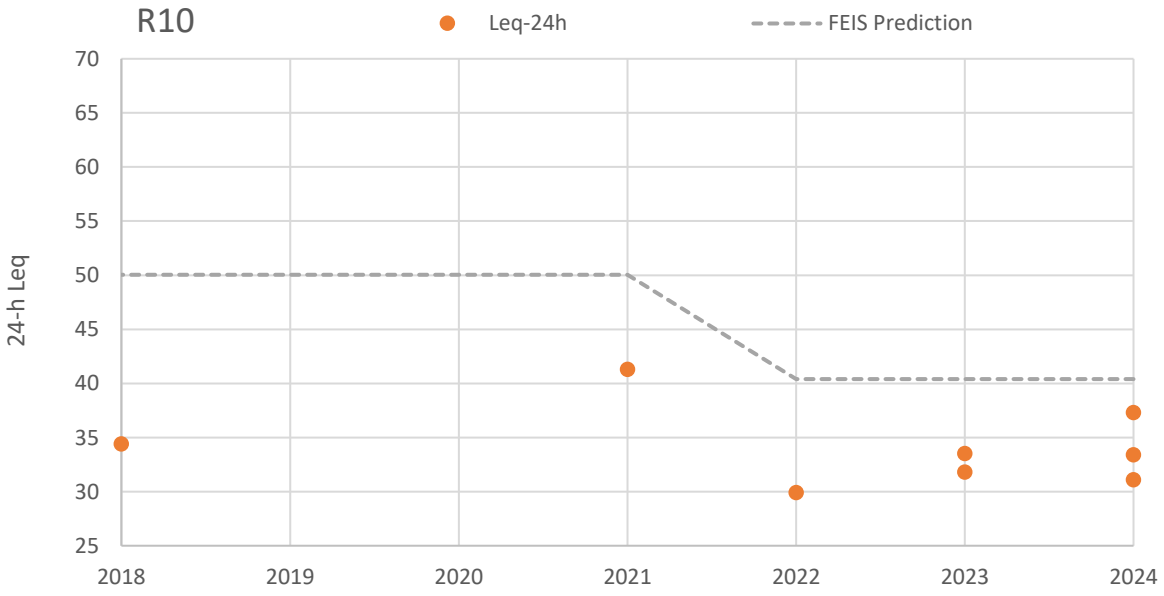


Figure 35. Historical 24-h L_{eq} values for monitoring station R10 (2018 – 2021) and R10a (2022+) at the Whale Tail site. Dashed line indicates the maximum FEIS prediction (2018, 2019 – Agnico Eagle, 2016; 2020+ - Agnico Eagle, 2018). No valid data was available in 2019 or 2020.

Figure 36. Historical 24-h L_{eq} values for monitoring station R11 (2018 – 2020) and R11a (2021+) at the Whale Tail Mine. Dashed line indicates the maximum FEIS prediction (2018, 2019 – Agnico Eagle, 2016; 2020+ Agnico Eagle, 2018), which is the same for both R11 and R11a locations. No measurements were available in 2019 or 2022.

SECTION 5 • SUMMARY

The objective of the noise monitoring program at the Meadowbank Complex is to measure noise levels at 11 previously determined monitoring locations over at least two 24 h periods each year, and periodically at one additional far field monitoring station. To fulfill this objective, Agnico Eagle aims to conduct a minimum of two monitoring events of two or more days per station annually, since high winds in the area tend to substantially reduce the quantity of available valid data.

In 2024, two or three surveys were successfully completed at nine of the 11 stations, and one survey was successfully completed at the two remaining stations. In total, five additional surveys were initiated but not successful due to a fallen microphone (2 cases), power supply issue (2 cases), or incomplete datasets (1 case).

After data processing according to weather conditions, the site's day-time and night-time design targets were met for all valid monitoring events. For one of the two surveys at station R5, one hourly L_{eq} value (11 am – 12 pm on August 9; 59 dBA) marginally exceeded the FEIS-predicted maximum (57 dBA). This was caused by a brief (<2 minute) aircraft fly-over. Aircraft were not included in FEIS noise models since they are an occasional occurrence. They may also be related to exploration activities in the region, rather than mine operation. Results for all other surveys and monitoring stations were less than FEIS predictions. Historical comparisons indicate no clear trends towards increasing sound levels above FEIS predictions.

Based on these results, no changes to noise abatement or mitigation measures are proposed at this time. Monitoring at far field station R12 is next scheduled for 2025.

Impacts of sensory disturbance on wildlife are evaluated through the Terrestrial Ecosystem Monitoring Plan (TEMP) and reported annually in the Wildlife Summary Report.

SECTION 6 • ACTIONS

No remedial actions related to ambient noise monitoring were planned for 2024.

For 2025, new microphone tripods and new batteries were purchased (end 2024) in an attempt to reduce invalidation of monitoring events. Data handling procedures will also be reviewed to reduce potential for data loss post-collection.

SECTION 7 • REFERENCES

Cumberland, 2005. Meadowbank Gold Project Environmental Impact Statement. Cumberland Resources Ltd. October, 2005.

AER (Alberta Energy Regulator), 2023. Directive 038: Noise Control.

AER (Alberta Energy Regulator), 2007. Directive 038: Noise Control.

Agnico Eagle, 2018. Final Environment Impact Statement (FEIS) Addendum - Whale Tail Pit Expansion Project. Volume 4 – Atmospheric Environment. Agnico Eagle Mines Ltd. December, 2018.

Agnico Eagle, 2016. Final Environment Impact Statement (FEIS) for the Whale Tail Pit Project. Volume 4 – Atmospheric Environment. Agnico Eagle Mines Ltd. May, 2016.

APPENDIX A

Site Photos

Figure -Apx 1: Monitoring location R1 (June 27, 2024).

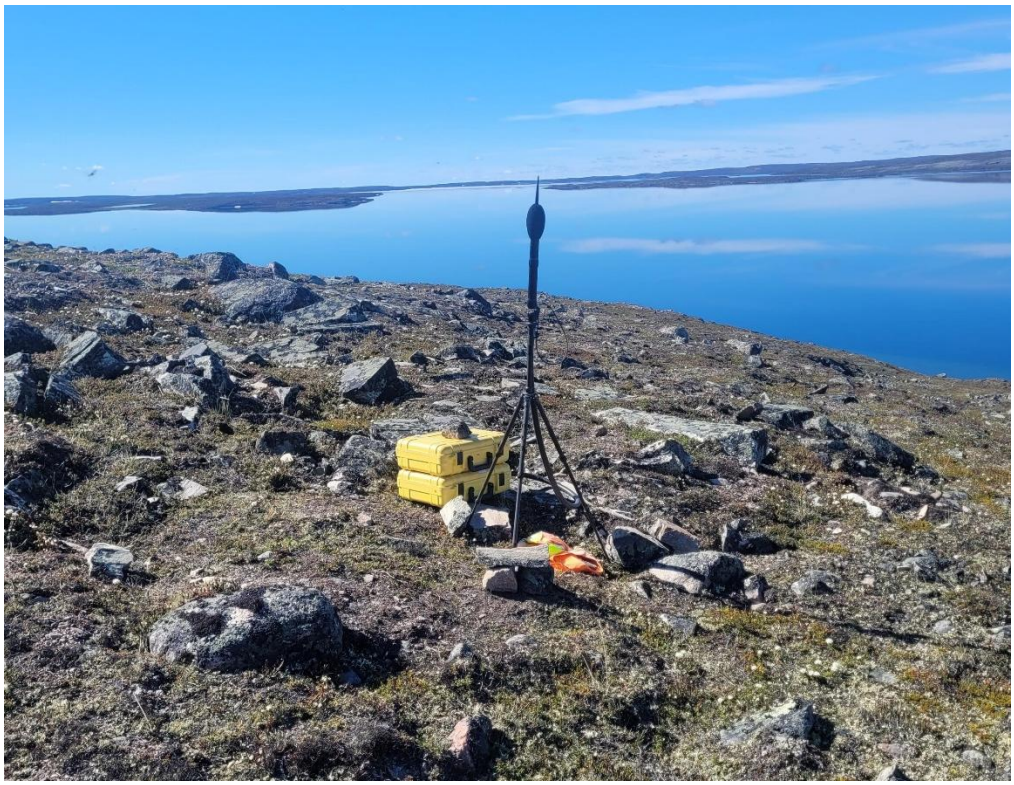


Figure -Apx 2: Monitoring location R2 (July 6, 2024).

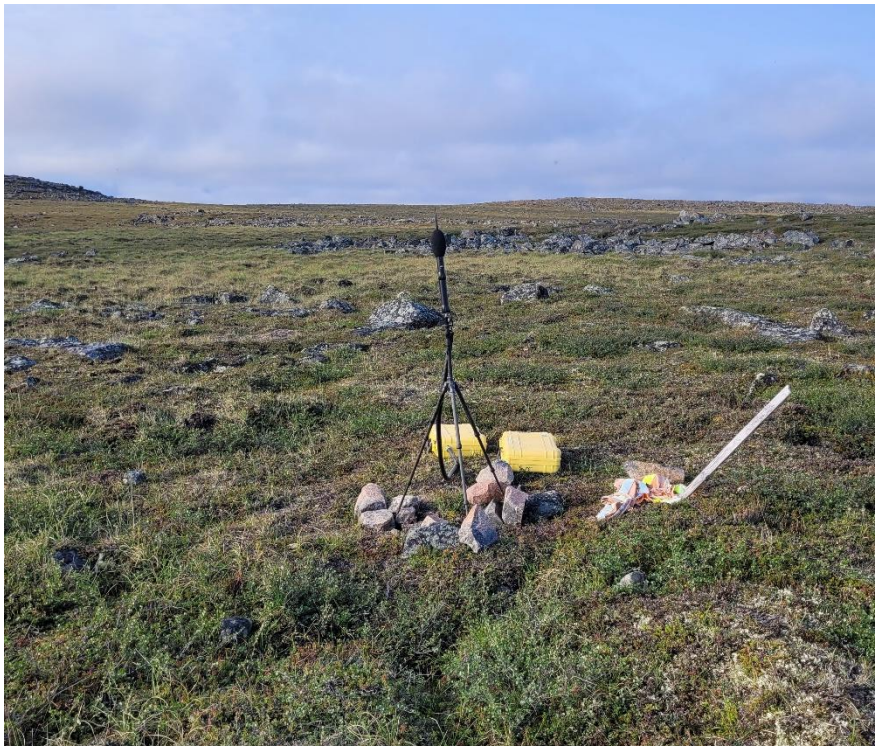


Figure -Apx 3: Monitoring location R3 (August 17, 2024).

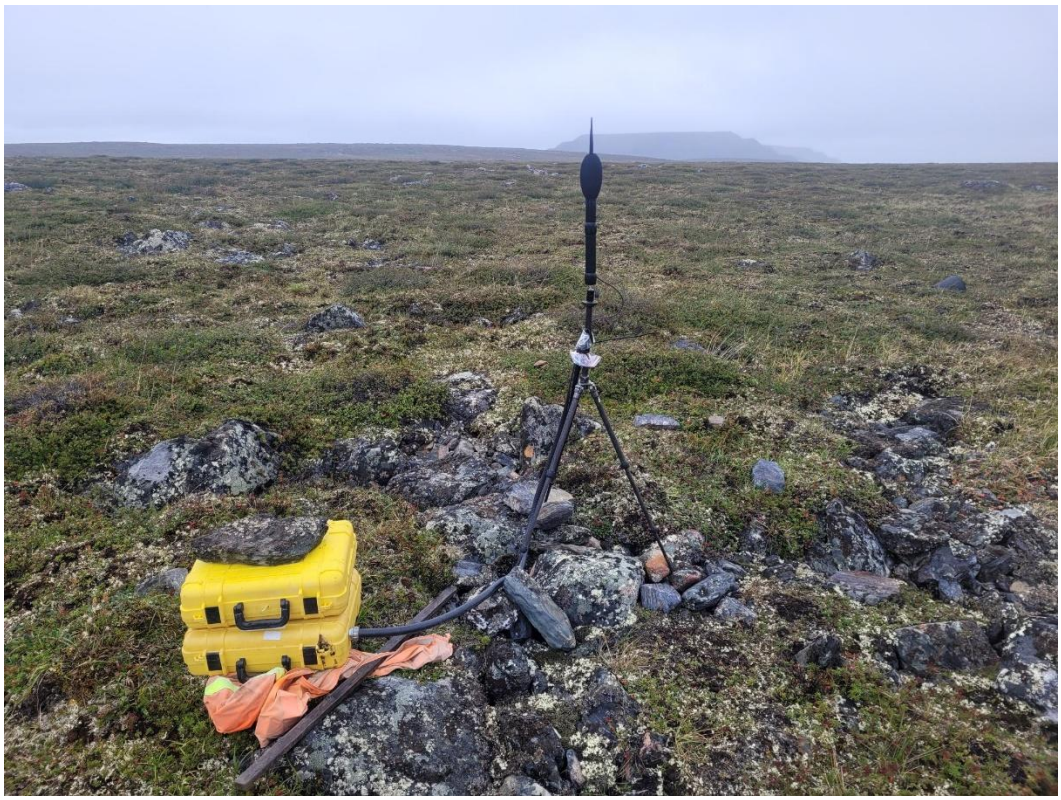


Figure -Apx 4: Monitoring location R4 (August 25, 2024).

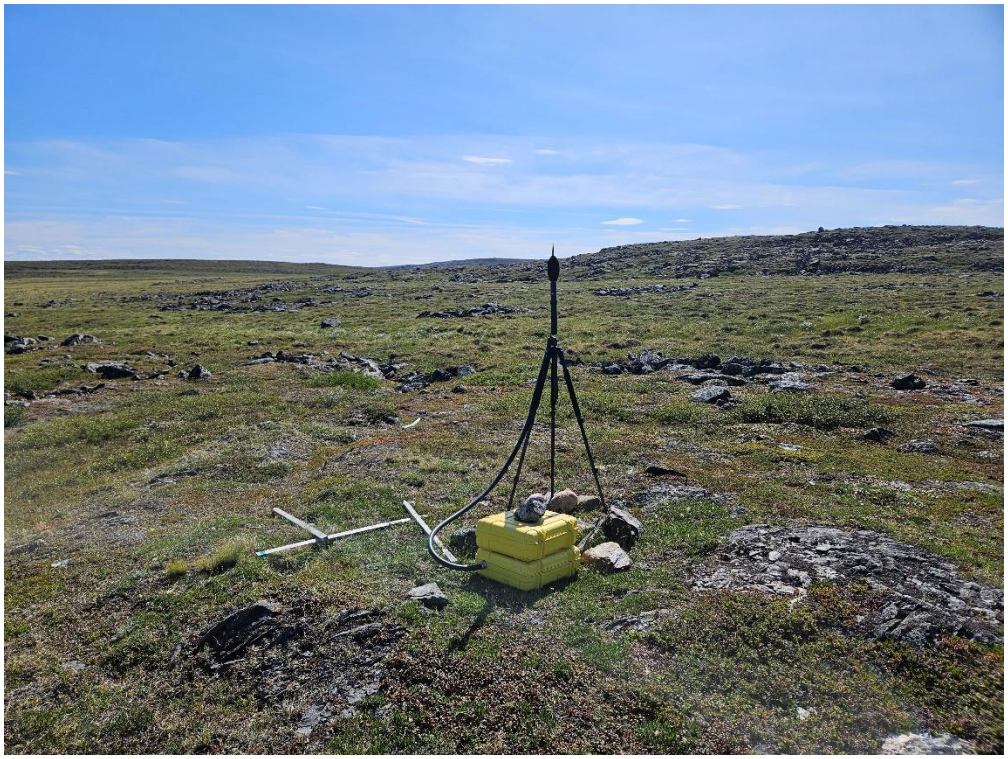


Figure -Apx 5: Monitoring location R5 (August 7, 2024).

Figure Apx 6: Monitoring location R6 (August 2, 2024).

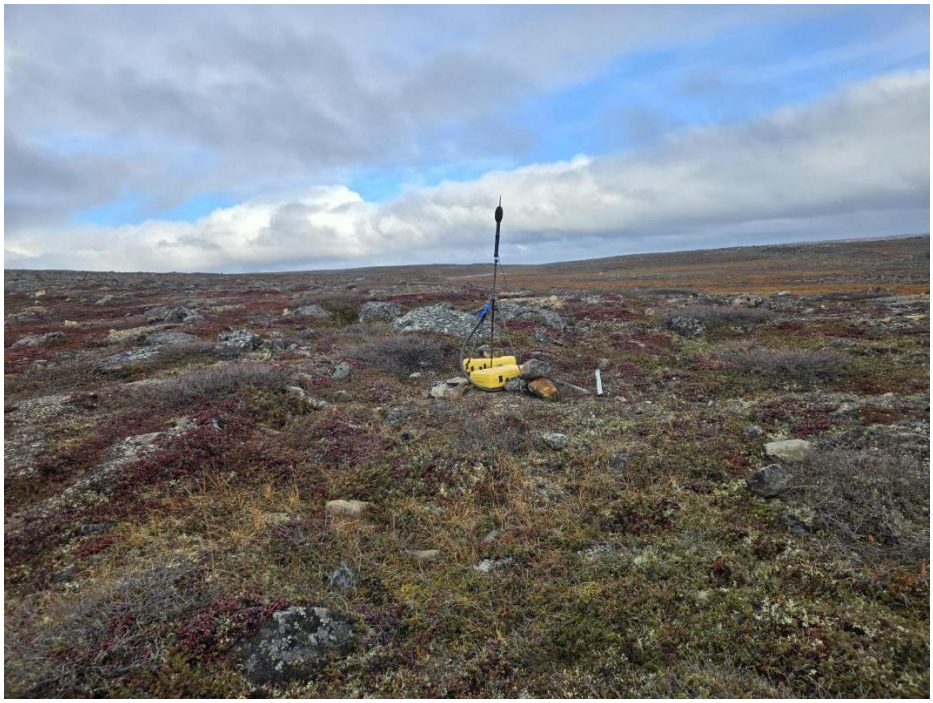


Figure -Apx 7: Monitoring location R7 (September 24, 2024).

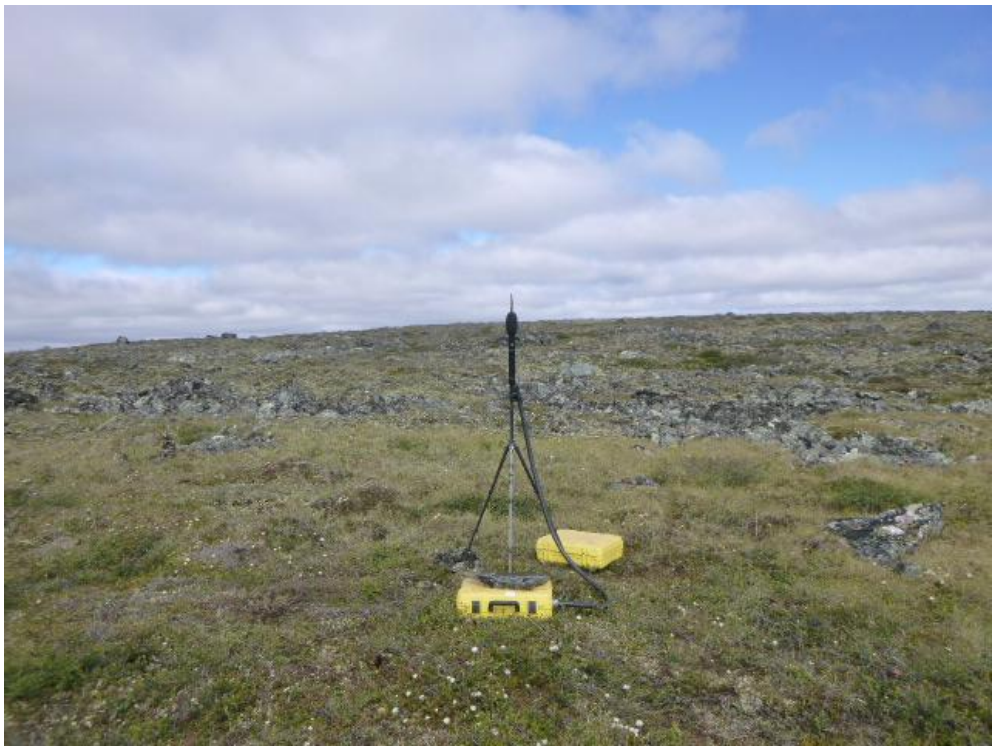


Figure -Apx 8: Monitoring location R8a (August 11, 2024).

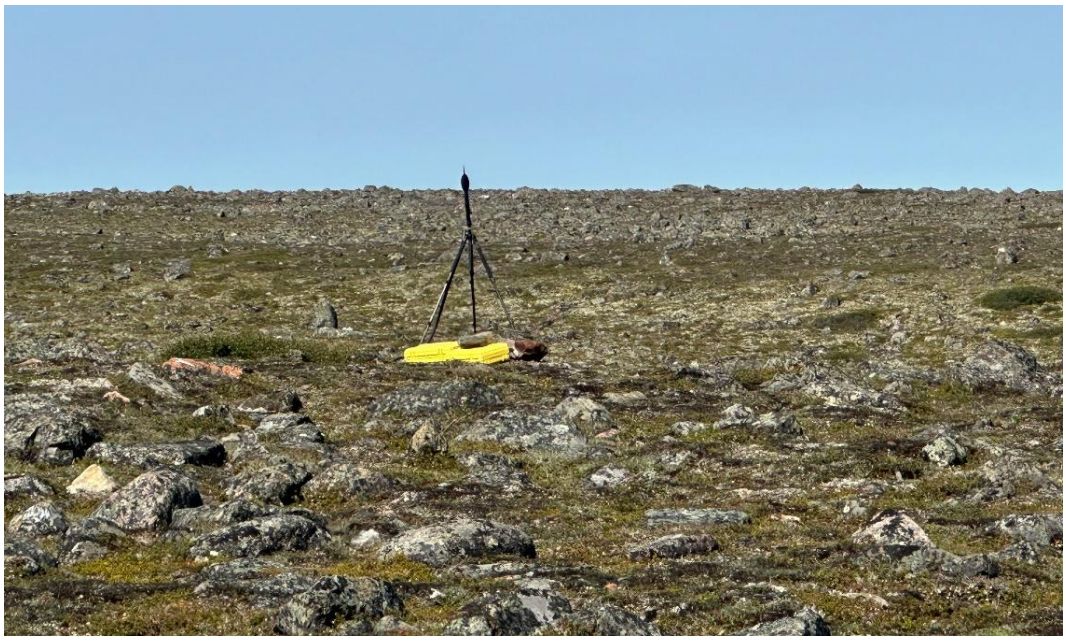


Figure Apx 9: Monitoring Location R9a (July 21, 2024).

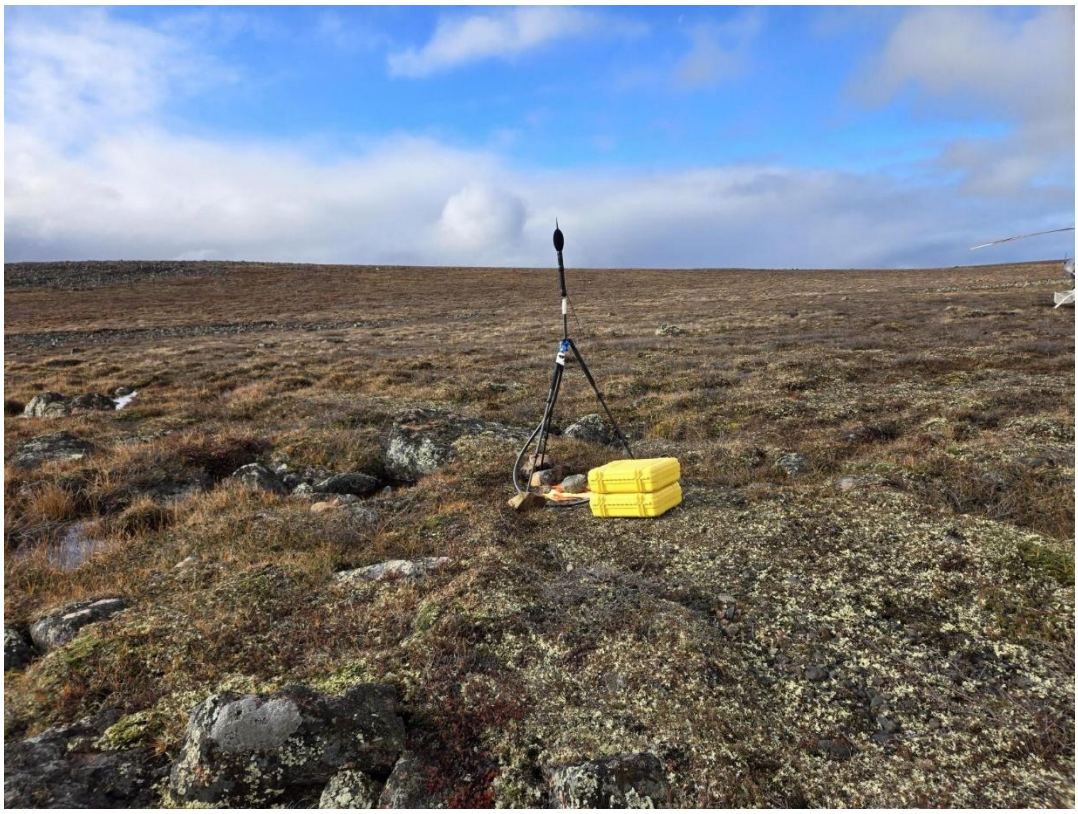


Figure Apx 10: Monitoring location R10a (September 24, 2024).

Figure Apx 11: Monitoring location R11a (August 17, 2024).

APPENDIX B

Weather Data and 1-h L_{eq} Values

App. Table 1. Average hourly air temperature, relative humidity, wind speed, and wind direction for the Meadowbank Mine weather station and calculated valid 1-h L_{eq} values for Meadowbank stations R1 – R6. Those filtered out from analyses based on unacceptable weather conditions or set-up/take-down are excluded (-).

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-06-27 16:00	12.3	41	4.6	311	-					
2024-06-27 17:00	12.8	42	5.8	325	-					
2024-06-27 18:00	12.4	49	6.0	309	-					
2024-06-27 19:00	10.8	53	7.2	297	-					
2024-06-27 20:00	10.0	57	6.1	294	-					
2024-06-27 21:00	9.6	57	5.8	294	-					
2024-06-27 22:00	9.7	65	7.2	312	-					
2024-06-27 23:00	8.4	72	6.5	316	-					
2024-06-28 0:00	8.0	69	5.1	319	-					
2024-06-28 1:00	7.7	75	3.5	316	30.3					
2024-06-28 2:00	7.0	83	5.6	327	-					
2024-06-28 3:00	5.7	88	6.4	332	-					
2024-06-28 4:00	4.7	95	6.8	338	-					
2024-06-28 5:00	3.5	100	5.8	351	-					
2024-06-28 6:00	3.8	98	5.8	355	-					
2024-06-28 7:00	4.2	98	5.9	332	-					
2024-06-28 8:00	5.0	88	6.1	326	-					
2024-06-28 9:00	5.8	91	6.0	327	-					
2024-06-28 10:00	7.2	76	5.5	322	-					
2024-06-28 11:00	9.8	60	5.8	319	-					
2024-06-28 12:00	11.6	49	6.0	320	-					
2024-06-28 13:00	12.8	48	5.5	315	-					
2024-06-28 14:00	13.8	45	6.2	323	-					
2024-06-28 15:00	14.6	45	5.7	313	-					
2024-06-28 16:00	15.5	46	5.2	321	-					
2024-06-28 17:00	15.3	48	5.1	318	-					
2024-06-28 18:00	13.8	56	5.1	302	-					
2024-06-28 19:00	13.9	49	4.9	298	-					
2024-06-28 20:00	13.6	50	4.2	294	33.6					
2024-06-28 21:00	14.5	46	1.8	294	37.9					
2024-06-28 22:00	14.5	49	1.6	235	43.5					
2024-06-28 23:00	12.2	64	4.5	230	-					

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-06-29 0:00	10.2	65	4.2	225	-					
2024-06-29 1:00	10.5	64	5.4	233	-					
2024-06-29 2:00	9.5	69	6.2	232	-					
2024-06-29 3:00	9.5	72	7.2	238	-					
2024-06-29 4:00	8.3	72	4.3	276	-					
2024-07-06 11:00	12.5	55	1.6	295		-				
2024-07-06 12:00	13.8	51	1.7	164		33.0				
2024-07-06 13:00	15.2	45	1.4	160		29.2				
2024-07-06 14:00	16.2	44	3.0	178		31.8				
2024-07-06 15:00	16.7	44	4.0	182		33.7				
2024-07-06 16:00	16.6	48	3.9	144		45.6				
2024-07-06 17:00	14.7	92	5.3	235		-				
2024-07-06 18:00	13.0	100	2.8	235		34.7				
2024-07-06 19:00	12.6	100	3.7	230		37.2				
2024-07-06 20:00	9.9	100	10.0	288		-				
2024-07-06 21:00	8.5	100	11.7	300		-				
2024-07-06 22:00	7.9	100	11.6	306		-				
2024-07-06 23:00	7.8	87	11.3	309		-				
2024-07-07 0:00	7.6	100	10.7	310		-				
2024-07-07 1:00	7.2	93	10.4	303		-				
2024-07-07 2:00	7.0	94	9.1	295		-				
2024-07-07 3:00	6.7	98	10.0	293		-				
2024-07-07 4:00	6.6	98	10.4	297		-				
2024-07-07 5:00	6.6	91	11.2	302		-				
2024-07-07 6:00	6.4	95	11.1	301		-				
2024-07-07 7:00	6.3	100	10.9	300		-				
2024-07-07 8:00	5.7	95	11.3	294		-				
2024-07-07 9:00	6.0	90	11.7	298		-				
2024-07-07 10:00	6.3	85	12.0	297		-				
2024-07-07 11:00	6.6	85	11.2	297		-				
2024-07-07 12:00	7.0	88	10.7	298		-				
2024-07-07 13:00	7.6	87	11.8	304		-				
2024-07-07 14:00	7.5	93	11.8	304		-				
2024-07-07 15:00	7.6	100	11.4	308		-				

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-07-07 16:00	8.0	96	10.3	313		-				
2024-07-07 17:00	8.8	88	11.1	318		-				
2024-07-07 18:00	9.5	79	10.4	320		-				
2024-07-07 19:00	10.3	73	10.5	319		-				
2024-07-07 20:00	10.4	73	9.7	321		-				
2024-07-07 21:00	10.3	76	8.4	323		-				
2024-07-07 22:00	9.8	79	7.6	321		-				
2024-07-07 23:00	9.3	82	7.1	321		-				
2024-07-08 0:00	8.9	86	6.2	324		-				
2024-07-08 1:00	8.5	89	5.8	322		-				
2024-07-08 2:00	8.2	94	5.5	311		-				
2024-07-08 3:00	7.9	100	5.0	307		-				
2024-07-08 4:00	8.0	99	4.9	321		-				
2024-07-08 5:00	7.8	100	4.0	303		30.3				
2024-07-08 6:00	7.6	100	4.5	297		-				
2024-07-08 7:00	7.4	100	5.7	305		-				
2024-07-15 17:00	19.5	40	-	-					-	
2024-07-15 18:00	19.6	30	-	-					-	
2024-07-15 19:00	19.5	36	-	-					-	
2024-07-15 20:00	18.6	43	-	-					-	
2024-07-15 21:00	17.1	49	-	-					-	
2024-07-15 22:00	16.5	55	-	-					-	
2024-07-15 23:00	15.6	60	-	-					-	
2024-07-16 0:00	15.1	57	-	-					-	
2024-07-16 1:00	15.6	54	-	-					-	
2024-07-16 2:00	15.3	56	-	-					-	
2024-07-16 3:00	14.6	60	-	-					-	
2024-07-16 4:00	14.3	63	-	-					-	
2024-07-16 5:00	14.0	65	-	-					-	
2024-07-16 6:00	14.0	68	-	-					-	
2024-07-16 7:00	13.7	69	-	-					-	
2024-07-16 8:00	14.6	61	-	-					-	
2024-07-16 9:00	17.3	49	-	-					-	
2024-07-16 10:00	19.5	43	-	-					-	

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-07-16 11:00	21.9	34	-	-					-	
2024-07-16 12:00	22.9	34	-	-					-	
2024-07-16 13:00	23.4	33	-	-					-	
2024-07-16 14:00	24.1	34	-	-					-	
2024-07-16 15:00	24.0	32	-	-					-	
2024-07-16 16:00	25.1	31	-	-					-	
2024-07-16 17:00	24.3	32	-	-					-	
2024-07-16 18:00	23.5	45	-	-					-	
2024-07-16 19:00	21.4	48	-	-					-	
2024-07-16 20:00	20.5	52	-	-					54.1	
2024-07-16 21:00	21.5	48	-	-					31.5	
2024-07-16 22:00	21.7	50	-	-					26.9	
2024-07-16 23:00	21.3	51	-	-					28.7	
2024-07-17 0:00	18.1	65	-	-					32.4	
2024-07-17 1:00	17.9	67	-	-					31.1	
2024-07-20 14:00	17.7	49	4.9	27				-		
2024-07-20 15:00	18.2	44	5.0	28				-		
2024-07-20 16:00	18.8	41	4.6	25				-		
2024-07-20 17:00	19.0	41	4.2	14				-		
2024-07-20 18:00	19.0	44	3.9	358				35.7		
2024-07-20 19:00	18.8	44	5.6	355				-		
2024-07-20 20:00	17.9	49	5.5	6				-		
2024-07-20 21:00	17.9	46	5.2	7				-		
2024-07-20 22:00	17.5	53	3.6	356				37.4		
2024-07-20 23:00	16.0	62	3.6	334				37.7		
2024-07-21 0:00	14.9	63	3.5	338				38.0		
2024-07-21 1:00	13.5	75	2.3	323				36.6		
2024-07-21 2:00	12.6	71	1.9	309				36.3		
2024-07-21 3:00	12.7	71	1.2	311				38.6		
2024-07-21 4:00	11.7	79	1.7	293				39.0		
2024-07-21 5:00	11.5	81	0.5	316				40.5		
2024-07-21 6:00	11.5	79	1.2	296				37.8		
2024-07-21 7:00	12.2	75	2.3	296				36.8		
2024-07-21 8:00	14.1	61	3.0	274				36.2		

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-07-21 9:00	16.4	52	3.2	260				34.9		
2024-07-21 10:00	17.9	46	2.6	231				28.5		
2024-07-21 11:00	19.2	44	3.9	245				34.5		
2024-07-21 12:00	20.0	40	4.5	235				-		
2024-07-21 13:00	21.1	38	4.8	244				-		
2024-07-21 14:00	22.2	37	5.1	254				-		
2024-07-21 15:00	22.4	39	4.9	280				-		
2024-07-21 16:00	22.1	37	5.5	291				-		
2024-07-21 17:00	23.1	35	6.8	308				-		
2024-07-21 18:00	23.1	33	7.5	329				-		
2024-07-21 19:00	22.9	32	6.8	332				-		
2024-07-21 20:00	22.3	37	5.7	337				-		
2024-07-21 21:00	21.7	42	5.1	339				-		
2024-07-21 22:00	20.9	46	3.4	339				35.8		
2024-07-21 23:00	19.6	54	3.0	351				34.9		
2024-07-22 0:00	18.1	58	2.7	7				35.4		
2024-07-22 1:00	17.6	58	2.6	7				39.0		
2024-07-22 2:00	15.7	71	1.5	315				37.2		
2024-07-22 3:00	14.1	73	1.7	296				39.4		
2024-07-22 4:00	14.0	75	2.8	293				37.7		
2024-07-22 5:00	14.1	73	1.7	317				39.1		
2024-07-22 6:00	13.9	76	2.3	296				39.2		
2024-07-22 7:00	14.5	70	2.2	297				37.5		
2024-07-22 8:00	16.0	64	1.5	305				30.0		
2024-07-22 9:00	17.8	53	1.0	291				31.3		
2024-07-22 10:00	19.3	50	1.1	291				28.3		
2024-07-22 11:00	20.4	43	1.3	174				25.8		
2024-07-22 12:00	21.5	39	1.7	171				33.8		
2024-07-22 13:00	22.2	41	2.5	188				27.0		
2024-07-22 14:00	21.7	41	4.8	199				-		
2024-08-02 9:00	7.3	70	5.2	11			-			-
2024-08-02 10:00	8.4	63	5.3	8			-			-
2024-08-02 11:00	9.2	61	5.9	5			-			-
2024-08-02 12:00	10.0	58	6.4	352			-			-

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-02 13:00	10.5	56	6.3	340			-			-
2024-08-02 14:00	10.9	53	5.8	341			-			-
2024-08-02 15:00	11.7	53	5.8	327			-			-
2024-08-02 16:00	12.0	49	6.0	326			-			-
2024-08-02 17:00	12.5	48	5.0	344			-			-
2024-08-02 18:00	13.0	49	4.3	344			-			-
2024-08-02 19:00	12.9	50	3.7	354			29.4			28.3
2024-08-02 20:00	12.8	49	4.0	355			28.7			29.0
2024-08-02 21:00	12.1	54	3.8	20			29.5			28.2
2024-08-02 22:00	11.2	57	4.2	24			-			-
2024-08-02 23:00	10.3	60	4.9	37			-			-
2024-08-03 0:00	9.5	61	4.8	36			-			-
2024-08-03 1:00	8.9	64	3.7	41			24.9			23.2
2024-08-03 2:00	8.5	66	3.0	35			26.0			24.0
2024-08-03 3:00	8.1	67	2.9	34			24.0			23.3
2024-08-03 4:00	7.7	70	2.2	17			24.7			19.3
2024-08-03 5:00	7.3	77	1.9	3			22.3			24.8
2024-08-03 6:00	6.9	76	1.7	341			22.1			18.3
2024-08-03 7:00	7.2	67	2.3	359			24.6			20.4
2024-08-03 8:00	7.5	66	3.0	14			29.6			32.4
2024-08-03 9:00	7.9	66	3.8	12			30.1			36.0
2024-08-03 10:00	8.9	64	4.1	6			33.5			33.0
2024-08-03 11:00	9.6	60	4.8	6			-			-
2024-08-03 12:00	10.4	58	5.2	1			-			-
2024-08-03 13:00	11.2	57	5.4	354			-			-
2024-08-03 14:00	11.7	53	6.1	355			-			-
2024-08-03 15:00	12.3	49	5.9	2			-			-
2024-08-03 16:00	12.6	48	5.9	0			-			-
2024-08-03 17:00	12.9	44	5.6	1			-			-
2024-08-03 18:00	13.2	45	6.2	353			-			-
2024-08-03 19:00	13.0	46	6.2	358			-			-
2024-08-03 20:00	12.4	49	6.1	353			-			-
2024-08-03 21:00	11.6	52	6.2	341			-			-
2024-08-03 22:00	10.8	60	5.8	339			-			-
2024-08-03 23:00	10.0	65	5.9	351			-			-

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-04 0:00	9.3	69	5.0	2			-			-
2024-08-04 1:00	8.6	73	5.2	7			-			-
2024-08-04 2:00	7.8	78	4.4	7			-			-
2024-08-04 3:00	7.5	79	4.9	4			-			-
2024-08-04 4:00	6.9	79	4.4	355			-			-
2024-08-04 5:00	6.5	85	4.1	351			37.3			27.8
2024-08-04 6:00	6.5	83	5.0	3			-			-
2024-08-04 7:00	7.4	79	5.0	360			-			-
2024-08-04 8:00	7.7	79	6.1	6			-			-
2024-08-04 9:00	7.9	71	6.1	7			-			-
2024-08-04 10:00	8.2	72	6.4	6			-			-
2024-08-04 11:00	8.8	67	7.2	346			-			-
2024-08-04 12:00	10.0	60	7.1	345			-			-
2024-08-04 13:00	11.3	56	7.4	348			-			-
2024-08-04 14:00	12.5	53	7.1	355			-			-
2024-08-04 15:00	13.2	50	7.1	352			-			-
2024-08-04 16:00	13.6	51	7.5	346			-			-
2024-08-04 17:00	13.5	51	8.2	339			-			-
2024-08-04 18:00	13.3	49	8.2	332			-			-
2024-08-04 19:00	13.2	50	8.2	332			-			-
2024-08-04 20:00	12.7	52	7.8	338			-			-
2024-08-04 21:00	12.2	55	7.0	338			-			-
2024-08-04 22:00	11.3	61	5.3	343			-			-
2024-08-04 23:00	10.4	65	4.0	359			33.7			26.3
2024-08-05 0:00	9.9	67	4.0	9			34.2			28.1
2024-08-05 1:00	9.6	69	3.6	7			33.3			25.0
2024-08-05 2:00	9.3	67	5.0	344			-			-
2024-08-05 3:00	9.0	71	5.4	342			-			-
2024-08-05 4:00	8.8	72	5.6	340			-			-
2024-08-05 5:00	8.4	91	6.3	340			-			-
2024-08-05 6:00	8.2	90	6.6	334			-			-
2024-08-05 7:00	8.1	85	7.1	333			41.9			-
2024-08-05 8:00	8.0	89	7.5	323			41.9			-
2024-08-05 9:00	7.9	94	7.5	319			-			-
2024-08-05 10:00	8.2	91	7.3	331			-			

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-07 14:00	17.2	49	6.6	345					-	
2024-08-07 15:00	18.0	49	7.0	2		-			-	
2024-08-07 16:00	19.0	47	6.4	358		-			-	
2024-08-07 17:00	19.4	46	6.3	357		-			-	
2024-08-07 18:00	19.6	45	6.0	6		-			-	
2024-08-07 19:00	19.7	45	5.4	4		-			-	
2024-08-07 20:00	19.7	46	5.0	353		-			-	
2024-08-07 21:00	19.1	50	3.7	339		31.6			37.3	
2024-08-07 22:00	17.5	61	3.0	332		33.0			33.8	
2024-08-07 23:00	15.5	70	3.2	314		28.6			34.0	
2024-08-08 0:00	13.9	72	2.3	299		37.0			41.7	
2024-08-08 1:00	13.4	73	2.0	295		36.0			41.2	
2024-08-08 2:00	13.2	74	2.1	285		31.8			36.7	
2024-08-08 3:00	12.6	73	1.3	279		18.4			22.6	
2024-08-08 4:00	13.0	68	2.4	271		26.2			24.6	
2024-08-08 5:00	12.3	81	1.3	205		28.9			26.2	
2024-08-08 6:00	12.0	79	1.3	197		36.1			31.7	
2024-08-08 7:00	12.8	72	3.1	203		34.4			36.4	
2024-08-08 8:00	13.4	71	4.5	211		-			-	
2024-08-08 9:00	14.9	61	5.7	220		-			-	
2024-08-08 10:00	16.5	58	5.9	235		-			-	
2024-08-08 11:00	18.1	51	3.6	230		34.7			42.6	
2024-08-08 12:00	20.2	47	5.0	242		-			-	
2024-08-08 13:00	21.5	41	6.0	243		-			-	
2024-08-08 14:00	22.5	41	6.6	238		-			-	
2024-08-08 15:00	23.2	34	7.3	242		-			-	
2024-08-08 16:00	24.2	34	7.9	258		-			-	
2024-08-08 17:00	23.6	39	7.1	265		-			-	
2024-08-08 18:00	22.4	40	7.0	289		-			-	
2024-08-08 19:00	22.6	47	5.5	302		-			-	
2024-08-08 20:00	20.9	55	3.8	305		26.3			28.4	
2024-08-08 21:00	19.4	61	2.4	293		23.2			20.4	
2024-08-08 22:00	18.1	62	1.6	289		22.5			21.8	
2024-08-08 23:00	17.2	67	2.1	284		31.3			36.0	

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-09 0:00	16.6	70	1.9	290		29.9			37.6	
2024-08-09 1:00	15.9	74	2.3	295		31.5			35.9	
2024-08-09 2:00	14.6	82	0.9	280		25.6			28.5	
2024-08-09 3:00	14.3	80	1.8	293		27.9			27.0	
2024-08-09 4:00	14.2	83	2.8	296		28.2			26.1	
2024-08-09 5:00	13.9	84	1.9	289		27.5			29.8	
2024-08-09 6:00	13.4	85	0.9	302		27.1			27.0	
2024-08-09 7:00	13.8	83	1.4	286		40.5			32.9	
2024-08-09 8:00	14.7	81	2.4	288		41.6			38.1	
2024-08-09 9:00	16.8	71	1.5	290		42.3			38.7	
2024-08-09 10:00	18.4	66	1.1	267		37.3			33.6	
2024-08-09 11:00	20.5	58	1.1	187		26.3			27.9	
2024-08-09 12:00	22.7	51	2.0	279		56.7			59.9	
2024-08-09 13:00	24.0	46	2.6	281		29.9			26.1	
2024-08-09 14:00	25.0	45	2.5	283		53.5			45.2	
2024-08-09 15:00	25.2	41	4.0	281		-			-	
2024-08-11 15:00	24.2	46	6.8	257						-
2024-08-11 16:00	23.2	58	7.2	272						-
2024-08-11 17:00	22.0	57	7.4	286						-
2024-08-11 18:00	21.4	56	6.6	287						-
2024-08-11 19:00	21.8	60	4.8	303						-
2024-08-11 20:00	20.7	65	3.0	298						32.7
2024-08-11 21:00	20.0	72	3.1	303						31.6
2024-08-11 22:00	19.2	74	3.0	324						29.5
2024-08-11 23:00	18.1	81	1.3	343						27.7
2024-08-12 0:00	17.2	85	1.4	350						21.8
2024-08-12 1:00	17.0	85	1.7	43						30.0
2024-08-12 2:00	16.3	90	3.4	54						26.9
2024-08-12 3:00	15.9	91	3.1	89						25.9
2024-08-12 4:00	15.6	95	3.4	93						29.3
2024-08-12 5:00	15.3	97	4.4	90						-
2024-08-12 6:00	15.0	100	4.6	93						-
2024-08-12 7:00	15.2	96	4.7	100						-
2024-08-12 8:00	15.8	92	5.0	109						-

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-12 9:00	16.4	90	4.7	128						-
2024-08-12 10:00	17.3	87	4.9	148						-
2024-08-12 11:00	18.2	76	2.9	163						39.5
2024-08-12 12:00	18.8	71	3.8	189						33.8
2024-08-12 13:00	20.4	65	3.8	190						34.9
2024-08-12 14:00	20.8	65	3.5	183						34.0
2024-08-12 15:00	21.0	64	3.2	191						33.1
2024-08-12 16:00	21.0	66	2.6	165						35.1
2024-08-12 17:00	21.6	65	2.7	163						39.5
2024-08-12 18:00	20.4	68	5.3	189						-
2024-08-12 19:00	20.3	68	5.9	193						-
2024-08-12 20:00	20.7	60	5.4	199						-
2024-08-12 21:00	21.5	62	4.1	221						37.6
2024-08-12 22:00	20.3	65	2.7	180						35.2
2024-08-12 23:00	19.3	70	2.2	197						36.8
2024-08-13 0:00	18.0	77	1.3	177						33.2
2024-08-13 1:00	17.2	85	1.3	169						33.9
2024-08-13 2:00	17.0	82	0.9	156						34.9
2024-08-13 3:00	16.7	80	0.5	171						35.2
2024-08-13 4:00	16.0	92	0.5	151						27.9
2024-08-13 5:00	15.2	95	3.9	328						33.9
2024-08-13 6:00	15.5	88	6.4	3						-
2024-08-13 7:00	15.0	87	7.2	355						-
2024-08-13 8:00	14.4	86	5.8	343						-
2024-08-13 9:00	14.3	84	5.9	339						-
2024-08-13 10:00	14.8	79	7.1	339						-
2024-08-13 11:00	15.3	75	7.2	343						-
2024-08-13 12:00	15.5	74	7.0	1						-
2024-08-13 13:00	15.8	74	7.1	355						-
2024-08-13 14:00	15.9	68	7.2	351						-
2024-08-13 15:00	16.5	67	7.7	359						-
2024-08-13 16:00	15.3	77	8.7	3						-
2024-08-13 17:00	14.4	74	8.3	4						-
2024-08-13 18:00	13.4	71	8.6	5						-
2024-08-13 19:00	12.3	68	8.8	6						-

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-13 20:00	11.2	67	9.2	7						-
2024-08-13 21:00	10.5	71	8.7	10						-
2024-08-13 22:00	10.0	70	8.1	9						-
2024-08-13 23:00	9.8	68	8.8	9						-
2024-08-14 0:00	9.5	62	8.4	15						-
2024-08-14 1:00	9.6	60	9.1	20						-
2024-08-14 2:00	9.4	62	8.4	26						-
2024-08-14 3:00	9.4	63	8.0	31						-
2024-08-14 4:00	9.2	69	8.0	28						-
2024-08-14 5:00	8.8	70	7.1	32						-
2024-08-14 6:00	8.8	70	7.4	31						-
2024-08-14 7:00	8.9	66	8.1	39						-
2024-08-14 8:00	8.8	67	6.6	47						-
2024-08-14 9:00	8.9	64	5.9	47						-
2024-08-14 10:00	9.3	65	4.9	47						-
2024-08-17 9:00	9.0	97	1.2	288			-			
2024-08-17 10:00	9.6	91	0.6	201			25.5			
2024-08-17 11:00	10.4	81	1.1	200			27.5			
2024-08-17 12:00	11.6	71	1.0	189			33.3			
2024-08-17 13:00	12.7	67	1.1	208			24.0			
2024-08-17 14:00	13.2	66	1.3	204			27.9			
2024-08-17 15:00	14.1	44	2.2	228			23.7			
2024-08-17 16:00	14.3	54	2.9	283			32.8			
2024-08-17 17:00	14.7	51	3.5	292			36.5			
2024-08-17 18:00	15.0	48	3.5	285			29.4			
2024-08-17 19:00	15.3	47	2.9	306			26.0			
2024-08-17 20:00	15.0	50	3.0	326			26.5			
2024-08-17 21:00	14.6	61	1.7	325			26.5			
2024-08-17 22:00	13.4	58	1.3	278			26.0			
2024-08-17 23:00	12.4	75	1.5	281			30.1			
2024-08-18 0:00	11.0	79	2.6	282			33.8			
2024-08-18 1:00	10.3	85	2.9	282			32.9			
2024-08-18 2:00	9.8	86	3.3	279			35.1			
2024-08-18 3:00	9.6	89	3.6	282			35.4			

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-18 4:00	9.4	90	3.4	289			35.3			
2024-08-18 5:00	8.8	96	3.1	291			35.1			
2024-08-18 6:00	8.5	94	3.3	279			33.5			
2024-08-18 7:00	8.4	93	1.9	253			35.4			
2024-08-18 8:00	9.1	91	2.3	250			38.2			
2024-08-18 9:00	9.9	83	2.8	251			35.4			
2024-08-18 10:00	11.3	68	3.7	257			29.0			
2024-08-18 11:00	12.5	63	3.5	252			30.8			
2024-08-18 12:00	13.3	62	4.1	235			28.6			
2024-08-18 13:00	13.8	57	3.8	203			27.6			
2024-08-18 14:00	14.2	54	5.0	195			-			
2024-08-18 15:00	14.7	48	4.5	220			-			
2024-08-18 16:00	15.1	44	4.8	227			-			
2024-08-18 17:00	15.5	49	4.2	233			-			
2024-08-18 18:00	15.7	53	4.8	235			-			
2024-08-18 19:00	15.6	53	5.4	235			-			
2024-08-18 20:00	15.0	55	6.1	235			-			
2024-08-18 21:00	14.1	65	5.9	233			-			
2024-08-18 22:00	12.9	71	5.1	234			-			
2024-08-18 23:00	12.4	75	5.4	228			-			
2024-08-19 0:00	11.3	82	4.2	209			-			
2024-08-19 1:00	10.8	83	5.0	207			-			
2024-08-19 2:00	10.4	81	4.5	205			-			
2024-08-19 3:00	10.2	88	4.0	200			39.8			
2024-08-19 4:00	9.4	96	3.9	205			40.7			
2024-08-19 5:00	8.9	98	4.4	204			-			
2024-08-19 6:00	8.8	98	4.4	196			-			
2024-08-19 7:00	8.7	98	3.7	192			38.5			
2024-08-19 8:00	9.3	94	4.0	191			40.7			
2024-08-19 9:00	10.3	89	3.2	195			41.1			
2024-08-19 10:00	11.6	84	4.4	194			-			
2024-08-19 11:00	13.1	76	4.7	192			-			
2024-08-19 12:00	15.0	68	4.9	188			-			
2024-08-19 13:00	16.9	58	5.5	198			-			
2024-08-19 14:00	18.3	49	5.9	215			-			

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)					
					R1	R2	R3	R4	R5	R6
2024-08-19 15:00	18.9	48	5.8	221			-			
2024-08-22 11:00	9.7	95	7.9	306				-		
2024-08-22 12:00	9.5	87	8.8	306				-		
2024-08-22 13:00	9.8	73	8.9	311				-		
2024-08-22 14:00	10.4	67	9.3	303				-		
2024-08-22 15:00	10.0	65	9.1	298				-		
2024-08-22 16:00	10.1	59	8.3	296				-		
2024-08-22 17:00	10.3	56	8.4	298				-		
2024-08-22 18:00	10.1	56	8.2	298				-		
2024-08-22 19:00	10.1	55	7.5	291				-		
2024-08-22 20:00	9.9	56	7.4	288				-		
2024-08-22 21:00	9.8	57	5.9	291				-		
2024-08-22 22:00	9.5	61	6.4	287				-		
2024-08-22 23:00	8.8	69	4.3	286				-		
2024-08-23 0:00	8.0	75	2.7	288				35.4		
2024-08-23 1:00	7.5	74	3.2	244				37.8		
2024-08-23 2:00	7.5	75	3.8	233				34.5		
2024-08-23 3:00	7.6	73	4.3	230				-		
2024-08-23 4:00	7.8	72	5.6	224				-		
2024-08-23 5:00	7.4	83	5.7	223				-		
2024-08-23 6:00	6.9	88	5.2	214				-		
2024-08-23 7:00	7.3	84	5.9	221				-		
2024-08-23 8:00	8.4	82	6.8	227				-		
2024-08-23 9:00	9.6	74	6.6	229				-		
2024-08-23 10:00	10.8	62	6.9	234				-		
2024-08-23 11:00	12.3	56	6.2	226				-		
2024-08-23 12:00	13.3	54	6.3	216				-		

App. Table 2. Average hourly air temperature, relative humidity, wind speed, and wind direction for the Whale Tail Mine weather station and valid calculated 1-h L_{eq} values for Whale Tail Mine stations R7 – R11. Those filtered out from analyses based on unacceptable weather conditions and set up/take down are excluded (-). Values excluded from subsequent calculations after secondary filtering, as explained in Section 2.4, are in italics.

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-07-01 16:00	20.6	38	5.3	309				-	
2024-07-01 17:00	20.5	38	5.0	313				-	
2024-07-01 18:00	20.6	40	4.7	306				-	
2024-07-01 19:00	20.5	40	4.4	307				-	
2024-07-01 20:00	20.4	42	3.3	302				29.3	
2024-07-01 21:00	20.2	40	3.5	297				34.8	
2024-07-01 22:00	19.5	45	3.3	300				27.7	
2024-07-01 23:00	18.2	50	1.6	291				28.5	
2024-07-02 0:00	16.1	61	0.3	234				25.5	
2024-07-02 1:00	15.0	66	0.2	240				23.3	
2024-07-02 2:00	14.2	67	0.7	201				22.7	
2024-07-02 3:00	13.3	70	1.8	195				23.9	
2024-07-02 4:00	12.7	71	2.6	196				31.0	
2024-07-02 5:00	13.1	70	3.2	221				33.5	
2024-07-02 6:00	13.0	75	2.4	207				31.4	
2024-07-02 7:00	13.6	73	2.5	246				35.5	
2024-07-02 8:00	14.3	70	3.4	263				35.5	
2024-07-02 9:00	15.0	73	3.1	308				36.2	
2024-07-02 10:00	15.2	74	1.7	311				36.9	
2024-07-02 11:00	11.9	83	4.2	303				-	
2024-07-02 12:00	11.1	84	1.8	285				*45.7*	
2024-07-02 13:00	11.1	82	1.5	22				*45.3*	
2024-07-02 14:00	11.2	79	1.5	295				*47.3*	
2024-07-02 15:00	11.0	76	1.9	290				*49.4*	
2024-07-02 16:00	11.0	67	2.2	286				*49.9*	
2024-07-02 17:00	10.3	71	1.7	285				*49.7*	
2024-07-02 18:00	10.6	66	2.0	282				*49.7*	
2024-07-02 19:00	10.6	60	2.3	284				*47.6*	
2024-07-02 20:00	9.8	63	3.0	290				*49.2*	
2024-07-02 21:00	9.4	65	2.0	285				*47.4*	
2024-07-02 22:00	8.9	63	2.0	290				39.0	
2024-07-02 23:00	8.1	68	2.4	299				32.2	

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-07-03 0:00	7.8	72	3.1	304				30.0	
2024-07-03 1:00	7.4	75	3.5	308				32.0	
2024-07-03 2:00	6.2	82	3.9	308				32.2	
2024-07-03 3:00	5.5	86	4.4	303				-	
2024-07-03 4:00	5.2	89	4.8	300				-	
2024-07-03 5:00	4.8	92	4.5	301				-	
2024-07-03 6:00	5.6	86	5.4	300				-	
2024-07-03 7:00	6.0	83	6.4	305				-	
2024-07-03 8:00	7.4	72	6.3	309				-	
2024-07-03 9:00	8.2	67	6.0	310				-	
2024-07-03 10:00	7.8	67	6.3	305				-	
2024-07-03 11:00	8.4	66	5.5	304				-	
2024-07-03 12:00	9.9	57	5.9	299				-	
2024-07-03 13:00	10.7	53	6.9	297				-	
2024-07-03 14:00	10.6	54	7.5	298				-	
2024-07-03 15:00	8.9	72	6.9	303				-	
2024-07-12 11:00	8.6	71	4.6	308			-		
2024-07-12 12:00	8.8	73	4.8	307		-	-		
2024-07-12 13:00	9.2	75	3.2	297		46.5	43.7		
2024-07-12 14:00	10.7	70	2.5	300		43.9	41.8		
2024-07-12 15:00	11.8	66	1.7	330		40.8	39.6		
2024-07-12 16:00	12.1	64	1.8	326		35.6	36.3		
2024-07-12 17:00	12.2	64	1.3	40		38.0	39.2		
2024-07-12 18:00	12.1	64	1.5	7		35.7	36.1		
2024-07-12 19:00	11.3	68	1.7	346		28.3	28.5		
2024-07-12 20:00	10.8	71	1.9	46		24.0	25.7		
2024-07-12 21:00	10.9	72	1.4	342		23.1	24.5		
2024-07-12 22:00	10.9	73	1.7	273		22.0	21.2		
2024-07-12 23:00	10.3	75	1.8	294		25.0	20.6		
2024-07-13 0:00	8.8	83	1.8	240		24.2	18.9		
2024-07-13 1:00	8.3	84	2.5	259		24.5	18.5		
2024-07-13 2:00	7.9	85	2.7	260		27.0	18.1		
2024-07-13 3:00	7.5	87	3.1	250		29.4	22.6		
2024-07-13 4:00	7.0	89	2.6	264		28.7	24.9		
2024-07-13 5:00	7.4	86	2.1	284		29.1	20.8		

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-07-13 6:00	8.1	84	2.3	290		31.9	22.2		
2024-07-13 7:00	9.8	77	2.7	311		25.4	35.8		
2024-07-13 8:00	12.0	69	0.8	353		30.0	28.3		
2024-07-13 9:00	12.2	67	1.2	22		23.4	26.8		
2024-07-13 10:00	12.0	65	1.8	34		24.8	28.7		
2024-07-13 11:00	13.1	60	1.7	32		29.1	28.8		
2024-07-13 12:00	13.9	51	2.2	35		29.7	32.5		
2024-07-13 13:00	13.8	47	2.6	39		30.3	35.2		
2024-07-13 14:00	14.5	44	2.7	53		32.1	34.2		
2024-07-13 15:00	15.2	43	3.2	61			34.6		
2024-07-13 16:00	15.8	41	3.4	66			34.7		
2024-07-13 17:00	16.3	42	3.9	64			36.5		
2024-07-13 18:00	16.6	42	3.5	62			34.6		
2024-07-13 19:00	16.6	42	3.6	66			33.7		
2024-07-13 20:00	16.5	42	3.5	64			33.9		
2024-07-13 21:00	16.4	43	2.6	63			29.8		
2024-07-13 22:00	15.9	44	2.6	63			30.0		
2024-07-13 23:00	14.8	44	3.7	62			33.0		
2024-07-14 0:00	14.1	45	4.1	64			27.3		
2024-07-14 1:00	13.4	51	3.4	59			28.6		
2024-07-14 2:00	12.1	58	3.9	64			27.5		
2024-07-14 3:00	11.6	61	4.0	70			30.6		
2024-07-14 4:00	11.4	60	4.1	70			27.0		
2024-07-14 5:00	10.9	61	3.2	75			29.9		
2024-07-14 6:00	11.4	59	2.9	71			33.2		
2024-07-14 7:00	12.5	56	2.5	65			31.0		
2024-07-14 8:00	14.2	52	2.0	78			34.1		
2024-07-14 9:00	15.9	46	1.8	69			27.5		
2024-07-14 10:00	16.5	42	1.6	66			27.6		
2024-07-14 11:00	18.3	36	1.0	140			28.6		
2024-07-14 12:00	19.1	34	1.1	156			29.4		
2024-07-14 13:00	19.3	33	1.3	144			28.5		
2024-07-14 14:00	18.9	35	2.0	138			-		
2024-07-21 13:00	23.7	39	4.3	303			-		
2024-07-21 14:00	22.9	41	4.8	304			-		

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-07-21 15:00	23.2	40	5.2	310			-		
2024-07-21 16:00	23.2	38	4.5	307			-		
2024-07-21 17:00	23.0	35	3.7	311			41.0		
2024-07-21 18:00	23.0	34	1.7	304			37.7		
2024-07-21 19:00	22.4	39	2.4	301			36.6		
2024-07-21 20:00	21.9	41	1.4	339			36.4		
2024-07-21 21:00	21.4	43	1.0	289			34.0		
2024-07-21 22:00	20.3	44	0.6	66			29.2		
2024-07-21 23:00	18.8	49	0.2	287			24.3		
2024-07-22 0:00	18.0	54	0.3	310			25.9		
2024-07-22 1:00	17.5	57	1.1	326			21.1		
2024-07-22 2:00	17.2	59	2.2	337			28.2		
2024-07-22 3:00	16.6	61	2.3	323			30.1		
2024-07-22 4:00	16.2	62	2.5	324			23.1		
2024-07-22 5:00	15.9	63	2.1	317			28.9		
2024-07-22 6:00	15.5	70	1.3	281			25.7		
2024-07-22 7:00	18.1	61	0.9	270			24.9		
2024-07-22 8:00	19.5	55	0.7	266			36.2		
2024-07-22 9:00	20.7	52	0.7	239			21.9		
2024-07-22 10:00	21.6	49	1.9	237			23.7		
2024-07-22 11:00	22.4	46	2.6	233			25.3		
2024-07-22 12:00	22.3	45	3.0	213			29.8		
2024-07-22 13:00	23.8	38	4.6	224			-		
2024-07-22 14:00	23.8	38	6.5	237			-		
2024-07-22 15:00	23.5	39	6.7	235			-		
2024-07-22 16:00	24.4	39	6.4	244			-		
2024-07-22 17:00	24.9	35	5.1	291			-		
2024-07-22 18:00	25.3	32	5.3	299			-		
2024-07-22 19:00	25.4	31	4.4	298			-		
2024-07-22 20:00	25.2	33	4.7	296			-		
2024-07-22 21:00	24.1	39	4.8	299			-		
2024-07-22 22:00	23.1	44	3.3	295			25.1		
2024-07-22 23:00	21.9	50	3.6	297			22.5		
2024-07-23 0:00	20.6	57	2.9	290			23.6		
2024-07-23 1:00	18.4	67	1.9	262			24.3		
2024-07-23 2:00	17.2	72	1.9	253			28.3		

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-07-23 3:00	16.8	73	2.3	257			31.3		
2024-07-23 4:00	16.6	74	3.9	263			35.1		
2024-07-23 5:00	17.4	68	3.9	260			39.2		
2024-07-23 6:00	18.2	63	4.8	268			-		
2024-07-23 7:00	17.4	70	4.5	269			-		
2024-07-23 8:00	17.8	70	4.0	267			30.2		
2024-07-23 9:00	20.4	60	2.9	279			32.2		
2024-07-23 10:00	20.6	61	4.3	259			-		
2024-07-23 11:00	22.4	56	5.0	273			-		
2024-07-26 10:00	12.2	80	1.7	48					-
2024-07-26 11:00	13.2	73	1.9	34					27.1
2024-07-26 12:00	14.2	56	2.7	51					28.5
2024-07-26 13:00	15.2	43	2.4	53					30.6
2024-07-26 14:00	15.7	33	2.3	42					29.5
2024-07-26 15:00	16.3	30	2.5	55					29.3
2024-07-26 16:00	16.6	31	2.7	62					28.3
2024-07-26 17:00	17.0	30	2.6	60					29.1
2024-07-26 18:00	17.1	27	2.7	67					29.0
2024-07-26 19:00	17.1	26	2.1	65					24.3
2024-07-26 20:00	16.9	28	2.1	66					27.0
2024-07-26 21:00	16.4	30	3.2	68					22.1
2024-07-26 22:00	15.6	32	2.6	64					23.6
2024-07-26 23:00	14.8	36	1.7	64					19.6
2024-07-27 0:00	13.5	42	2.4	58					19.8
2024-07-27 1:00	12.2	47	3.5	60					25.7
2024-07-27 2:00	11.4	51	4.4	63					-
2024-07-27 3:00	11.0	57	3.7	64					30.7
2024-07-27 4:00	11.1	59	3.5	73					35.0
2024-07-27 5:00	10.9	56	1.5	80					30.9
2024-07-27 6:00	10.6	58	1.3	91					34.4
2024-07-27 7:00	13.4	51	0.7	102					28.1
2024-07-27 8:00	15.9	47	1.1	206					29.0
2024-07-27 9:00	17.8	42	2.2	230					29.0
2024-07-27 10:00	18.6	37	2.8	242					24.8
2024-07-27 11:00	20.8	29	4.4	263					-

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-07-27 12:00	21.1	28	5.5	256					-
2024-07-27 13:00	21.4	28	5.9	263					-
2024-07-27 14:00	21.5	30	5.7	261					-
2024-07-27 15:00	22.0	33	5.8	270					-
2024-07-27 16:00	22.1	33	6.4	267					-
2024-07-27 17:00	22.4	30	6.3	267					-
2024-07-27 18:00	22.3	32	6.3	263					-
2024-07-27 19:00	22.2	34	6.1	260					-
2024-07-27 20:00	21.9	38	6.0	263					-
2024-07-27 21:00	21.0	43	5.5	263					-
2024-07-27 22:00	19.5	53	3.9	320					36.3
2024-07-27 23:00	13.4	68	3.9	52					46.7
2024-07-28 0:00	11.1	72	3.6	57					40.8
2024-07-28 1:00	9.8	75	3.0	52					38.5
2024-07-28 2:00	9.1	78	2.7	46					33.3
2024-07-28 3:00	8.2	74	3.0	56					37.8
2024-07-28 4:00	7.6	71	3.3	57					39.8
2024-07-28 5:00	7.2	75	3.2	53					41.1
2024-07-28 6:00	6.5	77	3.7	60					38.3
2024-07-28 7:00	6.3	77	3.6	61					38.6
2024-07-28 8:00	5.8	77	3.4	62					41.8
2024-07-28 9:00	5.0	83	3.2	60					41.4
2024-07-28 10:00	5.0	82	2.8	60					36.8
2024-07-28 11:00	5.1	81	3.2	55					36.9
2024-07-28 12:00	5.5	81	3.1	59					36.1
2024-07-28 13:00	5.7	81	3.4	58					34.8
2024-07-28 14:00	6.7	76	2.3	61					29.1
2024-07-28 15:00	7.6	70	2.2	58					29.1
2024-07-28 16:00	8.0	66	2.2	50					28.3
2024-07-28 17:00	8.3	64	2.1	60					30.6
2024-07-28 18:00	8.4	62	2.6	62					29.8
2024-07-28 19:00	8.3	63	3.2	60					31.3
2024-07-28 20:00	8.5	64	3.0	61					30.5
2024-07-28 21:00	8.0	67	3.3	60					30.3
2024-07-28 22:00	7.7	66	3.1	59					28.6
2024-07-28 23:00	7.2	70	3.3	57					30.7

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-07-29 0:00	6.9	73	3.9	62					28.6
2024-07-29 1:00	6.9	74	4.6	69					-
2024-07-29 2:00	7.0	75	4.6	70					-
2024-07-29 3:00	6.6	76	4.5	73					-
2024-07-29 4:00	6.4	79	4.5	71					-
2024-07-29 5:00	6.8	79	4.3	76					-
2024-07-29 6:00	6.9	80	5.1	81					-
2024-07-29 7:00	8.3	71	4.8	94					-
2024-07-29 8:00	9.3	65	4.9	93					-
2024-07-29 9:00	5.0	83	3.2	60					41.0
2024-07-29 10:00	5.0	82	2.8	60					41.8
2024-07-29 11:00	5.1	81	3.2	55					43.4
2024-07-29 12:00	5.5	81	3.1	59					43.0
2024-07-29 13:00	5.7	81	3.4	58					-
2024-08-11 15:00	22.8	54	6.0	298		-			
2024-08-11 16:00	22.3	56	5.8	297		-			
2024-08-11 17:00	22.4	56	6.1	299		-			
2024-08-11 18:00	22.0	60	5.8	307		-			
2024-08-11 19:00	21.4	64	4.6	306		-			
2024-08-11 20:00	20.3	69	2.6	304		33.6			
2024-08-11 21:00	19.1	74	0.6	84		29.4			
2024-08-11 22:00	18.0	78	1.3	59		30.3			
2024-08-11 23:00	17.1	78	2.0	61		33.6			
2024-08-12 0:00	15.9	83	2.5	80		31.2			
2024-08-12 1:00	15.2	85	2.0	89		30.4			
2024-08-12 2:00	14.8	87	2.5	85		31.6			
2024-08-12 3:00	14.3	89	1.9	112		33.3			
2024-08-12 4:00	14.0	91	2.1	115		37.4			
2024-08-12 5:00	14.0	91	2.4	106		38.4			
2024-08-12 6:00	13.9	92	3.5	111		38.4			
2024-08-12 7:00	14.2	92	4.6	117		-			
2024-08-12 8:00	14.6	90	4.4	135		-			
2024-08-12 9:00	15.7	86	4.3	150		-			
2024-08-12 10:00	16.8	84	4.6	173		-			
2024-08-12 11:00	18.5	77	4.3	204		-			

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-08-12 12:00	20.8	65	5.5	224		-			
2024-08-12 13:00	22.0	60	6.0	231		-			
2024-08-12 14:00	22.2	59	5.9	233		-			
2024-08-12 15:00	21.8	60	5.2	232		-			
2024-08-12 16:00	21.5	62	5.9	228		-			
2024-08-12 17:00	21.2	64	4.3	223		-			
2024-08-12 18:00	22.3	60	4.0	240		36.8			
2024-08-12 19:00	23.4	58	4.8	245		-			
2024-08-12 20:00	23.9	57	5.2	250		-			
2024-08-12 21:00	23.0	60	5.8	259		-			
2024-08-12 22:00	21.3	66	2.0	271		31.9			
2024-08-12 23:00	20.3	70	1.1	310		36.2			
2024-08-13 0:00	20.1	69	1.1	17		35.7			
2024-08-13 1:00	19.6	71	1.7	49		36.2			
2024-08-13 2:00	18.6	74	1.7	52		33.8			
2024-08-13 3:00	17.6	79	2.3	52		33.1			
2024-08-13 4:00	15.9	85	2.5	40		31.1			
2024-08-13 5:00	15.0	85	2.1	51		36.3			
2024-08-13 6:00	14.1	87	1.6	43		35.1			
2024-08-13 7:00	13.3	84	1.0	70		36.5			
2024-08-13 8:00	13.3	84	1.2	39		36.4			
2024-08-13 9:00	13.8	82	1.3	0		37.3			
2024-08-13 10:00	14.8	77	1.5	286		*41.2*			
2024-08-13 11:00	14.7	78	1.8	47		*41.7*			
2024-08-13 12:00	14.0	81	2.5	47		*41.9*			
2024-08-13 13:00	14.0	81	2.5	44		*41.4*			
2024-08-13 14:00	14.1	80	2.3	43		*42.8*			
2024-08-13 15:00	12.6	86	2.9	46		*45.6*			
2024-08-13 16:00	11.8	85	4.0	42		*46.7*			
2024-08-13 17:00	10.9	74	3.9	44		*45.3*			
2024-08-13 18:00	10.3	66	4.0	41		*46.3*			
2024-08-13 19:00	9.6	66	3.6	49		*48.3*			
2024-08-13 20:00	8.5	72	3.7	53		*47.4*			
2024-08-13 21:00	8.2	75	3.4	49		*46.7*			
2024-08-13 22:00	8.1	76	3.3	47		*44.1*			
2024-08-13 23:00	8.1	76	4.0	48		*47.8*			

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-08-14 0:00	7.9	76	3.9	67		*43.0*			
2024-08-14 1:00	7.7	78	4.1	62		41.0			
2024-08-14 2:00	7.5	78	4.0	63		38.8			
2024-08-14 3:00	7.6	77	3.8	64		38.4			
2024-08-14 4:00	7.5	77	3.8	63		37.4			
2024-08-14 5:00	7.4	77	4.1	63		39.5			
2024-08-14 6:00	7.3	76	4.4	61		-			
2024-08-14 7:00	7.5	76	4.8	61		-			
2024-08-14 8:00	7.6	74	6.3	64		-			
2024-08-14 9:00	7.6	74	6.0	66		-			
2024-08-14 10:00	7.7	73	5.1	70		-			
2024-08-14 11:00	8.0	72	5.8	71		-			
2024-08-17 15:00	16.0	44	2.0	272					-
2024-08-17 16:00	16.0	45	2.1	298					31.0
2024-08-17 17:00	15.8	44	2.6	312					31.6
2024-08-17 18:00	15.7	44	2.7	309					27.9
2024-08-17 19:00	15.8	43	2.8	307					28.4
2024-08-17 20:00	15.4	46	3.0	297					26.1
2024-08-17 21:00	14.7	51	2.8	302					22.2
2024-08-17 22:00	13.5	58	2.9	300					23.2
2024-08-17 23:00	12.3	65	2.6	299					19.9
2024-08-18 0:00	11.8	66	2.3	299					23.1
2024-08-18 1:00	10.2	74	1.4	260					26.9
2024-08-18 2:00	9.7	78	2.3	271					25.6
2024-08-18 3:00	8.5	84	1.6	260					24.5
2024-08-18 4:00	7.9	87	1.3	267					20.9
2024-08-18 5:00	7.2	91	1.0	255					19.5
2024-08-18 6:00	6.9	92	1.1	258					19.5
2024-08-18 7:00	9.1	83	1.9	258					18.4
2024-08-18 8:00	10.7	78	1.7	233					26.2
2024-08-18 9:00	11.8	75	2.4	237					23.6
2024-08-18 10:00	13.8	64	3.2	249					25.4
2024-08-18 11:00	15.1	58	4.7	248					-
2024-08-18 12:00	16.1	53	5.4	247					-
2024-08-18 13:00	16.1	52	5.7	235					-

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-08-18 14:00	16.3	50	5.2	243					-
2024-08-18 15:00	16.7	48	5.1	239					-
2024-08-18 16:00	17.1	45	4.9	249					-
2024-08-18 17:00	17.7	42	4.9	258					-
2024-08-18 18:00	17.5	44	5.1	256					-
2024-08-18 19:00	17.2	45	5.4	266					-
2024-08-18 20:00	16.5	49	5.6	262					-
2024-08-18 21:00	15.3	53	5.6	255					-
2024-08-18 22:00	13.6	65	5.3	241					-
2024-08-18 23:00	12.4	73	5.5	246					-
2024-08-19 0:00	11.6	77	5.6	248					-
2024-08-19 1:00	11.2	79	5.3	252					-
2024-08-19 2:00	10.7	81	5.0	248					-
2024-08-19 3:00	10.1	84	4.4	250					-
2024-08-19 4:00	9.6	86	4.7	249					-
2024-08-19 5:00	9.0	89	3.3	229					33.4
2024-08-19 6:00	8.8	90	3.1	237					30.3
2024-08-19 7:00	8.9	90	2.8	244					27.5
2024-08-19 8:00	10.9	82	2.4	245					32.5
2024-08-19 9:00	12.4	78	3.7	231					30.1
2024-08-19 10:00	13.8	73	4.2	235					-
2024-08-19 11:00	15.5	68	3.5	219					-
2024-08-27 11:00	15.8	61	4.0	254	-	-			
2024-08-27 12:00	16.1	58	4.5	254	-	-			
2024-08-27 13:00	15.1	59	6.1	236	-	-			
2024-08-27 14:00	14.4	61	5.7	226	-	-			
2024-08-27 15:00	14.1	62	4.8	202	-	-			
2024-08-27 16:00	14.7	59	5.1	195	-	-			
2024-08-27 17:00	14.5	61	4.8	205	-	-			
2024-08-27 18:00	13.3	74	3.2	164	-	31.8			
2024-08-27 19:00	13.2	78	4.8	190		-			
2024-08-27 20:00	12.6	83	5.9	214		-			
2024-08-27 21:00	12.0	84	8.3	205		-			
2024-08-27 22:00	11.6	84	7.1	194		-			
2024-08-27 23:00	11.7	84	6.5	196		-			

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-08-28 0:00	11.7	83	6.5	202		-			
2024-08-28 1:00	11.6	84	6.1	215		-			
2024-08-28 2:00	11.6	86	5.0	227		-			
2024-08-28 3:00	11.1	88	3.9	234		35.1			
2024-08-28 4:00	10.4	90	3.5	250		31.7			
2024-08-28 5:00	10.3	90	3.5	249		29.2			
2024-08-28 6:00	10.7	91	2.6	247		39.8			
2024-08-28 7:00	10.6	93	1.6	241		32.7			
2024-08-28 8:00	10.6	93	0.8	216		27.9			
2024-08-28 9:00	11.1	93	2.2	140		34.9			
2024-08-28 10:00	12.6	88	4.1	181		37.5			
2024-08-28 11:00	13.2	82	3.7	192		35.7			
2024-08-28 12:00	13.9	78	3.5	190		*32.6*			
2024-08-28 13:00	14.5	76	4.4	190		-			
2024-08-28 14:00	13.5	80	4.6	188		-			
2024-08-28 15:00	12.5	89	3.8	164		40.2			
2024-08-28 16:00	11.6	93	2.9	150		39.3			
2024-08-28 17:00	11.8	94	3.6	138		37.3			
2024-08-28 18:00	11.9	94	4.0	150		38.7			
2024-08-28 19:00	11.8	96	3.2	154		36.4			
2024-08-28 20:00	12.0	97	3.1	177		37.7			
2024-08-28 21:00	12.4	97	4.0	215		37.5			
2024-08-28 22:00	13.0	96	5.6	253		-			
2024-08-28 23:00	12.8	92	6.8	269		-			
2024-08-29 0:00	11.9	92	6.0	260		-			
2024-08-29 1:00	11.3	90	6.3	261		-			
2024-08-29 2:00	10.7	90	5.4	259		-			
2024-08-29 3:00	10.3	93	4.0	259		31.5			
2024-08-29 4:00	10.6	92	4.1	269		31.3			
2024-08-29 5:00	9.7	93	3.4	336		37.2			
2024-08-29 6:00	7.5	95	2.3	46		*46.7*			
2024-08-29 7:00	7.2	93	4.0	53		*55.1*			
2024-08-29 8:00	6.8	90	4.6	52		-			
2024-08-29 9:00	6.7	91	5.8	62		-			
2024-08-29 10:00	6.8	92	7.4	62		-			
2024-08-29 11:00	7.5	84	9.4	63		-			

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-08-29 12:00	8.1	78	11.4	63		-			
2024-08-29 13:00	9.0	74	12.1	68		-			
2024-08-29 14:00	8.8	74	11.6	69		-			
2024-08-29 15:00	8.7	73	11.3	71		-			
2024-08-29 16:00	8.7	73	10.2	71		-			
2024-08-29 17:00	8.4	74	10.2	69		-			
2024-08-29 18:00	8.1	74	10.2	70		-			
2024-08-29 19:00	7.8	75	9.6	76		-			
2024-08-29 20:00	7.4	75	9.3	83		-			
2024-08-29 21:00	6.8	78	9.1	84		-			
2024-08-29 22:00	6.3	78	8.7	84		-			
2024-08-29 23:00	6.0	77	9.0	88		-			
2024-08-30 0:00	5.5	78	8.4	89		-			
2024-08-30 1:00	5.2	80	6.6	99		-			
2024-08-30 2:00	4.8	82	6.7	100		-			
2024-08-30 3:00	4.7	80	7.0	102		-			
2024-08-30 4:00	4.6	78	6.5	101		-			
2024-08-30 5:00	4.3	76	7.1	99		-			
2024-08-30 6:00	4.0	78	6.7	98		-			
2024-09-06 11:00	9.1	78	7.0	195				-	
2024-09-06 12:00	9.4	78	7.6	200				-	
2024-09-06 13:00	10.1	76	7.8	201				-	
2024-09-06 14:00	10.9	75	7.3	201				-	
2024-09-06 15:00	10.0	83	7.2	198				-	
2024-09-06 16:00	9.5	88	7.0	188				-	
2024-09-06 17:00	9.5	90	7.3	187				-	
2024-09-06 18:00	9.2	92	7.3	181				-	
2024-09-06 19:00	8.9	93	7.8	180				-	
2024-09-06 20:00	8.8	93	8.0	181				-	
2024-09-06 21:00	8.7	94	7.3	182				-	
2024-09-06 22:00	8.7	94	6.7	177				-	
2024-09-06 23:00	8.5	94	6.6	178				-	
2024-09-07 0:00	8.5	94	5.3	183				-	
2024-09-07 1:00	8.5	94	4.7	183				-	
2024-09-07 2:00	8.5	94	3.8	192				39.6	

Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-09-07 3:00	8.6	94	3.9	204				36.3	
2024-09-07 4:00	8.7	94	2.7	209				39.6	
2024-09-07 5:00	8.4	95	1.5	231				40.2	
2024-09-07 6:00	8.4	95	1.8	260				35.6	
2024-09-07 7:00	8.2	96	2.4	289				32.2	
2024-09-07 8:00	8.9	94	1.7	283				36.8	
2024-09-07 9:00	9.0	93	1.2	249				37.6	
2024-09-07 10:00	9.2	93	2.3	248				35.9	
2024-09-07 11:00	9.7	92	3.7	248				30.1	
2024-09-24 14:00	6.0	92	8.5	120	-				
2024-09-24 15:00	6.5	92	7.9	118	-			-	
2024-09-24 16:00	6.7	91	5.6	109	-			-	
2024-09-24 17:00	6.4	96	5.6	86	-			-	
2024-09-24 18:00	6.6	97	4.4	90	-			-	
2024-09-24 19:00	6.7	96	4.5	106	-			-	
2024-09-24 20:00	6.6	95	4.9	94	-			-	
2024-09-24 21:00	6.5	94	6.5	92	-			-	
2024-09-24 22:00	6.0	92	6.1	116	-			-	
2024-09-24 23:00	5.3	92	5.0	125	-			-	
2024-09-25 0:00	5.1	93	3.0	110	35.3			30.1	
2024-09-25 1:00	4.9	94	2.8	74	36.5			30.4	
2024-09-25 2:00	5.1	95	2.6	55	35.3			31.2	
2024-09-25 3:00	5.4	96	3.3	59	36.8			32.3	
2024-09-25 4:00	5.5	96	4.0	65	35.7			36.3	
2024-09-25 5:00	4.7	95	4.1	127	33.8			32.0	
2024-09-25 6:00	4.2	96	4.2	123	-			-	
2024-09-25 7:00	4.1	99	3.9	116	35.1			31.7	
2024-09-25 8:00	4.1	99	3.7	102	31.4			29.5	
2024-09-25 9:00	4.4	99	3.6	144	33.3			30.5	
2024-09-25 10:00	4.5	99	3.8	178	39.2			34.9	
2024-09-25 11:00	4.9	98	4.7	188	-			-	
2024-09-25 12:00	5.1	96	5.5	196	-			-	
2024-09-25 13:00	5.3	95	5.6	195	-			-	
2024-09-25 14:00	5.4	97	4.9	204	-			-	
2024-09-25 15:00	5.9	96	3.7	245	38.3			33.9	

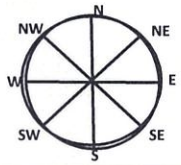
Date and Time	Avg. Air Temperature (°C)	Avg. Relative Humidity (%)	Avg. Wind Speed (m/s)	Avg. Wind Direction (°)	L_{eq} 1 h (dBA)				
					R7	R8	R9	R10	R11
2024-09-25 16:00	6.5	90	3.9	263	38.3			30.4	
2024-09-25 17:00	6.5	89	4.1	258	33.7			30.1	
2024-09-25 18:00	6.7	90	3.9	258	34.0			30.4	
2024-09-25 19:00	6.2	92	3.4	267	32.3			28.1	
2024-09-25 20:00	6.0	93	3.7	258	35.7			28.6	
2024-09-25 21:00	5.8	94	2.7	233	36.3			29.6	
2024-09-25 22:00	5.6	94	3.6	237	35.0			29.5	
2024-09-25 23:00	5.3	93	3.1	233	34.5			28.6	
2024-09-26 0:00	5.3	90	3.6	236	35.0			29.3	
2024-09-26 1:00	5.2	89	3.0	231	34.4			29.3	
2024-09-26 2:00	5.1	89	1.7	230	31.7			30.2	
2024-09-26 3:00	4.8	91	2.1	190	34.8			30.3	
2024-09-26 4:00	4.6	95	1.5	168	32.3			30.0	
2024-09-26 5:00	4.8	94	2.2	130	32.9			30.5	
2024-09-26 6:00	4.8	95	2.9	131	34.3			31.5	
2024-09-26 7:00	4.7	94	3.1	135	36.7			30.8	
2024-09-26 8:00	4.7	95	3.4	123	-			-	
2024-09-26 9:00	5.2	95	4.9	121				-	

APPENDIX C

Field Logs

1st deployment

MONITORING STARTS

Operator: EL/JC		Location: R1	
Date: 2024/06/27		Noise Meter Start Time: 15:15	
Calibration complete ?: Y		Sensitivity: pre 51.23	51.57 new
Deviation: 0.06		Time of Calibration: 15:11	
Battery Power Check: Y		Check available disk memory (Y/N)	
Photographs of Setup (Y/N)		Photographs of Surrounding (Y/N)	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 12.5		Wind Speed (km/hr): 8.2	
Wind Direction: NNW			
Barometric Pressure (kPa): 101.4		Relative Humidity (%) ~~44.7~~ 44.7	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

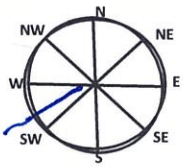
GPS Location	Latitude	Longitude	Altitude

Type of Ground Surface: Tundra

Acoustic Environment:

- Traffic
- Human activities
- Animal: Birds
- Other noise sources: Helicopters are staging nearby ~500m

MONITORING ENDS

Operator: EL/JC		Total Monitoring Period: 72hrs	
Date: 2024/06/30		Noise Meter End Time: 15:15 (Battery was dead)	
Calibration complete ?: No - dead battery		Sensitivity: N/A	
Deviation: N/A		Time of Calibration: N/A	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 25°c		Wind Speed (km/hr): 31	
Wind Direction: WSW			
Barometric Pressure (kPa): 100.1		Relative Humidity (%) 31	
Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

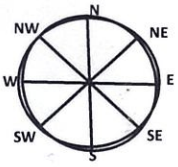
Operator: TD		Location: R2	
Date: Aug 7/24		Noise Meter Start Time: 14:45	
Calibration complete ?: Ys		Sensitivity: 51.47	
Deviation: -.05		Time of Calibration: 14:37	
Battery Power Check: Ys		Check available disk memory (Y/N)	
Photographs of Setup (Y/N)		Photographs of Surrounding (Y/N)	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 19°C		Wind Speed (km/hr): 25	
Wind Direction: NW			
Barometric Pressure (kPa): 100.9		Relative Humidity (%) 51.2	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	636795	7214435	

Type of Ground Surface:
Acoustic Environment:
- Traffic WORK ON SD. CHOPPER
- Human activities
- Animal BIRDS
- Other noise sources LAKE

MONITORING ENDS

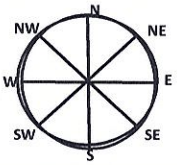
Operator: TD		Total Monitoring Period 48:15	
Date: Aug 9/24		Noise Meter End Time: 15:00	
Calibration complete ?: Ys		Sensitivity: 51.45	
Deviation 00		Time of Calibration: 13:05	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 29°C		Wind Speed (km/hr): 10	
Wind Direction: NW			
Barometric Pressure (kPa): 100.2		Relative Humidity (%) 51.00	
Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

Operator: E.L / T.D	Location: R2
Date: 2024 / 09 / 06	Noise Meter Start Time: 10:44
Calibration complete ?: Y	Sensitivity: pre 51.57 52.23 post Cal
Deviation: 0.11	Time of Calibration: 10:42
Battery Power Check: Y	Check available disk memory (Y/N) Y 28.9 Gb
Photographs of Setup (Y/N) Y	Photographs of Surrounding (Y/N)

Cloud cover:	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	(0-10,000)	10,000-25,000	25,000 +

Air Temperature (C): 14	Wind Speed (km/hr): 2.3
Wind Direction: NW	
Barometric Pressure (kPa): 98.6	Relative Humidity (%) 46

Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION

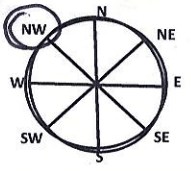
GPS Location	Latitude	Longitude	Altitude

Type of Ground Surface: TUNDRA
Acoustic Environment:
- Traffic: HELICOPTER FLYING.
- Human activities:
- Animal: BIRDS
- Other noise sources:

MONITORING ENDS

Operator: TD ES	Total Monitoring Period 23h 49m
Date: 2024.09.08	Noise Meter End Time: 10:33
Calibration complete ?: Yes	Sensitivity: 52.90 mV/Pa
Deviation 0.11 dB	Time of Calibration: 10:40

Cloud cover:	(cloudy)	partly cloudy	sunny
Height of cloud (feet):	(0-10,000)	10,000-25,000	25,000 +

Air Temperature (C): WARM 6.4	Wind Speed (km/hr): 15.5
Wind Direction:	
Barometric Pressure (kPa): 99.1	Relative Humidity (%) 78.3

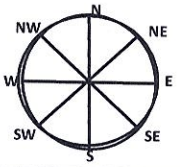
Precipitation:	(none)	drizzle	rain

Comments:

MONITORING STARTS

Operator: TD	Location: R3
Date: AUG 2/24	Noise Meter Start Time: 8:35
Calibration complete ?: ~~TD~~ Yes	Sensitivity: 51.83
Deviation: .01 dB	Time of Calibration: 8:30
Battery Power Check: Y	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 6°	Wind Speed (km/hr): 15 km
Wind Direction: NW	
Barometric Pressure (kPa): 99.85	Relative Humidity (%) 76.8

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

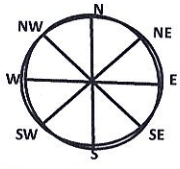
GPS Location	Latitude	Longitude	Altitude
	641120.98	7214416.99	

Type of Ground Surface:
Acoustic Environment:
- Traffic CHAINSAW
- Human activities
- Animal BIRD
- Other noise sources

MONITORING ENDS

Operator: TD, ES	Total Monitoring Period 72 hrs 30 min 05.
Date: 2024-08-05	Noise Meter End Time: 9:05
Calibration complete ?: YES	Sensitivity: 51.74
Deviation -0.02	Time of Calibration: 9:07

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 6°	Wind Speed (km/hr): 15KM
Wind Direction: NW	
Barometric Pressure (kPa): 100.5	Relative Humidity (%) 90.9

Precipitation:	none	drizzle	rain

Comments: MACHINE WAS STILL ON WHEN PICKED UP MBK. UNIT.

MONITORING STARTS

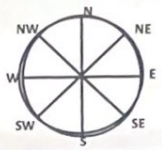
Operator: FQS, RP	Location: R3 round 2
Date: 2024-08-17	Noise Meter Start Time: 8:45
Calibration complete ?: Yes	Sensitivity: 51.49
Deviation: -.09	Time of Calibration: 8:36
Battery Power Check: Yes	Check available disk memory (Y/N) Yes
Photographs of Setup (Y/N) Yes	Photographs of Surrounding (Y/N)

Cloud cover: (cloudy) / partly cloudy / sunny

Height of cloud (feet): 0-10,000 / (10,000-25,000) / 25,000 +

Air Temperature (C): 11.6	Wind Speed (km/hr): 3.8

Wind Direction:



Barometric Pressure (kPa): 101.93	Relative Humidity (%) 80.6

Precipitation: (none) / drizzle / rain

GENERAL SITE DESCRIPTION

	~~Latitude~~ Easting	~~Longitude~~ Northing	Altitude
GPS Location 14W	641121	7214417	

Type of Ground Surface:

Acoustic Environment:

- Traffic
- Human activities
- (Animal)
- Other noise sources

MONITORING ENDS

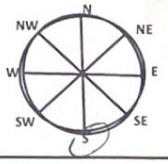
Operator: FQS JC	Total Monitoring Period 54hrs 15mins
Date: 24-08-19	Noise Meter End Time: 3.00pm
Calibration complete ?: Yes	Sensitivity: 51.45
Deviation 0	Time of Calibration: 3:02pm

Cloud cover: cloudy / partly cloudy / (sunny)

Height of cloud (feet): 0-10,000 / (10,000-25,000) / 25,000 +

Air Temperature (C): 20.0	Wind Speed (km/hr): 12.2Km/hr

Wind Direction: 12.2Km/hr



Barometric Pressure (kPa): 101.8	Relative Humidity (%) 52.6

Precipitation: (none) / drizzle / rain

Comments:

MONITORING STARTS

Operator: FQS SS	Location: R4 (Vault)
Date: 20/07/2024	Noise Meter Start Time: 13:42
Calibration complete ?: Yes	Sensitivity: 51.17
Deviation: -0.02	Time of Calibration: 13:36
Battery Power Check: yes	Check available disk memory (Y/N) Y
Photographs of Setup (Y/N) Y	Photographs of Surrounding (Y/N) Y

Cloud cover:	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	0-10,000	10,000-25,000	(25,000 +)

Air Temperature (C): 19.3	Wind Speed (km/hr): 9.5
Wind Direction: NW	(NW) N NE W E SW SE S
Barometric Pressure (kPa):	Relative Humidity (%) 44.4

Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	6039441	7218750	

Type of Ground Surface:
Acoustic Environment:
- Traffic chopper
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: Jess B Felix	Total Monitoring Period !
Date: 24/07/22	Noise Meter End Time: 1:21pm
Calibration complete ?: Yes	Sensitivity: 50.84
Deviation -0.06	Time of Calibration: 1:25

Cloud cover:	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	0-10,000	(10,000-25,000)	25,000 +

Air Temperature (C):	Wind Speed (km/hr): 3.6
Wind Direction: NW	(NW) N NE W E SW SE S
Barometric Pressure (kPa):	Relative Humidity (%)

Precipitation:	(none)	drizzle	rain

Comments:

MONITORING STARTS

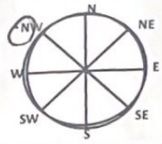
Operator: EL	Location: R4
Date: 2024/08/22	Noise Meter Start Time: 10:55
Calibration complete ?: Yes	Sensitivity: 51.73
Deviation: 0.05	Time of Calibration: 10:46
Battery Power Check: Y	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover: cloudy / partly cloudy / sunny

Height of cloud (feet): 0-10,000 / 10,000-25,000 / 25,000 +

Air Temperature (C): 9.3	Wind Speed (km/hr): 15.7 avg

Wind Direction: NW



Barometric Pressure (kPa): 100.8	Relative Humidity (%) 82.5

Precipitation: none / drizzle / rain

GENERAL SITE DESCRIPTION

GPS Location 14W	~~Easting~~ ~~Latitude~~ 639441	~~Northing~~ ~~Longitude~~ 7218750	Altitude

Type of Ground Surface: Tundra

Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

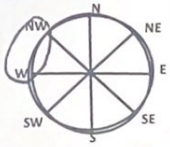
Operator: JC, EL	Total Monitoring Period
Date: 2024/08/24	Noise Meter End Time: 13:55
Calibration complete ?: Y	Sensitivity: 51.51
Deviation -0.04	Time of Calibration: 13:56

Cloud cover: cloudy / partly cloudy / sunny

Height of cloud (feet): 0-10,000 / 10,000-25,000 / 25,000 +

Air Temperature (C): 18.4	Wind Speed (km/hr): 23.5

Wind Direction: WNW



Barometric Pressure (kPa): 100.5	Relative Humidity (%) 66.4

Precipitation: none / drizzle / rain

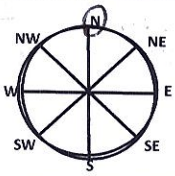
Comments: Could not read altitude as GPS died upon arrival after changing batteries before leaving.

Heavy rain this morning @ ~8am (24/08/24)

MONITORING STARTS

Operator: TD	Location: R5
Date: July 15/24	Noise Meter Start Time: ~~14:25~~ 16:25
Calibration complete ?: Y	Sensitivity: ~~-52.01~~ -51.20
Deviation: -.01	Time of Calibration: ~~14:20~~ 16:27
Battery Power Check: ✓	Check available disk memory (Y/N) Y
Photographs of Setup (Y/N) Y	Photographs of Surrounding (Y/N) Y

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 18°	Wind Speed (km/hr): 23
Wind Direction: NORTH.	
Barometric Pressure (kPa): 99.71	Relative Humidity (%) 40.5

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

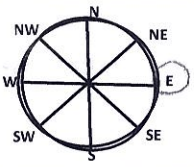
GPS Location	Latitude	Longitude	Altitude
	65° 1' 37.95" N	96° 9' 34.05" W	

Type of Ground Surface:
Acoustic Environment:
- Traffic : Chopper
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: FQS SS	Total Monitoring Period 32:25 minds Recorded
Date: July 18/24	Noise Meter End Time: 8:13
Calibration complete ?: n	Sensitivity: 51.28
Deviation 0.00	Time of Calibration: 9:30 In office

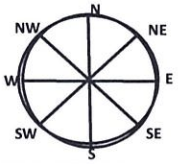
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 16°C	Wind Speed (km/hr): 10 km/h
Wind Direction: E	
Barometric Pressure (kPa): 101.4	Relative Humidity (%) 64.0

Precipitation:	none	drizzle	rain

Comments: batteries dead

MONITORING STARTS

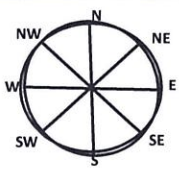
Operator: TD		Location: R5	
Date: 2024.08.07		Noise Meter Start Time: 13:45	
Calibration complete ?: Ys		Sensitivity: 49.99	
Deviation: -.12		Time of Calibration: 13:37	
Battery Power Check: Yes		Check available disk memory (Y/N)	
Photographs of Setup (Y/N)		Photographs of Surrounding (Y/N)	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 15°C		Wind Speed (km/hr): 25	
Wind Direction: NW			
Barometric Pressure (kPa): 100.9		Relative Humidity (%) 51.3	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	633779	7214494	

Type of Ground Surface:
Acoustic Environment:
- Traffic ROAD, CHOPPER
- Human activities
- Animal WILDLIFE
- Other noise sources

MONITORING ENDS

Operator: TD		Total Monitoring Period 48:40	
Date: AUG 9/24		Noise Meter End Time: 14:25	
Calibration complete ?: Ys		Sensitivity: 50.24	
Deviation .04		Time of Calibration: 14:30	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 29.0		Wind Speed (km/hr): 8	
Wind Direction: NW			
Barometric Pressure (kPa): 100.2		Relative Humidity (%) 50.8	
Precipitation:	none	drizzle	rain

Comments:

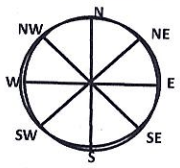
MONITORING STARTS

Operator: TD	Location: R6
Date: Aug 2/24	Noise Meter Start Time: 8:55
Calibration complete ?: Yes	Sensitivity: 50.7
Deviation: .09	Time of Calibration: 8:49
Battery Power Check: Yes	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 5C	Wind Speed (km/hr): 15km

Wind Direction: NW



Barometric Pressure (kPa): 99.35	Relative Humidity (%) 76.8

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	640708.00	7221964.00	

Type of Ground Surface:
Acoustic Environment: E
- Traffic CHOPPER
- Human activities
- Animal BIRDS
- Other noise sources

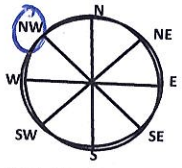
MONITORING ENDS

Operator: TD, ZS	Total Monitoring Period 71hrs 50mins 0sec.
Date: 2024-08-05	Noise Meter End Time: 8:45
Calibration complete ?: Yes	Sensitivity: 55.66
Deviation -0.01dB	Time of Calibration: 8:49

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 8.7	Wind Speed (km/hr): 14Km/h

Wind Direction:

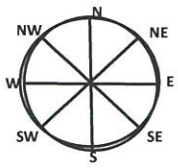


Barometric Pressure (kPa): 100.5	Relative Humidity (%) ~~78.9~~ 90.9

Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

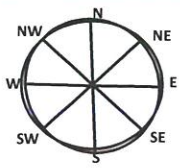
Operator: TD ES		Location: RL	
Date: 2024.08.11		Noise Meter Start Time: 15.00	
Calibration complete ?: Ys		Sensitivity: 51.62	
Deviation: .03		Time of Calibration: 14.45	
Battery Power Check: Ys		Check available disk memory (Y/N) Y	
Photographs of Setup (Y/N) Y		Photographs of Surrounding (Y/N) Y	
Cloud cover: SMOKE	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): ~ 24.5		Wind Speed (km/hr): 14	
Wind Direction: W			
Barometric Pressure (kPa): 95.0		Relative Humidity (%) 47.5	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

	Latitude	Longitude	Altitude
GPS Location			

Type of Ground Surface:
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: ES SS		Total Monitoring Period	
Date: 2024-08-14		Noise Meter End Time: 9:15	
Calibration complete ?: Yes		Sensitivity: 51.95	
Deviation 0.04		Time of Calibration: 9:17	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 8.8		Wind Speed (km/hr): 10.3	
Wind Direction:			
Barometric Pressure (kPa):		Relative Humidity (%) 76.1	
Precipitation:	none	drizzle	rain

Comments:

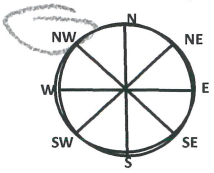
MONITORING STARTS

Operator: G. Bard, N. Andreatta	Location: R7, Round 2
Date: 26-July-2024	Noise Meter Start Time: 9:30
Calibration complete ?: Y	Sensitivity: 51.39
Deviation: 0.09	Time of Calibration: 7:25
Battery Power Check: Good	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 15°C	Wind Speed (km/hr): 2.0 km/h

Wind Direction:



Barometric Pressure (kPa): —	Relative Humidity (%)

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
14W	620194	7239038	

Type of Ground Surface:
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

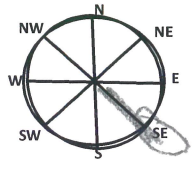
MONITORING ENDS

Operator: GB, NA	Total Monitoring Period 75:11
Date: 29-July-2024	Noise Meter End Time: 12:41
Calibration complete ?: Y	Sensitivity: 51.24
Deviation -0.03	Time of Calibration:

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 20°C	Wind Speed (km/hr): 15 km/hr

Wind Direction:



Barometric Pressure (kPa): 99.8	Relative Humidity (%) 71

Precipitation:	none	drizzle	rain

Comments: Microphone knocked over upon arrival

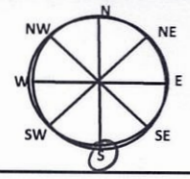
MONITORING STARTS

Operator: JC LJ	Location: R7
Date: 24/08/27	Noise Meter Start Time: 10:52
Calibration complete ?: Yes	Sensitivity: 51.76
Deviation: 0.04	Time of Calibration: 10:48am
Battery Power Check: Yes	Check available disk memory (Y/N) Y
Photographs of Setup (Y/N) Yes	Photographs of Surrounding (Y/N) Yes

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 14.7	Wind Speed (km/hr): 14.5

Wind Direction: South



Barometric Pressure (kPa): 101.9	Relative Humidity (%) 78%, 65%

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location R7	Latitude	Longitude	Altitude

Type of Ground Surface: Tundra
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: EL	Total Monitoring Period 6[illegible] hrs
Date: Aug 31 2024	Noise Meter End Time: 5:59
Calibration complete ?: Y	Sensitivity: 51.71
Deviation -0.01	Time of Calibration: 5:59

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 14	Wind Speed (km/hr): 8

Wind Direction: N

Barometric Pressure (kPa): 101.5	Relative Humidity (%) 38

Precipitation:	none	drizzle	rain

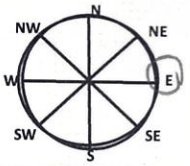
Comments:

MONITORING STARTS

Operator: EL, RP	Location: R7
Date: 2024/09/24	Noise Meter Start Time: 13:59
Calibration complete ?: Y	Sensitivity: 51,42
Deviation: ~0.04	Time of Calibration: 13:48
Battery Power Check: Y	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover: (cloudy) | partly cloudy | sunny

Height of cloud (feet): 500-1000 Ft — (0-10,000) | 10,000-25,000 | 25,000 +

Air Temperature (C): 4.7	Wind Speed (km/hr): 23.8
Wind Direction: E	
Barometric Pressure (kPa): 99.9	Relative Humidity (%) 115

Precipitation: (none) | drizzle | rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude

Type of Ground Surface: Tundra

Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: EL	Total Monitoring Period 41hrs, 41mins
Date: 2024-09-26	Noise Meter End Time: 7:36
Calibration complete ?: Y	Sensitivity: 51,95
Deviation 0.09	Time of Calibration: 7:38

Cloud cover: (cloudy) | partly cloudy | sunny

Height of cloud (feet): (0-10,000) | 10,000-25,000 | 25,000 +

Air Temperature (C): 6.2	Wind Speed (km/hr): 10,4
Wind Direction: SE	
Barometric Pressure (kPa): 99.9	Relative Humidity (%) 100

Precipitation: (none) | drizzle | rain

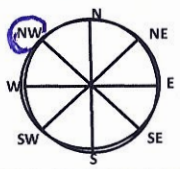
Comments: Overcast, rainy, windy days

3.54
972
4,512

MONITORING STARTS

Operator: TD FQS	Location: R8
Date: July 12/24	Noise Meter Start Time: 11:20
Calibration complete ?: Yes	Sensitivity: 51.69
Deviation: -0.20	Time of Calibration: 11:15
Battery Power Check: Yes	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	(cloudy)	partly cloudy	sunny
Height of cloud (feet):	0-10,000	(10,000-25,000)	25,000 +

Air Temperature (C): 15.1	Wind Speed (km/hr): 18.3
Wind Direction: NW	
Barometric Pressure (kPa): 100.09	Relative Humidity (%) 47 ~~47.4~~ 62.8

Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION

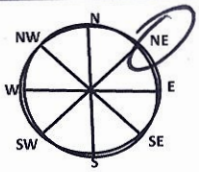
	Latitude	Longitude	Altitude
GPS Location			

Type of Ground Surface:
Acoustic Environment:
(Traffic) CHOPPER BRINGING & DROPPING OFF
Human activities
(Animal) POSSIBLE
Other noise sources

MONITORING ENDS

Operator: LA JP	Total Monitoring Period ~~41hr 50min~~. 13hr 13min 13sec
Date: July 14/2024	Noise Meter End Time: 13:10
Calibration complete ?:	Sensitivity: 51.36
Deviation -0.05	Time of Calibration: 13:13

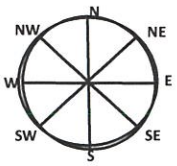
Cloud cover:	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	0-10,000	10,000-25,000	(25,000 +)

Air Temperature (C): 19°C	Wind Speed (km/hr): 5.1 Km/hr
Wind Direction:	
Barometric Pressure (kPa): 99.87	Relative Humidity (%)

Precipitation:	none	drizzle	rain

Comments: NO MARKER FOR STATION R9

MONITORING STARTS

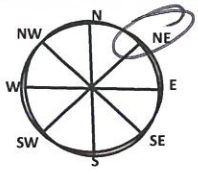
Operator: RJD GS		Location: R8	
Date: 2024. 08. 11		Noise Meter Start Time: 14:00	
Calibration complete ?: Ys		Sensitivity: 50.28	
Deviation: 0.0		Time of Calibration: 13:55	
Battery Power Check:		Check available disk memory (Y/N)	
Photographs of Setup (Y/N)		Photographs of Surrounding (Y/N)	
Cloud cover: SMOKEY	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 24.5		Wind Speed (km/hr): 15.5	
Wind Direction: SW			
Barometric Pressure (kPa): 95.0		Relative Humidity (%) 47.2	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude

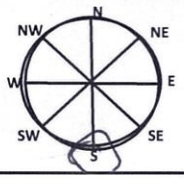
Type of Ground Surface:
Acoustic Environment:
- Traffic CHOPPER / ROAD
- Human activities
- Animal BIRDS
- Other noise sources

MONITORING ENDS

Operator: JP		Total Monitoring Period	
Date: 2024-08-14		Noise Meter End Time: 10:12	
Calibration complete ?: Yes		Sensitivity: 50.26	
Deviation -0.12		Time of Calibration: 10:15	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 8.6		Wind Speed (km/hr): 17.4	
Wind Direction: NE			
Barometric Pressure (kPa):		Relative Humidity (%) 65.7	
Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

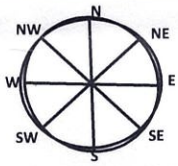
Operator: JC LJ		Location: R8	
Date: 24/08/27		Noise Meter Start Time: 10:13	
Calibration complete ?: Yes 10:07		Sensitivity: 50.17	
Deviation: ~~50.~~7.0.14		Time of Calibration: 10:07	
Battery Power Check: Yes		Check available disk memory (Y/N) Y	
Photographs of Setup (Y/N)		Photographs of Surrounding (Y/N)	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 16		Wind Speed (km/hr): 11.0	
Wind Direction: South			
Barometric Pressure (kPa): 101.9		Relative Humidity (%) ~~78~~ 56%	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location R8	Latitude	Longitude	Altitude

Type of Ground Surface: Tundra
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

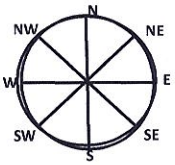
Operator: EL		Total Monitoring Period 67hrs	
Date: Aug 31		Noise Meter End Time: 5:25	
Calibration complete ?: Y		Sensitivity: 0.02	
Deviation 50.29		Time of Calibration: 5:27	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 14		Wind Speed (km/hr): 8	
Wind Direction: N			
Barometric Pressure (kPa): ~~1~~ 101.5		Relative Humidity (%) 38	
Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

Operator: FQS TD	Location: [redacted] R9
Date: JULY 12/24	Noise Meter Start Time: 10.55
Calibration complete ?: YES	Sensitivity: 50.13
Deviation: -.01	Time of Calibration: 10:52
Battery Power Check: YES	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 15.1	Wind Speed (km/hr): 14.7
Wind Direction: NW	
Barometric Pressure (kPa): 100.09	Relative Humidity (%) 47.4

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

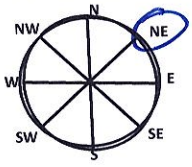
	Latitude	Longitude	Altitude
GPS Location			

Type of Ground Surface:
Acoustic Environment:
- Traffic: CHOPPER LEAVING & DROPPING OFF
- Human activities:
- Animal: BIRDS
- Other noise sources:

MONITORING ENDS

Operator: LA JP	Total Monitoring Period
Date: July 14/2024	Noise Meter End Time: 13:32
Calibration complete ?: YES	Sensitivity: 50.03
Deviation -0.02	Time of Calibration: 13:33

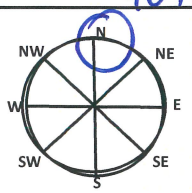
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 24.6	Wind Speed (km/hr): 4.8
Wind Direction: NE	
Barometric Pressure (kPa): 99.87	Relative Humidity (%) 64.4

Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

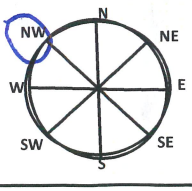
Operator: DN/JP		Location: R-09	
Date: July 21/2024		Noise Meter Start Time: 12:00	
Calibration complete ?: Y		Sensitivity: 50.04	
Deviation: -0.02		Time of Calibration: 11:49	
Battery Power Check: 100%		Check available disk memory (Y/N) Y	
Photographs of Setup (Y/N) Y		Photographs of Surrounding (Y/N) Y	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 22.7		Wind Speed (km/hr): ~~16~~ km/hr 14.6	
Wind Direction: N			
Barometric Pressure (kPa):		Relative Humidity (%) 41.9	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	14W 0603335	7256520	

Type of Ground Surface:
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

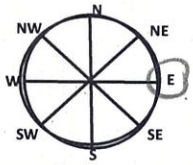
Operator: DN/JP		Total Monitoring Period 46:40:00	
Date: July 23/2024		Noise Meter End Time: 10:40	
Calibration complete ?: Yes		Sensitivity: 50.44	
Deviation 0.07		Time of Calibration: 10:46	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 25°C		Wind Speed (km/hr): 19.1	
Wind Direction: NW			
Barometric Pressure (kPa): 101.1		Relative Humidity (%) 21.4	
Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

Operator: EL, RP	Location: R10
Date: 2024/09/24	Noise Meter Start Time: 14:25
Calibration complete ?: Y	Sensitivity: 51.02
Deviation: 0.14	Time of Calibration: 14:13
Battery Power Check: Y	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	(cloudy)	partly cloudy	sunny
Height of cloud (feet): 500 - 1000'	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 10.4	Wind Speed (km/hr): 13.5
Wind Direction: E	
Barometric Pressure (kPa): 99.9	Relative Humidity (%) 115

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

	Latitude	Longitude	Altitude
GPS Location			

Type of Ground Surface: Tundra

Acoustic Environment:

- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: EL	Total Monitoring Period 41hrs 37 mins
Date: 2024/09/26	Noise Meter End Time: 8:02 am
Calibration complete ?: Y	Sensitivity: 50.50
Deviation -0.09	Time of Calibration: 8:04 am

Cloud cover:	(cloudy)	partly cloudy	sunny
Height of cloud (feet):	(0-10,000)	10,000-25,000	25,000 +

Air Temperature (C): 6.5	Wind Speed (km/hr): 10.5
Wind Direction: SE	
Barometric Pressure (kPa): 99.7	Relative Humidity (%) 100

Precipitation:	(none)	drizzle	rain

Comments: Overcast, rainy, windy days

MONITORING STARTS

Operator: Eric.L	Location: R10 south of WTSE
Date: 2024/07/101	Noise Meter Start Time: 15:29
Calibration complete ?: Y	Sensitivity: 51.57 pre 51.29 post
Deviation: -0.05	Time of Calibration: 15:23
Battery Power Check: Y	Check available disk memory (Y/N)
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 16° C	Wind Speed (km/hr): 32
Wind Direction: NNW	
Barometric Pressure (kPa): 100.0	Relative Humidity (%) 68

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

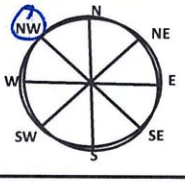
GPS Location	Latitude	Longitude	Altitude
	65.36	-96.67	

Type of Ground Surface: Tundra
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: E.L	Total Monitoring Period
Date: 2024-07-05 10:10am	Noise Meter End Time:
Calibration complete ?: Y	Sensitivity: pre 5129 5157 post
Deviation 0.05	Time of Calibration: 10:15

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 13.2	Wind Speed (km/hr): 9
Wind Direction: NW	
Barometric Pressure (kPa): 101.1	Relative Humidity (%) 103.9

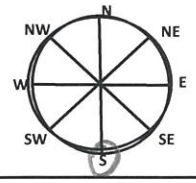
Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

Operator: Laurence Archambault	Location: R10
Date: 2024-09-06	Noise Meter Start Time: 10:17
Calibration complete ?: Y	Sensitivity: 50.21
Deviation: -0.01	Time of Calibration: 10:08
Battery Power Check: ok	Check available disk memory (Y/N) Y
Photographs of Setup (Y/N)	Photographs of Surrounding (Y/N)

Cloud cover:	cloudy	(partly cloudy)	sunny
Height of cloud (feet):	(0-10,000)	10,000-25,000	25,000 +

Air Temperature (C): 12.1	Wind Speed (km/hr): 20
Wind Direction:	
Barometric Pressure (kPa): 101.8	Relative Humidity (%) 58.8

Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION

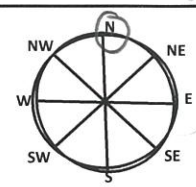
	Latitude	Longitude	Altitude
GPS Location	65.36	-96.67	

Type of Ground Surface: Tundra
Acoustic Environment:
- Traffic
- Human activities wave
- (Animal)
- (Other noise sources) chopper

MONITORING ENDS

Operator: Laurence Archambault	Total Monitoring Period 24:50:29
Date: 2024-09-09	Noise Meter End Time: 13:51
Calibration complete ?: Y	Sensitivity: 53.7
Deviation 0.07	Time of Calibration: 13:53

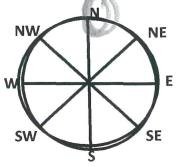
Cloud cover:	(cloudy)	partly cloudy	sunny
Height of cloud (feet):	(0-10,000)	10,000-25,000	25,000 +

Air Temperature (C): 9.8	Wind Speed (km/hr): 14.7
Wind Direction:	
Barometric Pressure (kPa):	Relative Humidity (%) 75.9

Precipitation:	(none)	drizzle	rain

Comments: Battery was dead on arrival

MONITORING STARTS

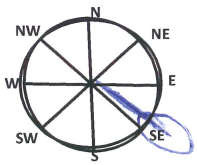
Operator: GB NA		Location: R11 Round 2	
Date: 24-07-26		Noise Meter Start Time: 9:00	
Calibration complete ?: y		Sensitivity: 50.16	
Deviation: -0.05		Time of Calibration: 8:58	
Battery Power Check: ✓		Check available disk memory (Y/N) y	
Photographs of Setup (Y/N) YES		Photographs of Surrounding (Y/N)	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 15°		Wind Speed (km/hr): 2	
Wind Direction:			
Barometric Pressure (kPa): —		Relative Humidity (%) —	
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

	Latitude	Longitude	Altitude
GPS Location 14W	6606756	7358558	

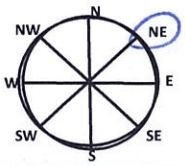
Type of Ground Surface:
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: GB		Total Monitoring Period 75:20	
Date: 24-07-29		Noise Meter End Time: 12:20	
Calibration complete ?: y		Sensitivity: 50.20	
Deviation 0.01		Time of Calibration: 12:18	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C): 20°C		Wind Speed (km/hr): 15 Km/hr	
Wind Direction:			
Barometric Pressure (kPa): 99.8		Relative Humidity (%) 71	
Precipitation:	none	drizzle	rain

Comments:

MONITORING STARTS

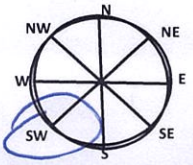
Operator: GB/SS		Location: R11	
Date: 2024-08-17		Noise Meter Start Time: 14:09	
Calibration complete ?: Y		Sensitivity: 49.90	
Deviation: -0.06		Time of Calibration: 14:07	
Battery Power Check: Y		Check available disk memory (Y/N) Y	
Photographs of Setup (Y/N) Y		Photographs of Surrounding (Y/N) Y	
Cloud cover:	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	0-10,000	(10,000-25,000)	25,000 +
Air Temperature (C): 18.8		Wind Speed (km/hr): 1.2	
Wind Direction: NE			
Barometric Pressure (kPa): 101.93		Relative Humidity (%) 21.6	
Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION

	Latitude	Longitude	Altitude
GPS Location			

Type of Ground Surface:
Acoustic Environment:
- Traffic
- Human activities
- Animal
- Other noise sources

MONITORING ENDS

Operator: GB/JP		Total Monitoring Period	
Date: Aug. 19/2024		Noise Meter End Time: 10:05	
Calibration complete ?: Yes		Sensitivity: 49.99	
Deviation 0.01		Time of Calibration: 10:06	
Cloud cover:	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	0-10,000	10,000-25,000	(25,000 +)
Air Temperature (C): 16.1		Wind Speed (km/hr): 7.7	
Wind Direction: WSW			
Barometric Pressure (kPa): 101.8		Relative Humidity (%) 68.6	
Precipitation:	(none)	drizzle	rain

Comments: