

# Memorandum

**To:** Alexco Resource Corp.

From: Catherine Henry & Holly Goulding, Access Consulting Group

**CC:** Kai Woloshyn, Alexco Resource Corp.

**Date:** August 29, 2014

**Re:** Noise Monitoring Data Summary, Keno, YT

#### Introduction

As part of the Keno Hill Silver District Mining Operations Noise Management Plan (the Plan) Alexco Keno Hill Mining Corp. (AKHM) has been monitoring noise levels in Keno City. The Plan was initially developed to address any potential noise effects that might occur with the addition of the two new mines, Lucky Queen and Onek 990. In addition to noise mitigation measures and the creation of a Noise Disturbance Notification Form and Noise Disturbance Register to track noise disturbance claims, AKHM committed to monitor noise levels within the community at various locations to assess the actual versus predicted noise levels and to determine if the noise abatement measures are effective. These noise data can now be used in the context of the Flame and Moth mine development.

The predicted noise levels were presented in the Noise Impact Assessment (NIA) completed by Patching Associates Acoustical Engineering Ltd (PAAE) conducted during the *Yukon Environmental and Socio-Economic Assessment Act* (YESAA) process (Project 2011-0315). The NIA identifies the noise sources from the current mining-related activities, noise receptors, and predicts the anticipated noise level from all existing sources and those associated with the addition of Lucky Queen and Onek 990 mining operations.

This memo presents noise monitoring results from April 2013 to June 2014.

# **NOISE RECEPTORS**

AKHM has monitored noise at the five locations selected in the NIA as being potential noise receptors within the 2 km radius study area around Keno City. Starting in November 2013, noise has also been monitored at the Keno City campground. These locations are listed in Table 1 and shown in Figure 1.



Table 1 Representative Locations Assessed in Keno City

Monitoring	GPS Location	Description
Location		
R01	N63.90827 W135.29599	East end Residence, north side of Lightning Creek Road
R02	N63.91019 W135.29968	Residence, east side of Sign Post Road
R03	N63.91023 W135.30205	Town Center, north from the Snack Bar
R04	N63.91239 W135.30376	Residence, west side of Wernecke Road
R05	N63.90851 W135.30993	Residence, about 850m east from the Mill
Cmpgrnd	N63.90772 W135.29998	Keno City campground

The background noise levels experienced by these locations vary considerably, depending on location and local activities. Past and proposed mining operations are in addition to normal fluctuations in background levels. Climate parameters, such as relative humidity, temperature, and temperature inversions impact the sound level and propagation experienced by each of these receptors.

#### **MONITORING TIMING**

For the period from April 2013 to June 2014, a total of 23 monitoring events were carried out. Mining took place at Bellekeno, and milling at the Keno District Mill throughout 2013, until these were suspended on September 3<sup>rd</sup>. Operations at Onek 990 ceased at the end of May 2013. November 2013 through June 2014 data can be considered as baseline as no mining operations were taking place at that time. Exploration activities at Flame & Moth resumed on March 25, 2014.

#### RESULTS

The results from the 23 monitoring events from April 2013 to June 2014 are presented in Appendix A. All readings were taken using an Extech integrating sound level datalogger model 407780 to measure average dBA over 10 minutes. The wind speed, wind direction, temperature and precipitation data from the Keno District Mill weather station associated with each noise monitoring event have been reported as these can have a significant effect on measured noise levels. Any notable noise sources associated with the monitoring event were also documented.

Noise levels measured at all testing locations were well within or below the 50-90 dBA range deemed "what is socially acceptable for daytime noise limits" as defined in the past YESAB assessment for the Bellekeno Mine development (Project 2009-0030), with all measurements being below 70 dBA. Of the 11 measurements above 50 dBA, four occurred on April 8th, 2013 (R01, R02, R03, and R04) and two on May 19th, 2013 (R01 and R03). While this corresponds to the period of operations at Onek, only one observation associated with the measurements appears to be linked with mining operations (May 19th measurement at R03: 'water truck went by'). In addition, observations for the May 19th event refer to creeks flowing, likely at their highest during spring freshet, and birds chirping, while wind conditions for the April 8th measurements were recorded as 'Windy SSE'. The crusher was operating during most of the April 8th, most of the May 19th and all of the June 18th noise measurements. No crushing took place during measurements on April 10th, May 6th, July 24th, 2013 or during the winter, but preparation for mantle change out took place on July 24th. While the crusher could be a contributing noise source, other natural, anthropogenic or mine-related noise sources likely play an important role.



The other five measurements above 50dBA occurred in January (R05), April (R03), May (Cmpgrnd) and June (R02 and Cmpgrnd) 2014. The elevated January R05 measurement is associated with a grader driving by, while the activities documented during the April measurement at R03 include a loader driving by, a backup alarm, a car driving by, a car horn, people talking and a dog barking. The elevated May measurement at the campground is associated with the creek, which likely had high flows associated with spring freshet, while the June campground measurement was associated with wind in the trees and the creek. The activities documented during the June measurement at R02 include wind in the trees, a car driving by, a chainsaw, ravens, and people talking.

Figure 2 shows the noise levels measured compared to the predicted current and proposed mining operations noise levels plus ambient sound levels from the NIA. Many of the measurements exceeded the predicted levels, which range from 32 to 39 dBA, both in the period of mining operations and after operations had ceased. No mining or exploration activities took place between September 2013 and March 2014, this period can therefore be considered as baseline. As can be observed in Figure 2, the baseline noise levels can vary considerably with different levels of activity in Keno City. Baseline noise levels were greater than those predicted in the NIA on several occasions, indicating that many of the notable noise sources are not linked to Keno mining or milling operations.

Noise levels at the campground were around 30 dBA throughout the winter and increased to around 50 dBA in the spring. This increase is associated with natural sounds such as the creek flowing and birds chirping.

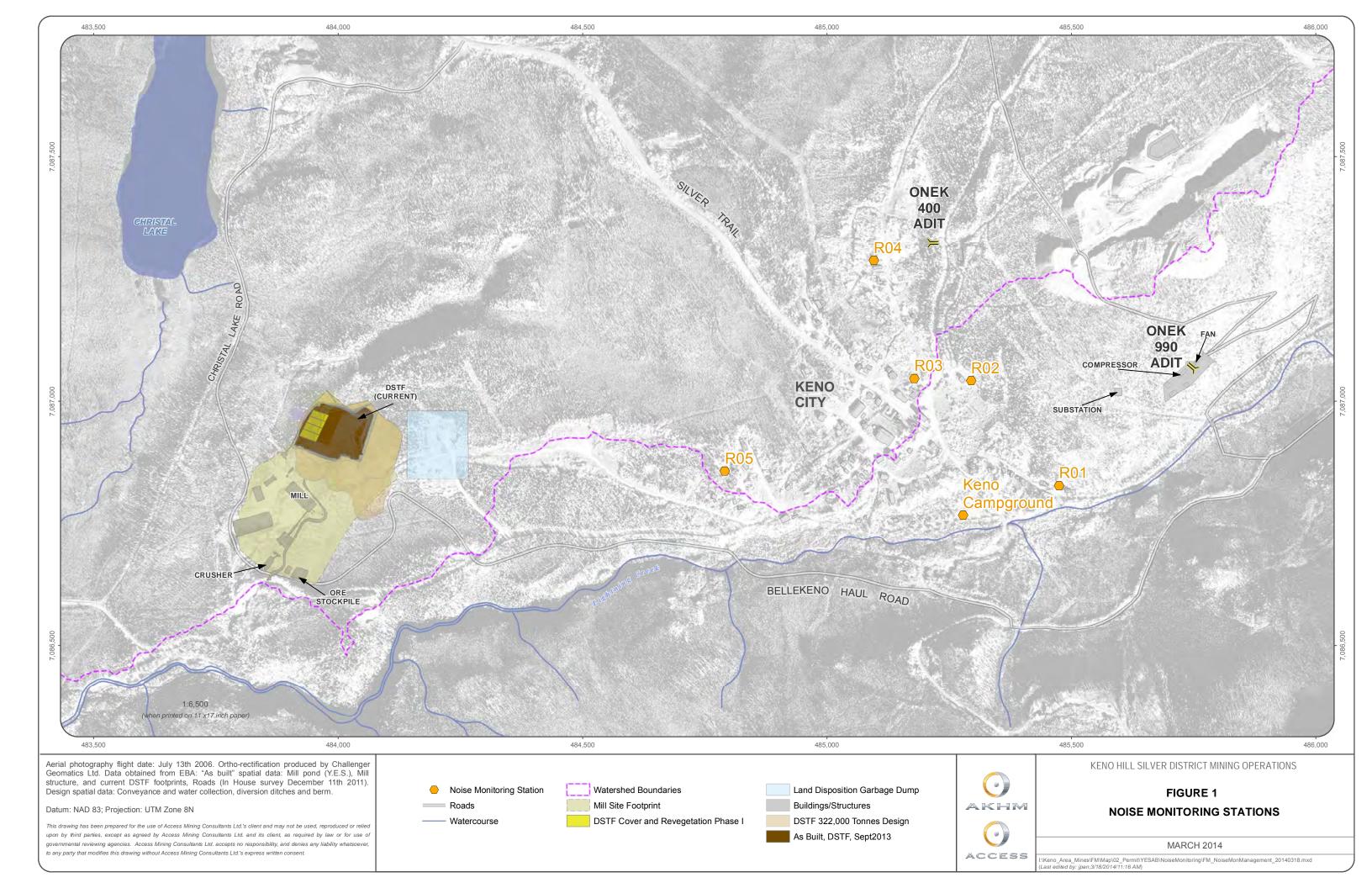
### **NOISE COMPLAINTS**

No noise complaints received by Keno residents were provided by Alexco to Access Consulting.

# **CONCLUSION**

Noise levels measured at all noise receptors were well within or below the 50-90 dBA range deemed to be socially acceptable for daytime noise limits. Compared to the predicted current and proposed mining operations noise levels plus ambient sound levels from the NIA, many of the measurements exceed the predicted levels, which range from 32 to 39 dBA, despite the temporary cessation of mining and milling operations in the Keno Hill Silver District between September 2013 and June 2014. It is recommended that proposed mining operations noise levels plus ambient sound levels generated in the NIA be revised using the noise monitoring data collected during the temporary closure period prior to the re-commencement of mining in the Keno Hill Silver District.

Given the short measurement interval of 10 minutes, measurements could have been influenced by fluctuations in background levels and climate parameters impacting noise levels and propagation. Thus, over a longer interval of measurement it is possible that lower noise levels might have been measured.





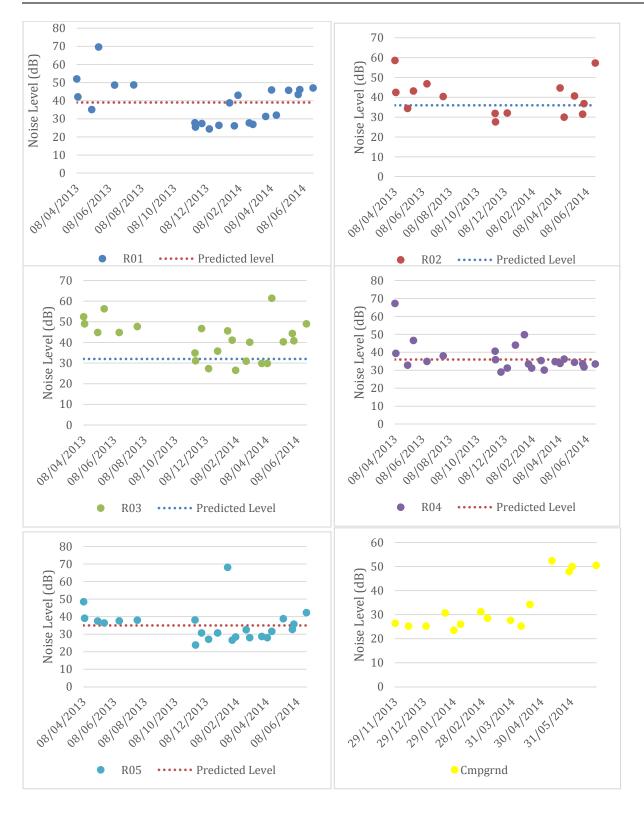


Figure 2 Keno Noise Monitoring Data

# **APPENDIX A**

**KENO NOISE MONITORING DATA** 

Keno Noise Monitoring Data

Keno Noise Monitoring Data									
Date	Location	Time	Temp (°C)	Wind	Precipitation	DBA	Observations	Summary of Mining Activities	
								Bellekeno Mine, Onek Mine, District	
08/04/2013	R01	12:26	2	Windy SSE	None	52.0		Mill and Crusher operating	
00/04/2015	1101	12.20	-	willay 552	Hone	32.0		Trim and crasher operating	
								Bellekeno Mine, Onek Mine, District	
08/04/2013	R02	12:05	2	Windy SSE	None	58.6		Mill and Crusher operating	
								Bellekeno Mine, Onek Mine, District	
08/04/2013	R03	11:45	2	Windy SSE	None	52.4		Mill and Crusher operating	
								Dollakona Mina Onak Mina District	
08/04/2013	R04	11:25	2	Windy SSE	None	67.2	A dog barked 2 times	Bellekeno Mine, Onek Mine, District Mill and Crusher operating	
08/04/2013	NO4	11.23	- 2	Willuy 33L	None	07.2	A dug barked 2 times	ivilii and crusher operating	
								Bellekeno Mine, Onek Mine, District	
08/04/2013	R05	11:04	2	Windy SSE	None	48.5		Mill and Crusher operating	
								Bellekeno Mine, Onek Mine and	
10/04/2013	R01	11:33	-6	Light SSW	None	42.1		District Mill operating	
								Bellekeno Mine, Onek Mine and	
10/04/2013	R02	13:00	-6	Light SSW	None	42.5		District Mill operating	
40/04/2042	000	42:40		U-ba cciai		40.0	Described the Bendard Hills	Bellekeno Mine, Onek Mine and	
10/04/2013	R03	12:40	-6	Light SSW	None	49.0	Doors slamming. People talking	District Mill operating Bellekeno Mine, Onek Mine and	
10/04/2013	R04	12:20	-6	Light SSW	None	39.4		District Mill operating	
10,04,2013	110-1	12.20	U	Light 3344	Hone	33.4		Bellekeno Mine, Onek Mine and	
10/04/2013	R05	12:00	-6	Light SSW	None	39.1		District Mill operating	
								Bellekeno Mine, Onek Mine and	
06/05/2013	R01	15:30	2	Wind West	None	35.1	Backup alarm at Onek. Tarps flapping in wind	District Mill operating	
00 100 10010								Bellekeno Mine, Onek Mine and	
06/05/2013	R02	15:30	2	Slight breeze	None	34.4		District Mill operating	
06/05/2013	R03	15:30	2	Windy	None	44.8	Dog barking. Boart truck	Bellekeno Mine, Onek Mine and District Mill operating	
00/03/2013	nu3	الد.دء	-	willay	None	0	oog ourang, boart track	Bellekeno Mine, Onek Mine and	
06/05/2013	R04	15:30	2	Slight breeze	None	32.8		District Mill operating	
,				<u> </u>	-			Bellekeno Mine, Onek Mine and	
06/05/2013	R05	15:30	2	Slight breeze	None	37.5	Dog barking	District Mill operating	
								Bellekeno Mine, District Mill and	
19/05/2013	R01	10:25	-2	Light (<10km/h) N	Light snow	69.6	Creek flowing loud. Squirrels making noise. Tarp flapping. Volvo going by on the BKR	Crusher operating	
40/05/2005	000	10.10		Haba ( ad o) ( ) 1	11-ba	40.0	Const. Charles - balance A face blade ablanta - Banata I	Bellekeno Mine, District Mill and	
19/05/2013	R02	10:10	-2	Light (<10km/h) E	Light snow	43.2	Creek flowing below. A few birds chirping. Boart pickup went by	Crusher operating Bellekeno Mine, District Mill and	
19/05/2013	R03	9:55	-2	Light (<10km/h) E	Light snow	56.3	A few birds. Talking and trucks in town in the distance. Water truck went by	Crusher operating	
15/05/2015	1103	3.33		Light (*10km/m/L	Light 3110W	30.3	A rew birds. Taking and tracks in town in the distance. Water track went by	Bellekeno Mine, District Mill and	
19/05/2013	R04	9:30	-2	Light (<10km/h) E	Light snow	46.6	Lots of birds calling and a woodpecker pecking close by	Crusher operating	
								Bellekeno Mine, District Mill and	
19/05/2013	R05	8:55	-2	Light (<10km/h) E	Light snow	36.4	A few birds and a squirrel chirping	Crusher operating	
								Bellekeno Mine, District Mill and	
18/06/2013	R01	16:25	22	Light (<10km/h) S	None	48.6	Creek flowing. Leaves rustling	Crusher operating	
18/06/2013	R02	16:10	22	Light (<10km/h) S	None	46.8	Volvo on BKR. 2 vehicles drove past. Gusts of wind rustling trees. Chainsaw nearby in town	Bellekeno Mine, District Mill and Crusher operating	
18/00/2013	NUZ	10.10	22	Light (<10km/m/3	None	40.0	volvo on BKK. 2 venicles drove past. Gusts of wind fusting trees. Chainsaw hearby in town	Bellekeno Mine, District Mill and	
18/06/2013	R03	15:55	22	Light (<10km/h) S	None	44.8	People talking and walking close by. 2 Vehicles driving through town and 1 driving by	Crusher operating	
								Bellekeno Mine, District Mill and	
18/06/2013	R04	15:40	21	Light (<10km/h) S	None	34.9	Wind rustling leaves. Birds calling	Crusher operating	
								Bellekeno Mine, District Mill and	
18/06/2013	R05	14:55	21	Light (<15km/h) S	None	37.6	Wind rustling leaves. Volvo on the BKR	Crusher operating	
24/07/2012	204	44.07	22	!!-b+ ( -20b /b) C		40.7	Language and the Constitution of the Constitut	Bellekeno Mine and District Mill	
24/07/2013	R01	11:07	23	light (<20km/h) S	None	48.7	Leaves rustling. Creek nearby. Birds chirping	operating Bellekeno Mine and District Mill	
24/07/2013	R02	10:55	23	light (<10km/h) S	None	40.4	Three vehicles driving nearby. Leaves rustling	operating	
24,07,2013	NOL	10.55	- 23	iigiit ( 120kii) ii j	Hone	-10.1	Three venices driving hears). Ecores rusting	Bellekeno Mine and District Mill	
24/07/2013	R03	10:43	23	light (<10km/h) S	None	47.7	Backup alarm at Mill. Leaves rustling. Someone in town hammering. Two vehicles drove by	operating	
								Bellekeno Mine and District Mill	
24/07/2013	R04	10:30	23	light (<10km/h) SE	None	38.0	Backup alarm at Mill. Mill crusher. Leaves rustling. Car drove by twice. Car on Silver Trail	operating	
0.1/07/0010								Bellekeno Mine and District Mill	
24/07/2013		10:14	23	Calm	None	38.0	Backup alarm at Mill. Volve down BKR. Mill crusher	operating	
16/11/2013 16/11/2013		14:11 13:51	-20 -20	Calm Calm	None None	27.8 31.9	Birds Squirrel, ravens, birds noise	Care and maintenance activites  Care and maintenance activites	
16/11/2013		13:35	-20	Calm	None	34.9	Squirrel, ravens, birds noise+ truck	Care and maintenance activites	
16/11/2013		13:20	-20	Calm	None	40.6	Lots of ravens activity, birds.	Care and maintenance activites	
-							Birds, truck plus door slaming + humain voive + dog barking. All at about 200 meters from sound		
16/11/2013		14:27	-20	Calm	None	38.1	meter.	Care and maintenance activites	
17/11/2013		12:46	-30	Calm	None	25.4	Birds	Care and maintenance activites	
17/11/2013		12:25	-30	Calm	None	27.6	Birds, squirrel and vehicule.	Care and maintenance activites	
17/11/2013 17/11/2013		12:07 11:48	-30 -30	Calm Calm	None None	31.1 35.9	Ravens, squirrel and vehicule. Ravens	Care and maintenance activites  Care and maintenance activites	
17/11/2013		13:01	-30	Calm	None	23.8	Quiet	Care and maintenance activites	
29/11/2013		15:08	-23	Calm	None	26.4	Chainsaw in town, birds chirping	Care and maintenance activites	
29/11/2013		14:52	-23	Calm	None	27.4	Birds chirping, snowmobile in distance	Care and maintenance activites	
29/11/2013	R03	14:36	-23	Calm	None	46.7	Ravens, chainsaw and dog barking in the distance, water truck drove by and backed up (alarm) nearby	Care and maintenance activites	
							squirrels and little birsds in distance, ravens flying by, someone coughing, doors closing mearby, dog		
29/11/2013		14:20	-23	Calm	None	29.0	barking	Care and maintenance activites	
29/11/2013 13/12/2013		13:59 10:55	-24 -20	Calm N-W Calm	None None	30.7 25.2	Raven calling, snowmobile in distance, squirrel nearby  Quiet, birds signing once.	Care and maintenance activites  Care and maintenance activites	
13/12/2013		10:35	-20	N-W Calm	None	25.2	Quiet Quiet	Care and maintenance activites	
13/12/2013		10:17	-20	N-W Calm	None	32.1	Raven , birds, squirrel.	Care and maintenance activites	
13/12/2013		10:02	-20	N-W Calm	None	27.3	Raven ,birds, squirrel.	Care and maintenance activites	
13/12/2013	R04	9:44	-20	N-W Calm	None	31.2	Raven flying and walking around. Birds signing.	Care and maintenance activites	
13/12/2013		11:13	-20	N-W Calm	None	27.1	Quiet, squirrel.	Care and maintenance activites	
31/12/2013		13:52	-18	calm	None	30.7	A few little birds chirping	Care and maintenance activites	
31/12/2013	R04	14:06	-18	Calm	None	44.0	lots of ravens flying, calling. Dog chewing on bone nearby. Person walking by, closing door	Care and maintenance activites	
31/12/2013	R03	14:20	-17	Light (<10km/h)S	None	35.8	Two vehicles drove through town. Flagpole dinging in the wind. People talking, walking in town	Care and maintenance activites	
31/12/2013		14:20 14:34	-17	Calm	None	35.8 26.4	Little birds chirping. Raven flew by	Care and maintenance activites  Care and maintenance activites	
31/12/2013		14:49	-17	Calm	None	25.2	Ravens calling in distance. Someone coughing. Little birds chirping	Care and maintenance activites	
20/01/2014		14:04	-14	Calm	None	49.8	Distant grader. Birds. Vehicle	Care and maintenance activites	
20/01/2014		14:24	-13	Calm	None	45.6	Distant grader. Birds	Care and maintenance activites	
20/01/2014	Cmpgrnd	14:39	-13	Calm	None	30.7	Distant grader	Care and maintenance activites	
20/01/2014		15:13	-14	Calm	None	38.8	Distant grader. Vehicle	Care and maintenance activites	
20/01/2014		14:56	-14	Calm	None	68.1	Grader went by	Care and maintenance activites	
29/01/2014		15:07	-12	Calm	None	26.6	Squirrels, whiskeyjack calling nearby	Care and maintenance activites	
29/01/2014 29/01/2014		15:23 15:36	-12 -12	Calm Calm	None None	33.5 41.1	Small bird chirping, ravens calling and flying by Ravens calling, truck driving by, squirrel chatting, small bird chirping	Care and maintenance activites  Care and maintenance activites	
23/01/2014	1103	23.30	12	Cami	None	42.1	processing, crock driving of, squarer charting, small one chiliphing	and maintenance activites	

Keno Noise Monitoring Data

Keno Noise Monitoring Data									
Date	Location	Time	Temp (°C)	Wind	Precipitation	DBA	Observations	Summary of Mining Activities	
29/01/2014	R01	15:50	-12	Calm	None	26.1	Squirrel chatting, door closing in distance, birds calling, neighbour getting firewood	Care and maintenance activites	
29/01/2014	Cmpgrnd	16:06	-12	Calm	None	23.5	Squirrel chatting, bird chirping, ravens flying over and calling	Care and maintenance activites	
05/02/2014	R05	12:55	-20	light (5km/h)	None	28.4	Raven calling, squirrel chattering	Care and maintenance activites	
05/02/2014	R04	13:12	-20	light(<5km/h)	None	31.2	Small bird chirping, ravens calling and flying, door closing in distance X3, neighbour getting firewood	Care and maintenance activites	
05/02/2014	R03	13:27	-20	light(<5km/h)	None	26.5	Ravens calling in distance. Squirrel chattering, small birds, truck creaking	Care and maintenance activites	
				0 , ,			(, , , , , , , , , , , , , , , , , , ,		
05/02/2014	R01	13:40	-18	light(<5km/h)	None	43.0	Squirrel chattering, ice inside old dump truck (beside sample site) cracked loudly, birds chirping	Care and maintenance activites	
05/02/2014		13:59	-19	light(<5km/h)	None	26.0	Small birds chirping, ravens in distance	Care and maintenance activites	
26/02/2014	R05	14:14	-9	Calm	None	32.5	Water truck running nearby, driving. Squirrel chattering, little birds calling	Care and maintenance activites	
26/02/2014	R04	14:31	-8	Calm	None	35.4	Ravens calling, person walking by and into house	Care and maintenance activites	
-,-,-							Lots of squirrels chattering, dog barking in distance, small birds chirping, radio from neighbours		
26/02/2014	R03	14:56	-8	Calm	None	30.9	house, raven calling	Care and maintenance activites	
26/02/2014	R01	15:10	-8	Calm	None	27.7	Little birds chirping. Squirrels	Care and maintenance activites	
26/02/2014		15:26	-8	Calm	None	31.2	Someone chainsawing in town. Birds chirping	Care and maintenance activites	
05/03/2014	R05	14:19	-14	Calm	None	28.0	Raven calling in distance. Lots of little birds chirping nearby	Care and maintenance activites	
03/03/2014	1105	11.13		Com	Hone	20.0	Ravens calling nearby. Squirrels chattering. Helicopter in distance. Little birds chirping. Ravens flying	care and maintenance activities	
05/03/2014	R04	14:37	-14	Slight breeze	None	30.1	by	Care and maintenance activites	
03/03/2014	1104	14.57	14	Slight breeze	None	30.1	Vehicle in town idling. Lots of little birds chirping. Raven calling. Flags tinging on flagpoles. Helicopter	Care and maintenance activites	
05/03/2014	R03	14:50	-13	light (<10km/h)	None	40.1	in distance. Vehicle driving through town and by twice.	Care and maintenance activites	
05/03/2014	R01	15:04	-13	calm	None	26.9	Lots of little birds chorping. Rvens in distance. Helicopter faintly in distance	Care and maintenance activites	
05/03/2014		15:19	-14	very slight breeze	None	28.5	Little birds chirping. Ravens in distance. Helicopter in distance. Backup alarm in town	Care and maintenance activites	
29/03/2014	RO5	14:31	-3	, ,	None	28.7	Lots of small birds calling nearby. Squirrel chattering	Care and maintenance activites	
29/03/2014	RUS	14.51	-3	Slight breeze	None	20.7	Ravens calling closeby. Small birds calling. Diamond drill and equipment working in distance. Wind	Care and maintenance activites	
29/03/2014	R04	14:48	0	light (10 km/h)	None	34.8	chimes. Someone scraping snow	Care and maintenance activites	
29/03/2014	NU4	14.46	U	light (10 km/m)	None	34.6	Flags hitting flagpoles. Lots of small birds calling nearby. Raven calling. Squirrel chattering. Squirrel	Care and maintenance activites	
20/02/2044	R03	15:00		United (40 Investigation		20.0		6	
29/03/2014	R01	15:00	0	light (10 km/h)	None	29.8	climbing on sign nearby	Care and maintenance activites	
29/03/2014	KUI	15:13	0	Slight breeze	None	31.3	Small birds. Squirrel chattering. Steel pipe made sound as it expanded	Care and maintenance activites	
00/00/004			_				Small birds calling. Bulldozer (drillers) going down Duncan creek road in distance. Someone working		
29/03/2014		15:34	0	Slight breeze	None	27.6	on something in town. Raven calling.	Care and maintenance activites	
09/04/2014	R01	10:04	-10	Calm	None	45.9	Pickup , backup alarm. birds	Care and maintenance activites	
09/04/2014	R02	9:55	-10	Calm	None	44.7	Water truck x 2, delivering.	Care and maintenance activites	
09/04/2014	R03	9:24	-10	Calm	None	29.8	Water truck x 2, delivering.	Care and maintenance activites	
09/04/2014	R04	9:00	-10	Calm	None	33.8	Ravens	Care and maintenance activites	
09/04/2014	R05	10:47	-10	Calm	None	28.0	Ravens	Care and maintenance activites	
09/04/2014	RO1	10:32 15:43	-10	Calm	None	25.2	Squirrel	Care and maintenance activites	
18/04/2014			2	Calm	None	32.0	Birds, loader, backup alarm far away.	Care and maintenance activites	
18/04/2014	R02	16:22	2	Calm	snow/rain	30.0	Car, birds	Care and maintenance activites	
18/04/2014	R03	15:20	2	Calm	snow	61.4	Loader, backup alarm. Car +horn. People talking, dog barking	Care and maintenance activites	
18/04/2014	R04	15:04	2	Calm	snow	36.2	Ravens, birds	Care and maintenance activites	
18/04/2014	R05	16:37	2	Calm	None	31.6	Birds	Care and maintenance activites	
18/04/2014		15:04	2	Calm	rain/snow	34.2	Birds	Care and maintenance activites	
11/05/2014	R01	9:14		strong N wind	none	45.7	Birds, creek	Care and maintenance activites	
11/05/2014		8:58		Light N wind	none	40.7	Birds, car, house doors slamming.	Care and maintenance activities	
11/05/2014	R03	8:42		Light N wind	none	40.3	Birds	Care and maintenance activites	
11/05/2014	R04	8:27		calme	none	34.4	Birds	Care and maintenance activites	
11/05/2014	R05	10:21		Light N wind	none	38.8	Wind in trees, bear or moose cracking branches.	Care and maintenance activites	
11/05/2014		9:30		Light N wind	none	52.4	Creek	Care and maintenance activites	
29/05/2014	R01	10:50		Light SW wind	none	43.4	Creek	Care and maintenance activites	
29/05/2014	R02	10:30		Light SW wind	none	31.5	Raven, truck.	Care and maintenance activites	
29/05/2014	R03	9:50		Light SW wind	none	44.3	Raven, car, truck running idle,starting.	Care and maintenance activites	
29/05/2014	R04	9:40		Light SW wind	none	33.6	Ravens	Care and maintenance activites	
29/05/2014	R05	11:40		Light SW wind	none	32.7	Birds	Care and maintenance activites	
29/05/2014		11:20		Light SW wind	none	47.9	Creek	Care and maintenance activites	
01/06/2014		15:49		strong wind all	none	46.1	Creek, wind, dog barking	Care and maintenance activites	
01/06/2014	R02	15:33		strong wind all	none	36.8	Doors slamming x 2.	Care and maintenance activites	
01/06/2014	R03	15:20		strong wind all	none	40.8	Truck, trailer, horn	Care and maintenance activites	
01/06/2014	R04	15:03		light wind all	none	31.8	Atv far away	Care and maintenance activites	
01/06/2014		16:18		strong wind all	none	35.7	Silent	Care and maintenance activites	
01/06/2014		16:03		strong wind all	none	50.0	Creek	Care and maintenance activites	
26/06/2014	R01	12:52	1	strong N wind	none	47.0	Wind in trees,creek, birds.	Care and maintenance activites	