

July 3, 2018

VIA E-MAIL: Shannon.Farrell@goldcorp.com

Shannon Farrell
Goldcorp Canada Ltd.
4315 Gold Mine Road,
South Porcupine, P0N 1H0

**Re: Acoustic Audit of the Goldcorp Canada Ltd., Porcupine Gold Mines Hollinger Pit
4315 Gold Mine Road, South Porcupine, ON**

Dear Ms. Farrell,

HGC Engineering was retained to undertake an Acoustic Audit of the Goldcorp Canada Ltd., Porcupine Gold Mines Hollinger Pit in Timmins, Ontario, following the commencement of the “Scenario 6” operating phase, as outlined in the Acoustic Assessment Report, prepared by Valcoustics Canada, issued June 5, 2013. The Audit was required to satisfy Condition 12.2 (b) (ii) of the Environmental Compliance Approval (“ECA”) number 9699-8QWSNZ, granted to the facility by the Ontario Ministry of the Environment and Climate Change (“MOECC”) on November 14, 2013.

HGC Engineering visited the facility and surrounding area on May 8th and 9th, 2018, to coordinate with on-site staff and to perform acoustical audit measurements of the pit activities. Sound levels at the most potentially impacted points of reception neighbouring the facility were measured during the early morning hours of May 9th, 2018.

The results of the Acoustic Audit indicate that the sound emissions of the facility are within the applicable limits of the MOECC at all of the neighbouring residences. Details of the acoustical measurements, analysis and results are presented in the following sections.

DESCRIPTION OF FACILITY & SURROUNDING AREA

The subject facility is located to the south of Highway 101 (Algonquin Boulevard East), to the east of Railway Street, and to the north of Moneta Avenue, in the City of Timmins, Ontario. Figure 1, appended, shows a scaled satellite photo of the facility and surrounding area.

The Hollinger Pit operations consist of mining gold-bearing ore from an open pit, using in-pit drills for setting explosive charges, pit excavators, loaders and shovels for loading haul trucks, as well as dozers and graders for maintaining the pit floor and access routes within the pit, and to aid the backfilling operations. Haul trucks transport ore and mine rock along a transportation corridor, which runs to the east and south of the Hollinger Pit, to the ore processing areas (which are separate from the pit operations). The facility can operate at full capacity during all hours of the day, evening and night.

Sound sensitive points of reception exist to the north, east, south and west of the facility. The assessment locations in this Audit Report generally follow those of the AAR, with the exception of one modified location, as described, below.

POINTS OF RECEPTION

Fourteen key assessment locations were chosen for the purposes of this audit, which are the closest and most exposed to the subject facility, shown as POR1 through POR14 in Figure 1. Thirteen of the fourteen chosen locations were originally identified in the AAR; the original point of reception represented by POR2 was a long-term care facility, purchased by Goldcorp after completion of the AAR, and later demolished. Therefore this location now represents a dwelling in the adjacent residential neighbourhood. A brief description of each point of reception is outlined below.

- POR01 – Two-storey residential dwelling located at approximately 50 Vipond Rd.
- POR02 – Two-storey residential dwelling located at Dwyer Ave. & Hollinger Ln.
- POR03 – Nine-storey apartment building located at 585 Algonquin Blvd.
- POR04 – Two-storey residential dwelling located at approximately 216 Laidlaw St.
- POR05 – Two-storey residential dwelling located at approximately 359 Dale Ave.
- POR06 – Single-storey trailer located at approximately 111 Bogey Dr.
- POR07 – Single-storey trailer located at approximately 41 Eagle Cr.
- POR08 – Two-storey residential dwelling located at approximately 800 Gold Mine Rd
- POR09 – Two-storey residential dwelling located at approximately 45 Cook Rd.
- POR10 – Two-storey residential dwelling located at approximately 184 Claimpost Tr.
- POR11 – Two-storey residential dwelling located at approximately 19 Prospector’s St.
- POR12 – Two-storey residential dwelling located at approximately 6 Quebec Ave.
- POR13 – Two-storey residential dwelling located at approximately 10 Dunn Ave.
- POR14 – Two-storey Comfort Inn, located at 939 Algonquin Blvd.

SOUND LEVEL CRITERIA

The MOECC noise assessment guidelines draw a distinction between sound produced by traffic on public roads and that produced by industrial or commercial activities, which are classified as *stationary sources of sound*. Vehicles operating within the boundaries of an industrial site are considered part of the stationary source. In general, the acceptability limits for stationary sources are site dependent, and the sound from the stationary source is evaluated against (i.e. compared to) the typical background sound at any potentially impacted, sound-sensitive points of reception (e.g., residences). Background sound is considered to include road traffic sound and other typical sounds, but excludes the sound of the facility under assessment.

During the Audit, background sound was observed at all points of reception to include traffic from surrounding roadways, unaffiliated industrial facilities, and natural sounds. The area surrounding the facility is best categorized as a Class 2 acoustical environment under MOECC guidelines.

As stipulated in the ECA, the appropriate document for determining the applicable assessment criteria is MOECC publication NPC-205, “Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)”. Publication NPC-205 stipulates that the sound level limit for a stationary source which operates during both daytime and nighttime hours in a Class 2 environment is the greater of the minimum one-hour energy-equivalent (L_{EQ}) background sound level, or the exclusionary minimum limits of 50 dBA during daytime hours (07:00 to 19:00), and 45 dBA during evening and nighttime hours (19:00 to 07:00). The MOECC guidelines also stipulate that the noise assessment shall consider a *predictable worst-case hour*, which is defined as an hour when typically busy operation of the stationary sources under consideration could coincide with an hour of low background sound.

At locations POR3 and POR14, the criteria established in the AAR were based on long-term automated monitoring of background conducted in February of 2012; at all other locations, the criteria were established as the exclusionary limits of 50/45 dBA during daytime and evening/nighttime hours, respectively. The



observations conducted by HGC Engineering during the site visits on May 8th and 9th confirmed the dominance of traffic sound at POR 3 and POR14. Accordingly, the previously established limits were adopted for the purposes of this Audit. Table 1, below, lists the applicable sound level criteria.

Table I: Applicable Sound Level Limits, L_{EQ} [dBA]

Location	Daytime (07:00 – 19:00)	Evening & Nighttime (19:00 – 07:00)
POR3	58	51
POR14	53	45
All Other POR's	50	45

MEASUREMENT METHODS

Acoustic Audit measurements were conducted at locations POR1 through POR14, on May 9th, 2018. Because the facility operates at full capacity during both day and night, measurements were only conducted during nighttime hours, between 12:30 and 04:00, when interference from background sound was lowest. This measurement period was also chosen in order to avoid employee shift/lunch breaks (which occur prior to 12:30 and after 04:00), to ensure full operation of the pit activities.

The measurements were conducted in accordance with MOECC procedural guideline NPC-103, for durations of 20-minutes at each point of reception. Because the upper storey windows of the multi-storey points of reception are the most potentially impacted, as they experience a lesser degree of acoustical shielding than the lower-storey(s), measurements at the two-storey receptors were conducted by elevating the microphones to a height of 4.5 metres above grade, using extension poles. Location POR3 is the upper storey window of a nine-storey apartment building. Accordingly, a sound level meter was hoisted using a 32-metre boom lift.

All sound level measurements were conducted using Norsonic Nor140 Integrating Sound Level Meters, each configured to measure overall L_{EQ} sound levels and L₉₀ sound levels. The L_{EQ} sound level is the energy-equivalent sound level, and represents the integrated sound exposure level of both steady and time-varying sounds over the duration of the measurement. The L₉₀ represents the sound level which is exceeded 90 percent of the time over the duration of a measurement, and is therefore useful in identifying the contribution of steady sources, such as the industries neighbouring the Hollinger Pit, sound emissions from which were observed to be steady and dominant in some cases. One-third octave band sound levels were also recorded, in one second intervals, and audio was recorded by the sound level meters for the duration of each measurement, for reference and use in post-measurement analysis. All instrumentation was within its annual laboratory calibration period and correct calibration was field-verified using a Brüel & Kjær model 4231 acoustic calibrator.

The meteorological conditions during the measurements were suitable for outdoor acoustical measurements, with cloudy skies and calm to moderate winds. At each point of reception, meteorological data was recorded throughout the measurement period, using Kestrel 4500 and Kestrel 5500 weather meters (data provided in Table III and Appendix A, below).

The facility was confirmed by Goldcorp personnel to be operating normally at the time, with typical haul truck activity (eleven CAT 785 haul trucks cycling through the pit), five SmartRoc D45 drills, one CAT 385 excavator, one CAT D10 dozer, one CAT 16H grader, and two Hitachi 2500 shovels operating within the pit.

RESULTS & DISCUSSION

Table II, below, summarizes the direct, unadjusted L_{EQ} sound levels measured at the fourteen locations.

Table II: Summary of Unadjusted Acoustic Audit Measurements [dBA]

Loc'n	Time	L_{EQ}	Notes
POR1	01:50	40	Haul trucks consistent/audible, distant traffic audible
POR2	02:30	42	Haul trucks & pit audible, distant traffic
POR3	03:40	59	Neighbouring industry dominant, pit not audible
POR4	03:30	49	Neighbouring industry dominant, distant traffic audible, pit occasionally audible
POR5	02:05	46	Neighbouring industry, peepers & distant traffic dominant, pit occasionally audible
POR6	01:40	41	Pit activities & haul trucks constant, backup beepers in distance, some birds
POR7	02:20	40	Pit activities & haul trucks constant, some birds
POR8	03:20	48	Peepers dominant, haul trucks audible (pass-bys <45 dBA)
POR9	01:55	35	Haul trucks consistent/audible, distant traffic
POR10	01:15	43	Haul trucks consistent/audible, distant traffic and unaffiliated substation contributing
POR11	00:40	43	Haul trucks consistent/audible, distant traffic and natural sounds contributing
POR12	00:40	39	Pit operations steady and haul trucks audible, some distant traffic contributing
POR13	01:15	38	Distant traffic audible, dome trucks audible occasionally, substation audible
POR14	03:20	41	Distant traffic dominant, pit occasionally audible

With exception of locations POR3, POR4, POR5, and POR8, the 20-minute L_{EQ} sound levels measured at the points of reception were within the applicable nighttime (i.e. most stringent) sound level limit of 45 dBA.

At locations POR3, POR4, POR5, and POR8, the measured sound levels were clearly dominated by sources of sound unrelated to the Hollinger Pit. Accordingly, the data gathered during the Audit was post processed, toward isolating the sound levels of the Hollinger Pit, as detailed below.

At location POR8, the chirping call of Spring Peepers (a type of small frog) dominated the measured L_{EQ} sound level. The peeper sound is concentrated in the 1.6 kHz and 2.0 kHz one-third octave bands. Therefore, the contribution of the peepers was removed from the measurement data in post-processing by logarithmically averaging the sound levels in the 1.25 kHz and 2.5 kHz one-third octave bands, substituting these for the original 1.6 kHz and 2.0 kHz one-third octave band sound levels, and re-calculating the L_{EQ} .

At locations POR4 and POR5, sound from neighbouring industrial facilities and Spring Peepers dominated the measured L_{EQ} sound levels; time-varying sound from the pit (e.g. variable sound associated with the dozer tracks, shovels dumping loads into trucks, haul trucks accelerating and changing gears, etc.) was only occasionally audible. Given that the sound from the neighbouring facilities was continuous, steady and dominant, the measured L_{90} sound levels at POR4 and POR5 represents the contribution of sound from those industries to the L_{EQ} . Therefore, the influence of the neighbouring facilities was removed from the measurement data in post processing by logarithmically subtracting the measured L_{90} sound levels from the measured L_{EQ} sound levels, yielding the only audible (time-varying) sound from the pit.

At location POR3 (where the microphone was elevated by a boom lift), a thorough review of the audio recordings clearly indicated that the neighbouring industrial facility dominated both the measured L_{EQ} and L_{90} sound levels, due to proximity, such that an estimation of the Hollinger Pit sound levels could not be derived. However, because the Hollinger Pit activities were not audible in the recordings, it can be concluded that the associated sound levels of the pit were at least 10 dBA below the measured L_{EQ} , and therefore within the applicable limits.

Table III, below, lists the sound levels, “L_{EQ}*”, with adjustments where warranted, as described above, in order to be representative of the sound levels of the subject facility, for comparison with the assessment criteria. Notes are provided regarding the adjustments made to each L_{EQ} value, where applicable. The average wind speed and direction recorded at each location are also provided.

Table III: Summary of Acoustic Audit Measurements [dBA]

Loc'n	L _{EQ} *	Sound Level Limits	Within Limits?	Wind Speed (m/s)	Wind Direction	Note
POR1	40	50 / 45	Yes	0.7	SW	1
POR2	42	50 / 45	Yes	1.1	SW	1
POR3	59	58 / 51	Yes	3.0	E	2
POR4	45	50 / 45	Yes	1.5	SE	3
POR5	43	50 / 45	Yes	2.3	SE	3
POR6	41	50 / 45	Yes	1.2	SE	1
POR7	40	50 / 45	Yes	1.3	ESE	1
POR8	45	50 / 45	Yes	1.4	SE	3
POR9	35	50 / 45	Yes	0.4	SW	1
POR10	43	50 / 45	Yes	1.1	S	1
POR11	43	50 / 45	Yes	1.0	SE	1
POR12	39	50 / 45	Yes	0.9	WSW	1
POR13	38	50 / 45	Yes	0.6	SSW	1
POR14	41	53 / 45	Yes	1.8	SSE	1

Notes:

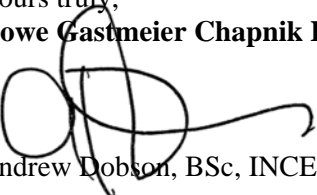
1. Measured L_{EQ}, with no adjustments.
2. Measurements completely dominated by unaffiliated industrial sources, pit inaudible.
3. Contributions from sound sources not attributable to pit removed in post-processing.

CONCLUSIONS

The results of the Acoustic Audit measurements indicate that the sound levels of the Hollinger Pit are within the applicable sound level limits as outlined in MOECC guideline NPC-205, at all sound sensitive points of reception.

We trust that this information satisfies your current requirements. If you have any questions or require further assistance, please do not hesitate to call.

Yours truly,
Howe Gastmeier Chapnik Limited



Andrew Dobson, BSc, INCE

Reviewed by

Corey Kinart, PEng, MBA

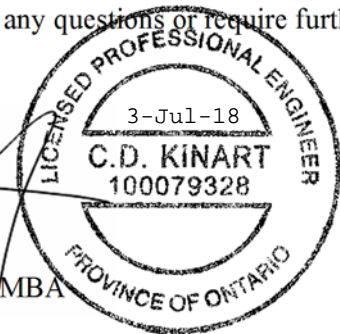




Figure 1: Aerial Image Showing Hollinger Pit and Measurement Positions / Neighbouring Points of Reception

APPENDIX A
Meteorological Data



ACOUSTICS



NOISE



VIBRATION

Location POR1

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 1:48	229	1.3	6.6	42.3	981.2
09/05/2018 1:49	231	0.5	7.1	41.6	981.2
09/05/2018 1:50	222	0.6	6.6	41.1	981.2
09/05/2018 1:51	244	0	6.7	40.6	981.2
09/05/2018 1:52	199	1.2	6.2	40.2	981.2
09/05/2018 1:53	221	0.9	6.1	39.9	981
09/05/2018 1:54	229	0	6.3	39.7	981
09/05/2018 1:55	227	0.9	6	39.6	981.2
09/05/2018 1:56	225	1	6	39.6	981.2
09/05/2018 1:57	230	0.8	5.9	39.6	981
09/05/2018 1:58	248	0.3	6	39.6	981.2
09/05/2018 1:59	240	0.5	6.2	39.7	981.2
09/05/2018 2:00	230	0	6	39.7	981.2
09/05/2018 2:01	238	0.8	6.2	39.8	981.2
09/05/2018 2:02	239	0.6	6	39.9	981.2
09/05/2018 2:03	238	0.5	6	40.1	981.2
09/05/2018 2:04	235	0	6	40.3	981.2
09/05/2018 2:05	235	0	5.8	40.3	981
09/05/2018 2:06	238	1.1	5.8	40.4	981
09/05/2018 2:07	238	0.5	5.8	40.6	981
09/05/2018 2:08	98	2.4	5.7	40.7	981
09/05/2018 2:09	255	0.5	5.9	40.8	981
09/05/2018 2:10	254	0.9	5.8	41.1	981
09/05/2018 2:11	253	0.6	5.8	41.2	981

Location POR2

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 2:28	50	2.9	7.7	40.2	981.9
09/05/2018 2:29	282	1.3	7.5	40.5	981.7
09/05/2018 2:30	194	1.3	6.6	42.8	981.7
09/05/2018 2:31	317	0.5	7	43.1	981.7
09/05/2018 2:32	106	1.6	6.2	43	981.7
09/05/2018 2:33	295	0.7	6.1	43.9	981.7
09/05/2018 2:34	335	0.9	6.1	44.4	981.7
09/05/2018 2:35	316	0.8	6.2	43.6	981.7
09/05/2018 2:36	74	1	6	44.3	981.7
09/05/2018 2:37	304	0.7	6.1	44.5	981.7
09/05/2018 2:38	349	0.8	5.8	44.4	981.7
09/05/2018 2:39	13	1	6.1	44.4	981.7
09/05/2018 2:40	340	1.2	6.1	44.3	981.7
09/05/2018 2:41	299	0.4	6	44.3	981.7
09/05/2018 2:42	283	1	5.7	44.3	981.7
09/05/2018 2:43	122	1.1	6	44.3	981.7
09/05/2018 2:44	55	0.7	6	44.2	981.7
09/05/2018 2:45	352	1.4	5.6	44.2	981.7
09/05/2018 2:46	340	0.6	5.7	44.3	981.5
09/05/2018 2:47	62	1.9	5.8	44.3	981.5
09/05/2018 2:48	42	1.5	5.8	44.3	981.7
09/05/2018 2:49	330	0	5.8	44.4	981.5
09/05/2018 2:50	352	0.6	5.9	44.3	981.5
09/05/2018 2:51	66	2.8	5.7	44.3	981.7

Location POR3

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 3:38	72.04	3.083	5.52	--	973
09/05/2018 3:39	116.6	2.716	5.531	--	974
09/05/2018 3:40	95.2	4.208	5.531	--	974
09/05/2018 3:41	103.1	3.272	5.531	--	974
09/05/2018 3:42	106.2	1.982	5.531	--	974
09/05/2018 3:43	61.05	2.153	5.535	--	974
09/05/2018 3:44	95.9	2.438	5.545	--	974
09/05/2018 3:45	83.8	2.71	5.532	--	974
09/05/2018 3:46	97.7	3.981	5.531	--	974
09/05/2018 3:47	88.1	4.006	5.514	--	974
09/05/2018 3:48	83.6	2.842	5.493	--	974
09/05/2018 3:49	92	2.602	5.491	--	974

09/05/2018 3:50	79.6	2.956	5.493	--	974
09/05/2018 3:51	110.3	4.967	5.493	--	974
09/05/2018 3:52	99	2.298	5.494	--	974
09/05/2018 3:53	80.6	2.571	5.524	--	974
09/05/2018 3:54	112	2.804	5.531	--	974
09/05/2018 3:55	104.5	3.26	5.531	--	974
09/05/2018 3:56	102.9	3.677	5.531	--	974
09/05/2018 3:57	98.2	2.672	5.531	--	974
09/05/2018 3:58	107.7	2.425	5.534	--	974
09/05/2018 3:59	100.9	3.614	5.531	--	974
09/05/2018 4:00	102.4	2.766	5.531	--	974
09/05/2018 4:01	93.5	3.285	5.531	--	974

Location POR4

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 3:29	123	2	5.9	58.2	982.2
09/05/2018 3:30	129	1.8	5.9	60.2	982.2
09/05/2018 3:31	94	2.5	5.6	58	982.2
09/05/2018 3:32	126	1.3	5.8	56.9	982.2
09/05/2018 3:33	142	1.1	5.6	53.2	982.2
09/05/2018 3:34	145	2.6	5.6	51.5	982.2
09/05/2018 3:35	94	2.4	5.5	50.9	982.2
09/05/2018 3:36	113	1.6	5.5	51.1	982.2
09/05/2018 3:37	131	1	5.6	50.8	982
09/05/2018 3:38	118	1	5.6	50.9	982.2
09/05/2018 3:39	121	0.9	5.5	50.7	982.2
09/05/2018 3:40	120	1.1	5.5	50.5	982.2
09/05/2018 3:41	122	1.5	5.5	50.4	982
09/05/2018 3:42	127	0.7	5.5	49.8	982
09/05/2018 3:43	121	1.3	5.6	49.6	982
09/05/2018 3:44	125	1.4	5.5	49.2	982
09/05/2018 3:45	129	2.1	5.4	48.6	982
09/05/2018 3:46	128	1.6	5.4	48.1	982
09/05/2018 3:47	141	2	5.5	47.8	982.2
09/05/2018 3:55	152	3.3	5.4	46.4	982.2
09/05/2018 3:56	123	1.3	5.5	46.3	982.2
09/05/2018 3:57	133	0.5	5.5	46.2	982
09/05/2018 3:58	123	1.6	5.5	46.1	981.9
09/05/2018 3:59	122	0.6	5.5	46.1	981.9

Location POR5

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 2:03	115	1.6	6.4	49.1	983.3
09/05/2018 2:04	112	2.8	6.4	49	983.3
09/05/2018 2:05	117	3.3	6.4	48.1	983.3
09/05/2018 2:06	105	3.2	6.4	48.1	983.3
09/05/2018 2:07	131	2.4	6.4	48.7	983.3
09/05/2018 2:08	121	3.5	6.3	48.8	983.2
09/05/2018 2:09	127	3.9	6.3	48.2	983.2
09/05/2018 2:10	143	2.4	6.5	48.7	983.2
09/05/2018 2:11	133	2.3	6.2	49.2	983.3
09/05/2018 2:12	120	3.1	6.2	48.5	983.3
09/05/2018 2:13	127	2.1	6.5	48.1	983.4
09/05/2018 2:14	128	2.5	6.3	48.8	983.4
09/05/2018 2:15	119	1.6	6.1	49	983.3
09/05/2018 2:16	130	1.9	6.3	48.8	983.2
09/05/2018 2:17	128	1.3	6.3	49.1	983.3
09/05/2018 2:18	129	3.4	6.2	48.9	983.3
09/05/2018 2:19	125	1.7	6.3	49.5	983.3
09/05/2018 2:20	134	1.6	6.4	49.2	983.3
09/05/2018 2:21	110	1.3	6.3	49.2	983.3
09/05/2018 2:22	139	2.4	6.2	49.3	983.3
09/05/2018 2:23	104	2.2	6.2	48.7	983.2
09/05/2018 2:24	140	2.2	6.3	48.8	983.2
09/05/2018 2:25	135	2.1	6	49.3	983.3
09/05/2018 2:26	134	1.1	6.1	48.8	983.3

Location POR6

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 1:38	76	1.1	9.7	29.2	982.5
09/05/2018 1:39	84	0.7	8	34	982.5
09/05/2018 1:40	98	1.5	7.7	35.8	982.7
09/05/2018 1:41	234	1.7	7.2	37.8	982.5
09/05/2018 1:42	182	0	7.2	39.2	982.7
09/05/2018 1:43	184	2.9	6.7	40.2	982.7
09/05/2018 1:44	10	0	6.8	40.4	982.5
09/05/2018 1:45	87	0.9	6.9	40.7	982.7
09/05/2018 1:46	180	1.3	6.6	41.3	982.7
09/05/2018 1:47	84	0.6	6.9	41.7	982.5
09/05/2018 1:48	96	1.9	6.6	41.3	982.5
09/05/2018 1:49	146	2.5	6.6	41.2	982.5
09/05/2018 1:50	54	1.5	6.5	41.6	982.5
09/05/2018 1:51	314	1.4	6.5	41.6	982.5
09/05/2018 1:52	342	0.6	6.6	41.7	982.5
09/05/2018 1:53	339	1.2	6.5	41.3	982.5
09/05/2018 1:54	39	1	6.5	41.9	982.5
09/05/2018 1:55	18	0.6	6.5	41.6	982.5
09/05/2018 1:56	55	0.9	6.5	41.3	982.5
09/05/2018 1:57	36	0.7	6.5	41.4	982.5
09/05/2018 1:58	135	2.5	6.4	41.7	982.5
09/05/2018 1:59	31	2.3	6.4	41.5	982.4
09/05/2018 2:00	64	1.2	6.4	41.8	982.4
09/05/2018 2:01	40	0.4	6.3	42	982.4

Location POR7

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 2:17	28	0.7	12.9	15.9	983.7
09/05/2018 2:18	99	1.7	8.9	25.6	983.7
09/05/2018 2:19	105	2.3	7	32.6	983.7
09/05/2018 2:20	105	0.6	8.4	37.2	983.7
09/05/2018 2:21	105	0.9	7.5	37.8	983.7
09/05/2018 2:22	106	1	7.1	39.2	983.7
09/05/2018 2:23	106	1.5	6.8	40.6	983.7
09/05/2018 2:24	113	3.7	6.6	41.6	984
09/05/2018 2:25	115	1.7	6.5	41.7	983.7
09/05/2018 2:26	114	1.8	6.3	42	983.7
09/05/2018 2:27	114	0.8	6.5	42.1	983.7
09/05/2018 2:28	114	1.8	6.5	42	983.9
09/05/2018 2:29	114	0	6.5	41.8	983.7
09/05/2018 2:30	114	0.9	6.6	41.7	983.7
09/05/2018 2:31	114	1	6.2	41.3	983.7
09/05/2018 2:32	114	0.9	6.3	42.2	983.7
09/05/2018 2:33	115	0.9	6.4	42	983.7
09/05/2018 2:34	115	2.6	6.2	42	983.7
09/05/2018 2:35	115	1.3	6.1	42.4	983.7
09/05/2018 2:36	115	0.8	6	42.6	983.7
09/05/2018 2:37	115	0.4	6.2	42.7	983.5
09/05/2018 2:38	115	2.1	6	42.9	983.7
09/05/2018 2:39	115	0.7	6	42.8	983.7
09/05/2018 2:40	115	0.7	6	43	983.7

Location POR8 (from POR4 Monitor)

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 3:20	320	--	--	--	--
09/05/2018 3:21	337	--	--	--	--
09/05/2018 3:22	123	1.7	11.6	35.4	982.2
09/05/2018 3:23	113	1.1	6.7	45.9	982.2
09/05/2018 3:24	133	1.1	7.8	49.7	982.2
09/05/2018 3:25	118	1.2	6.3	51	982.2
09/05/2018 3:26	122	0.9	6.4	60.6	982.2
09/05/2018 3:27	111	1.9	5.9	56	982.2
09/05/2018 3:28	119	0.9	6.4	58.5	982.2
09/05/2018 3:29	123	2	5.9	58.2	982.2
09/05/2018 3:30	129	1.8	5.9	60.2	982.2
09/05/2018 3:31	94	2.5	5.6	58	982.2

09/05/2018 3:32	126	1.3	5.8	56.9	982.2
09/05/2018 3:33	142	1.1	5.6	53.2	982.2
09/05/2018 3:34	145	2.6	5.6	51.5	982.2
09/05/2018 3:35	94	2.4	5.5	50.9	982.2
09/05/2018 3:36	113	1.6	5.5	51.1	982.2
09/05/2018 3:37	131	1	5.6	50.8	982
09/05/2018 3:38	118	1	5.6	50.9	982.2
09/05/2018 3:39	121	0.9	5.5	50.7	982.2
09/05/2018 3:40	120	1.1	5.5	50.5	982.2
09/05/2018 3:41	122	1.5	5.5	50.4	982
09/05/2018 3:42	127	0.7	5.5	49.8	982
09/05/2018 3:43	276	0	18.5	22.6	980.9

Location POR9

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 1:54	245	0	7.4	49.6	982.2
09/05/2018 1:55	246	0	7.5	49.9	982.2
09/05/2018 1:56	225	0	7	49.2	982
09/05/2018 1:57	230	1.5	6.4	48.3	982.2
09/05/2018 1:58	234	0.4	6.3	47.6	982.2
09/05/2018 1:59	226	0	6.2	47	982
09/05/2018 2:00	225	0	6.2	46.5	982
09/05/2018 2:01	233	0.6	6	46	982
09/05/2018 2:02	231	1.5	6	45.5	982
09/05/2018 2:03	224	0	6	45.2	982
09/05/2018 2:04	223	0	5.9	45	982
09/05/2018 2:05	231	0.5	5.8	44.8	982
09/05/2018 2:06	236	0	5.8	44.7	982
09/05/2018 2:07	234	0.7	5.9	44.5	982
09/05/2018 2:08	230	0.7	5.8	44.4	981.9
09/05/2018 2:09	232	1.1	5.8	44.2	981.9
09/05/2018 2:10	238	0	5.8	44.2	981.9
09/05/2018 2:11	231	0.7	5.8	44.3	981.9
09/05/2018 2:12	231	0.9	5.8	44.3	982
09/05/2018 2:13	225	0	5.8	44.3	981.9
09/05/2018 2:14	224	0	5.8	44.3	982
09/05/2018 2:15	231	1	5.8	44.4	981.9
09/05/2018 2:16	229	0	5.7	44.4	982
09/05/2018 2:17	232	1	5.7	44.3	982

Location POR10

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 1:13	201	0.8	7.4	41	983.2
09/05/2018 1:14	178	1	7	40.8	983.2
09/05/2018 1:15	204	0	7.1	40.6	983.5
09/05/2018 1:16	128	1.2	7	40.5	983.4
09/05/2018 1:17	173	0.7	6.9	40.4	983.2
09/05/2018 1:18	142	1	6.9	40.4	983.2
09/05/2018 1:19	198	0.6	7	40.4	983.4
09/05/2018 1:20	53	3.3	6.5	40.3	983.4
09/05/2018 1:21	192	0	6.8	40.3	983.2
09/05/2018 1:22	201	0.4	6.8	40.3	983.4
09/05/2018 1:23	84	2.6	6.7	40.3	983.2
09/05/2018 1:24	128	2	6.7	40.2	983.2
09/05/2018 1:25	222	1.2	6.8	40.2	983.2
09/05/2018 1:26	191	0.7	6.8	40.2	983
09/05/2018 1:27	201	0.8	6.9	40.3	983
09/05/2018 1:28	205	0.9	6.8	40.3	983
09/05/2018 1:29	195	0.5	6.7	40.4	983
09/05/2018 1:30	237	0.8	6.8	40.4	983.2
09/05/2018 1:31	205	0.6	6.5	40.5	983
09/05/2018 1:32	116	1.2	6.8	40.5	983
09/05/2018 1:33	188	0.8	6.5	40.6	983.2
09/05/2018 1:34	168	0.9	6.5	40.6	983
09/05/2018 1:35	110	2.8	6.3	40.6	983.2
09/05/2018 1:36	187	0.9	6.8	40.7	983

Location POR11

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 0:38	132	1.4	6.9	39.4	985
09/05/2018 0:39	114	0.6	7.4	39.2	985
09/05/2018 0:40	116	0.4	7.2	39	985
09/05/2018 0:41	141	2.2	7	38.9	985
09/05/2018 0:42	114	1.4	7	38.9	984.9
09/05/2018 0:43	121	0	6.9	38.8	984.9
09/05/2018 0:44	132	1.6	6.8	38.8	984.9
09/05/2018 0:45	120	1.2	6.9	38.9	984.9
09/05/2018 0:46	151	1.7	6.7	39	984.9
09/05/2018 0:47	133	0.5	6.6	39.1	984.9
09/05/2018 0:48	96	1.4	7	39.1	984.9
09/05/2018 0:49	122	1.3	6.8	39.2	984.9
09/05/2018 0:50	120	0.5	6.7	39.2	984.9
09/05/2018 0:51	119	0.9	6.7	39.3	984.9
09/05/2018 0:52	106	0.5	6.9	39.3	984.7
09/05/2018 0:53	134	2.6	6.8	39.4	984.7
09/05/2018 0:54	112	1.4	7	39.4	984.7
09/05/2018 0:55	116	0.4	6.6	39.6	984.7
09/05/2018 0:56	124	1.6	6.7	39.6	984.7
09/05/2018 0:57	118	1.1	6.7	39.7	984.7
09/05/2018 0:58	116	0.7	6.8	39.8	984.7
09/05/2018 0:59	114	0.5	6.8	39.8	984.7
09/05/2018 1:00	123	1.2	7	39.9	984.7
09/05/2018 1:01	172	0	7	40.1	984.7

Location POR12

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 0:38	256	0.5	6.7	43.1	988.2
09/05/2018 0:39	256	0.7	6.6	44.1	988.2
09/05/2018 0:40	253	0	6.8	43.9	988.2
09/05/2018 0:41	253	0	6.6	43.6	988.2
09/05/2018 0:42	256	0.7	6.7	43.7	988.2
09/05/2018 0:43	256	0.9	6.7	43.5	988.2
09/05/2018 0:44	256	0.4	6.6	43.7	988.2
09/05/2018 0:45	256	1	6.5	43.7	988.2
09/05/2018 0:46	256	1.4	6.5	43.9	988.2
09/05/2018 0:47	256	0.7	6.5	44.4	988.2
09/05/2018 0:48	257	0.4	6.5	44.2	988.2
09/05/2018 0:49	256	1	6.5	44.2	988.2
09/05/2018 0:50	255	0.7	6.5	44.1	988.2
09/05/2018 0:51	252	2.2	6.5	44	988.2
09/05/2018 0:52	256	1.5	6.5	43.9	988.2
09/05/2018 0:53	253	0	6.4	43.9	988.2
09/05/2018 0:54	256	1.9	6.4	43.9	988.2
09/05/2018 0:55	256	0.7	6.3	43.9	988.2
09/05/2018 0:56	256	1	6.4	43.9	988
09/05/2018 0:57	247	1.4	6.5	43.8	988.2
09/05/2018 0:58	266	1.7	6.4	43.8	988
09/05/2018 0:59	266	2	6.4	43.8	988
09/05/2018 1:00	267	0.7	6.3	43.8	988
09/05/2018 1:01	267	1.1	6.4	43.8	987.9

Location POR13

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 1:14	200	0.9	6.4	45.8	988
09/05/2018 1:15	199	0	6.5	45.5	988.2
09/05/2018 1:16	200	1.1	6.3	45	988
09/05/2018 1:17	202	0.4	6.3	44.8	988
09/05/2018 1:18	199	0	6.3	44.4	988.2
09/05/2018 1:19	198	0	6.2	44.4	988
09/05/2018 1:20	201	1.2	6.3	44.2	988
09/05/2018 1:21	197	0	6.2	44.1	988
09/05/2018 1:22	197	0	6.2	44	988
09/05/2018 1:23	197	0	6.2	43.9	988
09/05/2018 1:24	200	0.9	6.2	44	988
09/05/2018 1:25	197	0	6.1	43.9	988

09/05/2018 1:26	200	1	6.2	43.8	988
09/05/2018 1:27	200	1	6.2	43.8	988
09/05/2018 1:28	200	1.1	6.2	43.8	987.9
09/05/2018 1:29	200	0.5	6	43.7	987.9
09/05/2018 1:30	202	0	6	43.8	988
09/05/2018 1:31	201	0.6	6.1	43.7	987.9
09/05/2018 1:32	198	0.4	6.1	43.8	987.7
09/05/2018 1:33	200	0.7	6	43.8	987.7
09/05/2018 1:34	200	0.9	6.1	43.8	987.7
09/05/2018 1:35	200	1.3	6.2	43.8	987.7
09/05/2018 1:36	200	0.7	6.1	43.9	987.7
09/05/2018 1:37	200	0.8	6	43.9	987.9

Location POR14

YYYY-MM-DD HH:MM:SS	Wind Direction	Wind Speed (m/s)	Temperature (deg C)	Relative Humidity (%)	Barometric Pressure (hPa)
09/05/2018 3:17	77	2.6	5.4	51.2	982.4
09/05/2018 3:18	107	1.2	5.4	51.5	982.4
09/05/2018 3:19	122	1.2	5.5	51.1	982.3
09/05/2018 3:20	79	2.9	5.6	51.2	982.3
09/05/2018 3:21	129	0.5	5.5	51.5	982.3
09/05/2018 3:22	314	0.7	5.6	51.6	982.3
09/05/2018 3:23	322	0.8	5.6	52.3	982.3
09/05/2018 3:24	325	2.7	5.3	52	982.3
09/05/2018 3:25	325	1	5.6	52.7	982.3
09/05/2018 3:26	327	1.9	5.4	52.7	982.2
09/05/2018 3:27	333	2.3	5.3	52.8	982.2
09/05/2018 3:28	320	0.7	5.4	53	982.2
09/05/2018 3:29	90	1.7	5.4	52.3	982.1
09/05/2018 3:30	89	3.2	5.4	52.7	982.2
09/05/2018 3:31	147	0	5.5	52.4	982.2
09/05/2018 3:32	63	2.5	5.3	51.5	982.1
09/05/2018 3:33	80	2	5.4	51.3	982.2
09/05/2018 3:34	59	2.3	5.2	51.1	982.2
09/05/2018 3:35	84	1.8	5.4	50.9	982.2
09/05/2018 3:36	112	1.3	5.4	50.6	982.2
09/05/2018 3:37	89	2.8	5.5	50.6	982.1
09/05/2018 3:38	84	2.5	5.4	50.7	982.1
09/05/2018 3:39	62	1.6	5.3	50.7	982.1
09/05/2018 3:40	86	2.5	5.4	50.6	982.2