# **Appendix G11**

Report: 2012 Noise Monitoring Report



# MEADOWBANK GOLD PROJECT

# 2012 Noise Monitoring Report

In Accordance with NIRB Project Certificate No.004

Prepared by:
Agnico-Eagle Mines Limited – Meadowbank Division

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# **EXECUTIVE SUMMARY**

The 2012 noise monitoring program at Meadowbank was conducted in support of the Noise Abatement and Management Plan (AEM, 2009). The objective of the 2012 program was to measure noise levels at five previously determined monitoring locations around the Meadowbank site, over two 24 hr periods.

Due to equipment malfunction or difficulties with software, usable data was only obtained for three locations (R1, R2, R5).

Since noise levels vary constantly over time, the monitoring instrument used at Meadowbank measures acoustical energy near-continuously and reports a single number for each minute, representing the "equivalent sound level" ( $L_{eq}$ ). This value represents the sound level that would produce the same amount of acoustical energy in the specified time period as the time-varying measured sound levels.  $L_{eq}$  values for various time periods recommended by Health Canada are provided for each monitoring location in Table 1.

Table 1: Summary of  $L_{eq}$  values for Health Canada-recommended time periods at three locations around the Meadowbank site (R1, R2, R5). Hourly data was filtered to remove set-up/take-down noises, and data collected outside of optimal weather conditions. Total hours used to calculate each  $L_{eq}$  after data filtering are provided.

Site	Dates (2012)	L <sub>eq, day</sub> 7am-11pm (dBA)	Total Hours	L <sub>eq, night</sub> 11pm-7am (dBA)	Total Hours	L <sub>eq, 1hr</sub> 10pm-11pm (dBA)	L <sub>eq, 24hr</sub> (dBA)	Total Hours
R1	July 2-3	51.1	13	45.8	8	44.21	49.7	21
	July 3-4	57.6	16	55.3	6	46.49	57.1	21
R2	July 25-26	48.7	5	38.0	1	33.43	48.0	6
R5	July 5-6	57.5	16	56.7	8	45.54	57.4	23
	July 6-7	64.5	9	58.1	6	49.79	62.9	15

Since three hours of data are considered representative of the acoustic environment for the daytime and nighttime  $L_{eq}$ , all values are considered valid except the nighttime  $L_{eq}$  for R2.

Noted sounds that contributed to noise levels at each location include wind, waves, insects, birds, vehicle traffic, air traffic (helicopter, airplane) and blasting.

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#### 1 INTRODUCTION

#### 1.1 OBJECTIVE

Since 2008, Agnico-Eagle Mines Ltd. (AEM) has conducted outdoor noise monitoring at their Meadowbank site, near Baker Lake, Nunavut, in support of their Noise Abatement and Management Plan (AEM, 2009).

The objective of this monitoring program is to provide information on average daily noise levels and noise sources around the site. To fulfill this objective, AEM aims to conduct two 24 hr surveys of ambient noise each year in five locations around the mine site.

In 2012, data was only available for three sites (R1, R2, R5) due to instrument malfunction and problems with data extraction. Two 24 hr periods were recorded for R1 and R5, but only one 24 hr period was available for R2.

#### 1.2 MONITORING LOCATIONS

Noise monitoring locations in 2012 were similar to previous years, and were located as recommended in the Noise Abatement and Management Plan. UTM coordinates are provided in Table 2, and are shown in relation to the mine site features in Figure 1. Photos of the monitoring locations are provided in Appendix A.

Table 2: UTM coordinates and dates of measurement for the Meadowbank noise monitoring locations. \*Measurement data for two locations was not available due to equipment malfunction.

Monitoring Location	Dates	Easting	Northing
R1	July 2-3, 3-4	636896	7216829
R2	July 25-26	636795	7214435
R3*	Sept 8-9	641104	7214427
R4*	Sept 10-12	639990	7218810
R5	July 5-6, 6-7	633781	7214493

## 1.2.1 R1

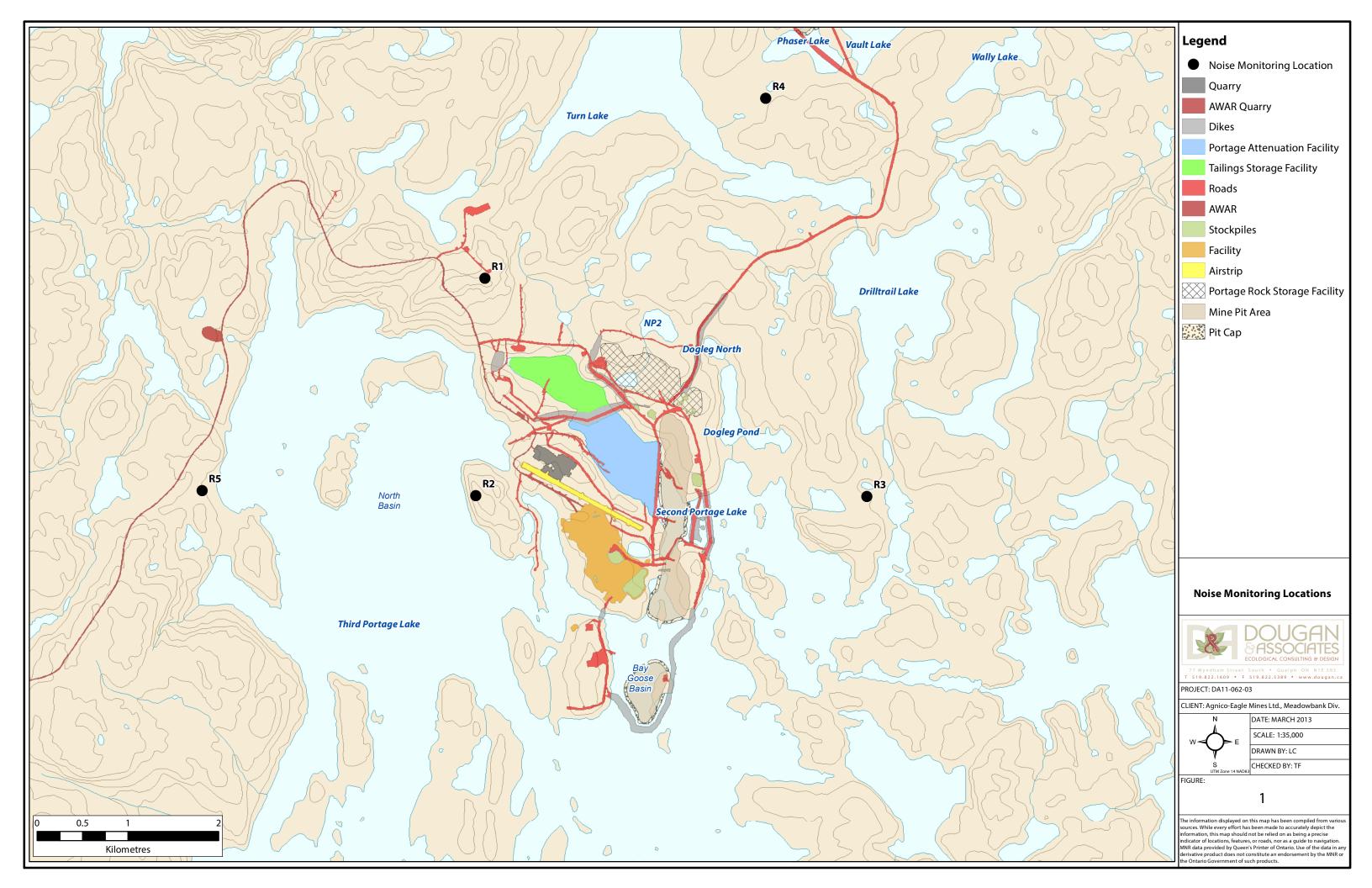
Location R1 is approximately 700 m south of the explosive storage area, and 400 m northeast of the all-weather access road. Third Portage Lake is nearby to the south, and surrounding terrain is rocky tundra with some vegetation.

# 1.2.2 R2

Location 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.

#### 1.2.3 R3

Location 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.



# 1.2.4 R4

Location R4 is approximately 1,500 m southwest of the future location of Vault Pit. Turn Lake is to the west, and surrounding terrain is vegetated tundra with rocky outcrops.

# 1.2.5 R5

Location R5 is in the exploration camp, near the all-weather access road, and approximately 3,500 m west of the airstrip. 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.

# 2 METHODS

In 2012, AEM field staff conducted one or two 24 hr noise surveys at each of the locations described in Section 1.2. These surveys provide data on average noise levels during a typical day, as well as variability of noise levels within the day.

### 2.1 SOUND LEVEL METER

For locations R1, R2 and R5, a Bruel and Kjaer Model 2250 integrating sound level meter was used to conduct the noise survey. As in the past, the noise level logging rate was set at one-minute intervals, and sound was recorded in 10 minute intervals.

The parameters logged each minute were:

- Integrated average sound level, in dBA L<sub>eq</sub>
- Absolute maximum sound level, in dBA L<sub>max</sub>
- Absolute minimum sound level, in dBA L<sub>min</sub>
- Peak sound level, in dBZ LZ<sub>peak</sub>

Calibration of the instrument was performed before and after each 24 hr period using a Bruel and Kjaer Type 4231 Calibrator, to ensure variance was within 0.5 dB. See field notes, Appendix B. Estimated uncertainty of the calibrator is  $\pm$  0.12 dB at a 99% confidence level.

Before measurements could be conducted at locations R3 and R4, the Bruel and Kjaer instrument lost its firmware and could no longer be used. The replacement instrument (Larson Model 824) had battery problems, and usable data was not recovered for these locations.

#### 2.2 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 was available from this station.

#### 2.3 FIELD NOTES

A pocket weather meter (Kestrel 3000) 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 take-down.

#### 2.4 DATA ANALYSIS

Since noise levels constantly vary over time, the monitoring instrument used at Meadowbank measures continuously and reports a single-number value for each minute, representing the "equivalent sound level" (L<sub>eq</sub>). This value is the average sound level occurring over the specified time period (i.e.one minute). Alternatively, it is the sound level that would produce the same total amount of acoustical energy in the specified time period as the measured sound levels did.

As in 2011 (Golder, 2012), data downloaded from the instrument was filtered to remove measurements collected outside of acceptable weather conditions (wind speed > 4.17 m/s; relative humidity > 90%). All datapoints associated with the first and last hour of measurement were also filtered out to remove noise from technicians, and to ensure more than 30 min of data contributed to hourly averages.

One-minute  $L_{\rm eq}$  values produced by the instrument were used to calculate hourly, day-time (7am-11pm), night-time (11pm-7am) and 24 hr  $L_{\rm eq}$  values. These time periods are based on Health Canada recommendations, as described in Golder (2012).  $L_{\rm eq}$  values for each time period were calculated as the geometric mean of filtered one-minute  $L_{\rm eq}$  values.

# 3 RESULTS

#### 3.1 R1

One-minute  $L_{eq}$  maximum ( $L_{max}$ ) and minimum ( $L_{min}$ ) values over the monitoring period are shown in Figure 1. Filtered one-minute  $L_{eq}$  values exclude data collected in the first and last hour to remove technician interference, and data collected under non-optimal weather conditions (wind speed > 4.17 m/s or relative humidity > 90%). Filtered values were used in subsequent  $L_{eq}$  calculations, but the unfiltered values are also shown for reference.

Hourly L<sub>eq</sub> values were calculated as described in Section 2.4, and are shown in Table 3.

Weather data for noise monitoring dates at R1 is shown in Table 4. Six hours of data were filtered out due to weather conditions.

Audible noises noted in the field log at this location include trucks, airplanes, helicopters, blasting, insects and wind.

A review of the sound files identified construction traffic and wind as the most commonly heard noises.

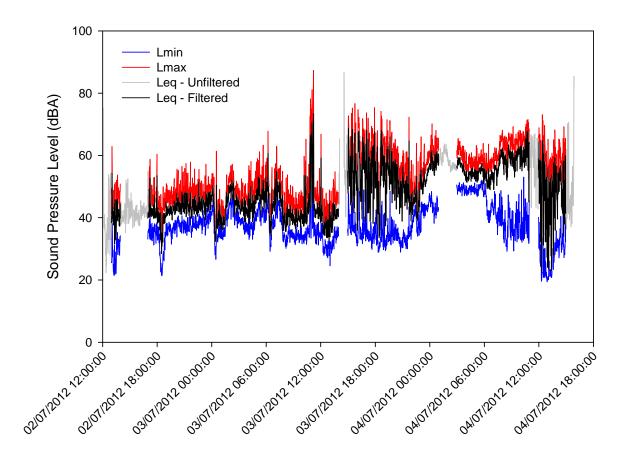


Figure 1: One-minute  $L_{eq}$ ,  $L_{max}$  and  $L_{min}$  values recorded at monitoring station R1 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind speed > 4.17 m/s, RH > 90%).

Table 3: Hourly  $L_{eq}$  values for monitoring station R1 at the Meadowbank site. Hours for which measurements were taken outside of optimal conditions (set-up, take-down, wind speed > 4.17 m/s, RH > 90%) were not used in daily, nightly and 24 hr  $L_{eq}$  calculations, and are indicated as "not valid".

Date	Start Time	L <sub>eq</sub> – 1hr	Notes
July 2, 2012	12:00 PM	59.20	Not valid
	1:00 PM	42.90	
	2:00 PM	44.23	Not valid
	3:00 PM	41.86	Not valid
	4:00 PM	43.11	Not valid
	5:00 PM	43.33	
	6:00 PM	40.98	
	7:00 PM	42.44	
	8:00 PM	44.25	
	9:00 PM	44.12	

Date	Start Time	L <sub>eq</sub> – 1hr	Notes
	10:00 PM	44.21	
	11:00 PM	44.93	
July 3, 2012	12:00 AM	43.84	
-	1:00 AM	43.59	
	2:00 AM	47.70	
	3:00 AM	42.97	
	4:00 AM	44.56	
	5:00 AM	47.54	
	6:00 AM	47.77	
	7:00 AM	47.60	
	8:00 AM	40.43	
	9:00 AM	40.07	
	10:00 AM	53.99	
	11:00 AM	60.66	
	12:00 PM	43.67	
	1:00 PM	40.84	
	2:00 PM	58.10	Not valid
	2:00 PM	73.77	Not valid
	3:00 PM	60.37	
	4:00 PM	60.43	
	5:00 PM	58.61	
	6:00 PM	58.03	
	7:00 PM	57.11	
	8:00 PM	52.79	
	9:00 PM	51.00	
	10:00 PM	46.49	
	11:00 PM	53.14	
July 4, 2012	12:00 AM	58.01	
	1:00 AM	60.67	Not valid
	2:00 AM	56.79	Not valid
	3:00 AM	56.80	
	4:00 AM	53.72	
	5:00 AM	54.59	
	6:00 AM	52.78	
	7:00 AM	57.45	
	8:00 AM	59.06	
	9:00 AM	59.72	
	10:00 AM	61.11	N1-4 : -1'-1
	11:00 AM	61.40	Not valid
	12:00 PM	55.55	
	1:00 PM	50.92	
	2:00 PM	51.63	<b>.</b>
	3:00 PM	69.89	Not valid

Table 4: Weather conditions for monitoring station R1 at the Meadowbank site. Data for which wind speed > 4.17 m/s or relative humidity > 90% were filtered out for  $L_{\text{eq}}$  calculations.

Date	Start Time	Air Temperature (°C)	Relative Humidity (%)	Wind Speed (m/s)	Wind Direction (deg)	Filtered Out?
July 2, 2012	12:00 PM	14.35	51.17	2.73	33.87	
	1:00 PM	15.08	50.12	3.173	62	
	2:00 PM	15.7	45.34	4.254	59.8	у
	3:00 PM	16.27	43.75	4.169	48.69	у
	4:00 PM	16.68	43.04	4.416	68.64	у
	5:00 PM	16.79	42.22	3.409	120.1	
	6:00 PM	17.25	40.53	3.378	123	
	7:00 PM	17.54	42.33	3.671	116.5	
	8:00 PM	17.65	43.2	4.163	110.1	
	9:00 PM	17.62	43.14	3.153	117.7	
	10:00 PM	16.73	47.13	2.176	128.6	
	11:00 PM	16.09	51.94	1.483	110.6	
July 3, 2012	12:00 AM	15.56	54.11	1.206	79.85	
	1:00 AM	14.67	61.48	2.045	88.5	
	2:00 AM	12.67	68.1	0.646	279.4	
	3:00 AM	12.64	64.78	1.318	57.5	
	4:00 AM	12.7	64.88	1.568	71.88	
	5:00 AM	12.95	66.04	1.728	82.9	
	6:00 AM	12.62	65.53	0.852	91.9	
	7:00 AM	13.14	65.87	1.608	70.65	
	8:00 AM	14.37	55.94	1.553	96.1	
	9:00 AM	15.73	51.54	1.548	110.6	
	10:00 AM	16.58	46.86	2.259	129.8	
	11:00 AM	16.78	45.94	2.283	94.8	
	12:00 PM	17.24	45.03	3.301	67.09	
	1:00 PM	17.85	43.07	3.326	37.23	
	2:00 PM	18.41	36.2	3.349	53.53	
	3:00 PM	18.94	37.69	3.017	50.19	
	4:00 PM	19.24	36.26	3.063	30.62	
	5:00 PM	19.49	34.67	3.287	28.14	
	6:00 PM	19.65	31.43	2.488	18.25	
	7:00 PM	20.1	28.53	1.972	15.46	
	8:00 PM	20.09	29.91	2.829	0.574	
	9:00 PM	19.98	31.64	2.664	346.5	
	10:00 PM	19.33	39.82	2.507	343.9	

Date	Start Time	Air Temperature (°C)	Relative Humidity (%)	Wind Speed (m/s)	Wind Direction (deg)	Filtered Out?
	11:00 PM	17.59	43.64	2.517	3.156	
July 4, 2012	12:00 AM	16.05	52.62	3.707	19.6	
	1:00 AM	14.81	61.72	4.362	40.08	у
	2:00 AM	13.6	66.34	4.411	38.84	у
	3:00 AM	12.85	68.27	3.602	40.12	
	4:00 AM	11.55	69.7	1.132	315.4	
	5:00 AM	11.94	70.23	1.52	10.4	
	6:00 AM	12.59	66.81	1.862	14.47	
	7:00 AM	13.75	60.08	1.627	20.06	
	8:00 AM	15	58.3	2.411	33.33	
	9:00 AM	16.08	50.52	3.357	40.72	
	10:00 AM	17.34	45.1	3.821	42.05	
	11:00 AM	18.35	39.82	4.302	40.74	у
	12:00 PM	18.9	36.41	3.986	38.26	
	1:00 PM	19.58	33.46	2.262	14.01	
	2:00 PM	20.14	32.92	2.185	36.12	
	3:00 PM	20.92	30.21	1.661	113.1	

# 3.2 R2

One-minute  $L_{eq}$ , maximum ( $L_{max}$ ) and minimum ( $L_{min}$ ) values over the monitoring period are shown in Figure 2.

Hourly  $L_{eq}$  values were calculated as described in Section 2.4, and are shown in Table 5.

Weather data for noise monitoring dates at R2 is shown in Table 6. Nineteen hours of data were filtered out due to weather conditions.

Audible noises noted in the field log at this location include airplanes, helicopters, waves and wind.

The sound files were dominated by sounds of birds, waves and wind. A high-pitched squeaking noise which may have been caused by movement of the tripod set-up was heard throughout the monitoring period.

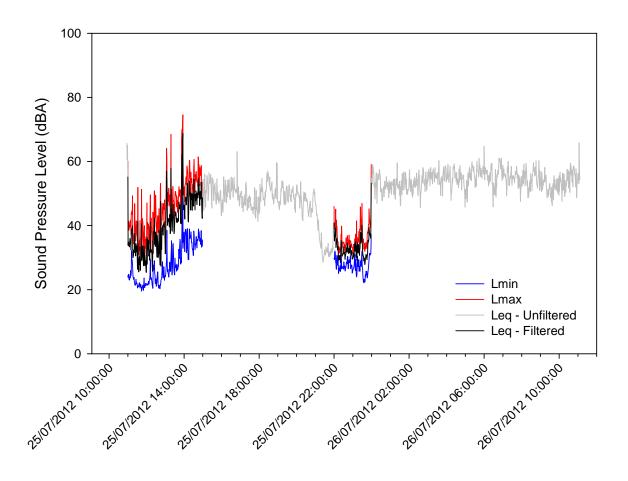


Figure 2: One-minute  $L_{eq}$ ,  $L_{max}$  and  $L_{min}$  values recorded at monitoring station R2 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind speed > 4.17 m/s, RH > 90%).

Table 5: Hourly  $L_{eq}$  values for monitoring station R2 at the Meadowbank site. Hours for which measurements were taken outside of optimal conditions (set-up, take-down, wind speed > 4.17 m/s, RH > 90%) were not used in daily, nightly and 24 hr  $L_{eq}$  calculations, and are indicated as "not valid".

Date	Start Time	L <sub>eq</sub> – 1hr	Notes
July 25, 2012	10:00 AM	64.31	Not valid
	11:00 AM	38.97	
	12:00 PM	37.19	
	1:00 PM	54.20	
	2:00 PM	49.83	
	3:00 PM	51.76	Not valid
	4:00 PM	52.10	Not valid
	5:00 PM	48.04	Not valid

Date	Start Time	L <sub>eq</sub> – 1hr	Notes
	6:00 PM	52.47	Not valid
	7:00 PM	49.87	Not valid
	8:00 PM	48.53	Not valid
	9:00 PM	38.46	Not valid
	10:00 PM	33.43	
	11:00 PM	38.01	
July 26, 2012	12:00 AM	53.68	Not valid
	1:00 AM	53.14	Not valid
	2:00 AM	53.86	Not valid
	3:00 AM	55.87	Not valid
	4:00 AM	55.40	Not valid
	5:00 AM	56.51	Not valid
	6:00 AM	57.04	Not valid
	7:00 AM	55.55	Not valid
	8:00 AM	55.64	Not valid
	9:00 AM	52.84	Not valid
	10:00 AM	55.27	Not valid
	11:00 AM	59.14	Not valid

Table 6: Weather conditions for monitoring station R2 at the Meadowbank site. Data for which wind speed > 4.17 m/s or relative humidity > 90% were filtered out for  $L_{\rm eq}$  calculations.

Date	Start Time	Air Temperature (°C)	Relative Humidity (%)	Wind Speed (m/s)	Wind Direction (deg)	Filtered Out?
July 25, 2012	10:00 AM	10.08	62.72	1.593	263.7	
	11:00 AM	11.21	55.58	2.843	291.9	
	12:00 PM	12.57	51.24	2.956	268.7	
	1:00 PM	14.19	48.33	2.869	274.6	
	2:00 PM	15.3	49.93	3.663	257.3	
	3:00 PM	16.36	48.68	4.719	265.2	у
	4:00 PM	15.99	51.25	5.153	262.5	у
	5:00 PM	16.02	54.3	5.239	260.5	у
	6:00 PM	16.55	49.12	4.697	257.6	у
	7:00 PM	16.24	58.08	5.495	258.8	у
	8:00 PM	15.85	59.42	5.06	253.3	у
	9:00 PM	15.26	67.74	5.236	266.1	у
	10:00 PM	13.9	78.8	3.533	291.4	
	11:00 PM	13.33	85.5	1.951	288.9	
July 26, 2012	12:00 AM	12.79	93.4	2.216	299.8	у
	1:00 AM	9.59	95.1	7.699	1.679	у

Date	Start Time	Air Temperature (°C)	Relative Humidity (%)	Wind Speed (m/s)	Wind Direction (deg)	Filtered Out?
	2:00 AM	7.886	92.2	7.341	7.355	у
	3:00 AM	6.814	91.4	7.663	7.773	у
	4:00 AM	5.319	93.3	8.11	4.151	у
	5:00 AM	4.383	94.8	7.561	5.594	у
	6:00 AM	3.722	91	7.373	12.3	у
	7:00 AM	3.935	83	8.45	16.23	у
	8:00 AM	4.381	80.5	8.3	12.05	у
	9:00 AM	4.517	80.4	7.822	14.41	у
	10:00 AM	4.681	79.79	7.874	21.36	у
	11:00 AM	6.151	74.94	8.29	17.84	у

### 3.3 R5

One-minute  $L_{\text{eq}}$ , maximum ( $L_{\text{max}}$ ) and minimum ( $L_{\text{min}}$ ) values over the monitoring period are shown in Figure 3.

Hourly L<sub>eq</sub> values were calculated as described in Section 2.4, and are shown in Table 7.

Weather data for noise monitoring dates at R5 is shown in Table 8. Seven hours of data were filtered out due to weather conditions.

Audible noises noted in the field log at this location include birds, helicopters, planes, trucks and wind.

Distant construction noises were dominant in the sound files throughout the daytime hours, and were much more noticeable during the nighttime hours of the second monitoring period (6-7/07/2012) compared to the first (5-6/07/2012). A squeaking noise which may have been caused by movement of the tripod set-up was heard consistently.

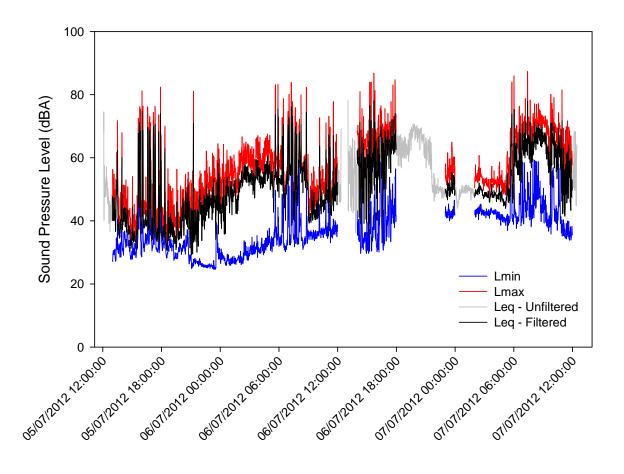


Figure 3: One-minute  $L_{eq}$ ,  $L_{max}$  and  $L_{min}$  values recorded at monitoring station R5 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind speed > 4.17 m/s, RH > 90%).

Table 7: Hourly  $L_{eq}$  values for monitoring station R5 at the Meadowbank site. Hours for which measurements were taken outside of optimal conditions (set-up, take-down, wind speed > 4.17 m/s, RH > 90%) were not used in daily, nightly and 24 hr  $L_{eq}$  calculations, and are indicated as "not valid".

Date	Start Time	L <sub>eq</sub> - 1hr	Notes
July 5,2012	12:00 PM	58.63	Not valid
	1:00 PM	48.68	
	2:00 PM	39.74	
	3:00 PM	58.16	
	4:00 PM	61.63	
	5:00 PM	61.54	
	6:00 PM	47.83	
	7:00 PM	37.33	
	8:00 PM	43.72	

Date	Start Time	L <sub>eq</sub> - 1hr	Notes
	9:00 PM	53.59	
	10:00 PM	45.54	
	11:00 PM	48.59	
July 6, 2012	12:00 AM	47.39	
	1:00 AM	48.85	
	2:00 AM	54.44	
	3:00 AM	55.02	
	4:00 AM	55.20	
	5:00 AM	61.20	
	6:00 AM	61.07	
	7:00 AM	64.13	
	8:00 AM	62.41	
	9:00 AM	43.57	
	10:00 AM	52.48	
	11:00 AM	55.52	
	12:00 PM	57.37	Not valid
	1:00 PM	62.56	Not valid
	2:00 PM	60.21	
	3:00 PM	65.06	
	4:00 PM	63.19	
	5:00 PM	66.17	
	6:00 PM	63.97	Not valid
	7:00 PM	67.09	Not valid
	8:00 PM	67.03	Not valid
	9:00 PM	61.37	Not valid
	10:00 PM	49.79	Not valid
	11:00 PM		
July 7, 2012	12:00 AM	48.54	
	1:00 AM	49.67	Not valid
	2:00 AM	49.35	
	3:00 AM	48.26	
	4:00 AM	47.90	
	5:00 AM	58.99	
	6:00 AM	64.41	
	7:00 AM	66.28	
	8:00 AM	67.31	
	9:00 AM	64.44	
	10:00 AM	63.56	
	11:00 AM	55.74	
	12:00 PM	61.00	Not valid

Table 8: Weather conditions for monitoring station R2 at the Meadowbank site. Data for which wind speed > 4.17 m/s or relative humidity > 90% were filtered out for  $L_{\rm eq}$  calculations.

Date	Start Time	Air Temperature (°C)	Relative Humidity (%)	Wind Speed (m/s)	Wind Direction (deg)	Filtered Out?
July 5, 2012	12:00 PM	14.87	58.69	3.126	130.9	
	1:00 PM	15.57	59.16	2.78	150.1	
	2:00 PM	16.32	54.09	2.905	131.8	
	3:00 PM	16.44	52.23	2.036	159.6	
	4:00 PM	17.17	50.3	2.683	126.4	
	5:00 PM	17.47	44.86	1.55	170.3	
	6:00 PM	18.04	41.58	1.423	239.3	
	7:00 PM	18.75	40.96	1.014	236.5	
	8:00 PM	19.08	43.53	1.051	244.8	
	9:00 PM	18.84	44.42	1.021	240.4	
	10:00 PM	18.49	55.24	2	212.4	
	11:00 PM	15.43	65.6	3.313	235.8	
July 6, 2012	12:00 AM	14.19	63.71	3.241	272.2	
	1:00 AM	14.19	68.45	3.774	279.9	
	2:00 AM	12.83	66.17	2.182	263	
	3:00 AM	11.98	72.33	3.24	263.4	
	4:00 AM	11.34	72.94	2.889	282.3	
	5:00 AM	11.57	72.33	1.872	263.5	
	6:00 AM	11.88	72.02	1.26	262.4	
	7:00 AM	13.1	73	1.591	245.1	
	8:00 AM	14.26	62.63	1.576	275	
	9:00 AM	15.13	66.79	2.018	299	
	10:00 AM	16.29	59.11	2.665	309.6	
	11:00 AM	17.59	53.01	3.185	330.6	
	12:00 PM	18.81	42.83	3.367	344.8	
	1:00 PM	19.78	37.31	3.237	337.9	
	2:00 PM	20.25	34.23	3.521	313.9	
	3:00 PM	20.71	38.76	3.86	318.6	
	4:00 PM	20.79	40.11	3.544	304.9	
	5:00 PM	21.04	35.28	3.512	312.6	
	6:00 PM	21.53	37.85	4.25	324.2	у
	7:00 PM	21	38.26	4.614	333	у
	8:00 PM	20.4	43.43	5.203	347.9	у
	9:00 PM	18.99	43.47	5.315	351.8	у

Date	Start Time	Air Temperature (°C)	Relative Humidity (%)	Wind Speed (m/s)	Wind Direction (deg)	Filtered Out?
	10:00 PM	17.75	50.74	4.909	5.874	у
	11:00 PM	16.26	54.64	3.628	15.18	
July 7, 2012	12:00 AM	14.99	58.3	4.964	26.57	у
	1:00 AM	13.84	60.82	4.866	27.81	у
	2:00 AM	12.53	66.31	4.066	22.57	
	3:00 AM	11.54	68.13	3.689	18.75	
	4:00 AM	9.81	79.55	2.455	336.2	
	5:00 AM	8.42	75.7	2.458	315.7	
	6:00 AM	8.89	73.03	2.672	314.1	
	7:00 AM	10.8	63.17	3.489	331.6	
	8:00 AM	12.08	61.3	4.103	348.5	
	9:00 AM	13.64	57.98	4.089	3.843	
	10:00 AM	15.05	49.41	3.482	2.368	
	11:00 AM	16.14	46.01	3.402	18.57	
	12:00 PM	16.94	40.84	2.64	44.5	

# 4 SUMMARY

# 4.1 DAYTIME, NIGHTTIME AND 24 HR LEQ

 $L_{\rm eq}$  values were calculated for daytime (7am-11pm), nighttime (11pm-7am), 1 hr (10pm-11pm) and 24 hr time periods based on Health Canada recommendations (as in Golder, 2012). These  $L_{\rm eq}$  values and the total hours of valid data available for the calculations are shown in Table 9. According to Alberta's ERCB Directive 038 (in Golder, 2012), a minimum of three hours of valid data are considered representative of the noise environment for daytime and nighttime calculations. Although wind speeds at Meadowbank are commonly near the limit of acceptability, a sufficient number of valid datapoints were available for all sites and time periods except nighttime at R2.

Table 9: Summary of  $L_{eq}$  values for Health Canada-recommended time periods at three locations around the Meadowbank site (R1, R2, R5). Since certain data was not valid for all time points (due to set-up/take-down noises or weather conditions) the total hours used to calculate each  $L_{eq}$  are provided.

Site	Dates (2012)	L <sub>eq, day</sub> 7am-11pm (dBA)	Total Hours	L <sub>eq, night</sub> 11pm-7am (dBA)	Total Hours	L <sub>eq, 1hr</sub> 10pm-11pm (dBA)	L <sub>eq, 24hr</sub> (dBA)	Total Hours
R1	July 2-3	51.1	13	45.8	8	44.21	49.7	21
	July 3-4	57.6	15	55.3	6	46.49	57.1	21
R2	July 25-26	48.7	5	38.0	1	33.43	48.0	6
R5	July 5-6	57.5	16	56.7	8	45.54	57.4	23
	July 6-7	64.5	9	58.1	6	49.79	62.9	15

### 4.2 HISTORICAL COMPARISON

# 4.2.1 Differences in Data Analysis

Methods of data analysis were not identical in each year, and the differences are noted here.

Firstly, hourly, daytime (7am-11pm), nighttime (11pm-7am) and 24 hr  $L_{\rm eq}$  values in the 2011 report (Golder, 2012) appear to have been calculated using the arithmetic mean of one-minute  $L_{\rm eq}$  values, rather than the geometric mean, which would result in calculated  $L_{\rm eq}$  values that are lower than actual, because the decibel scale is logarithmic. Values for 2011 were re-calculated as in this report (see Section 2.4) to provide comparable data. Values in 2009 and 2010 (Golder, 2010; 2011) appear to have been calculated using the geometric mean, as in the current analysis.

Secondly, it should be noted that data points measured outside of acceptable wind conditions (> 4.17 m/s) were not filtered from the analysis in 2009 and 2010 because it was determined that these were typical for the area, and no wind-induced noise in the microphone was noted. These data points were

filtered out in 2011 and 2012, as per Health Canada and Alberta Energy Resources Conservation Board guidance (described in Golder, 2012). Wind was regularly noted in sound files in 2012.

Lastly, the model of Bruel and Kjaer sound level meter used in 2012 was the same as previous years, but the specific instrument was new.

 $L_{\rm eq}$  measurements for all time periods from 2009 - 2012 are shown in Figure 4. Daytime and nighttime sound levels are discussed in more detail below. It should be recalled that because of the logarithmic scale, an increase of 3 dB represents an approximate doubling of sound pressure.

#### 4.2.2 R1

Calculated daytime  $L_{eq}$  values at R1 (mean = 55 dB) were similar to 2009 (57 dB), but higher than 2010 (42 dB) and 2011 (47 dB). Nighttime values at this location (mean = 53 dB) were higher than previously recorded (41 dB in 2009, 2010 and 2011), which may have been due to construction of the nearby north cell diversion ditch, which occurred during the monitoring event. Sound files were reviewed, and construction sounds were audible overnight.

### 4.2.3 R2

Calculated noise levels for all time periods were similar to, or lower than previous years.

### 4.2.4 R5

Calculated daytime  $L_{eq}$  values at R5 (mean = 62 dB) were higher than 2009 (57 dB), 2010 (58 dB), and 2011 (mean = 45 dB). Similarly, nighttime values for both sampling periods in 2012 (mean = 57 dB) were higher than previously recorded in 2009 (45 dB), 2010 (42 dB), and 2011 (42 dB). Sound files were reviewed, and distant construction noise was prominent throughout the daytime hours, and particularly during the night of the second monitoring period.

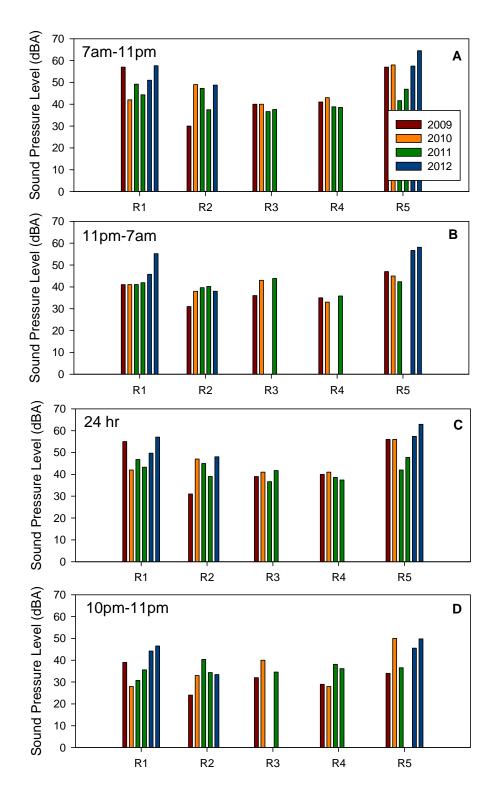


Figure 4:  $L_{eq}$  values for various Health Canada-recommended time periods, calculated from 1 min  $L_{eq}$  values collected at Meadowbank locations R1 – R5 in 24-hr surveys in 2010 - 2012. One column is shown for each 24-hr survey.

# 5 RECOMMENDATIONS

- Noise level monitoring should continue in 2013 at all five locations after professional calibration of the instrument.
- Specific activities occurring in the vicinity during monitoring events should be noted to help identify possible noise sources.
- Trends in noise levels in should be re-examined in 2013 (particularly nighttime) to determine
  whether values continue to increase. If values are sustained above the PSL (55 dB) as a
  result of mine-related activities for an unreasonable period of time, additional steps should be
  taken to mitigate noise levels (per the Noise Management and Abatement Plan, 2009).
- Any audible noises from the instrument itself (possibly caused by movement of the tripod) should be noted upon set-up, and mitigated if possible.

# 6 REFERENCES

Golder Associates (Golder), 2012. 2011 Noise Monitoring, Meadowbank Division, Nunavut. Prepared for Agnico-Eagle Mines Ltd. February, 2012.

Golder Associates (Golder), 2011. 2010 Noise Monitoring, Meadowbank Division, Nunavut. Prepared for Agnico-Eagle Mines Ltd. March 8, 2011.

Golder Associates (Golder), 2010. 2010 Noise Monitoring, Meadowbank Division, Nunavut. Prepared for Agnico-Eagle Mines Ltd. February 4, 2010.

AEM, 2009. Noise Management and Abatement Plan. Meadowbank Gold Project. Version 1. September, 2009.

# **APPENDIX A**

**Site Photos** 

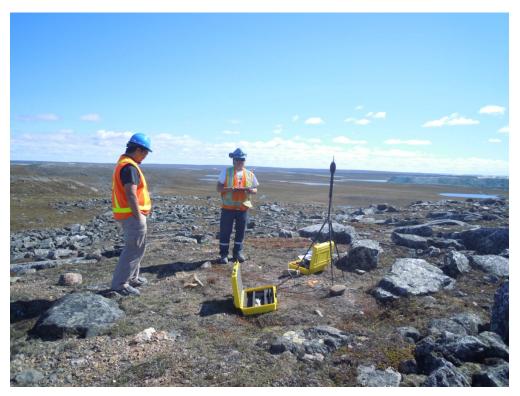


Figure -Apx 1: Monitoring location R1



Figure -Apx 2: Monitoring location R2



Figure -Apx 3: Monitoring location R5.

# **APPENDIX B**

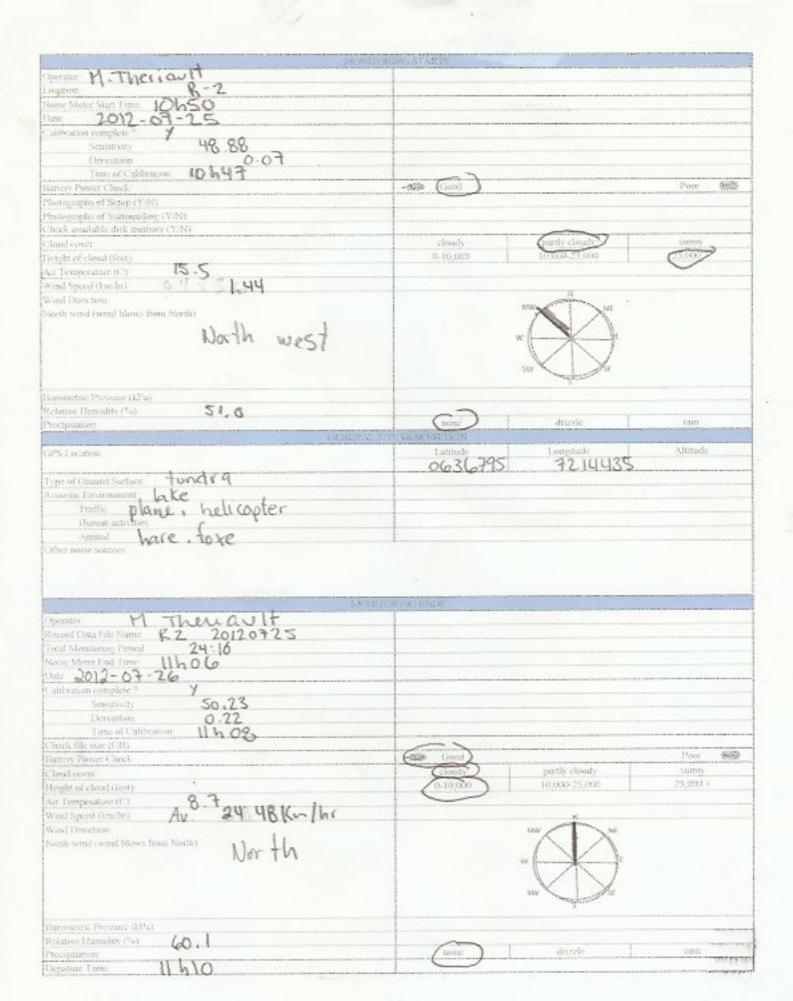
Field Logs

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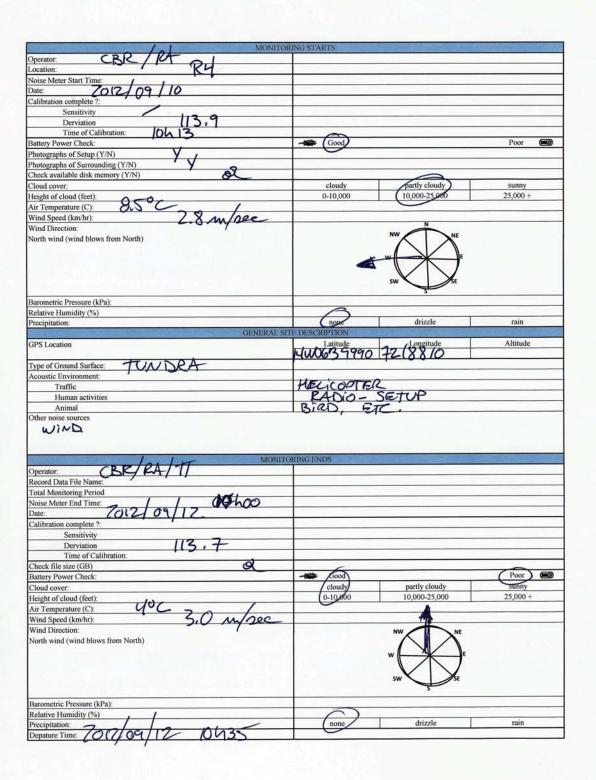
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Photographs of Surrounding (Y/N)			172
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Acoustic Environment  Traffic Human activities Animal Other noise sources  MONI Operator:  Control of the contr	TORING ENDS  Good cloudy	partly cloudy	/sunny/
Acoustic Environment  Traffic Human activities Animal Other noise sources  MONI Operator Record Data File Name Total Monitoring Period Noise Meter End Time Date 7012 - 03 - 04 Calibration complete? Sensitivity Derviation Time of Calibration: 15 h 5 f  Chock file size (GB) Battery Power Check: Cloud cover: Height of cloud (feet).	TORING FNDS	partly cloudy 10,000-25,000	
Acoustic Environment  Traffic Human activities Animal Other noise sources  MONI Operator:  Control of the contr	TORING ENDS  Good cloudy		/sunny/
Acoustic Environment  Traffic Human activities Animal Other noise sources  MONI Operator Record Data File Name Total Monitoring Period Noise Meter End Time Date 7012 - 03 - 04 Calibration complete? Sensitivity Derviation Time of Calibration: 15 h 5 f  Chock file size (GB) Battery Power Check: Cloud cover: Height of cloud (feet).	TORING ENDS  Good cloudy		/sunny/
Acoustic Environment Traffic Human activities Animal Other noise sources  MONI Operator: Record Data File Name Total Monitoring Period Noise Meter End Time Sensitivity Derviation Derviation Time of Calibration: Check file size (GB) Battery Power Check Cloud cover: Height of cloud (feet) Air Monitoring Power (C) Wind Speed (km/hr): Noise Discretors	TORING ENDS  Good cloudy	10,000-25,000	/sunny/
Acoustic Environment Traffic Human activities Animal Other noise sources  MONI Operator:  Record Data File Name: Total Monitoring Period Noise Meter End Time: Date: 7012-03-04 Calibration complete? Sensitivity Derviation Time of Calibration: 15 h 5 f Check file size (GB) Battery Power Check Cloud cover: Height of cloud (feet) Air Temperature (C): Wind Speed (km/hr):  Other Noise Activities  MONI Operator:  MONI	TORING ENDS  Good cloudy		/sunny/
Acoustic Environment  Traffic Human activities Animal Other noise sources  MONI Operator: Record Data File Name: Total Monitoring Period Noise Meter End Time: Sensitivity Derivation complete? Sensitivity Fig. 8.1 Derivation: Sensitivity Fig. 8.1 Derivation: Time of Calibration: Check file size (GB) Battery Power Check: Cloud cover: Height of cloud (feet) Air Temperature (C): Wind Speed (km/hr): Wind Direction: North wind (wind blows from North)  Banometric Pressure (kPa):	TORING ENDS  Good cloudy	10,000-25,000 NW NE	/sunny/
Acoustic Environment Traffic Human activities Animal Other noise sources  MONI Operator: Record Data File Name Total Monitoring Period Noise Meter End Time Sensitivity Derivation Time of Calibration: Time of Calibration: Check file size (GB) Battery Power Check Cloud cover: Height of cloud (feet) Air Temperature (C): Wind Speed (km/hr): Wind Direction: North wind (wind blows from North)  Banometric Pressure (kPa) Relative Humidity (%)  Relative Humidity (%)  Relative Humidity (%)  Relative Humidity (%)  Air Temperature (kPa) Relative Humidity (%)	FORING FNIXS  FORING FNIXS  Good  cloudy 0-10,000	10,000-25,000 NW NE SW SE	Suney 25,000 +)
Acoustic Environment  Traffic Human activities Animal Other noise sources  MONI Operator: Record Data File Name Total Monitoring Period Noise Meter End Time: Sensitivity Derviation Time of Calibration: Check file size (GB) Battery Power Check: Cloud cover: Height of cloud (feet) Air Temperature (C) Wind Speed (km/hr): Wind Direction: North wind (wind blows from North)  Barometric Pressure (kPa)	TORING ENDS  Good cloudy	10,000-25,000 NW NE	/sunny/



MONTH	ONIN/C CEATITE
- A 72 \ 113 A	ORING STARTS
Operator: CRC CA	
Noise Meter Start Time: 10 10 10	
Date: (0(2)09 108	
Calibration complete ?:	
Sensitivity	
Derviation 113, T	
Time of Calibration: 10005	
Battery Power Check:	Good Poor es
Photographs of Setup (Y/N)	
Photographs of Surrounding (Y/N)	
Check available disk memory (Y/N)	
Cloud cover:	cloudy partly cloudy sunny
Height of cloud (feet):	0-10,000 10,000-25,000 25,000
Air Temperature (C): 3°C . 1 /	
Height of cloud (feet): Air Temperature (C): Wind Speed (km/hr): Wind Direction:	
Wind Direction:	N A
	NW ME
North wind (wind blows from North)	w E
	SW SE
Barometric Pressure (kPa):	
Relative Humidity (%)	
Precipitation:	none drizzle rain
	SHE DESCRIPTION
GPS Location	Latitude Longitude Altitude
Type of Ground Surface:	
Acoustic Environment:	33.000
Traffic	HELICOPTER.
Human activities	RADIO, SETUP
Animal	BIRDS, FIC
Other noise sources	
wind	
	TORING ENDS
Operator: BR RA	
Record Data File Name:	
Total Monitoring Period	
Noise Meter End Time:/   100	
Date: 70 (2/09/09	
Calibration complete ?:	
Sensitivity	
Derviation [13, 9]	
Time of Calibration:	
Check file size (GB)	
	Good Poor C
Battery Power Check:	
Cloud cover:	
Height of cloud (feet):	0-10,000 10,000-25,000 25,000+
Air Temperature (C):	
Wind Speed (km/hr): Sit w/ ooc.	N 4
Wind Direction:	NW NE
North wind (wind blows from North)	SW SE
Barometric Pressure (kPa):	
Relative Humidity (%)	
Precipitation:	none drizzle rain
Depature Time: 2012/09/09 LLNOS	



Operator: Jame Kataluk Location: R5 Fxploration Camp Noise Meter Start Time: 15: 16 Date: 2012 , 57 - 25 Calibration complete?: \$\frac{1}{2}\$\$	55111115		
Noise Meter Start Time: 10: 16 Date: 2012, 57-05			
Noise Meter Start Time: 10: 16 Date: 2012 , 57 - 05	7		
Date: 2012, 87 - 05			
Sensitivity 49.09			
Derviation 0.05			
Time of Calibration: 10:32	$\sim$		
	(Good)		Poor 💷
Photographs of Setup (Y/N)			
Photographs of Surrounding (YN)			
Check available disk memory (NN) 3.72GB/3.72 GB			
Cloud cover:	cloudy	partly cloudy	sunny
leight of cloud (feet):	0-10,000	10,000-25,000	25,000 +
ir Temperature (C): 14			
Vind Speed (km/hr): 4.3 x 3.6 a verge average 2.5 x 3.6=9			
Wind Speed (Kilvin) 5 X 3-6 A VETGE - UVC/ME 2-3 X 3-6 A VETGE - UVC/ME 2-3 X 3-6 A		N	
Wind Direction: East		NW NE	
North wind (wind blows from North)		SW SE	
Barometric Pressure (kPa):			
Relative Humidity (%) 65. Z	_		
Precipitation: none	(none)	drizzle	rain
GENERAL SITE	DESCRIPTION		
PS Location 14W 0633791 7214493	Latitude 4W 0433781	Longitude 72/4493	Altitude 136m
	AM (0032) [0]	1217/73	DOM
Type of Ground Surface: tundra			
Acoustic Environment:			
Traffic			
Human activities			
Animal Other noise sources hirds			
Animal Other noise sources birds heliupter plane	Va		
Animal Other noise sources birds heliupter plane MONITORI	NG ENDS		
Animal Other noise sources birds helicopter plane  MONITORI Operator: Jame Kataluk	NG ENDS		
Animal Other noise sources birds helicopter plane  MONITORI Operator: Jame Kataluk	NG ENDS		
Animal Other noise sources birds helicapter plane  MONITORI  Departor: Jame Kataluk  Record Data File Name:	NG ENDS		
Animal Other noise sources birds helicopter plane  MONITORE  Operator: Jame Kataluk  Record Data File Name: Total Monitoring Period	NG ENDS		
Animal Other noise sources birds helicopter plane  MONITORI  Deperator: Tamle Ratalisk  Record Data File Name:  Total Monitoring Period  Noise Meter End Time:   2 - 25	NG ENDS		
Animal Other noise sources birds helicopter plane  MONITORI Operator: Jame Kataluk Record Data File Name: Total Monitoring Period Noise Meter End Time: 12:25 Date: 2012 - 07 - 012	NG ENDS		
Animal Other noise sources birds heliupter plane  MONITORI Operator: Jame Kataluk Record Data File Name: Iotal Monitoring Period Noise Meter End Time: 12 25 Date: 2012 - 07 - 016 Calibration complete ?: 165	NG ENDS		
Animal Other noise sources  heliusper plane  Departor: Jame Ratalia Record Data File Name: Total Monitoring Period Noise Meter End Time: 12 - 25 Date: 2012 - 07 - 04 Calibration complete ?: Yes Sensitivity 49,96	NG ENDS		
Animal Other noise sources  helicopter plane  MONITORI  Operator: To me Ratalist  Record Data File Name:  Fotal Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 06  Calibration complete ?: 45  Sensitivity 49,96  Derviation 410	NG ENDS		
Animal Other noise sources  helicopter plane  MONITORI  Operator: To me Kata I	NG ENDS		
Animal Other noise sources  helicopter  plane  MONITORI  Departor: Tame Kataluk  Record Data File Name:  fotal Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 - 07  Calibration complete ?: 14 9 9  Derviation  Time of Calibration: 12 - 26  Check file size (GB)			
Animal Other noise sources  helicopter  plane  MONITORI  Departor: Tame Kataluk  Record Data File Name:  fotal Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 - 07  Calibration complete ?: 14 9 9  Derviation  Time of Calibration: 12 - 26  Check file size (GB)	NG ENDS		Poor C
Animal Other noise sources  helicopter  plane  MONITORI  Departor: Tame Kataluk  Record Data File Name: Fotal Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 - 04  Calibration complete ?: 46 5  Sensitivity 48 98  Derviation 0 10  Time of Calibration: 12 - 25  Check file size (GB)  Battery Power Check:		partly cloudy	Poor sunny
Animal Other noise sources  Activates  Activates  Activates  Deparator: James Retail Record Data File Name:  Fotal Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 - 01  Calibration complete ?: 45 5  Sensitivity 49 96  Derviation  Time of Calibration: 12 - 25  Check file size (GB)  Sattery Power Check:  Cloud cover:	→ Good cloudy		
Animal Other noise sources    Animal	Good	partly cloudy 10,000-25,000	sunny
Animal Other noise sources  helicopter  helicopter  plane  MONITORI  Decreator: To mee Ratalitation Cotal Monitoring Period  Noise Meter End Time: [2:25]  Date: 2012 - 07 - 04  Calibration complete ?: [4:5]  Sensitivity 43.96  Derviation  Time of Calibration: [2:26]  Check file size (GB)  Sattery Power Check:  Cloud cover:  leight of cloud (feet):  hir Temperature (C): 24.4	→ Good cloudy		sunny
Animal Other noise sources  helicopter  plane  MONITORI  Departor: Tame Kataluk  Record Data File Name:  Fotal Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 - 02  Calibration complete ?: 14 5 96  Derviation  Time of Calibration: 12 - 26  Check file size (GB)  Sattery Power Check:  Cloud cover:  Height of cloud (feet):  kir Temperature (C): 24 4 9  Wind Speed (km/hr): 2 . 5 x 3 . 6 =	→ Good cloudy	10,000-25,000	sunny
Animal Other noise sources  helicupter plane  MONITORE  Operator: Jame Ratalia  Record Data File Name:  Fotal Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 - 00  Calibration complete? 46 5  Sensitivity 43 96  Derviation  Time of Calibration: 12 25  Check file size (GB)  Battery Power Check:  Cloud cover:  Height of cloud (feet):  Air Temperature (C): 24 4  Wind Speed (km/hr): 2 5 x 3 6 =  Wind Direction:	→ Good cloudy		sunny
Animal Other noise sources  heliupter plane  MONITORI  Departor: Jame Rataluk  Record Data File Name:  Total Monitoring Period  Noise Meter End Time: 12 25  Date: 2012 - 07 - 04  Calibration complete?: 49 96  Derviation  Time of Calibration: 12 - 26  Check file size (GB)  Battery Power Check:  Cloud cover:  Height of cloud (feet):  Air Temperature (C): 24 9  Wind Speed (km/hr): 2 . 5 x 3 . 6 =	→ Good cloudy	10,000-25,000	sunny
Animal Other noise sources  heliupfer plane  MONITORI  Departor: Jame Rataluk  Record Data File Name:  Total Monitoring Period  Noise Meter End Time: 12 - 25  Date: 2012 - 07 - 04  Calibration complete 7: 49 - 96  Derviation  Time of Calibration: 12 - 26  Check file size (GB)  Battery Power Check:  Cloud cover:  Height of cloud (feet):  Air Temperature (C): 24 - 4  Wind Speed (km/hr): 2 - 5 x 3 - 6 =  Wind Direction:  North wind (wind blows from North)	→ Good cloudy	10,000-25,000 NW NE	sunny
Animal Other noise sources  heliupfer plane  MONITORI  Departor: Jame Rataluk  Record Data File Name:  Total Monitoring Period  Noise Meter End Time: 12 - 25  Date: 2012 - 07 - 04  Calibration complete 7: 49 - 96  Derviation  Time of Calibration: 12 - 26  Check file size (GB)  Battery Power Check:  Cloud cover:  Height of cloud (feet):  Air Temperature (C): 24 - 4  Wind Speed (km/hr): 2 - 5 x 3 - 6 =  Wind Direction:  North wind (wind blows from North)	→ Good cloudy	10,000-25,000	sunny
Animal Other noise sources  heliupter plane  MONITORE  Deperator: James Retail Record Data File Name:  Fotal Monitoring Period Noise Meter End Time: 12 25 Date: 2012 - 07 - 06  Calibration complete ?! 45 5  Sensitivity 49 96 Derviation Time of Calibration: 12 - 26  Check file size (GB)  Sattery Power Check: Cloud cover:  leight of cloud (feet):  Air Temperature (C): 24 - 4  Wind Speed (km/hr): 2 - 5 x 3 - 6 =  Wind Speed (km/hr): 2 - 5 x 3 - 6 =  Wind Direction:	→ Good cloudy	10,000-25,000 NW NE	sunny
Animal Other noise sources  helicopter  honoise Meter End Time:   2 - 25  Date: 2012 - 07 - 04  Calibration complete ?:   45 - 96  Derviation  Time of Calibration:   2 - 26  Check file size (GB)  Sattery Power Check:  Cloud cover:  leight of cloud (feet):  hir Temperature (C):   24 - 4  Wind Speed (km/hr):   2 - 5 x 3 - 6 =  Wind Direction:  North wind (wind blows from North)	→ Good cloudy	10,000-25,000 NW NE	sunny
Animal Other noise sources  helicopter  honoritring Period  Noise Meter End Time: [2:25]  Date: 2012 - 07 - 04  Calibration complete ?: [4:5]  Sensitivity 43,96  Derviation  Time of Calibration: [2:26]  Check file size (GB)  Sattery Power Check:  Cloud cover:  leight of cloud (feet):  hir Temperature (C): [2:4]  Wind Speed (km/hr): [2:5 x 3,6]  Wind Speed (km/hr): [2:5 x 3,6]	→ Good cloudy	NW NE	sunny
Animal Other noise sources    April	→ Good cloudy	NW NE	sunny
Animal Other noise sources    Application	→ Good cloudy	NW NE	sunny

Cara 9			
The second second was a second	MONITORING STARTS		
Operator Emil Kataluk Location RS Exploration Camp			
Location: RS Explanation Comme			
Noise Meter Start Time:			
Date 7012-07-06			
Calibration complete ?: VCS	Strategic Strate		THE RESERVE
Canoration complete 7: VCS			
Sensitivity 48.73 mw/PA Derviation - 0.04 d B			
Derviation - 0.04 d 5			
Time of Calibration:			
Battery Power Check:	1-0		
Photographs of Setup (VN)	- Good		Poor 6
notograpus or setup (1)(N)			and the second
hotographs of Surrounding (VN)			
heck available disk memory (VIN) 3.72 /3.72 Gb			
Cloud cover:	cloudy	1 /	_
leight of cloud (feet):		partly cloudy	sunny
Air Temperature (C): 20.9	0-10,000	10,000-25,000	25,000 +
Vind Speed (km/hr): /7 . /			
Vind Direction:		N	
North wind (wind blows from North)		W SW	
and the same of th		3	
arometric Pressure (kPa)			Yang Indiana
Celative Humidity (%) 39.5		71	
recipitation: none	(none)	drizzle	rain
G10	NEXAL SITE DESCRIPTION	A STATE OF THE PARTY OF THE PAR	Jain
PS Location	The state of the s		Altitude
	Latitude	Longitude	
Otto of Ceremid Surface A A.	14W 06,33781	72/4/93	136m
Traffic helicopter, light / heavy yehioles	14W 06.33781		
ype of Ground Surface tundes.  countie Environment:  Traffic he leapter, light / heavy vehicle:  Human activities  Animal herds  ther noise sources	14W 06.33781		
Traffic he capter, light / heavy which human activities Animal herds ther noise sources  perator: Januar Kafaluk coord Data File Name: RS 20120706 total Mentering Period oise Meter End Time: 12:30	14W 06.33781		
Traffic he capter, light / heavy vehicles Human activities Animal herds ther noise sources  perator: Janue Kotalub econd Data File Name: RS 2/11/07/06 total Menitoring Period oise Meter End Time: 17:30 there 2012-07-07	14W 0633781		
Traffic he capter, ight / heavy velicle:  Human activities Animal herds  ther noise sources  persion: Talmace Kotaluce ecord Data File Name: KS 2/11/20/10/6 oral Monitoring Period ora	14W 0633781		
Traffic he capter, light / heavy villus / Human activities  Animal herds  ther noise sources  perator: Januar Kafaluc econd Data File Name: RS 2/11/07/06 total Menitoring Period oise Meter End Time: 17 - 30 alibration complete ? Sensitivity 48-93	14W 0633781		
Traffic he capter, light / heavy which human activities  Animal herds ther noise sources  perator: There is Kataliac ecord Data File Name: R 2/1/2070/6 total Montring Period oise Meter End Time: 17:30 total Montring Period oise Meter End Time: 17:30 total Control of the capter of t	14W 0633781		
constite Environment:  Traffic he capter, 19th / heavy which:  Human activities  Animal herds  ther noise sources  perator: Jaine a Koladuk  perator	14W 0633781		
Traffic he capter, 19th / heavy whice Human activities Animal herds ther noise sources  perator. Januar Kaladak perator Planace Romanica Planace perator Planace Romanica Planace Planace perator Planace Romanica Planace Pl	14W 0633781		
constite Environment:  Traffic he capter, light / heavy velicle:  Human activities  Animal herds  ther noise sources  perator: Januar Rolation  pera	S NOONTORENG SAIDS		136,00
raffic he capter, 19th / heavy vehicles  Human activities  Animal herds  ther noise sources  perator: Tance ratable coord Data File Name: RS 2/11/20/10/6  total Monitoring Period onites Monetering Period onites: 2/12/20/17/2/7  alibration complete?:  Sensitivity 48-93  Derviation 0.04 dB  Time of Calibration: /2-32  teck file size (GB)  attery Power Check:	14W 06.33781  S  MONITORING ENDS	72/4493	136.M1  Poor €
Traffic he capter, light heavy vehicles Human activities Animal herd's ther noise sources  penator: Talonge Kataline econd Data File Name: RS 2/11/2010/6 total Monitoring Period total Monitoring Per	MONITORING ENDS		136,00
Traffic he capter, 19th / heavy vehicles Human activities Animal herds ther noise sources  perator. Jan. 12 Rolatub econd Data File Name: RS 2/112010/6 stal Mentioring Period oise Meter find Time: 17.30 state: 20/2-07-07 alibration complete? Sensitivity 48.93 Derviation 2.04 dB Time of Calibration: /2-32 state file size (GB) stary Power Check ood cover: sight of cloud (first):	14W 06.33781  S  MONITORING ENDS	72/4/93	Poor Sunny
coustic Environment:  Traffic he capter, light / heavy vehicle: Human activities Animal herds ther noise sources  perstor: Janue Rolature econd Data File Name: RS 20120104  stal Monitoring Period oise Meter End Time: 17:30 ate: 20/2-07-07 dibration complete?: Sensitivity 48.93 Derviation 48.93 Derviation 2.04 dB Time of Calibration: /2-32 ateck file size (GB) attery Power Check ound cover: sight of cloud (fret):	MONITORING ENDS	72/4493	136.M1  Poor €
coustic Environment:  Traffic he capter, light / heavy vehicle: Human activities Animal herds ther noise sources  perstor: Janue Rolature econd Data File Name: RS 20120104  stal Monitoring Period oise Meter End Time: 17:30 ate: 20/2-07-07 dibration complete?: Sensitivity 48.93 Derviation 48.93 Derviation 2.04 dB Time of Calibration: /2-32 ateck file size (GB) attery Power Check ound cover: sight of cloud (fret):	MONITORING ENDS	72/4/93	Poor Sunny
raffic he capter, 19th / heavy vehicles  Human activities  Animal herds  ther noise sources  perator: Januer foliation  perator:	MONITORING ENDS	72/4/93	Poor Sunny
Traffic he capter, 19th / heavy vehicles  Human activities  Animal herds  ther noise sources  perator: Januer Kolalub econd Data File Name: RS 2/11/07/06  total Monitoring Period outse Meter End Time: 17:30  atte: 2012-07-07  alibration complete?:  Sensitivity 48.43  Derviation 0.04 dB Time of Calibration: /2-32  attect file size (GB) attery Power Check out cover.  inght of cloud (feet): r Temperature (C): 18.4  ind Speed (km/hr): 2.7×36 = 10.44 km  ind Direction:	MONITORING ENDS	72/4/93	Poor Sunny
Traffic he capter, 19th / heavy vehicles  Human activities  Animal herds  ther noise sources  perator: Janue Kotaluk econd Data File Name: RS 2/11/07/06  total Monitoring Period outs Meter End Time: 17:30  ante: 2072-07-07  alibration complete?: Sensitivity 48-73  Derviation 0.04 dB  Time of Calibration: /2-32  teck file size (GB) attery Power Check load cover.  right of cloud (feet): irr Temperature (C): 18-4  ind Speed (km/hr): 2,7×3-6 < 10.44 km  ind Direction:	MONITORING ENDS	partly cloudy 10,000-25,000	Poor Sunny
Traffic he capter, 19th / heavy whicles Human activities Animal herds ther noise sources  perator. The new Kaladak econd Data File Name: RS 20120706 asia Menitoring Period oise Meter find Time: 12:30 asia Menit	MONITORING ENDS	partly cloudy 10,000-25,000	Poor Sunny
Traffic he capter, 19th / heavy vehicles  Human activities  Animal herds ther noise sources  perator: January Rolation to an Monitoring Period to the End Time: 17 - 30 there: 20/2-07-07 dibration complete? Sensitively 48-93 Derviation Joy 48-93 Derviation Calibration: /2-32 teck file size (GB) thery Power Check toud cover: ight of cloud (feet): Temperature (C) /8-9 ind Speed (km/hr): 2, 9×3-6 = 10-99 km to wind (wind blows from North)	MONITORING ENDS	partly cloudy 10,000-25,000	Poor Sunny
Traffic he capter, 19th / heavy vehicles  Human activities  Animal herds  ther noise sources  perator: Janue Kolalub econd Data File Name: RS 2/11/20/10/6  total Menitoring Period oise Meter End Time: 17/30  the: 20/2-07-07  alibration complete?: Sensitivity 48.93  Derviation 2.094 dB  Time of Calibration: /2-32  heck file size (GB)  attery Power Check total Over Check total Ov	MONITORING ENDS	partly cloudy 10,000-25,000	Poor Sunny
Traffic he capter, light / heavy vehicles Human activities Animal bergs wher noise sources  perator: James Kataluc ecord Data File Name: RS 2/1/2070/6 otal Monitoring Period oise Meeter End Time: 17:30 me: 20/2-07 - 0.7 alibration complete ?: Sensitivity 48-93 Derviation 0.04 dB	MONITORING ENDS	partly cloudy 10,000-25,000	Poor Sunny