Appendix H-4

Noise monitoring report

AGNICO EAGLE

MELIADINE GOLD PROJECT

2018 Noise Monitoring Report

In Accordance with NIRB Project Certificate No. 006

Prepared by Agnico Eagle Mines Limited –
Meliadine Division

MARCH 2019

EXECUTIVE SUMMARY

In accordance with NIRB Project Certificate No. 006, and as described in the Noise Abatement and Monitoring Plan (March, 2017), Agnico Eagle Mines Ltd. (Agnico Eagle) began outdoor noise monitoring at the Meliadine site near Rankin Inlet in 2016. The objective of the noise monitoring program is to measure noise levels at four previously determined monitoring locations (NPOR006, NPOR008, NPOR014, NPOR017) over at least two 24 h periods. Results are compared to FEIS predictions for the 24-h L_{eq}, and the $L_{eq\text{-}nighttime}$ design target of 40 dBA for reference. Note that according to conditions of the Project Certificate, NPOR014 was not required to be monitored in 2018, since activities related to the Discovery Pit were not occurring. However, maintaining this site as a reference station facilitates interpretation of the dataset, by providing a measure of the general background acoustic environment.

Since high winds in the area tend to significantly reduce the amount of available data, technicians aim to conduct two or more monitoring events for each station, of two to three days each. In 2018, two separate monitoring events were conducted for NPOR006 and NPOR017, while one event was conducted for NPOR008 and NPOR014. These stations are only accessible by boat, and high winds inhibited technician access.

Overall, a very limited dataset was available for calculation of 24-h and night-time L_{eq} values in 2018. This was generally due to sub-optimal weather conditions, near-continuous animal sound interference, and subsequent filtration of the data. For stations NPOR006 and NPOR017, insufficient data was available after filtering to calculate valid 24-h and night-time L_{eq} values for comparison to predictions. For remote stations NPOR008 and NPOR014, L_{eq} values were elevated so sound recordings were reviewed, and no human-associated activity was audible. Significant wind, wave, and animal sounds (bird calls) mainly contributed to the elevated background acoustic environment in these locations.

The data collected in 2018 suggests that background sound levels in this area may regularly exceed those assumed during the FEIS (35 dBA), likely due to predominant high winds and wave action on the shore of Meliadine Lake. Particular care will be taken to ensure future monitoring is conducted when wind speeds are at their lowest, to reduce the significant wind interference and wave noises contributing to background sounds. Timing monitoring events earlier in the season may also help reduce the frequency of bird calls which were especially dominant in recordings this year, and which consistently contributed to recorded sound peaks. In addition, due to frequent use of the cabin at NPOR006 and potential for interference with sound measurements, Agnico will conduct reconnaissance in 2019 to determine whether monitoring at NPOR005 would facilitate analysis of acoustic data in this area.

Table of Contents

List of Tables

List of Figures

List of Appendices

1 INTRODUCTION

In February, 2015, Agnico Eagle Mines Ltd. (Agnico Eagle) was issued NIRB Project Certificate No. 006 for the Meliadine Gold Project, near Rankin Inlet, NU. In accordance with this Project Certificate, and as described in the Noise Abatement and Monitoring Plan (March, 2017), Agnico Eagle began conducting outdoor noise monitoring at the Meliadine site in 2016. The objective of the Noise Abatement and Monitoring Plan is to validate predictions of noise levels made in the FEIS, confirm the findings of the noise impact assessment (Vol. 5 – Atmospheric Environment and Impact Assessment, April, 2014), and inform the implementation of noise mitigation measures. If noise monitoring confirms excessive Project-associated noise levels exist, the monitoring data will be used to determine where noise abatement requires improvement.

A summary of the noise monitoring program is shown in Table 1, according to the Noise Abatement and Monitoring Plan (2017).

Table 1. Noise monitoring objectives, frequency, duration, and locations.

Project Phase	Project Objectives	Frequency and Duration of Monitoring	Monitoring Locations
Construction and Operations	To verify that the noise emissions used in the FEIS noise assessment were reasonable, yet conservative. To verify that the mitigation measures considered integral to the Project are incorporated as planned, and are effective.	Yearly monitoring programs, twice per year. A duration of 24+ hours per station.	FEIS receptors NPOR006 NPOR008 NPOR014 NPOR017 Possibility to add NPOR005

2 METHODS

2.1 MONITORING LOCATIONS

In 2018, noise monitoring was conducted at four locations, as identified in the Noise Abatement and Monitoring Plan. These locations coincide with the identified points of reception (PORs) with the greatest predicted changes in noise levels from existing conditions, as determined through the noise impact assessment (FEIS Vol. 5, Section 5.5). The monitoring locations are identified in Figure 1, and summarized in Table 2. Photos of the noise monitoring locations are provided in Section 3. These

monitoring locations will be reviewed and may be adapted throughout the construction and/or operations phases of the Project, as necessary.

It should be noted that based on conditions for monitoring, NPOR014 was not required to be assessed in 2018, since activities associated with the Discovery Pit were not occurring. However, maintaining this station as a reference site facilitates interpretation of the noise data.

Table 2. Noise monitoring locations and conditions for monitoring.

POR	UTM	Project Area	Conditions for Monitoring
NPOR006	15V 538286 / 6991299	Mine	Monitor during the entire Construction and Operations Phases, and initial stages of Closure when extensive activities are occurring.
NPOR008	15V 543707 / 6987276	Mine	Monitor during the entire Construction and Operations Phases, and initial stages of Closure when extensive activities are occurring.
NPOR014	15V 549401 / 6982060	Mine	Monitor only if activities associated with the Discovery Pit are occurring.
NPOR017	15V 544203 / 6970537	AWAR	Monitor during the entire Construction and Operations Phases, and initial stages of Closure when extensive activities are occurring.

All noise monitoring stations are located in close proximity to seasonally occupied cabins, which were identified as being the most sensitive receptors in the noise impact assessment (FEIS Vol. 5, Section 5.5.4.4). However, it is noted that the frequent use of some of these cabins impedes efficient collection of valid noise data that is representative of mine activities.

NPOR006 is located approximately 1 km north of the mine site disturbance area, and approximately 200 m outside the FEIS site study area (SSA). The adjacent cabin was in use at the time of the 2018 noise surveys. The surrounding terrain is a mix of small rock and lichen. The slope is very minimal leaning SW. Meliadine Lake is ~150 m NE and an unnamed small lake is ~120 m SSW.

NPOR008 is located approximately 1.25 km from the SSA, on the east side of the site. The surrounding terrain is on the summit of a small vegetated hill with very little apparent rock. Meliadine Lake is ~ 51 m to the NNE. The mine camp is approximately 2 km to the northwest, and the all weather road is approximately 2.5 km to the southwest.

NPOR014 is located approximately 130 m from the traditionally used ATV trail. This station is at the southern end of Meliadine Lake and is approximately 10 km away from the Meliadine exploration camp and 5 km from the Discovery area. It is located within the SSA. Currently there is no development in this area, so measurements at NPOR014 in 2018 are expected to be indicative of background values.

NPOR017 is located at the southern end of the all-weather access road (AWAR). It is approximately 150 m SW of the road. No SSA was assessed for the AWAR.

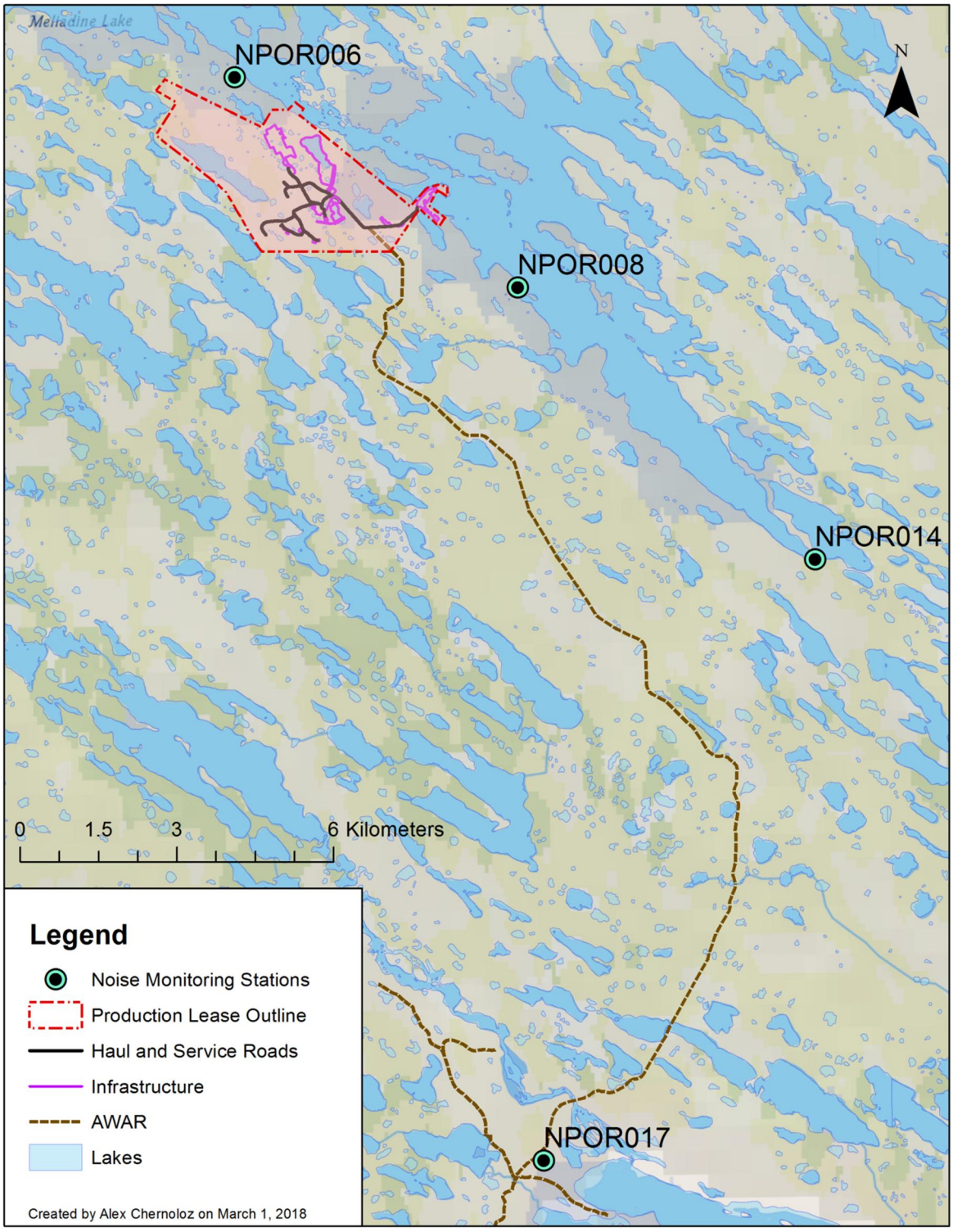


Figure 1. Noise receptors (points of reception - PORs) as identified in the noise impact assessment. Noise monitoring was conducted at NPOR006, NPOR008, NPOR014, and NPOR017 in 2018.

2.2 MONITORING DATES

In accordance with the Noise Abatement and Monitoring Plan, two 24-h+ noise surveys were planned to be conducted for each location. One survey was completed for NPOR008 and NPOR014 due to adverse weather conditions. These sites are accessible by boat only, and high winds prevented technicians from conducted a second monitoring event. Surveys were planned to last approximately 72 - 96 h in duration (extents of battery life), since a significant portion of data is typically filtered out due to sub-optimal weather conditions (see Section 2.4). Monitoring dates and times for each survey are provided in Table 3. Due to equipment malfunction, three surveys recorded less than 24 h of data.

Table 3. Noise monitoring dates in 2018.

Location	Monitoring Start Date (Time)	Monitoring Stop Date (Time)	Duration (h)
NPOR006	8/22/18 11:08	8/22/18 21:44	11
	9/04/18 11:38	9/07/18 16:37	78
NPOR008	8/28/18 17:42	8/29/18 5:52	13
NPOR014	8/25/18 16:26	8/28/18 16:27	73
NPOR017	8/10/18 12:07	8/12/18 23:59	60
	9/09/18 10:11	9/09/18 21:49	12

2.3 SOUND LEVEL METER

For all stations a Bruel and Kjaer Model 2250 integrating sound level meter with secondary wind screen was used to conduct the noise survey. The noise logging rate was set at one-minute intervals, and according to the Noise Abatement and Monitoring Plan, logged parameters included:

- Integrated equivalent A-weighted sound level (L_{Aeq})
- 1/3 octave band sound levels in decibels (dB)
- Statistical data (L_{10}, L_{90})
- Maximum sound level (L_{max}) in dBA
- Minimum sound level (L_{min}) in dBA

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 A). Estimated uncertainty, over a yearly time period for the calibrator is better than 0.05 dB at a 96% confidence level.

2.4 WEATHER DATA

Weather data for the noise monitoring periods was collected using the mine site's permanent weather station. Hourly data for wind, temperature, and relative humidity were available from this station.

The Alberta Energy Resource Conservation Board Directive 038 (Directive 038) requires noise data to be collected under appropriate weather conditions, which are represented by an absence of steady precipitation, snow, water, or ice ground cover, as well as restrictions on wind speed. To adhere to these conditions, noise data was filtered out from analyses when relative humidity exceeded 90% (assuming precipitation occurred) and/or wind speed exceeded 15 km/hr. Average hourly humidity and wind speed values were used, since filtering based on maximum values resulted in exclusion of nearly the entire noise dataset. This approach is considered conservative, since higher winds are likely to result in increased noise levels due to wind effects. Weather data (wind speed, wind direction, temperature, and humidity) are provided in Appendix B.

2.5 FIELD NOTES

A pocket weather meter (WeatherHawk® WindMate™, WM-300) was used by field staff to record wind speed, direction, and temperature at the beginning and end of each monitoring period. Other observations included precipitation, cloud cover, and observed noises during instrument set-up and takedown. All field notes are provided in Appendix A.

2.6 DATA ANALYSIS

Data recorded at the four monitoring sites were downloaded for assessment using the Bruel and Kjaer 5503 Measurement Suite software, with some calculations performed using Microsoft Excel. Recorded one-minute L_{Aeq} values were used to calculate hourly equivalent energy noise levels ($L_{eq, 1h}$).

2.6.1 INITIAL DATA FILTERING

All datapoints associated with the first hour of measurement were filtered out to remove noise from technician activity, and to ensure more than 30 min of data contributed to hourly averages. Data was also filtered on the basis of recorded weather conditions to comply with Directive 038 (see Section 2.4).

2.6.2 24-H AND NIGHT-TIME LEQ CALCULATIONS

After the initial filtration, valid hourly L_{eq} values for each monitoring period were used to calculate average 24-h equivalent energy noise levels ($L_{eq, 24\,h}$) for comparison to FEIS model predictions and the site's noise monitoring criteria (see Table 4) . When a data point ($L_{eq, 1\,h}$) was available from more than one day within a monitoring period, values were energy-averaged across calendar days to ensure time points contributed equally to 24-h L_{eq} values. As indicated in the Noise Abatement and Monitoring Plan, night-time (11pm – 7am) L_{eq} values were also calculated, and are compared with the design target of 40 dBA for reference only. It should be noted that this target was designed to apply at a distance of 1.5 km from the site study area (SSA) in remote areas. Since all of the monitoring stations are located closer to or within the SSA (except NPOR017, the AWAR location for which no

SSA was assessed), exceedances of this target value may occur, without an exceedance at the 1.5 km distance. In that case, one or more stations may be added or moved in future monitoring events to coincide with this design target location to more precisely assess FEIS predictions.

According to Directive 038, a noise monitoring survey is considered to be acceptable when there are a minimum of 180 valid minutes during the daytime period and 180 valid minutes during the nighttime period. When insufficient valid data was available from the appropriate time periods, 24-h and night-time L_{eq} values could not be calculated.

Table 4. FEIS predictions for 24-h equivalent sound levels, FEIS design targets for 1.5 km from the site study area perimeter, and proposed noise monitoring criteria from the 2017 Noise Abatement and Monitoring Plan.

Location	FEIS Prediction $L_{eq\text{-}24h}$ (dBA)	Design Target (1.5 km from SSA) $L_{eq\text{-}nighttime}$ (dBA)	Proposed Noise Monitoring Criteria $L_{eq\text{-}24h}$ (dBA)
NPOR006	39.8	40	45
NPOR008	41.7	40	45
NPOR014	44.7	40	45
NPOR017	43.4	40	45

2.6.3 SECONDARY DATA FILTERING

When calculated 24-h or night-time L_{eq} values exceeded the above criteria, sound recordings were reviewed to identify and if necessary, remove noise data containing recordings of abnormal noise sources unrelated to mine activity. In 2018 this was limited to prolonged wind-induced microphone noise, and animal interference in close proximity to the microphone (in particular, very loud bird calls). These noise sources were assumed to be minimal in the FEIS process, since a background sound level of 35 dBA was used. After this second data filtering, the final L_{eq} values were compared to FEIS predictions and the night-time design target.

3 RESULTS

All 1-h L_{eq} values are provided in Appendix B.

3.1 NPOR006

L_{eq} values calculated from 1-min measurements over each monitoring period at NPOR006 are shown in Figures 3 and 4. Invalid data points removed from analyses due to assumed technician interference and sub-optimal weather conditions (as described in Section 2.4) are indicated (LA_{eq}-unfiltered). For event 1 at station NPOR006, 11 h of monitoring were conducted, and 5 h of valid data were available after initial filtering. Since all valid data was from the daytime period (12 – 5 pm), there was insufficient representative data to calculate a 24 h L_{eq} or night-time L_{eq} for this event. For event 2 at NPOR006, 78 h of monitoring were conducted, and 20 h of valid data were available after initial filtering, including 14 daytime and 6 night-time hours.

Audible noises noted in the field log for this location include human activities from a nearby cabin (ATV traffic, construction work), site traffic (including helicopters) and site activities (gravel excavation nearby).

After the initial filtering, the calculated 24-h L_{eq} value for the valid monitoring event (September) was 56.5 dBA, which exceed the FEIS prediction of 39.8 dBA and FEIS impact assessment criteria for "non-significant impacts" (45 dBA). Sound recordings were therefore reviewed. Significant animal interference (bird calls) contributed to peaks, and strong wind induced microphone noise occurred throughout the recording. The dataset was further filtered on this basis. Approximately 6 h were removed due to dominant wind induced noise (evident from listening to sound files and observed elevated L_{min} values), and 24 min were removed due to very prominent bird noises in close proximity to the sound meter. After this secondary filtering, the available dataset consisted of 11 h of data from September 5 – 6, including 2 h from the night-time period, which is insufficient to calculate valid 24-h and night-time L_{eq} values.

Monitoring in 2019 will be conducted earlier in the season, prior to the fall goose migration and when wind speeds tend to be lower, in order to optimize chances of successful data collection.

In 2017, the FEIS impact assessment criteria of 45 dBA was marginally exceeded during one event, and continued monitoring was recommended to determine if elevated noise levels in this location are sustained, and in order to better distinguish mine-related noise from that of the cabin. Since occupancy of the nearby cabin is frequent, and construction works there appear to be ongoing (a second cabin appears to have been built since 2016), it has not been feasible to conduct monitoring during an unoccupied period. Furthermore, near-continuous noise from small mechanical equipment (potentially a generator) is audible on sound files. Agnico will conduct reconnaissance in 2019 to determine the feasibility of monitoring at NPOR005, as described in the Noise Abatement and Monitoring Plan. This station is in a similar location relative to site development, but may have lower occupancy rates.

To date, no noise-related complaints have been received in this area.

Figure 2. Noise monitoring location NPOR006 (September 4, 2018).

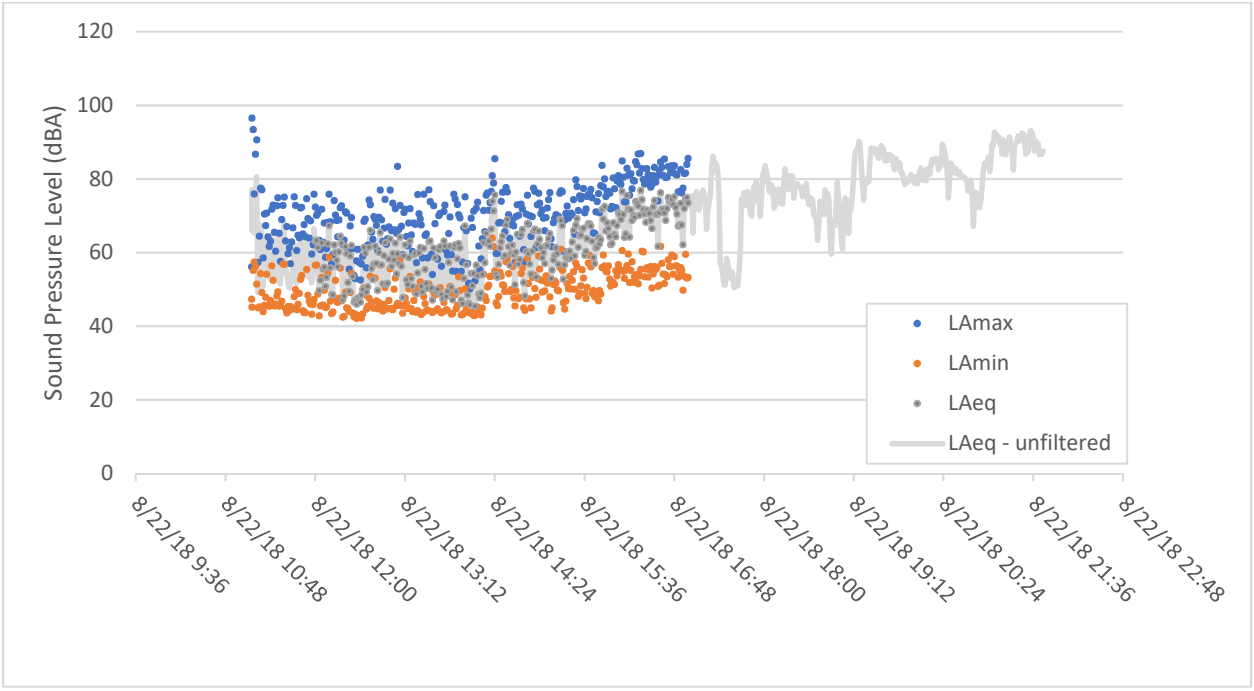


Figure 3. 1-min L_{max}, L_{min}, and L_{eq} values recorded at site NPOR006 during monitoring event 1.

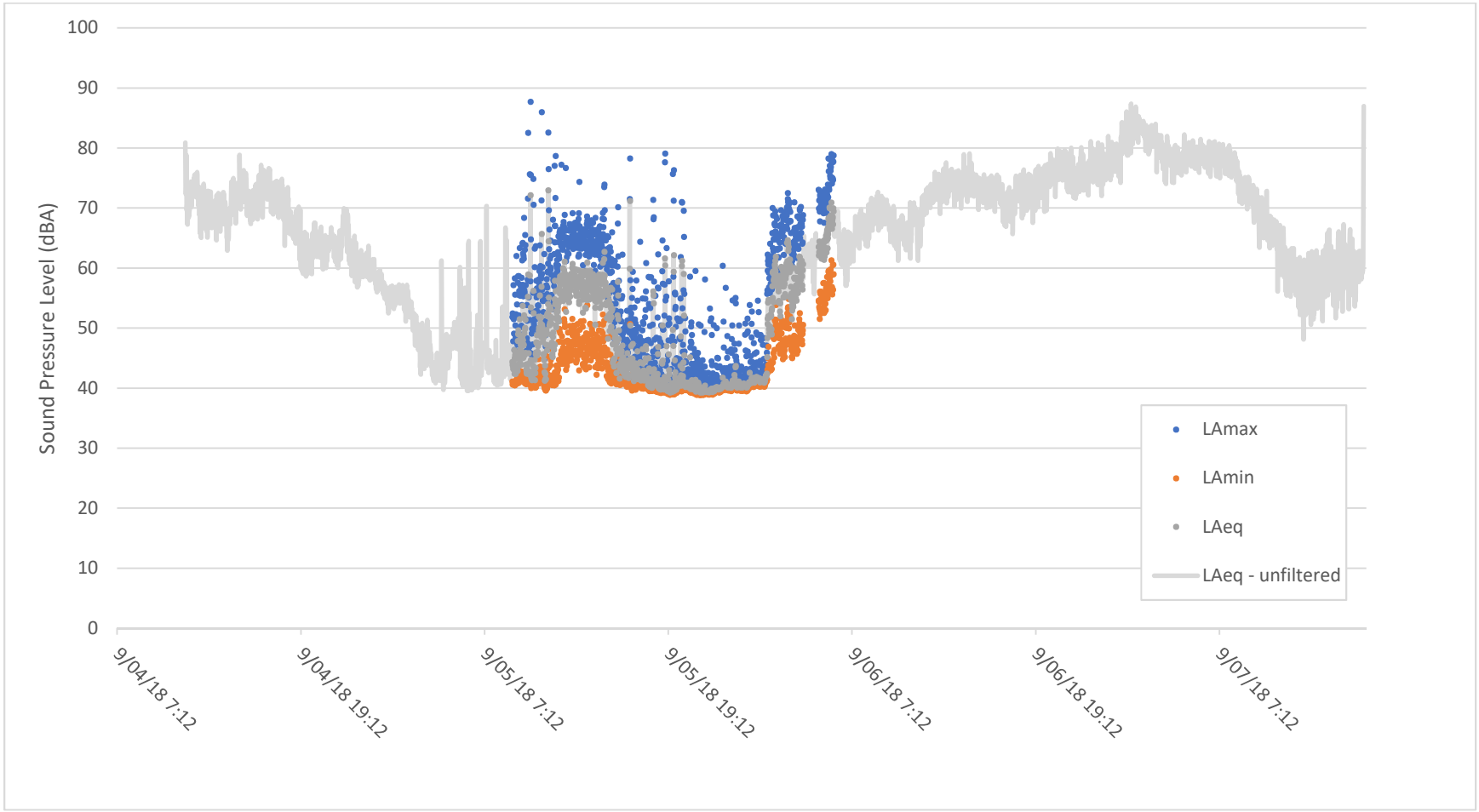


Figure 4. 1-min L_{max}, L_{min}, and L_{eq} values recorded at site NPOR006 during monitoring event 2.

3.2 NPOR008

L_{eq} values calculated from 1-min L_{eq} measurements over the monitoring period at NPOR008 are shown in Figure 6. Invalid data points removed from the analysis due to technician interference and sub-optimal weather conditions (as described in Section 2.4) are indicated. For the monitoring event at this station (August 28 – 29), 12 h of monitoring were successfully conducted, and 5 h of valid data were available after initial filtering. This included one hour from the daytime period, which is insufficient to calculate a valid 24-h L_{eq}s.

Audible noises noted in the field log at this location include occasional boats, helicopters, and wildlife (birds).

After the initial filtering, the $L_{eq\text{-}nighttime}$ for this station was 64.5 dBA, which is above the design target of 40 dBA for 1.5 km from the mine SSA. As a result, sound recordings were reviewed. From this review, no mine-related or other human-associated sounds were audible on the recordings. Wind, wave action, and occasional animal noises appear to be contributing to the recorded acoustic environment at this station. L_{min} values were elevated, further indicating significant background noise. Since no mine activity was audible, the dataset was not further filtered on the basis of the sound review, and the recorded Leq night-time is assumed to be representative of a naturally elevated acoustic environment in this location.

As indicated in Section 3.1, it is recommended for monitoring to be conducted earlier in the season, when wind speeds tend to be lower. It may also be noted that a background noise value of 35 dBA was assumed in the FEIS, which is typical in remote areas. However, in this location adjacent to Meliadine Lake, the combination of greater wind speeds and the nearby shoreline appears to result in an elevated background sound level which should be considered in data interpretation for this site.

Figure 5. Noise monitoring location NPOR008 (2018).

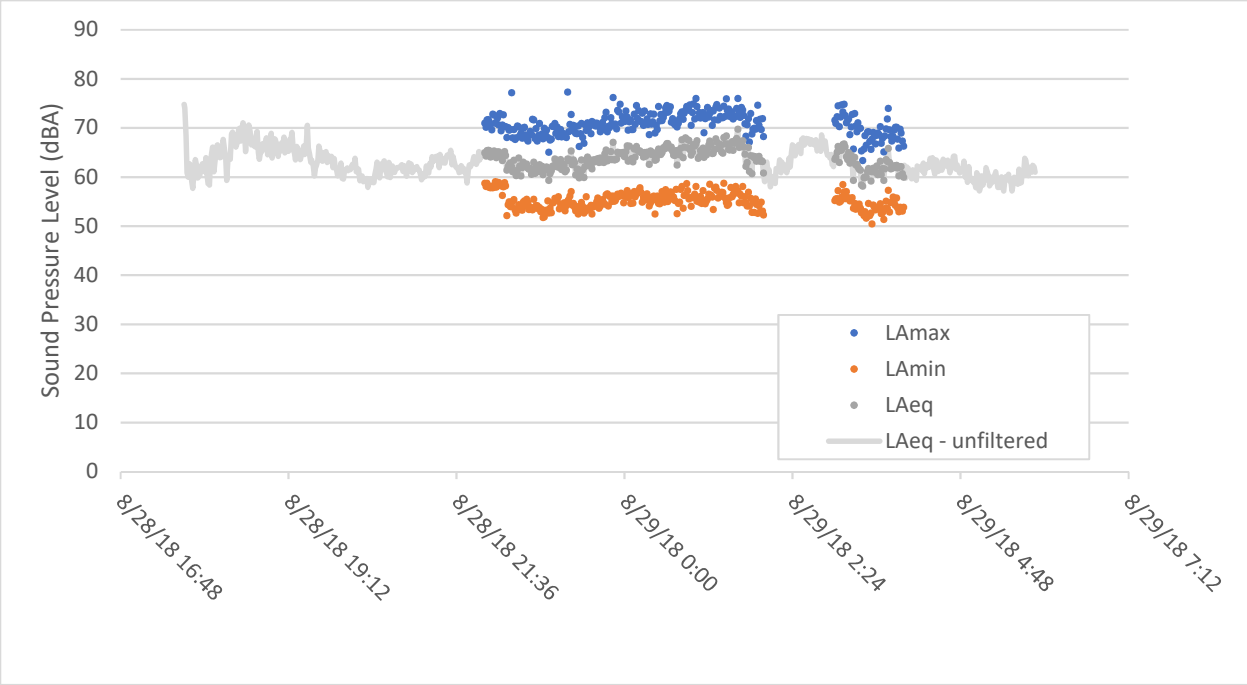


Figure 6. 1-min L_{max}, L_{min}, and L_{eq} values recorded at site NPOR008 during monitoring event 1.

3.3 NPOR014

No development activity is currently occurring in the area of NPOR014, so 2018 monitoring is considered to be representative of the background acoustic environment. L_{eq} values calculated from 1-min L_{eq} measurements over the August 25 - 28 monitoring period at NPOR014 are shown in Figure 8. Invalid data points removed from the analysis due to technician interference and sub-optimal weather conditions based on weather station data (as described in Section 2.4) are indicated. For station NPOR014, 73 h of monitoring were conducted, and 49 h of valid data were available after initial filtering.

Noise sources noted in the field log at this location include potential for boats and ATVs, bird sounds, and hunting sounds.

The calculated 24-h L_{eq} after initial filtering was 63.5 dBA. This is above the value of 44.7 dBA predicted in the FEIS for this location. The $L_{eq\text{-}nighttime}$ was 49.9, which is above the design target of 40 dBA for 1.5 km from the mine SSA. As a result, sound recordings were reviewed. No mine related activity was audible. Significant and frequent animal interference (bird sounds) in close proximity to the noise meter contributed to noise peaks, and background sounds were dominated by wind and wave action, and near-constant bird calls throughout sections of the recording. Insect sounds were also frequently audible. Since no development activity is currently occurring in this area, the recorded sound levels are indicative of the typically elevated acoustic environment near the shore of Meliadine Lake at this time of year.

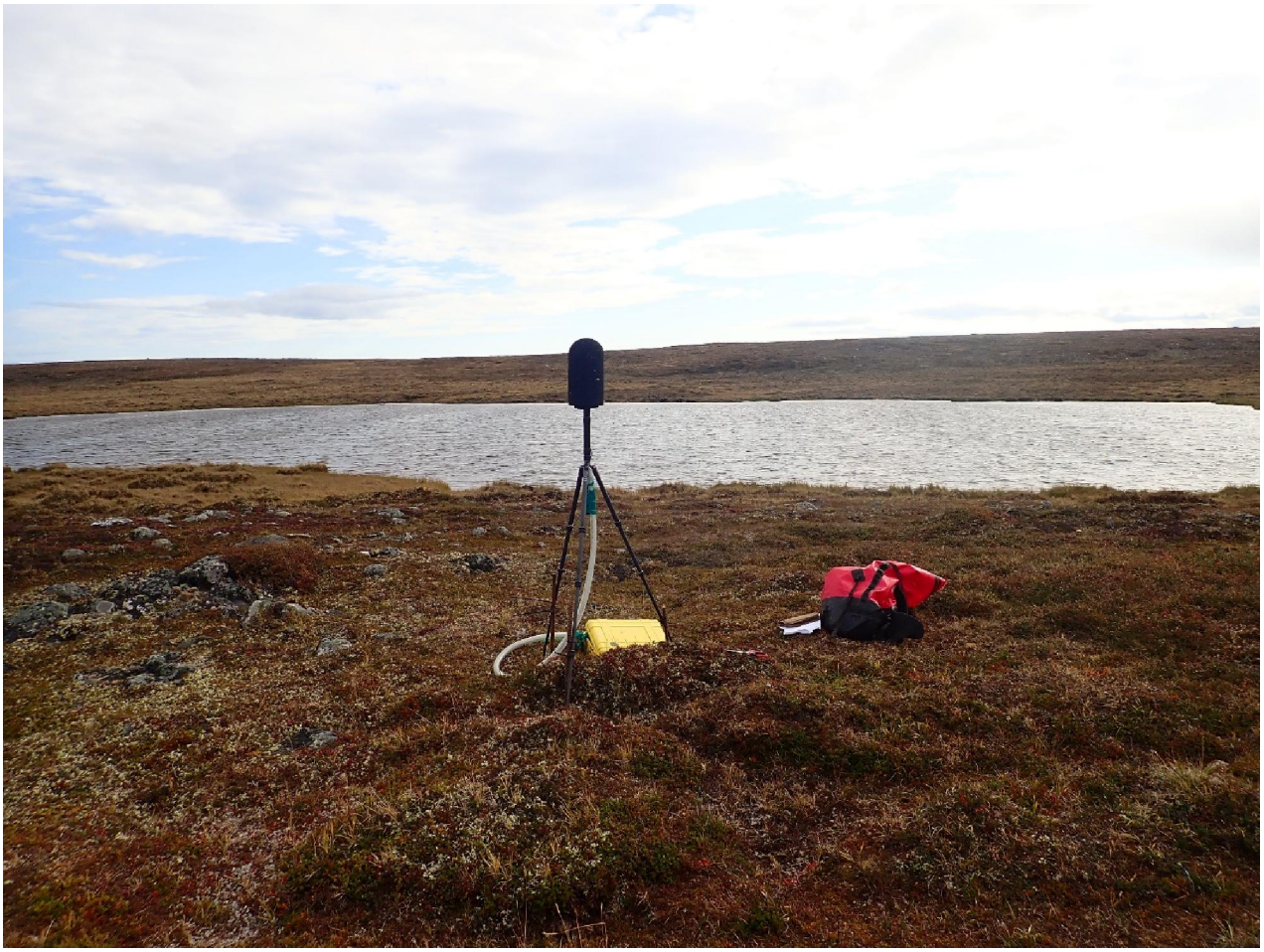


Figure 7. Noise monitoring station NPOR014 (August 28, 2018).

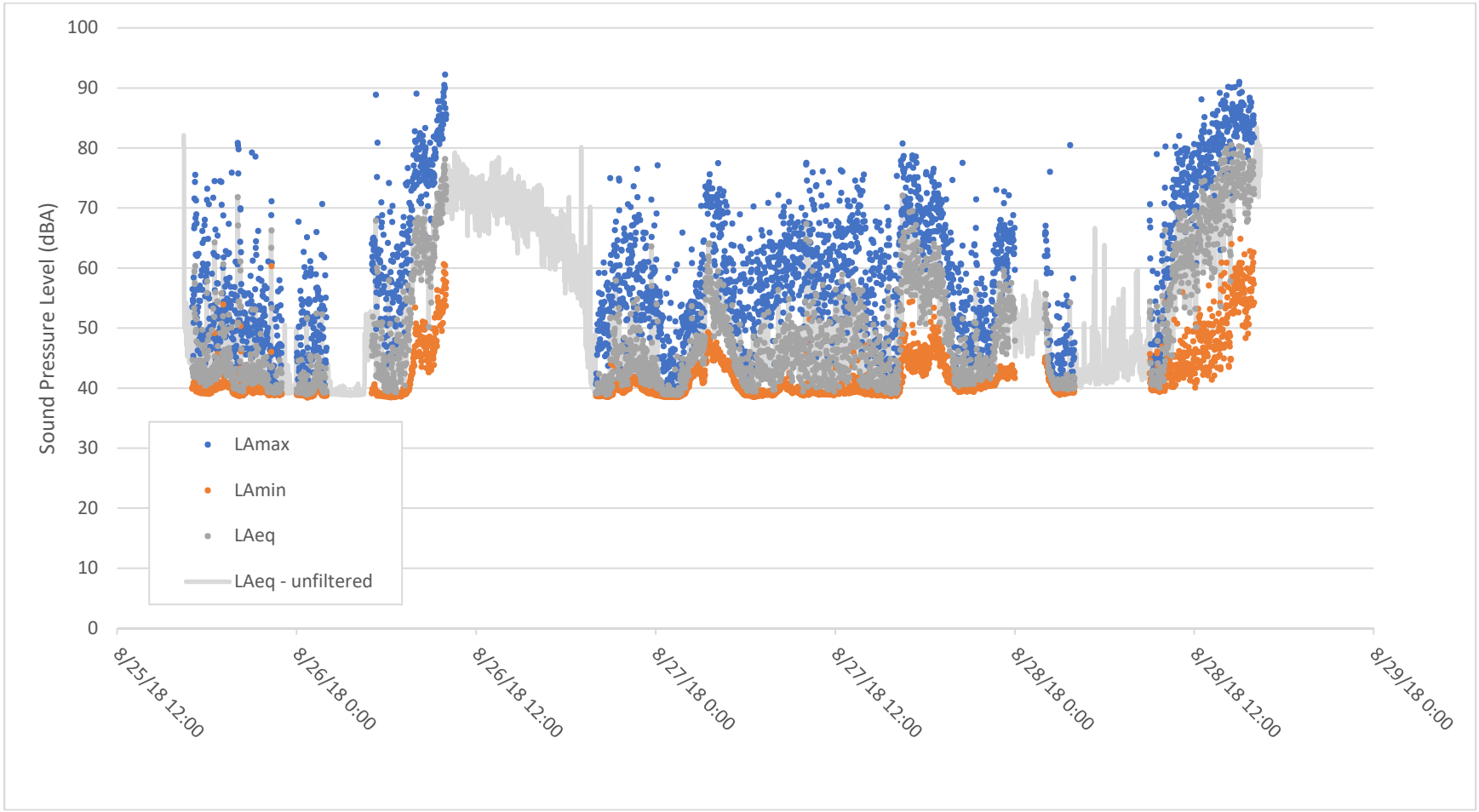


Figure 8. 1-min L_{max}, L_{min}, and L_{eq} values recorded at monitoring site NPOR014.

3.4 NPOR017

L_{eq} values calculated from 1-min L_{eq} measurements over the monitoring periods at NPOR017 are shown in Figure 10 and 11. Invalid data points removed from analysis due to technician interference and sub-optimal weather conditions based on weather station data (as described in Section 2.4) are indicated. For event 1 at station NPOR017 (August 10 - 12), 60 h of monitoring were conducted and 9 h of valid data were available after filtering. This did not include any night-time hours (11 pm – 7 am), so calculation of a valid 24-h L_{eq} or night-time L_{eq} was not possible. For event 2 at station NPOR017 (September 9), 12 h of monitoring were conducted, and 2 h of valid data were available after filtering. As a result it was not possible to calculate any valid day- or night-time measurements for event 2.

This station is located 140 m from the all weather road. Audible noises noted in the field log include light vehicles, transport trucks, ATVs, sounds from the nearby hunting cabin, and bird noises.

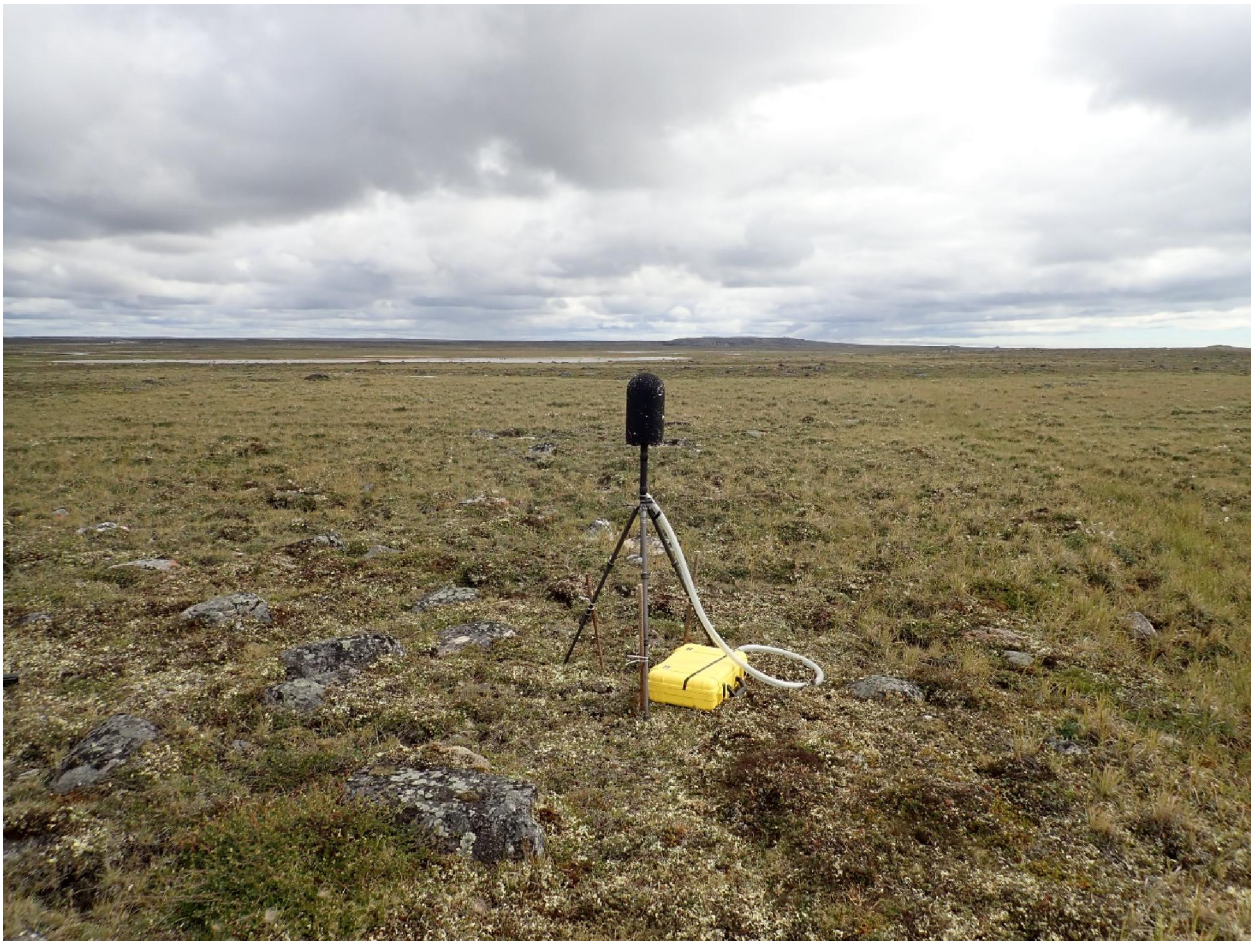


Figure 9. Noise monitoring location NPOR017 (August 10, 2018).

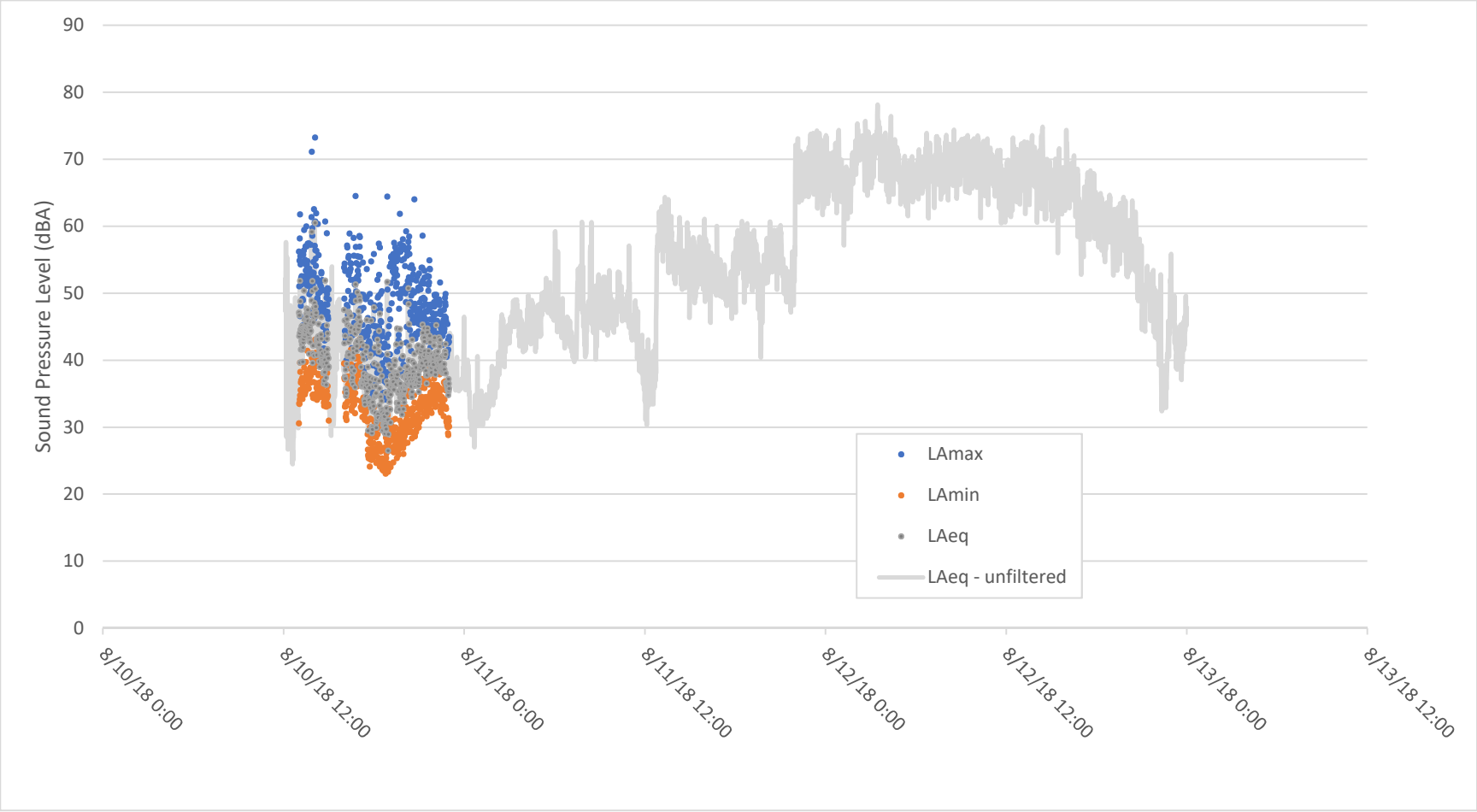


Figure 10. 1-min L_{max}, L_{min}, and L_{eq} values recorded at site NPOR017 during monitoring event 1.

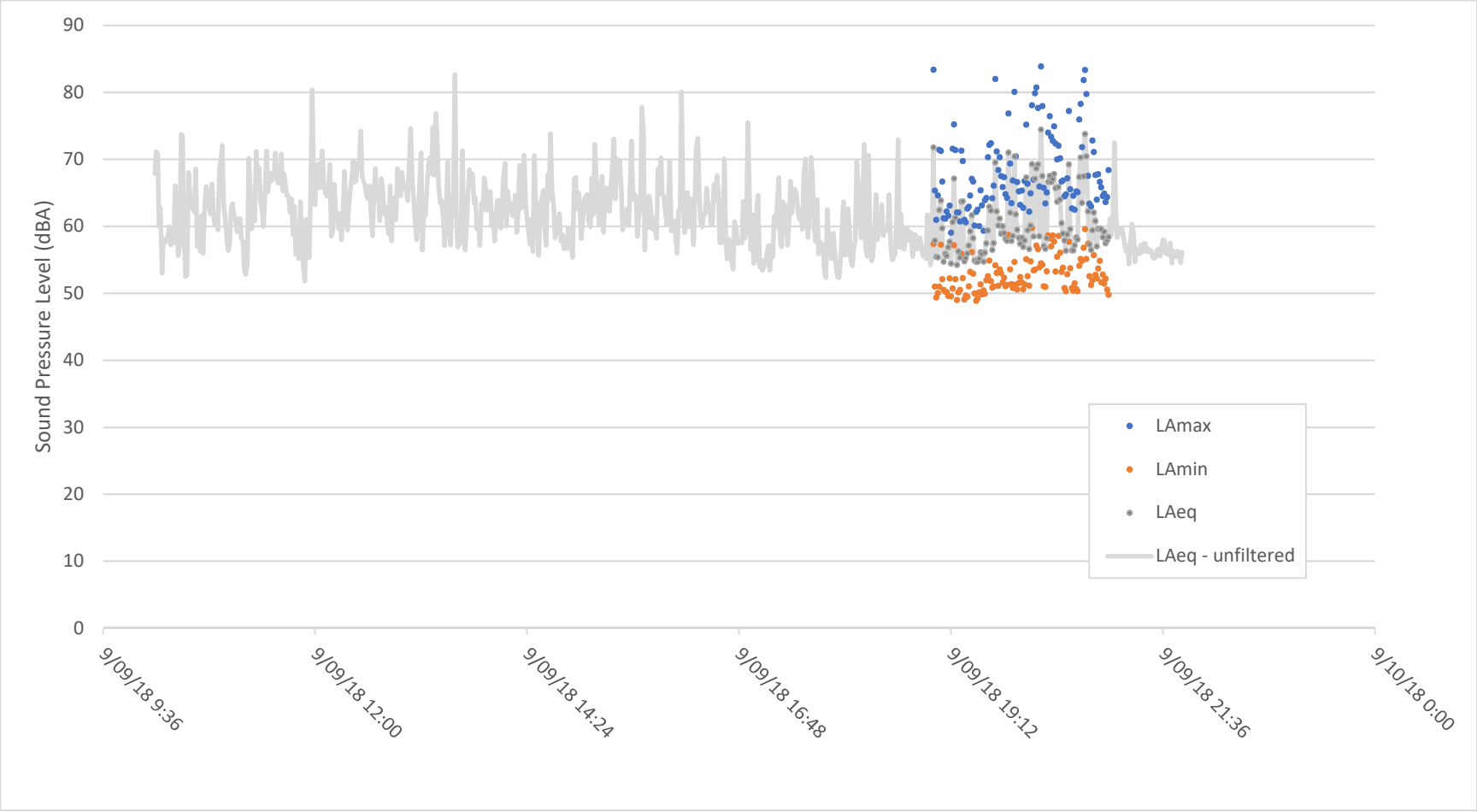


Figure 11. 1-min L_{max}, L_{min}, and L_{eq} values recorded at site NPOR017 during monitoring event 2.

4 SUMMARY AND CONCLUSION

The objective of the noise monitoring program at Meliadine is to measure noise levels at four previously determined monitoring locations over at least two 24 h periods. In 2018 Agnico Eagle conducted two successful rounds of monitoring for stations NPOR006 and NPOR017, and one successful round of monitoring for NPOR008 and NPOR014. However, high winds (both measured and audible) and frequent bird calls in close proximity to the noise meter substantially reduced the quality of the data for comparison to FEIS predictions.

A summary of the available noise monitoring results is provided in Table 5. For station NPOR006 and NPOR017, insufficient valid data was available after initial and/or secondary filtering to calculate 24-h or night-time L_{eq} values. For station NPOR008, only a night-time L_{eq} could be calculated after initial filtering, and that value exceeded the design target of 40 dBA. However, sound recordings were dominated by wind and wave action, and no human-associated activities were audible, so a secondary filtering was not performed. The calculated L_{eq} value is not considered comparable to FEIS predictions or design targets, which assume limited background noise. Similarly for NPOR014, the measured 24-h and night-time L_{eq} values exceeded noise monitoring criteria and the design target, respectively, but no mine-related activity is ongoing in this area, and sound recordings were dominated by wind, waves, and near-continous bird calls for significant portions of the dataset.

Table 5. Summary of noise monitoring results in 2018. "NA" indicates insufficient valid data was available after filtering. *No mine activity is audible at these remote sites, so measured values are assumed representative of baseline; no filtering on the basis of sound recordings was performed.

Location	Monitoring Start	Monitoring End	Noise Monitoring Criterion - $L_{eq(24\ h)}$ (dBA)	FEIS Prediction - $L_{eq(24\ h)}$ (dBA)	Measured $L_{eq(24\ h)}$ (dBA)	Measured L_{eq} (nighttime) (dBA)
NPOR006	08/22 11:08	08/22 21:44	45	39.8	NA	NA
	09/04 11:38	09/07 16:37	45	39.8	NA	NA
NPOR008	08/28 17:42	08/29 5:53	45	41.7	NA	*64.5**
NPOR014	08/25 16:26	08/28 16:27	45	44.7	*63.5**	*49.9**
NPOR017	08/10 12:07	08/12 23:59	45	43.4	NA	NA
	09/09 10:11	09/09 21:50	45	43.4	NA	NA

Overall, a very limited dataset was available for calculation of 24-h and night-time L_{eq} values in 2018. This was generally due to a tendency towards sub-optimal weather conditions, and subsequent

filtration of the data. The data collected in 2018 suggests that measured background sound levels in this area may regularly exceed those assumed during the FEIS (35 dBA), likely due to predominant high winds and wave action on the shore of Meliadine Lake. Particular care will be taken in the future to ensure monitoring is conducted when wind speeds are at their lowest, to reduce the significant wind and wave noises contributing to background sounds. Timing monitoring events earlier in the season may also help reduce the frequency of bird calls which were especially dominant in recordings this year, and which consistently contributed to recorded sound peaks. Continued use of a far-field reference station such as NPOR014 will be considered, in order to better define background noise levels in this area.

5 ACTIONS

The following actions were planned for 2018 and responses of Agnico are indicated:

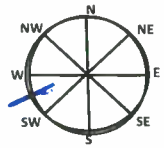
- Additional efforts will be made to conduct monitoring at NPOR006 while the cabin is unoccupied.
    - Attempts were made to fulfill this objective, but the cabin at NPOR006 is regularly occupied and was in use at the time of noise surveys. Agnico will conduct reconnaissance at nearby station NPOR005 (according to the Noise Abatement and Monitoring Plan) in 2019 to determine occupancy rates, and will conduct monitoring at this station if feasible.

The following actions are planned for 2019:

- Noise monitoring surveys will be conducted earlier in the ice-free season when wind speeds and animal interference (bird calls) are minimized.
- Weather data will be reviewed during or immediately following noise monitoring events to estimate the proportion of usable data and the need for supplemental monitoring.
- Reconnaissance and monitoring (if feasible based on occupancy) will be conducted at NPOR005, since high occupancy rates at NPOR006 tend to interfere with assessments of mine-related noise in this location. Monitoring will also be conducted at NPOR006.
- Monitoring will focus on NPOR005, NPOR006, NPOR008 and NPOR017. Since activities at the Discovery Pit are not ongoing, monitoring is not required at NPOR014. However, data will be collected at this station if time and weather conditions permit.

Appendix A: Field Logs

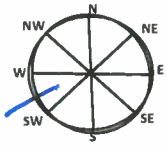
MONITORING STARTS

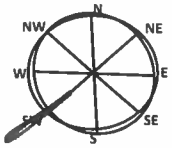
Operator:	Laura Hanson		
Location:	NPR006		
Noise Meter Start Time:			
Date:	2018-08-22.		
Calibration complete ?:	YES		
Sensitivity	3.003 mv / Pa		
Derviation	-0.02 dB		
Time of Calibration:			
Battery Power Check:	Good (circled)	Poor	
Photographs of Setup (Y/N)	YES Y		
Photographs of Surrounding (Y/N)			
Check available disk memory (Y/N)			
Cloud cover:	90%	partly cloudy	sunny
Height of cloud (feet):		10,000-25,000 (circled)	25,000 +
Air Temperature (C):	6.5°C		
Wind Speed (km/hr):	6 Km/hr		
Wind Direction: North wind (wind blows from North)	WSW		
Barometric Pressure (kPa):			
Relative Humidity (%)	65.2 %		
Precipitation:	none (circled)	drizzle	rain

GENERAL SITE DESCRIPTION

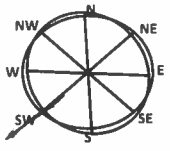
GPS Location	Latitude	Longitude	Altitude
	15V 538286	6891299	
Type of Ground Surface:	Tundra		
Acoustic Environment:	Near Cabin - 20m from ATV trail.		
Traffic	ATV		
Human activities	Carpentry Work. - owner is home.		
Animal	Birds, Arctic Hare, Arctic Fox		
Other noise sources			

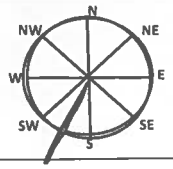
MONITORING ENDS

Operator:	Laura Hanson		
Record Data File Name:			
Total Monitoring Period			
Noise Meter End Time:	NOT SURE DEVICE TURNED OFF.		
Date:	2018-08-25		
Calibration complete ?:	YES		
Sensitivity	3.03 mV/Pa		
Derviation	-8.01 dB		
Time of Calibration:	10:40		
Check file size (GB) ~			
Battery Power Check:	Good (circled)	Poor	
Cloud cover:	cloudy (circled)	partly cloudy	sunny
Height of cloud (feet):	0-10,000 (circled)	10,000-25,000	25,000 +
Air Temperature (C):	6.3°C		
Wind Speed (km/hr):	11.5 Km/hr		
Wind Direction: North wind (wind blows from North)	241°		
Barometric Pressure (kPa):			
Relative Humidity (%)	67.7 %		
Precipitation:	none (circled)	drizzle	rain
Depature Time:			

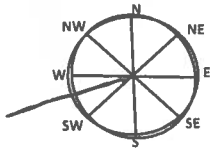
MONITORING STARTS			
Operator:	SA, JB2		
Location:	NPOR06		
Noise Meter Start Time:	11:41a.m.		
Date:	Sept. 4, 2018		
Calibration complete ?:	✓		
Sensitivity	3.05		
Derviation	0.02		
Time of Calibration:	11:39 a.m.		
Battery Power Check:	(Good)	Poor	
Photographs of Setup (Y/N)	✓		
Photographs of Surrounding (Y/N)	✓		
Check available disk memory (Y/N)	✓		
Cloud cover:	overcast	partly cloudy	sunny
Height of cloud (feet):		(10,000-25,000)	25,000 +
Air Temperature (C):	6.8°C		
Wind Speed (km/hr):	30km/hr		
Wind Direction: North wind (wind blows from North)			
Barometric Pressure (kPa):			
Relative Humidity (%)	74.5		
Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION			
GPS Location Zone 15V	Latitude	Longitude	Altitude
	6991799 mN	538286 mE	
Type of Ground Surface:	Tundra.		
Acoustic Environment:			
Traffic	ATVs almost daily. Dump trucks. Regular site traffic 1km away excavation of gravel within 500m, during the day. Nearby hunting shack ~~reused~~ used often		
Human activities			
Animal	Dog. Birds. Geese. Wolverine.		
Other noise sources	Hunting cabin within 150m is used regularly. ATVs were observed arrived and leaving almost daily while monitoring was being done. Helicopters also frequently fly by.		

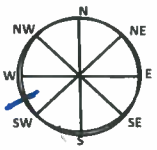
MONITORING ENDS			
Operator:	SA, LS.		
Record Data File Name:	NPOR06.J06		
Total Monitoring Period	~ 76 hrs		
Noise Meter End Time:	4:40 pm		
Date:	Sept 7, 2018		
Calibration complete ?:	✓		
Sensitivity	3.05		
Derviation	0.02		
Time of Calibration:	4:44		
Check file size (GB)			
Battery Power Check:	(Good)	Poor	
Cloud cover:	cloudy	~~partly cloudy~~	sunny
Height of cloud (feet):	0-10,000	(10,000-25,000)	25,000 +
Air Temperature (C):	6.3		
Wind Speed (km/hr):	15.4		
Wind Direction: North wind (wind blows from North)	230° 		
Barometric Pressure (kPa):			
Relative Humidity (%)	48.9		
Precipitation:	(none)	drizzle	rain
Depature Time:	4:50		

MONITORING STARTS			
Operator:	Sean Arruda, Daphne Macin.		
Location:	NPOR08		
Noise Meter Start Time:	17:42		
Date:	2018-08-28		
Calibration complete ?:	✓		
Sensitivity	3.04 mV/Pa		
Derviation	0.01		
Time of Calibration:	17:41		
Battery Power Check:	(Good)	Poor	
Photographs of Setup (Y/N)	✓		
Photographs of Surrounding (Y/N)	✓		
Check available disk memory (Y/N)	✓		
Cloud cover:	70%	(partly cloudy)	sunny
Height of cloud (feet):		(10,000-25,000)	25,000 +
Air Temperature (C):	11.9°C		
Wind Speed (km/hr):	20-25 km/hr		
Wind Direction: North wind (wind blows from North)	SSW 209°		
Barometric Pressure (kPa):			
Relative Humidity (%)	69.4		
Precipitation:	(none)	drizzle	rain

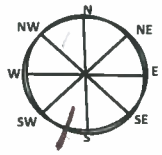
GENERAL SITE DESCRIPTION			
GPS Location Zone 15V	Latitude	Longitude	Altitude
	6987276 mN	543707 mE	
Type of Ground Surface:	Tundra		
Acoustic Environment:			
Traffic	Boats rarely. Helicopters fairly often. Main road ~2-3km away.		
Human activities	Mining camp 2.2km away (to northwest).		
Animal	Swans, geese, birds. Foxes,		
Other noise sources			

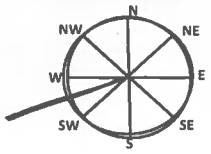
MONITORING ENDS			
Operator:	SA, JB2		
Record Data File Name:	NPOR08.Job		
Total Monitoring Period	~88 hrs		
Noise Meter End Time:	9:40 a.m.		
Date:	Sept. 1, 2018		
Calibration complete ?:	NO		
Sensitivity	X		
Derviation			
Time of Calibration:			
Check file size (GB)			
Battery Power Check:	(Good)	Poor	
Cloud cover:	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	(0-10,000)	10,000-25,000	25,000 +
Air Temperature (C):	16.8°C		
Wind Speed (km/hr):	6.7 Km/hr		
Wind Direction: North wind (wind blows from North)	WSW		
Barometric Pressure (kPa):			
Relative Humidity (%)	55.8		
Precipitation:	(none)	drizzle	rain
Depature Time:	9:55 am.		

Remember to take photos before tear down. - The sd card with photos was broken.

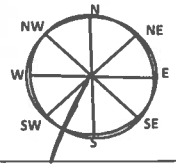
MONITORING STARTS			
Operator:	Laura Hanson		
Location:	NPOR014		
Noise Meter Start Time:	16:27		
Date:	2018-08-25		
Calibration complete ?:	Yes		
Sensitivity	3.04 mv/pa		
Derviation	0.02 dB		
Time of Calibration:	16:20		
Battery Power Check:	(Good)	Poor	
Photographs of Setup (Y/N)	Y		
Photographs of Surrounding (Y/N)	Y		
Check available disk memory (Y/N)	Y		
Cloud cover:	0%	partly cloudy	sunny
Height of cloud (feet):	10 000	10,000-25,000	25,000 +
Air Temperature (C):	13.7°C		
Wind Speed (km/hr):	7 km/hr.		
Wind Direction: North wind (wind blows from North)	WSW 246		
Barometric Pressure (kPa):			
Relative Humidity (%)	47.7		
Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION			
GPS Location	Latitude	Longitude	Altitude
	15V 549401	6982060	
Type of Ground Surface:	Tundra.		
Acoustic Environment:	near lake.		
Traffic	poss. bt boats - quads		
Human activities	fish. ing		
Animal	Birds.		
Other noise sources	Gun Fire		

MONITORING ENDS			
Operator:	SEAN ARRUDA		
Record Data File Name:	NPOR014		
Total Monitoring Period	3 days		
Noise Meter End Time:	16:35		
Date:	2018-08-28		
Calibration complete ?:			
Sensitivity	NO		
Derviation			
Time of Calibration:			
Check file size (GB)			
Battery Power Check:	(Good)	Poor	
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C):	11.0°C		
Wind Speed (km/hr):	20-25		
Wind Direction: North wind (wind blows from North)	304° SSW		
windchill: 11.2c			
Barometric Pressure (kPa):			
Relative Humidity (%)	64.9		
Precipitation:	none	(drizzle)	rain
Depature Time:	16:40		

MONITORING STARTS			
Operator:	SA, PS		
Location:	NPOR17		
Noise Meter Start Time:	12:10 pm		
Date:	Aug 10, 2018		
Calibration complete ?:	Y		
Sensitivity	3.18 mV/Pa		
Derviation	0.00 dB		
Time of Calibration:	12:09		
Battery Power Check:	(Good)	Poor	
Photographs of Setup (Y/N)	Y		
Photographs of Surrounding (Y/N)	Y		
Check available disk memory (Y/N)	N		
Cloud cover:	90% cover	partly cloudy	sunny
Height of cloud (feet):		(10,000-25,000)	25,000 +
Air Temperature (C):	14.2°C		
Wind Speed (km/hr):	10.2 km/hr		
Wind Direction: North wind (wind blows from North)	WSW 		
Barometric Pressure (kPa):	100.9 kPa		
Relative Humidity (%)	77		
Precipitation:	(none)	drizzle	rain

GENERAL SITE DESCRIPTION			
GPS Location Zone 15V	Latitude	Longitude	Altitude
	6970537 m N	544203 m E	
Type of Ground Surface:	Tundra		
Acoustic Environment:			
Traffic	140m from main road. Transports, pickups, ATVs, excavators, etc.		
Human activities	Heavy ATV traffic and nearby cabins,		
Animal	ground squirrel (sik-sik), geese, birds, foxes.		
Other noise sources	Planes, helicopters.		

MONITORING ENDS			
Operator:	PS		
Record Data File Name:	NPOR17		
Total Monitoring Period	~71 hrs		
Noise Meter End Time:	13:00		
Date:	Aug 13, 2018		
Calibration complete ?:	Y		
Sensitivity	3.02 mV/Pa		
Derviation	0.01 dB		
Time of Calibration:	~~12~~		
Check file size (GB)			
Battery Power Check:	(Good)	Poor	
Cloud cover:	cloudy	(partly cloudy)	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	(25,000 +)
Air Temperature (C):	15.1°C		
Wind Speed (km/hr):	11.5 km/hr		
Wind Direction: North wind (wind blows from North)			
Barometric Pressure (kPa):			
Relative Humidity (%)	49.5		
Precipitation:	(none)	drizzle	rain
Depature Time:	13:30		

MONITORING STARTS			
Operator:	Sean Arruda		
Location:	NPOR17		
Noise Meter Start Time:	10:17am		
Date:	Sept. 9, 2018		
Calibration complete ?:	Y		
Sensitivity	3.03mV/Pa		
Derviation	-0.07		
Time of Calibration:	10:00am		
Battery Power Check:	Good	Poor	
Photographs of Setup (Y/N)	Y		
Photographs of Surrounding (Y/N)	Y		
Check available disk memory (Y/N)	29gb		
Cloud cover:		partly cloudy	sunny
Height of cloud (feet):	less than 10,000	10,000-25,000	25,000 +
Air Temperature (C):	8.6C		
Wind Speed (km/hr):	10-15km/hr		
Wind Direction: North wind (wind blows from North)	WSW 240 degrees		
Barometric Pressure (kPa):	100.9kPa		
Relative Humidity (%)	62.8		
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION			
GPS Location	Latitude	Longitude	Altitude
	6970537.00 m N	544203.00 m E	
Type of Ground Surface:	Tundra		
Acoustic Environment:			
Traffic	~150m from road. ATVs, pickups, transports, dumptrucks, airplanes		
Human activities	Hunting, hunt shack within 150m, ATVs, daily traffic on road.		
Animal	Dogs, ground squirrels, birds, geese.		
Other noise sources			

MONITORING ENDS			
Operator:	Laura Hanson		
Record Data File Name:	NPOR17-SEP9		
Total Monitoring Period	Unknown due to hand held shutting down before returning to retrieve from field		
Noise Meter End Time:			
Date:	9/12/18		
Calibration complete ?:	Yes		
Sensitivity	3.07 mv/PA		
Derviation	0.12 dB		
Time of Calibration:	17:48		
Check file size (GB)			
Battery Power Check:		Poor	Very poor
Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +
Air Temperature (C):	5.6 C		
Wind Speed (km/hr):	16-20 km per hour		
Wind Direction: North wind (wind blows from North)	262		
Barometric Pressure (kPa):			
Relative Humidity (%)	48.10%		
Precipitation:	none	drizzle	rain
Depature Time:	17:58		

Appendix B: Weather Data and Hourly L_{eq} values

Appx B - Table 1. Weather data recorded from the Meliadine site permanent weather station for noise monitoring dates. To comply with Alberta Directive 038, noise data was excluded from analyses when average wind speeds exceeded 15 km/h and when relative humidity exceeded 90% (assuming precipitation occurred). L_{eq} values removed during initial and secondary data filtering steps are shaded gray.

Date and Time	1-h Leq (dBA)	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Speed (km/h)	Average Wind Direction (°)
NPOR017					
8/10/18 12:00	44.8	13.1	76.4	10.3	338.6
8/10/18 13:00	47.1	13.7	70.6	14.3	325.3
8/10/18 14:00	46.2	14.4	62.6	11.3	327.7
8/10/18 15:00	43.9	14.7	59.7	15.3	306.8
8/10/18 16:00	44.2	15.0	57.3	11.2	301.1
8/10/18 17:00	41.1	15.3	55.0	8.9	291.6
8/10/18 18:00	38.6	15.9	51.7	6.6	289.3
8/10/18 19:00	37.6	15.9	51.4	6.9	262.6
8/10/18 20:00	39.9	15.7	53.3	7.4	222.7
8/10/18 21:00	41.1	13.9	71.0	9.6	209.7
8/10/18 22:00	39.9	11.6	86.0	11.7	200.0
8/10/18 23:00	38.2	10.1	91.6	12.2	185.0
8/11/18 0:00	35.1	9.4	94.0	13.7	182.5
8/11/18 1:00	34.1	8.7	93.7	15.4	155.8
8/11/18 2:00	42.5	9.0	94.0	22.0	149.8
8/11/18 3:00	46.1	9.3	95.5	30.7	147.6
8/11/18 4:00	45.6	9.6	94.3	33.9	142.4
8/11/18 5:00	48.6	9.2	94.0	32.8	144.5
8/11/18 6:00	48.7	9.1	95.4	39.5	140.1
8/11/18 7:00	49.1	9.3	97.4	42.3	138.7
8/11/18 8:00	49.4	9.1	98.5	27.8	144.2
8/11/18 9:00	48.3	10.0	99.4	17.0	158.7
8/11/18 10:00	48.8	10.6	99.5	22.5	178.3
8/11/18 11:00	43.4	11.2	99.4	17.5	204.4
8/11/18 12:00	52.4	12.1	99.6	17.7	210.1
8/11/18 13:00	59.7	14.9	93.3	17.3	229.0
8/11/18 14:00	55.4	16.9	61.4	37.2	267.8
8/11/18 15:00	55.1	16.0	61.7	39.4	269.1
8/11/18 16:00	53.6	15.9	64.8	38.2	263.4
8/11/18 17:00	51.9	15.4	69.6	34.3	265.4
8/11/18 18:00	55.5	15.7	71.2	28.8	268.5
8/11/18 19:00	54.2	14.9	77.6	30.8	271.0

Date and Time	1-h Leq (dBA)	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Speed (km/h)	Average Wind Direction (°)
8/11/18 20:00	56.3	13.4	86.7	33.6	276.9
8/11/18 21:00	55.1	12.5	93.0	31.3	277.6
8/11/18 22:00	68.9	11.9	96.0	30.1	285.0
8/11/18 23:00	70.0	10.5	92.6	50.3	292.1
8/12/18 0:00	69.7	9.4	91.8	49.5	289.5
8/12/18 1:00	67.3	9.2	91.3	50.1	289.8
8/12/18 2:00	71.5	9.9	94.2	52.4	298.1
8/12/18 3:00	72.0	10.0	88.8	66.0	312.4
8/12/18 4:00	70.1	9.2	86.5	66.4	313.7
8/12/18 5:00	67.4	8.6	84.3	63.0	315.7
8/12/18 6:00	68.8	8.2	84.0	57.9	320.2
8/12/18 7:00	69.1	7.9	84.0	58.3	317.6
8/12/18 8:00	70.0	7.8	82.2	60.0	317.5
8/12/18 9:00	70.9	7.6	81.0	61.7	317.1
8/12/18 10:00	69.9	7.5	79.8	60.0	318.6
8/12/18 11:00	67.4	7.8	75.7	55.9	320.2
8/12/18 12:00	68.5	8.3	73.5	53.7	321.3
8/12/18 13:00	69.2	8.9	73.3	54.1	316.4
8/12/18 14:00	68.1	9.0	74.2	55.5	311.8
8/12/18 15:00	66.3	9.3	72.0	55.1	315.3
8/12/18 16:00	66.8	10.2	62.7	51.4	320.4
8/12/18 17:00	63.9	10.6	64.4	50.3	318.5
8/12/18 18:00	61.4	9.8	77.0	48.0	313.9
8/12/18 19:00	59.6	10.0	71.2	46.4	312.8
8/12/18 20:00	57.1	10.3	64.6	51.4	305.8
8/12/18 21:00	49.9	9.5	67.5	46.2	309.1
8/12/18 22:00	45.6	8.7	71.3	39.8	314.1
8/12/18 23:00	44.8	8.4	70.1	40.7	307.7
NPOR006					
8/22/18 11:00	67.1	5.6	70.0	10.9	314.6
8/22/18 12:00	59.4	5.9	65.7	11.5	318.9
8/22/18 13:00	58.9	6.3	61.0	10.3	328.4
8/22/18 14:00	64.4	6.6	55.6	8.4	332.4
8/22/18 15:00	64.9	6.9	55.4	10.5	350.6
8/22/18 16:00	72.1	6.8	58.9	8.3	82.2
8/22/18 17:00	76.5	7.3	55.2	20.5	353.5
8/22/18 18:00	77.1	6.9	60.4	17.7	353.6
8/22/18 19:00	84.5	7.6	54.2	23.5	348.1
8/22/18 20:00	82.6	7.2	66.3	26.2	346.4

Date and Time	1-h Leq (dBA)	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Speed (km/h)	Average Wind Direction (°)
8/22/18 21:00	89.9	6.8	71.5	27.5	345.4
NPOR014					
8/25/18 16:00	70.5	8.9	60.3	13.1	352.8
8/25/18 17:00	49.2	9.5	56.8	9.6	0.7
8/25/18 18:00	50.3	9.8	56.6	8.4	1.3
8/25/18 19:00	47.0	9.8	58.1	8.8	337.2
8/25/18 20:00	56.1	8.6	66.5	8.1	325.4
8/25/18 21:00	43.8	7.2	74.9	6.9	4.0
8/25/18 22:00	50.8	6.3	86.4	10.3	121.6
8/25/18 23:00	41.4	5.4	91.5	7.9	131.0
8/26/18 0:00	41.6	4.9	88.5	3.7	141.4
8/26/18 1:00	42.9	5.2	89.6	2.5	124.5
8/26/18 2:00	39.6	4.9	92.1	5.6	121.1
8/26/18 3:00	39.1	4.7	91.5	8.4	124.9
8/26/18 4:00	46.5	4.3	91.8	8.4	130.1
8/26/18 5:00	52.4	4.4	89.7	9.7	109.6
8/26/18 6:00	45.9	4.3	87.8	9.4	96.7
8/26/18 7:00	58.7	4.4	88.0	8.4	97.4
8/26/18 8:00	64.2	4.8	89.3	9.4	95.7
8/26/18 9:00	71.4	5.7	89.7	13.3	100.3
8/26/18 10:00	74.9	7.8	77.3	15.4	106.0
8/26/18 11:00	73.3	8.7	66.1	19.6	99.7
8/26/18 12:00	71.8	9.2	60.7	21.1	83.3
8/26/18 13:00	73.4	9.4	57.4	21.9	79.6
8/26/18 14:00	71.6	9.6	55.5	20.5	79.9
8/26/18 15:00	70.0	9.8	54.9	17.7	84.3
8/26/18 16:00	68.5	9.5	54.6	18.5	82.0
8/26/18 17:00	65.3	8.8	56.3	18.2	78.8
8/26/18 18:00	61.9	8.3	56.2	19.4	64.3
8/26/18 19:00	63.5	8.1	57.3	19.3	63.2
8/26/18 20:00	41.2	7.6	60.3	18.2	64.8
8/26/18 21:00	47.3	6.9	65.9	10.9	59.4
8/26/18 22:00	47.0	6.0	71.8	9.6	37.5
8/26/18 23:00	48.3	5.5	73.8	10.6	32.3
8/27/18 0:00	42.2	5.1	79.6	10.3	21.2
8/27/18 1:00	40.6	4.7	83.1	10.8	25.5
8/27/18 2:00	46.3	4.4	85.3	10.2	19.3
8/27/18 3:00	56.7	3.9	88.4	12.0	0.1
8/27/18 4:00	52.5	4.2	88.6	13.0	4.5

Date and Time	1-h Leq (dBA)	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Speed (km/h)	Average Wind Direction (°)
8/27/18 5:00	45.3	4.4	86.6	11.6	17.4
8/27/18 6:00	43.6	3.5	88.4	9.3	8.7
8/27/18 7:00	45.1	3.6	89.0	8.1	38.7
8/27/18 8:00	47.7	4.3	86.9	7.4	43.5
8/27/18 9:00	46.8	5.0	84.1	9.1	27.3
8/27/18 10:00	54.2	6.3	76.1	8.5	51.8
8/27/18 11:00	46.5	7.1	71.1	8.9	36.5
8/27/18 12:00	50.1	8.3	62.3	9.9	56.3
8/27/18 13:00	51.5	9.4	54.7	9.0	66.4
8/27/18 14:00	44.9	10.1	50.4	8.5	64.4
8/27/18 15:00	45.8	10.1	49.9	7.5	36.7
8/27/18 16:00	61.1	10.3	47.8	5.4	6.2
8/27/18 17:00	60.8	10.4	48.1	5.2	346.7
8/27/18 18:00	59.0	8.7	66.5	13.9	180.8
8/27/18 19:00	53.7	8.3	64.2	13.9	183.2
8/27/18 20:00	43.7	7.0	68.1	10.9	172.1
8/27/18 21:00	45.3	5.1	74.7	9.3	185.6
8/27/18 22:00	48.5	4.6	77.4	11.4	200.8
8/27/18 23:00	53.7	4.2	85.0	14.2	219.4
8/28/18 0:00	50.5	3.8	83.6	15.5	218.7
8/28/18 1:00	52.6	3.8	82.6	15.3	221.1
8/28/18 2:00	46.7	3.4	81.2	13.9	216.9
8/28/18 3:00	42.0	2.6	88.4	7.0	220.7
8/28/18 4:00	42.3	2.8	92.6	5.7	225.0
8/28/18 5:00	52.1	3.0	93.3	3.0	218.9
8/28/18 6:00	45.2	2.7	94.3	4.1	170.7
8/28/18 7:00	46.4	3.3	94.5	3.7	183.7
8/28/18 8:00	49.3	4.4	91.0	4.5	157.9
8/28/18 9:00	46.7	5.9	85.6	6.0	176.2
8/28/18 10:00	60.4	7.3	79.6	7.0	205.0
8/28/18 11:00	63.9	9.5	69.9	8.1	205.3
8/28/18 12:00	67.6	11.2	57.8	11.9	212.2
8/28/18 13:00	71.4	11.8	45.8	14.7	227.7
8/28/18 14:00	75.2	12.6	44.4	14.7	223.1
8/28/18 15:00	75.0	12.8	46.5	13.7	213.5
8/28/18 16:00	78.0	11.8	60.6	18.9	180.8
8/28/18 17:00	70.5	11.5	64.8	18.3	185.5
8/28/18 18:00	49.2	11.3	66.9	15.5	180.1
8/28/18 19:00	50.3	11.4	63.5	17.3	196.9

Date and Time	1-h Leq (dBA)	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Speed (km/h)	Average Wind Direction (°)
8/28/18 20:00	47.0	10.4	66.4	16.4	194.4
8/28/18 21:00	56.1	8.4	75.1	15.0	194.5
8/28/18 22:00	43.8	7.5	78.3	14.6	205.1
8/28/18 23:00	50.8	6.8	78.6	13.3	206.8
8/29/18 0:00	41.4	6.4	81.9	12.4	210.1
8/29/18 1:00	41.6	6.7	81.9	15.0	205.6
8/29/18 2:00	42.9	6.6	81.0	15.8	202.7
8/29/18 3:00	39.6	6.0	82.7	14.4	208.7
8/29/18 4:00	39.1	6.0	86.2	15.8	201.5
NPOR006					
9/04/18 11:00	74.1	5.7	83.7	27.9	152.2
9/04/18 12:00	72.3	5.8	85.4	26.0	155.5
9/04/18 13:00	70.1	6.1	85.4	25.3	156.3
9/04/18 14:00	70.9	6.6	87.0	26.5	154.2
9/04/18 15:00	72.8	6.6	90.3	27.9	150.8
9/04/18 16:00	73.2	6.3	93.2	29.1	152.2
9/04/18 17:00	72.9	6.1	95.2	26.8	152.5
9/04/18 18:00	68.7	6.1	96.3	20.6	156.6
9/04/18 19:00	64.2	6.0	96.7	21.6	149.4
9/04/18 20:00	64.5	6.1	95.5	21.9	148.8
9/04/18 21:00	64.5	5.9	95.1	20.2	151.9
9/04/18 22:00	64.4	5.9	95.6	15.4	156.5
9/04/18 23:00	60.2	5.9	95.8	12.7	159.5
9/05/18 0:00	56.9	5.8	96.1	8.2	163.1
9/05/18 1:00	55.4	5.6	95.8	8.6	153.9
9/05/18 2:00	52.4	5.5	96.1	4.7	146.5
9/05/18 3:00	45.8	5.3	96.5	3.8	160.5
9/05/18 4:00	47.2	5.3	96.8	1.4	192.0
9/05/18 5:00	49.8	5.3	93.3	2.8	279.0
9/05/18 6:00	52.2	5.4	91.7	3.3	352.0
9/05/18 7:00	55.9	5.4	90.9	4.6	23.6
9/05/18 8:00	52.0	5.6	91.0	5.3	61.7
9/05/18 9:00	46.8	5.9	89.6	5.4	17.9
9/05/18 10:00	47.6	6.2	89.2	9.5	346.0
9/05/18 11:00	56.7	6.6	87.6	7.4	4.8
9/05/18 12:00	57.5	7.0	86.3	9.6	338.0
9/05/18 13:00	57.4	7.6	83.3	12.9	330.7
9/05/18 14:00	57.0	7.5	83.9	13.3	330.8
9/05/18 15:00	53.9	7.4	84.9	12.4	336.1

Date and Time	1-h Leq (dBA)	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Speed (km/h)	Average Wind Direction (°)
9/05/18 16:00	54.2	7.0	87.2	11.7	345.5
9/05/18 17:00	42.8	6.8	87.6	8.1	348.5
9/05/18 18:00	41.5	6.8	85.0	6.8	327.5
9/05/18 19:00	41.7	6.8	84.9	7.3	321.6
9/05/18 20:00	41.4	6.4	87.2	7.1	315.8
9/05/18 21:00	39.7	6.3	88.3	6.1	329.1
9/05/18 22:00	40.1	6.0	89.3	6.3	310.0
9/05/18 23:00	40.7	5.8	88.5	5.4	288.4
9/06/18 0:00	40.9	6.0	86.1	8.6	299.3
9/06/18 1:00	48.2	5.7	89.2	6.4	303.6
9/06/18 2:00	58.8	5.8	88.7	10.8	311.4
9/06/18 3:00	59.0	5.7	88.8	12.6	328.8
9/06/18 4:00	62.4	5.8	88.3	16.0	339.8
9/06/18 5:00	66.0	5.9	86.2	14.9	329.3
9/06/18 6:00	65.3	5.8	86.9	17.8	326.2
9/06/18 7:00	66.0	5.7	93.0	19.3	340.6
9/06/18 8:00	69.0	5.5	91.3	20.7	351.4
9/06/18 9:00	68.9	5.6	90.8	21.6	348.7
9/06/18 10:00	65.9	5.9	92.4	24.1	353.1
9/06/18 11:00	68.5	6.4	89.1	22.6	351.5
9/06/18 12:00	72.6	7.0	80.0	23.9	345.0
9/06/18 13:00	74.2	7.4	78.0	30.8	354.0
9/06/18 14:00	74.7	8.0	72.8	32.1	353.1
9/06/18 15:00	73.8	8.6	69.8	34.5	353.7
9/06/18 16:00	73.3	9.0	65.8	32.5	353.1
9/06/18 17:00	71.1	7.9	77.0	18.9	33.2
9/06/18 18:00	73.1	8.8	67.4	25.2	357.3
9/06/18 19:00	74.1	8.8	70.6	27.9	336.0
9/06/18 20:00	76.9	7.6	83.2	29.9	322.8
9/06/18 21:00	76.1	6.8	90.4	33.2	322.1
9/06/18 22:00	77.0	6.4	92.2	35.0	322.7
9/06/18 23:00	77.9	6.1	93.3	34.9	323.2
9/07/18 0:00	79.5	5.7	94.4	36.7	324.3
9/07/18 1:00	83.7	5.4	90.7	35.9	323.9
9/07/18 2:00	82.2	4.8	91.7	38.0	323.6
9/07/18 3:00	79.9	4.4	90.5	37.6	325.9
9/07/18 4:00	78.5	3.9	89.1	36.5	327.8
9/07/18 5:00	79.2	3.6	87.7	34.3	326.6
9/07/18 6:00	78.9	3.2	84.5	35.0	324.4

Date and Time	1-h Leq (dBA)	Average Air Temperature (°C)	Average Relative Humidity (%)	Average Wind Speed (km/h)	Average Wind Direction (°)
9/07/18 7:00	78.3	2.9	77.1	33.8	324.4
9/07/18 8:00	75.4	2.7	74.4	32.9	324.3
9/07/18 9:00	71.1	3.0	71.6	29.0	327.5
9/07/18 10:00	67.3	3.6	68.1	26.5	324.8
9/07/18 11:00	62.4	4.3	65.0	24.1	320.9
9/07/18 12:00	58.0	4.8	64.0	22.2	305.6
9/07/18 13:00	59.0	5.9	59.1	16.3	304.6
9/07/18 14:00	61.0	7.0	54.6	17.0	281.6
9/07/18 15:00	61.3	8.4	52.6	18.1	272.9
9/07/18 16:00	71.9	9.4	53.4	19.0	278.3
NPOR017					
9/09/18 10:00	65.6	4.1	69.7	17.6	322.4
9/09/18 11:00	66.9	4.1	67.0	21.9	326.2
9/09/18 12:00	66.2	4.2	65.2	24.0	320.6
9/09/18 13:00	69.2	4.3	62.7	25.6	312.1
9/09/18 14:00	64.2	4.8	59.5	24.8	312.6
9/09/18 15:00	67.0	5.1	60.5	24.5	309.9
9/09/18 16:00	66.5	5.7	57.1	27.2	309.5
9/09/18 17:00	62.2	6.3	52.6	24.1	311.7
9/09/18 18:00	62.4	6.6	50.7	25.2	305.0
9/09/18 19:00	62.1	6.6	51.8	24.5	295.4
9/09/18 20:00	65.3	6.4	55.8	30.0	297.8
9/09/18 21:00	59.5	5.7	61.5	25.4	293.7