Annual Noise Monitoring of

Durham York Energy Centre Operations

Environmental Compliance Approval No. 7306-8FDKNX

January 10, 2017
Project: 114-0318-200

Prepared for

Covanta Durham York Renewable Energy L.P.

Prepared by

Kathryn Katsiroumpas, B.Sc.E., P.Eng.

VALCOUSTICS
Canada Ltd.

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Durham York Energy Centre Operations

Environmental Compliance Approval No. 7306-8FDKNX

1.0 INTRODUCTION

Valcoustics Canada Ltd. (VCL) was retained by Covanta Durham York Renewable Energy L.P. (Covanta) to conduct an Acoustic Audit of actual noise emissions due from the operations of the Durham York Energy Centre (DYEC) located in the Municipality of Clarington, Ontario. This Acoustic Audit Report (Audit) is required as per Section 5.0 Noise Monitoring and Report Plan Methodology of the Noise Monitoring and Reporting Plan (NMRP). The NMRP was developed in accordance with Section 19 of the Environmental Assessment (EA) and condition 7.(5)(a) and (b) of the Environmental Compliance Approval (ECA) No. 7306-8FDKNX, issued June 28, 2011 and amended on August 12, 2014, October 24, 2014, December 3, 2015, February 24, 2015 and March 14, 2016. An initial Acoustic Assessment Report (AAR) was completed by Golder Associates, dated March 2011 (Reference 3) as part of the supporting documentation prepared to obtain an ECA.

An Acoustic Audit dated May 5, 2015 (Reference 1) and a Supplemental Acoustic Audit dated November 23, 2015 (Reference 2) were submitted to the Ministry of Environment and Climate Change (MOE) and found to satisfy the reporting requirements of the NMRP.

Relevant sections of the EA and ECA are included as Appendix A.

This report fulfils the monitoring and compliance requirements established by the NMRP. Monitoring was completed from September 6 to 14, 2016. As part of the required NMRP annual review of the DYEC noise monitoring program and in conformance with ECA amendment of February 24, 2016, it is proposed that the NMRP should be revised, following MOE acceptance, to revoke the requirement to carry out future annual acoustic audit measurements unless facility changes dictate or requested by the Director of the MOE.

1.1 SUMMARY

The receptor based sound measurements and subjective observations indicate compliance with the sound level limits in MOE Publication NPC-205 as well as the newly released NPC-300 (Reference 6). Therefore, this report concludes that the DYEC continues to be in compliance with the requirements of the NMRP, prepared in accordance with the requirements of the EA Approval.

2.0 SITE AND SURROUNDING AREA DESCRIPTION

The DYEC facility accepts Municipal Solid Waste (MSW) from the Regions of Durham and York. The sources of waste are post-diversion residual waste collected at curbside as well as any residual waste materials collected at public drop-off centres and transfer stations. The only institutional, commercial, and industrial (IC&I) waste managed at the Facility includes residual waste where the Regions' have waste management procedures in place.

The maximum MSW processing rate for the facility established by the ECA is 140,000 tonnes/year of waste. The Facility operates on a continuous basis; 24 hours/day, 7 days/week, 365 days/year. Waste may be delivered 6 days per week between 0700 to 1900 hours. The MSW receiving schedule may be adjusted depending on demand and facility needs within the established hours indicated in the ECA (i.e., waste can only be received from Monday to Saturday - excluding statutory holidays, between 0700 and 1900 hours - ECA's Condition 4(1)(b)). Note that currently, the facility typically only accepts MSW deliveries on Saturdays following holiday weekends or as waste needs require.

The Facility consists of two thermal treatment trains, each equipped with independently operated boilers/furnaces and air pollution control equipment. The treated exhaust gases are vented to a common 87.6 m stack and released into the atmosphere.

MSW is only accepted from approved haulers that have a valid waste licence except for municipal or exempt vehicles as per Section 16(2) (a) of Regulation 347 General - Waste Management, made under the Environmental Protection Act, R.S.O. 1990. All incoming waste vehicles must proceed to a weigh scale to allow the vehicle weight, waste type and source to be recorded by the scale operator. A maximum of 7,350 cubic metres of waste storage is provided in the storage pit with waste stored above and below the tipping floor level.

Equipment interfacing with the external environment at the Facility that were considered potential noise sources within the AAR include: HVAC units, roof ventilation units, a closed-loop cooling water system, a transformer, silo filling using truck mounted blowers, a silo vent dust collector, the main exhaust stack, on-site truck and front end loader traffic, an air cooled condenser, process louvres, bay doors, emergency generator and diesel fire water pumps. On-site trucking (including MSW, reagent delivery, ash/metal pickup) and periodic testing of the emergency generator and diesel fire water pumps will be limited to daytime business (0700 to 1900) hours only.

Table 1 presents general information about the Facility relevant to this Audit report.

TABLE 1 – FACILITY DESCRIPTION

Facility	Durham – York Energy Centre
Location:	1835 Energy Drive, Courtice, Ontario, L1E 2R2 Clarington Energy Business Park, Clarington, Ontario
Main Activities/ Equipment Used:	Thermal Treatment of Solid Waste
Production:	140,000 tonnes per year at MCR 218 tonne/day at 13 MJ/kg per train.

The location of the Facility is presented Figure 1. A site plan of the facility is included in Figures 2a and 2b.

Currently, the surrounding area is primarily industrial. The lands are designated as Business Park (south of Highway 401) and Light Industrial (north of Highway 401) within the Official Plan. The DYEC is located within the Clarington Energy Business Park which was created to intensify the industrial uses in the surrounding vacant lands. Only one residential dwelling will remain within the Clarington Energy Business Park moving forward, that being POR002.

The surrounding area also includes:

- the Canadian National Railways (CN) Belleville Subdivision and the Courtice Water Pollution Control Plant to the south;
- vacant and existing industrial lands, farm land and Darlington Provincial Park to the west;
- the newly constructed Energy Drive, vacant industrial lands and Highway 401 to the north;
- existing industrial lands, farm land, park lands and the Darlington Nuclear Facility to the east.

3.0 SUMMARY OF NOISE MITIGATION MEASURES

The majority of activities associated with the facility occur within the building. As per the AAR, the following noise mitigation measures have been implemented:

- The emergency generator, located outside just west of the Tipping Floor (see Figure 2a), has been fitted with an acoustic enclosure, complete with air intake/discharge silencers and engine exhaust muffler.

- The fire water pumps are housed in a building near the south east corner of the site and are fitted with exhaust mufflers.

- Protocol for the facility ensures that the weekly testing of the emergency generator and fire water pumps only occurs during business (0700 to 1900) hours, is not done concurrently and is of 30 minutes duration each.

4.0 SOURCE/RECEPTOR VERIFICATION

4.1 NOISE ASSESSMENT RECEPTORS

The AAR assessed the noise impact of the facility at three receptor locations. Audit measurements were also completed in the vicinity of these receptors:

- POR001: The two-storey dwelling at this location has been demolished as part of the Energy Drive construction. However, a POR to the west has been maintained to be consistent with the AAR. The POR is a two-storey farmhouse approximately 1100 m from the property line west of the facility. This POR has been designated as POR001rev.

- POR002: Two-storey dwelling approximately 690 m from the property line east of the facility.

As part of the Acoustic Audit, VCL collected long-term (one week) sound level measurements before DYEC startup (November 13 to 24, 2014) and during DYEC operations (April 6 to 16, 2015 and October 5 to 15, 2015) at all three measurement locations representative of the POR's. Measurements were repeated at these locations from September 6 to 14, 2016. These measurement locations are designated as M001, M002a/b and M003, see Figure 1. With the exception of M003, the sound measurement locations are significantly closer to DYEC than the corresponding POR's. The noise monitors logged acoustic data every hour for the duration of each monitoring period. As required by the NMRP, data is presented to include hourly Leq and L90 sound levels.

To date, DYEC has not received any noise complaints from nearby residential properties since becoming operational.

4.2 NOISE SOURCES

Noise sources within the facility are consistent with those considered in the AAR and include HVAC units, roof ventilation units, closed loop cooling water cooler, the switch yard, reagent silo filling and dust collector vents, main exhaust stack, front end loader movements, air cooled condenser, the tipping hall (through the bay doors and louvres), louvres for the boiler, air pollution control and turbine process, the grizzly building and the residue building, emergency generator and the fire water pumps.

There are a few minor differences in operations than those outlined in the AAR, however, they have minimal influence on the resulting noise impact:

- the emergency generator is 300 kW not 250 kW;
- all truck movements occur off of Courtice Road; and
- the average number of trucks delivering MSW will be 20 per day and picking up residual material (ash, metal) will be six per day. During a worst case hour, a total of seven trucks would be expected on-site. See Appendix B for truck logs from DYEC for the monitoring period. During the monitoring period there were an average of 17 trucks delivering MSW per day and six trucks picking up residual material.

The facility consists of a number of discrete noise sources. However, at a distance, sound from the facility is continuous with little to no fluctuation based on activities occurring on-site (i.e., emergency generator testing). Emergency generator testing occurred on September 8, 2016 and fire water pump testing occurred on September 11, 2016.

5.0 NOISE GUIDELINES

5.1 SOUND LIMITS

The ECA references the MOE noise guidelines contained in MOE Publication NPC-205 as the supporting AAR and the underlying EA and NMRP were all conducted to demonstrate compliance with this guideline. See Appendix C. It should be noted that these provincial guidelines have subsequently been updated by Publication NPC-300, "Environmental Noise Guideline, Stationary

and Transportation Sources - Approval and Planning". Nevertheless, this report demonstrates compliance with NPC-205, in conformance with MOE discussions, the ECA and all supporting documentation. Note that, in this circumstance, a facility in compliance with NPC-205 will also comply with NPC-300.

Sound measurements and subjective observations indicate that the area should be considered Class 1 - i.e., an area where the background sound level is dominated by "urban hum". However, to be conservative and consistent with the AAR, the area was assessed as Class 2. Class 2 is only applicable where the background sound level is dominated by the activities of people, usually road traffic, during the daytime and the natural environment in the evening and nighttime. The sound level limits are established by the ambient due to road traffic or the minimum sound level limits as follows:

TABLE 2 – APPLICABLE SOUND LEVEL LIMITS $L_{eq\ 1hr}$ (dBA)

Point of Reception (POR)	Daytime (0700 to 1900 hours)	Evening (1900 to 2300 hours)	Nighttime (2300 to 0700 hours)
POR001rev	50	45	45
POR002	50	45	45
POR003	50	45	45

Based on the pre-operational sound measurements and to remain consistent with the AAR, the above minimum sound level limits are applicable.

6.0 SOUND LEVEL MEASUREMENTS

Receptor based sound level measurements were completed of the facility from September 6 to 14, 2016.

As per the NMRP, noise measurements are to occur during Peak Facility Activity such as when the facility is operating at 100% maximum continuous rating (MCR) and generating electricity. The DYEC boilers operated at 100% MCR and were at full thermal load as measured by steam production levels during the entire monitoring period. This is considered "Peak Facility Activity", as required by the NMRP.

All sound measurements were made in accordance with MOE Publication NPC-103 *"Procedures"* (Reference 7). Hourly weather data was obtained from the Region of Durham for their weather station located at the Courtice Water Pollution Plant. See Appendix D. Where wind speeds exceeded 20 kph, the sound data was disregarded for that time period. However, wind speeds were low and weather conditions favourable for the majority of the monitoring period.

All requirements of the NMRP were followed. The off-site receptor based measurements were done for at least two locations for more than a week on a continuous basis.

7.0 ACOUSTICAL INSTRUMENTATION

Sound level measurements at all locations were made using Norsonic Nor140 sound level meters (SLM's). The SLM's were calibrated using a RION NC-74 acoustical calibrator. The measuring

microphone was equipped with a wind screen. For the sound measurements at a 4.5 m height, the microphone was affixed to a pole and an extension cable used.

8.0 RESULTS

Hourly L_{eq}, L_{10} and L_{90} statistical descriptors have been plotted for each monitoring date at each location. See Appendices E, F, G and H. L_{eq} is the energy equivalent continuous sound level; meaning the constant time averaged sound level over the time period in question. L_{90} is the sound level exceeded 90% of the time over the time period in question. L_{10} is the sound level exceeded 10% of the time over the time period in question.

The maximum and minimum hourly L_{90} values have been presented in tabular format. See Tables 3, 4, 5 and 6. Previous measurement results from the Acoustic Audit have been included for comparison purposes. Since noise from the DYEC is steady and continuous at a distance off site, the overall L_{90} statistical descriptor is a fair representation of the L_{eq} from DYEC only. The L_{90} excludes transient sound of short duration, such as train pass-bys, people noise or aeroplanes but will still include some contribution from other steady noise sources in the area (i.e., Highway 401).

Sound measurements were done at locations M001, M002a/b and M003. M002a was used for the November 2014 measurements where the monitor was located within the Copart storage yard at a height of 1.5 m. Note that this location was well screened from most noise sources in the vicinity by the property line fence. The April 2015, October 2015 and September 2016 measurements were done at M002b which is further west, just outside of the Copart fence at a height of 4.5 m. This better corresponds to the two-storey dwelling at POR002. Note that when comparing M002a and M002b, reduced ground effect and screening from the Copart fence account for a 6 to 7 dBA difference.

Sound from the DYEC facility is continuous. Even during short-term and transient activities, such as truck movements or fire water pump testing, the off-site sound levels remain continuous as these activities were not discernable. There are also numerous other noise sources in the vicinity including Highway 401, the CN Belleville Subdivision, the Courtice Water Pollution Control Plant, the Darlington Nuclear Facility, other smaller industrial uses in the area as well as the sounds of nature and people. Since noise from DYEC is steady and continuous, the L_{90} statistical descriptor best represents its noise impact as it excludes transient activities (such as train pass-bys). It is important to note however, that other steady sounds such as Highway 401, the Darlington Nuclear Facility and the Courtice Water Pollution Control Plant will all influence the L_{90}.

Subjectively, the DYEC facility was not audible in the vicinity of POR001rev, POR002 and POR003 in September 2016 which is in line with previous post-operational monitoring periods. Observations were made during the daytime period (0700 to 1200 hours). During lulls in road traffic on Highway 401 (the dominant noise source at all locations), the DYEC was not audible.

At POR003, which is the same geographical location as measurement location M003, there has been a slight but not perceptible increase in the average maximum and minimum hourly L_{90} values since November 2014. However, since the DYEC facility is not audible at this location, even during the nighttime when the ambient is at its lowest, this increase is not attributable to noise from DYEC. Highway 401 noise is dominant at this location and traffic volumes likely account for any increase in sound levels.

When a noise source is inaudible over the ambient, it is contributing little to no sound energy to the overall sound levels and thus is expected to be at least 10 dBA lower. Therefore at POR003, it can be assumed that the noise contribution from DYEC would be at least 10 dBA lower than the average minimum (September 2016) L_{90} sound levels of 52 dBA during the day/night. The resulting sound levels of 42 dBA day/night are well within the applicable sound level limits.

Since DYEC is also not audible at POR001 and POR002, it is expected that at these locations, the sound contribution from DYEC would be at least 10 dBA lower than the average minimum (October 2015) L_{90} sound levels measured at M001 and M002b. The average minimum L_{90} sound levels are 47/48 dBA at M001 and 47/49 dBA at M002a during the day/night. Thus, sound levels from DYEC are well within the sound level limits. This is a conservative assessment since the measurement locations are closer to DYEC and any additional distance attenuation has not been accounted for.

9.0 CONCLUSIONS

The sound emissions from the DYEC were not audible during the September 2016 post-operational measurement period and are considered to be within the sound level limits stated in the MOE Publication NPC-205. Thus it is concluded that the facility remains in compliance with NPC-205 and NPC-300 as well as ECA No. 7306-8FDKNX.

As part of the required NMRP annual review of the DYEC noise monitoring program and in conformance with ECA amendment of February 24, 2016, it is proposed that the NMRP should be revised, following MOE acceptance, to revoke the requirement to carry out future annual acoustic audit measurements unless facility changes dictate or requested by the Director of the MOE.

10.0 REFERENCES

1. “Acoustic Audit of Durham York Energy Centre Operations, Environmental Compliance Approval No. 7306-8FDKNX”, Valcoustics Canada Ltd., Project: 114-318, May 8, 2015.

2. “Supplemental Acoustic Audit of Durham York Energy Centre Operations, Environmental Compliance Approval No. 7306-8FDKNX”, Valcoustics Canada Ltd., Project 114-318-100. November 23, 2015.

3. “Acoustic Assessment Report, Durham York Energy Centre”, Golder Associates, March 2011.

4. “Noise Monitoring and Reporting Plan, Durham York Energy Centre”, Golder Associates, September 2011.

5. “Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)”, Ontario Ministry of the Environment, Publication NPC-205, October 1995.

6. “Environmental Noise Guideline – Stationary and Transportation Sources, Approval and Planning”, Ontario Ministry of the Environment, Publication NPC-300, August 2013.

7. “Procedures”, Ontario Ministry of the Environment, Publication NPC-103, August 1978.

8. "Information to be Submitted for Approval of Stationary Sources of Sound", Ontario Ministry of the Environment, Publication NPC-233, October 1995.

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TABLE 3

SUMMARY OF PRE-OPERATIONAL SOUND MEASUREMENTS (HOURLY L_{90})

Monitoring Date	M001[1]				M002a[1]				M003[1]			
	Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
Thursday, November 13, 2014	52	49	–	–	49	45	–	–	60	57	–	–
Friday, November 14, 2014	55	51	52	46	52	47	50	43	59	48	58	51
Saturday, November 15, 2014	52	46	51	44	46	40	47	40	58	52	54	46
Sunday, November 16, 2014	49	41	45	37	44	33	42	33	59	49	52	46
Monday, November 17, 2014	54	42	49	37	51	38	49	32	60	49	51	43
Friday, November 21, 2014	54	45	53	47	52	39	51	46	58	45	54	46
Sunday, November 23, 2014	52	41	50	43	51	42	47	41	60	52	54	45
Average for Pre-operational Monitoring Period	*53*	*45*	*50*	*42*	*49*	*41*	*48*	*39*	*59*	*50*	*54*	*46*

Notes:

(1) See Figure 1.
(2) Day/Evening – 0700 to 2300 hours.
(3) Night – 2300 to 0700 hours.

TABLE 4

COMPARISON OF PRE-OPERATIONAL AND POST-OPERATIONAL SOUND MEASUREMENTS (HOURLY L_{90})

APRIL 2015

Monitoring Date	M001[1]				M002b[1]				M003[1]			
	Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
Monday, April 6, 2015	52	46	–	–	54	49	–	–	59	53	–	–
Tuesday, April 7, 2015	52	46	43	48	54	48	55	51	57	53	54	45
Saturday, April 11, 2015	54	50	–	–	56	51	–	–	58	53	–	–
Sunday, April 12, 2015	51	46	49	42	54	49	53	50	57	49	55	45
Monday, April 13, 2015	55	46	53	47	58	50	55	48	61	51	58	49
Tuesday, April 14, 2015	56	49	53	45	58	50	56	52	63	48	65	52
Wednesday, April 15, 2015	58	46	58	48	59	51	61	52	58	48	51	47
Thursday, April 16, 2015	–	–	52	47	–	–	57	50	–	–	58	48
Average for Post-operational (April 2015) Monitoring Period	*54*	*47*	*53*	*46*	*56*	*50*	*56*	*51*	*59*	*51*	*57*	*48*
Average for Pre-operational (November 2014) Monitoring Period	*53*	*45*	*50*	*42*	*49*	*41*	*48*	*39*	*59*	*50*	*54*	*46*

Notes:

(1) See Figure 1.
(2) Day/Evening – 0700 to 2300 hours.
(3) Night – 2300 to 0700 hours.

TABLE 5

COMPARISON OF PRE-OPERATIONAL AND POST-OPERATIONAL SOUND MEASUREMENTS (HOURLY L_{90})

OCTOBER 2015

Monitoring Date	M001[1]				M002b[1]				M003[1]			
	Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
Monday, October 5, 2015	49	37	–	–	54	45	–	–	50	43	–	–
Tuesday, October 6, 2015	54	46	52	44	56	50	52	43	54	48	53	48
Wednesday, October 7, 2015	54	46	55	47	59	50	57	52	54	47	56	49
Thursday, October 8, 2015	54	47	55	51	58	55	54	47	55	48	55	51
Friday, October 9, 2015	56	49	55	46	60	52	58	50	56	50	54	48
Saturday, October 10, 2015	57	40	57	51	57	50	57	49	57	42	57	51
Sunday, October 11, 2015	54	48	51	47	59	53	54	49	61	50	58	53
Monday, October 12, 2015	47	40	46	42	58	51	55	48	47	44	49	47
Tuesday, October 13, 2015	54	50	48	42	61	56	57	51	58	52	48	45
Wednesday, October 14, 2015	55	52	54	47	57	53	55	52	56	51	54	50
Thursday, October 15, 2015	52	51	52	48	61	60	61	53	54	53	53	50
Average for Post-operational (October 2015) Monitoring Period	*53*	*46*	*53*	*47*	*58*	*52*	*56*	*49*	*54*	*48*	*54*	*49*
Average for Pre-operational (November 2014) Monitoring Period	*53*	*45*	*50*	*42*	*49*	*41*	*48*	*39*	*59*	*50*	*54*	*46*

Notes:

(1) See Figure 1.
(2) Day/Evening – 0700 to 2300 hours.
(3) Night – 2300 to 0700 hours.

TABLE 6

COMPARISON OF PRE-OPERATIONAL AND POST-OPERATIONAL SOUND MEASUREMENTS (HOURLY L_{90})

SEPTEMBER 2016

Monitoring Date	M001[1]				M002b[1]				M003[1]			
	Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]		Day/Evening[2]		Night[3]	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
Tuesday September 6, 2016	52	47	–	–	51	45	–	–	58	53	–	–
Wednesday September 7, 2016	51	45	53	51	50	45	52	50	57	50	58	52
Thursday September 8, 2016	55	50	53	49	55	49	52	48	58	50	55	52
Friday September 9, 2016	55	47	54	51	56	47	54	52	58	49	59	54
Saturday September 10, 2016	51	43	50	48	53	45	53	48	58	54	54	52
Sunday September 11, 2016	52	48	49	48	54	51	54	52	55	49	53	50
Monday September 12, 2016	53	43	51	44	56	44	51	46	64	49	65	51
Tuesday September 13, 2016	53	48	54	46	54	50	52	46	62	58	64	55
Wednesday September 14, 2016	52	49	–	–	54	51	–	–	58	55	–	–
Average for Post-operational (September 2016) Monitoring Period	*53*	*47*	*52*	*48*	*54*	*47*	*53*	*49*	*59*	*52*	*58*	*52*
Average for Pre-operational (November 2014) Monitoring Period	*53*	*45*	*50*	*42*	*49*	*41*	*48*	*39*	*59*	*50*	*54*	*46*

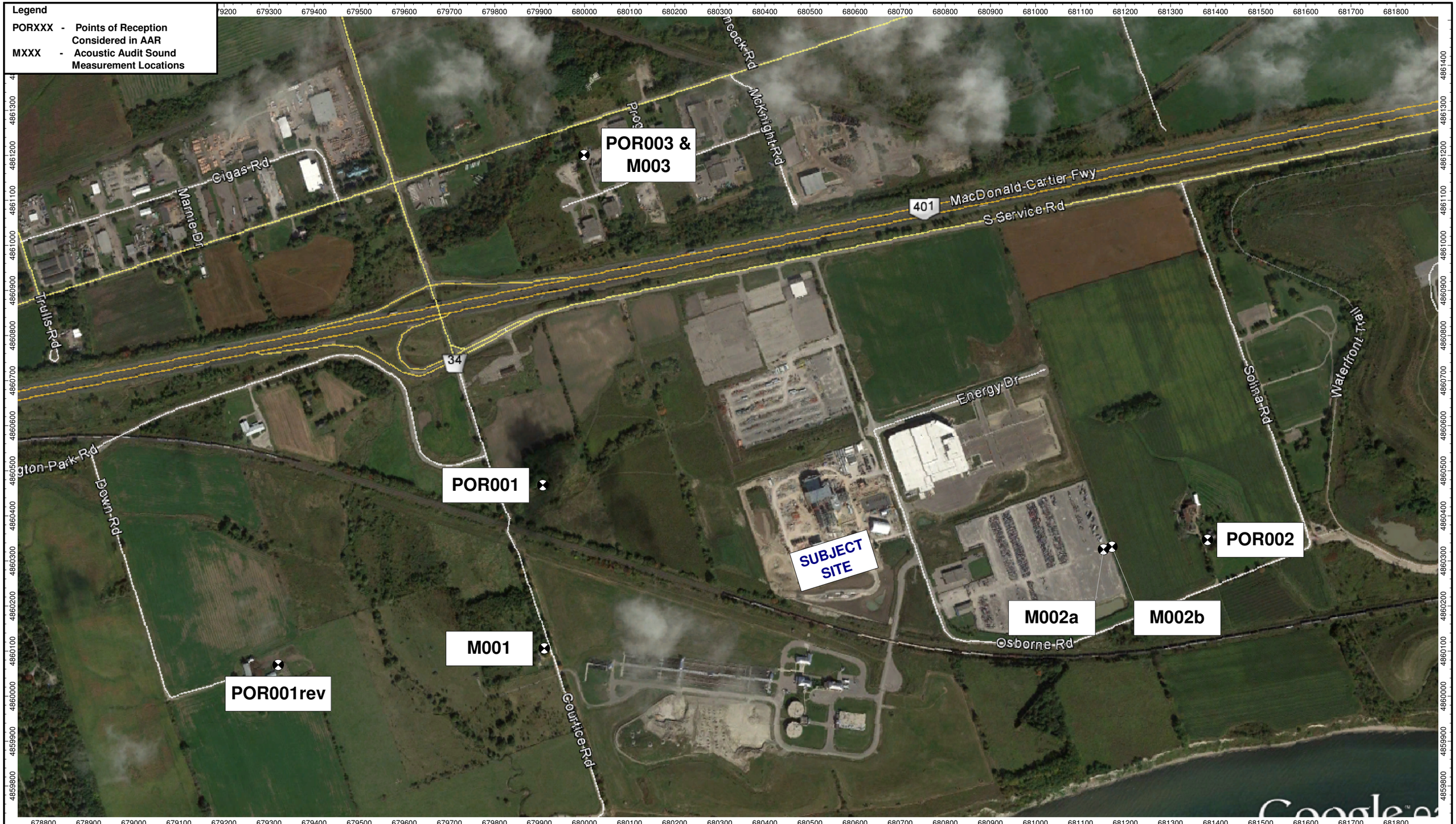
Notes:

(1) See Figure 1.
(2) Day/Evening – 0700 to 2300 hours.
(3) Night – 2300 to 0700 hours.

Legend

PORXXX - Points of Reception Considered in AAR

MXXX - Acoustic Audit Sound Measurement Locations



VALCOUSTICS Canada Ltd. consulting acoustical engineers	Title: **Area Plan with Points of Reception and Measurement Locations**	Date: **2017-01-10**	Figure: **1**
	Project Name: **DYEC - Acoustic Audit**	Project No.: **114-318-200**	

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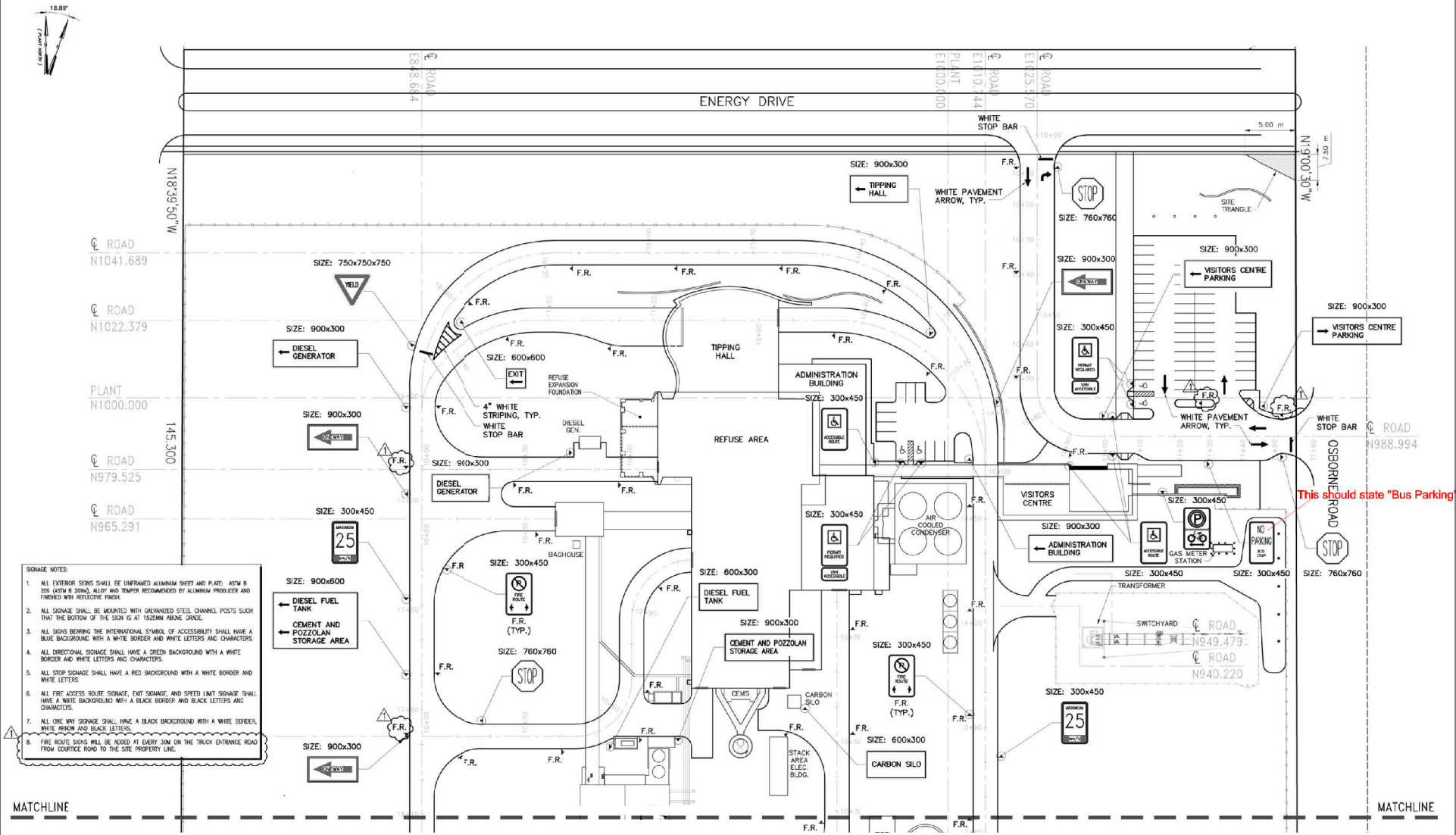
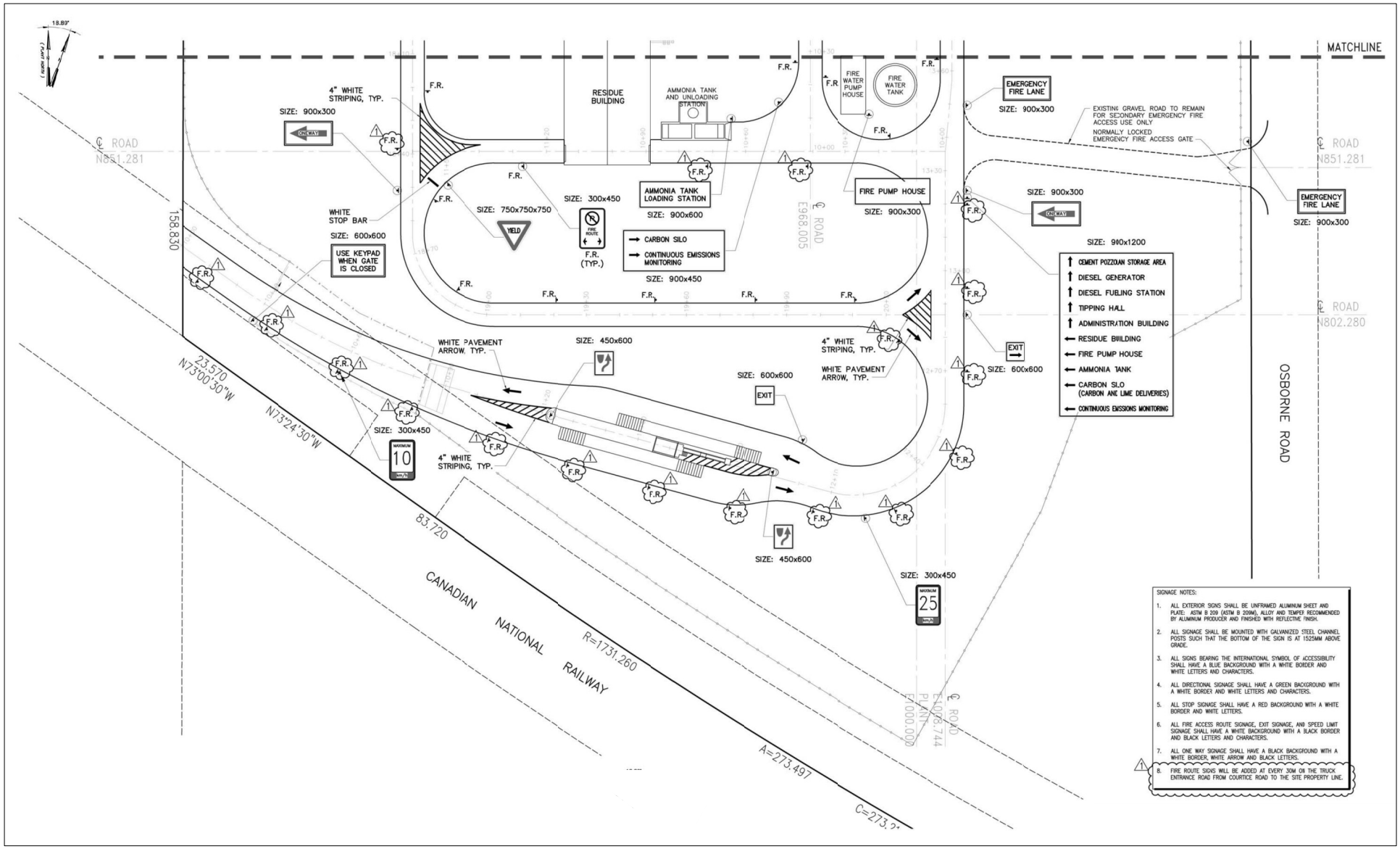
Date Plotted: 09.01.17



No.	Revision/Issue	Date

VALCOUSTICS Canada Ltd.
30 Wertheim Court, Unit 25
Richmond Hill, Ontario
Canada L4B 1B9
solutions@valcoustics.com
Phone: (905) 764-5223
Fax: (905) 764-6813

Title	Project No.	Date
Site Plan - North	114-318-200	2017-01-10
Project Name	**Scale**	**Figure**
DYEC - Acoustic Audit	N.T.S.	2a



No.	Revision/Issue	Date

VALCOUSTICS Canada Ltd.
30 Wertheim Court, Unit 25
Richmond Hill, Ontario
Canada L4B 1B9
solutions@valcoustics.com
Phone: (905) 764-5223
Fax: (905) 764-6813

Title	Project No.	Date
Site Plan - South	114-318-200	2017-01-10
Project Name	**Scale**	**Figure**
DYEC - Acoustic Audit	N.T.S.	2b

APPENDIX A

ENVIRONMENTAL COMPLIANCE APPROVAL NO. 7306-8FDKNX

Ontario

Ministry of the Environment
Ministère de l'Environnement

CERTIFICATE OF APPROVAL

MULTI-MEDIA
Number 7306-8FDKNX
Issue Date: June 28, 2011

The Regional Municipality of Durham
605 Rossland Rd E 5th Floor
Whitby, Ontario
L1N 6A3

and

The Regional Municipality of York
17250 Yonge Street
Newmarket, Ontario
L3Y 6Z1

and

Covanta Durham York Renewable Energy Limited Partnership
445 South Street
Morristown, New Jersey
United States of America
07960

Site Location: Durham York Energy Centre
72 Osbourne Road
Lot 27, Concession Broken Front, Part 1
Clarington Municipality, Regional Municipality of Durham

You have applied in accordance with Sections 9 and 27 of the Environmental Protection Act and Section 53 of the Ontario Water Resources Act for approval of:

A thermal treatment facility to be used for the receipt and manual and/or mechanical sorting of solid non-hazardous post-diversion municipal waste (Waste), temporary storage and thermal treatment of the Waste, abatement of the emissions from the processes and activities undertaken at the Site, handling, screening, sorting and/or conditioning of the residual wastes and management of the wastewater and the non-contact stormwater generated at the Site. The Facility's maximum Waste thermal treatment rate is 140,000 tonnes per year of Waste, the nominal electricity generation rate is 20 Megawatts and the nominal steam generation rate 72,000 kilograms per hour of steam.

The facility consists of the following major processes and support units:

(1) two (2) identical combustion trains, each having a nominal capacity of 218 tonnes of Waste per day venting into the atmosphere via a common exhaust stack, having an exit diameter of 1.71 metres, extending 87.6 metres above grade.

Each combustion train is an independent process train and it consists of the following main components:

(a) a stoker grate steam Boiler, having a design heat input of 118 Gigajoules per hour, equipped with a natural gas fired auxiliary Low NOx burner, having a nominal heat input of 59.5 Gigajoules per hour; and

(b) the following air pollution control equipment:

(i) a Selective Non Catalytic Reduction System (SNCR System) with ammonia injection for NOx control;
(ii) an activated carbon injection system, to reduce mercury and dioxins in flue gas;
(iii) a dry recirculation lime injection scrubber to control acid gases;
(iv) a pulse jet type baghouse to control particulate emissions;

(2) one (1) steam turbine generator set having a rated capacity of 20 Megawatts;

(3) waste and reagent storage as described in Condition 2.:

(4) fly ash conditioning system including two (2) surge bins, two (2) pugmills and seven (7) curing/storage bunkers;

(5) bottom ash sorting system including conveyors, screens, a rotary drum magnet and an eddy separator;

(6) one (1) emergency diesel generator, rated at 250 Kilowatts;

(7) natural gas-fired combustion equipment for comfort heating;

(8) a wastewater management system for collection, recirculation and reuse of the process water; and

(9) a stormwater management facility for collection, transmission and discharge of non-contact runoff at the Site, as described in the attached Schedule "G",

Note: Use of the site for any other type of waste is not approved under this Certificate, and requires obtaining a separate approval amending this Certificate.

For the purpose of this Provisional Certificate of Approval and the terms and conditions specified below, the following definitions apply:

"***Acoustic Assessment Report***" means the report, prepared in accordance with *Publication NPC-233* by Paul Niejadlik / Golder Associates Ltd. and dated March 2011 submitted in support of the application, that documents all sources of noise emissions and Noise Control Measures present at the Facility;

"**Acoustic Assessment Summary Table**" means a table summarizing the results of the Acoustic Assessment Report;

"**Acoustic Audit**" means an investigative procedure consisting of measurements of all noise emissions due to the operation of the Facility, assessed in comparison to the Performance Limits for the Facility regarding noise emissions, completed in accordance with the procedures set in the Ministry's *Publication NPC-103* and reported in accordance with the Ministry's *Publication NPC-233;*

"**Acoustic Audit Report**" means a report presenting the results of an Acoustic Audit, prepared in accordance with the Ministry's *Publication NPC-233;*

"**Acoustical Consultant**" means a person currently active in the field of environmental acoustics and noise/vibration control, who is familiar with Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from a Facility;

"**Air Standards Manager**" means the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, as those duties relate to the conditions of this Certificate;

"**APC Building**" means the building at the Site where the APC Equipment and the reagent indoor storage tanks are located;

"**APC Equipment**" means all the air pollution control equipment at the Facility, including the SNCR System, the activated carbon injection system, the dry recirculation lime injection scrubber and the pulse jet type baghouse to control emissions from the combustion chamber of the Boilers, the dust collectors to control emissions from the Residue Building and the dust collectors to control emissions from the reagent storage silos;

"**Boiler Building**" means the building at the Site where the Boilers, turbine generator and the air cooled condenser(s) are located;

"**Boilers**" means the two (2) steam boilers firing the approved Waste described in this Certificate;

"**Bulky Unprocessable Items**" means the incoming Waste received at the Site that cannot be processed in the Equipment;

"**CEM Systems**" means the continuous monitoring and recording systems used to measure and record the temperature and the emissions from the Boilers as specified in the attached Schedule "F";

"**Certificate**" means this entire provisional Certificate of Approval, issued in accordance with Sections 39 and 9 of the *EPA* and Section 53 of the *OWRA,* and includes any schedules attached to it, the application and the supporting documentation listed in the attached Schedule "A;

"***40 CFR 60***" means title 40, part 60 under the Code of Federal Regulations (Air Programs, U.S. Environmental Protection Agency), revised as of July 1, 1990, published by the Office of the Federal Register, National Archives and Records, Administration in the United States of America;

"**Complaint**" means a complaint received either by the Owner or the District Manager that has been confirmed by staff of the Ministry and the cause of which is attributed to the Owner's activities at the Facility;

"**Commencement Date of Operation**" means the date when the approved Waste is first received at the Site;

"**Compound of Concern**" means a contaminant that, based on generally available information, may be emitted to the atmosphere in a quantity from any source at the Facility that is significant either in comparison to the relevant Ministry Point of Impingement Limit or if a Ministry Point of Impingement Limit is not available for the compound then, based on generally available toxicological information, the compound has the potential to cause an adverse effect as defined by the *EPA* at a Point of Impingement;

"**Controlled Shutdown**" means an immediate cut-off of all waste into the Boilers, while maintaining the operation of the combustion chamber and the APC Equipment within the Performance Requirements;

"**Description Section**" means the section on page one of the Certificate describing the Owner's operations and the Equipment located at the Facility and specifying the Facility Production Limit for the Facility;

"**Dioxins and Furans**" means polychlorinated dibenzo-dioxins and polychlorinated dibenzofurans;

"**Director**" means any person appointed in writing by the Minister of the Environment pursuant to section 5 of the *EPA* and pursuant to section 5 of the *OWRA* as a Director for the purposes of Part V of the *EPA,* section 9 of the *EPA* and section 53 of the *OWRA;*

"**District Manager**" means the District Manager of the York Durham District Office of the Ministry;

"**Emergency Shutdown**" means an immediate cut-off of all waste feed into the Boilers, followed by an accelerated extinction of all combustion in the Boilers, while maintaining the combustion temperature within the Performance Requirements, except when unreasonable;

"**Emission Summary Table**" means the table prepared in accordance with *O. Reg. 419/05* and the Procedure Document listing the appropriate Point of Impingement concentrations of each Compound of Concern from the Facility and providing comparison to the corresponding Ministry Point of Impingement Limit;

"***EAA***" means the Environmental Assessment Act, R.S.O. 1990, c. E.18, as amended;

"**EA Approval**" means the Notice of Approval to Proceed with the Undertaking signed by the Minister of the Environment on November 3, 2010, EA File No. 04-EA-02-08;

"***EPA***" means the Environmental Protection Act, R.S.O. 1990, c. E.19, as amended;

"**Equipment**" means equipment or processes associated with the thermal treatment of the approved Waste described in this Certificate and in the Supporting Documentation referred to herein and any other equipment or processes handling wastes and reagents;

"**ESDM Report**" means the Emission Summary and Dispersion Modelling Report prepared in accordance with the Procedure Document by Golder Associates and dated March 2011 submitted in support of the application, and includes any amendments to the ESDM Report listed in the attached Schedule "A" and all subsequent up-dated ESDM Reports as applicable;

"**Facility**" means the entire operation associated with thermal treatment of Waste located on the property where the Equipment is located;

"**Facility Production Limit**" means the production limit placed on the main product(s) or raw materials used by the Facility that represents the design capacity of the Facility and assists in the definition of the operations approved by the Director;

"**Grizzly Building**" means the building at the Site where the bottom ash is screened and where the oversized constituents of the bottom ash (grizzly overs) are temporarily stored prior to transport for subsequent storage in the Residue Building;

"**Independent Acoustical Consultant**" means an Acoustical Consultant who is not representing the Owner and was not involved in preparing the Acoustic Assessment Report or the design/implementation of Noise Control Measures for the Facility and/or Equipment. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment or the design/implementation of Noise Control Measures for the Facility and/or Equipment;

"**I-TEF**" means International Toxic Equivalency Factor derived for each dioxin and furan congener by comparing its toxicity to the toxicity of 2,3,7,8 tetrachloro dibenzo-p-dioxin, as recommended by the North Atlantic Treaty Organization Committee on Challenges to Modern Society (NATO CCMS) in 1989 and adopted by Canada in 1990;

"**I-TEQ**" means International Toxic Equivalent of dioxins and furans calculated using the I-TEFs, as recommended by the NATO CCMS in 1989 and adopted by Canada in 1990;

"**Manager**" means the Manager, Technology Standards Section, Standards Development Branch, who has been appointed under Section 5 of the *EPA* for the purposes of Section 11(1)2 of the *O. Reg. 419/05,* or any other person who represents and carries out the duties of the Manager,

Technology Standards Section, Standards Development Branch, as those duties relate to the conditions of this Certificate;

"**Ministry**" means the ministry of the government of Ontario responsible for the *EPA* and the *OWRA* and includes all officials, employees or other persons acting on its behalf or the Ontario Ministry of the Environment;

"**Municipality**" means the Municipality of Clarington;

"***NMA***" means the *Nutrient Management Act*, 2002, S.O. 2002, c. 4, as amended;

"**Noise Control Measures**" means measures to reduce the noise emission from the Facility and/or Equipment including, but not limited to silencers, acoustic louvers, enclosures, absorptive treatment, plenums and barriers;

"**LDR**" means the Lands Disposal Restrictions referred to in sections 74 through 85 of the *O. Reg. 347,* which prohibit the disposal of hazardous wastes on land until they have been treated to meet the treatment standards under the *O. Reg. 347;*

"**Leachate Toxicity Criteria**" means the concentrations of any of the contaminants listed in Schedule 4 at a concentration equal to or in excess of the concentration specified for that contaminant in Schedule 4 using the Toxicity Characteristic Leaching Procedure, defined in the *O. Reg. 347*;

"***O. Reg. 419/05***" means the *Ontario Regulation 419/05,* Air Pollution – Local Air Quality enacted under the *EPA,* as amended;

*"**O. Reg. 347**"* means the *Ontario Regulation 347,* R.R.O 1990 (General –Waste Management) enacted under the *EPA,* as amended;

"***OWRA***" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;

"**Owner**" means any person that is responsible for the establishment and operation of the Site being approved by this Certificate, and it includes The Regional Municipality of Durham, The Regional Municipality of York, and Covanta Durham York Renewable Energy Limited Partnership (operator), their successors and assignees;

"***PA***" means the *Pesticides Act*, R.S.O. 1990, c.P. 11, as amended;

"**Performance Requirements**" means the performance requirements and emission limits specified in the section of this Certificate entitled "Performance Requirements";

"**Point of Impingement**" means any point outside the Facility in the natural environment and as defined by s.2 of the *O. Reg. 419/05;*

"**Point of Reception**" means the Point of Reception as defined by *Publication NPC-205* and/or *Publication NPC-232*, as applicable;

"**Pre-test Information**" means the information outlined in Section 1.1 of the Source Testing Code;

"**Procedure Document**" means the Ministry's document entitled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated July 2005, as amended;

"**Professional Engineer**" means a Professional Engineer as defined within the *Professional Engineers Act*, R.S.O. 1990, c. P.28, as amended;

"**Provincial Officer**" means any person designated in writing by the Minister as a provincial officer pursuant to Section 5 of the *OWRA* or Section 5 of the *EPA* or Section 17 of the *PA* or Section 4 of the *NMA* or Section 8 of the *SDWA;*

"***Publication NPC-103***" means the Ministry's Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report, dated August 1978, published by the Ministry, as amended;

"***Publication NPC-205***" means the Ministry's Publication NPC-205, entitled "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", dated October, 1995, as amended;

"***Publication NPC-207***" means the Ministry's draft technical publication entitled "Impulse Vibration in Residential Buildings", dated November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, dated August 1978, published by the Ministry, as amended;

"***Publication NPC-232***" means the Ministry's Publication NPC-232, entitled "Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)", dated October, 1995, as amended;

"***Publication NPC-233***" means the Ministry's Publication NPC-233, entitled "Information to be Submitted for Approval of Stationary Sources of Sound", dated October, 1995, as amended;

"**Rejected Waste**" means either municipal waste which cannot be processed at the Facility or waste which the Site is not approved to accept. Rejected Waste includes but is not limited to the Bulky Unprocessable Items and the Unacceptable Waste;

"**Regional Director**" means the Regional Director of the Central Region of the Ministry;

"**Regions**" means The Regional Municipality of Durham and The Regional Municipality of York;

*"**Report EPS 1/PG/7**"* means the Environment Canada Report EPS 1/PG/7, entitled "Protocols and Performance Specifications for Continuous Monitoring of Gaseous Emissions from Thermal Generation", dated September, 1993, as amended;

"**Residual Waste**" means waste resulting from the Waste processing activities at the Site. Residual Waste is limited to the recovered ferrous metals, the recovered non-ferrous metals, the bottom ash (consisting of the ash fines and the grizzly overs) and the fly ash (untreated and following conditioning);

"**Residue Building**" means the building at the Site where the bottom ash and the fly ash are processed, temporarily stored and loaded in transport vehicles for off-site disposal;

"**Schedules**" means the following schedules "A", "B", "C", "D", "F" and "G", attached to the Certificate and forming part of the Certificate;

"***SDWA***" means the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, as amended;

"**Sensitive Receptor**" means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from odour discharges from the Facility, including one or a combination of:

(a) private residences or public facilities where people sleep (e.g.: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.);

(b) institutional facilities (e.g.: schools, churches, community centres, day care centres, recreational centres, etc.);

(c) outdoor public recreational areas (e.g.: trailer parks, play grounds, picnic areas, etc.); and

(d) other outdoor public areas where there are continuous human activities (e.g.: commercial plazas and office buildings);

"**Site**" means the property where the Owner has located and operates the Facility and the Works and located at 72 Osbourne Road, 27, Concession Broken Front, Part 1 in the Municipality of Clarington, Regional Municipality of Durham;

"**Source Testing**" means monitoring, sampling and testing to measure emissions resulting from operating the Facility under conditions which yield the worst case emissions within the approved operating range of the Facility;

"***Source Testing Code***" means the Ministry's document entitled "Source Testing Code, Version 2, Report No. ARB-66-80", dated November 1980, as amended;

"**Stack**" means the stack that discharges emissions from the Boilers after those emissions have been controlled by the associated APC Equipment;

"**Substantial Completion**" has the same meaning as “substantial performance” in the *Construction Lien Act* R.S.O. 1990, c.C-30, as amended;

"**Supporting Documentation**" means the documents listed in the attached Schedule "A" of this Certificate which forms part of this Certificate;

"**Test Contaminants**" means the contaminants set out in the attached Schedule "D";

"**Tipping Building**" means the building at the Site where the incoming Waste is received, sorted and temporarily stored;

"**Total Power Failure**" means the loss of the external power supply and concurrent loss of all in-plant power generation;

"**Trained Personnel**" means one or more Site personnel trained in accordance with the requirements of Condition 9.;

"**Waste**" means municipal solid waste as defined in the *O. Reg. 347* and limited to the approved waste set out in Condition No. 2.(2);

"**Waste Processing Rate** means the mass of Waste fed into one of the Boilers;

"**Works**" means the sewage works described in the Owner's application, this Certificate and in the Supporting Documentation referred to herein, to the extent approved by this Certificate;

"**Unacceptable Waste**" means the incoming Waste received at the Site that does not meet the incoming Waste quality criteria set out in this Certificate, is of hazardous nature and requires caution when handling; and

"**Undiluted Gases**" means the flue gas stream which contains oxygen, carbon monoxide, total hydrocarbons and all contaminants in the same concentrations as they exist in the flue gas stream emerging from an individual piece of equipment, such as the combustion chamber of one Boiler or one baghouse, and into which gas stream no ambient air and/or no other gas stream originating from another piece of equipment, except for dilution air introduced within the CEM Systems, has been introduced.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

GENERAL PROVISIONS

1. GENERAL

Compliance

(1) The Owner shall ensure compliance with all the conditions of this Certificate and shall ensure that any person authorized to carry out work on or operate any aspect of the Site, including the Works, is notified of this Certificate and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Any person authorized to carry out work on or operate any aspect of the Site shall comply with the conditions of this Certificate.

Build in Accordance

(3) (a) Except as otherwise provided by this Certificate, the Site shall be designed, developed, built, operated, monitored, inspected and maintained in accordance with the following applications:

(i) Applications for a Certificate of Approval (Air) dated March 2, 2011, each signed by Cliff Curtis, Commissioner of Works, The Regional Municipality of Durham, by Erin Mahoney, Commissioner of

Environmental Services, The Regional Municipality of York and by Matthew R. Mulcahy, Senior Vice President, Business Development, Covanta Durham York Renewable Energy Limited Partnership, and the Supporting Documentation listed in the attached Schedule "A".

(ii) Applications for a Provisional Certificate of Approval (Waste Disposal Site) dated March 2, 2011, each signed by Cliff Curtis, Commissioner of Works, The Regional Municipality of Durham, by Erin Mahoney, Commissioner of Environmental Services, The Regional Municipality of York and by Matthew R. Mulcahy, Senior Vice President, Business Development, Covanta Durham York Renewable Energy Limited Partnership, and the Supporting Documentation listed in the attached Schedule "A".

(iii) Applications for a Certificate of Approval of Municipal and Private Sewage Works dated March 2, 2011, each signed by Cliff Curtis, Commissioner of Works, The Regional Municipality of Durham, by Erin Mahoney, Commissioner of Environmental Services, The Regional Municipality of York and by Matthew R. Mulcahy, Senior Vice President, Business Development, Covanta Durham York Renewable Energy Limited Partnership, and the Supporting Documentation listed in the attached Schedule "A".

(b) (i) Any design optimization or modification that is inconsistent with the conceptual design set out in the Supporting Documentation in Schedule "A" shall be clearly identified, along with an explanation of the reasons for the change and submitted to the Director for approval.

(ii) If a change to the conceptual design is submitted to the Director for approval, no construction of the Site shall commence prior to the Director approving, in writing, the final conceptual design of the Site.

As-built Drawings

(4) (a) Within ninety (90) days of the completion of the initial successful Source Testing program, a set of as-built drawings showing the Facility and the Works and bearing the stamp of a Professional Engineer, shall be prepared and retained at the Site.

(b) These drawings shall be kept up-to-date through revisions undertaken from time to time and a copy shall be retained at the location of the Site or at the operational office of the Owner for the operational life of the Site.

(c) Notwithstanding provisions of Condition 1.(4)(b), an amendment to this Certificate shall be sought for changes to the as-built drawings, requiring approval.

(d) The as-built drawings shall be made available to Ministry staff upon request.

Interpretation

(5) Where there is a conflict between a provision of any document, including the application referred to in this Certificate and the conditions of this Certificate, the conditions in this Certificate shall take precedence.

(6) Where there is a conflict between the applications and a provision in any documents listed in Schedule "A", the applications shall take precedence, unless it is clear that the purpose of the document was to amend the applications and that the Ministry approved the amendment.

(7) Where there is a conflict between any two documents listed in Schedule "A", other than the applications, the document bearing the most recent date shall take precedence.

(8) The requirements of this Certificate are severable. If any requirement of this Certificate, or the application of any requirement of this Certificate to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this Certificate shall not be affected thereby.

Other Legal Obligations

(9) The issuance of, and compliance with the conditions of this Certificate does not:

(a) relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement; or

(b) limit in any way the authority of the Ministry to require certain steps be taken or to require the Owner to furnish any further information related to compliance with this Certificate.

Adverse Effects

(10) The Site shall be constructed, operated and maintained in a manner which ensures the health and safety of all persons and prevents adverse effects on the natural environment or on any persons.

(11) The Owner shall take steps to minimize and ameliorate any adverse effect on the natural environment or impairment of water quality resulting from the approved operations at the Site, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.

(12) Despite the Owner or any other person fulfilling any obligations imposed by this Certificate, the person remains responsible for any contravention of any other condition of this Certificate or any applicable statute, regulation, or other legal requirement resulting from any act or emission that caused the adverse effect to the natural environment or impairment of water quality.

(13) If at any time odours, pests, litter, dust, noise or other such negative effects are generated at this Site and cause an adverse effect, the Owner shall take immediate appropriate remedial action that may be necessary to alleviate the adverse effect, including suspension of all waste management activities if necessary.

Change of Ownership

(14) The Owner shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any changes:

(a) the ownership of the Site;
(b) the operator of the Site;
(c) the address of the Owner;
(d) the partners, where the Owner is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act,* R.S.O. 1990, c. B.17, as amended, shall be included in the notification;
(e) the name of the corporation where the Owner is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act*, R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

(15) No portion of this Site shall be transferred or encumbered prior to or after closing of the Site unless the Director is notified in advance. In the event of any change in ownership of the Site, other than change to a successor municipality, the Owner shall notify the successor of and provide the successor with a copy of this Certificate, and the Owner shall provide a copy of the notification to the District Manager and the Director.

Inspections by the Ministry

(16) No person shall hinder or obstruct a Provincial Officer from carrying out any and all inspections authorized by the *OWRA,* the *EPA,* the *PA,* the *SDWA* or the *NMA* of any place to which this Certificate relates, and without limiting the foregoing:

(a) to enter upon the premises where the approved processing is undertaken, or the location where the records required by the conditions of this Certificate are kept;
(b) to have access to, inspect, and copy any records required to be kept by the conditions of this Certificate;
(c) to inspect the Site, related equipment and appurtenances;
(d) to inspect the practices, procedures, or operations required by the conditions of this Certificate;
(e) to conduct interviews with staff, contractors, agents and assignees of the Owner; and
(f) to sample and monitor for the purposes of assessing compliance with the terms and conditions of this Certificate or the *EPA,* the *OWRA,* the *PA,* the *SDWA* or the *NMA.*

Information

(17) Any information requested by the Ministry, concerning the operation of the Site and its operation under this Certificate, including but not limited to any records required to be kept by this Certificate, manuals, plans, records, data, procedures and supporting documentation shall be provided to the Ministry, in a timely manner, upon request**.**

(18) The receipt of any information by the Ministry or the failure of the Ministry to prosecute any person or to require any person to take any action, under this Certificate or under any statute, regulation or other legal requirement, in relation to the information, shall not be construed as:

(a) an approval, waiver, or justification by the Ministry of any act or omission of any person that contravenes any term or condition of this Certificate or any statute, regulation or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

(19) The Owner shall ensure that a copy of this Certificate, in its entirety and including all its Notices of Amendment and the Supporting Documentation listed in Schedule "A" are retained at the Site at all times.

2. **SERVICE AREA, APPROVED WASTE TYPES, RATES and STORAGE**

(1) The service area for the Site is the area within the jurisdictional boundaries of The Regional Municipality of Durham and The Regional Municipality of York.

(2) The operation of this Site is limited to:

(a) receipt, temporary storage, transfer and processing, including thermal treatment, of solid non-hazardous waste remaining after Waste Diversion required by the EA Approval, limited to Waste from the following sources:

(i) domestic waste and Industrial Commercial and Institutional waste from the Regions' curbside collection and/or from the Regions' waste management facilities; and

(ii) waste generated on-Site through activities not relating to the handling and processing of Waste (ie. office, lunch room, etc.);

(b) collection and management of the stormwater run-off generated at the Site.

(3) The following Unacceptable Waste is prohibited from being accepted at the Site:

(a) hazardous waste, as defined in the *O. Reg. 347;*
(b) wastes which have been source-separated for the purposes of diversion;

(c) international waste generated outside of Canada, but collected within the jurisdictional boundaries of The Regional Municipality of Durham and The Regional Municipality of York.

(4) Waste Receipt Rate:

(a) The maximum daily amount of Waste that is approved to be accepted at the Site shall not exceed 1,520 tonnes per day.

(5) Storage Restrictions:

Solids:

(a) A maximum of 7,350 cubic metres shall be stored inside the Waste pit within the Tipping Building as shown in the Supporting Documentation.

(b) Rejected Waste, limited to the Bulky Unprocessable Items removed from the incoming Waste in the Tipping Building shall be stored:

(i) in two (2) roll-off bins having a maximum total storage capacity of 30 cubic metres, located within the confines of the Tipping Building; and/or

(ii) in the appropriate dedicated bunkers, located within the confines of the Residue Building and described in Conditions 2.(5)(c), 2.(5)(d) and 2.(5)(d), below.

(c) A maximum of approximately 77 tonnes or 106 cubic metres of the Residual Waste, limited to the recovered ferrous metals, shall be stored in one (1) dedicated bunker, located within the confines of the Residue Building, described in the Supporting Documentation. The storage duration is limited to a maximum of seven (7) days.

(d) A maximum of approximately 120 tonnes or 100 cubic metres of the Residual Waste, limited to the recovered non-ferrous metals, shall be stored in one (1) dedicated bunker, located within the confines of the Residue Building, described in the Supporting Documentation. The storage duration is limited to a maximum of seven (7) days.

(e) A maximum of 630 tonnes of the Residual Waste, limited to bottom ash shall be stored in two (2) dedicated bunkers, located within the confines of the Residue Building, described in the Supporting Documentation. The storage duration is limited to a maximum of seven (7) days.

(f) A maximum of 700 tonnes of the Residual Waste, limited to the fly ash shall be stored in seven (7) dedicated bunkers, located within the confines of the Residue Building, described in the Supporting Documentation. The storage duration is limited to a maximum of thirty six (36) days.

(g) A maximum of 85 cubic metres of activated carbon for the carbon injection system shall be stored in one (1) outdoor tank, located adjacent to the APC Building.

(h) A maximum of 150 cubic metres of lime for the dry scrubber shall be stored in one (1) or more indoor tank(s), located within the confines of the APC Building.

(i) If required, recirculated residue shall be stored in one (1) or more indoor tank(s), located within the confines of the APC Building.

(j) A maximum of 35 tonnes or 25 cubic metres of cement for fly ash conditioning shall be stored in one (1) outdoor silo, located adjacent to the Residue Building.

(k) A maximum of 25 tonnes or 45 cubic metres of pozzolan for fly ash conditioning shall be stored in one (1) outdoor silo, located adjacent to the Residue Building.

Liquids:

(l) (i) A maximum of 36 cubic metres or 40 tonnes of aqueous ammonia for the SNCR System shall be stored in one (1) outdoor tank, located adjacent to the APC Building.

(ii) The Owner shall ensure that the aqueous ammonia storage tank is equipped with a liquid level monitoring device designed to provide a visual and an auditory alarm when the high level setpoint is reached.

(iii) The aqueous ammonia storage tank spill containment area and the loading area shall be designed in accordance with the requirements in the Ministry's document entitled *"Guidelines for Environmental Protection Measures at Chemical and Waste Storage Facilities"* dated May 2007, as amended.

(6) No outdoor storage of waste, including storage in vehicles, is approved under this Certificate.

(7) The Owner shall ensure that storage of all wastes is undertaken in a manner that does not cause an adverse effect or a hazard to the environment or any person.

(8) (a) Waste received at the Site shall be processed within four (4) days from its receipt at the Site.

(b) Emergency Waste storage duration extension:

(i) The Owner may store the incoming Waste inside the tipping pit within the confines of the Tipping Building for up-to seven (7) days from its receipt at the Site, on an emergency basis only.

(ii) Within twenty four (24) hours from the start of the emergency storage of the incoming Waste, the Owner shall notify, in writing, the District Manager that the incoming Waste is being stored longer then four (4) days.

(iii) Should there be public complaints about the extended incoming Waste storage, the Owner, in consultation with the District Manager, shall determine the cause of the complaints, propose appropriate abatement measures, including but not be limited to the removal and off-site disposal of the Waste contained in the tipping pit, and implement the said measures upon receiving written concurrence from the District Manager within the time frame acceptable to the District Manager.

(9) In the event that Waste cannot be processed at the Site and the Site is at its approved storage capacity, the Owner shall cease accepting additional Waste. Receipt of additional Waste may be resumed once such receipt complies with the waste storage limitations approved in this Certificate.

3. **SIGNS and SITE SECURITY**

(1) Prior to receipt of Waste at the Site, the Owner shall ensure that a sign is posted at the entrance to the Site. The sign shall be visible from the main road leading to the Site. The following information shall be included on the sign:

(a) name of the Owner;
(b) this Certificate number;
(c) hours during which the Site is open;
(d) waste types that are approved to be accepted at the Site;
(e) Owner's telephone number to which complaints may be directed;
(f) Owner's twenty-four hour emergency telephone number (if different from above);
(g) a warning against unauthorized access; and
(h) a warning against dumping at the Site.

(2) The Owner shall ensure that appropriate and visible signs are posted at the Site clearly identifying the wastes and the process reagents and stating warnings about the nature and any possible hazards of the wastes and the reagents.

(3) The Owner shall ensure that appropriate and visible signs are posted at the Site to prohibit smoking, open flames or sources of ignition from being allowed near any flammable materials storage areas.

(4) The Owner shall install and maintain appropriate and visible signs at the Site to direct vehicles to the Waste receiving and Residual Waste removal areas and to the reagent unloading areas.

(5) The Owner shall post appropriate and visible signs along the traffic route providing clear directions to the Site.

(6) The Owner shall ensure that the Site is fenced in and that all entrances are secured by lockable gates to restrict access only to authorized personnel when the Site is not open.

(7) The Owner shall ensure that access to the Site, with the exception of the area designated as a Public Information Centre, is regulated and that no unauthorized persons are permitted at the Site without the Trained Personnel escort.

(8) The Owner shall ensure that the Site is operated in a safe and secure manner, and that Waste, the Residual Waste and the Unacceptable Waste are properly handled, packaged or contained and stored so as not to pose any threat to the general public and the Site personnel.

4. SITE OPERATIONS

(1) Operating hours:

(a) The Site is approved to operate twenty-four (24) hours per day three hundred and sixty-five (365) days per year.

(b) Notwithstanding Condition 4.(1)(a), Waste shall only be received at the Site and the Residual Waste shall only be transferred from the Site between 7:00 a.m. and 7:00 p.m. Monday to Saturday. No receipt of the Waste or transfer of the Residual Waste shall be undertaken on statutory holidays.

(c) Emergency Receipt of Waste:

(i) The Owner may receive Waste at the Site outside of the operating hours specified in Condition 4.(1)(b), above, on an emergency basis only.

(ii) Within twenty four (24) hours from the receipt of Waste outside of the approved receiving hours, the Owner shall notify, in writing, the District Manager that Waste was received outside of the approved receiving hours.

(iii) Should there be complaints about Waste shipments outside of the approved hours, the Owner, in consultation with the District Manager, shall determine the cause of the complaint, propose appropriate abatement measures and implement the said measures upon receiving written concurrence from the District Manager within the time frame acceptable to the District Manager.

(2) Incoming Waste receipt:

(a) At the weigh scale, the Trained Personnel shall:

(i) inspect the required documentation prior to acceptance of the incoming Waste at the Site; and

(ii) inspect the incoming Waste with radiation detection equipment.

(b) In the Tipping Building, the Trained Personnel shall:

(i) visually inspect all incoming Waste being unloaded into the Waste pit; and

(ii) once per hour, or as accepted by the District Manager, unload the incoming Waste on the tipping floor for a manual visual inspection and sorting of the incoming Waste.

(c) The Owner shall only accept the incoming Waste that is delivered in vehicles that have been approved by the Ministry.

(d) The Owner shall ensure that all unloading of incoming Waste at the Site takes place entirely within the confines of the Tipping Building.

(3) **Unacceptable Waste handling:**

(a) In the event that waste that is not approved under this Certificate is inadvertently accepted at the Site, the Owner shall ensure that the Unacceptable Waste:

(i) is stored in a way that ensures that no adverse effects result from its storage;
(ii) is segregated from all other waste;
(iii) is handled and removed from the Site in accordance with the *O. Reg. 347* and the *EPA*; and
(iv) is removed from the Site within (4) days of its receipt or as acceptable to the District Manager.

(b) The Owner shall ensure that all loading of the Unacceptable Waste into transport vehicles is carried out entirely within the confines of the Tipping Building.

(4) **Waste Sorting:**

(a) The Trained Personnel shall remove the Bulky Unprocessable Items and Unacceptable Waste from the incoming Waste prior to charging of the Waste to the Boilers.

(b) All sorting of the incoming Waste at the Site shall be undertaken indoors, within the confines of the Tipping Building and/or the Refuse Building.

(5) **Residual Waste Handling and Disposal:**

(a) (i) Except for transportation of the Residual Waste between the Grizzly Building and the Residue Building, the Owner shall ensure that all

handling of the bottom ash and its segregated constituents, and of the fly ash, is undertaken within the confines of enclosed conveyors and enclosed buildings.

(ii) The Owner shall ensure that all loading of the Residual Waste into vehicles for its transport from the Site is carried out entirely within the confines of the Residue Building.

(b) (i) Different constituents of the Residual Waste shall not be comingled prior to the required compliance testing, unless all Residual Waste is to be disposed of at a Waste Disposal Site that is approved to accept hazardous waste.

(ii) The Owner shall ensure that the equipment used in handling of the hazardous wastes or that came in direct contact with the hazardous wastes is not used to handle other wastes.

(iii) On an emergency basis, the Owner may use equipment used to handle the hazardous wastes to handle other wastes provided that prior to such use the equipment has been thoroughly cleaned first.

(c) (i) Only haulers approved by the Ministry shall be used to transport the Residual Waste from the Site.

(ii) The Residual Waste shall be transported from the Site in appropriately covered vehicles that will not allow fugitive dust emissions to be emitted into the natural environment during the said transport.

d) Residual Waste generated at the Site shall be disposed of shall only be disposed of at an approved waste disposal site in accordance with the requirements in the *EPA* and the *O. Reg. 347* or at a location with the appropriate jurisdictional approval or a license, if required.

(e) Should the Residual Waste limited to the conditioned fly ash and/or the bottom ash be deemed a hazardous waste, the ash shall be disposed of at an approved waste disposal site in accordance with the Land Disposal Restrictions requirements in the *EPA* and the *O. Reg.* 347 or at a location with the appropriate jurisdictional approval or a license, if required.

(6) **Wastewater Management**

(a) The Owner shall ensure that all wastewater generated at the Site is contained within enclosed buildings, tanks, pipes and conveyors at the Site and the approved outdoor Wastewater Settling Basin.

(b) The Owner shall ensure that all wastewater generated at the Site is collected in leak-proof and sufficiently designed wastewater storage facilities:

(i) Wastewater Holding Tank, to collect the continuous reject water flow from the Boiler make-up water treatment system and the Boiler blowdown, having an approximate holding capacity of 100 cubic metres, located within the confines of the Boiler Building and venting to the atmosphere; and

(ii) Wastewater Settling Basin, to collect the wastewater from the floor drains in the buildings at the Site, except for the Tipping Building and the Residue Building, the ash discharger overflow and drain water, the Boiler and turbine-generator washdown water and the APC Equipment area washdown water, having an approximate holding capacity of 38 cubic metres, located outdoors, open to the atmosphere and equipped with a filter basket and an oil skimmer board.

(c) The wastewater pumps shall be located in the area designed in accordance with the Supporting Documentation to ensure that any potential leaks or drips are contained and directed to the Wastewater Settling Basin.

(d) (i) The wastewater level in the Wastewater Holding Tank shall be monitored and controlled to ensure that the wastewater inflow to the Tank does not cause the Tank overflow.

(ii) The wastewater level in the Wastewater Settling Basin shall be monitored and controlled to ensure that the atmospheric precipitation does not cause an overflow from the Basin.

(e) The Owner shall regularly empty, and clean as necessary, all sumps, wastewater storage/holding areas and equipment that are used to contain, collect and handling the wastewater generated at the Site.

(f) Should the Owner find it necessary to remove the wastewater from the Site, the wastewater shall only be disposed of at a Ministry-approved site in accordance with the site's certificate of approval or be discharged to the sanitary sewer in accordance with the agreement with the municipality accepting the discharge.

(g) The floors of the Tipping Building and the Residue Building shall be sufficiently sloped to facilitate the flow of the wastewater generated from the floor cleaning activities and from the truck washdown towards the designated wastewater collection area.

(h) The Owner shall ensure that the Wastewater Settling Basin is regularly cleaned out and that it does not become a source of odour emissions.

(7) All activities approved under this Certificate shall only be carried out by appropriately Trained Personnel.

5. EQUIPMENT and SITE INSPECTIONS and MAINTENANCE

Operation and Maintenance

(1) Prior to the receipt of the Waste at the Site, the Owner shall prepare and update as necessary, an Operation and Maintenance Manual for all the Equipment, the APC Equipment, the CEM Systems, the Works and any other equipment associated with managing of the Waste and with the control of environmental impacts from the Facility. The Manual shall be prepared in accordance with the written manufacturer's and/or supplier's specifications and good engineering practice.

As a minimum, the Operation and Maintenance Manual shall specify:

(a) operation procedures of the Equipment, the APC Equipment, the CEM Systems, the Works, and any other equipment associated with managing of the Waste and with the control of environmental impacts from the Facility, in accordance with manufacturers' recommendations and good engineering practices to achieve compliance with this Certificate, the *EPA,* the *OWRA* and their Regulations;
(b) calibration procedures for the CEM Systems as required by this Certificate;
(c) procedures for start-up and shutdown, including Controlled Shutdown and Emergency Shutdown;
(d) quality assurance procedures for the operation and calibration of the CEM Systems in accordance with *40 CFR 60*, Appendix F or *Report EPS 1/PG/7,* as appropriate;
(e) Waste receiving and screening procedures;
(f) Waste, Rejected Waste and Residual Waste handling procedures;
(g) testing and monitoring procedures as required by this Certificate;
(h) maintenance and preventative maintenance procedures as required by this Certificate;
(i) Facility inspection, including frequency of inspections, procedures;
(j) procedure for handling complaints as required by this Certificate.
(k) contingency measures to resolve upset conditions and/or minimize the environmental impacts from the Facility;
(l) emergency response procedures, including procedures for dealing with power failure, fire, explosion, spills and any other potential emergencies;
(m) procedures for record keeping activities as required by this Certificate;
(n) description of the responsibilities of the Site personnel and the personnel training protocols; and
(o) a list of personnel positions responsible for operation and maintenance, including supervisory personnel and personnel responsible for handling of the emergency situations, recording and reporting pursuant to the requirements of this Certificate, along with the training and experience required for the positions and a description of the responsibilities.

(2) A copy of this Operations and Maintenance Manual shall be kept at the Site, be accessible to the Site personnel at all times and be updated, as required. The Operations and Maintenance Manual shall be available for inspection by a Provincial Officer upon request.

(3) The Owner shall implement the operation, maintenance, preventative maintenance and calibration procedures set out in the Operations and Maintenance Manual required by this Certificate.

Critical Spare Parts

(4) (a) The Owner shall prepare a list of critical spare parts, update this list annually or more frequently, if necessary, to ensure that this list is maintained up-to-date and shall be available for inspection by a Provincial Officer upon request.

(b) The Owner shall ensure that the critical spare parts are available at the Site at all times or are immediately available from an off-Site supplier.

Inspections

(5) Prior to receipt of the Waste at the Site, the Owner shall prepare a comprehensive written inspection program which includes inspections of all aspects of the Site's operations including, but not limited to the following:

(a) buildings and the indoor waste storage facilities and presence of dust and odour and leaks in or near any openings, such as doorways, window, vent, louver or any other opening;
(b) outdoor Residual Waste transport equipment, and the presence of dust and leaks at or near transfer points or the equipment seams;
(c) the Equipment, the APC Equipment, the CEM Systems, the Works and any other equipment associated with managing of the Waste and with the control of environmental impacts from the Facility;
(d) spill containment areas, loading areas and the conditions around the Wastewater Settling Basin;
(e) security fencing, gates, barriers and signs;
(f) off-site nuisance impacts such as odour, dust, litter, etc.
(g) presence of stormwater pooling at the Site; and
(h) condition of the on-Site roads for presence of leaks and drips from the waste delivery trucks or excessive dust emissions.

(6) The inspections, except for the inspection of the Works, are to be undertaken daily by the Trained Personnel in accordance with the inspection program to ensure that the Facility is maintained in good working order at all times and that no off-Site impacts are occurring. Any deficiencies detected during these regular inspections must be promptly corrected.

Inspections and Maintenance of the Works

(7) The Owner shall inspect the Works at least once a year and, if necessary, clean and maintain the Works to prevent the excessive build-up of sediments and/or vegetation.

6. PERFORMANCE REQUIREMENTS

(1) The Owner shall, ensure that the Facility/Equipment is designed and operated in such a manner as to ensure that the following Performance Requirements are met:

(a) the maximum 10-minute average concentration of odour at the most impacted Sensitive Receptor, resulting from the operation of the Facility/Equipment, calculated in accordance with the procedures outlined in the attached Schedule "B", shall not exceed 1 odour unit;

(b) the noise emissions from the Facility shall comply with the limits set out in Ministry *Publication NPC-205;*

(c) the vibration emissions from the Facility shall comply with the limits set out in Ministry *Publication NPC-207.*

(2) The Owner shall ensure that the Boilers and the associated APC Equipment and the CEM Systems are designed and operated in such a manner as to ensure that the following Performance Requirements are met:

(a) (i) The temperature in the combustion zone of each Boiler shall reach a minimum of 1000 degrees Celsius (^{o}C) for one second, prior to introduction of the Waste into the combustion chamber of the Boiler during the start-up, and thereafter maintained during the entire thermal treatment cycle and subsequent shutdown until all Waste combustion is completed.

(ii) Compliance with the minimum temperature requirement shall be demonstrated by direct measurement at the location where the combustion gases have achieved the residence time of one second at a minimum temperature of 1000^{o}C (the Target Location) or by correlation of the required temperature of 1000^{o}C for one second to the temperature measured downstream of the Target Location as proven by a method acceptable to the Director.

(b) The concentration of residual oxygen in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler, as measured and recorded by the CEM System, shall not be less than 6 percent by volume on a dry basis.

(c) (i) The operational target for the concentration of carbon monoxide in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler is 40 milligrams per dry cubic metre, as a 4-hour rolling average, normalized to 11 percent oxygen at a reference temperature of 25^{o}C and a reference pressure of 101.3 kilopascals, as measured and recorded by the CEM System, for the period from and including initial commissioning of the facility to twelve months following the completion of the first Source Testing program.

(ii) The 4-hour average concentration of carbon monoxide in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler, as measured and recorded by the CEM System, shall not be more than 40 milligrams per dry cubic metre, normalized to 11 percent oxygen at a reference temperature of 25^{o}C and a reference pressure of 101.3 kilopascals, after the first twelve months following the completion of the first Source Testing program.

(d) The emissions from the Boilers after those emissions have been controlled by the associated APC Equipment for discharge into the atmosphere via the Stack shall comply with the emission concentration limits listed in the attached Schedule "C", as measured by a CEM System or by Source Testing as applicable.

(e) The Boilers shall include combustion air control systems, which are capable of automatically adjusting the distribution and the quantity of combustion air, in such a manner that changes in the Waste Processing Rate and/or Waste composition or irregularities in the loading and/or combustion shall not adversely affect the performance of the Boilers.

(f) The Boilers shall provide and maintain a high degree of gas turbulence and mixing in the combustion chamber.

(g) The Boilers shall achieve the temperature, oxygen availability and turbulence requirements over the complete range of operating parameters, including feed rate, feed characteristics, combustion air, flue gas flow rate and heat losses.

(h) The inlet temperature into each baghouse of the APC Equipment of the Boilers shall not be less than 120^{o}C and not more than 185^{o}C.

(3) The Owner shall install and maintain visual and audible alarm systems to alert the Facility/Equipment operators of any potential deviation from the above Performance Requirements for parameters that are continuously monitored by applicable CEM Systems and shall forthwith take all reasonable actions to bring the Equipment/Facility into compliance with all Performance Conditions.

(4) In the event that the CEM Systems indicate that emissions from the Boilers and the Stack exceed any Performance Requirements in the attached Schedule "C" for a continuous three (3) hour period, the Owner shall forthwith cut-off all Waste feed into the affected Boiler and initiate an Emergency Shutdown, while maintaining a temperature of 1000^{o}C, as practicable, in the combustion zone of the Boiler.

Residual Waste Compliance Criteria

(5) (a) The Residual Waste generated at the Site and destined for a non-hazardous waste disposal site in Ontario shall not meet any of the criteria from the definition of "hazardous waste" set out in the *O. Reg. 347.*

(b) The Residual Waste that meets any of the criteria from the definition of "hazardous waste" set out in the *O. Reg.* 347 shall be handled and disposed of in accordance with the LDR requirements set out in the *EPA* and the *O. Reg. 347*.

(6) The Residual Waste, limited to the bottom ash, destined for a non-hazardous waste disposal site shall meet the definition of "incinerator ash" set out in the *O. Reg. 347*.

7. **TESTING, MONITORING** and **AUDITING**

Source Testing

(1) The Owner shall perform annual Source Testing in accordance with the procedures and schedule outlined in the attached Schedule "E", to determine the rate of emission of the Test Contaminants from the Stack. The first Source Testing program shall be conducted not later than six (6) months after the Commencement Date of Operation of the Facility/Equipment and subsequent Source Testing program shall be conducted once (1) every calendar year thereafter.

Continuous Monitoring

(2) The Owner shall select, test and install appropriate CEM Systems and continuous recording devices in accordance with the requirements outlined in the attached Schedule "F" to conduct and maintain a program to continuously monitor, as a minimum, the following parameters prior to commencement of operation of the Boilers:

(a) the temperature at one (1) second downstream of the combustion zone of each Boiler where most of the combustion has been completed and the combustion temperature is fully developed;

(b) the inlet temperature of the gases into each baghouse of the APC Equipment of each Boiler;

(c) the concentration of carbon monoxide, oxygen and organic matter (as methane) in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler;

(d) the opacity and moisture content of the flue gas and the concentration of oxygen, nitrogen oxides, sulphur dioxide, hydrogen chloride, hydrogen fluoride and ammonia in the Undiluted Gases leaving the baghouse of the APC Equipment of each Boiler.

Long-Term Sampling for Dioxins and Furans

(3) (a) The Owner shall develop, install, maintain and update as necessary a long-term sampling system, with a minimum monthly sampling frequency, to measure the concentration of Dioxins and Furans in the Undiluted Gases leaving the APC Equipment associated with each Boiler. The performance of

this sampling system will be evaluated during the annual Source Testing programs in accordance with the principles outlined by 40 CFR 60, Appendix B, Specification 4.

(b) The Owner shall evaluate the performance of the long-term sampling system in determining Dioxins and Furans emission trends and/or fluctuations as well as demonstrating the ongoing performance of the APC Equipment associated with the Boilers.

Ambient Air Monitoring

(4) (a) The Regions shall develop and implement the Ambient Air Monitoring and Reporting Plan, in accordance with the requirements set out in the EA Approval and as determined to be acceptable by the Regional Director.

(b) The Regions shall report the results of the Ambient Air Monitoring program to the Regional Director in accordance with the Ambient Air Monitoring and Reporting Plan and in accordance with the requirements of Condition 14.

(c) The Regions shall post the Ambient Air Monitoring and Reporting Plan and the results of the Ambient Air Monitoring program on the Owner's web site for the Facility in accordance with the requirements of the EA Approval and Condition 15.

Noise Monitoring - Acoustic Audit

(5) The Owner:

(a) shall carry out Acoustic Audit measurements on the actual noise emissions due to the operation of the Facility. The Acoustic Audit measurements shall be carried out in accordance with the procedures in *Publication NPC-103* and in accordance to the Noise Monitoring and Reporting Plan prepared in accordance with the requirements set out in the EA Approval and as approved by the Director;

(b) shall submit an Acoustic Audit Report on the results of the Acoustic Audit, prepared by an Independent Acoustical Consultant, in accordance with the requirements of *Publication NPC-233* and the Noise Monitoring and Reporting Plan prepared in accordance with the requirements set out in the EA Approval and as approved by the Director, to the District Manager and the Director, not later than three (3) months after the commencement of operation of the Facility.

(6) The Director:

(a) may not accept the results of the Acoustic Audit if the requirements of *Publication NPC-233* or the approved Noise Monitoring and Reporting Plan were not followed;

(b) may require the Owner to repeat the Acoustic Audit if the results of the Acoustic Audit are found unacceptable to the Director.

Residual Waste Testing

(7) (a) A minimum of six (6) months prior to the Commencement Date of Operation, the Owner shall submit to the Director for approval, a Testing Protocol for testing of the bottom ash for compliance with the criteria set out in the "incinerator ash" definition from the *O. Reg.* 347 and for testing of the Residual Waste for compliance with the criteria set out in this Certificate.

(b) As a minimum, the Testing Protocol shall comply with the Ministry's regulatory requirements for sampling and testing of waste, including the requirements set out in the Ministry's document entitled "Principles of Sampling and Analysis of Waste for TCLP under Ontario Regulation 347", dated February 2002, as amended.

(c) The Testing Protocol shall include the rationale for the proposed methods and the following:

(i) a sampling protocol, including the proposed number of samples to be taken and their locations, to ensure that representative sample(s) are being tested for compliance with this Certificate;

(ii) sample(s) handling and preserving procedures;

(iii) analytical protocol for the applicable contaminants to ensure that appropriate analytical method(s) are being used for compliance testing required by this Certificate; and

(iv) a testing protocol for the bottom ash during the Site commissioning period.

(d) The Owner shall implement the Testing Protocol on the Commencement Date of Operation.

(8) For handling of the bottom ash as a solid non-hazardous waste, the Owner shall follow the following schedule for compliance testing:

(a) for the Site commissioning period, the bottom ash shall be tested in accordance with the Testing Protocol approved by the Director;

(b) for the period following the Site commissioning period, the bottom ash shall be tested for the content of the combustible materials on an annual basis, until the compliance testing results indicate that the bottom ash meets the “incinerator ash” definition from the *O. Reg. 347* for three (3) consecutive years, following which a triennial compliance testing event may be carried out;

(c) should any annual or triennial compliance testing event indicate that the bottom ash does not meet the "incinerator ash" definition, prior to each of the next three (3) shipments from the Site, compliance testing of each of the three (3) shipments shall be carried out. Once three (3) consecutive tests re‑establish compliance with the "incinerator ash" definition from the *O. Reg. 347* and that the bottom ash does not exceed the Leachate Toxicity Criteria, the compliance testing schedule set out in Condition 7.(8)(b) may be resumed; and

(d) should the results of any compliance testing of the bottom ash indicate that the concentrations of the leachate toxic contaminants in the bottom ash equal to or exceed the Leachate Toxicity Criteria, the bottom ash shall be handled as a hazardous waste. Once three (3) consecutive tests re‑establish that the bottom ash does not exceed the Leachate Toxicity Criteria, the bottom ash compliance testing schedule set out in Condition 7.(8)(b) may be resumed.

(9) (a) For handling of the bottom ash as a hazardous waste and for handling of the fly ash, prior to final disposal at a hazardous waste landfill site in Ontario, the Owner shall undertake any sampling and testing that would be required to comply with the LDR requirements set out in the *EPA* and the *O. Reg. 347*.

(b) The Owner shall follow the following schedule for compliance testing:

(i) prior to each of the first three (3) shipments of the ash from the Site, the ash shall be tested so that for the compliance with the LDR requirements can be demonstrated;

(ii) following the three (3) initial compliance testing events, the ash shall be tested on an annual basis, until the compliance testing results indicate that the ash meets the LDR requirements during the three (3) consecutive years, following which a triennial compliance testing may be carried out; and

(iii) should any annual or triennial compliance testing event indicate that the ash does not meet the LDR requirements, prior to next three (3) shipments from the Site, compliance testing of each of the three (3) shipments shall be carried out. Once three (3) consecutive tests re‑establish compliance with the LDR requirements, the compliance testing schedule set out in Condition 7.(9)(b)(ii) may be resumed.

Soil Testing:

(10) (a) Within one hundred and twenty (120) days from the date of this Certificate, the Regions shall undertake the soil testing in accordance with the Soil Testing Plan required by this Certificate.

(b) The soil testing shall be repeated every three (3) years or as agreed upon in writing by the Regional Director.

Disposal of Residual Waste

(11) The Owners shall ensure that no portion of the Residual Waste undergoing compliance testing is transferred from the Site until the results of the compliance testing required by this Certificate demonstrate compliance with the relevant Ministry's requirements.

(12) Bottom ash that is not a hazardous waste, as defined in the *O. Reg. 347,* may be disposed of at an approved non-hazardous waste landfill site or at a site approved to accept such waste by an appropriate government agency of equivalent jurisdiction.

(13) Residual Waste shall be treated to comply with the LDR requirements set out in the *EPA* and the *O. Reg. 347* prior to disposal of at an approved hazardous waste landfill site or at a site approved to accept such waste by an appropriate government agency of equivalent jurisdiction.

Groundwater and Surface Water Monitoring

(14) (a) The Regions shall develop and implement the Groundwater and Surface Water Monitoring Plan, in accordance with the requirements set out in the EA Approval and as determined to be acceptable to the Regional Director.

(b) The Regions shall report the results of the Groundwater and Surface Water Monitoring program to the Regional Director and to the Director in accordance with the schedule set out in the EA Approval and in accordance with the requirements of Condition 14.

(c) The Regions shall post the Groundwater and Surface Water Monitoring Plan and the results of the Groundwater and Surface Water Monitoring program on the Owner's web site for the Facility in accordance with the requirements of the EA Approval and Condition 15.

8. NUISANCE IMPACT CONTROL and HOUSEKEEPING

Odour Management

(1) (a) The Owner shall maintain a negative air pressure atmosphere in the Tipping Building at all times to contain any potential odours within the confines of the Tipping Building.

(b) (i) Once per year, or as required by the District Manager, the Owner shall undertake a test to measure the worse case scenario negative air pressure atmosphere throughout the Tipping Building, while the activities approved in this Certificate are carried out in the Tipping Building.

(ii) Notwithstanding the requirements set out in Condition 8.(1)(b)(i), the Owner shall install sufficient instrumentation to measure the air flow into the Boilers and demonstrate that adequate air flow is maintained

to maintain a negative air pressure atmosphere throughout the Tipping Building.

(c) In the event that adequate negative air pressure cannot be maintained, the Owner shall implement any necessary additional odour containment and control measures, including, but not necessarily limited to, those in the required Contingency and Emergency Response Plan.

(2) The Owner shall ensure that the entrance and exit doors into the Tipping Building, the Residue Building and the Grizzly Building are kept closed at all times except to permit the entry or exit of the respective waste transport vehicles and waste handling equipment into and out of these Buildings.

(3) The Owner shall ensure that, at all times, the air from the Tipping Building, the Residue Building, the Grizzly Building and from the Equipment is exhausted through an appropriate and fully functional APC Equipment approved by this Certificate.

(4) The Owner shall undertake appropriate housekeeping activities, including regular cleaning of the tipping floor to control potential sources of fugitive odour emissions.

(5) The Owner shall ensure that no Waste handling equipment or empty storage containers are stored outside, unless they have been washed to prevent fugitive odour emissions.

(6) The Owner shall regularly clean all equipment and storage areas that are used to handle, process and store waste at the Site, including the surfaces of the outdoor spill containment areas, as required.

(7) (i) Prior to the receipt of Waste at the Site, the Owner shall provide documentation which outlines the testing carried out by a licensed structural engineer to confirm the effectiveness of the containment in the buildings, conveyors and tanks and silos at the Site.

(ii) The testing shall be carried out and repeated as directed by the District Manager in accordance with the test protocol prepared in consultation with and approved by the District Manager.

(iii) These tests shall be repeated as directed or agreed by the District Manager.

(8) The Owner shall prepare and implement an Odour Management and Mitigation Plan in accordance with the requirements set out in the EA Approval and as determined to be acceptable to the Regional Director.

(9) (a) In addition to the requirements set out in the EA Approval, the Odour Management and Mitigation Plan shall include the following:

(i) identification of all potential sources of odourous emissions;

(ii) description of the preventative and control measures to minimize odourous emissions from the identified sources;
(iii) procedures for the implementation of the Odour Management and Mitigation Plan;
(iv) inspection and maintenance procedures to ensure effective implementation of the Odour Management and Mitigation Plan; and
(v) procedures for verification and recording the progress of the implementation of the Odour Management and Mitigation Plan.

(b) The Owner shall continue to submit an updated Odour Management and Mitigation Plan until such time as the Regional Director notifies the Owner in writing that further submissions are no longer required.

Vehicles and Traffic

(10) (a) The Owner shall ensure that all vehicles transporting waste to and from the Site are not leaking or dripping waste when arriving at or leaving the Site.

(b) Should the Owner become aware that the truck(s) delivering waste to the Site have leaked wastewater on the municipal roadways, the Owner shall immediately report the violation to the owner of the vehicle(s) and to the District Manager.

(c) The Owner shall ensure that the exterior of all vehicles delivering Waste to the Site or hauling waste from the Site is washed prior to the trucks' departure from the Site, if necessary.

(d) Any necessary truck washing shall occur only in the designated wash down area of the Tipping Building or the Residue Building.

(11) The Owner shall ensure that there is no queuing or parking of vehicles that are waiting to enter the Site on any roadway that is not a distinct part of the Site.

Litter

(12) The Owner shall:

(a) take all practical steps to prevent the escape of litter from the Site;
(b) pick up litter around the Site on a daily basis, or more frequently if necessary; and
(c) if necessary, erect litter fences around the areas causing a litter problem.

Dust

(13) The Owner shall ensure that all on-site roads and operations/yard areas are regularly swept/washed to prevent dust impacts off-Site.

Vermin and Vectors

(14) The Owner shall:

(a) implement necessary housekeeping procedures to eliminate sources and potential sources of attraction for vermin and vectors; and

(b) hire a qualified, licensed pest control professional to design and implement a pest control plan for the Site. The pest control plan shall remain in place, and be updated from time to time as necessary, until the Site has been closed and this Certificate has been revoked.

Visual Screening

(15) The Owner shall provide visual screening for the Site in accordance with the documentation included in the attached Schedule "A".

9. STAFF TRAINING

(1) (a) The Owner shall ensure that all operators of the Site are trained with respect to the following, as per the specific job requirements of each individual operator:

(i) terms and conditions of this Certificate and the requirements of the EA Approval;
(ii) operation and management of the Site, or area(s) within the Site, as per the specific job requirements of each individual operator, and which may include procedures for receiving, screening and identifying Waste, refusal, handling, processing and temporarily storing wastes, operation of the Equipment, the APC Equipment, the CEM System and the Works;
(iii) testing, monitoring and operating requirements;
(iv) maintenance and inspection procedures;
(v) recording procedures;
(vi) nuisance impact control and housekeeping procedures;
(vii) procedures for recording and responding to public complaints;
(viii) an outline of the responsibilities of Site personnel including roles and responsibilities during emergency situations;
(ix) the Contingency and Emergency Response Plan including exit locations and evacuation routing, and location of relevant equipment available for emergency situations;
(x) environmental, and occupational health and safety concerns pertaining to the wastes to be handled;
(xi) emergency first-aid information; and
(xii) relevant waste management legislation and regulations, including the *EPA,* the *OWRA,* the *O. Reg. 347,* the *O. Reg. 419/05* and the Ministry guidelines affecting thermal treatment facilities.

(2) The Owner shall ensure that all personnel are trained in the requirements of this Certificate relevant to the employee's position:

(a) upon commencing employment at the Site in a particular position;
(b) whenever items listed in Condition 9.(1) are changed or updated; and
(c) during the planned refresher training.

10. **COMPLAINTS / ODOUR-CONTAMINANT EMISSIONS RESPONSE PROCEDURE**

(1) The Owner or a designated representative of the Owner shall be available to receive public complaints caused by the operations at the Site twenty-four (24) hours per day, seven (7) days per week.

(2) If at any time, the Owner or the Ministry receives a complaint or the Owner or the Provincial Officer detects an emission of odour or any contaminant, (Emission Event), from the Site, in addition to the requirements set out in the EA approval, the Owner shall record all relevant information in the computerized tracking system and shall respond to the complaint/Emission Event according to the following procedure:

Step 1: Record of Complaint/Emission Event

(a) (i) The Owner shall record each complaint/Emission Event and each record shall include the following:

(A) name, address and the telephone number of the complainant, if known;
(B) time and date of the complaint/Emission Event;
(C) details of the complaint; and

(ii) After the complaint/Emission Event has been recorded in the tracking system, the Owner shall immediately report to the District Manager by phone or e-mail during office hours and to the Ministry's Spills Actions Centre at 1-800-268-6060 after office hours on the receipt of the complaint or occurrence of the Emission Event.

Step 2: Investigation and Handling of Complaint/Emission Event

(b) The Owner shall immediately initiate investigation of the complaint/Emission Event. As a minimum, the investigation shall include the following:

(i) determination of the activities being undertaken at the Site at the time of the complaint/Emission Event;
(ii) meteorological conditions including, but not limited to the ambient temperature, approximate wind speed and its direction.
(iii) determination if the complaint is attributed to activities being undertaken at the Site and if so, the possible cause(s) of the complaint/Emission Event; and

(iv) determination of the remedial action(s) to address the cause(s) of the Complaint/Emission Event, and the schedule for the implementation of the necessary remedial action(s).

(c) The Owner shall respond to the complainant, if known, and the response shall include the results of the investigation of the Complaint, the action(s) taken or planned to be taken to address the cause(s) of the Complaint, and if any follow-up response(s) will be provided.

(d) Upon completed investigation of the Complaint/Emission event, the Owner shall, within three (3) business days, submit a report to the District Manager on the Complaint, on the action(s) taken or planned to be taken to address the cause(s) of the Complaint and on all proposed action(s) to prevent recurrence of the Complaint/Emission Event in the future.

(3) If, in the opinion of the District Manager, failure of the APC Equipment and/or any other process or equipment upset or malfunction results in off-site Complaint/Emission Event, confirmed by the Owner or a Provincial Officer of the Ministry, the Owner shall, immediately upon notification from the District Manager, implement any necessary additional control measures, including, but not necessarily limited to, those in the Contingency and Emergency Response Plan required by this Certificate.

(4) If the District Manager deems the additional control measures taken as per condition 10.(3) to be unsuitable, insufficient or ineffective, the District Manager may direct the Owner, in writing, to take further measures to address the noted failure, upset or malfunction including pursuant to section 39 of the *EPA* requiring a reduction in the receipt of Waste, cessation of the receipt of Waste, removal and off-site disposal of Waste from the Tipping Building as well as making repairs or modifications to equipment or processes.

11. CONTINGENCY and EMERGENCY RESPONSE PLAN

(1) (a) The Owner shall develop and implement a Contingency and Emergency Response Plan in accordance with the requirements set out in the EA Approval.

(b) Notwithstanding the requirements set out in the EA Approval, the Contingency and Emergency Response Plan shall be prepared in consultation with the District Manager or designate, the local Municipality and the Fire Department.

(2) In addition to the requirements set out in the EA Approval, the Contingency and Emergency Response Plan, as a minimum, shall include the following:

(a) the Site plan clearly showing the equipment layout and all storage areas for wastes and reagents;

(b) a list of Site personnel responsible for the implementation of the contingency measures and various emergency response tasks and their training requirements;
(c) a list of equipment and materials required for the implementation of the contingency measures and the emergency situation response;
(d) maintenance and testing program for equipment required for the implementation of the contingency measures and the emergency situation response;
(e) procedures to be undertaken as part of the implementation of the contingency measures and the emergency situation response;
(f) names and telephone numbers of waste management companies available for emergency response;
(g) notification protocol, with names and telephone numbers of persons to be contacted, including the Owner, the Site personnel, the Ministry of the Environment Spills Action Centre and the York Durham District, the local Fire and Police Departments, the local Municipality, the local Medical Officer of Health, and the Ministry of Labour;
(h) procedures and actions to be taken should the incoming Waste not meet the applicable quality criteria specified in this Certificate;
(i) procedures and actions to be taken should the outgoing Residual Waste fail to meet the criteria specified in this Certificate;
(j) procedures and actions to be taken should the current disposal options for the outgoing Residual Waste become unavailable;
(k) design of the contingency measure, procedures and actions should the emissions from the Site, including the fugitive odour/dust emissions, cause occurrences of public Complaints;
(l) procedures and actions to be taken should the Owner be unable to maintain the negative pressure in the Tipping Building;
(m) procedures and actions to be taken should the occurrence of Complaints require the Owner to suspend the waste processing activities at the Site; and
(n) identification and risk assessment of all reasonably foreseeable incidents that may result in a discharge into the natural environment of any contaminant in an amount, concentration or level in excess of that prescribed by the Regulations and/or imposed by this Certificate, including but not limited to:
    (i) a breakdown of the Facility/Equipment or part of the Facility/Equipment, including the APC Equipment and the CEM Systems associated with the Boilers;
    (ii) CEM Systems indicate that the Boilers and associated APC Equipment have been out of compliance with the Performance Requirements;
    (iii) any change in process parameters which may result in non compliance with the Performance Requirements;
    (iv) power failure resulting in the use of the Emergency Diesel Generator or Total Power Failure; and
    (v) description of the preventative and control measures to minimize the occurrence or impacts of the above incidents; and
    (vi) procedures for corrective measures and timelines to take to address the above incidents in a timely manner to effectively prevent or minimize the discharge of any contaminant into the natural environment and continue to maintain compliance with the *EPA* , the Regulations and

this Certificate, including procedures for Waste Processing Rate reduction, waste feed cut-off, Controlled Shutdown or Emergency Shutdown of the Boilers as applicable.

(3) The Owner shall submit the finalized Contingency and Emergency Response Plan to the Director a minimum of one hundred and twenty (120) days prior to the Commencement Date of Operation, for approval.

(4) An up-to-date version of the Contingency and Emergency Response Plan shall be kept at the Site at all times, in a central location available to all staff, and it shall be available for inspection by a Provincial Officer upon request.

(5) The Owner shall ensure that the names and telephone numbers of the persons to be contacted in the event of an emergency situation are kept up-to-date, and that these numbers are prominently displayed at the Site and at all times available to all staff and emergency response personnel.

(6) The Contingency and Emergency Response Plan shall be reviewed on a regular basis and updated, as necessary. The revised version of the Contingency and Emergency Response Plan shall be submitted to the local Municipality and the Fire Department for comments and to the District Manager for comments and concurrence.

(7) The Owner shall implement the recommendations of the updated Contingency and Emergency Response Plan, immediately upon receipt of the written concurrence from the District Manager.

12. **EMERGENCY SITUATION RESPONSE and REPORTING**

(1) The Owner shall immediately take all measures necessary to contain and clean up any spill or leak which may result from the operation at this Site and manage any emergency situation in accordance with the Contingency and Emergency Response Plan.

(2) The Owner shall ensure that the equipment and materials listed in the Contingency and Emergency Response Plan are immediately available at the Site, are in a good state of repair, and fully operational at all times.

(3) The Owner shall ensure that all Site personnel responsible for the emergency situation response are fully trained in the use of the equipment and related materials, and in the procedures to be employed in the event of an emergency.

(4) All Spills as defined in the *EPA* shall be immediately reported to the **Ministry's Spills Action Centre at 1-800-268-6060** and shall be recorded in the log book as to the nature of the emergency situation, and the action taken for clean-up, correction and prevention of future occurrences.

13. **SUBMISSIONS to the REGIONAL DIRECTOR or DISTRICT MANAGER**

(1) The Owner shall notify the District Manager in writing, at least six (60) days prior to the scheduled date for the first receipt of Waste at the Site, as to whether or not the construction of the Facility has been carried out in accordance with this Certificate to a point of Substantial Completion.

(2) (a) The Owner shall forthwith notify the District Manager and the Spills Action Centre by telephone, when any of the following incidents occur that may result in a discharge into the natural environment of any contaminant in an amount, concentration or level in excess of that prescribed by the Regulations and/or imposed by this Certificate:

(i) CEM Systems indicate that the Boilers and associated APC Equipment have been out of compliance with the Performance Requirements triggering a Waste Processing Rate Reduction, Waste Feed cut-off, Controlled Shutdown or Emergency Shutdown as specified in the Emergency Response and Contingency Plan;
(ii) failure of the APC Equipment associated with the Boilers; and
(iii) power failure resulting in the use of the emergency diesel generator or Total Power Failure;

(b) In addition to fulfilling the notification requirements from the *EPA,* the Owner shall prepare and submit a written report to the District Manager with respect to any of the above said occurrences, within five (5) calendar days of the occurrence, in the following format:

(i) date of the occurrence;
(ii) general description of the occurrence;
(iii) duration of the occurrence;
(iv) effect of the occurrence on the emissions from the Facility;
(v) measures taken to alleviate the effect of the occurrence on the emissions from the Facility; and
(vi) measures taken to prevent the occurrence of the same or similar occurrence in the future.

(3) Should a Spill, as defined in the *EPA*, occur at the Site, in addition to fulfilling the requirements from the *EPA* and applicable regulations, the Owner shall submit to the District Manager a written report within three (3) calendar days outlining the nature of the Spill, remedial measure taken and the measures taken to prevent future occurrences at the Site.

(4) (a) Within ninety (90) days from the date of this Certificate, the Regions shall prepare and submit to the District Manager for concurrence, a Soil Testing Plan to monitor the impact of the Site operations at the locations where the ambient air monitoring is proposed by the Owner in accordance with the requirements set out in the EA Approval.

(b) (i) This Plan shall ensure that representative samples of the soil to be tested are collected in sufficient numbers and that the samples are properly preserved and tested so that reliable data on the soil characteristics is collected.

(ii) As a minimum, the Plan shall include testing for cadmium, lead, chromium, nickel, cobalt, copper, molybdenum, selenium, zinc and mercury, Dioxins and Furans.

(iii) This Plan shall comply with the Ministry's regulatory requirements for sampling and testing of soil and it shall include the rationale for the proposed methods.

(iv) This Plan be kept at the Site at all times and be available for inspection by a Provincial Officer upon request.

14. RECORDS KEEPING

(1) Any information requested by the Ministry concerning the Facility and its operation under this Certificate, including, but not limited to, any records required to be kept by this Certificate, shall be provided to the Ministry, upon request**,** in a timely manner.

(2) The Owner shall retain, for a minimum of seven (7) years from the date of their creation, except as noted below, all reports, records and information described in this Certificate.

Daily Activities

(3) The Owner shall maintain an on-Site written or digital record of activities undertaken at the Site. All measurements shall be recorded in consistent metric units of measurement. As a minimum, the record shall include the following:

(a) date of record and the name and signature of the person completing the report;
(b) quantity and source of the incoming Waste received at the Site;
(c) records of the estimated quantity of Waste thermally treated in the Boilers;
(d) quantity of the Unacceptable Waste received at the Site by the end of the approved Waste receipt period and the type(s) of the Unacceptable Waste received;
(e) quantity and type of the Residual Waste shipped from the Site, including any required outgoing Residual Waste characterization results;
(f) destination and/or receiving site(s) for the Residual Waste shipped from the Site;
(g) quantity and type of any Rejected Waste accepted at the Site;
(h) destination and/or receiving site(s) for the Rejected Waste shipped from the Site;
(i) housekeeping activities, including litter collection and washing/cleaning activities, etc.
(j) amount of electricity produced;

(k) amount of excess electricity exported to the electrical grid.

Monitoring and Testing Records

(4) The Owner shall maintain an on-Site written or digital record of activities undertaken at the Site. All measurements shall be recorded in consistent metric units of measurement. As a minimum, the record shall include the following:

(a) day and time of the activity;
(b) all original records produced by the recording devices associated with the CEM Systems;
(c) a summary of daily records of readings of the CEM Systems, including:
  (i) the daily minimum and maximum 4-hour average readings for carbon monoxide;
  (ii) the daily minimum and maximum one hour average readings for oxygen;
  (iii) the daily minimum and maximum 10-minute average readings for organic matter;
  (iv) the daily minimum and maximum 24-hour average readings for sulphur dioxide;
  (v) the daily minimum and maximum 24-hour average readings for nitrogen oxides;
  (vi) the daily minimum and maximum 24-hour average readings for hydrogen chloride;
  (vii) the daily minimum and maximum 6-minute average and 2-hour average opacity readings; and
  (viii) the daily minimum and maximum one-hour average readings for temperature measurements.
(d) records of all excursions from the applicable Performance Requirements as measured by the CEM Systems, duration of the excursions, reasons for the excursions and corrective measures taken to eliminate the excursions;
(e) all records produced during any Acoustic Audit;
(f) all records produced during any Source Testing;
(g) all records produced by the long term sampling program for Dioxins and Furans required by this Certificate;
(h) all records produced during the Residual Waste compliance testing;
(i) all records produced during the Soil Testing;
(j) all records produced during the Groundwater and Surface Water Monitoring required by this Certificate;
(k) all records produced during the Ambient Air Monitoring required by this Certificate;
(l) all records associated with radiation monitoring of the incoming Waste, including but not limited to:
  (i) transaction number;
  (ii) hauler;
  (iii) vehicle ID;
  (iv) alarm level;
  (v) maximum CPS;
  (vi) uSv/hr;

(vii) comment;
(viii) background CPS;
(ix) driver time in and out; and
(x) name of the Trainer Personnel that carried out the monitoring.

(m) results of the containment testing carried out in the buildings, conveyors, tanks and silos, as required;

(n) results the negative pressure in the Tipping Building carried out, as required.

Inspections/Maintenance/Repairs

(5) The Owner shall maintain an on-Site written or digital record of inspections and maintenance as required by this Certificate. As a minimum, the record shall include the following:

(a) the name and signature of the Trained Personnel that conducted the inspection;
(b) the date and time of the inspection;
(c) the list of any deficiencies discovered, including the need for a maintenance or repair activity;
(d) the recommendations for remedial action;
(e) the date, time and description of actions (repair or maintenance) undertaken;
(f) the name and signature of the Trained Personnel who undertook the remedial action; and
(g) an estimate of the quantity of any materials removed during cleaning of the Works.

Emergency Situations

(6) The Owner shall maintain an on-Site written or digital record of the emergency situations. As a minimum, the record shall include the following:

(a) the type of an emergency situation;
(b) description of how the emergency situation was handled;
(c) the type and amount of material spilled, if applicable;
(d) a description of how the material was cleaned up and stored, if generated; and
(e) the location and time of final disposal, if applicable; and
(f) description of the preventative and control measures undertaken to minimize the potential for re-occurrence of the emergency situation in the future.

Complaints Response Records

(7) The Owner shall establish and maintain a written or digital record of complaints received and the responses made as required by this Certificate.

Training

(8) The Owner shall maintain an on-Site written or digital record of training as required by this Certificate. As a minimum, the record shall include the following:

(a) date of training;
(b) name and signature of person who has been trained; and
(c) description of the training provided.

Reports

(9) The Owner shall keep at the Site the following reports required by this Certificate:

(a) the ESDM Report
(b) the Acoustic Assessment Report;
(c) the Annual Report; and
(d) the Third Party Audit.

15. **REPORTING**

Annual Report

(1) By March 31st following the end of each operating year, the Owner shall prepare and submit to the District Manager and to the Advisory Committee, an Annual Report summarizing the operation of the Site covering the previous calendar year. This Annual Report shall include, as a minimum, the following information:

(a) a summary of the quality and the quantity of the Wastes accepted at the Site, including the maximum amount of the Waste received annually and daily and the sources of the Waste;

(b) a summary of the quality and the quantity of the Residual Waste shipped from the Site, including the analytical data required to characterize the Residual Waste, the off-Site destinations for the Residual Waste and its subsequent use, if known;

(c) estimated material balance for each month documenting the maximum amount of wastes stored at the Site;

(d) annual water usage;

(e) annual amount of the electricity produced and the annual amount of the electricity exported to the electrical grid;

(f) summaries and conclusions from the records required by Conditions 14.(3) through 14.(8) of this Certificate;

(g) the Emission Summary Table and the Acoustic Assessment Summary Table for the Facility as of December 31 from the previous calendar year;

(h) a summary of dates, duration and reasons for any environmental and operational problems, Boilers downtime, APC Equipment and CEM System malfunctions that may have negatively impacted the quality of the environment or any incidents triggered by the Emergency Response and

Contingency Plan and corrective measures taken to eliminate the environmental impacts of the incidents;

(i) a summary of the dates, duration and reasons for all excursions from the applicable Performance Requirements as measured by the CEM Systems or as reported by the annual Source Testing, reasons for the excursions and corrective measures taken to eliminate the excursions;

(j) results of the evaluation of the performance of the long-term sampling system in determining the Dioxins and Furans emission trends and/or fluctuations for the year reported on as well as demonstrating the ongoing performance of the APC Equipment associated with the Boilers;

(k) dates of all environmental complaints relating to the Site together with cause of the Complaints and actions taken to prevent future Complaints and/or events that could lead to future Complaints;

(l) any environmental and operational problems that could have negatively impacted the environment, discovered as a result of daily inspections or otherwise and any mitigative actions taken;

(m) a summary of any emergency situations that have occurred at the Site and how they were handled;

(n) the results and an interpretive analysis of the results of the groundwater and surface water, including an assessment of the need to amend the monitoring programs;

(o) summaries of the Advisory Committee meetings, including the issues raised by the public and their current status;

(p) any recommendations to improve the environmental and process performance of the Site in the future;

(q) statement of compliance with this Certificate, including compliance with the *O. Reg. 419/05* and all air emission limits based on the results of source testing, continuous monitoring and engineering calculations, as may be appropriate; and

(r) interpretation of the results and comparison to the results from previous Annual Reports to demonstrate the Facility's impact on the environment.

Third Party Audit

(2) (a) The Regions shall ensure that an independent technical review of the operations at the Site is undertaken in accordance with the requirements of the EA Approval.

(b) In addition to the Third Party Audit requirements set out in the EA approval, the Third Party Audit shall include the following:

(i) a review of the data from the monitoring and testing required by this Certificate;
(ii) a review of all complaints received about the operation of the Facility;
(iii) any recommendations for improving the operation of the Facility received from the Advisory Committee; and
(iv) a recommendation of any improvements that could be made to ensure that the operation of the Facility is optimized and is protective of the health and safety of people and the environment.

(3) The Regions shall submit a Written Audit Report on the results of the independent technical review to the Regional Director in accordance with the Audit Plan and retain a copy at the Site.

Soil Testing Report

(4) Within one (1) month of completion of each Soil Testing event, the Regions shall submit to the District Manager a Soil Testing Report, which includes the details on the sampling/testing procedures, the results of the testing and a comparison with the results obtained during the previous Soil Testing.

16. PUBLIC ACCESS TO DOCUMENTATION

(1) The Owner shall, at all times, maintain documentation that describes the current operations of the Facility. The Owner shall post the documentation at the website for the undertaking and during regular business hours, the Owner shall make the following documents available for inspection at the Site by any interested member of the public, upon submission to the Ministry for review:

(a) a current ESDM Report that demonstrates compliance with the Performance Limits for the Facility regarding all Compounds of Concern;

(b) a current Acoustic Assessment Report that demonstrates compliance with the Performance Limits for the Facility regarding noise emissions;

(c) the most recent Annual Report;

(d) the most current Third Party Audit Report;

(e) Odour Management and Mitigation Plan, prepared in accordance with the requirements of the EA Approval;

(f) Noise Monitoring and Reporting Plan, prepared in accordance with the requirements of the EA Approval; and

(g) Groundwater and Surface Water Monitoring and Reporting Plan, prepared in accordance with the requirements of the EA Approval.

(2) The Owner shall ensure that necessary hardware and software are provided at a location available to the public, to provide on-line real-time reporting of the operating parameter data for the Facility, including acceptable operating limits, stack emissions, and all other parameters for which continuous monitoring is required and that continuous records of the same be kept and made available to the public.

17. ADVISORY COMMITTEE

(1) The Regions shall establish an Advisory Committee in accordance with the requirements set out in the EA Approval.

18. CLOSURE of the SITE

(1) A minimum of nine (9) months prior to closure of the Site, the Owner shall submit, for approval by the Director, a written Closure Plan for the Site. This Plan shall include, as a minimum, a description of the work that will be done to facilitate closure of the Site and a schedule for completion of that work.

(2) Within ten (10) days after closure of the Site, the Owner shall notify the Director and the District Manager, in writing, that the Site is closed and that the approved Closure Plan has been implemented.

SCHEDULE "A"

Supporting Documentation

(1) Applications for a Certificate of Approval (Air) dated March 2, 2011, each signed by Cliff Curtis, Commissioner of Works, The Regional Municipality of Durham, by Erin Mahoney, Commissioner of Environmental Services, The Regional Municipality of York and by Matthew R. Mulcahy, Senior Vice President, Business Development, Covanta Durham York Renewable Energy Limited Partnership, and the following supporting documentation:

(a) Emission Summary and Dispersion Modelling Report, dated March 2011, prepared by Golder Associates;

(b) Acoustic Assessment Report prepared by Golder Associates Ltd., dated March 2011 and signed by Paul Niejadlik.

(2) Applications for a Provisional Certificate of Approval (Waste Disposal Site) dated March 2, 2011, each signed by Cliff Curtis, Commissioner of Works, The Regional Municipality of Durham, by Erin Mahoney, Commissioner of Environmental Services, The Regional Municipality of York and by Matthew R. Mulcahy, Senior Vice President, Business Development, Covanta Durham York Renewable Energy Limited Partnership, and the following supporting documentation:

(a) Attachment #1 containing the "Design and Operations Report", dated March 2011, prepared by Golder Associates Ltd.;

(b) Attachment #3 containing the "Public Consultation Report", dated March 2011, prepared by Golder Associates Ltd.;

(c) Attachment #4 containing the Host Community Agreement

(d) Attachment #5 containing the proof of legal name for Covanta Durham York Renewable Energy Limited Partnership; and

(e) A letter May 24, 2011 from Anthony Ciccone, Golder Associates Ltd., to Margaret Wojcik, Ontario Ministry of the Environment, providing additional technical information on the proposal and attaching a report entitled "Amendment #1 Durham York Energy Centre Design and Operations Report", dated May 2011;

(3) Applications for a Certificate of Approval of Municipal and Private Sewage Works dated March 2, 2011, each signed by Cliff Curtis, Commissioner of Works, The Regional Municipality of Durham, by Erin Mahoney, Commissioner of Environmental Services, The Regional Municipality of Durham and by Matthew R. Mulcahy, Senior Vice President, Business Development, Covanta Durham York Renewable Energy Limited Partnership, and the following supporting documentation:

(a) "Surface Water and Groundwater Technical Study Report" dated July 2009, prepared by Jacques Whitford, Markham, Ontario (CD Report).

(b) "Stormwater Design Model Output" prepared by Sigma Energy, dated March 2001 (CD Report).

(c) Clearance letter from Central Lake Ontario Conservation date February 22, 2011.

(d) A letter dated March 23, 2011, from Brian Bahor, Covanta Energy Corporation, to Stefanos Habtom, Ontario Ministry of the Environment, providing additional technical design information on the proposed stormwater management ponds.

SCHEDULE "B"

Procedure to calculate and record the 10-minute average concentration of odour at the Point of Impingement and at the most impacted Sensitive Receptor

(a) Calculate and record one-hour average concentration of odour at the Point of Impingement and at the most impacted Sensitive Receptor, employing CALPUFF atmospheric dispersion model or the dispersion model acceptable to the Director that employs at least five (5) years of hourly local meteorological data and that can provide results reported as individual one-hour average odour concentrations.

(b) Convert and record each of the one-hour average concentrations predicted over the five (5) years of hourly local meteorological data at the Point of Impingement and at the most impacted Sensitive Receptor to 10-minute average concentrations using the One-hour Average to 10-Minute Average Conversion described below; and

(c) Record and present the 10-Minute Average concentrations predicted to occur over a five (5) year period at the Point of Impingement and at the most impacted Sensitive Receptor in a histogram. The histogram shall identify all predicted 10-minute average odour concentration occurrences in terms of frequency, identifying the number of occurrences over the entire range of predicted odour concentration in increments of not more than 1/10 of one odour unit. The maximum 10-minute average concentration of odour at the Sensitive Receptor will be considered to be the maximum odour concentration at the most impacted Sensitive Receptor that occurs and is represented in the histogram, disregarding outlying data points on the histogram as agreed to by the Director.

One-hour Average To 10-minute Average Conversion

1. Use the following formula to convert and record one-hour average concentrations predicted by the CALPUFF atmospheric dispersion model or by the dispersion model acceptable to the Director to 10-minute average concentrations:

X10min = X60min*1.65

where X10min = 10-minute average concentration
X60min = one-hour average concentration

SCHEDULE "C"

PERFORMANCE REQUIREMENTS
In-Stack Emission Limits

Parameter	In-Stack Emission Limit	Verification of Compliance
Total Suspended Particulate Matter (filterable particulate measured in accordance with the Ontario Source Testing Code)	9 mg/Rm3	Results from compliance Source Testing
cadmium	7 µg/Rm3	Results from compliance Source Testing
lead	50 µg/Rm3	Results from compliance Source Testing
mercury	15 µg/Rm3	Results from compliance Source Testing
dioxins and furans	60 pg/Rm3	Results from compliance Source Testing; results expressed as I-TEQ
hydrochloric acid (HCl)	9 mg/Rm3	Calculated as the rolling arithmetic average of 24 hours of data measured by a CEM System that provides data at least once every 15 minutes
sulphur dioxide (SO2)	35 mg/Rm3	Calculated as the rolling arithmetic average of 24 hours of data measured by a CEM System that provides data at least once every 15 minutes
nitrogen oxides (NOx)	121 mg/ Rm3	Calculated as the rolling arithmetic average of 24 hours of data measured by a CEM System that provides data at least once every 15 minutes
organic matter (undiluted, expressed as equivalent methane)	50 ppmdv (33 mg/ Rm3)	Results from compliance source testing
carbon monoxide	35 ppmdv (40 mg/Rm3)	Calculated as the rolling arithmetic average of four (4) hours of data measured by a CEM System that provides data at least once every fifteen minutes, in accordance with condition 6 (2) (c)
opacity	10 percent	Calculated as the rolling arithmetic average of six (6) minutes of data measured by a CEM System that provides data at least once every minute
	5 percent	Calculated as the rolling arithmetic average of two (2) hours of data measured by a CEM System that provides data at least once every

		fifteen minutes

mg/Rm3- milligrams per reference cubic metre;

pg/Rm3 - picograms per reference cubic metre

ppmdv parts per million by dry volume,

µg/Rm3 - micrograms per reference cubic metre

R- reference conditions - 25 degrees Celsius, 101.3 kilopascals, dry basis, 11% oxygen

SCHEDULE "D"

TEST CONTAMINANTS

Hydrogen Chloride
Hydrogen Fluoride
Oxides of Nitrogen expressed as Nitrogen Dioxide
Sulphur Dioxide
Total Hydrocarbons, expressed as methane on wet basis
Carbon Dioxide
Total Suspended Particulate Matter (< 44 microns)
Total PM-10 including condensables
Total PM-2.5 including condensables

Metals

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Copper
Lead
Mercury
Molybdenum
Nickel
Selenium
Silver
Thallium
Vanadium
Zinc

Schedule "D" - Cont'd

Chlorobenzenes	Chlorophenols
Monochlorobenzene (MCB) 1,2-Dichlorobenzene (1,2-DCB) 1,3-Dichlorobenzene (1,3-DCB) 1,4-Dichlorobenzene (1,4-DCB) 1,2,3-Trichlorobenzene (1,2,3-TCB) 1,2,4-Trichlorobenzene (1,2,4-TCB) 1,3,5-Trichlorobenzene (1,3,5-TCB) 1,2,3,4-Tetrachlorobenzene (1,2,3,4-TeCB) 1,2,3,5-Tetrachlorobenzene (1,2,3,5-TeCB) 1,2,4,5-Tetrachlorobenzene (1,2,4,5-TeCB) Pentachlorobenzene (PeCB) Hexachlorobenzene (HxCB)	2-monochlorophenol (2-MCP) 3-monochlorophenol (3-MCP) 4-monochlorophenol (4-MCP) 2,3-dichlorophenol (2,3-DCP) 2,4-dichlorophenol (2,4-DCP) 2,5-dichlorophenol (2,5-DCP) 2,6-dichlorophenol (2,6-DCP) 3,4-dichlorophenol (3,4-DCP) 3,5-dichlorophenol (3,5-DCP) 2,3,4-trichlorophenol (2,3,4-T3CP) 2,3,5-trichlorophenol (2,3,5-T3CP) 2,3,6-trichlorophenol (2,3,6-T3CP) 2,4,5-trichlorophenol (2,4,5-T3CP) 2,4,6-trichlorophenol (2,4,6-T3CP) 3,4,5-trichlorophenol (3,4,5-T3CP) 2,3,4,5-tetrachlorophenol (2,3,4,5-T4CP) 2,3,4,6-tetrachlorophenol (2,3,4,6-T4CP) 2,3,5,6-tetrachlorophenol (2,3,5,6-T4CP) Pentachlorophenol (PeCP)

Schedule "D" - Cont'd

Co-Planar PCBs (Dioxin-like PCBs)	Volatile Organic Matter
PCB-077 (3,3',4,4'-TCB)	Acetaldehyde
PCB-081 (3,4,4',5-TCB)	Acetone
PCB-105 (2,3,3',4,4'-PeCB)	Acrolein
PCB-114 (2,3,4,4',5-PeCB)	Benzene
PCB-118 (2,3',4,4',5-PeCB)	Bromodichloromethane
PCB-123 (2',3,4,4',5-PeCB)	Bromoform
PCB-126 (3,3',4,4',5-PeCB)	Bromomethane
PCB-156 (2,3,3',4,4',5-HxCB)	Butadiene, 1,3 -
PCB-157 (2,3,3',4,4',5'-HxCB)	Butanone, 2 -
PCB-167 (2,3',4,4',5,5'-HxCB)	Carbon Tetrachloride
PCB-169 (3,3',4,4',5,5'-HxCB)	Chloroform
PCB-189 (2,3,3',4,4',5,5'-HpCB)	Cumene
	Dibromochloromethane
	Dichlorodifluoromethane
	Dichloroethane, 1,2 -
	Dichloroethene, Trans - 1,2
	Dichloroethene, 1,1 -
	Dichloropropane, 1,2 -
	Ethylbenzene
	Ethylene Dibromide
	Formaldehyde
	Mesitylene
	Methylene Chloride
	Styrene
	Tetrachloroethene
	Toluene
	Trichloroethane, 1,1,1 -
	Trichloroethene
	Trichloroethylene, 1,1,2 -
	Trichlorotrifluoroethane
	Trichlorofluoromethane
	Xylenes, M-, P- and O-
	Vinyl Chloride

Schedule "D" - Cont'd

Polycyclic Organic Matter	Dioxin/Furan Isomers
Acenaphthylene	
Acenaphthene	2,3,7,8-Tetrachlorodibenzo-p-dioxin
Anthracene	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
Benzo(a)anthracene	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
Benzo(b)fluoranthene	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
Benzo(k)fluoranthene	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
Benzo(a)fluorene	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
Benzo(b)fluorene	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin
Benzo(ghi)perylene	
Benzo(a)pyrene	2,3,7,8-Tetrachlorodibenzofuran
Benzo(e)pyrene	2,3,4,7,8-Pentachlorodibenzofuran
Biphenyl	1,2,3,7,8-Pentachlorodibenzofuran
2-Chloronaphthalene	1,2,3,4,7,8-Hexachlorodibenzofuran
Chrysene	1,2,3,6,7,8-Hexachlorodibenzofuran
Coronene	1,2,3,7,8,9-Hexachlorodibenzofuran
Dibenzo(a,c)anthracene	2,3,4,6,7,8-Hexachlorodibenzofuran
Dibenzo(a,h)anthracene	1,2,3,4,6,7,8-Heptachlorodibenzofuran
Dibenzo(a,e)pyrene	1,2,3,4,7,8,9-Heptachlorodibenzofuran
9,10-Dimethylanthracene	1,2,3,4,6,7,8,9-Octachlorodibenzofuran
7,12-Dimethylbenzo(a)anthracene	
Fluoranthene	
Fluorene	
Indeno(1,2,3-cd)pyrene	
2-Methylanthracene	
3-Methylcholanthrene	
1-Methylnaphthalene	
2-Methylnaphthalene	
1-Methylphenanthrene	
9-Methylphenanthrene	
Naphthalene	
Perylene	
Phenanthrene	
Picene	
Pyrene	
Tetralin	
M-terphenyl	
O-terphenyl	
P-terphenyl	
Triphenylene	

SCHEDULE "E"

SOURCE TESTING PROCEDURES

1. The Owner shall submit, to the Manager a test protocol including the Pre-Test Information required by the Source Testing Code, at least two (2) months prior to the scheduled Source Testing date.

2. (1) For the purpose of the Source Testing program, the Owner is temporarily permitted to operate the Boilers at a residual oxygen concentration below the performance limit outlined in Condition 6.(2)(b) during the period of the Source Testing. The Owner shall ensure that the concentration of residual oxygen in the Undiluted Gases leaving the combustion zone of the Boilers, as measured and recorded by the CEM System, shall not be less than 5 percent by volume on a dry basis, during this Source Testing program.

   (2) If the Source Testing results demonstrate that compliance with the Performance Requirements can be maintained at a residual oxygen concentration below the performance limit outlined in Condition 6.(2)(b), the Owner may apply to the Director for approval to alter the required residual oxygen concentration.

3. The Owner shall finalize the test protocol in consultation with the Manager.

4. The Owner shall not commence the Source Testing until the Manager has accepted the test protocol.

5. The Owner shall complete the first Source Testing not later than six (6) months after Commencement of Operation of the Facility/Equipment.

6. The Owner shall conduct subsequent Source Testing at least once (1) every calendar year thereafter.

7. The Owner shall notify the District Manager and the Manager in writing of the location, date and time of any impending Source Testing required by this Certificate, at least fifteen (15) days prior to the Source Testing.

8. The Owner shall submit a report on the Source Testing programs to the District Manager and the Manager not later than three (3) months after completing each Source Testing program. The report shall be in the format described in the Source Testing Code, and shall also include, but not be limited to:

   (1) an executive summary;
   (2) records of operating conditions; including process description, records of waste composition and feed rate during the Source Testing;
   (3) all records produced by the CEM Equipment;
   (4) procedures followed during the Source Testing and any deviation from the proposed test protocol and the reasons therefore;
   (5) the results of the analyses of the stack emissions;

(6) a summary table that compares the Source Testing results, the monitoring data and the records of operating conditions during the Source Testing to the requirements imposed by the *EPA*, the Regulation and/or the Performance Requirements;
(7) the results of dispersion calculations in accordance with the *O. Reg. 419/05*, indicating the maximum concentration of the Test Contaminants, at the Point of Impingement.
(8) an updated site wide emission source inventory to assess the aggregate point of impingement concentrations of the Test Contaminants.

9. The Owner shall ensure that the Source Testing Report is made available and easily accessible for review by the public at the Facility, immediately after the document is submitted to the Ministry.

10. The Director may not accept the results of the Source Testing if:
(1) the Source Testing Code or the requirements of the Manager were not followed; or
(2) the Owner did not notify the District Manager and the Manager of the Source Testing; or
(3) the Owner failed to provide a complete report on the Source Testing.

11. If the Director does not accept the results of the Source Testing, the Director may require re-testing.

SCHEDULE "F"

PARAMETER:
Temperature

LOCATION:
The sample point for the Continuous Temperature Monitor shall be located at a point where the temperature in the combustion zone of the Boilers has reached at least 1000^{o}C for a period of not less than one second. Compliance shall be proven by direct measurement or/and a correlation between the measured temperature and the intended target proven by a method acceptable to the Director.

PERFORMANCE:
The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters.

	PARAMETERS	SPECIFICATION
1)	Type:	"K", "J" or other type or alternative measurement device with equivalent measurement accuracy and suitable to the temperature range being measured
2)	Accuracy:	± 1.5 percent of the minimum gas temperature

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 1 minutes or better. Temperature readings for record keeping and reporting purposes shall be kept as one-hour average values.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

PARAMETER:
Carbon Monoxide

INSTALLATION:
The Continuous Carbon Monoxide Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of carbon monoxide in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler, and shall meet the following installation specifications.

PARAMETERS	SPECIFICATION
1) Range (parts per million, ppm):	0 to ≥100 ppm
2) Calibration Gas Ports:	close to the sample point

PERFORMANCE:
The Continuous Carbon Monoxide Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
1) Span Value (nearest ppm equivalent):	2 times the average normal concentration of the source
2) Relative Accuracy:	≤10 percent of the mean value of the reference method test data or ± 5 ppm whichever is greater
3) Calibration Error:	≤ 2.5 percent of actual concentration
4) System Bias:	≤ 4 percent of the mean value of the reference method test data
5) Procedure for Zero and Span Calibration Check:	all system components checked
6) Zero Calibration Drift (24-hour):	≤ 5 percent of span value
7) Span Calibration Drift (24-hour):	≤5 percent of span value
8) Response Time (90 percent response to a step change):	≤180 seconds
9) Operational Test Period:	≥168 hours without corrective maintenance

CALIBRATION:
Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

PARAMETER:
Oxygen

INSTALLATION:
The Continuous Oxygen Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of oxygen in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler and in the Undiluted Gases leaving the APC Equipment associated with each Boiler, and shall meet the following installation specifications.

PARAMETERS	SPECIFICATION
1) Range (percentage):	0 - 20 or 0 - 25
2) Calibration Gas Ports:	close to the sample point

PERFORMANCE:
The Continuous Oxygen Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
1) Span Value (percentage):	2 times the average normal concentration of the source
2) Relative Accuracy:	≤10 percent of the mean value of the reference method test data
3) Calibration Error:	0.25 percent O_2
4) System Bias:	≤ 4 percent of the mean value of the reference method test data
5) Procedure for Zero and Span Calibration Check:	all system components checked
6) Zero Calibration Drift (24-hour):	≤ 0.5 percent O_2
7) Span Calibration Drift (24-hour):	≤ 0.5 percent O_2
8) Response Time (90 percent response to a step change):	≤ 90 seconds
9) Operational Test Period:	≥ 168 hours without corrective maintenance

CALIBRATION:
Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better. Oxygen concentration readings for record keeping and reporting purposes shall be kept as one-hour average values.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent thereafter.

PARAMETER:
Hydrogen Chloride

INSTALLATION:
The Continuous Hydrogen Chloride Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of hydrogen chloride in the Undiluted Gases leaving the APC Equipment associated with each Boiler, and shall meet the following installation specifications.

PARAMETERS	SPECIFICATION
1) Range (parts per million, ppm):	0 to ≥100 ppm
2) Calibration Gas Ports:	close to the sample point

PERFORMANCE:
The Continuous Hydrogen Chloride Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
1) Span Value (nearest ppm equivalent):	2 times the average normal concentration of the source
2) Relative Accuracy:	≤ 20 percent of the mean value of the reference method test data or ± 5 ppm whichever is greater
3) Calibration Error:	≤ 2 percent of actual concentration
4) System Bias:	≤ 4 percent of the mean value of the reference method test data
5) Procedure for Zero and Span Calibration Check:	all system components checked
6) Zero Calibration Drift (24-hour):	≤ 5 percent of span value
7) Span Calibration Drift (24-hour):	≤ 5 percent of span value
8) Response Time (90 percent response to a step change):	≤ 240 seconds
9) Operational Test Period:	≥168 hours without corrective maintenance

CALIBRATION:
The monitor shall be calibrated daily at the sample point, to ensure that it meets the drift limits specified above, during the periods of the operation of the . The results of all calibrations shall be recorded at the time of calibration.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 5 minutes or better.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent thereafter.

PARAMETER:
Nitrogen Oxides

INSTALLATION:
The Continuous Nitrogen Oxide Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of nitrogen oxides in the Undiluted Gases leaving the APC Equipment associated with each Boiler, and shall meet the following installation specifications.

PARAMETERS	SPECIFICATION
1) Analyzer Operating Range (parts per million, ppm):	0 to ≥200 ppm
2) Calibration Gas Ports:	close to the sample point

PERFORMANCE:
The Continuous Nitrogen Oxides Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
1) Span Value (nearest ppm equivalent):	2 times the average normal concentration of the source
2) Relative Accuracy:	≤ 10 percent of the mean value of the reference method test data
3) Calibration Error:	≤ 2 percent of actual concentration
4) System Bias:	≤4 percent of the mean value of the reference method test data
5) Procedure for Zero and Span Calibration Check:	all system components checked
6) Zero Calibration Drift (24-hour):	≤ 2.5 percent of span value
7) Span Calibration Drift (24-hour):	≤ 2.5 percent of span value
8) Response Time (90 percent response to a step change):	≤ 240 seconds
9) Operational Test Period:	≥ 168 hours without corrective maintenance

CALIBRATION:
Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent thereafter.

PARAMETER:
Sulphur Dioxide

INSTALLATION:
The Continuous Sulphur Dioxide Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of sulphur dioxide in the Undiluted Gases leaving the APC Equipment associated with each Boiler, and shall meet the following installation specifications.

PARAMETERS	**SPECIFICATION**
1. Range (parts per million, ppm):	0 to ≥100 ppm
2. Calibration Gas Ports:	close to the sample point

PERFORMANCE:
The Continuous Sulphur Dioxide Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	**SPECIFICATION**
1. Span Value (nearest ppm equivalent):	2 times the average normal concentration of the source
2. Relative Accuracy:	≤ 10 percent of the mean value of the reference method test data
3. Calibration Error:	≤ 2 percent of actual concentration
4. System Bias:	≤ 4 percent of the mean value of the reference method test data
5. Procedure for Zero and Span Calibration Check:	all system components checked
6. Zero Calibration Drift (24-hour):	≤ 2.5 percent of span value
7. Span Calibration Drift (24-hour):	≤ 2.5 percent of span value
8. Response Time (90 percent response to a step change):	≤ 200 seconds
9. Operational Test Period:	≥168 hours without corrective maintenance

CALIBRATION:
Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

PARAMETER:
Total Hydrocarbons

INSTALLATION:
The Total Hydrocarbons Monitor shall be installed at an accessible location where the measurements are representative of the concentrations of Organic Matter (as methane) in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler and shall meet the following installation specifications.

	PARAMETERS	**SPECIFICATION**
1.	Detector Type:	Flame Ionization
2.	Oven Temperature:	160^{o}C minimum
3.	Flame Temperature:	1800 ^{o}C minimum at the corona of the hydrogen flame
4.	Range (parts per million, ppm):	0 to ≥200 ppm
5.	Calibration Gas:	propane in air or nitrogen
6.	Calibration Gas Ports:	close to the sample point

PERFORMANCE:
The Continuous Total Hydrocarbons Monitor shall meet the following minimum performance specifications for the following parameters.

	PARAMETERS	**SPECIFICATION**
1.	Span Value (nearest ppm equivalent):	2 times the average normal concentration of the source
2.	Relative Accuracy:	≤ 10 percent of the mean value of the reference method test data or ± 5 ppm whichever is greater
3.	System Bias:	≤ 4 percent of the mean value of the reference method test data
4.	Noise:	≤ 1 percent of span value on most sensitive range
5.	Repeatability:	≤ 1 percent of span value
6.	Linearity (response with propane in air):	≤ 3 percent of span value over all ranges
7.	Calibration Error:	≤ 2 percent of actual concentration
8.	Procedure for Zero and Span Calibration Check:	all system components checked on all ranges
9.	Zero Calibration Drift (24-hours):	≤ 2.5 percent of span value on all ranges
10.	Span Calibration Drift (24-hours):	≤ 2.5 percent of span value
11.	Response Time (90 percent response to a step change):	≤ 60 seconds
12.	Operational Test Period:	≥ 168 hours without corrective maintenance

CALIBRATION:
Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better. Measurements of concentrations of organic matter (as methane) shall be kept as 10 minute average values for record keeping and reporting purposes.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent thereafter.

PARAMETER: Opacity

INSTALLATION: The Continuous Opacity Monitor shall be installed at an accessible location where the measurements are representative of the actual opacity of the Undiluted Gases leaving the APC Equipment associated with each Boiler and shall meet the following design and installation specifications.

PARAMETERS		**SPECIFICATION**
1)	Wavelength at Peak Spectral Response (nanometres, nm):	500 - 600
2)	Wavelength at Mean Spectral Response (nm):	500 - 600
3)	Detector Angle of View:	≤ 5 degrees
4)	Angle of Projection:	≤ 5 degrees
5)	Range (percent of opacity):	0 -100

PERFORMANCE:
The Continuous Opacity Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS		**SPECIFICATION**
1)	Span Value (percent opacity):	2 times the average normal opacity of the source
2)	Calibration Error:	≤3 percent opacity
3)	Attenuator Calibration:	≤2 percent opacity
4)	Response Time (95 percent response to a step change):	≤ 10 seconds
5)	Schedule for Zero and Calibration Checks:	daily minimum
6)	Procedure for Zero and Calibration Checks:	all system components checked
7)	Zero Calibration Drift (24-hours):	≤ 2 percent opacity
8)	Span Calibration Drift (24-hours):	≤ 2 percent opacity
9)	Conditioning Test Period:	≥ 168 hours without corrective maintenance
10)	Operational Test Period:	≥ 168 hours without corrective maintenance

CALIBRATION:
The monitor shall be calibrated, to ensure that it meets the drift limits specified above, during the periods of the operation of the Equipment. The results of all calibrations shall be recorded at the time of calibration.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 30 seconds or better.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

PARAMETER:
Moisture, Hydrogen Fluoride and Ammonia

Selection and Installation

The Owner shall select and install a CEM System, to measure moisture content of the stack gases, the concentration of hydrogen fluoride and ammonia in the Undiluted Gases leaving the APC Equipment associated with each Boiler, as follows:

a) Design and Performance Specifications shall be in accordance with 40 CFR 60, Appendix B, Specification 4.

b) The Owner shall select the probe locations in compliance with 40 CFR 60, Appendix B, Specification 2.

Test Procedures

The Owner shall verify compliance with the Design and Performance Specifications in accordance with 40 CFR 60, Appendix B, Specification 4, with the reference method for the relative accuracy test being Method 4. of the Source Testing Code.

In furtherance of, but without limiting the generality of the foregoing, the mean difference between the calibration gas value and the analyzer response value at each of the four test concentrations shall be less than 5 percent of the measurement range.

SCHEDULE "G"

A stormwater management facility to service a 10.0 ha drainage area of the Durham York Energy Centre located on the west side of Osbourne Road and north of the CN Rail, Lot 27, Concession Broken Front, Part, Municipality of Clarington, Regional Municipality of Durham, designed to provide quality and quantity control of stormwater run-off by attenuating runoff from storm events up to 1:100 years return frequency to or below the pre-development levels, consisting of:

East Stormwater Management Pond (East SWM Pond)

A stormwater management facility to service a 5.7 ha drainage area comprising of the eastern part of the Durham York Energy Centre consisting of the following:

- one (1) approximately 128 m long drainage ditch collecting stormwater runoff from the north eastern part of the site, having an average horizontal slope of 1.56%, depth of 0.5 m, bottom width of 1.0 m, and side slopes of 2.5H:1V, discharging to storm sewers described below;

- one (1) approximately 199 m long drainage ditch collecting stormwater runoff from the eastern part of the site, having an average horizontal slope of 2.77%, depth of 0.5 m, bottom width of 1.0 m, and side slopes of 2.5H:1V, discharging to storm sewers described below;

- approximately fourteen (14) catch basins/maintenance holes and a total of 466.8 m long 450 mm diameter and 34.6 m of 600 mm diameter corrugated PE stormwater sewers conveying stormwater runoff collected from the north and north eastern part of the site, discharging to a forebay of a wet extended detention stormwater management pond described below;

- one (1) forebay with approximate bottom dimensions of 11.0 m wide and 34.8 m long and depth of 1.0 m, equipped with 600 mm diameter corrugated HDPE inlet pipe, a rip-rap covered inlet structure, and a forebay berm with top elevation of 95.0 m masl, discharging to a wet extended detention pond described below;

- one (1) wet extended detention stormwater management pond located at the south east part of the site, with approximate bottom dimensions of 21.0 m wide and 71.4 m long and a maximum depth of 2.7 m at 96.70 m masl elevation, having side slopes of 3H:1V and 5H:1V near the outlet structure, providing a permanent pool storage capacity of 1,008 m^3 at elevation 95.0 m masl, an active storage capacity of 3,099 m^3 at 96.70 m masl elevation, and total storage capacity of 4,107 m^3, equipped with an outlet structure consisting of a 150 mm diameter reverse slope inlet pipe with a gate valve and a 450 mm diameter perforated pipe riser fitted with 75 mm diameter orifice plate, a 75 mm diameter maintenance discharge pipe with a gate valve, and an emergency overflow structure at elevation 97.0 m masl, discharging through a 450 mm diameter outlet pipe to existing swale along the northern side of the CN Rail line to Tooley Creek and eventually to Lake Ontario;

West Stormwater Management Pond (West SWM Pond)

A stormwater management facility to service a 4.3 ha drainage area comprising of the western part of the Durham York Energy Centre consisting of the following:

- one (1) approximately 296 m long drainage ditch collecting stormwater runoff from the north western part of the site, having an average horizontal slope of 1.0%, depth of 0.5 m, bottom width of 1.0 m, and side slopes of 2.5H:1V, discharging to storm sewers described below;

- approximately five (5) catch basins/maintenance holes and a total of 272.2 m long 450 mm diameter corrugated PE stormwater sewers conveying stormwater runoff collected from the western part of the site, discharging to a forebay of a wet extended detention stormwater management pond described below;

- one (1) forebay with approximate bottom dimensions of 13.0 m wide and 26.0 m long and depth of 1.0 m, equipped with 450 mm diameter corrugated HDPE inlet pipe, a rip-rap covered inlet structure, and a forebay berm with top elevation of 95.0 m masl, discharging to a wet extended detention pond described below;

- one (1) wet extended detention stormwater management pond located at the south western part of the site, with approximate bottom dimensions of 13.0 m wide and 58.0 m long and a maximum depth of 2.5 m at 96.5 m masl elevation, having side slopes of 3H:1V and 5H:1V near the outlet structure, providing a permanent storage capacity of 623 m^3 at elevation 95.0 m masl, an active storage capacity of 2,054 m^3 at 96.50 m masl elevation, and total storage capacity of 2,677 m^3, equipped with an outlet structure consisting of a 150 mm diameter reverse slope inlet pipe with a gate valve and a 450 mm diameter perforated pipe riser fitted with 75 mm diameter orifice plate, a 75 mm diameter maintenance discharge pipe with a gate valve, and an emergency overflow structure at elevation 96.80 m masl, discharging through a 450 mm diameter outlet pipe to existing swale along the northern side of the CN Rail line to Tooley Creek and eventually to Lake Ontario;

including all associated controls and appurtenances.

The reasons for the imposition of these terms and conditions are as follows:

GENERAL

Conditions 1.(1), (2), (5), (6), (7), (8), (9), (10), (11), (12), (13), (17), (18) and (19) are included to clarify the legal rights and responsibilities of the Owner.

Conditions Nos.1.(3) and (4) are included to ensure that the Site is operated in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider.

Condition No. 1.(14) is included to ensure that the Site is operated under the corporate name which appears on the application form submitted for this approval and to ensure that the Director is informed of any changes.

Condition No.1.(15) is included to restrict potential transfer or encumbrance of the Site without the notification to the Director and to ensure that any transfer of encumbrance can be made only on the basis that it will not endanger compliance with this Certificate.

Condition No. 1.(16) is included to ensure that the appropriate Ministry staff has ready access to the operations of the Site which are approved under this Certificate. The Condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the *EPA*, the *OWRA*, the *PA*, the *NMA* and the *SDWA*.

SERVICE AREA, APPROVED WASTE TYPES, RATES and STORAGE

Condition No. 2. is included to specify the approved waste receipt rates, the approved waste types and the service area from which waste may be accepted at the Site based on the Owner's application and supporting documentation. Condition No. 2. is also included to specify the maximum amount of waste that is approved to be stored at the Site.

SIGNS and SITE SECURITY

Condition No. 3. is included to ensure that the Site's users, operators and the public are fully aware of important information and restrictions related to the operation of the Site. Condition No. 3. is also included to ensure that the Site is sufficiently secured, supervised and operated by properly trained personnel and to ensure controlled access and integrity of the Site by preventing unauthorized access when the Site is closed and no site personnel is on duty.

SITE OPERATIONS

Condition No. 4. is included to outline the operational requirements for the Facility to ensure that the said operation does not result in an adverse effect or a hazard to the natural environment or any person.

EQUIPMENT and SITE INSPECTIONS and MAINTENANCE

Condition No. 5. is included to require the Site to be maintained and inspected thoroughly on a regular basis to ensure that the operations at the Site are undertaken in a manner which does not result in an adverse effect or a hazard to the health and safety of the environment or any person.

PERFORMANCE REQUIREMENTS

Condition No. 6 is included to set out the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Facility.

TESTING, **MONITORING** and **AUDITING**

Condition No. 7. is to require the Owner to gather accurate information on the operation of the Facility so that the environmental impact and subsequent compliance with the *EPA*, the *OWRA*, their Regulations and this Certificate can be verified.

NUISANCE IMPACT CONTROL and HOUSEKEEPING

Condition No. 8. is included to ensure that the Site is operated and maintained in an environmentally acceptable manner which does not result in a negative impact on the natural environment or any person. Condition No. 8 is also included to specify odour control measures to minimize a potential for odour emissions from the Site.

STAFF TRAINING

Condition No. 9. is included to ensure that staff are properly trained in the operation of the equipment and instrumentation used at the Site, in the emergency response procedures and on the requirements and restrictions related to the Site operations under this Certificate.

COMPLAINTS RECORDING PROCEDURE

Condition No.10. is included to require the Owner to respond to any environmental complaints resulting from the Facility appropriately and in a timely manner and that appropriate actions are taken to prevent any further incidents that may cause complaints in the future.

CONTINGENCY and EMERGENCY RESPONSE PLAN and EMERGENCY SITUATIONS RESPONSE AND REPORTING

Conditions Nos.11. and 12. are included to ensure that the Owner is prepared and properly equipped to take immediate action in the event of an emergency situation.

SUBMISSIONS to the REGIONAL DIRECTOR or DISTRICT MANAGER

Condition No. 13. is included to set out the requirements for the submissions to the District Manager and the Regional Director regarding the operation of the Facility and the activities required by this Certificate.

RECORDS KEEPING

Condition No.14. is included to ensure that detailed records of Site activities, inspections, monitoring and upsets are recorded and maintained for inspection and information purposes.

REPORTING

Condition No.15. is to ensure that regular review of site, operations and monitoring is carried out and findings documented by a third party for determining whether or not the Site is being operated in compliance with this Certificate of Approval, the EPA and its regulations and whether or not any changes should be considered.

PUBLIC ACCESS to DOCUMENTATION

Condition No.16. is included to ensure that the public has access to information on the operation of the Site in order to participate in the activities of the Advisory Committee in a meaningful and effective way.

ADVISORY COMMITTEE

Condition No.17. is included to require the Owner to establish a forum for the exchange of information and public dialogue on activities carried out at the Site and to ensure that the local residents are properly informed of the activities at the Site and that their concerns can be heard and acted upon , as necessary. Open communication with the public and local authorities is important in helping to maintain high standards for the operation of the Site and protection of the natural environment. Condition 16. is also included to ensure that the requirements of the EA Approval are fulfilled.

CLOSURE of the SITE

Condition No.18. is included to ensure that the final closure of the Site is completed in accordance with Ministry's standards.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, and in accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written Notice served upon me, the Environmental Review Tribunal, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act and Section 101 of the

Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 9 and 39, *Environmental Protection Act*
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted site is approved under Section 9 and Section 27 of the Environmental Protection Act and Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 28th day of June, 2011

Signature
Ian Parrott, P .Eng.
Director
Section 9, *EPA*
Section 39, *EPA*
Section 53, *OWRA*

MW,QN,SH/

c: District Manager, MOE York-Durham
Regional Director, MOE Central Region

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDMENT TO ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 7306-8FDKNX
Notice No. 1
Issue Date: August 12, 2014

The Regional Municipality of Durham
605 Rossland Rd E 5th Floor
Whitby, Ontario
L1N 6A3

and

The Regional Municipality of York
17250 Yonge Street
Newmarket, Ontario
L3Y 6Z1

and

Covanta Durham York Renewable Energy Limited Partnership
445 South Street
Morristown, New Jersey
United States of America
07960

Site Location: Durham York Energy Centre
72 Osbourne Rd Lot 27, Concession Broken Front, Part 1
Clarington Municipality, Regional Municipality of Durham
L1E 2R2

You are hereby notified that I have amended Approval No. 7306-8FDKNX issued on June 28, 2011 for Waste Disposal Site (Incineration), complete with an Energy from Waste Facility and associated equipment, , as follows:

1. The following definition has been added:

   "Contingency and Emergency Response Plan" also means the document entitled "Spill Contingency and Emergency Response Plan";

2. The following Conditions are amended to read as follows:

2.(5)(b)(iii) The Owner may use equipment used to handle the hazardous wastes to handle other wastes provided that prior to such use the equipment has been thoroughly cleaned first.

4.(5)(e) A maximum of 630 tonnes of the Residual Waste, limited to the bottom ash shall be stored in two (2) dedicated bunkers, located within the confines of the Residue Building, described in the Supporting Documentation. The storage duration is as follows:

(i) The storage duration is limited to a maximum of seven (7) days.

(ii) Should longer storage duration be required to accommodate the duration of the required compliance testing, a minimum of forty eight (48) hours before the storage extension is commenced, the Owner shall notify the District Manager of the required extension. The notification shall include the duration of the extension and the reasons.

3. The following Conditions are added:

7.(7) (e) The Owner shall carry out the required bottom and fly ash compliance testing in accordance with the document entitled "Ash Sampling and Testing Protocol", listed in the attached Schedule.

11.8 Containment evaluations performed under the Spill Contingency and Emergency Response Plan shall be conducted by the Owner in accordance to procedures agreed by the District Manager pursuant to Conditions 8.(7)(i),(ii) and (iii).

4. The following documents have been added to Schedule "A":

4. October 31, 2013 letter from Mirka Januszkiewicz, the Regional Municipality of Durham to Ian Parrott, Ministry of the Environment and Climate Change, requesting approval of the Ash Sampling and Testing Protocol and the document entitled "Durham York Energy Centre, Ash Sampling and Testing Protocol", prepared by by Golder Associates and dated June 2014.

5. Document entitled "Durham York Energy Centre, Spill Contingency & Emergency Response Plan" prepared by Covanta Durham York Renewable Energy Limited Partnership and dated January 13, 2014, excluding section entitled "Containment Evaluation".

6. Document entitled "Durham York Energy Centre, Protocol for the Measurement of Combustion Temperature and the Development of Time and Temperature Correlations", prepared by Covanta Durham York Renewable Energy Limited Partnership and dated June 2014.

7. Document entitled "Durham York Energy Centre, Noise Monitoring and Reporting Plan", prepared by Golder Associates and dated September 2011.

The reasons for this amendment to the Approval are as follows:

to approve the "Ash Sampling and Testing Protocol" as required Condition 7.(7)(a), the "Durham York Energy Centre, Spill Contingency & Emergency Response Plan", as required Condition 11.(3), "Durham York Energy Centre, Noise Monitoring and Reporting Plan" as required Condition 7.(5)(a) and "Durham York Energy Centre, Protocol for the Measurement of Combustion Temperature and the Development of Time and Temperature Correlations" as proposed by the applicant.

This Notice shall constitute part of the approval issued under Approval No. 7306-8FDKNX dated June 28, 2011, as amended.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-3717 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 12th day of August, 2014

Ian Parrott, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

MW/
c: District Manager, MOE York-Durham
n/a, The Regional Municipality of Durham

Ministry of the Environment
Ministère de l'Environnement

AMENDMENT TO ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 7306-8FDKNX
Notice No. 2
Issue Date: October 24, 2014

The Regional Municipality of Durham
605 Rossland Rd E 5th Floor
Whitby, Ontario
L1N 6A3

and
The Regional Municipality of York
17250 Yonge Street
Newmarket, Ontario
L3Y 6Z1

and

TransRiver Canada Incorporated, as general partner for and on behalf of Covanta Durham York Renewable Energy Limited Partnership
445 South St
Morristown, New Jersey
USA 07960

Site Location: Durham York Energy Centre
1835 Energy Drive
Clarington Municipality, Regional Municipality of Durham
L1E 2R2

You are hereby notified that I have amended Approval No. 7306-8FDKNX issued on June 28, 2011 for Waste Disposal Site (Incineration), complete with an Energy from Waste Facility and associated equipment, as follows:

1. The address of the Site has been changed to read as follows:

Durham York Energy Centre
1835 Energy Drive
Clarington Municipality, Regional Municipality of Durham
L1E 2R2

2. The following definitions have been added:

"**Operator**" means any person other than the Regions' employees, authorized by the Regions as having the charge, management or control of any aspect of the Site and includes TransRiver Canada Incorporated, as general partner for and on behalf of Covanta Durham York Renewable Energy Limited Partnership, the partnership under the laws of Nova Scotia more particularly described in the October 6, 2014 letter from Joanna Rosengarten to the Ministry of Environment and Climate Change, and includes its successors and assignees, their successors and assignees;

"**Regions**" means any person that is responsible for the establishment or operation of the Site being approved by this Approval, and it includes The Regional Municipality of Durham and The Regional Municipality of York, their successors and assignees;

2. The following definition has been amended to read as follows:

"**Site**" means the property referred to as Durham York Energy Centre where the Owner has located and operates the Facility and the Works and located at 1835 Energy Drive in the Municipality of Clarington, Regional Municipality of Durham;

"**Owner**" within the context of this Approval, means the Regions and the Operator;

3. The following Conditions have been amended to read as follows:

"General: Change of Ownership" Conditions 1.(14) and 1.(15):

(14) The Regions shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any changes:

(a) the ownership of the Site;
(b) the operator of the Site;
(c) the address of the Regions;
(d) the partners, where the Regions are or at any time become a partnership and a copy of the most recent declaration filed under the *Business Names Act*, R.S.O. 1990, c. B.17, as amended, shall be included in the notification;
(e) the name of the corporation where the Regions are or at any time become a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act*, R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

(15) No portion of this Site shall be transferred or encumbered prior to or after closing of the Site unless the Director is notified in advance. In the event of any change in ownership of the Site, other than change to a successor municipality, the Regions shall notify the successor of and provide the successor with a copy of this Approval, and the Regions shall provide a copy of the notification to the District Manager and the Director.

"Service Area, Approved Waste Types, Rates And Storage: Storage Restrictions" Condition 2.(5)(e):

2.(5)(e) (i) A maximum of 630 tonnes of the Residual Waste, limited to the bottom ash shall be stored in two (2) dedicated bunkers, located within the confines of the Residue Building, described in the Supporting Documentation.

(ii) The storage duration of bottom ash in the bunkers is limited to a maximum of seven (7) days.

(iii) Should additional storage location(s) and a longer storage duration be required during testing, a minimum of forty eight (48) hours before the storage parameters are changed from those approved in Condition 2.(5)(e)(i) and (ii), the Owner shall notify the District Manager, in writing, of the proposed changes and provide the reasons for the changes.

"Site Operations: Residual Waste Handling and Disposal" Condition 4.(5)(b)(iii):

4.(5)(b)(iii) The Owner may use the equipment that comes in contact with the hazardous wastes to handle other wastes provided that prior to such use, the equipment has been cleaned, as confirmed by visual inspections, to ensure the removal of any hazardous waste residues and to prevent cross contamination.

"Closure of the Site" Conditions 18.(1) and 18.(2):

(1) A minimum of nine (9) months prior to closure of the Site, the Regions shall submit, for approval by the Director, a written Closure Plan for the Site. This Plan shall include, as a minimum, a description of the work that will be done to facilitate closure of the Site and a schedule for completion of that work.

(2) Within ten (10) days after closure of the Site, the Regions shall notify the Director and the District Manager, in writing, that the Site is closed and that the approved Closure Plan has been implemented.

4. "Covanta Durham York Renewable Energy Limited Partnership" is replaced with "TransRiver Canada Incorporated, as general partner for and on behalf of Covanta Durham York Renewable Energy Limited Partnership, the partnership under the laws of Nova Scotia more particularly described in the October 6, 2014 letter from Joanna Rosengarten to the Ministry of Environment and Climate Change and includes its successors and assignees", in the Environmental Compliance Approval dated June 28, 2011 and in the Notice of Amendment dated August 12, 2014.

5. The following documents are added to Schedule "A":

8. Application for Environmental Compliance Approval Application dated May 23, 2014, signed by Matthew R. Mulcahy, Covanta Durham York Renewable Energy Limited Partnership, Application for Environmental Compliance Approval Application dated May

23, 2014, signed by Cliff Curtis, The Regional Municipality of Durham and Application for Environmental Compliance Approval Application dated May 23, 2014, signed by Laura McDowell, The Regional Municipality of York, including the following attached supporting documentation:

(a) revised Section 8.0 "Ash Handling and Associated System" and revised Section 10.0 "Potable Process and Wastewater" dated May 2014, of the document entitled "Design and Operations Report", dated March 2011, prepared by Golder Associates Ltd.

(b) Drawing No. M-2530, entitled "Piping & Instrumentation Diagram Bottom Ash Lime Slurry System"

(c) Drawing No. 70258-1-ME-GA-SK-001, entitled "Covanta Durham York Hydrated Lime System for Boiler Bottom Ash"

9. E-mail dated September 10, 2014 (2:26 p.m.) from Leon Brasowski, Covanta Durham York Renewable Energy Limited Partnership, to Margaret Wojcik, Ontario Ministry of the Environment and Climate Change, providing additional supporting documentation on the proposal, including an attachment entitled "M-1500^0360 Highlighted for MOE.pdf".

10. E-mail dated October 13, 2014 (3:23 p.m.) from Leon Brasowski, Covanta Durham York Renewable Energy Limited Partnership, to Ricki Allum, Ontario Ministry of the Environment and Climate Change, providing additional supporting documentation on the legal name of the applicant, including an attachment entitled "Partnership Legal Clarification.pdf".

The reasons for this amendment to the Approval are as follows:

to approve the proposed Bottom Ash Lime Conditioning System, to correct the typographical errors in the Notice of Amendment dated August 12, 2014, to clarify the intent of the Residual Waste equipment cleaning condition and to allow different bottom ash storage conditions during testing.

This Notice shall constitute part of the approval issued under Approval No. 7306-8FDKNX dated June 28, 2011, as amended.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and

conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*****
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-3717 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 24th day of October, 2014

Tesfaye Gebrezghi, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental*

MW/
c: District Manager, MOE York-Durham
Leon Brasowski, Covanta Energy Corporation

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

AMENDMENT TO ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 7306-FDKNX
Notice No. 4
Issue Date: February 24, 2016

The Regional Municipality of Durham
605 Rossland Road East, Level 5
Whitby, Ontario
L1N 6A3

The Regional Municipality of York
17250 Yonge Street
Newmarket, Ontario
L3Y 6Z1

TransRiver Canada Incorporated operating as Covanta Durham York
Renewable Energy Limited Partnership
445 South Street
Morristown, New Jersey
USA 07960

Site Location: Durham York Energy Centre
1835 Energy Dr Lot 27, Concession Broken Front, Part 1
Clarington Municipality, Regional Municipality of Durham
L1E 2R2

You are hereby notified that I have amended Approval No. 7306-8FDKNX issued on June 28, 2011 for a Waste Disposal Site (Incineration), complete with an Energy from Waste Facility and associated equipment, , as follows:

The following Conditions are revoked:

7. **TESTING**, **MONITORING** and **AUDITING**

Noise Monitoring - Acoustic Audit

(5) The Owner:

(a) shall carry out Acoustic Audit measurements on the actual noise emissions due to the

operation of the Facility. The Acoustic Audit measurements shall be carried out in accordance with the procedures in *Publication NPC-103* and in accordance to the Noise Monitoring and Reporting Plan prepared in accordance with the requirements set out in the EA Approval and as approved by the Director;

(b) shall submit an Acoustic Audit Report on the results of the Acoustic Audit, prepared by an Independent Acoustical Consultant, in accordance with the requirements of *Publication NPC-233* and the Noise Monitoring and Reporting Plan prepared in accordance with the requirements set out in the EA Approval and as approved by the Director, to the District Manager and the Director, not later than three (3) months after the commencement of operation of the Facility.

(6) The Director:

(a) may not accept the results of the Acoustic Audit if the requirements of *Publication NPC-233* or the approved Noise Monitoring and Reporting Plan were not followed;

(b) may require the Owner to repeat the Acoustic Audit if the results of the Acoustic Audit are found unacceptable to the Director.

All other Terms and Conditions remain the same.

The reason for this amendment to the Approval is to address the information provided in the following documents:

- Acoustic Audit Report prepared by Valcoustics Canada Ltd., dated May 8, 2015 and signed by Kathryn Katsiroumpas, P.Eng.; and
- Acoustic Audit Report prepared by Valcoustics Canada Ltd., dated November 23, 2015 and signed by Kathryn Katsiroumpas, P.Eng.

This Notice shall constitute part of the approval issued under Approval No. 7306-8FDKNX dated June 28, 2011

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental

compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*****
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1
of the Environmental Protection Act
Ministry of the Environment and Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 24th day of February, 2016

Ian Greason, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

M/

c: District Manager, MOECC York-Durham
Kathryn Katsiroumpas, Valcoustics Canada Ltd.

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

AMENDMENT TO ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 7306-8FDKNX
Notice No. 5
Issue Date: March 14, 2016

The Regional Municipality of Durham
605 Rossland Rd E 5th Floor
Whitby, Ontario
L1N 6A3

and

The Regional Municipality of York
17250 Yonge Street
Newmarket, Ontario
L3Y 6Z1

and

TransRiver Canada Incorporated, as general partner for and on behalf of Covanta Durham York Renewable Energy Limited Partnership
445 South St
Morristown, New Jersey
USA 07960

Site Location: Durham York Energy Centre
1835 Energy Dr Lot 27, Concession Broken Front, Part 1
Clarington Municipality, Regional Municipality of Durham
L1E 2R2

You are hereby notified that I have amended Approval No. 7306-8FDKNX issued on June 28, 2011 for Waste Disposal Site (Incineration), complete with an Energy from Waste Facility and associated equipment , as follows:

I. The following conditions have been amended to read as follows:

2. SERVICE AREA, APPROVED WASTE TYPES, RATES and STORAGE

(5) Storage Restrictions:

Solids:

(c) A maximum of approximately 77 tonnes or 106 cubic metres of the Residual Waste, limited to the recovered ferrous metals, shall be stored in one (1) dedicated bunker, located within the confines of the Residue Building, described in the Supporting Documentation.

(d) A maximum of approximately 120 tonnes or 100 cubic metres of the Residual Waste, limited to the recovered non-ferrous metals, shall be stored in one (1) dedicated bunker, located within the confines of the Residue Building, described in the Supporting Documentation.

(e) A maximum of 630 tonnes of the Residual Waste, limited to bottom ash shall be stored in two (2) dedicated bunkers, located within the confines of the Residue Building, described in the Supporting Documentation.

(f) A maximum of 700 tonnes of the Residual Waste, limited to the fly ash shall be stored in seven (7) dedicated bunkers, located within the confines of the Residue Building, described in the Supporting Documentation.

(j) A maximum of 65 cubic metres of cement for fly ash conditioning shall be stored in one (1) outdoor silo, located adjacent to the Residue Building.

(k) A maximum of 105 cubic metres of pozzolan for fly ash conditioning shall be stored in one (1) outdoor silo, located adjacent to the Residue Building.

Liquids:

(l) (i) A maximum of 57 cubic metres of aqueous ammonia for the SNCR System shall be stored in one (1) outdoor tank, located adjacent to the Residue Building.

(8) (a) Waste received at the Site shall be processed within six (6) days from its receipt at the Site.

(b) Emergency storage of Waste requirements:

(i) On an emergency basis only, the storage duration of Waste inside the tipping pit may be extended beyond the limit set out in Condition 2.(8)(a), above, subject to compliance with the following requirements:

(A) prior to the start of the emergency storage of Waste, the Owner shall notify, in writing, the District Manager that the incoming Waste will be stored longer than six (6) days from its receipt;

(B) any additional information that the District Manager may require shall be submitted within a time period acceptable to the District Manager;

(C) the proposed preventative measures for emergency storage of Waste as identified in the Operations and Maintenance Manual shall be implemented upon commencement of the emergency storage of Waste and shall remain in effect for the entire duration of the emergency storage, unless otherwise advised by the District Manager; and

(D) the Owner shall notify, in writing, the District Manager when emergency storage is no longer required.

5. EQUIPMENT and SITE INSPECTIONS and MAINTENANCE

(p) all measures deemed necessary to prevent an occurrence of an adverse effect from the emergency storage of Waste.

II. The following section of Schedule "F" has been amended to read as follows:

PARAMETER:
Total Hydrocarbons

INSTALLATION:
The Total Hydrocarbons Monitor shall be installed at an accessible location where the measurements are representative of the concentrations of Organic Matter (as methane) in the Undiluted Gases leaving the combustion zone via the economizer outlet of each Boiler or at any other location that has been determined in consultation with the Ministry to be suitable/equivalent for the determination of Total Hydrocarbons leaving the combustion zone of each Boiler and has been approved by the Director. The Total Hydrocarbons Monitor shall meet the following installation specifications:

PARAMETERS	**SPECIFICATION**
1. Detector Type:	Flame Ionization
2. Oven Temperature:	160°C minimum
3. Flame Temperature:	1800°C minimum at the corona of the hydrogen flame
4. Range (parts per million, ppm):	0 to ≥200 ppm
5. Calibration Gas:	propane in air or nitrogen
6. Calibration Gas Ports:	close to the sample point

PERFORMANCE:
The Continuous Total Hydrocarbons Monitor shall meet the following minimum performance specifications for the following parameters.

	PARAMETERS	SPECIFICATION
1.	Span Value (nearest ppm equivalent):	2 times the average normal concentration of the source
2.	Relative Accuracy:	≤ 10 percent of the mean value of the reference method test data or ± 5 ppm whichever is greater
3.	System Bias:	≤ 4 percent of the mean value of the reference method test data
4.	Noise:	≤ 1 percent of span value on most sensitive range
5.	Repeatability:	≤ 1 percent of span value
6.	Linearity (response with propane in air):	≤ 3 percent of span value over all ranges
7.	Calibration Error:	≤ 2 percent of actual concentration
8.	Procedure for Zero and Span Calibration Check:	all system components checked on all ranges
9.	Zero Calibration Drift (24-hours):	≤ 2.5 percent of span value on all ranges
10.	Span Calibration Drift (24-hours):	≤ 2.5 percent of span value
11.	Response Time (90 percent response to a step change):	≤ 60 seconds
12.	Operational Test Period:	≥ 168 hours without corrective maintenance

CALIBRATION:
Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better. Measurements of concentrations of organic matter (as methane) shall be kept as 10 minute average values for record keeping and reporting purposes.

RELIABILITY:
The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent thereafter.

III. The following Item #4 in Schedule "A" has been amended to read as follows:

4. Letter dated October 31, 2013 from Mirka Januszkiewicz, The Regional Municipality of Durham to Ian Parrott, Ministry of the Environment and Climate Change, requesting approval of the Ash Sampling and Testing Protocol and the document entitled "Durham York Energy Centre, Ash Sampling and Testing Protocol", excluding a reference to the Loss-on-Ignition test method on page 6, prepared by Golder

Associates and dated June 2014.

IV. The following document has been added to Schedule "A":

5. Letter dated February 29, 2016 from Leon Brasowski, TransRiver Canada Incorporated, to Dale Gable, Ministry of the Environment and Climate Change, requesting change to the total hydrocarbon monitor location as reviewed and accepted by the Ministry`s Standards Development Branch.

The reasons for this amendment to the Approval are as follows:

1. to remove the storage duration limits on storage of recovered ferrous and non-ferrous metals since such storage does not pose an environmental risk;

2. to increase the amounts of cement, pozzolan and aqueous ammonia approved for storage at the Site since the currently approved amounts result in partial filling of the tanks, necessitating more frequent deliveries resulting in increased truck traffic and a chance of interrupting fly ash and flue gas treatment;

3. to revise the protocol for an emergency storage of the incoming Waste so that the Owner is able to deal more effectively with emergency situations occurring at the Site while providing more flexibility to the Districting Manager to oversee management of such situations;

4. to remove a reference to an incorrect bottom ash testing method erroneously included within the text of the DYEC Ash Sampling and Testing Protocol included as Item #4 in Schedule “A” in order to ensure that only the approved testing method for compliance testing is referenced in the supporting documentation.

5. to approve the revised location of the Total Hydrocarbons Monitor following the Ministry's acceptance of the results of the test program in which two (2) Total Hydrocarbons Monitor monitors were operated in the existing and the proposed locations simultaneously.

This Notice shall constitute part of the approval issued under Approval No. 7306-8FDKNX dated June 28, 2011, as amended.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment and Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 14th day of March, 2016

Dale Gable, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

MW/

c: District Manager, MOECC York-Durham
n/a, TransRiver Canada Incorporated operating as Covanta Durham York Renewable Energy Limited Partnership

APPENDIX B

DYEC TRUCK LOGS
SEPTEMBER 2016

Covanta Durham York Renewable Energy, LP

Truck Cycle Time Report

Transactions from 09/06/2016 through 09/14/2016
Inbound and Outbound Tickets
Third Party and Intercompany Customers

Ticket	Date	Truck	Customer	Time In / Out	Time Cycle (Minutes)
17431	9/6/2016	1560	004 - Walker Environmental	06:58:05 / 07:32:16	34.11
17432	9/6/2016	80251	001 - Regional Muncipality of Durham	06:58:51 / 07:37:44	38.93
17433	9/6/2016	14149	004 - Walker Environmental	07:00:17 / 07:55:43	55.26
17434	9/6/2016	14150	004 - Walker Environmental	07:03:46 / 07:57:48	54.02
17435	9/6/2016	84	07 - Gerdau	07:05:17 / 08:30:32	85.15
17436	9/6/2016	80247	001 - Regional Muncipality of Durham	08:12:13 / 08:37:05	24.92
17437	9/6/2016	80230	001 - Regional Muncipality of Durham	08:42:41 / 09:04:54	22.13
17438	9/6/2016	08123	002 - Regional Muncipality of York	08:23:41 / 09:08:25	44.84
17439	9/6/2016	573	003 - Reagents	07:01:44 / 09:17:18	135.74
17440	9/6/2016	1590	004 - Walker Environmental	09:05:39 / 09:34:01	28.62
17441	9/6/2016	80227	001 - Regional Muncipality of Durham	08:56:01 / 09:35:26	39.25
17442	9/6/2016	80251	001 - Regional Muncipality of Durham	09:59:22 / 10:30:26	31.04
17443	9/6/2016	15172	004 - Walker Environmental	10:31:03 / 10:56:25	25.22
17444	9/6/2016	80247	001 - Regional Muncipality of Durham	10:45:00 / 11:09:38	24.38
17445	9/6/2016	80230	001 - Regional Muncipality of Durham	10:57:42 / 11:28:47	31.05
17446	9/6/2016	80227	001 - Regional Muncipality of Durham	11:42:26 / 12:17:29	35.03
17447	9/6/2016	80251	001 - Regional Muncipality of Durham	12:07:15 / 12:55:48	48.33
17448	9/6/2016	08123	002 - Regional Muncipality of York	12:06:05 / 13:07:21	61.16
17449	9/6/2016	14149	004 - Walker Environmental	12:59:52 / 13:16:29	16.77
17450	9/6/2016	80247	001 - Regional Muncipality of Durham	12:50:19 / 13:29:56	39.37
17451	9/6/2016	0175	002 - Regional Muncipality of York	12:49:27 / 13:32:33	43.06
17452	9/6/2016	14150	004 - Walker Environmental	13:04:03 / 13:34:58	30.55
17453	9/6/2016	80230	001 - Regional Muncipality of Durham	13:05:11 / 13:57:53	52.42
17454	9/6/2016	0176	002 - Regional Muncipality of York	10:23:53 / 14:26:11	242.58
17455	9/6/2016	80227	001 - Regional Muncipality of Durham	14:01:42 / 14:31:38	29.96
17456	9/6/2016	80251	001 - Regional Muncipality of Durham	15:19:42 / 15:51:04	31.62
17457	9/6/2016	84	07 - Gerdau	15:38:08 / 16:16:16	38.08
17458	9/6/2016	80247	001 - Regional Muncipality of Durham	15:44:20 / 16:27:17	42.97
17459	9/6/2016	15172	004 - Walker Environmental	16:05:13 / 16:32:52	27.39
17460	9/6/2016	80230	001 - Regional Muncipality of Durham	16:27:35 / 16:50:01	22.66
17461	9/6/2016	80227	001 - Regional Muncipality of Durham	16:36:12 / 17:18:07	41.95
17462	9/6/2016	80251	001 - Regional Muncipality of Durham	17:50:18 / 18:20:02	29.84
17463	9/7/2016	14149	004 - Walker Environmental	07:03:19 / 07:27:43	24.24
17464	9/7/2016	80227	001 - Regional Muncipality of Durham	07:09:11 / 07:38:23	29.12
17465	9/7/2016	14150	004 - Walker Environmental	07:05:08 / 07:43:42	38.34
17466	9/7/2016	80251	001 - Regional Muncipality of Durham	08:30:12 / 08:56:21	26.09
17467	9/7/2016	80247	001 - Regional Muncipality of Durham	08:45:05 / 09:17:20	32.15
17468	9/7/2016	80230	001 - Regional Muncipality of Durham	08:51:54 / 09:18:35	26.81

Covanta Durham York Renewable Energy, LP

Truck Cycle Time Report

Transactions from 09/06/2016 through 09/14/2016
Inbound and Outbound Tickets
Third Party and Intercompany Customers

Ticket	Date	Truck	Customer	Time In / Out	Time Cycle (Minutes)
17469	9/7/2016	80227	001 - Regional Muncipality of Durham	09:04:29 / 09:37:04	32.75
17470	9/7/2016	08123	002 - Regional Muncipality of York	09:18:42 / 10:03:52	45.10
17471	9/7/2016	80251	001 - Regional Muncipality of Durham	10:15:23 / 10:42:58	27.35
17472	9/7/2016	80227	001 - Regional Muncipality of Durham	10:55:43 / 11:16:57	21.14
17473	9/7/2016	80247	001 - Regional Muncipality of Durham	11:16:57 / 11:38:10	21.53
17474	9/7/2016	80230	001 - Regional Muncipality of Durham	11:10:21 / 11:39:17	28.96
17475	9/7/2016	15172	004 - Walker Environmental	11:23:53 / 11:48:15	24.62
17476	9/7/2016	7119	003 - Reagents	01:30:30 / 02:42:38	72.08
17477	9/7/2016	80251	001 - Regional Muncipality of Durham	12:27:42 / 12:51:30	23.88
17478	9/7/2016	14149	004 - Walker Environmental	13:36:08 / 14:00:53	24.45
17479	9/7/2016	14150	004 - Walker Environmental	13:47:41 / 14:21:45	34.04
17480	9/7/2016	0176	002 - Regional Muncipality of York	15:40:42 / 16:16:54	36.12
17481	9/7/2016	08123	002 - Regional Muncipality of York	16:03:58 / 16:42:11	38.53
17482	9/7/2016	15172	004 - Walker Environmental	18:11:51 / 18:32:05	20.54
17483	9/8/2016	80227	001 - Regional Muncipality of Durham	07:04:56 / 07:27:26	22.70
17484	9/8/2016	80251	001 - Regional Muncipality of Durham	07:03:34 / 07:28:52	25.18
17485	9/8/2016	14149	004 - Walker Environmental	07:04:12 / 07:30:16	26.04
17486	9/8/2016	80247	001 - Regional Muncipality of Durham	07:05:54 / 07:48:20	42.66
17487	9/8/2016	14150	004 - Walker Environmental	07:07:32 / 07:50:33	43.01
17488	9/8/2016	80242	001 - Regional Muncipality of Durham	07:44:01 / 08:11:47	27.46
17489	9/8/2016	0175	002 - Regional Muncipality of York	07:32:03 / 08:18:11	46.08
17490	9/8/2016	08123	002 - Regional Muncipality of York	07:55:43 / 08:45:03	49.60
17491	9/8/2016	80247	001 - Regional Muncipality of Durham	09:30:01 / 09:54:41	24.40
17492	9/8/2016	80251	001 - Regional Muncipality of Durham	09:28:33 / 09:56:06	27.73
17493	9/8/2016	80227	001 - Regional Muncipality of Durham	09:33:17 / 10:15:00	41.83
17494	9/8/2016	80242	001 - Regional Muncipality of Durham	10:09:39 / 10:47:26	37.87
17495	9/7/2016	1145	003 - Reagents	21:01:58 / 23:03:13	121.55
17496	9/8/2016	11136	002 - Regional Muncipality of York	10:25:14 / 11:15:37	50.23
17497	9/8/2016	15172	004 - Walker Environmental	11:06:08 / 11:39:32	33.24
17498	9/8/2016	80251	001 - Regional Muncipality of Durham	11:24:48 / 11:50:11	25.63
17499	9/7/2016	545	003 - Reagents	18:00:52 / 21:00:49	179.97
17500	9/8/2016	80247	001 - Regional Muncipality of Durham	11:38:03 / 12:12:49	34.46
17501	9/8/2016	80227	001 - Regional Muncipality of Durham	11:59:01 / 12:36:13	37.12
17502	9/8/2016	0175	002 - Regional Muncipality of York	11:58:07 / 12:37:59	39.52
17503	9/8/2016	80269	001 - Regional Muncipality of Durham	12:25:01 / 13:05:47	40.46
17504	9/8/2016	14149	004 - Walker Environmental	12:54:06 / 13:13:03	18.97
17505	9/8/2016	14150	004 - Walker Environmental	13:07:00 / 13:33:21	26.21
17506	9/8/2016	80251	001 - Regional Muncipality of Durham	13:27:31 / 13:51:09	23.78

Covanta Durham York Renewable Energy, LP

Truck Cycle Time Report

Transactions from 09/06/2016 through 09/14/2016
Inbound and Outbound Tickets
Third Party and Intercompany Customers

Ticket	Date	Truck	Customer	Time In / Out	Time Cycle (Minutes)
17507	9/8/2016	9909	18 - Green for life	13:34:22 / 13:57:53	23.31
17508	9/8/2016	80227	001 - Regional Muncipality of Durham	14:04:59 / 14:32:26	27.67
17509	9/8/2016	80247	001 - Regional Muncipality of Durham	14:34:38 / 15:01:13	26.75
17510	9/8/2016	08123	002 - Regional Muncipality of York	15:04:59 / 15:41:10	36.51
17511	9/8/2016	80269	001 - Regional Muncipality of Durham	15:36:51 / 16:10:49	33.98
17512	9/8/2016	80251	001 - Regional Muncipality of Durham	15:32:15 / 16:11:57	39.42
17513	9/8/2016	15172	004 - Walker Environmental	16:52:49 / 17:15:56	23.07
17514	9/9/2016	80247	001 - Regional Muncipality of Durham	07:02:46 / 07:27:11	24.65
17515	9/9/2016	14149	004 - Walker Environmental	07:00:28 / 07:28:20	27.92
17516	9/9/2016	14150	004 - Walker Environmental	07:01:24 / 07:34:55	33.31
17517	9/9/2016	80251	001 - Regional Muncipality of Durham	07:22:34 / 07:47:33	24.99
17518	9/9/2016	80242	001 - Regional Muncipality of Durham	07:35:48 / 08:10:53	35.05
17519	9/9/2016	11136	002 - Regional Muncipality of York	07:47:18 / 08:34:23	47.05
17520	9/9/2016	80227	001 - Regional Muncipality of Durham	08:25:57 / 08:52:04	26.47
17521	9/9/2016	80247	001 - Regional Muncipality of Durham	09:05:30 / 09:27:25	21.95
17522	9/9/2016	80251	001 - Regional Muncipality of Durham	09:35:07 / 09:57:42	22.35
17523	9/9/2016	80242	001 - Regional Muncipality of Durham	09:55:57 / 10:23:11	27.54
17524	9/9/2016	08123	002 - Regional Muncipality of York	09:55:01 / 10:25:17	30.16
17525	9/9/2016	80227	001 - Regional Muncipality of Durham	10:27:18 / 10:51:03	23.85
17526	9/9/2016	15172	004 - Walker Environmental	10:43:44 / 11:03:14	19.70
17527	9/9/2016	566	003 - Reagents	06:01:54 / 08:30:00	148.46
17528	9/9/2016	80247	001 - Regional Muncipality of Durham	11:25:50 / 11:50:36	24.86
17529	9/9/2016	80251	001 - Regional Muncipality of Durham	11:24:50 / 11:51:53	27.03
17530	9/9/2016	80227	001 - Regional Muncipality of Durham	12:13:50 / 12:43:30	29.80
17531	9/9/2016	11136	002 - Regional Muncipality of York	12:16:42 / 12:54:05	37.63
17532	9/9/2016	84	07 - Gerdau	12:04:16 / 12:58:45	54.29
17533	9/9/2016	14149	004 - Walker Environmental	12:36:20 / 13:12:57	36.37
17534	9/9/2016	14150	004 - Walker Environmental	12:42:27 / 13:27:08	44.81
17535	9/9/2016	08123	002 - Regional Muncipality of York	13:39:37 / 14:24:02	44.65
17536	9/9/2016	80251	001 - Regional Muncipality of Durham	14:11:08 / 14:48:46	37.38
17537	9/9/2016	80227	001 - Regional Muncipality of Durham	14:07:45 / 14:50:09	42.64
17538	9/9/2016	80247	001 - Regional Muncipality of Durham	14:20:51 / 15:11:48	50.97
17539	9/9/2016	15172	004 - Walker Environmental	16:52:06 / 17:11:07	19.01
17540	9/10/2016	80251	001 - Regional Muncipality of Durham	06:58:11 / 07:20:43	22.32
17541	9/10/2016	80230	001 - Regional Muncipality of Durham	06:57:13 / 07:21:45	24.32
17542	9/10/2016	80247	001 - Regional Muncipality of Durham	06:59:08 / 07:39:48	40.40
17543	9/10/2016	80251	001 - Regional Muncipality of Durham	08:54:29 / 09:17:38	23.09
17544	9/10/2016	80230	001 - Regional Muncipality of Durham	09:06:14 / 09:33:48	27.34

Covanta Durham York Renewable Energy, LP

Truck Cycle Time Report

Transactions from 09/06/2016 through 09/14/2016
Inbound and Outbound Tickets
Third Party and Intercompany Customers

Ticket	Date	Truck	Customer	Time In / Out	Time Cycle (Minutes)
17545	9/10/2016	80247	001 - Regional Muncipality of Durham	09:43:07 / 10:06:02	22.95
17546	9/10/2016	80247	001 - Regional Muncipality of Durham	12:17:19 / 12:41:15	23.96
17547	9/12/2016	14149	004 - Walker Environmental	06:58:08 / 07:19:08	21.00
17548	9/12/2016	80230	001 - Regional Muncipality of Durham	06:59:24 / 07:21:13	21.89
17549	9/12/2016	818	004 - Walker Environmental	07:00:49 / 07:36:56	36.07
17550	9/12/2016	80227	001 - Regional Muncipality of Durham	07:15:15 / 07:41:58	26.43
17551	9/12/2016	14150	004 - Walker Environmental	07:05:41 / 07:52:07	46.66
17552	9/12/2016	566	003 - Reagents	07:08:11 / 08:40:20	92.09
17553	9/12/2016	80251	001 - Regional Muncipality of Durham	08:18:46 / 08:42:02	23.56
17554	9/12/2016	84	07 - Gerdau	08:28:09 / 08:58:03	29.94
17555	9/12/2016	08123	002 - Regional Muncipality of York	08:24:30 / 09:12:26	47.96
17556	9/12/2016	80230	001 - Regional Muncipality of Durham	09:27:51 / 09:53:30	25.79
17557	9/12/2016	80227	001 - Regional Muncipality of Durham	09:45:15 / 10:14:34	29.19
17558	9/12/2016	15175	004 - Walker Environmental	10:33:55 / 10:59:24	25.69
17559	9/12/2016	1110	003 - Reagents	07:02:51 / 11:09:56	247.05
17560	9/12/2016	84	07 - Gerdau	11:07:54 / 11:44:19	36.65
17561	9/12/2016	80230	001 - Regional Muncipality of Durham	11:39:39 / 11:59:16	19.77
17562	9/12/2016	80227	001 - Regional Muncipality of Durham	11:56:20 / 12:19:56	23.36
17563	9/12/2016	80251	001 - Regional Muncipality of Durham	11:45:34 / 12:25:12	39.78
17564	9/12/2016	0175	002 - Regional Muncipality of York	12:10:28 / 13:00:47	50.19
17565	9/12/2016	14149	004 - Walker Environmental	13:05:30 / 13:21:41	16.11
17566	9/12/2016	08123	002 - Regional Muncipality of York	12:35:10 / 13:36:14	61.04
17568	9/12/2016	80230	001 - Regional Muncipality of Durham	13:51:01 / 14:26:45	35.44
17569	9/12/2016	80227	001 - Regional Muncipality of Durham	14:19:16 / 14:51:11	31.95
17570	9/12/2016	14150	004 - Walker Environmental	14:36:30 / 14:56:49	20.19
17571	9/12/2016	80251	001 - Regional Muncipality of Durham	14:33:04 / 15:20:05	47.01
17573	9/12/2016	15175	004 - Walker Environmental	16:15:23 / 16:42:23	27.00
17574	9/12/2016	80230	001 - Regional Muncipality of Durham	16:24:21 / 16:47:07	22.86
17575	9/13/2016	80230	001 - Regional Muncipality of Durham	07:13:20 / 07:37:33	24.13
17576	9/13/2016	84	07 - Gerdau	07:25:22 / 07:55:29	30.07
17577	9/13/2016	80227	001 - Regional Muncipality of Durham	07:27:42 / 08:00:46	33.04
17578	9/13/2016	80251	001 - Regional Muncipality of Durham	08:42:09 / 09:04:44	22.35
17579	9/13/2016	08123	002 - Regional Muncipality of York	08:57:27 / 09:30:59	33.32
17580	9/13/2016	80227	001 - Regional Muncipality of Durham	09:55:57 / 10:20:45	24.88
17581	9/13/2016	80269	001 - Regional Muncipality of Durham	09:57:41 / 10:22:50	25.09
17582	9/13/2016	0175	002 - Regional Muncipality of York	10:21:46 / 10:58:49	37.03
17583	9/12/2016	818	004 - Walker Environmental	15:47:58 / 16:11:15	23.57
17584	9/13/2016	15175	004 - Walker Environmental	10:37:29 / 11:00:15	22.86

Covanta Durham York Renewable Energy, LP

Truck Cycle Time Report

Transactions from 09/06/2016 through 09/14/2016
Inbound and Outbound Tickets
Third Party and Intercompany Customers

Ticket	Date	Truck	Customer	Time In / Out	Time Cycle (Minutes)
17585	9/13/2016	14150	004 - Walker Environmental	10:53:17 / 11:10:58	17.41
17586	9/13/2016	80251	001 - Regional Muncipality of Durham	10:46:38 / 11:22:35	35.97
17587	9/13/2016	80230	001 - Regional Muncipality of Durham	11:25:08 / 11:53:35	28.27
17588	9/12/2016	15172	002 - Regional Muncipality of York	13:25:10 / 14:06:26	41.16
17589	9/13/2016	80227	001 - Regional Muncipality of Durham	11:51:08 / 12:21:10	30.02
17590	9/13/2016	15172	002 - Regional Muncipality of York	12:04:37 / 12:51:48	47.11
17591	9/13/2016	08123	002 - Regional Muncipality of York	13:06:35 / 13:41:25	34.90
17592	9/13/2016	80230	001 - Regional Muncipality of Durham	13:36:33 / 14:05:51	29.18
17593	9/13/2016	80227	001 - Regional Muncipality of Durham	13:46:33 / 14:37:44	51.11
17594	9/13/2016	15175	004 - Walker Environmental	15:43:41 / 16:07:08	23.67
17595	9/13/2016	80230	001 - Regional Muncipality of Durham	15:55:47 / 16:22:07	26.60
17596	9/13/2016	14150	004 - Walker Environmental	16:15:04 / 16:39:41	24.37
17597	9/13/2016	80227	001 - Regional Muncipality of Durham	16:10:31 / 16:44:47	34.16
17598	9/13/2016	15172	002 - Regional Muncipality of York	16:04:45 / 16:51:01	46.56
17599	9/14/2016	14149	004 - Walker Environmental	07:26:05 / 07:28:05	2.00
17600	9/14/2016	08123	002 - Regional Muncipality of York	08:15:10 / 08:50:51	35.41
17601	9/14/2016	80269	001 - Regional Muncipality of Durham	08:25:39 / 09:07:46	42.07
17602	9/14/2016	80230	001 - Regional Muncipality of Durham	09:12:56 / 09:35:48	22.92
17603	9/14/2016	0379	002 - Regional Muncipality of York	09:44:12 / 10:11:30	27.18
17604	9/14/2016	84	07 - Gerdau	10:03:36 / 10:29:20	25.84
17605	9/14/2016	15175	004 - Walker Environmental	10:24:12 / 10:49:30	25.18
17606	9/14/2016	14150	004 - Walker Environmental	10:41:15 / 11:06:59	25.44
17607	9/14/2016	80230	001 - Regional Muncipality of Durham	11:39:57 / 12:02:01	22.44
17608	9/14/2016	80227	001 - Regional Muncipality of Durham	11:38:23 / 12:03:04	24.81
17609	9/14/2016	14149	004 - Walker Environmental	12:53:33 / 13:14:20	20.87
17610	9/14/2016	0379	002 - Regional Muncipality of York	12:57:18 / 13:23:41	26.23
17611	9/14/2016	08123	002 - Regional Muncipality of York	13:24:26 / 13:59:57	35.31
17612	9/14/2016	80230	001 - Regional Muncipality of Durham	13:45:35 / 14:16:19	30.84
17613	9/14/2016	80227	001 - Regional Muncipality of Durham	14:48:17 / 15:12:05	23.88
17614	9/14/2016	84	07 - Gerdau	15:18:36 / 16:02:04	43.68
17615	9/14/2016	15175	004 - Walker Environmental	16:04:25 / 16:42:34	38.09
17616	9/14/2016	14150	004 - Walker Environmental	16:30:26 / 16:58:58	28.32

Report Grand Totals

184 tickets and 184 transactions

Average Cycle **37.46**

End of Report

APPENDIX C

ENVIRONMENTAL NOISE GUIDELINES

APPENDIX C

ENVIRONMENTAL NOISE GUIDELINES

MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE (MOE)

Reference: MOE Publication NPC-205, October 1995: "Sound Level Limits for Stationary Sources in Class 1 and 2 Areas (URBAN)".

For sound from a stationary source, including Quasi-Steady Impulsive Sound but not including other impulsive sound, the sound level limit expressed in terms of the One Hour Equivalent Sound level (L_{eq}) is the background One Hour Equivalent Sound Level (L_{eq}) typically caused by road traffic as obtained pursuant to Section 6 for that point of reception.

No restrictions apply to a stationary source resulting in a One hour Equivalent Sound Level (L_{eq}) lower than the minimum values for that time period specified in Table 205-1.

TABLE 205-1

MINIMUM VALUES OF ONE HOUR L_{eq} OR L_{LM} BY TIME OF DAY

	One Hour L_{eq} (dBA) or L_{LM} (dBAI)	
Time of Day	**Class 1 Area**	**Class 2 Area**
0700 - 1900 hours	50	50
1900 - 2300 hours	47	45
2300 - 0700 hours	45	45

For impulsive sound from a metal working operation (such as from a punch press) the applicable sound level limit is 60 dBAI, if the stationary source were operating before January 1, 1980, and otherwise is 50 dBAI. The sound level limits are expressed in terms of the Logarithmic Mean Impulse Sound Level (L_{LM}).

APPENDIX D

WEATHER DATA
SEPTEMBER 2016

;
; Intellution Historical Data Report
; Generated 15/09/2016 1:36:38 PM
; Start Time: 06/09/16 00:00:00
; Duration: 09:00:00:00
; Interval: 00:10:00
; Historical Input Data path: D:\FIX\HTRDATA
; Retrieval modes: (S)ample (A)verage (H)igh (L)ow (R)aw
;

Date	Time	CCSCADA0:CC-DG-SIT-0001-SI.F_CV (A)	CCSCADA0:CC-DG-TIT-0001-TI.F_CV (A)	CCSCADA0:CC-DG-ZIT-0001-ZI.F_CV (A)
		Wind km/hr	Temp: °C	Wind Dir.
6/9/2016	00:00:00	5.204632	20.4778	187.0922
6/9/2016	01:00:00	7.467012	20.93236	181.0133
6/9/2016	02:00:00	7.19617	20.16686	165.4227
6/9/2016	03:00:00	3.278445	20.87542	178.4075
6/9/2016	04:00:00	2.630806	20.93491	176.5629
6/9/2016	05:00:00	0.4378743	21.31638	220.6323
6/9/2016	06:00:00	0.2214293	21.78681	264.612
6/9/2016	07:00:00	4.337402	21.41917	269.5478
6/9/2016	08:00:00	3.199971	23.19121	259.4062
6/9/2016	09:00:00	8.580634	24.64626	292.346
6/9/2016	10:00:00	4.857666	24.76981	284.3899
6/9/2016	11:00:00	6.257938	25.09571	196.8681
6/9/2016	12:00:00	5.786819	25.52924	306.5341
6/9/2016	13:00:00	6.985851	25.39032	242.5571
6/9/2016	14:00:00	7.167919	25.98085	329.7382
6/9/2016	15:00:00	6.913668	26.95275	303.1689
6/9/2016	16:00:00	7.856985	27.86287	294.5862
6/9/2016	17:00:00	13.99095	26.58033	288.712
6/9/2016	18:00:00	12.69692	26.20983	281.5451
6/9/2016	19:00:00	12.24456	26.6536	269.1262
6/9/2016	20:00:00	12.24099	26.27637	265.6417
6/9/2016	21:00:00	12.11039	25.65375	261.5822
6/9/2016	22:00:00	11.4604	25.43841	262.8407
6/9/2016	23:00:00	4.029769	25.42531	214.1229
7/9/2016	00:00:00	7.487508	24.4428	209.3371
7/9/2016	01:00:00	8.564903	23.9592	202.8683
7/9/2016	02:00:00	4.372241	23.85912	220.4086
7/9/2016	03:00:00	6.838211	24.16208	238.4798
7/9/2016	04:00:00	4.782556	23.75071	229.6669
7/9/2016	05:00:00	5.88001	23.4515	200.466
7/9/2016	06:00:00	6.687104	23.61981	189.5901
7/9/2016	07:00:00	1.89402	23.6034	226.9624
7/9/2016	08:00:00	7.984246	24.1894	238.041
7/9/2016	09:00:00	3.008348	25.86731	265.9534
7/9/2016	10:00:00	5.370752	26.11159	327.4427
7/9/2016	11:00:00	5.388151	26.10624	54.47045
7/9/2016	12:00:00	8.150018	26.23987	329.8932
7/9/2016	13:00:00	9.514693	26.20967	257.891
7/9/2016	14:00:00	5.860003	27.19606	295.0985
7/9/2016	15:00:00	6.436488	28.62357	306.2125
7/9/2016	16:00:00	7.399992	29.10997	321.2666
7/9/2016	17:00:00	11.05969	28.93818	301.2775
7/9/2016	18:00:00	9.631051	28.65144	266.3318

Date	Time	CCSCADA0:CC-DG-SIT-0001-SI.F_CV (A)	CCSCADA0:CC-DG-TIT-0001-TI.F_CV (A)	CCSCADA0:CC-DG-ZIT-0001-ZI.F_CV (A)
		Wind km/hr	Temp: °C	Wind Dir.
7/9/2016	19:00:00	13.41159	28.04657	267.4474
7/9/2016	20:00:00	11.80887	26.11193	279.7202
7/9/2016	21:00:00	5.483667	26.52972	288.4297
7/9/2016	22:00:00	9.75162	26.02416	62.69402
7/9/2016	23:00:00	2.13706	25.53927	167.3228
8/9/2016	00:00:00	9.781425	24.53522	77.63647
8/9/2016	01:00:00	2.062194	24.65632	115.4197
8/9/2016	02:00:00	7.381731	24.74089	55.7217
8/9/2016	03:00:00	4.43505	24.63495	60.66988
8/9/2016	04:00:00	1.351335	24.31514	203.8439
8/9/2016	05:00:00	1.501992	24.56953	66.12907
8/9/2016	06:00:00	1.66693	24.72774	277.8158
8/9/2016	07:00:00	4.616732	24.67466	301.8809
8/9/2016	08:00:00	6.57989	25.48368	291.3314
8/9/2016	09:00:00	14.75077	25.86941	23.60931
8/9/2016	10:00:00	5.350025	25.79404	64.41805
8/9/2016	11:00:00	6.786305	25.8545	83.74343
8/9/2016	12:00:00	13.24006	26.30064	53.99508
8/9/2016	13:00:00	7.504214	27.03693	66.73781
8/9/2016	14:00:00	18.10984	26.12683	42.66153
8/9/2016	15:00:00	18.53071	26.45634	47.38222
8/9/2016	16:00:00	16.56096	26.67788	52.31085
8/9/2016	17:00:00	7.343476	26.61461	69.35664
8/9/2016	18:00:00	6.456983	26.29698	59.14193
8/9/2016	19:00:00	8.545924	28.62825	128.3951
8/9/2016	20:00:00	10.07302	26.56129	159.1874
8/9/2016	21:00:00	13.60227	25.06397	151.8257
8/9/2016	22:00:00	10.64772	24.49409	148.1998
8/9/2016	23:00:00	6.205699	23.89725	133.3382
9/9/2016	00:00:00	6.34815	23.32952	123.2841
9/9/2016	01:00:00	6.640965	22.7452	115.7449
9/9/2016	02:00:00	7.567099	22.23646	147.1506
9/9/2016	03:00:00	6.858193	21.82403	129.4609
9/9/2016	04:00:00	4.486994	21.5195	126.1177
9/9/2016	05:00:00	2.500683	21.06577	127.5753
9/9/2016	06:00:00	4.183894	20.83485	135.0375
9/9/2016	07:00:00	4.900711	20.78742	104.1983
9/9/2016	08:00:00	5.200934	21.82285	118.6536
9/9/2016	09:00:00	11.06578	23.11485	136.6721
9/9/2016	10:00:00	9.290145	24.39503	136.2736
9/9/2016	11:00:00	6.967333	27.09712	128.1054
9/9/2016	12:00:00	5.704992	27.94975	100.5999
9/9/2016	13:00:00	12.98988	25.83382	37.82053
9/9/2016	14:00:00	14.59327	25.80235	41.73372
9/9/2016	15:00:00	15.03607	25.69466	49.78989
9/9/2016	16:00:00	14.61944	25.849	42.95873
9/9/2016	17:00:00	4.930555	25.71264	59.49174
9/9/2016	18:00:00	4.767017	26.09688	76.47607
9/9/2016	19:00:00	5.938966	26.73814	132.615
9/9/2016	20:00:00	13.11079	25.66667	164.6775
9/9/2016	21:00:00	9.060718	24.30157	189.2548
9/9/2016	22:00:00	11.77188	22.96114	207.0844

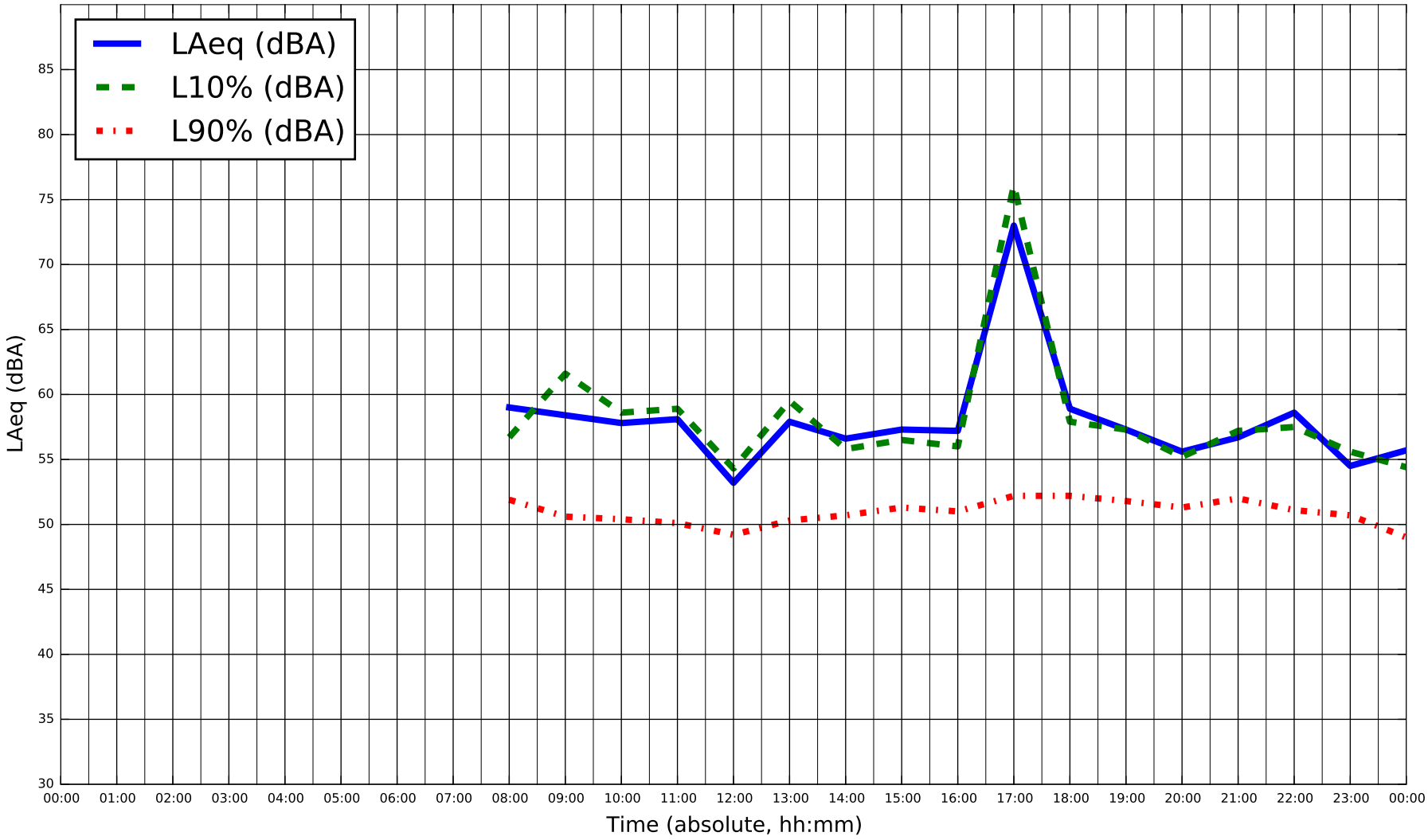
Date	Time	CCSCADA0:CC-DG-SIT-0001-SI.F_CV (A)	CCSCADA0:CC-DG-TIT-0001-TI.F_CV (A)	CCSCADA0:CC-DG-ZIT-0001-ZI.F_CV (A)
		Wind km/hr	Temp: °C	Wind Dir.
9/9/2016	23:00:00	1.856318	22.48107	245.5349
10/9/2016	00:00:00	1.690992	21.7157	148.9357
10/9/2016	01:00:00	4.880948	22.17331	251.8889
10/9/2016	02:00:00	7.696427	21.405	234.3605
10/9/2016	03:00:00	5.912204	22.20612	233.198
10/9/2016	04:00:00	13.21072	20.16193	197.4127
10/9/2016	05:00:00	12.90164	21.18159	214.6484
10/9/2016	06:00:00	10.73812	21.6476	230.5701
10/9/2016	07:00:00	10.8456	21.50142	228.5353
10/9/2016	08:00:00	13.94924	22.05099	242.7107
10/9/2016	09:00:00	18.52227	22.78644	267.4899
10/9/2016	10:00:00	18.04926	24.46729	278.9147
10/9/2016	11:00:00	14.29251	24.84245	331.6379
10/9/2016	12:00:00	12.44753	24.38607	316.8162
10/9/2016	13:00:00	11.19128	24.86392	295.2787
10/9/2016	14:00:00	16.80251	25.56181	299.479
10/9/2016	15:00:00	19.81895	27.21616	27.19119
10/9/2016	16:00:00	19.60319	27.46475	38.71272
10/9/2016	17:00:00	21.35204	27.18378	44.57364
10/9/2016	18:00:00	20.74827	27.25126	44.6578
10/9/2016	19:00:00	26.97203	25.44411	33.56537
10/9/2016	20:00:00	16.68533	25.40414	47.46562
10/9/2016	21:00:00	25.04902	25.48119	46.26947
10/9/2016	22:00:00	31.99012	24.74384	37.5015
10/9/2016	23:00:00	31.50456	24.37099	46.79187
11/9/2016	00:00:00	20.07071	22.51004	105.4465
11/9/2016	01:00:00	11.14346	21.34627	87.71621
11/9/2016	02:00:00	11.05653	21.58403	84.90213
11/9/2016	03:00:00	14.20801	21.34634	95.58767
11/9/2016	04:00:00	16.70008	20.68399	97.0683
11/9/2016	05:00:00	14.84874	19.58121	96.19145
11/9/2016	06:00:00	16.52525	18.93165	104.2584
11/9/2016	07:00:00	18.85222	18.09487	119.7135
11/9/2016	08:00:00	11.15723	17.80125	121.333
11/9/2016	09:00:00	15.44459	18.42565	122.8372
11/9/2016	10:00:00	16.09348	19.46134	137.0162
11/9/2016	11:00:00	17.52604	20.75941	122.7075
11/9/2016	12:00:00	17.95216	21.68976	93.55551
11/9/2016	13:00:00	14.25251	22.22148	119.9071
11/9/2016	14:00:00	13.42982	22.51514	133.2996
11/9/2016	15:00:00	11.83347	23.10897	120.0795
11/9/2016	16:00:00	12.89624	23.38745	129.8961
11/9/2016	17:00:00	14.39209	23.07293	143.0451
11/9/2016	18:00:00	11.93845	22.24681	148.2986
11/9/2016	19:00:00	8.145497	21.03333	161.7951
11/9/2016	20:00:00	4.495636	20.10148	169.7413
11/9/2016	21:00:00	3.600115	18.90886	178.1543
11/9/2016	22:00:00	1.090559	17.6414	205.6648
11/9/2016	23:00:00	2.0911	16.97133	174.0108
12/9/2016	00:00:00	3.596378	15.7136	179.7038
12/9/2016	01:00:00	5.294858	14.90598	183.2268
12/9/2016	02:00:00	4.821979	13.57222	192.1976

Date	Time	CCSCADA0:CC-DG-SIT-0001-SI.F_CV (A)	CCSCADA0:CC-DG-TIT-0001-TI.F_CV (A)	CCSCADA0:CC-DG-ZIT-0001-ZI.F_CV (A)
		Wind km/hr	Temp: °C	Wind Dir.
12/9/2016	03:00:00	8.022912	14.72453	184.3526
12/9/2016	04:00:00	7.394393	12.97605	184.9969
12/9/2016	05:00:00	4.95078	14.66663	203.393
12/9/2016	06:00:00	7.723946	13.0105	186.9409
12/9/2016	07:00:00	6.411023	12.79951	183.7425
12/9/2016	08:00:00	4.697647	15.26276	185.538
12/9/2016	09:00:00	1.271614	19.74287	167.8271
12/9/2016	10:00:00	8.082548	19.47093	308.758
12/9/2016	11:00:00	8.806068	20.17973	304.2149
12/9/2016	12:00:00	10.05909	20.72531	298.8951
12/9/2016	13:00:00	6.589148	21.70263	243.015
12/9/2016	14:00:00	9.285908	22.2595	21.03065
12/9/2016	15:00:00	6.958228	22.64646	34.13533
12/9/2016	16:00:00	6.427653	22.82381	24.27892
12/9/2016	17:00:00	5.931261	22.80294	288.6718
12/9/2016	18:00:00	8.003533	22.49196	316.2667
12/9/2016	19:00:00	8.936398	22.45234	323.6587
12/9/2016	20:00:00	8.236724	22.15671	321.8321
12/9/2016	21:00:00	5.050033	21.57774	270.8919
12/9/2016	22:00:00	4.319912	19.75645	190.271
12/9/2016	23:00:00	12.97197	21.52364	298.5367
13/09/2016	00:00:00	13.86178	21.41655	302.0391
13/09/2016	01:00:00	14.10714	21.43257	194.414
13/09/2016	02:00:00	1.343175	19.80792	164.8621
13/09/2016	03:00:00	5.310358	15.96572	190.2966
13/09/2016	04:00:00	7.413553	16.45903	200.1155
13/09/2016	05:00:00	6.235799	16.21493	190.1462
13/09/2016	06:00:00	6.12969	15.94637	196.0733
13/09/2016	07:00:00	6.673814	16.40876	191.1931
13/09/2016	08:00:00	5.036793	18.05533	196.9384
13/09/2016	09:00:00	0.9130639	22.15603	89.71947
13/09/2016	10:00:00	3.415787	21.8886	50.6708
13/09/2016	11:00:00	4.588725	21.96142	41.49289
13/09/2016	12:00:00	6.850937	22.41911	38.71289
13/09/2016	13:00:00	9.540607	22.9872	46.42966
13/09/2016	14:00:00	12.01098	23.37796	29.50858
13/09/2016	15:00:00	13.72479	23.72587	26.88977
13/09/2016	16:00:00	11.29916	24.49373	78.57965
13/09/2016	17:00:00	19.24759	24.9721	27.49238
13/09/2016	18:00:00	20.76973	24.41553	14.62185
13/09/2016	19:00:00	25.24651	24.76148	30.67039
13/09/2016	20:00:00	18.95773	24.33388	49.51477
13/09/2016	21:00:00	8.572351	24.02803	65.70794
13/09/2016	22:00:00	7.662654	23.68843	70.15031
13/09/2016	23:00:00	9.638101	23.51506	74.07909
14/09/2016	00:00:00	8.02982	23.47353	59.65791
14/09/2016	01:00:00	7.172978	23.01085	65.4948
14/09/2016	02:00:00	10.4745	22.7658	80.26244
14/09/2016	03:00:00	8.743852	23.4458	95.19492
14/09/2016	04:00:00	16.797	22.96383	134.3213
14/09/2016	05:00:00	14.72903	22.24245	135.4154
14/09/2016	06:00:00	15.93072	21.06631	115.7096

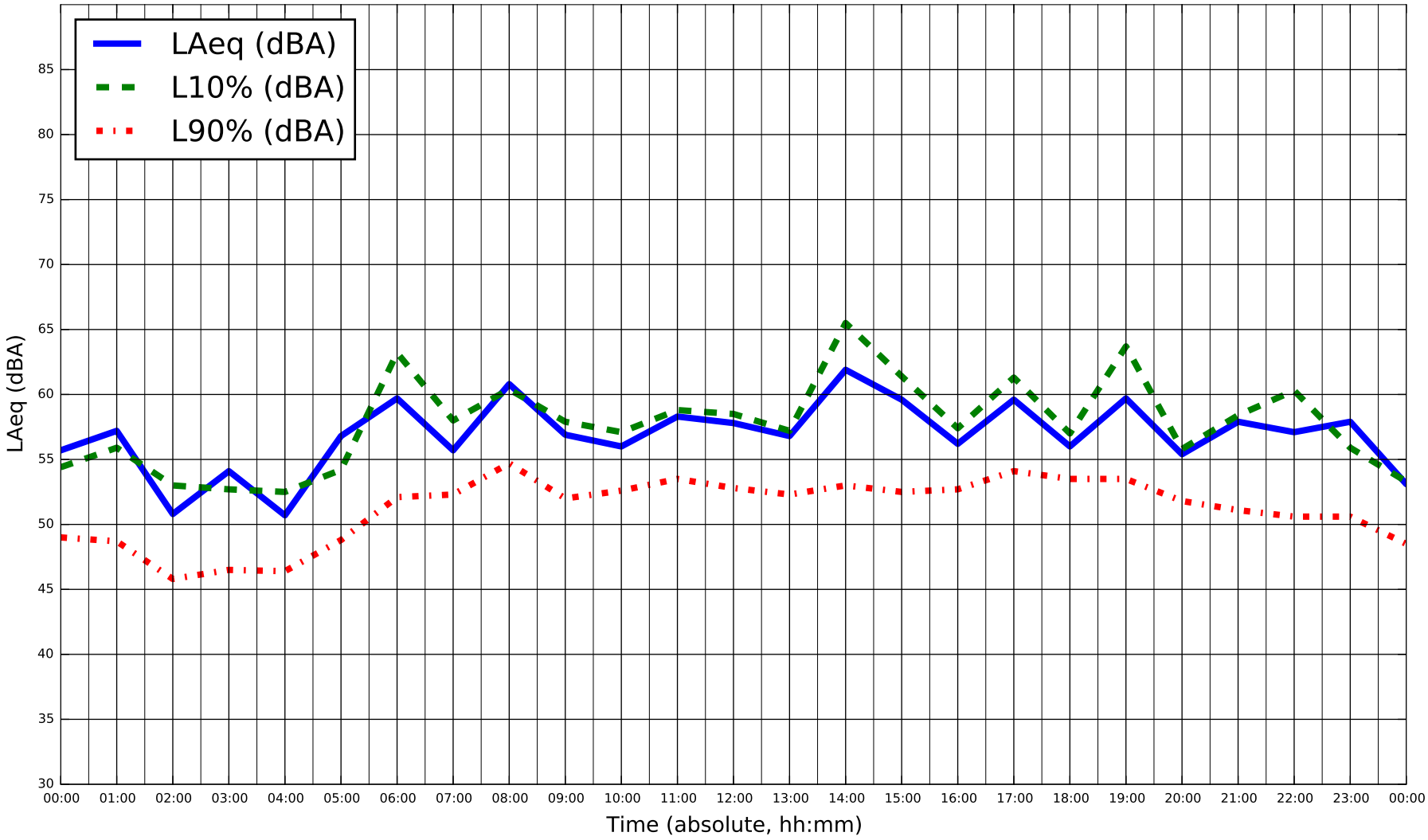
Date	Time	CCSCADA0:CC-DG-SIT-0001-SI.F_CV (A)	CCSCADA0:CC-DG-TIT-0001-TI.F_CV (A)	CCSCADA0:CC-DG-ZIT-0001-ZI.F_CV (A)
		Wind km/hr	Temp: °C	Wind Dir.
14/09/2016	07:00:00	17.37725	20.42465	126.4871
14/09/2016	08:00:00	11.76382	19.68444	140.2281
14/09/2016	09:00:00	18.31448	19.08713	157.706
14/09/2016	10:00:00	21.0609	18.86493	164.3166
14/09/2016	11:00:00	12.39819	18.53856	158.562
14/09/2016	12:00:00	12.38034	18.28343	160.8717
14/09/2016	13:00:00	15.6953	20.39876	147.0713
14/09/2016	14:00:00	12.5298	21.48556	147.9134
14/09/2016	15:00:00	9.758915	22.56871	167.2012
14/09/2016	16:00:00	13.07852	23.23166	169.9945
14/09/2016	17:00:00	12.90829	23.00355	166.6374
14/09/2016	18:00:00	8.282979	21.79486	161.0422
14/09/2016	19:00:00	12.33733	21.27321	155.2196
14/09/2016	20:00:00	9.783737	19.36952	159.2713
14/09/2016	21:00:00	10.48417	17.86536	159.862
14/09/2016	22:00:00	12.33088	16.68501	169.4232
14/09/2016	23:00:00	11.74505	16.22777	181.8928
15/09/2016	00:00:00	11.86361	15.25526	196.7828

APPENDIX E

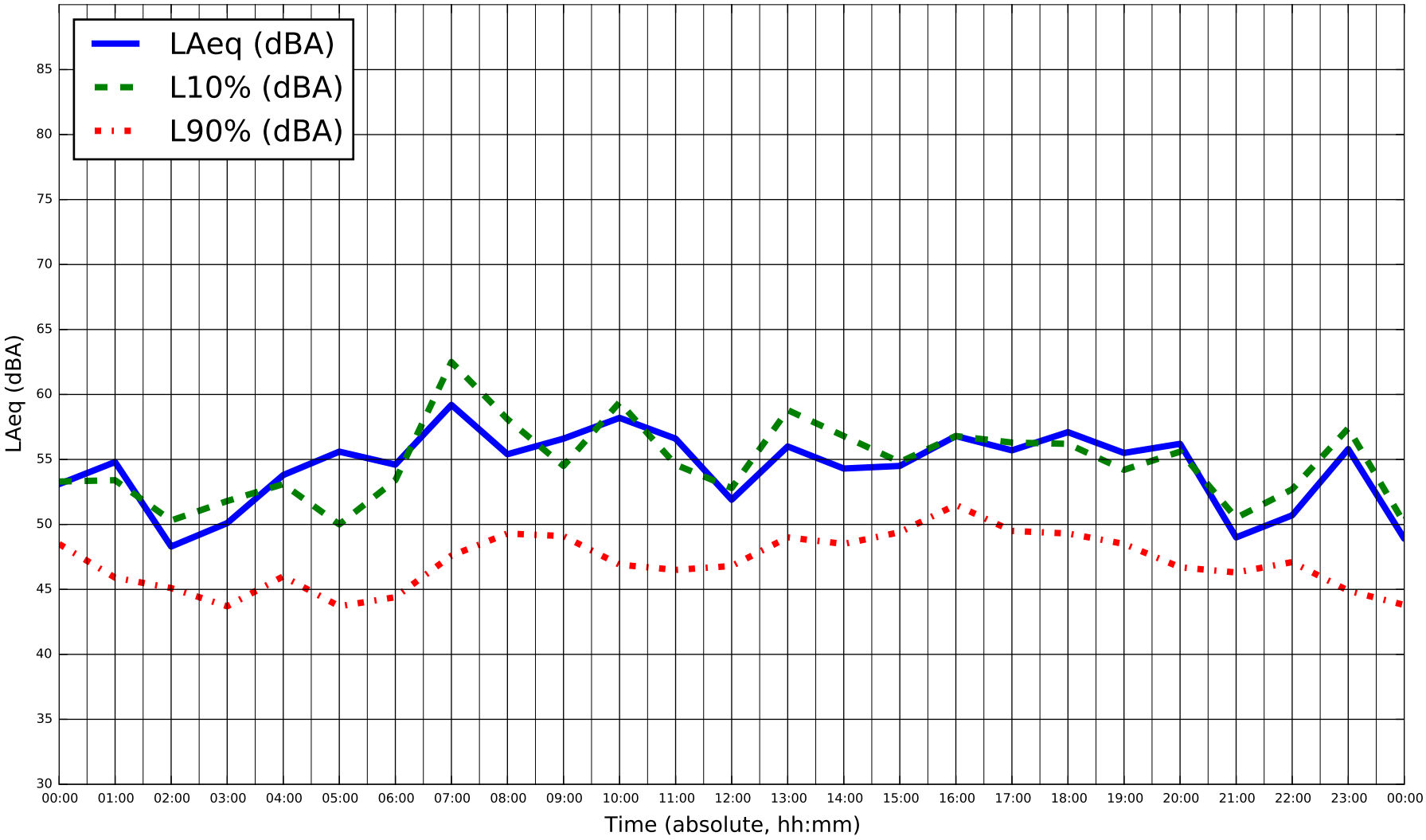
NOVEMBER 2014 PRE-OPERATIONAL SOUND MEASUREMENT RESULTS



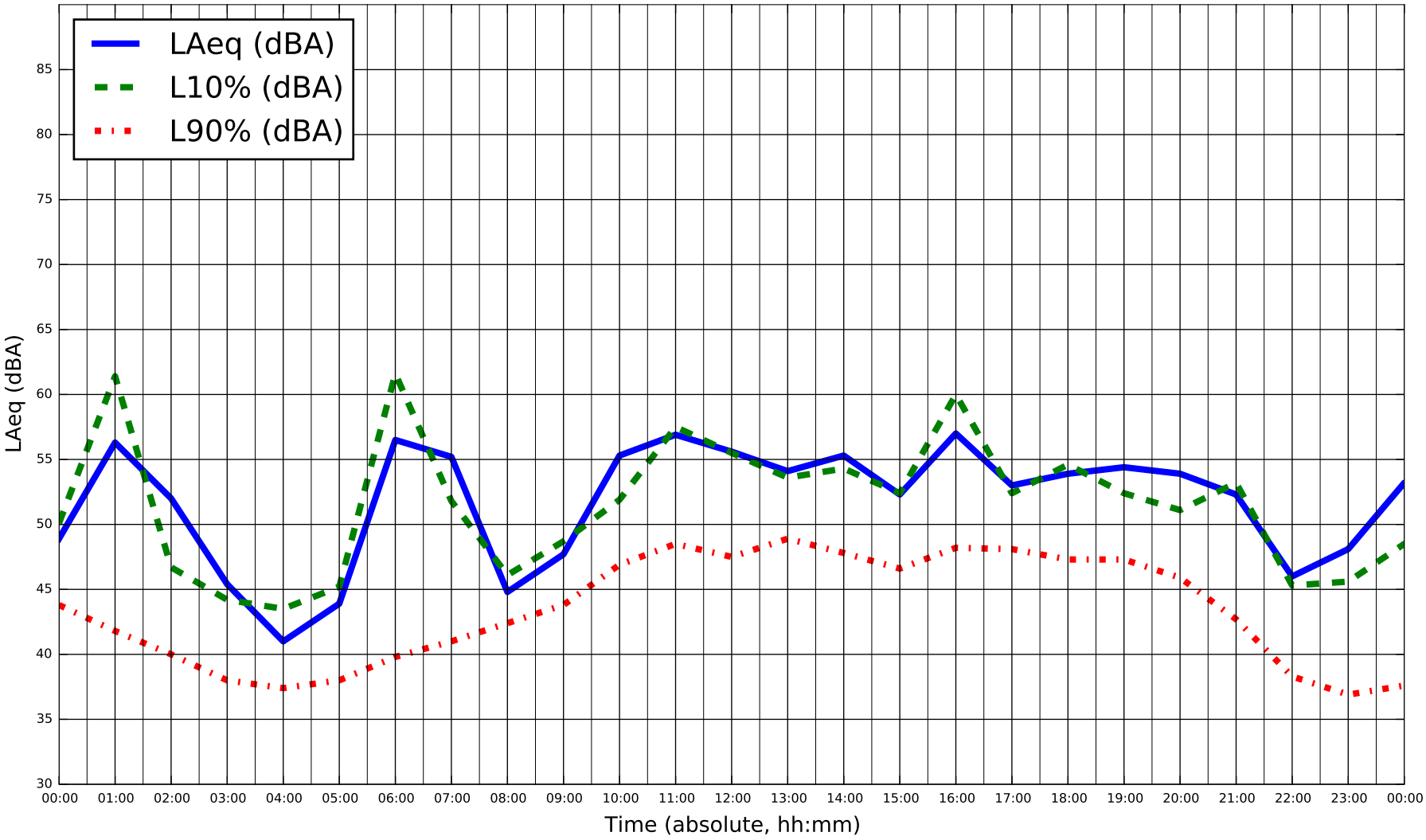
VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Thursday Nov 13, 2014	Figure: E-1
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



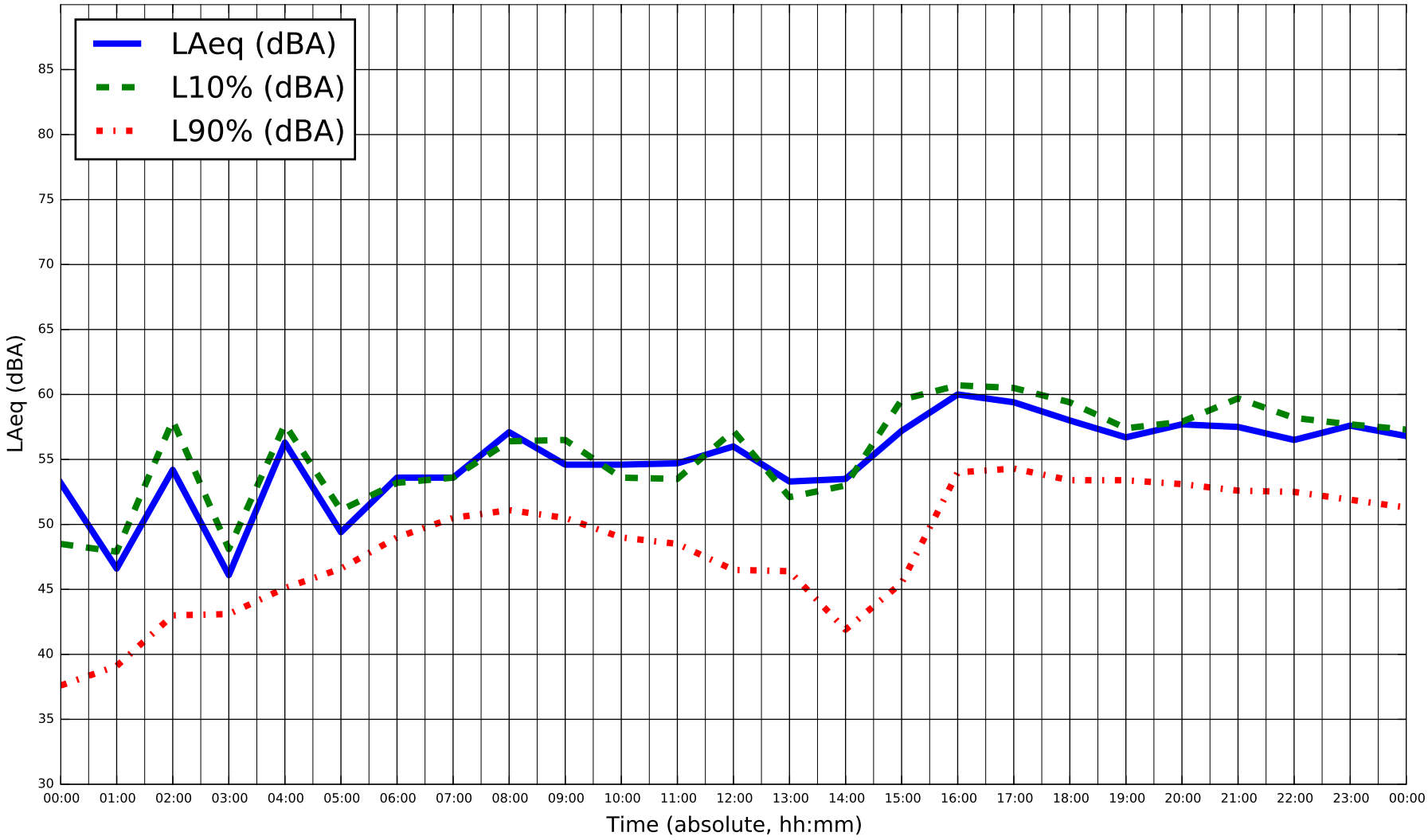
VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Friday Nov 14, 2014	Figure: E-2
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



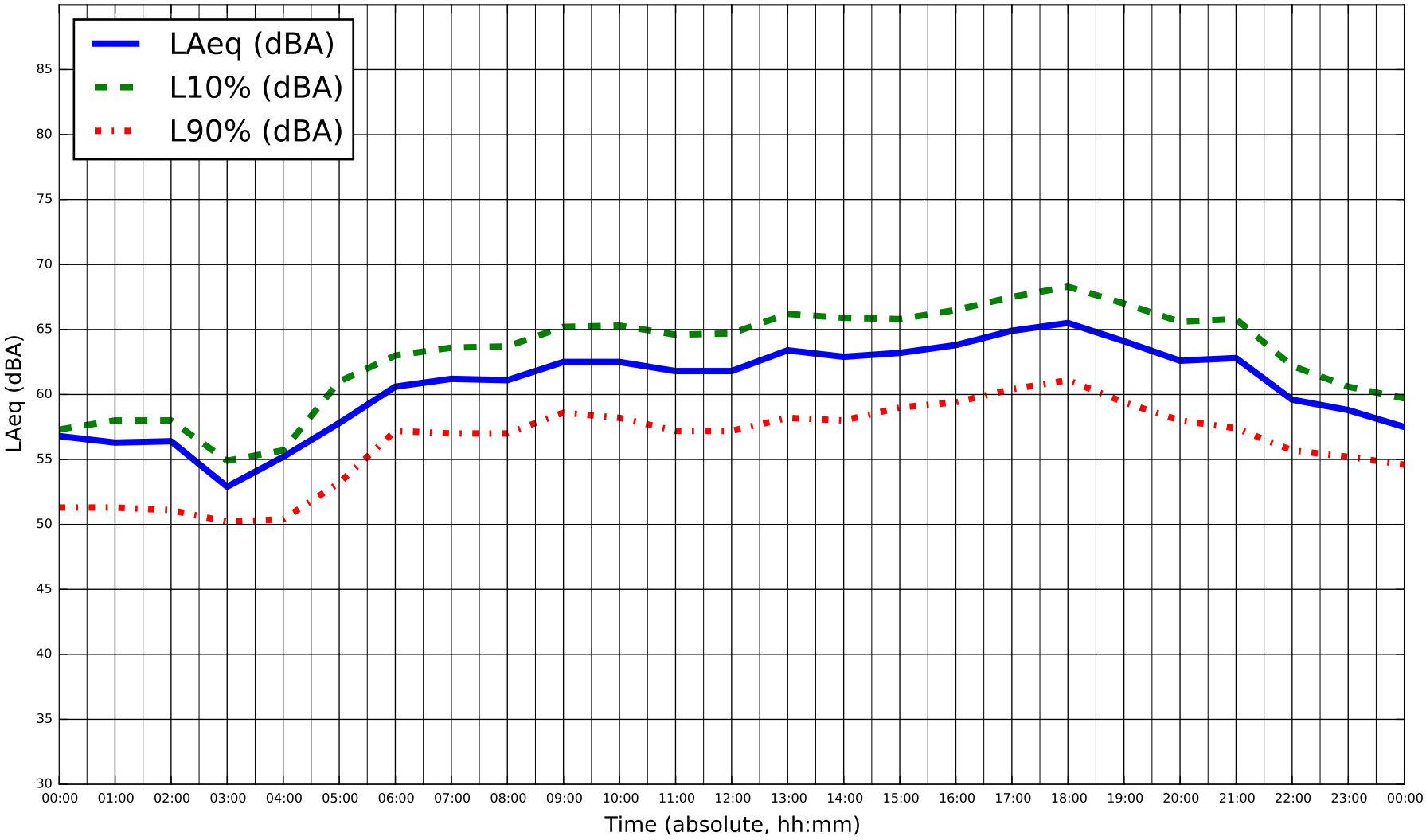
VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Saturday Nov 15, 2014	Figure: E-3
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Sunday Nov 16, 2014	Figure: E-4
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

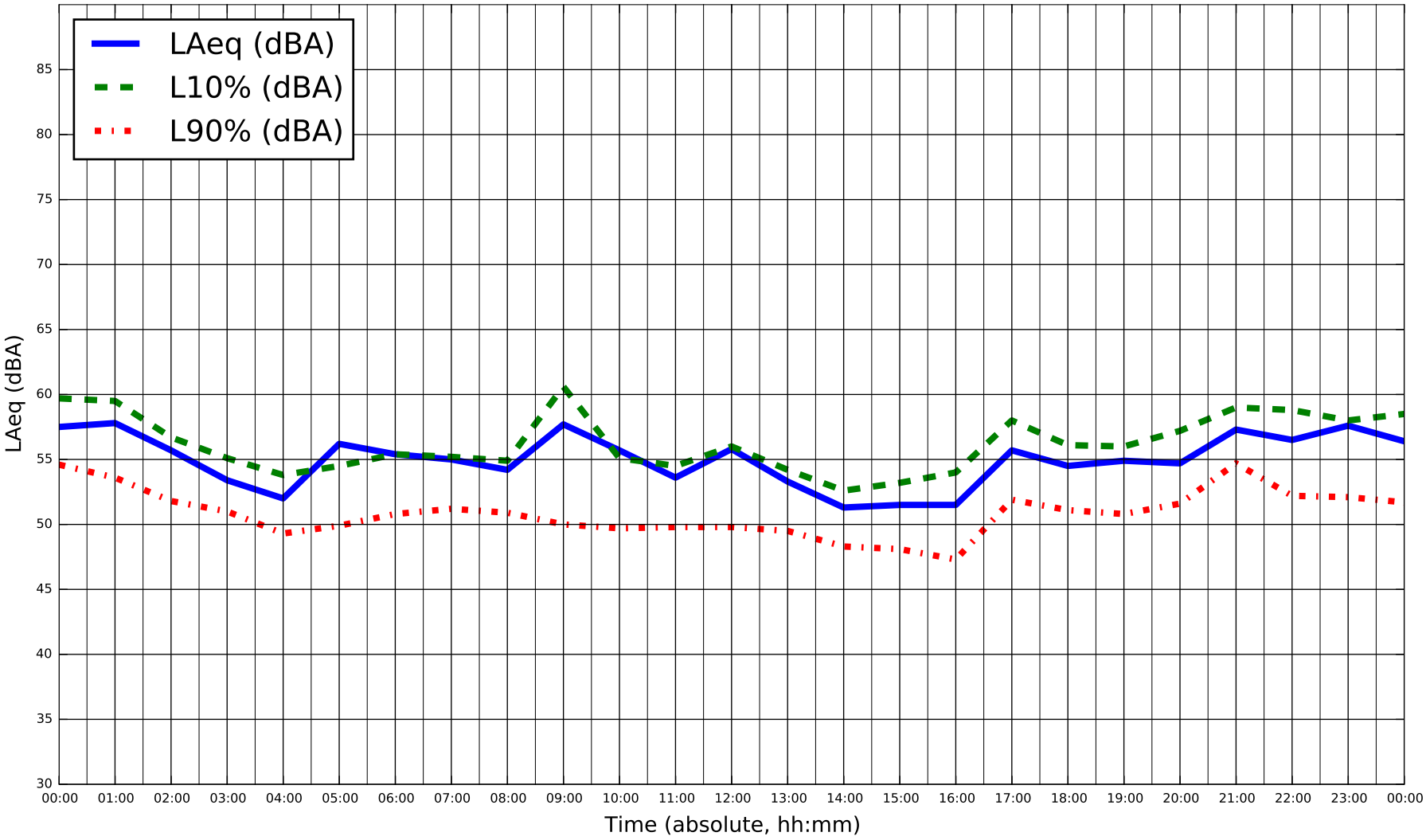


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Monday Nov 17, 2014	Figure: E-5
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



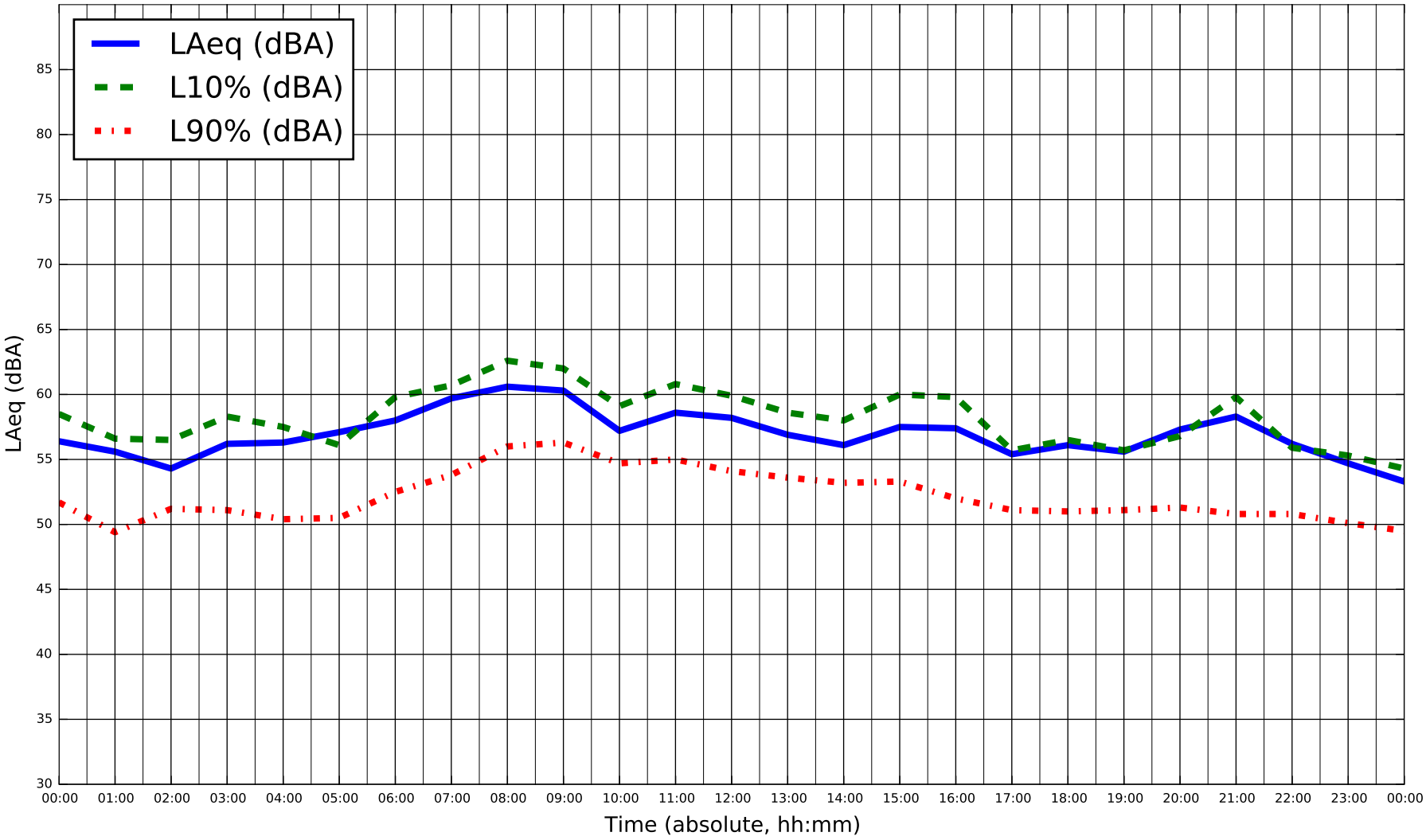
* Sustained winds over 20 km/hr during monitoring on Nov 18, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Tuesday Nov 18, 2014	Figure: E-6
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



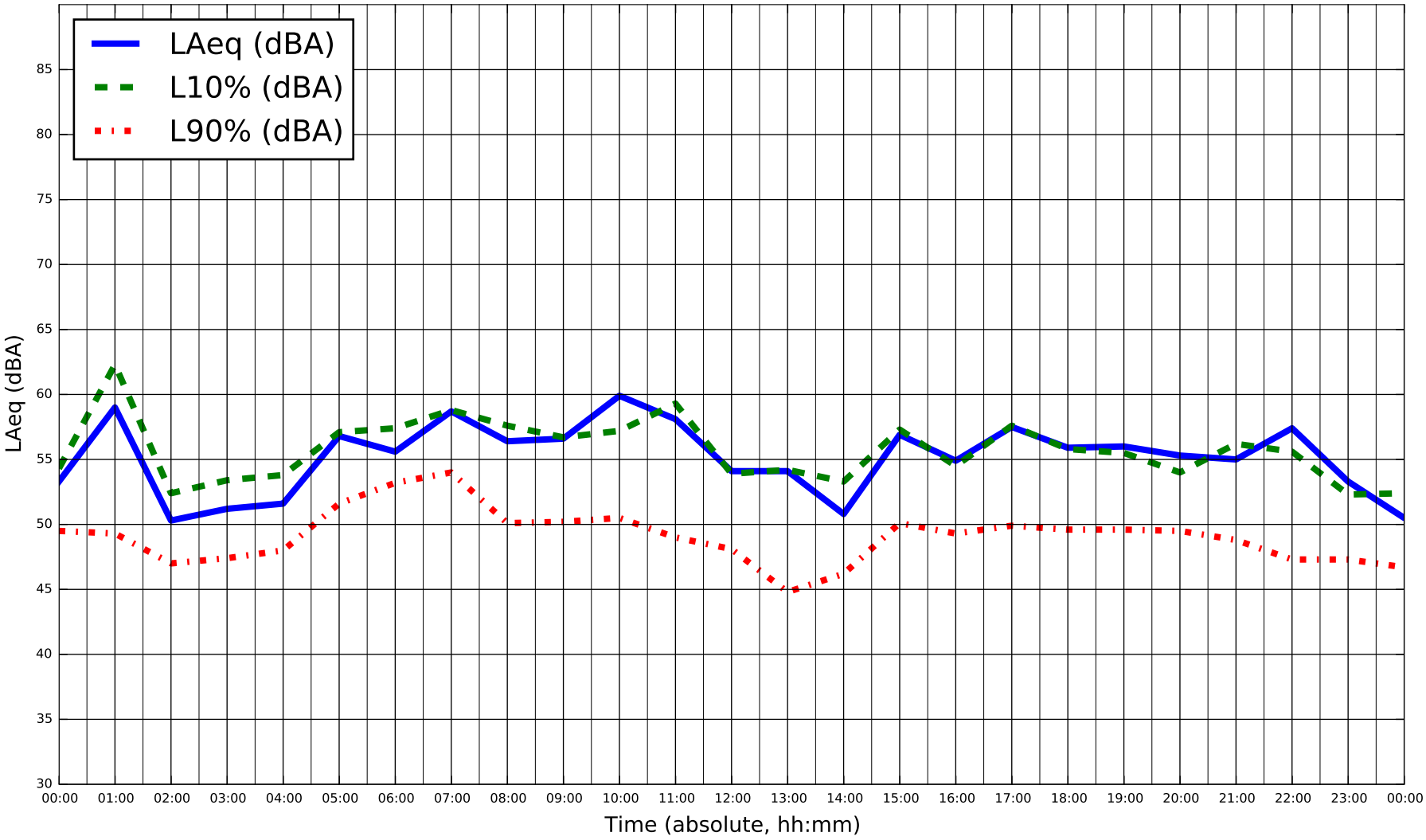
* Sustained winds over 20 km/hr during monitoring on Nov 19, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Wednesday Nov 19, 2014	Figure: E-7
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

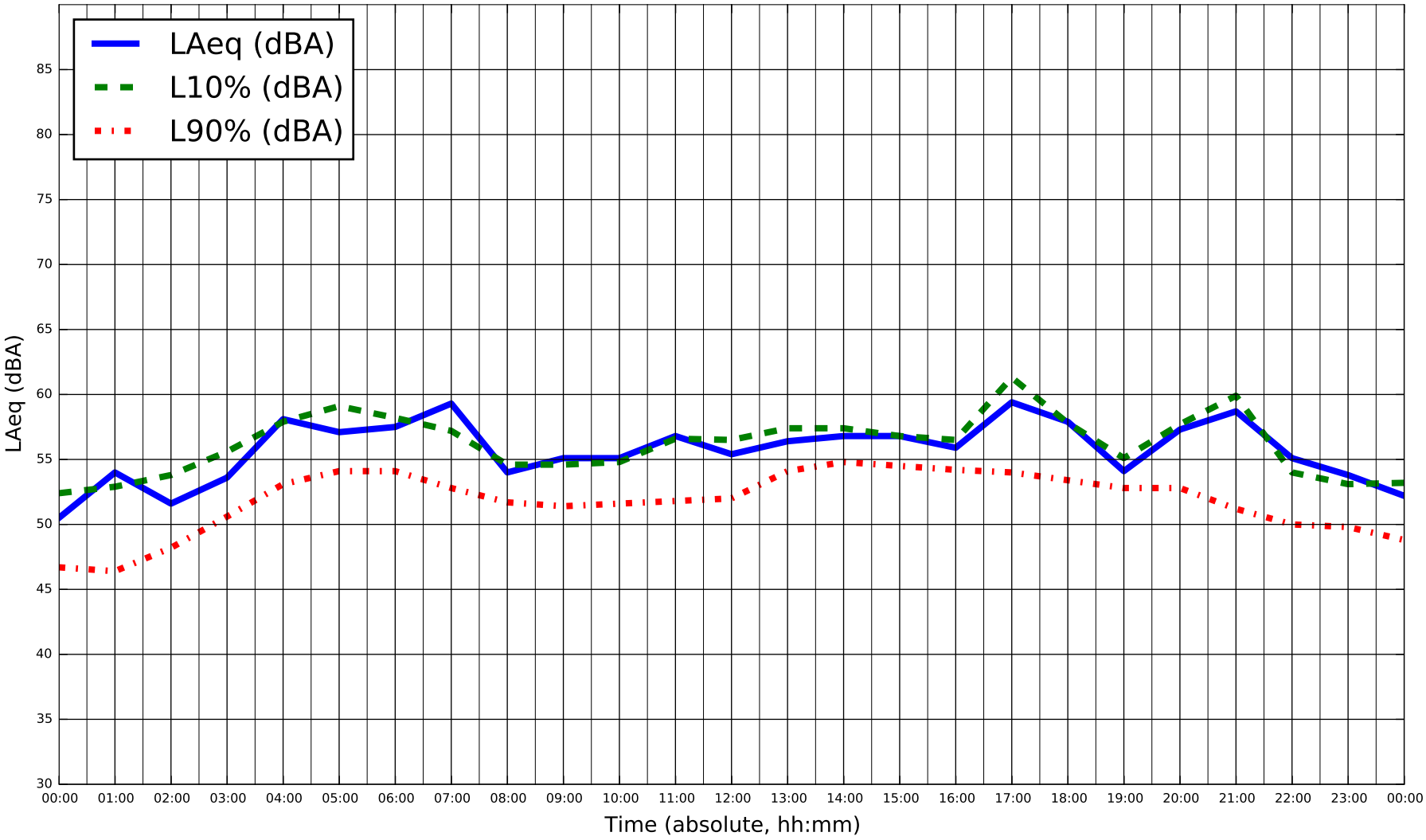


* Sustained winds over 20 km/hr during monitoring on Nov 20, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Thursday Nov 20, 2014	Figure: E-8
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

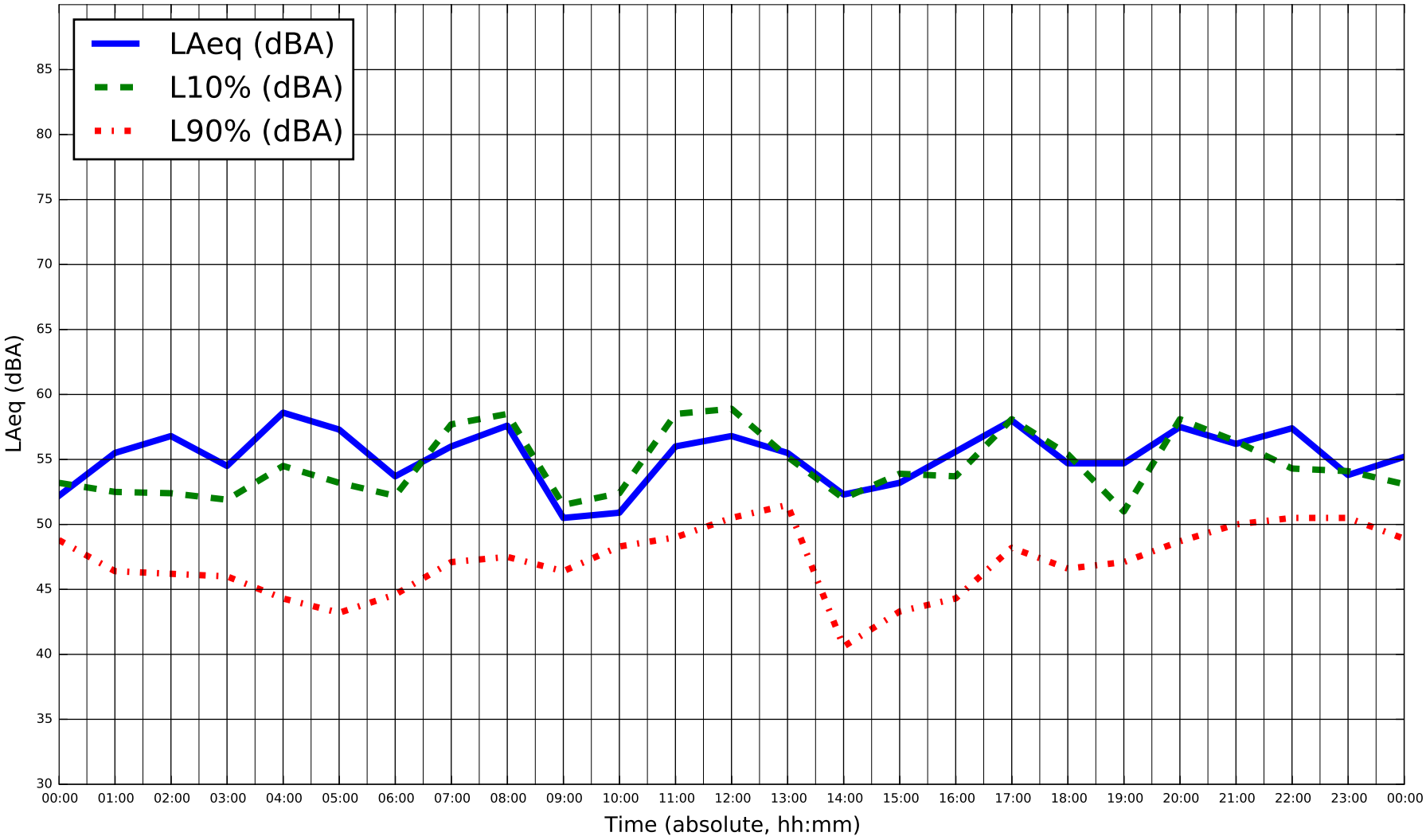


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Friday Nov 21, 2014	Figure: E-9
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

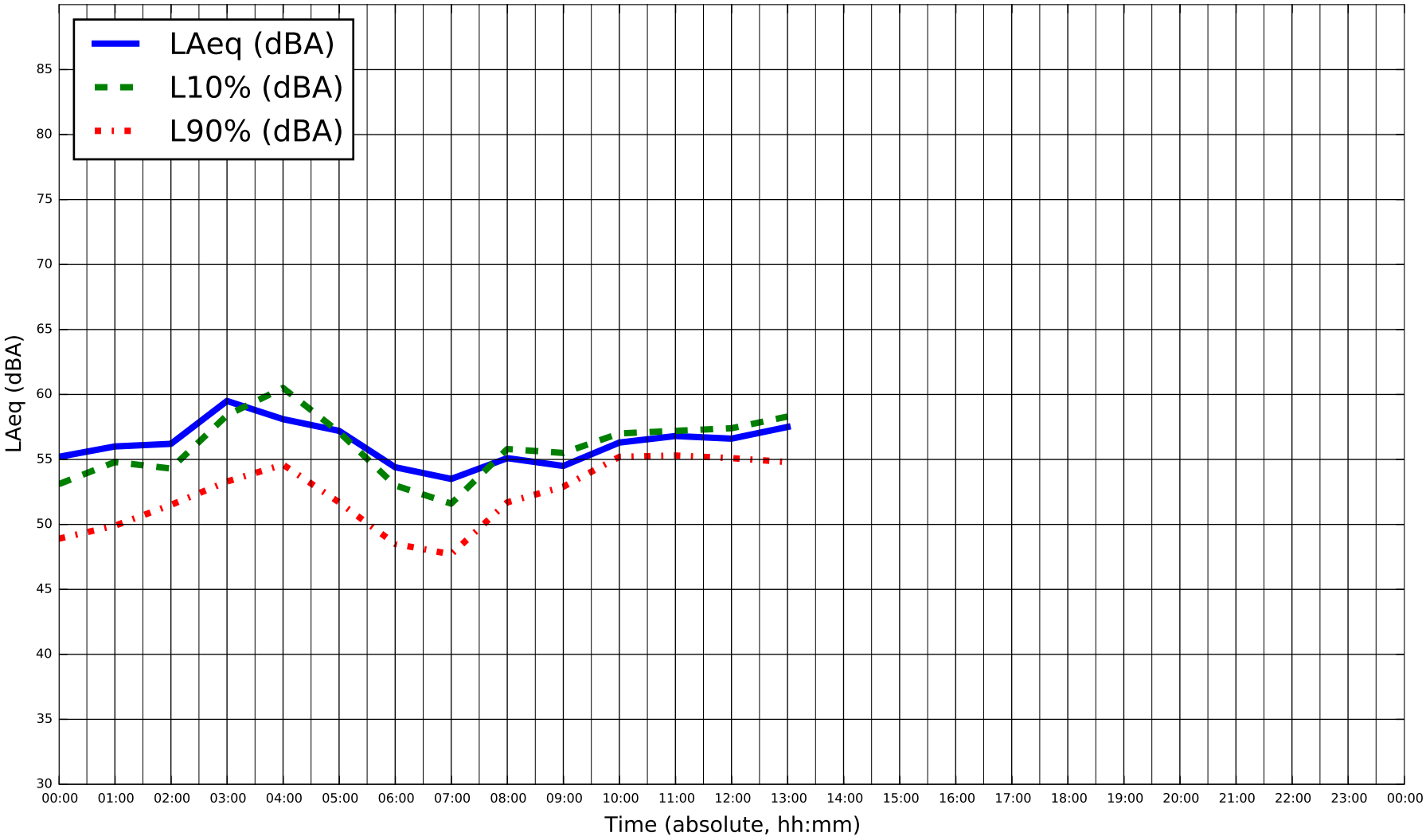


* Sustained winds over 20 km/hr during monitoring on Nov 22, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Saturday Nov 22, 2014	Figure: E-10
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

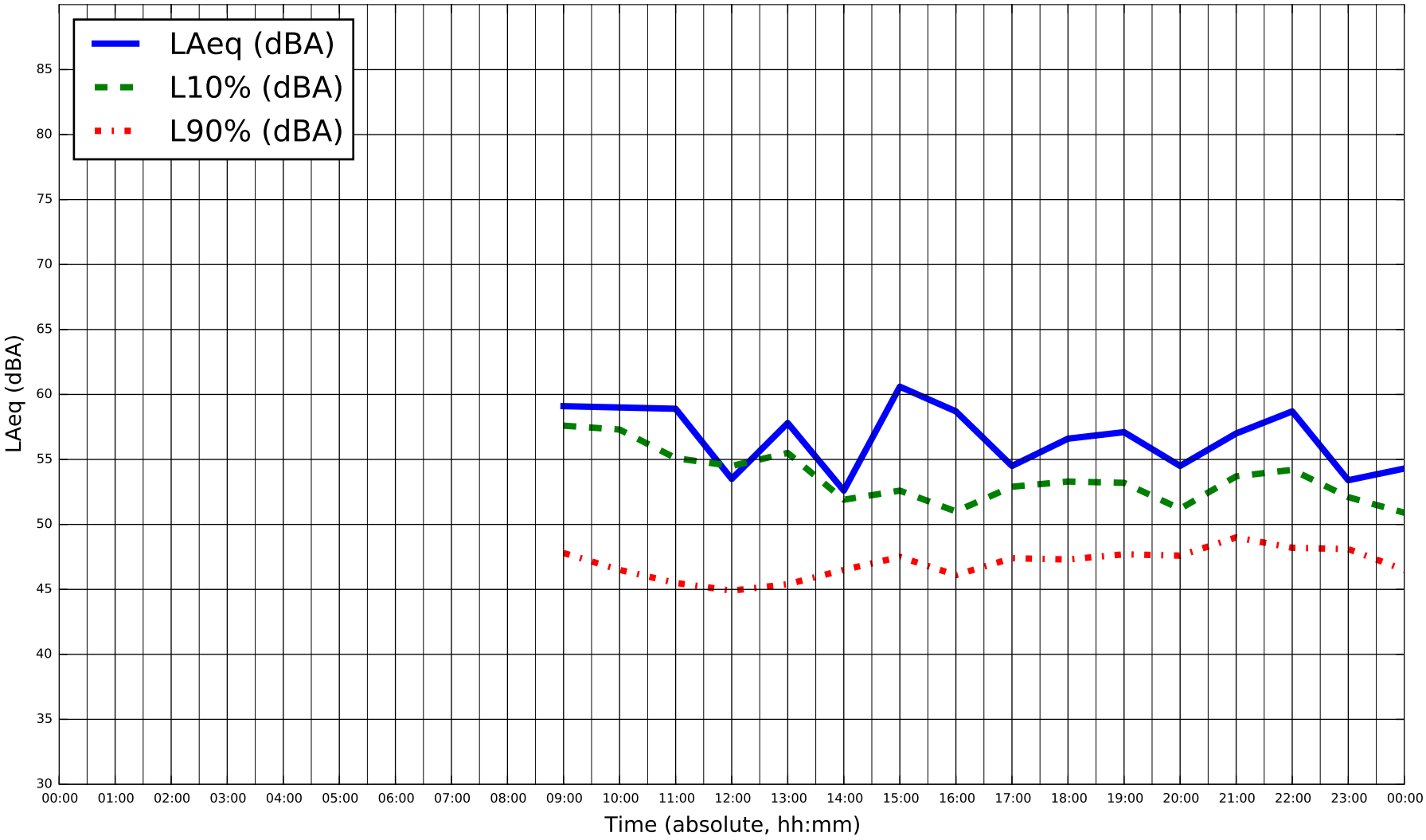


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Sunday Nov 23, 2014	Figure: E-11
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

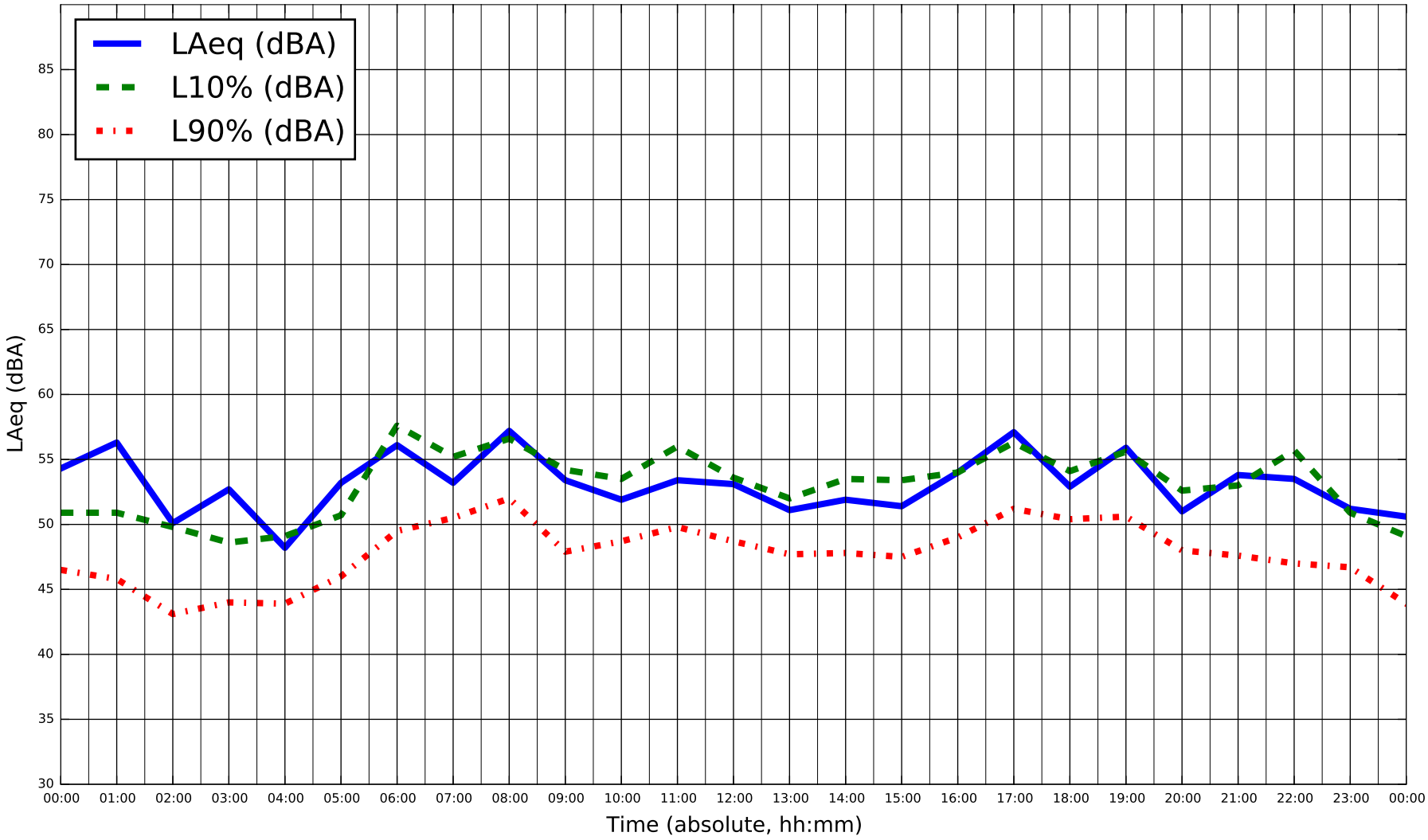


* Sustained winds over 20 km/hr during monitoring on Nov 24, 2014

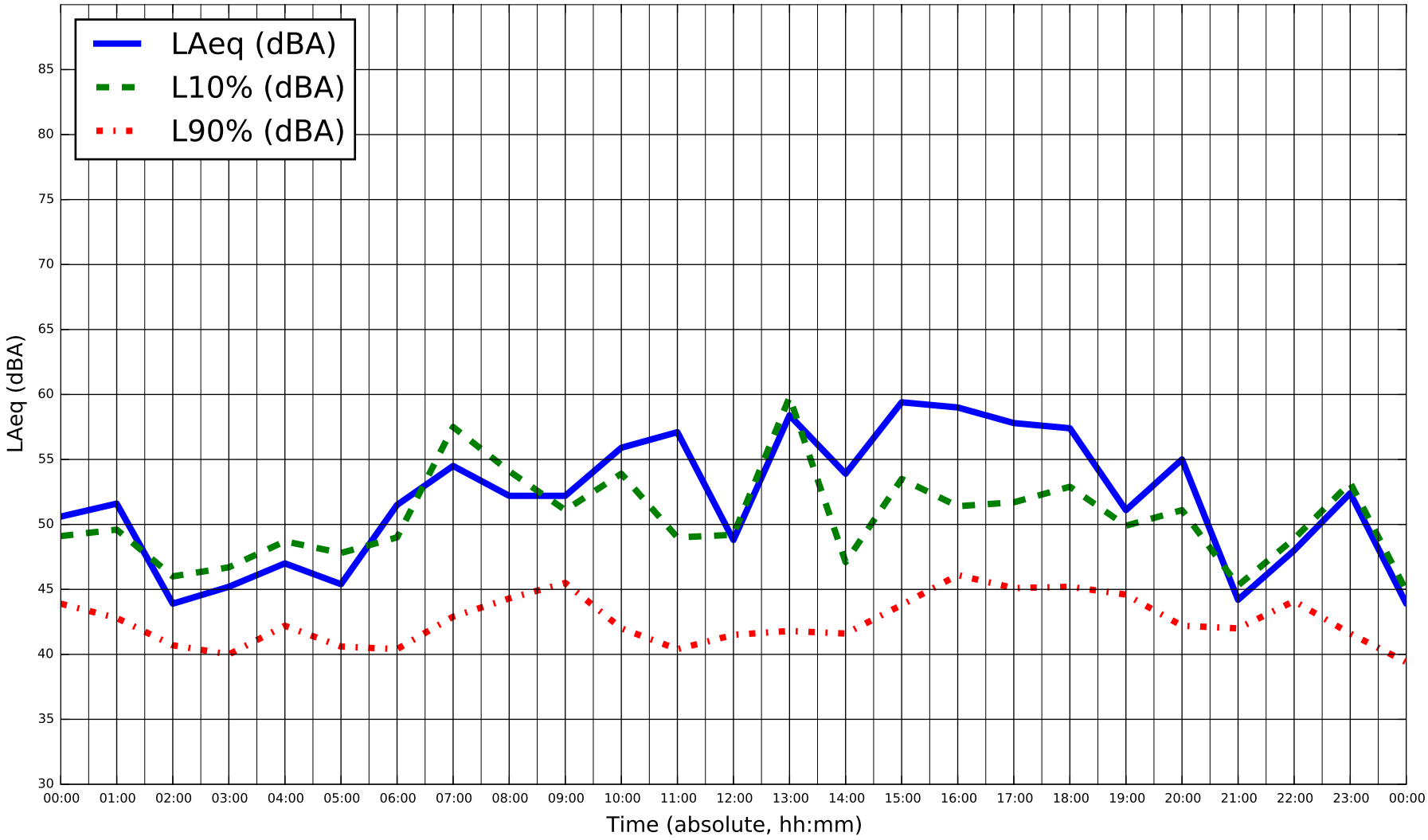
VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M001	Measurement Date: Monday Nov 24, 2014	Figure: E-12
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Thursday Nov 13, 2014	Figure: E-13
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Friday Nov 14, 2014	Figure: E-14
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Saturday Nov 15, 2014	Figure: E-15
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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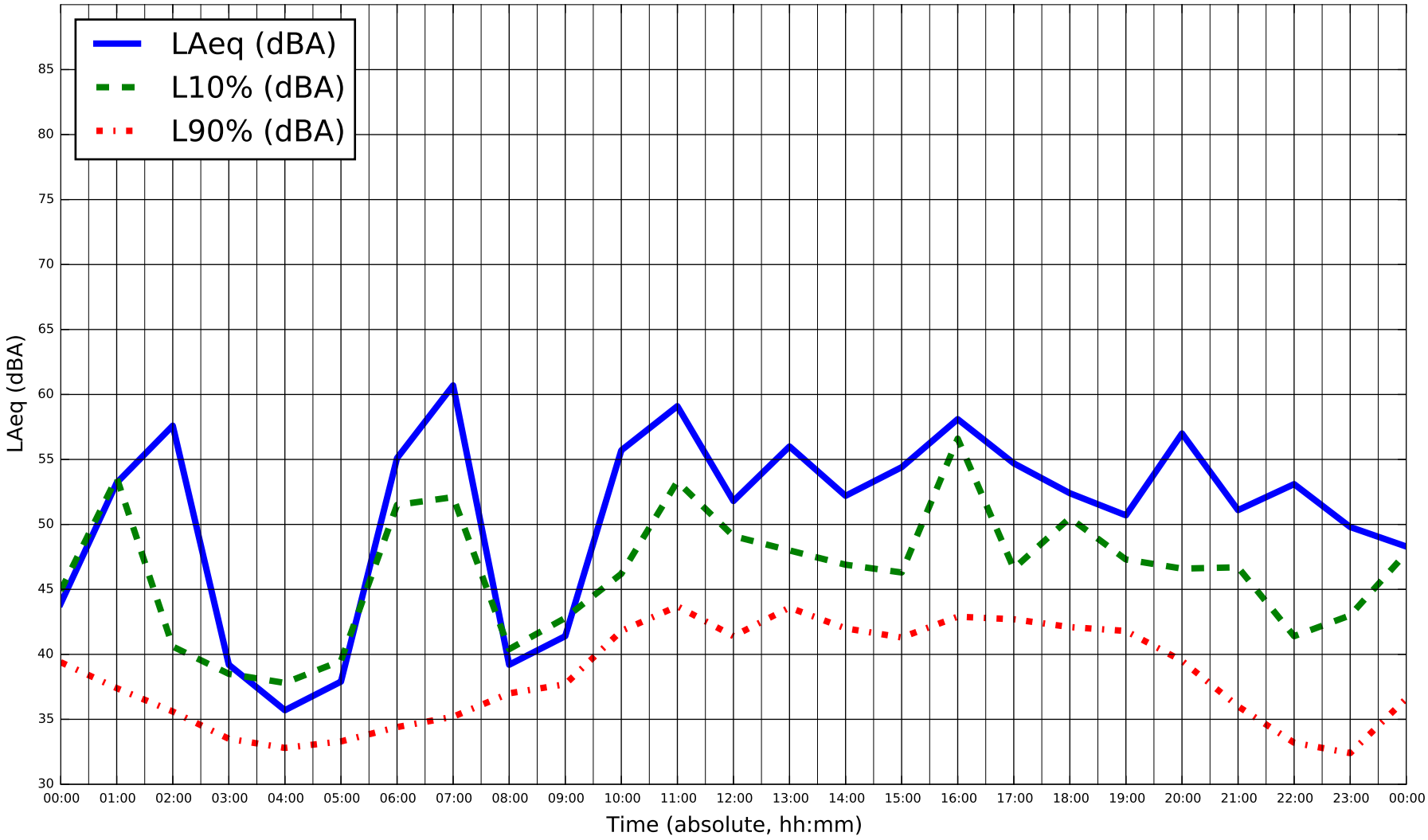
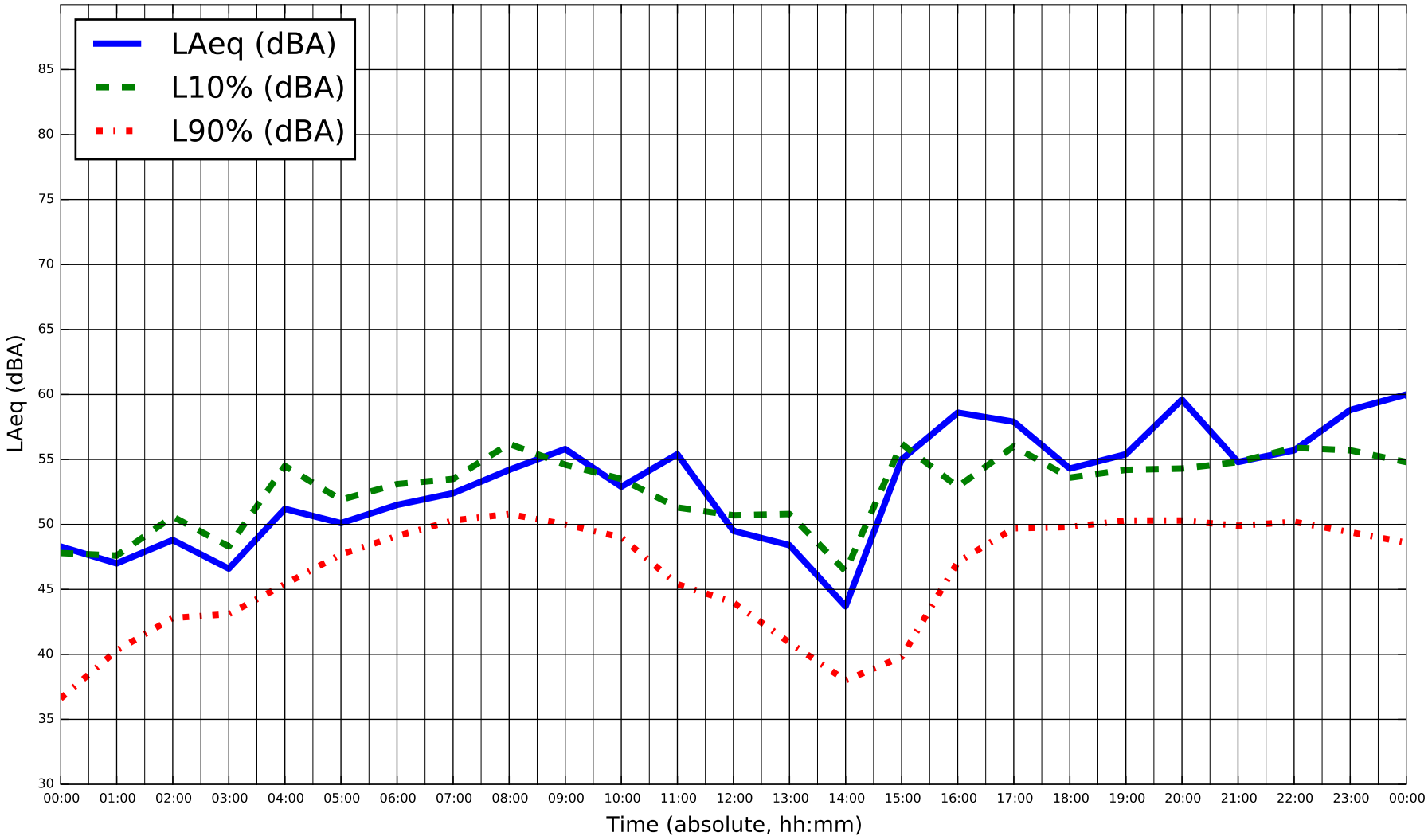
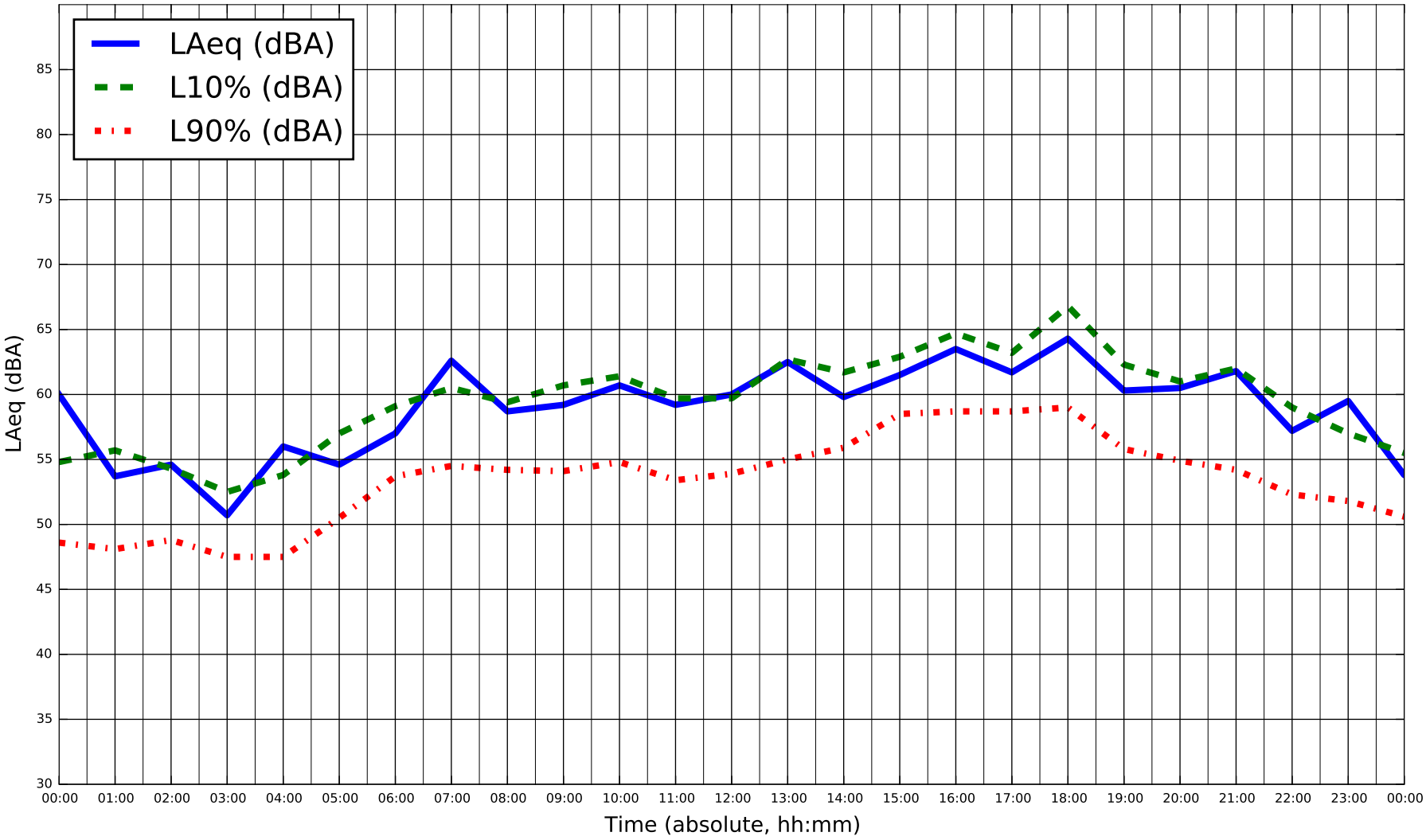


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Sunday Nov 16, 2014	Figure: E-16
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

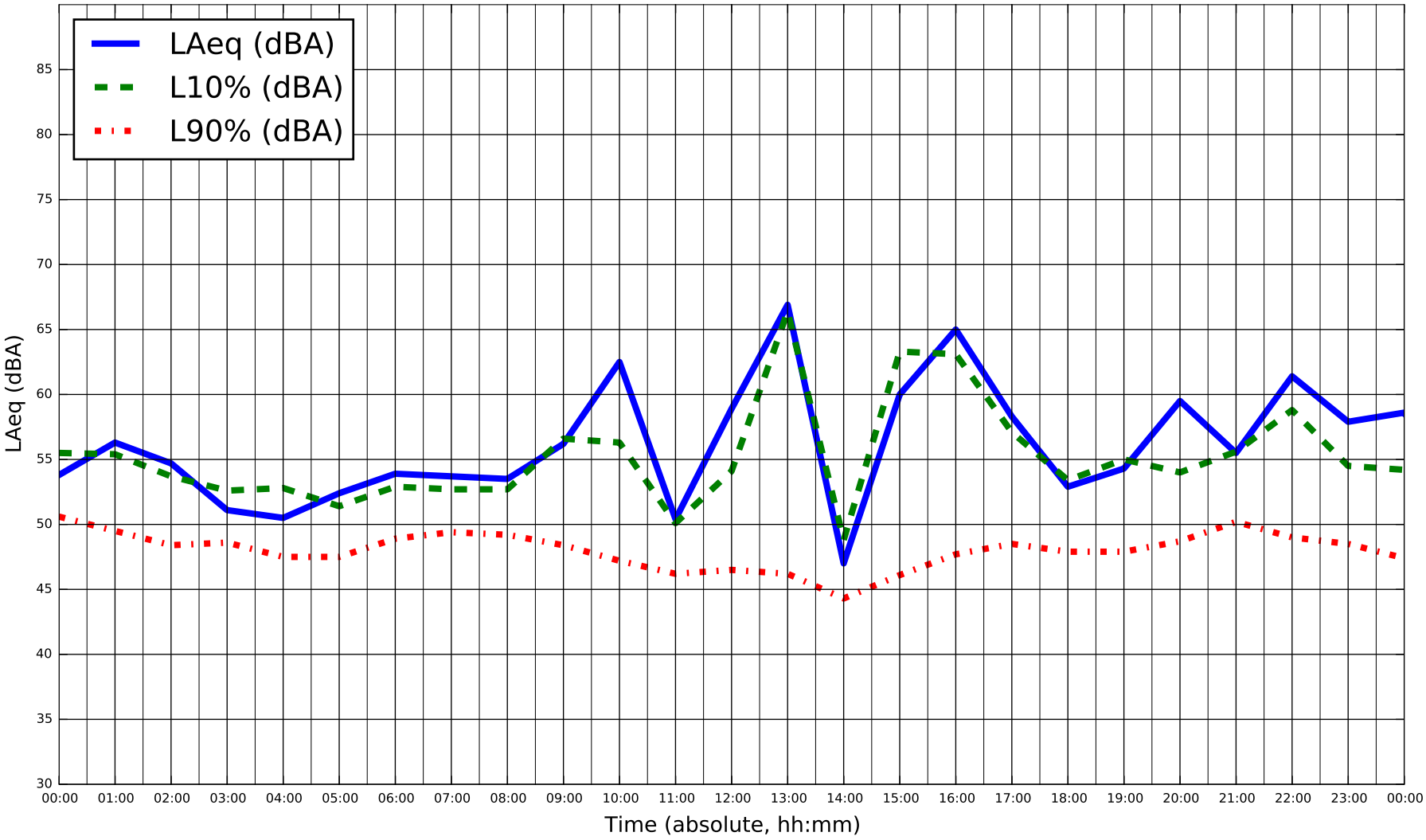


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Monday Nov 17, 2014	Figure: E-17
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



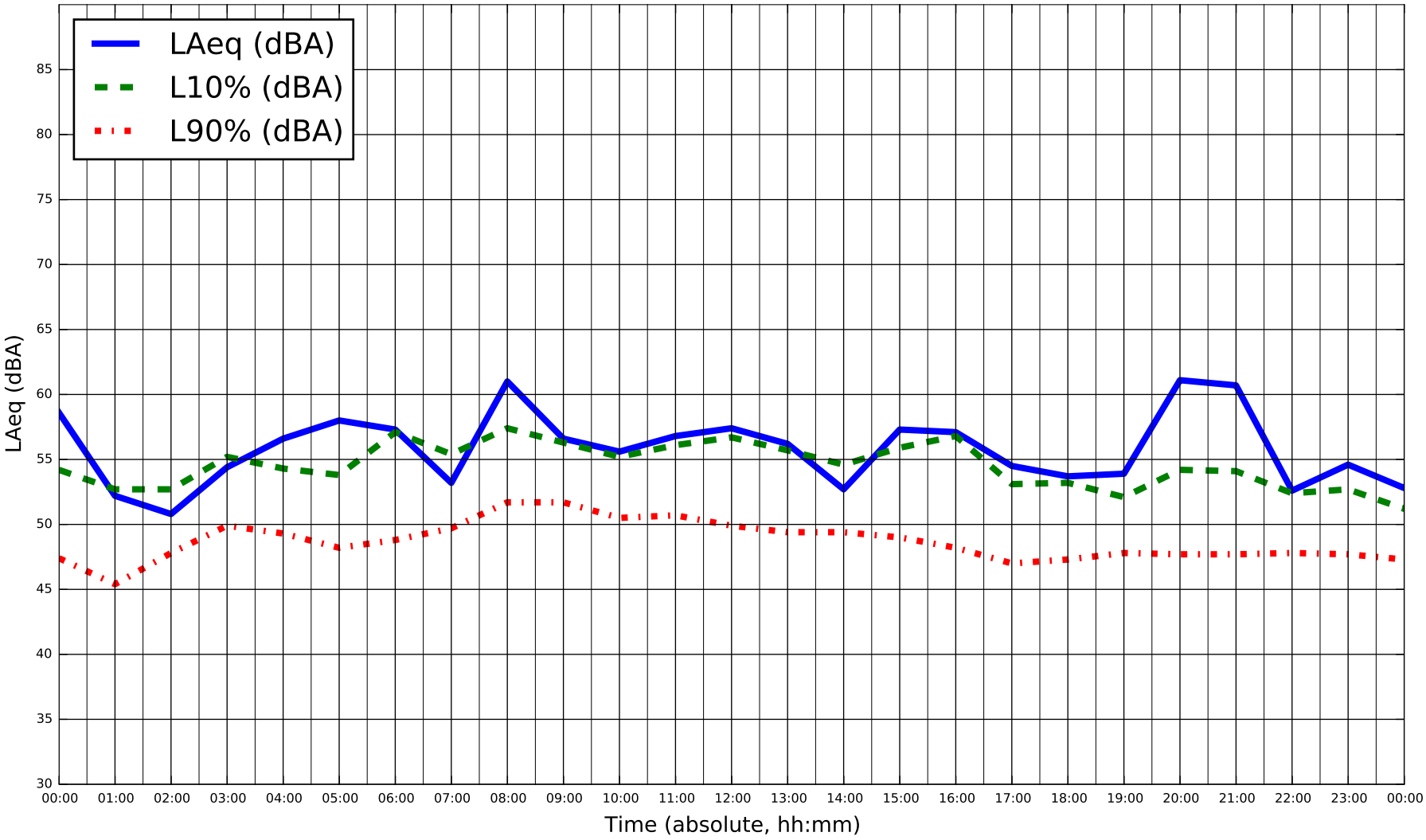
* Sustained winds over 20 km/hr during monitoring on Nov 18, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Tuesday Nov 18, 2014	Figure: E-18
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



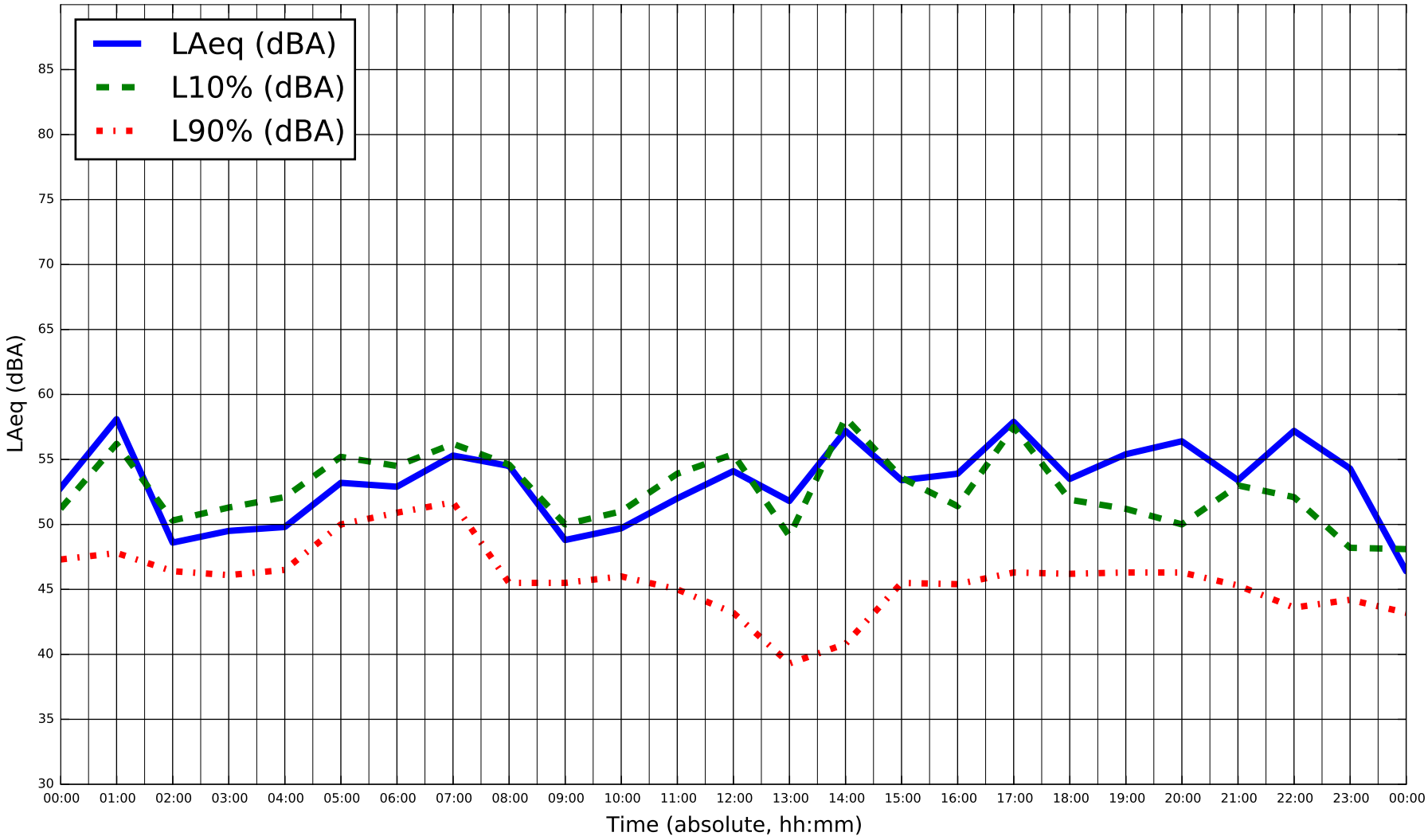
* Sustained winds over 20 km/hr during monitoring on Nov 19, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Wednesday Nov 19, 2014	Figure: E-19
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

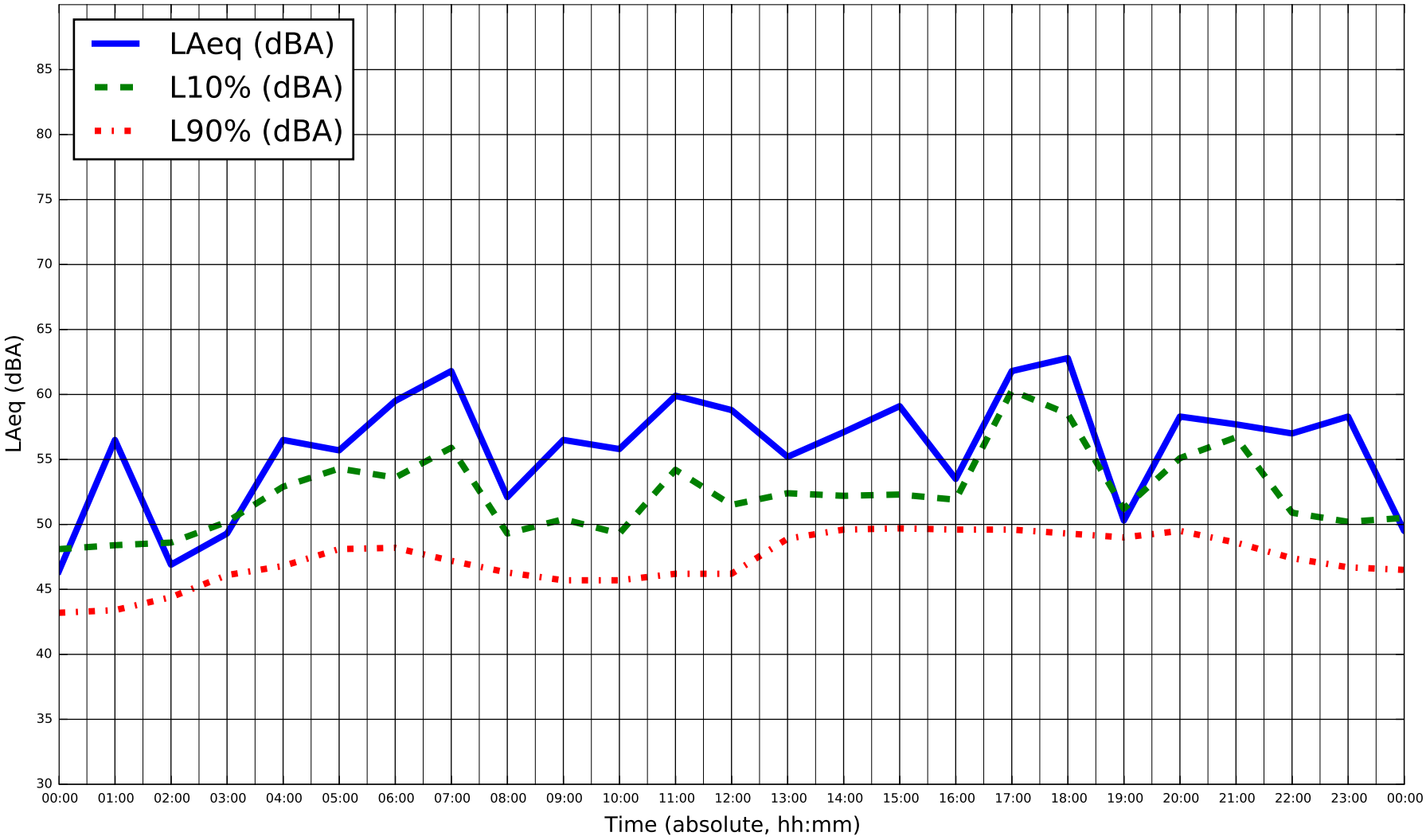


* Sustained winds over 20 km/hr during monitoring on Nov 20, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Thursday Nov 20, 2014	Figure: E-20
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

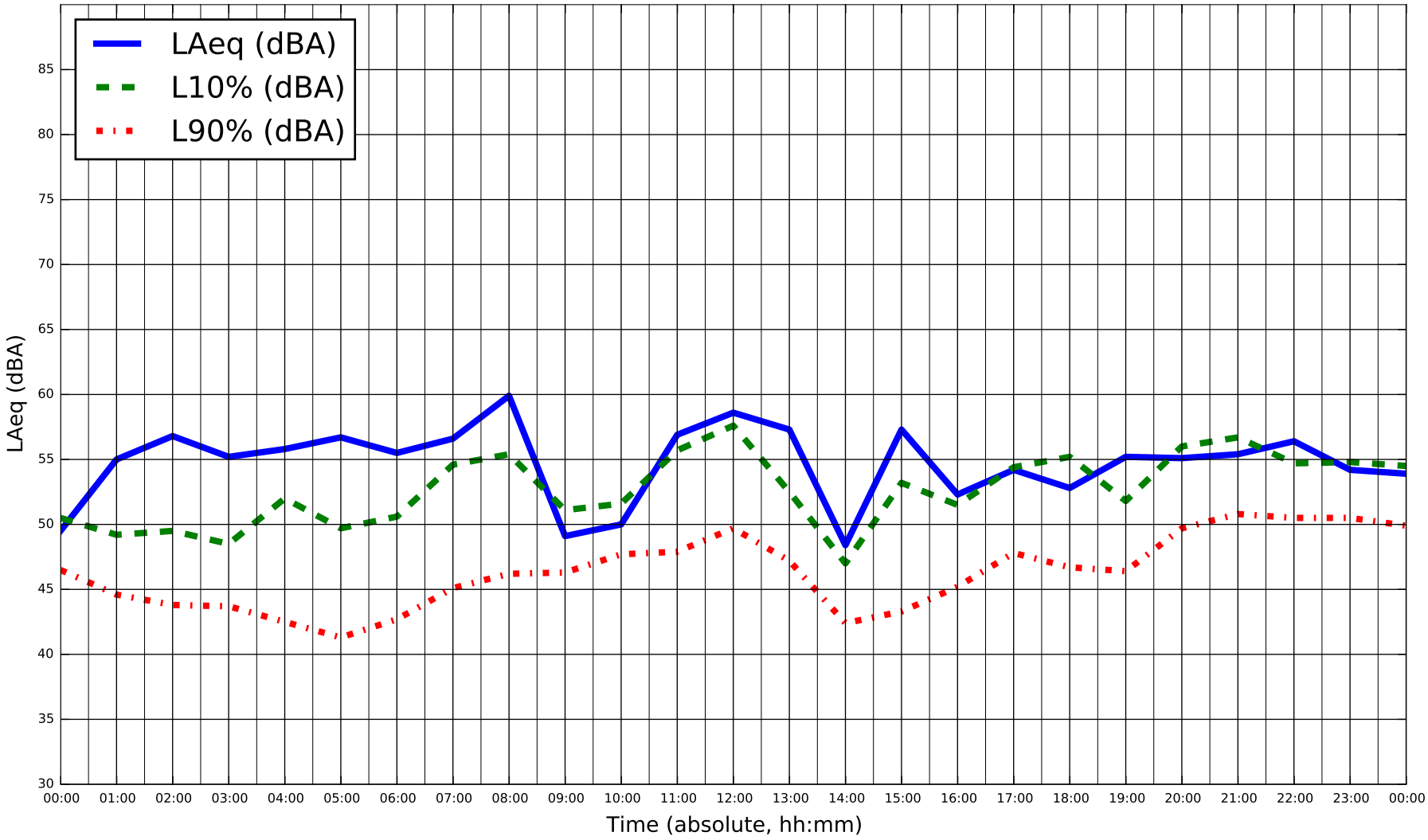


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Friday Nov 21, 2014	Figure: E-21
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

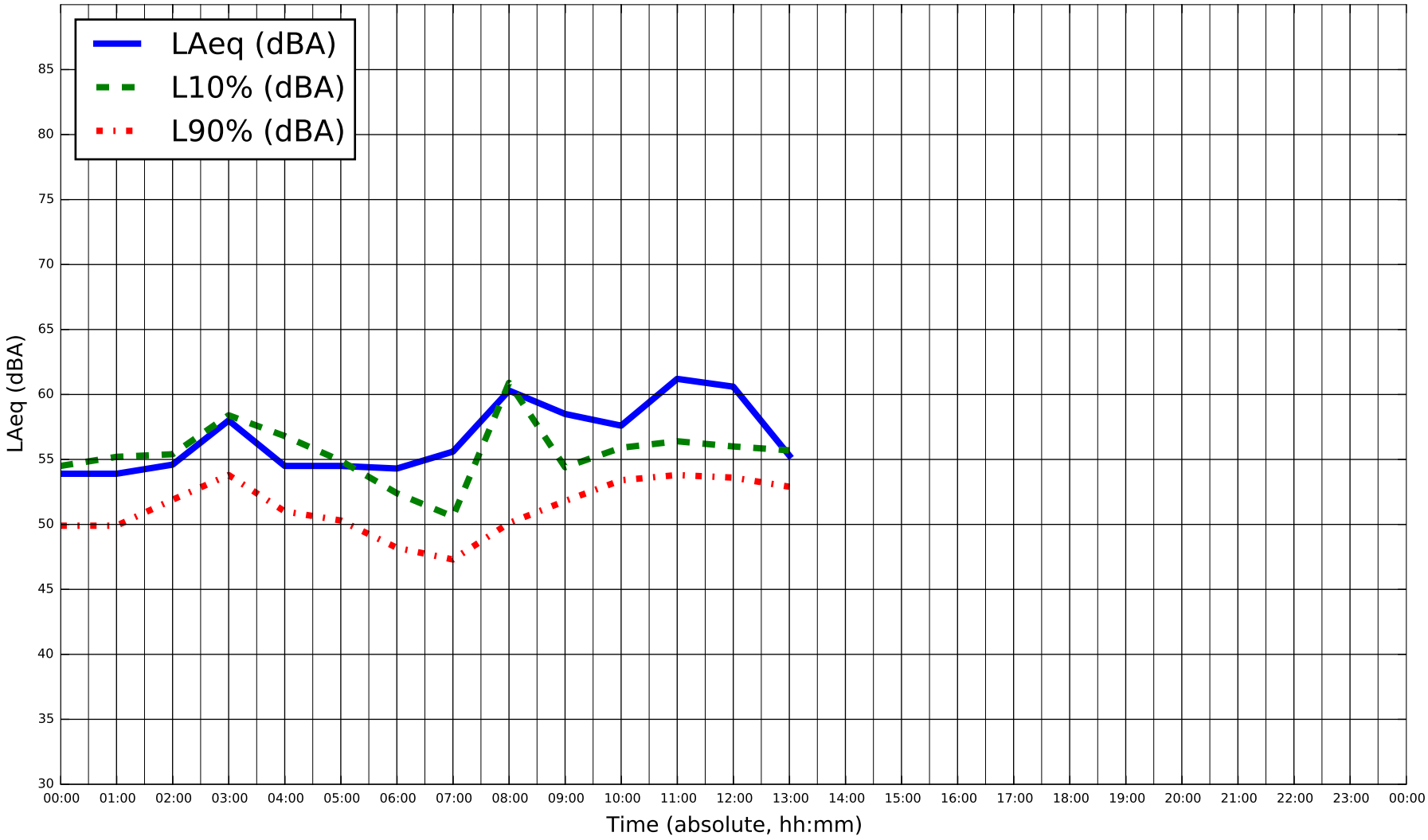


* Sustained winds over 20 km/hr during monitoring on Nov 22, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Saturday Nov 22, 2014	Figure: E-22
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

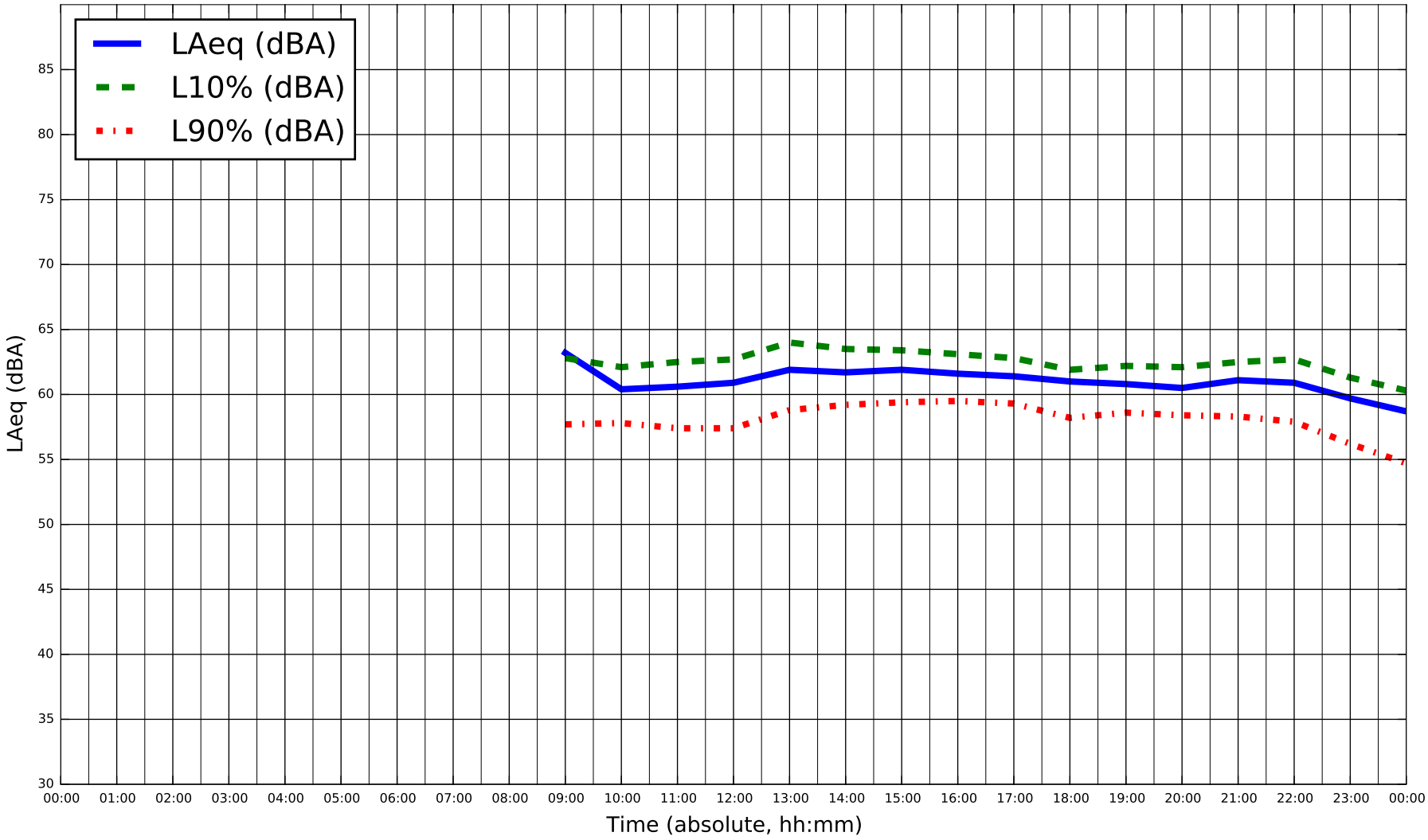


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Sunday Nov 23, 2014	Figure: E-23
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



* Sustained winds over 20 km/hr during monitoring on Nov 24, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M002	Measurement Date: Monday Nov 24, 2014	Figure: E-24
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Thursday Nov 13, 2014	Figure: E-25
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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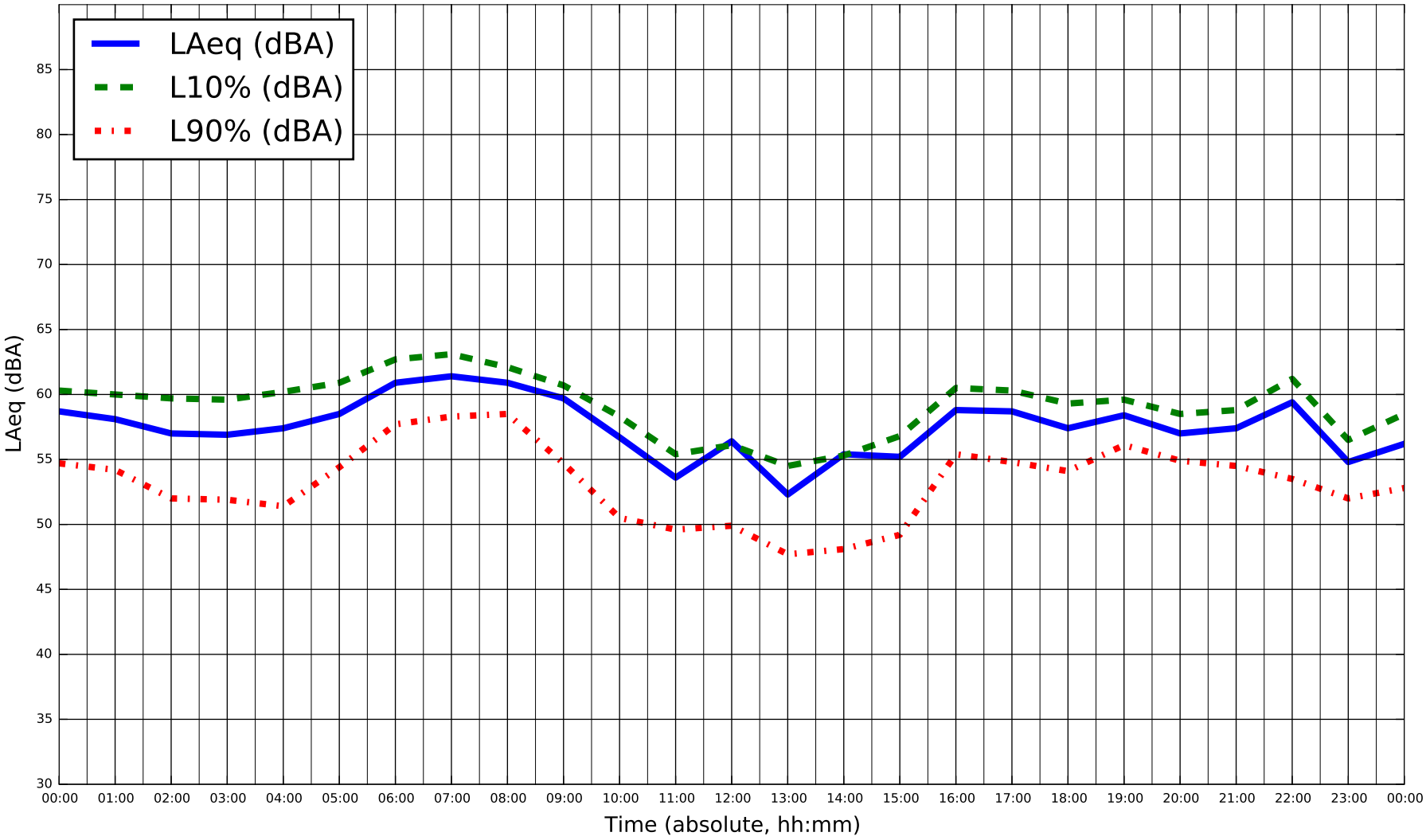

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Friday Nov 14, 2014	Figure: E-26
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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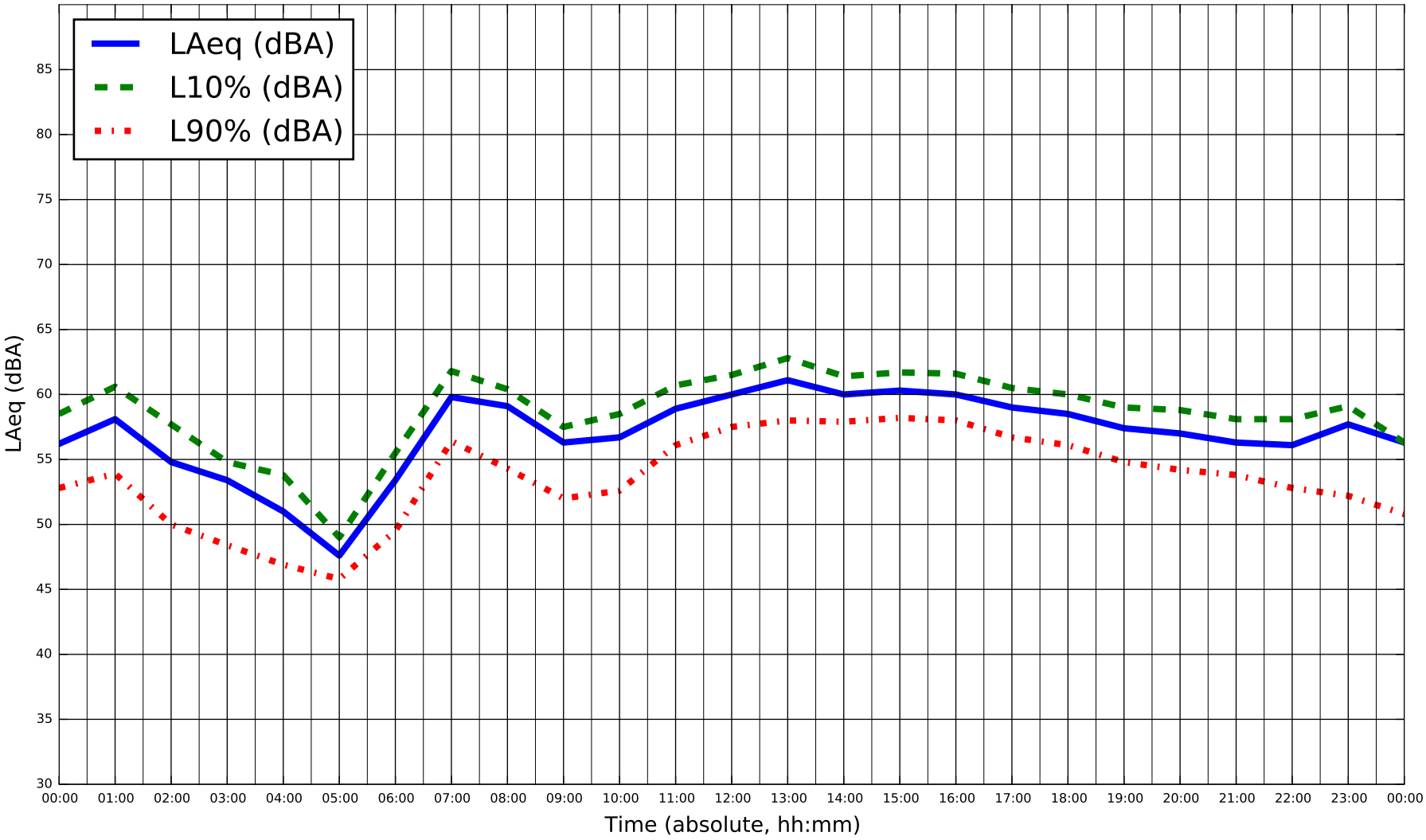
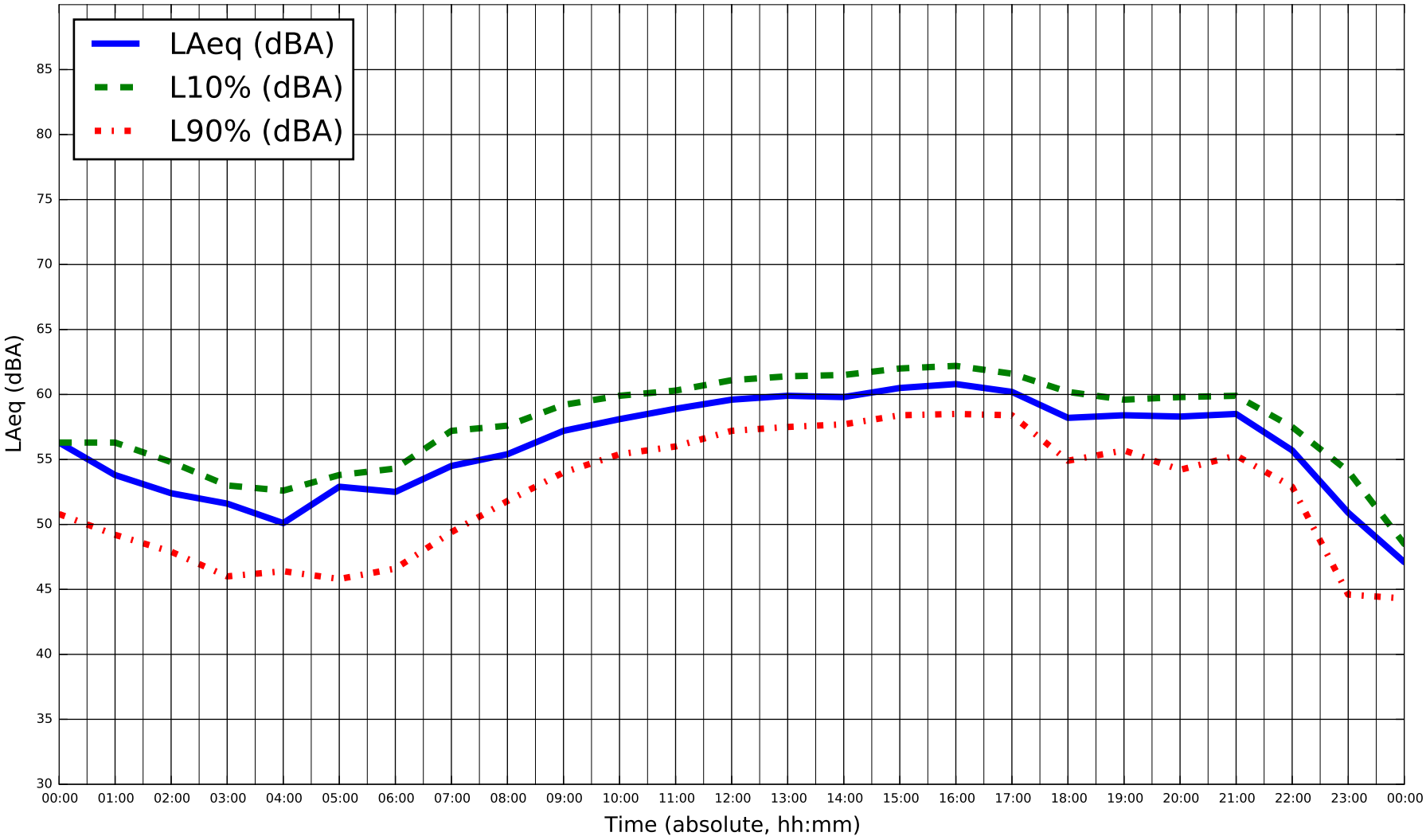
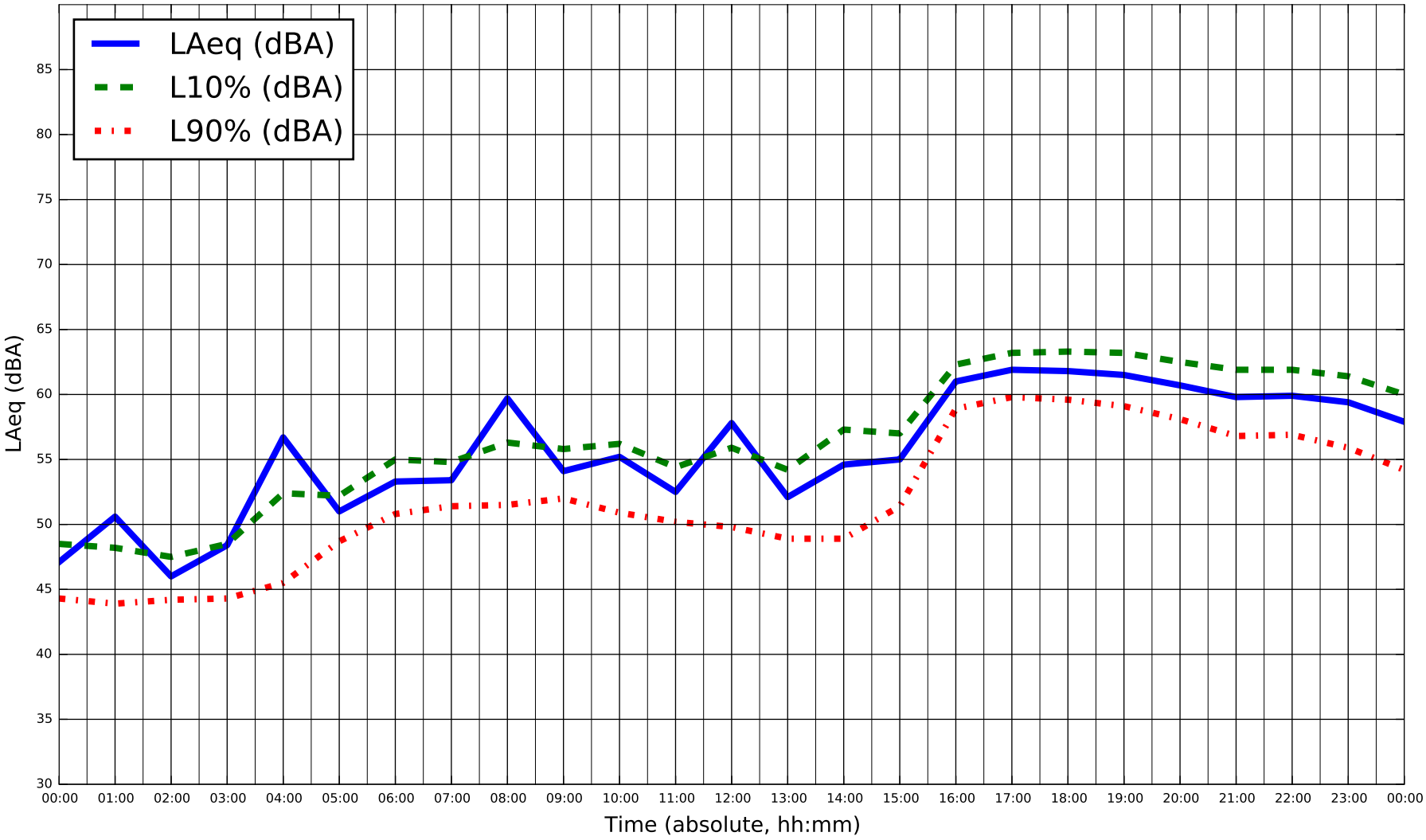


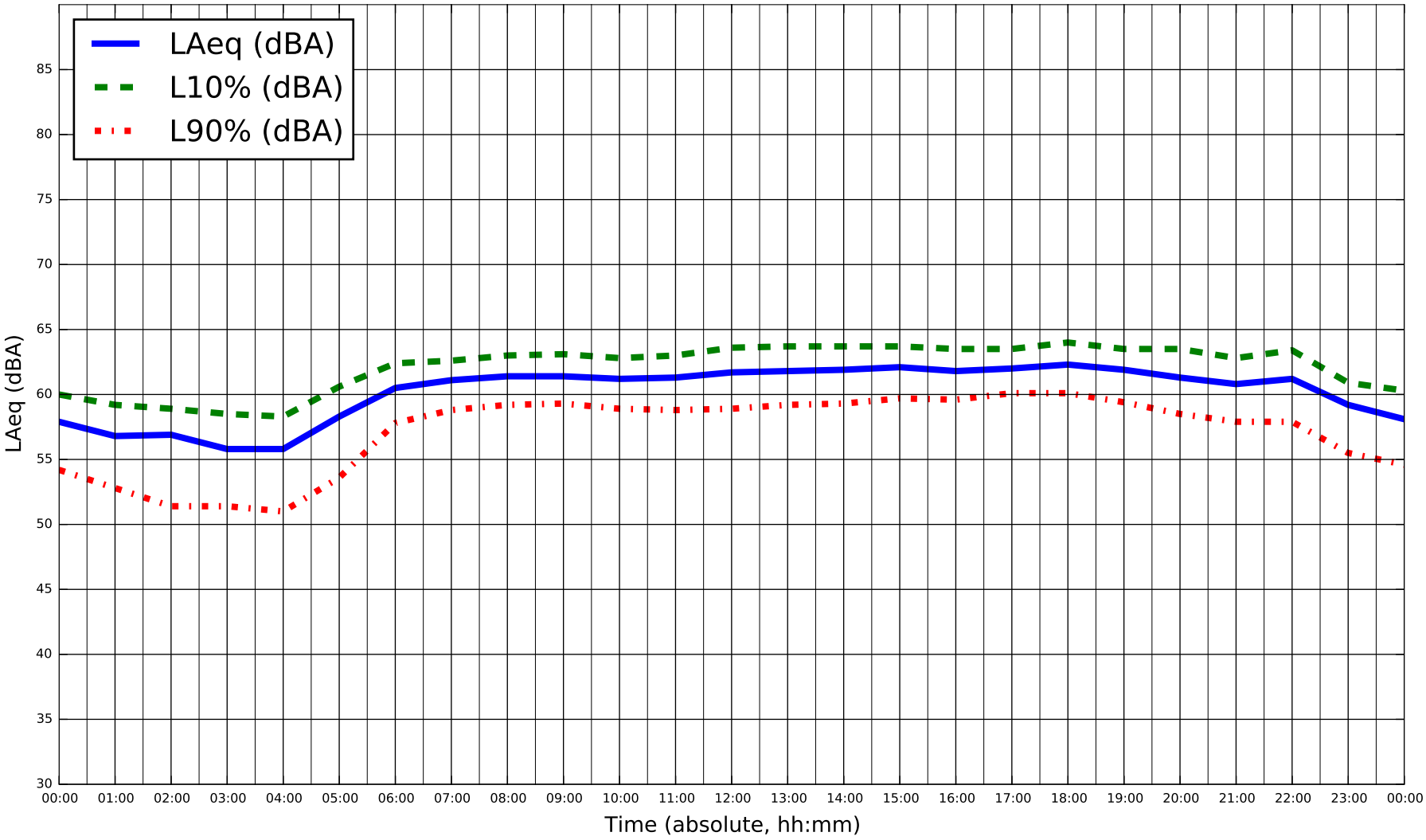
VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Saturday Nov 15, 2014	Figure: E-27
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Sunday Nov 16, 2014	Figure: E-28
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

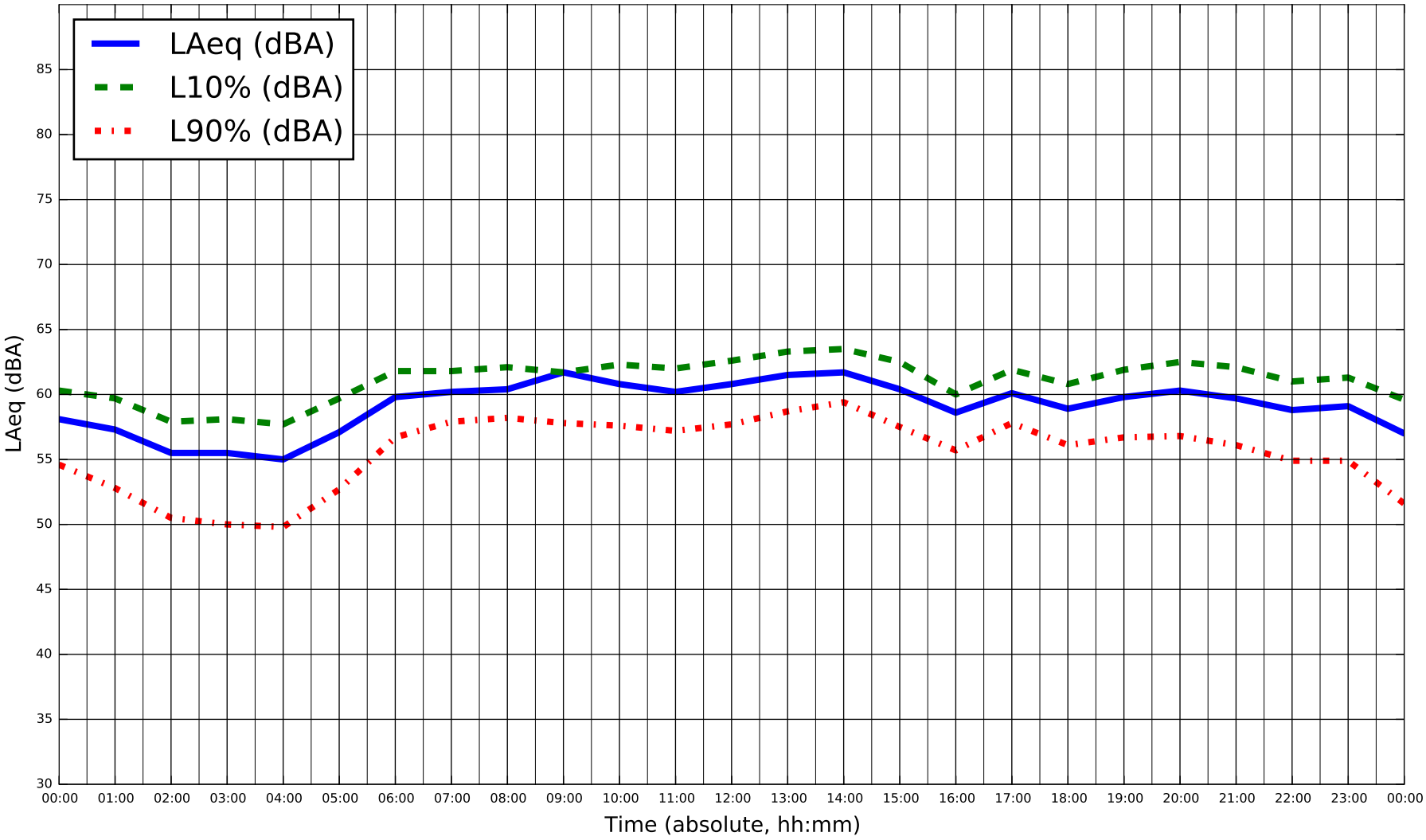


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Monday Nov 17, 2014	Figure: E-29
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



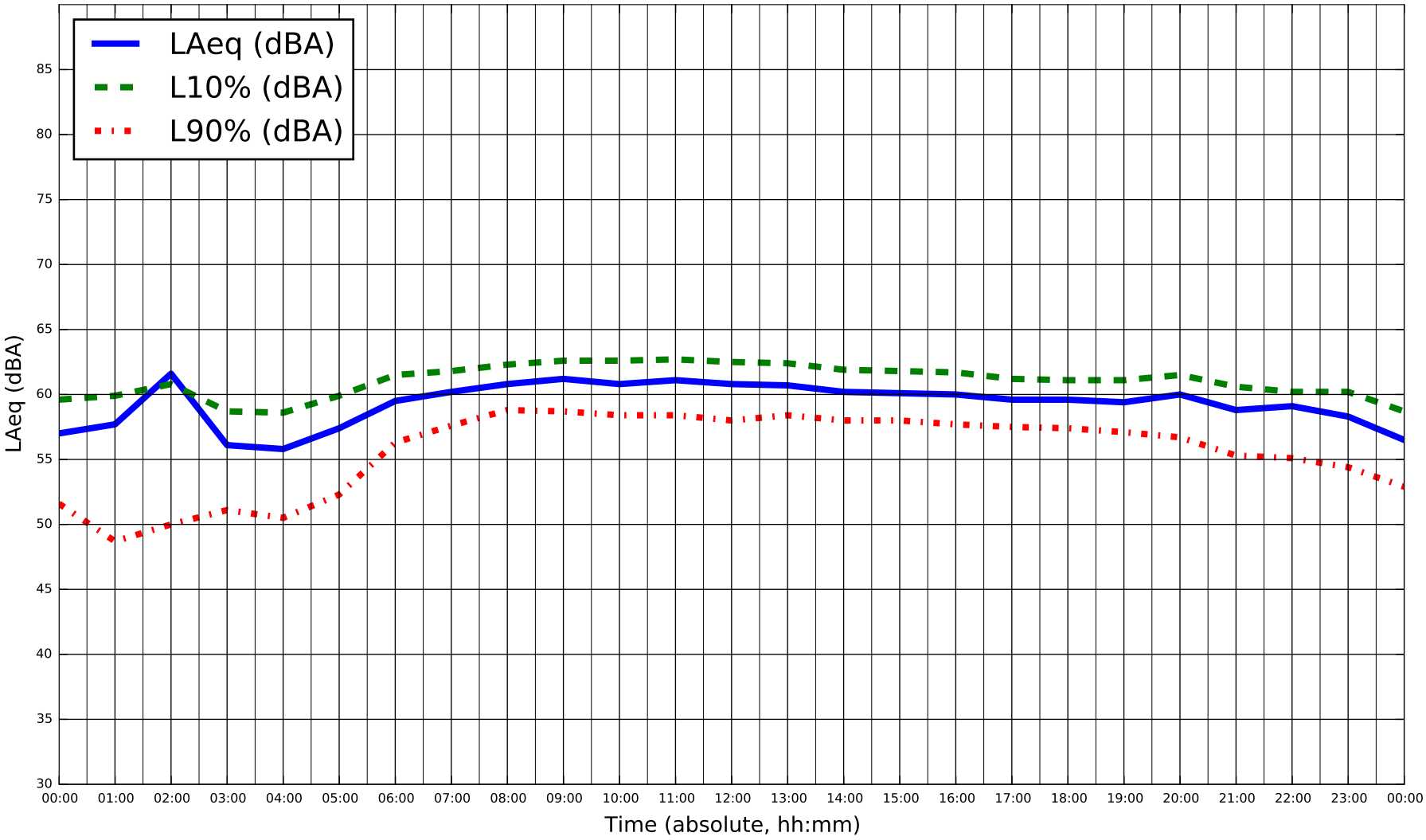
* Sustained winds over 20 km/hr during monitoring on Nov 18, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Tuesday Nov 18, 2014	Figure: E-30
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



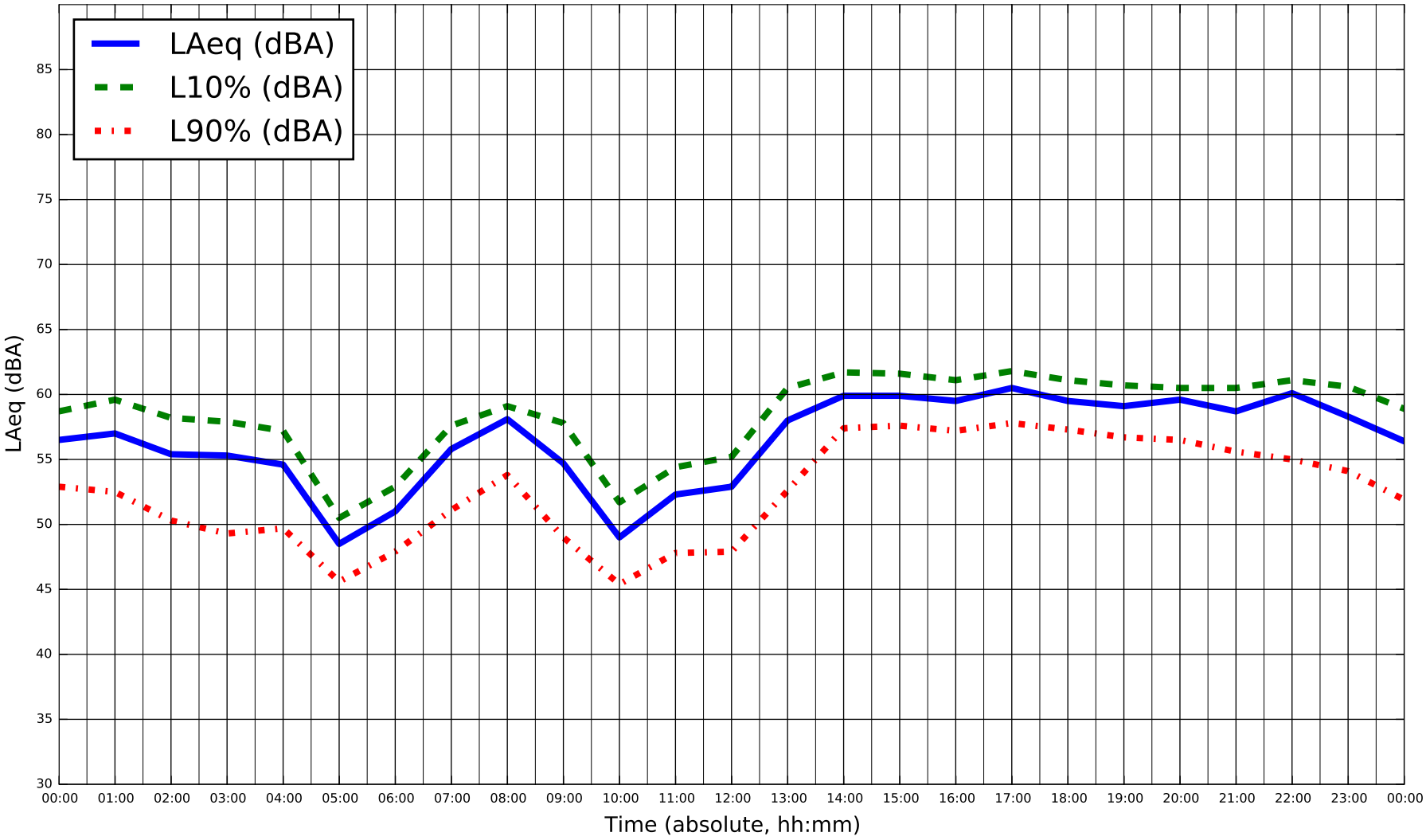
* Sustained winds over 20 km/hr during monitoring on Nov 19, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Wednesday Nov 19, 2014	Figure: E-31
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

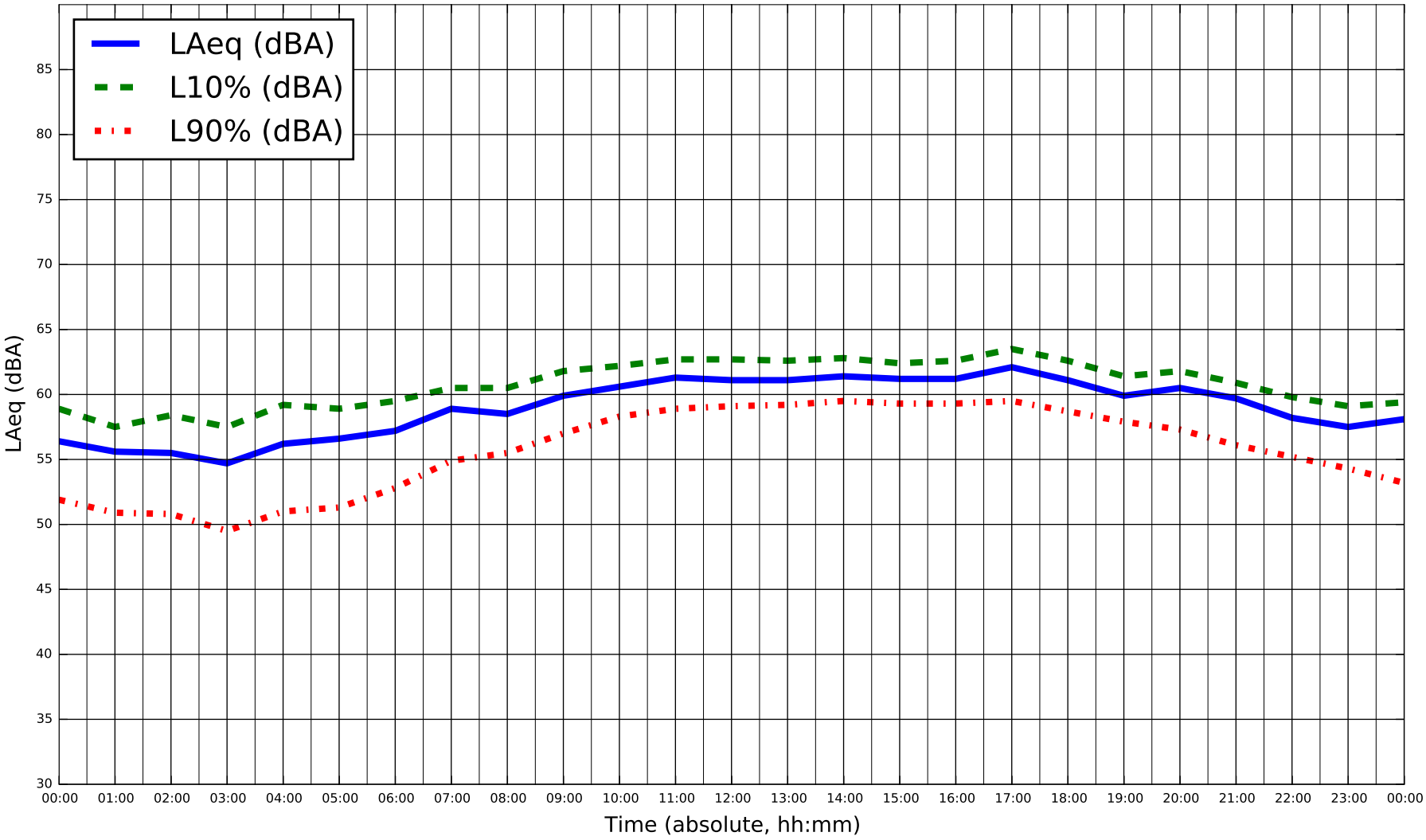


* Sustained winds over 20 km/hr during monitoring on Nov 20, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Thursday Nov 20, 2014	Figure: E-32
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

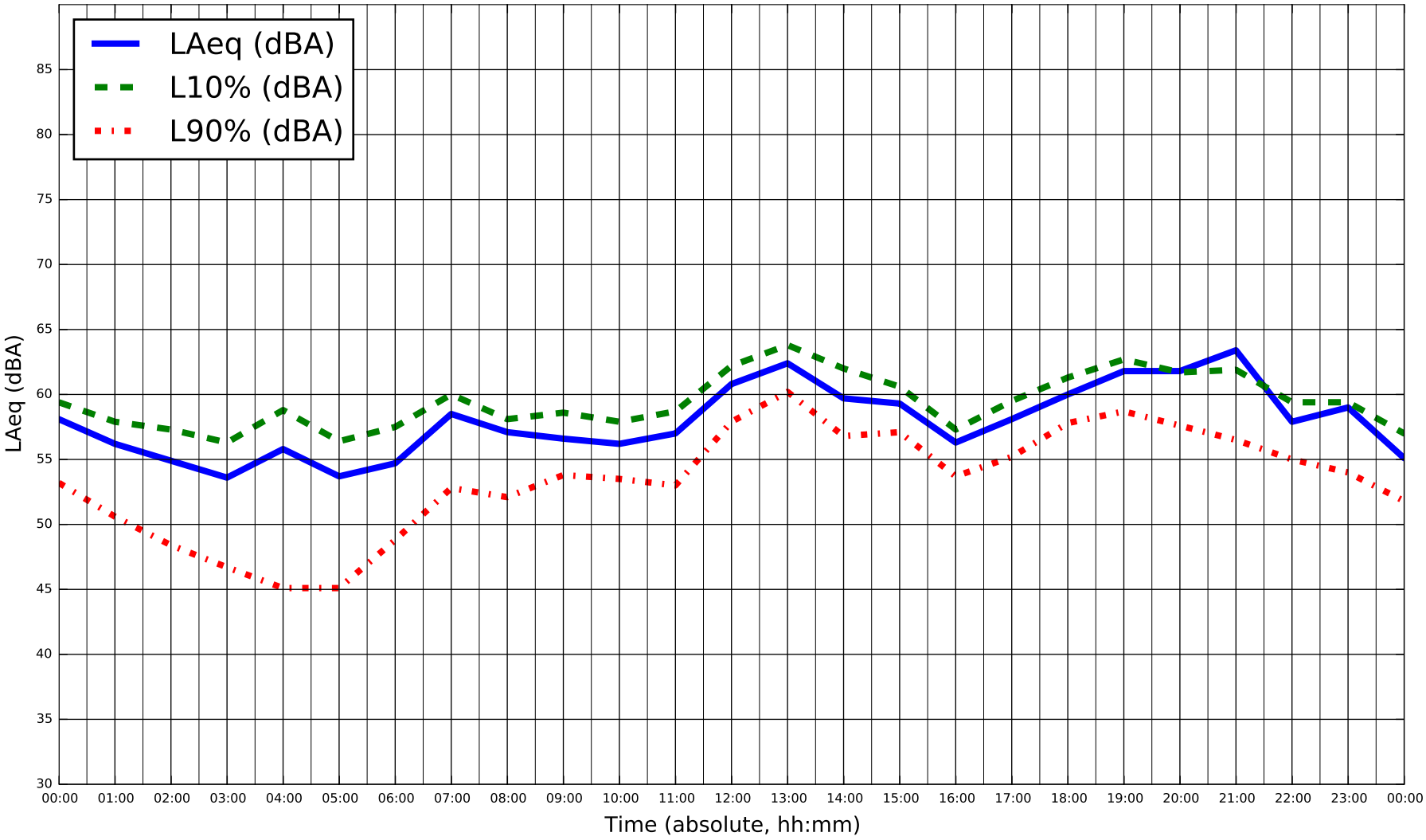


VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Friday Nov 21, 2014	Figure: E-33
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

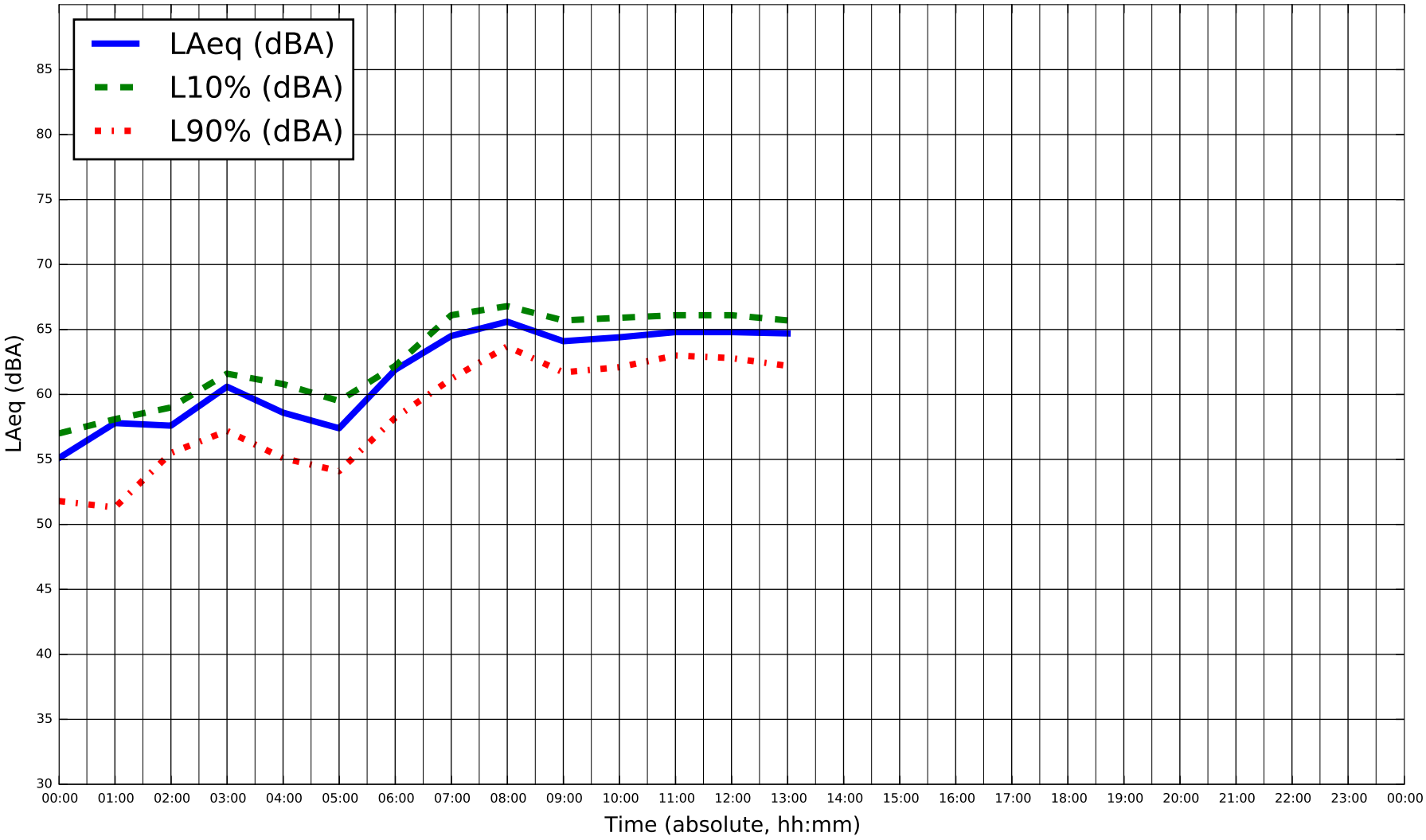


* Sustained winds over 20 km/hr during monitoring on Nov 22, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Saturday Nov 22, 2014	Figure: E-34
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Sunday Nov 23, 2014	Figure: E-35
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

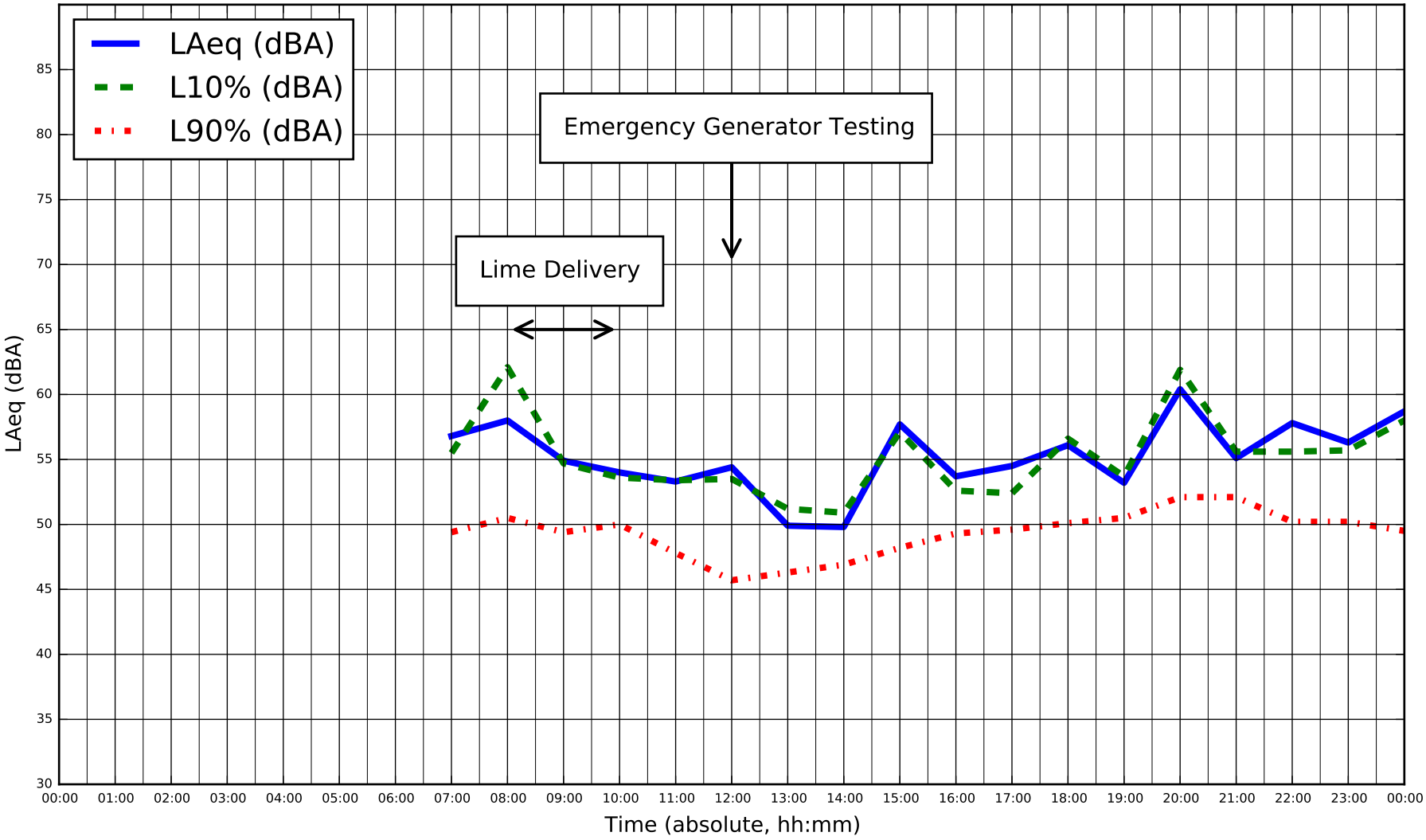


* Sustained winds over 20 km/hr during monitoring on Nov 24, 2014

VALCOUSTICS Canada Ltd.	Title: Ambient Sound Measurements - Location M003	Measurement Date: Monday Nov 24, 2014	Figure: E-36
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

APPENDIX F

APRIL 2015 POST-OPERATIONAL SOUND MEASUREMENT RESULTS



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Monday April 6, 2015	Figure: F-1
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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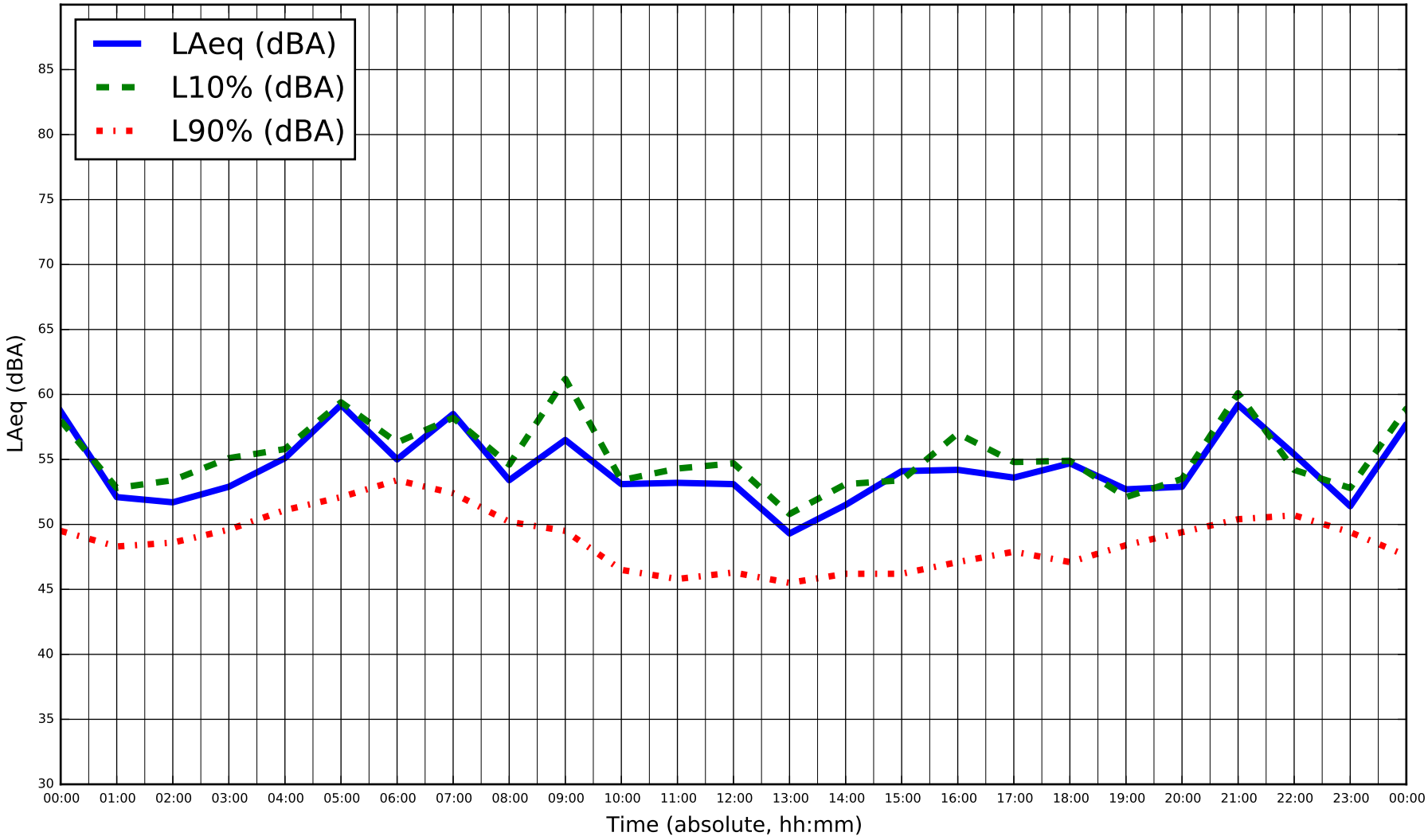

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Tuesday April 7, 2015	Figure: F-2
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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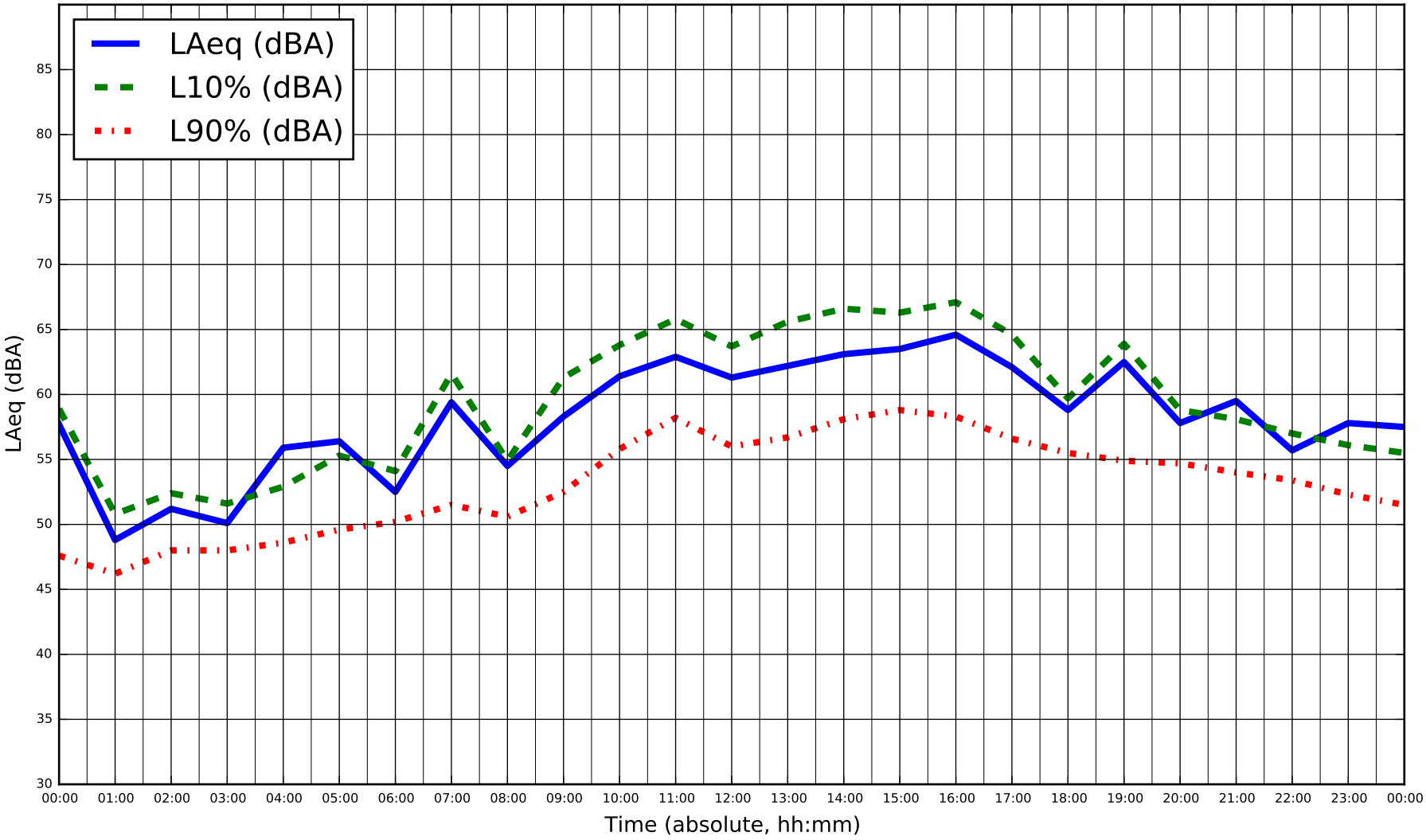
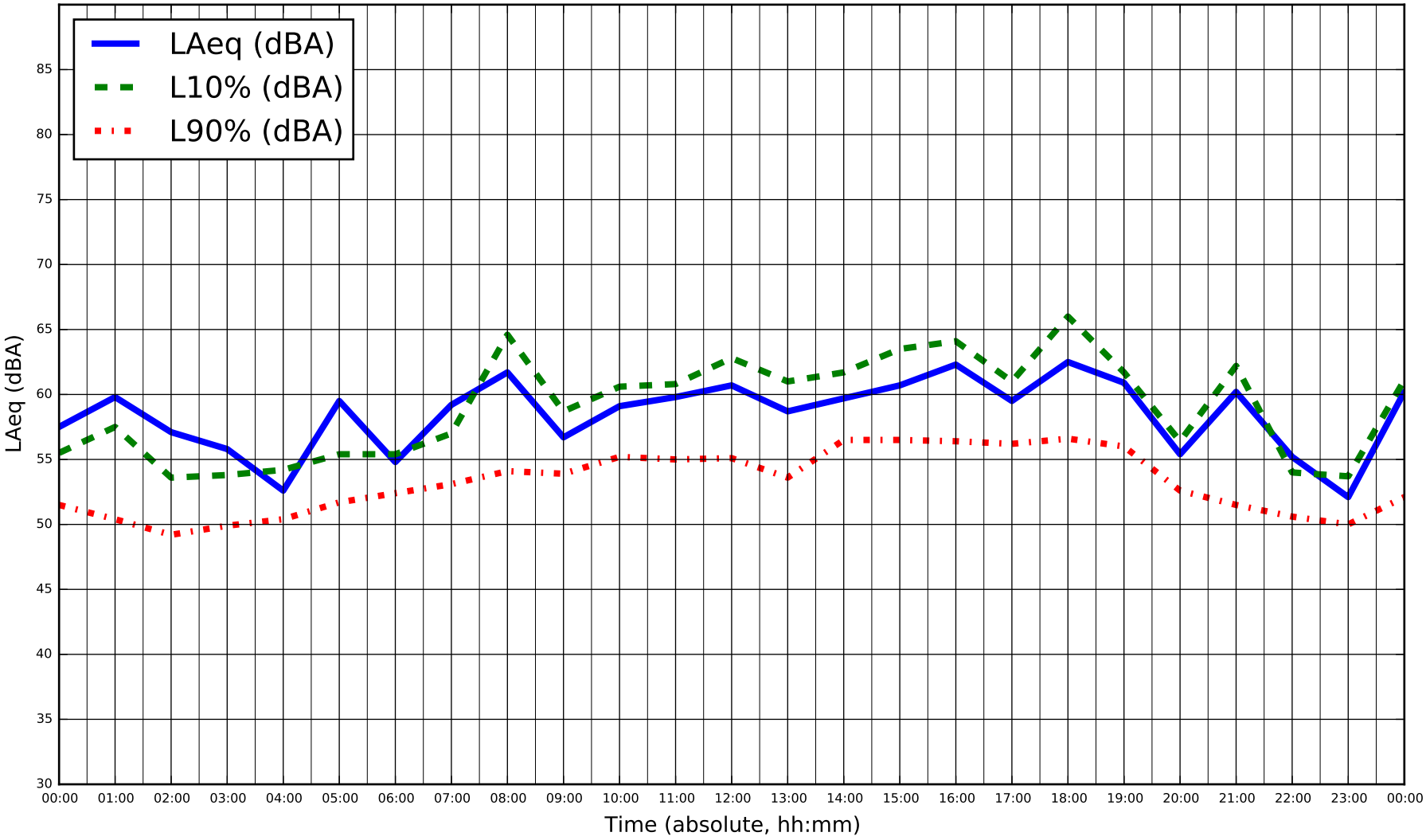


* Sustained winds over 20 km/hr during monitoring, on April 8, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Wednesday April 8, 2015	Figure: F-3
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



* Sustained winds over 20 km/hr during monitoring, on April 9, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Thursday April 9, 2015	Figure: F-4
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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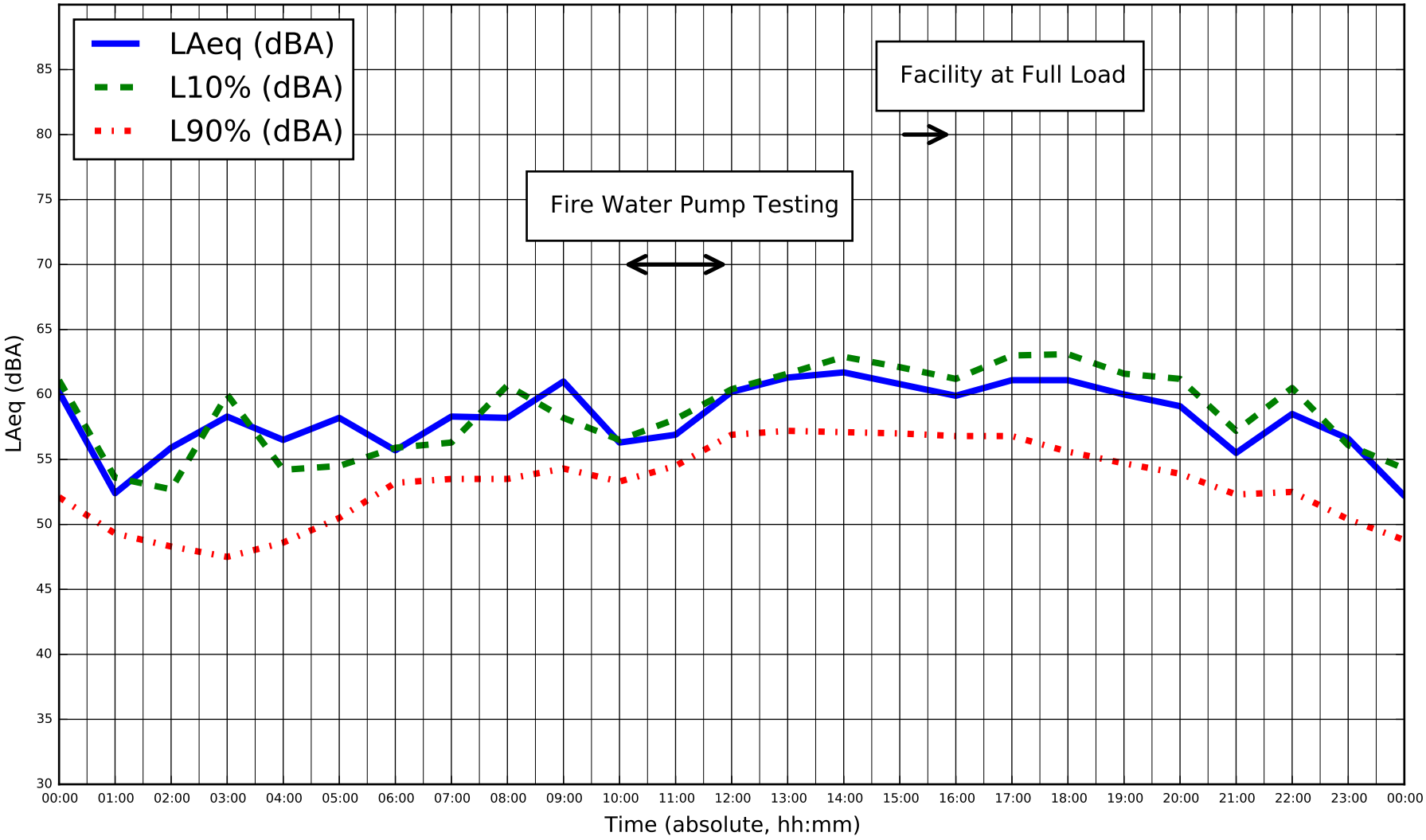

* Sustained winds over 20 km/hr during monitoring, on April 10, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Friday April 10, 2015	Figure: F-5
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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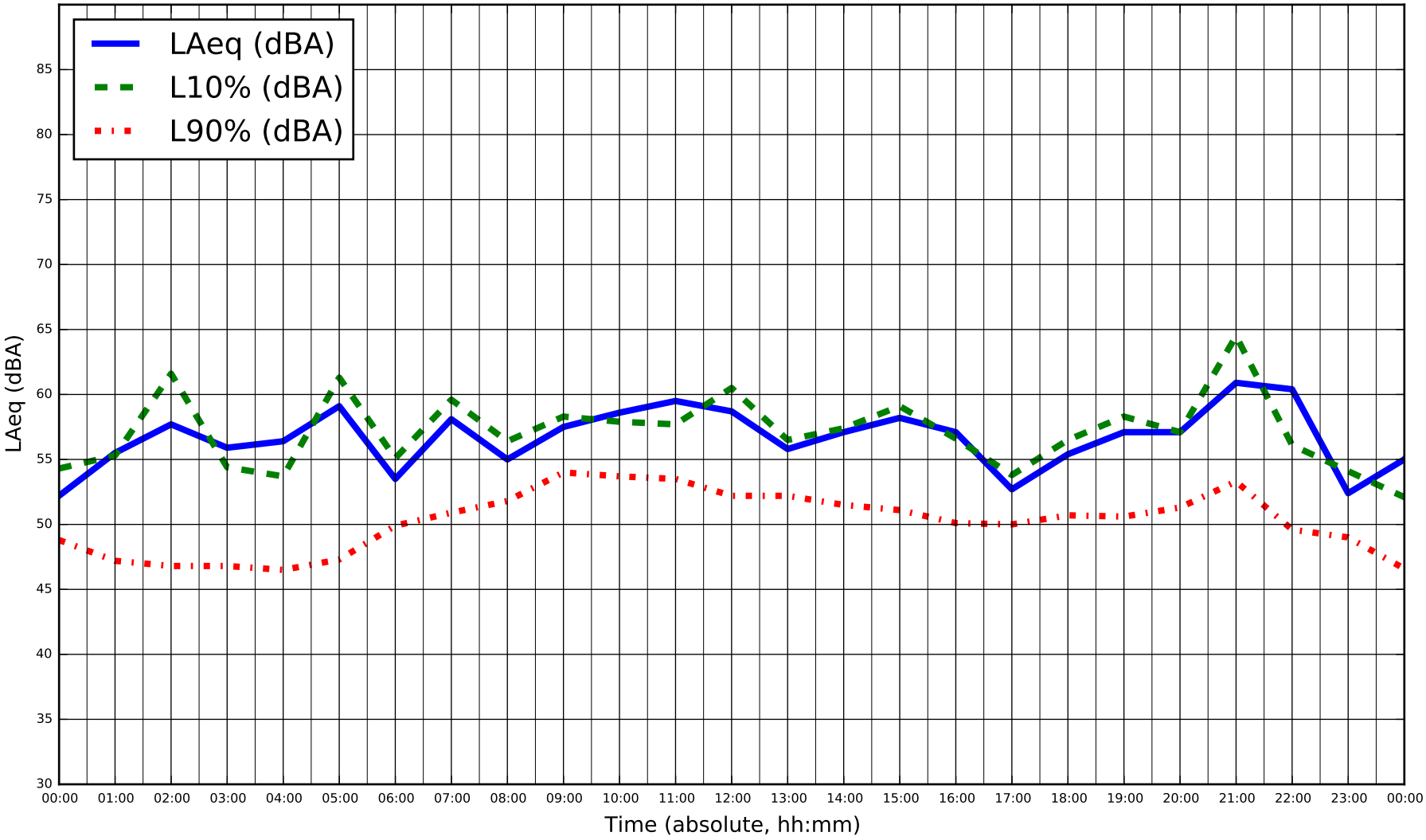
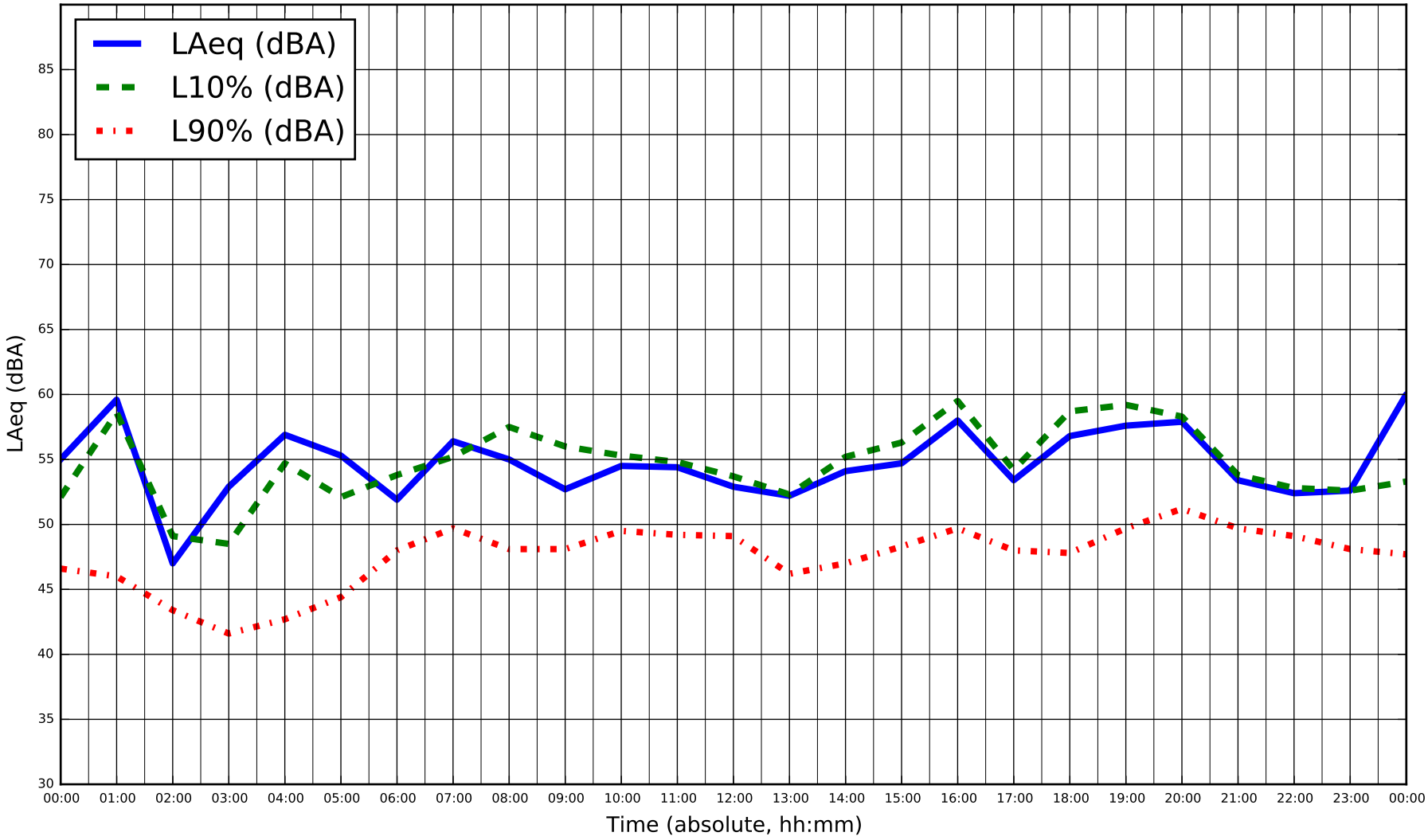


* Sustained winds over 20 km/hr during monitoring on April 11, 2015 (00:00 to 07:00 hrs only)

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Saturday April 11, 2015	Figure: F-6
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Sunday April 12, 2015	Figure: F-7
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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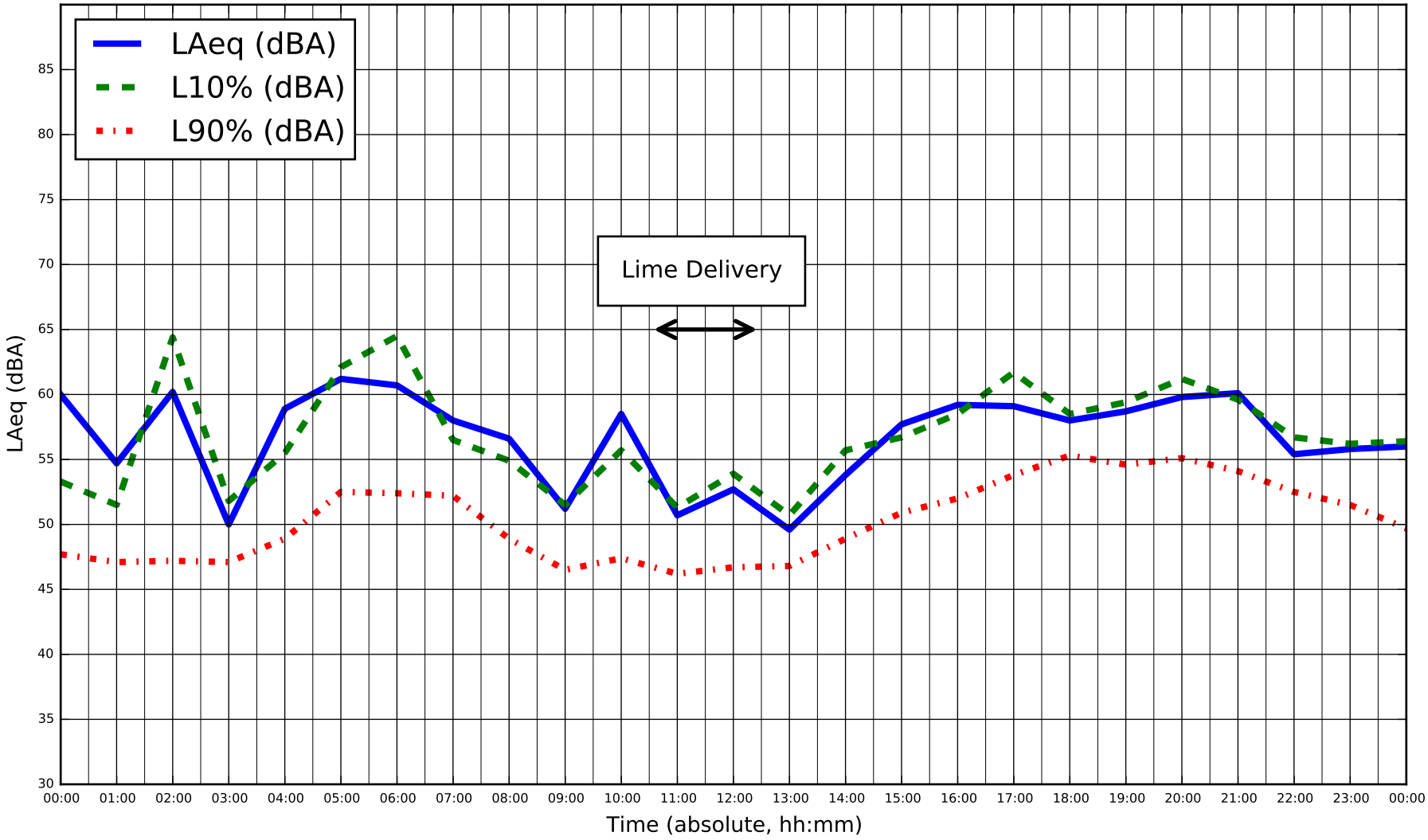

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Monday April 13, 2015	Figure: F-8
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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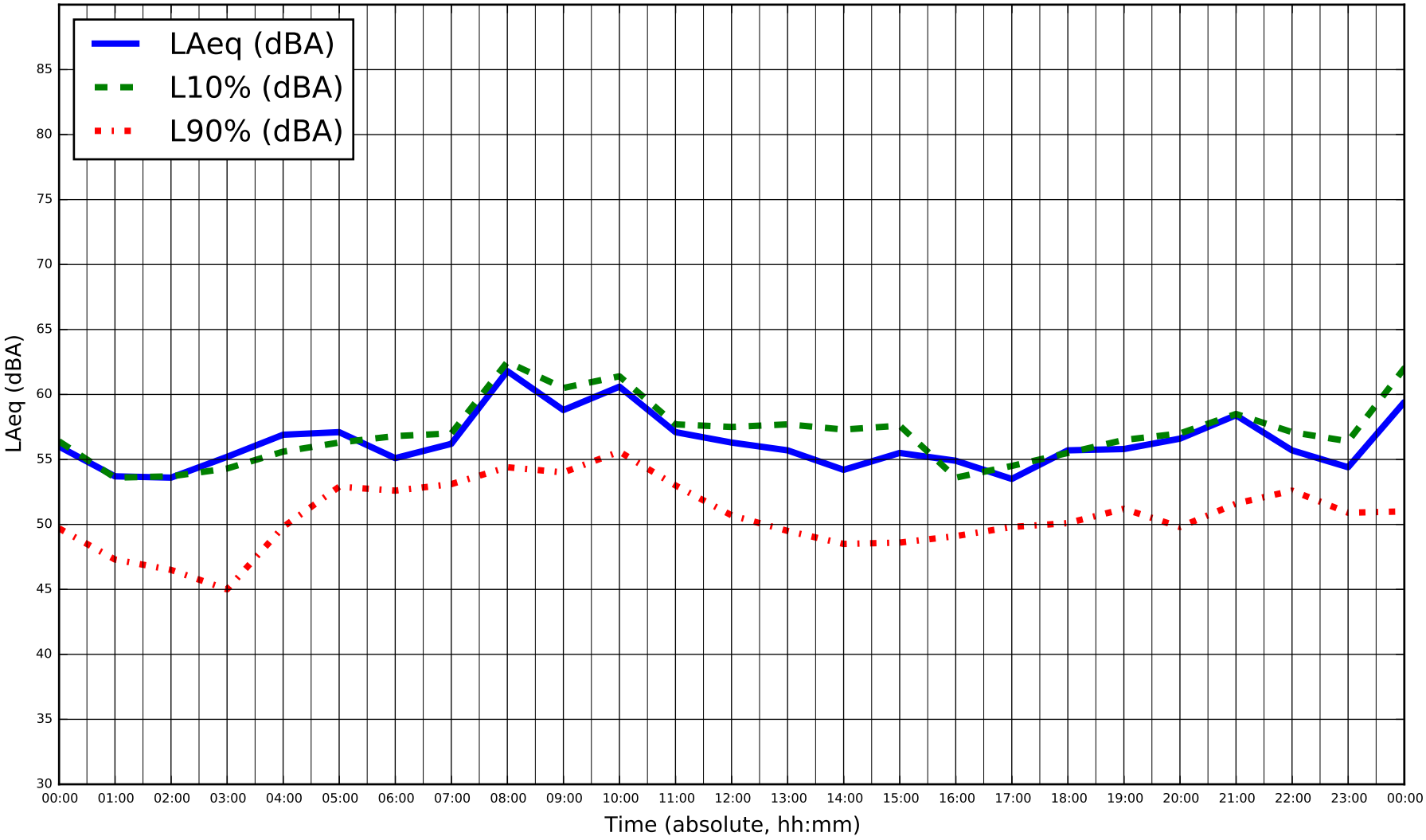

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Tuesday April 14, 2015	Figure: F-9
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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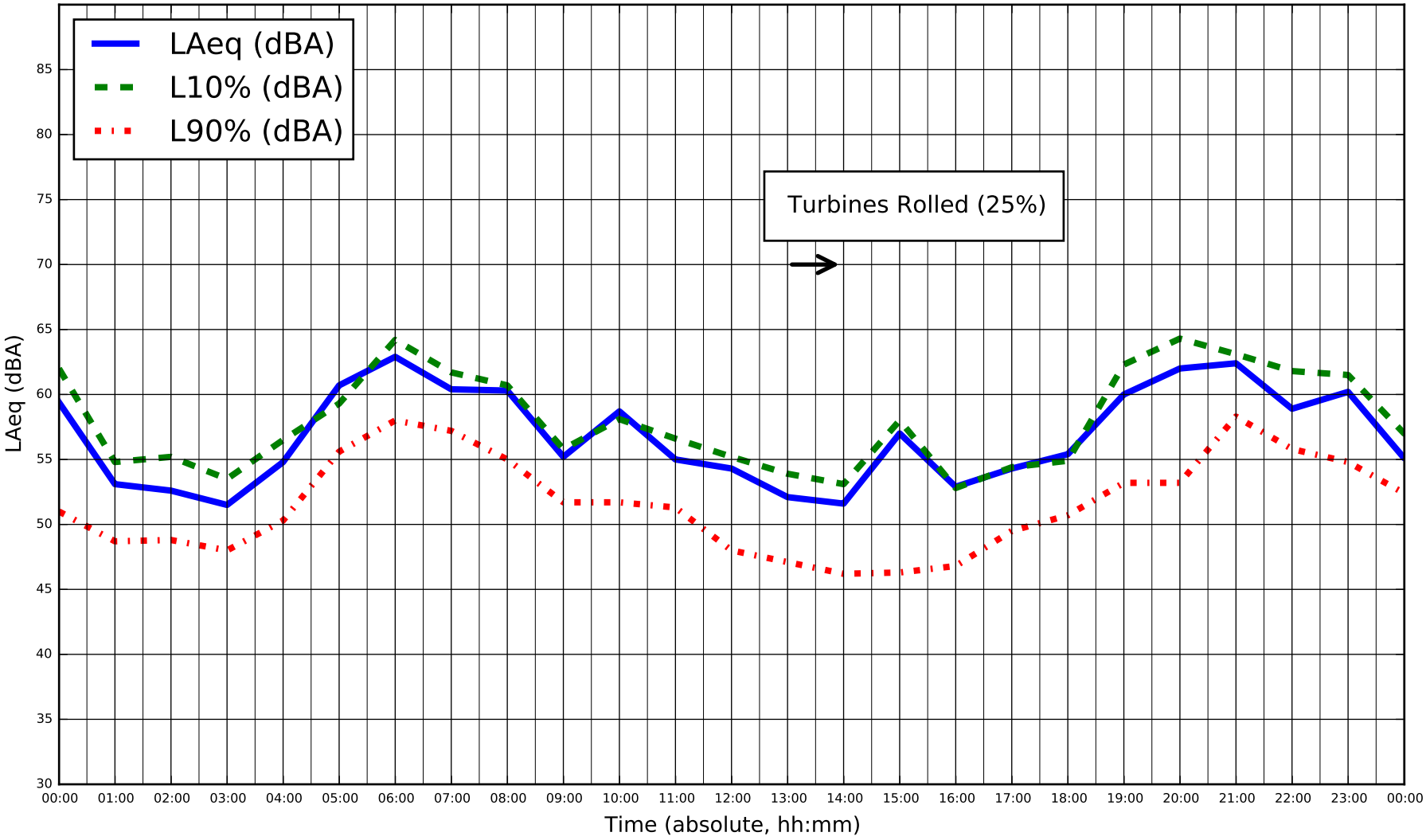

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Wednesday April 15, 2015	Figure: F-10
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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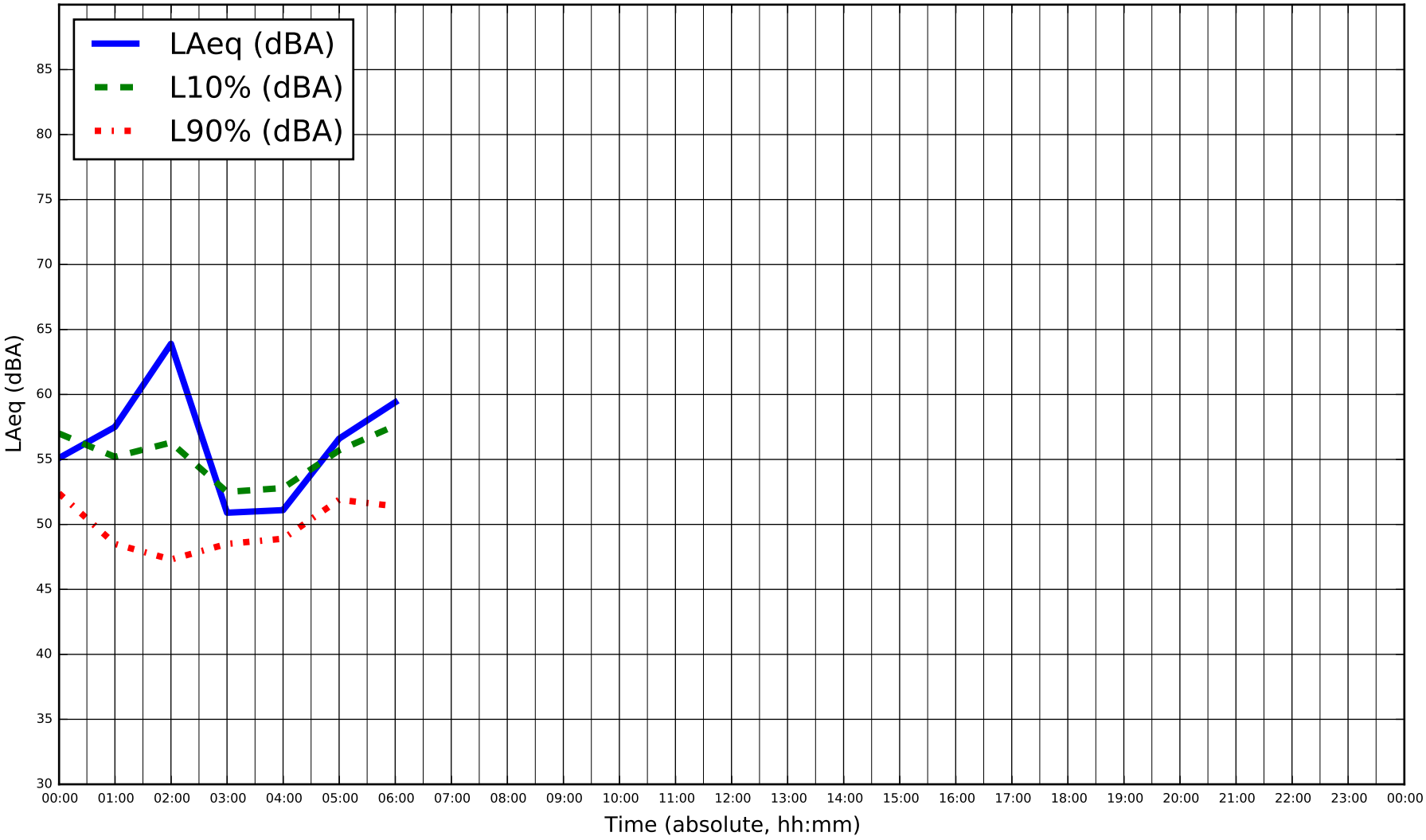

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Thursday April 16, 2015	Figure: F-11
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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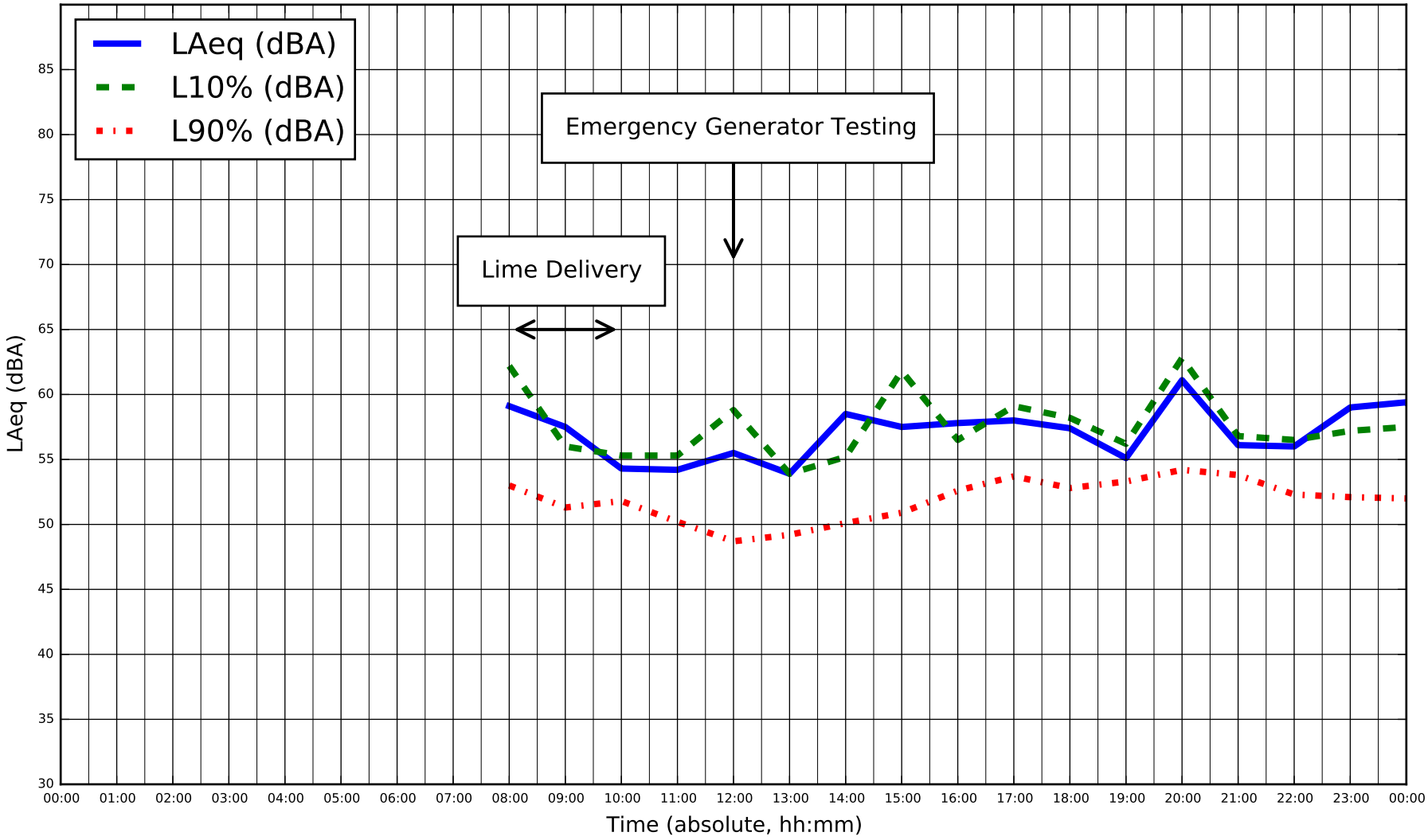

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Monday April 6, 2015	Figure: F-12
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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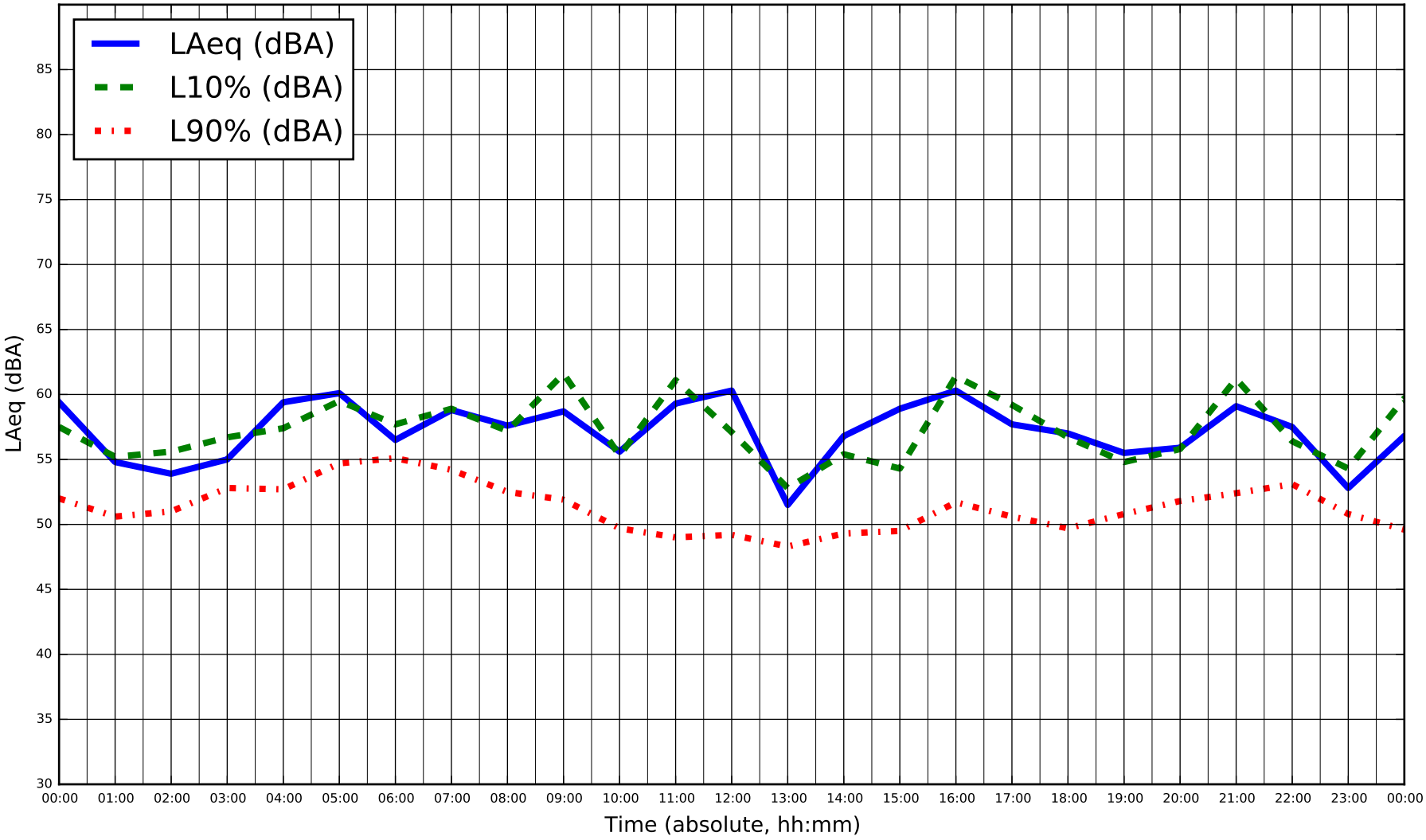

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Tuesday April 7, 2015	Figure: F-13
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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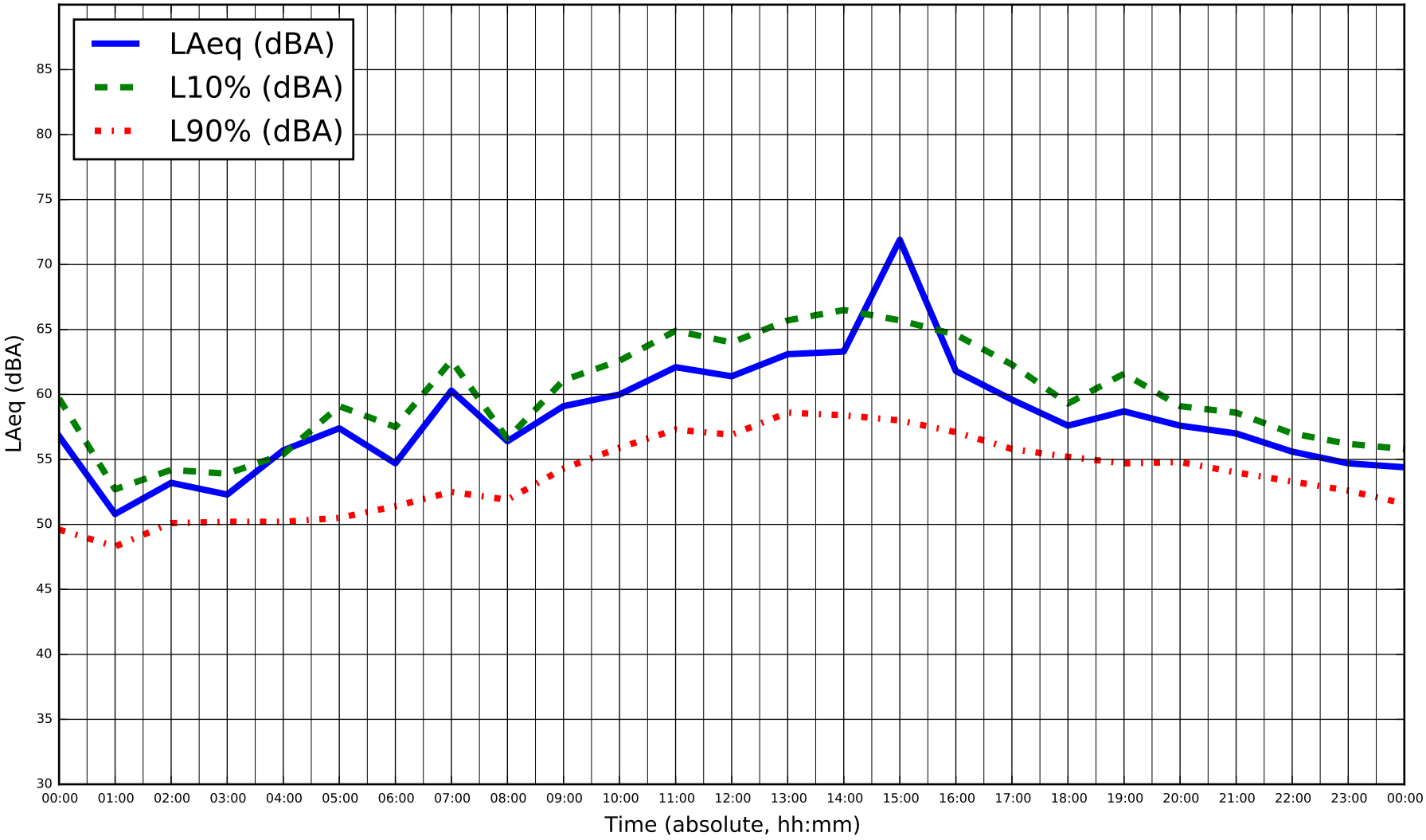
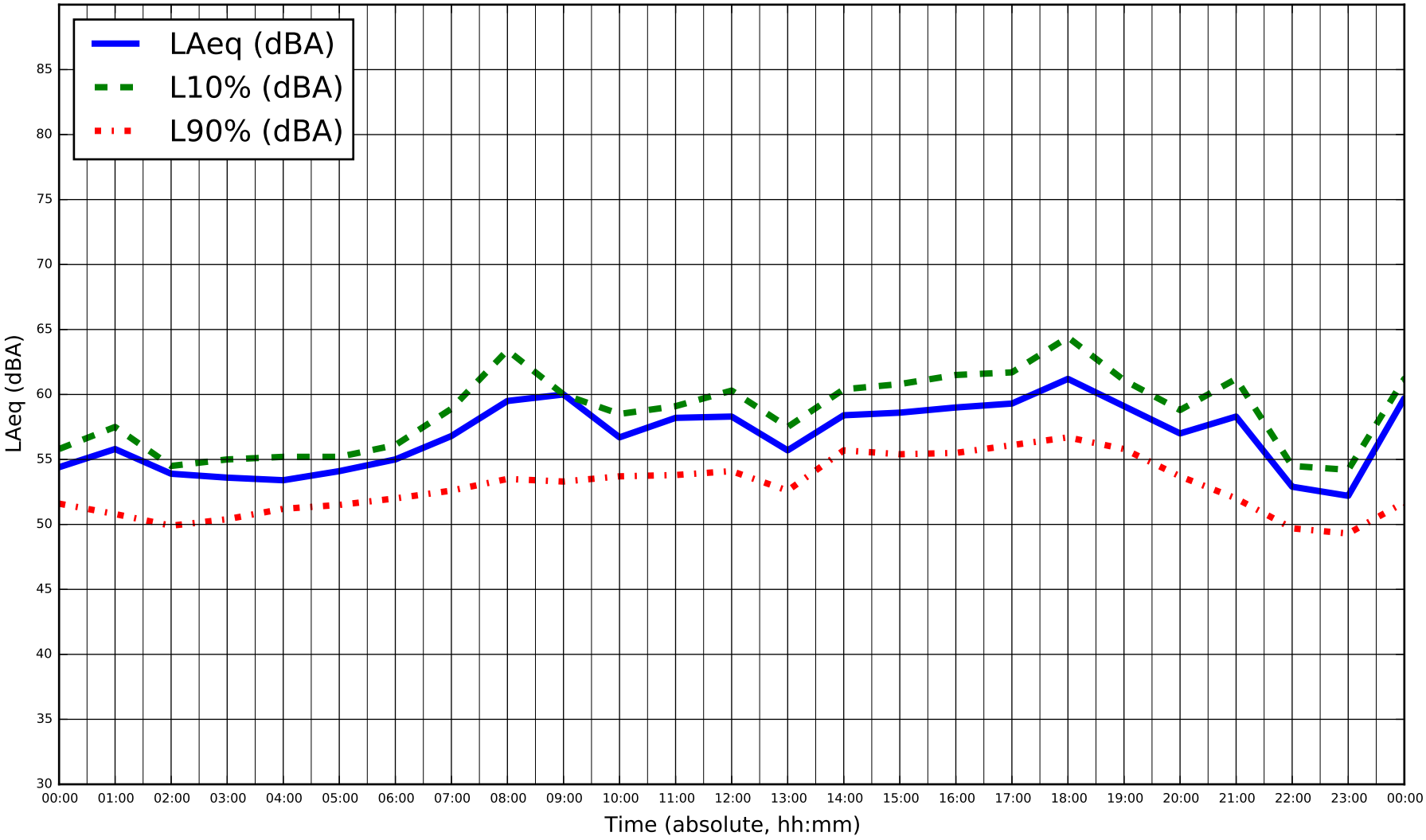


* Sustained winds over 20 km/hr during monitoring, on April 8, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Wednesday April 8, 2015	Figure: F-14
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



* Sustained winds over 20 km/hr during monitoring, on April 9, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Thursday April 9, 2015	Figure: F-15
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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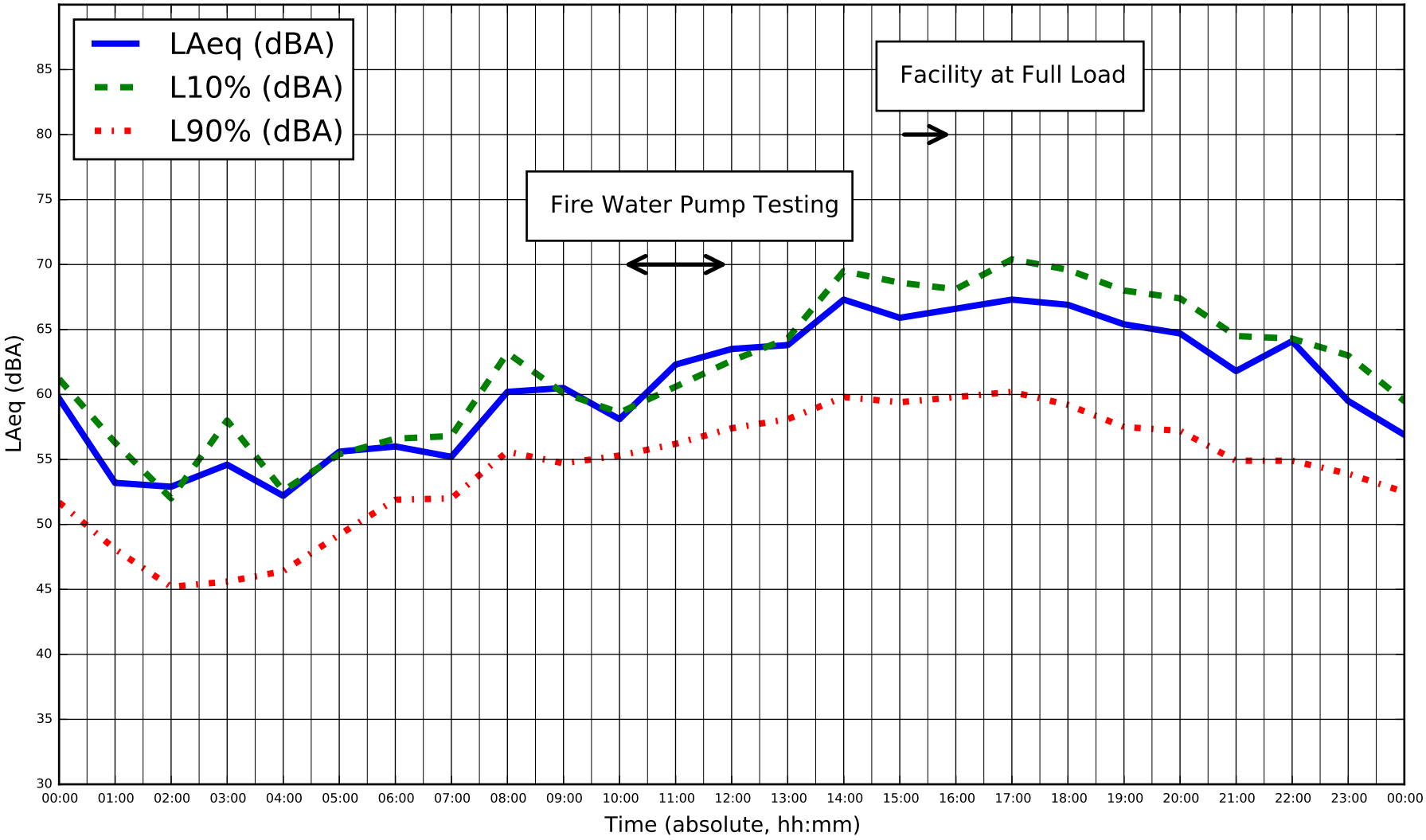

* Sustained winds over 20 km/hr during monitoring, on April 10, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Friday April 10, 2015	Figure: F-16
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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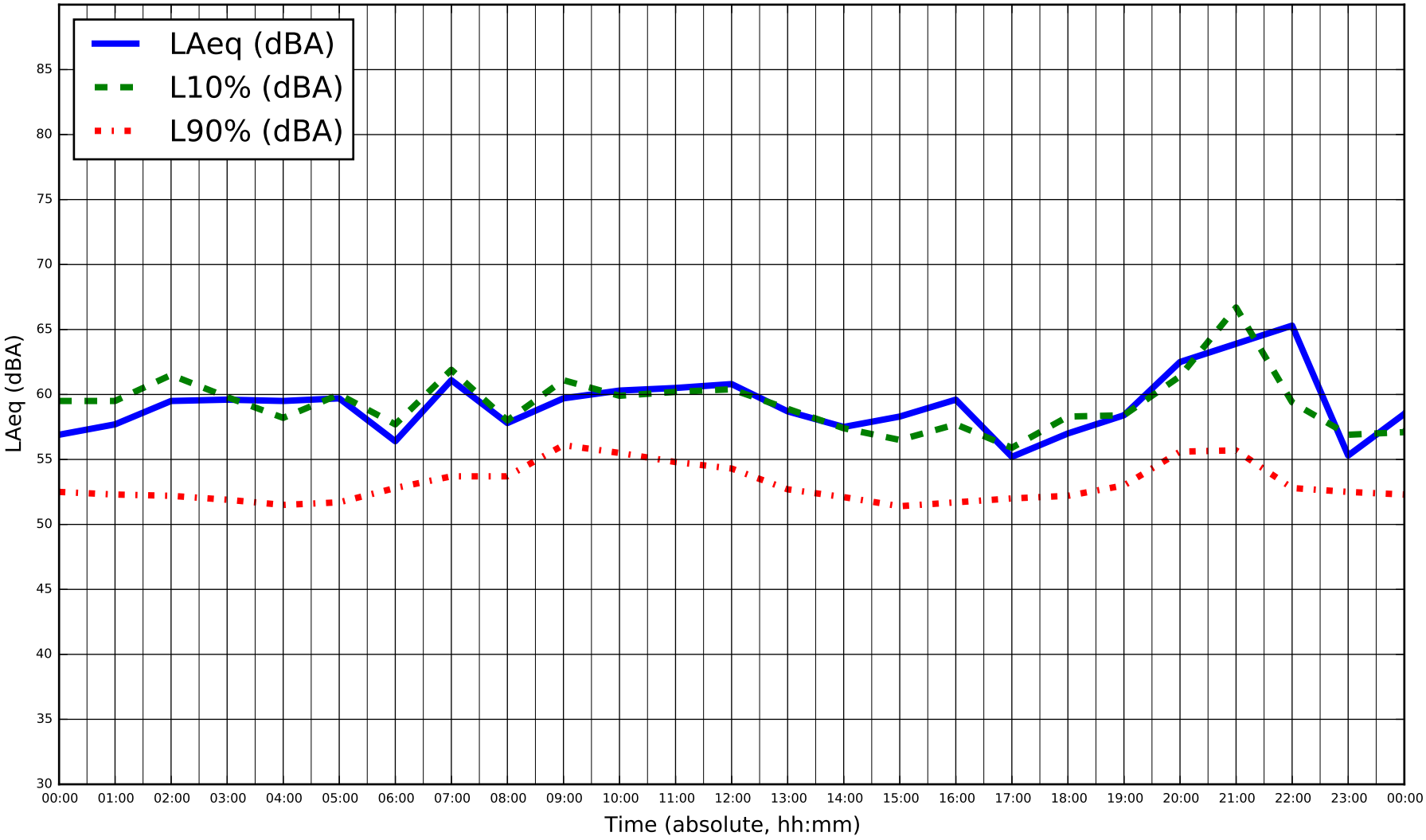
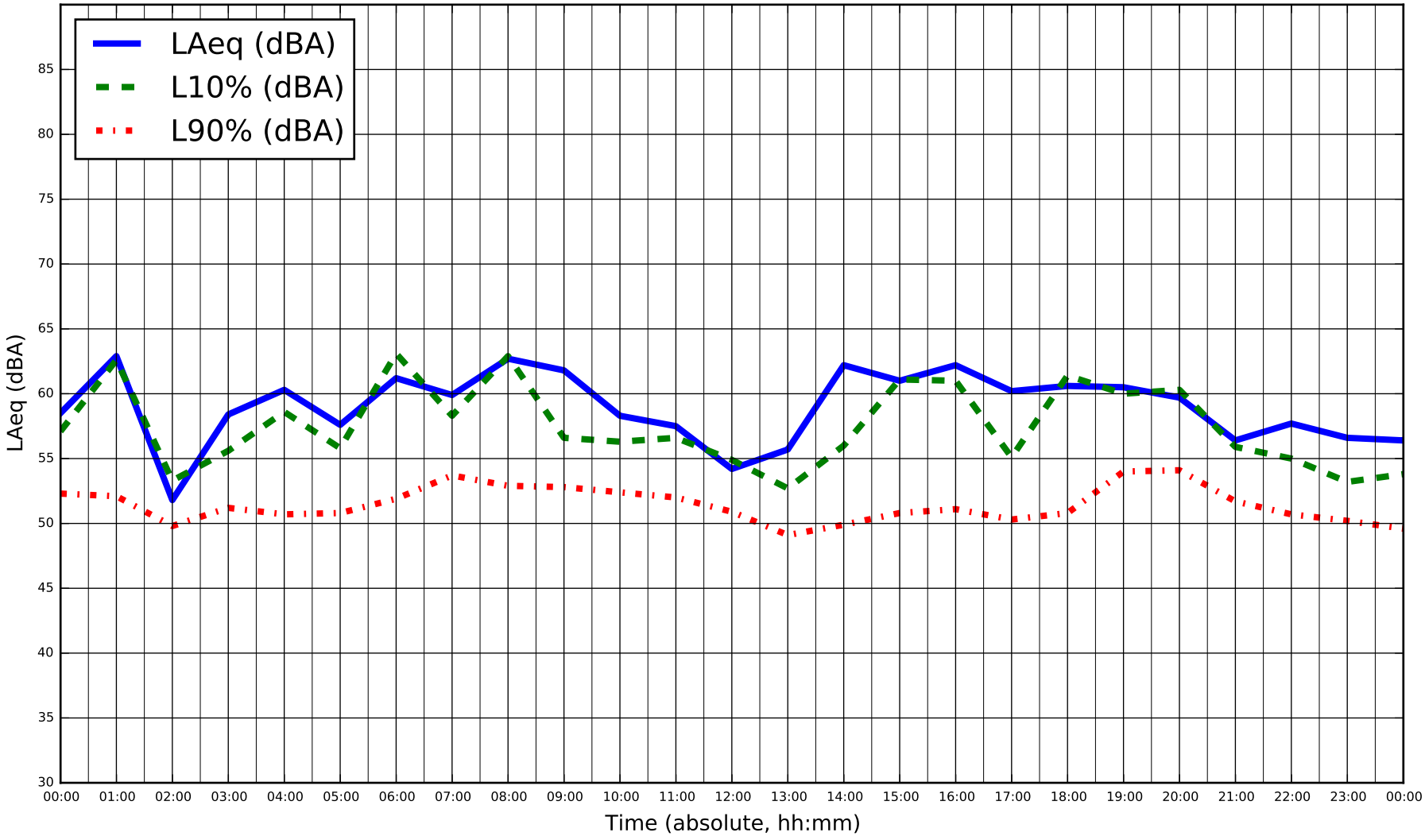


* Sustained winds over 20 km/hr during monitoring on April 11, 2015 (00:00 to 07:00 hrs only)

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Saturday April 11, 2015	Figure: F-17
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Sunday April 12, 2015	Figure: F-18
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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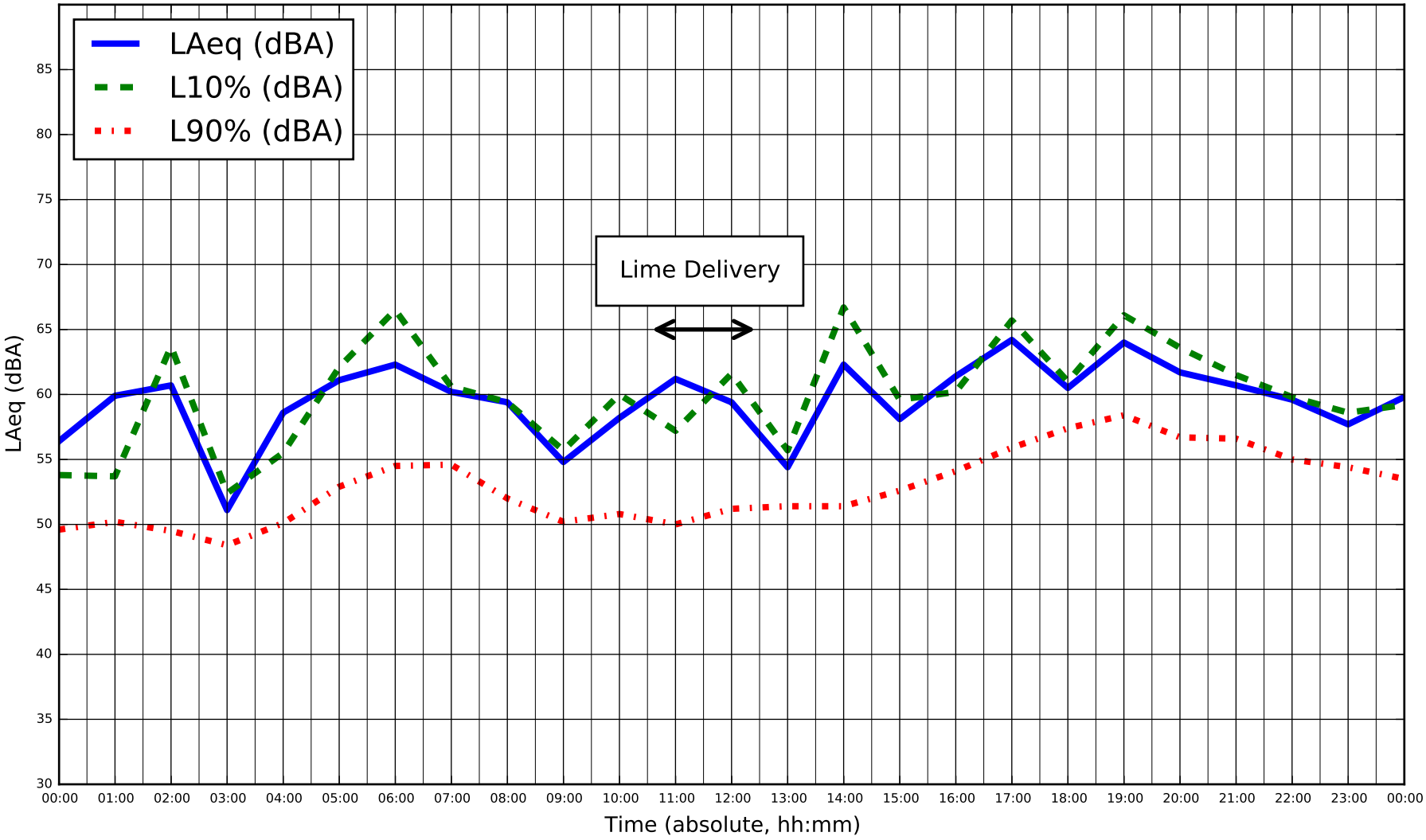

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Monday April 13, 2015	Figure: F-19
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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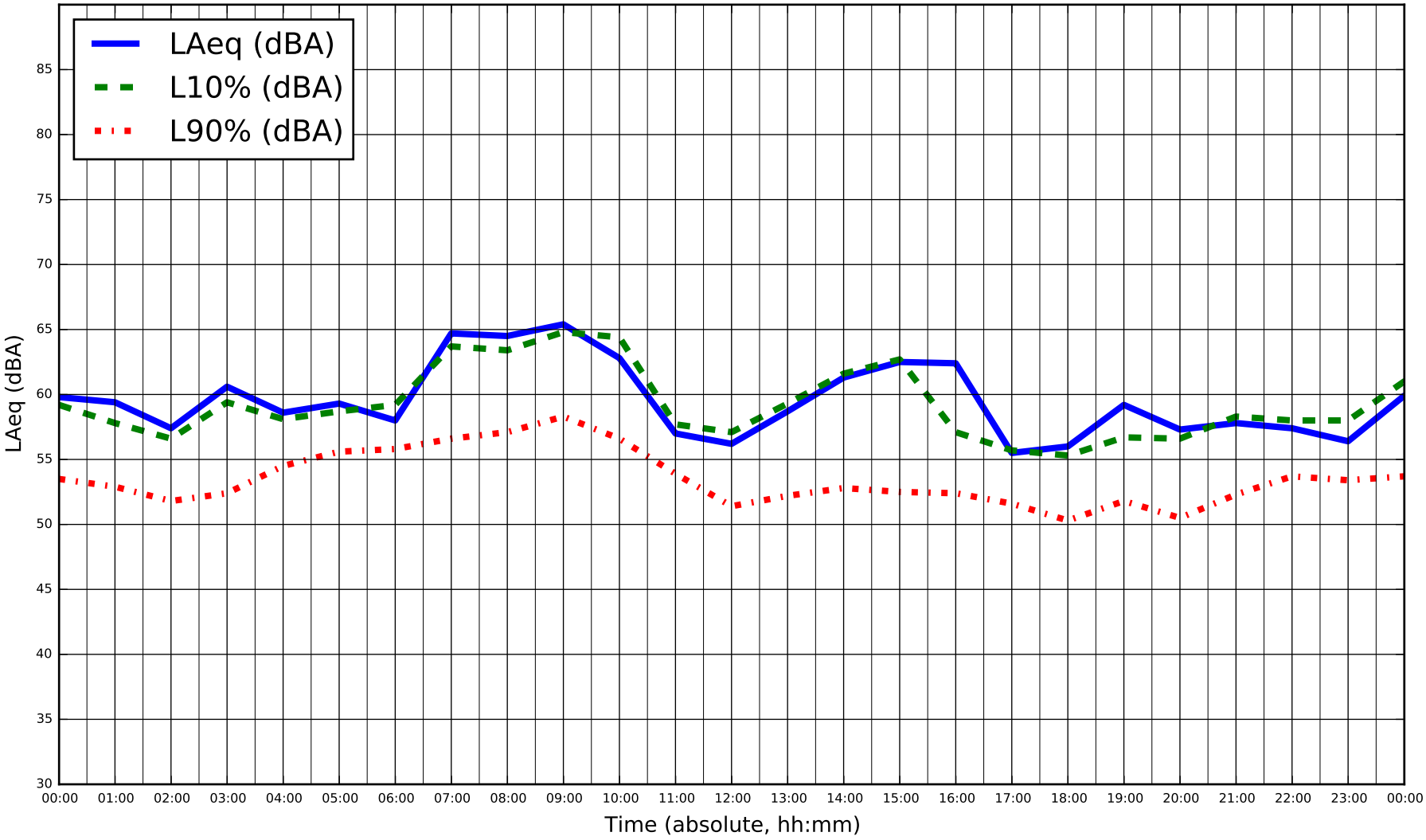

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Tuesday April 14, 2015	Figure: F-20
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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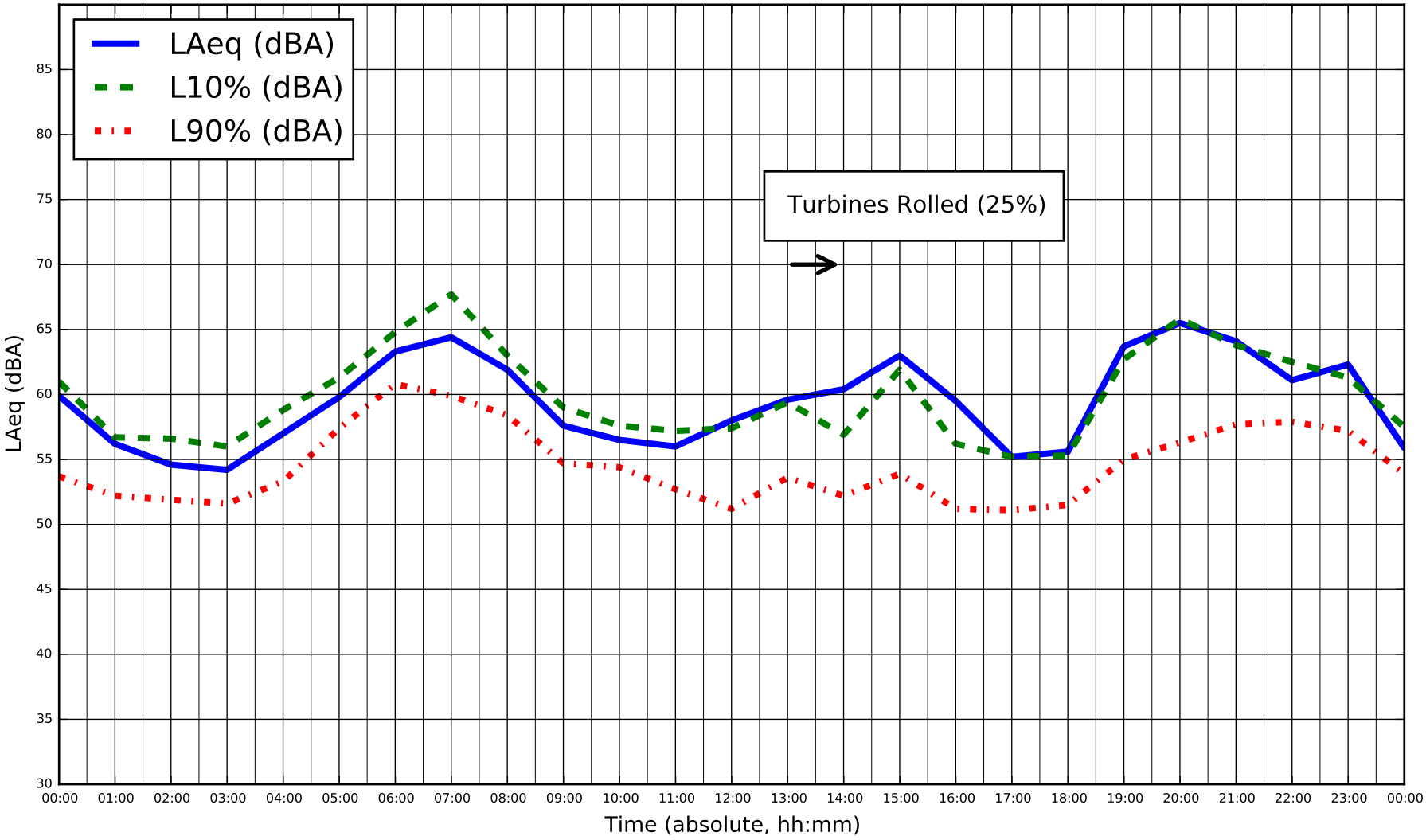

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Wednesday April 15, 2015	Figure: F-21
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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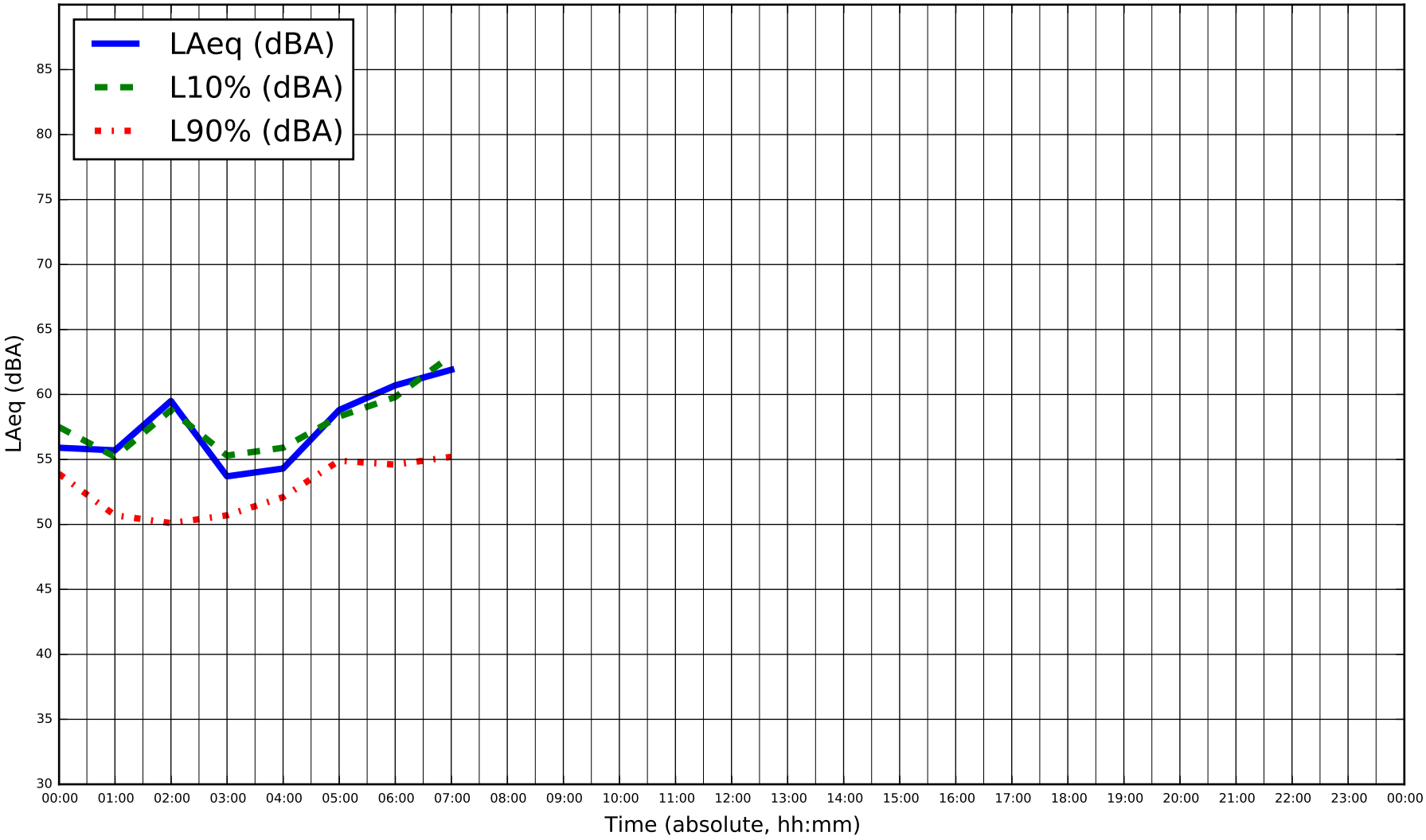

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Thursday April 16, 2015	Figure: F-22
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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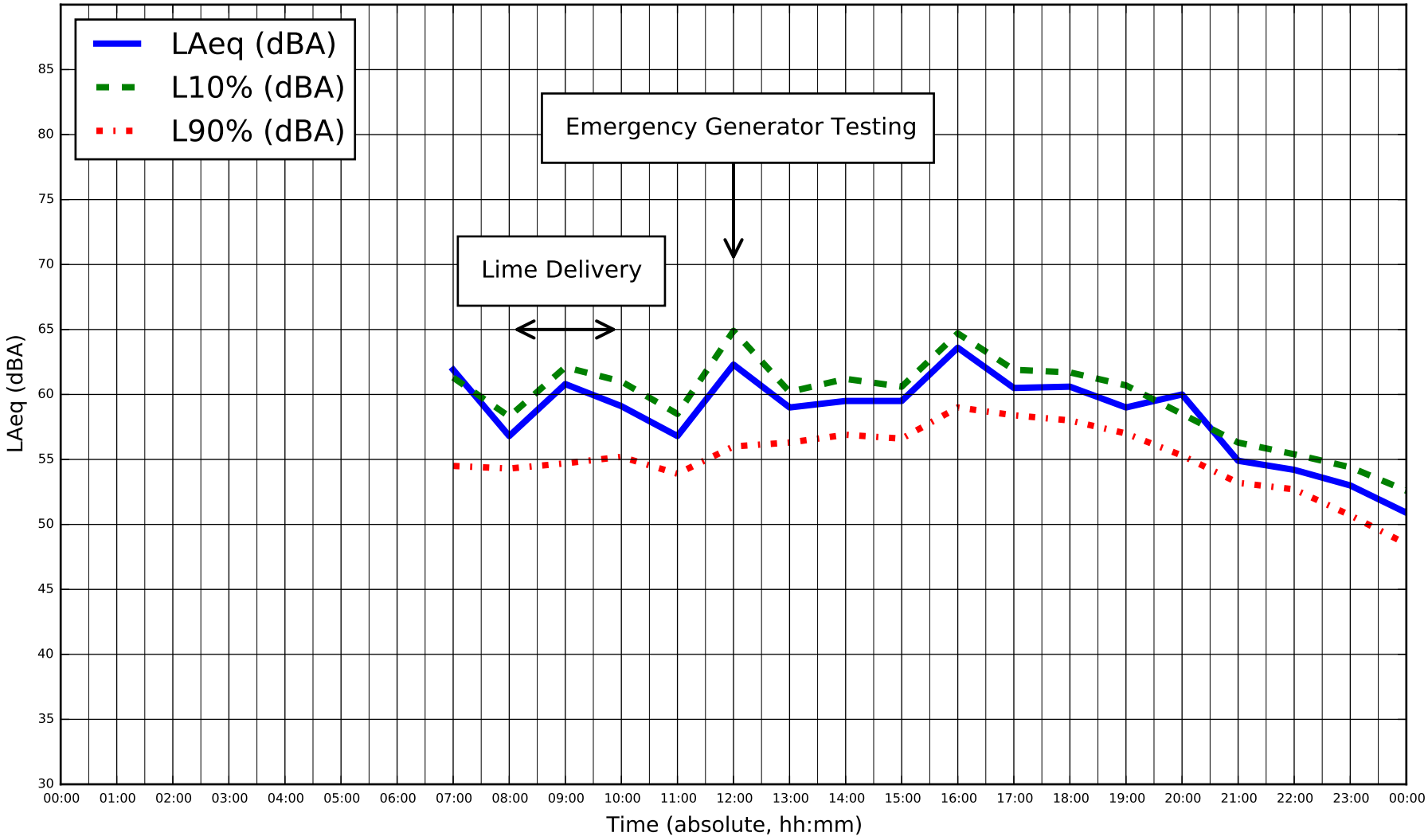

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Monday April 6, 2015	Figure: F-23
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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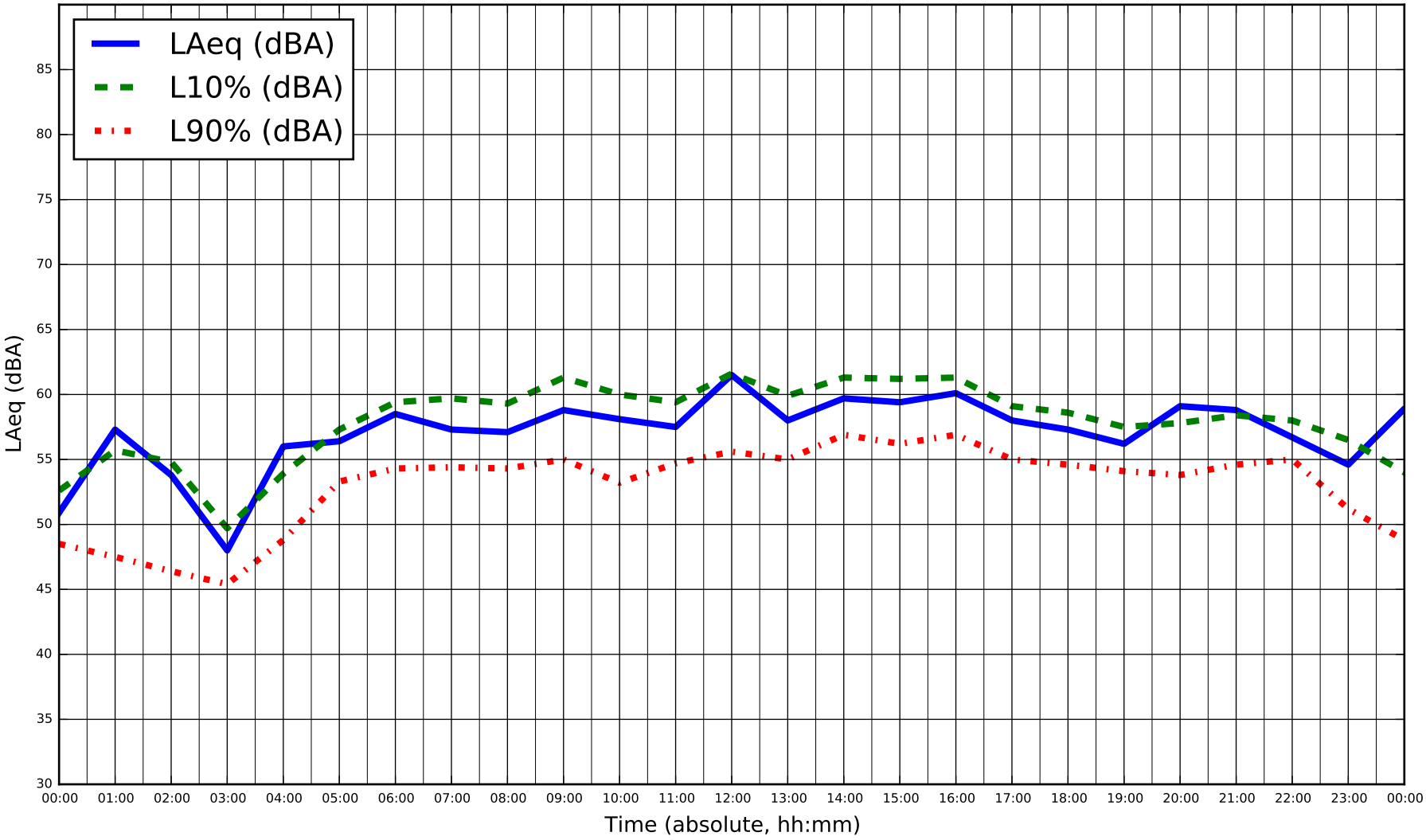

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Tuesday April 7, 2015	Figure: F-24
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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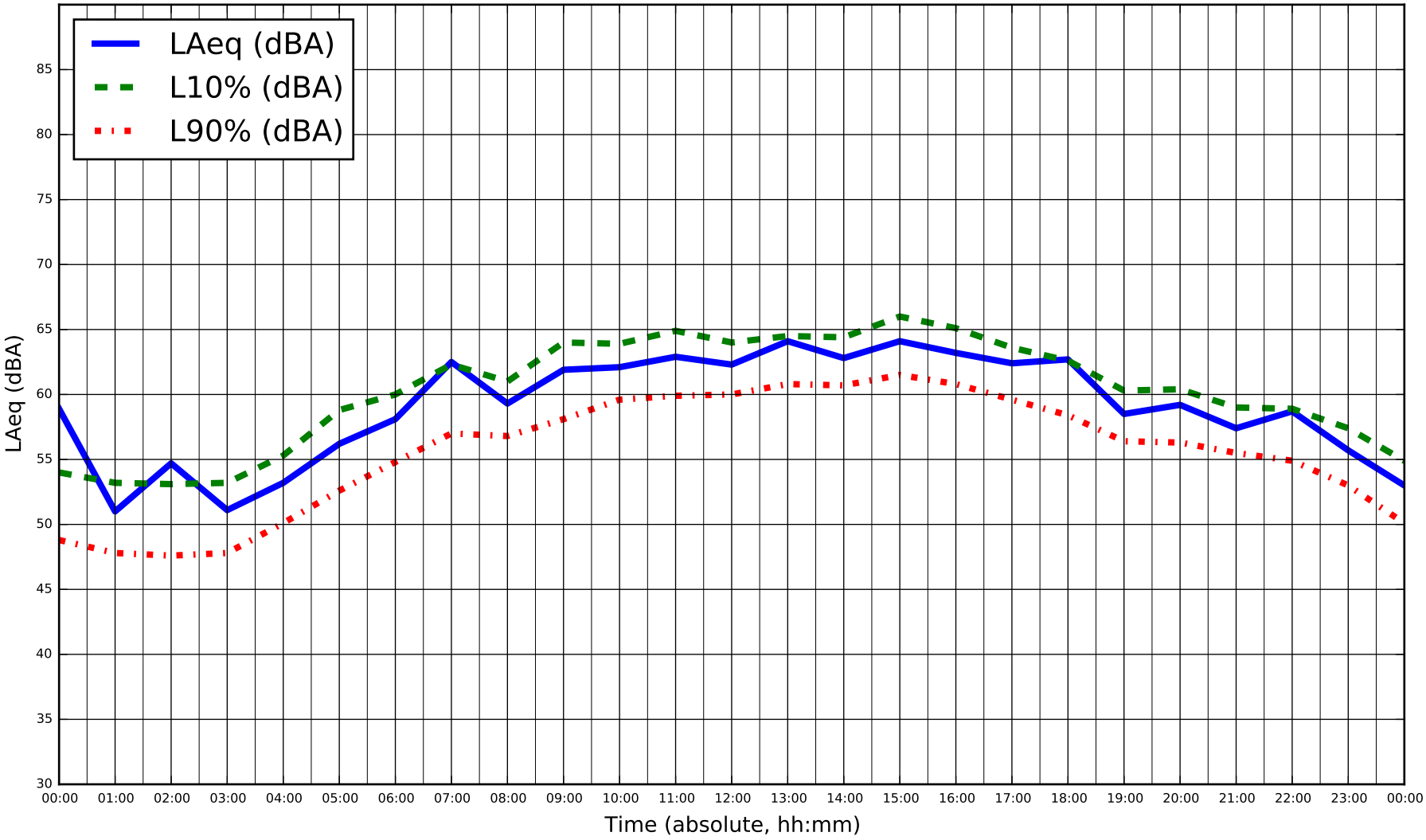

* Sustained winds over 20 km/hr during monitoring, on April 8, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Wednesday April 8, 2015	Figure: F-25
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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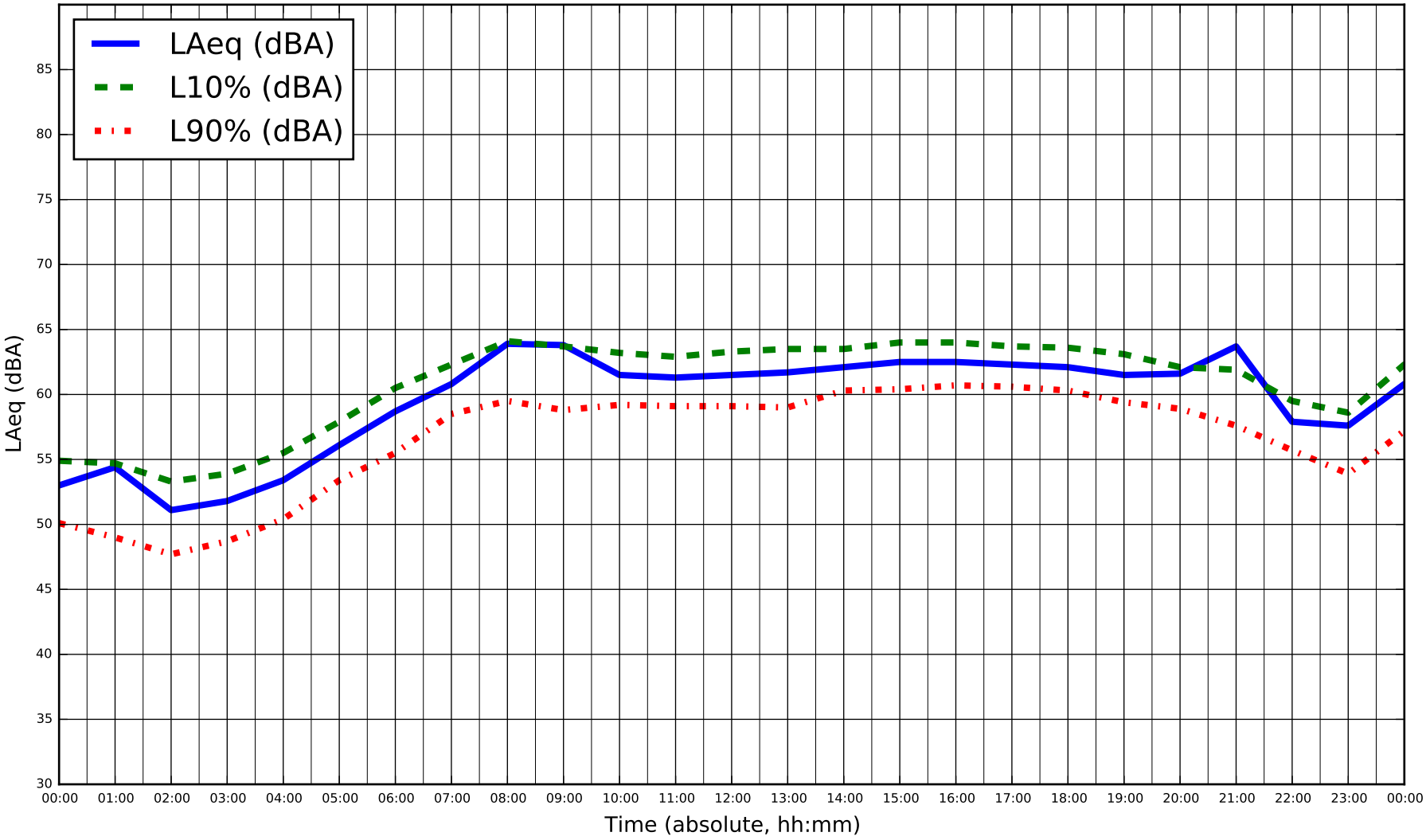

* Sustained winds over 20 km/hr during monitoring, on April 9, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Thursday April 9, 2015	Figure: F-26
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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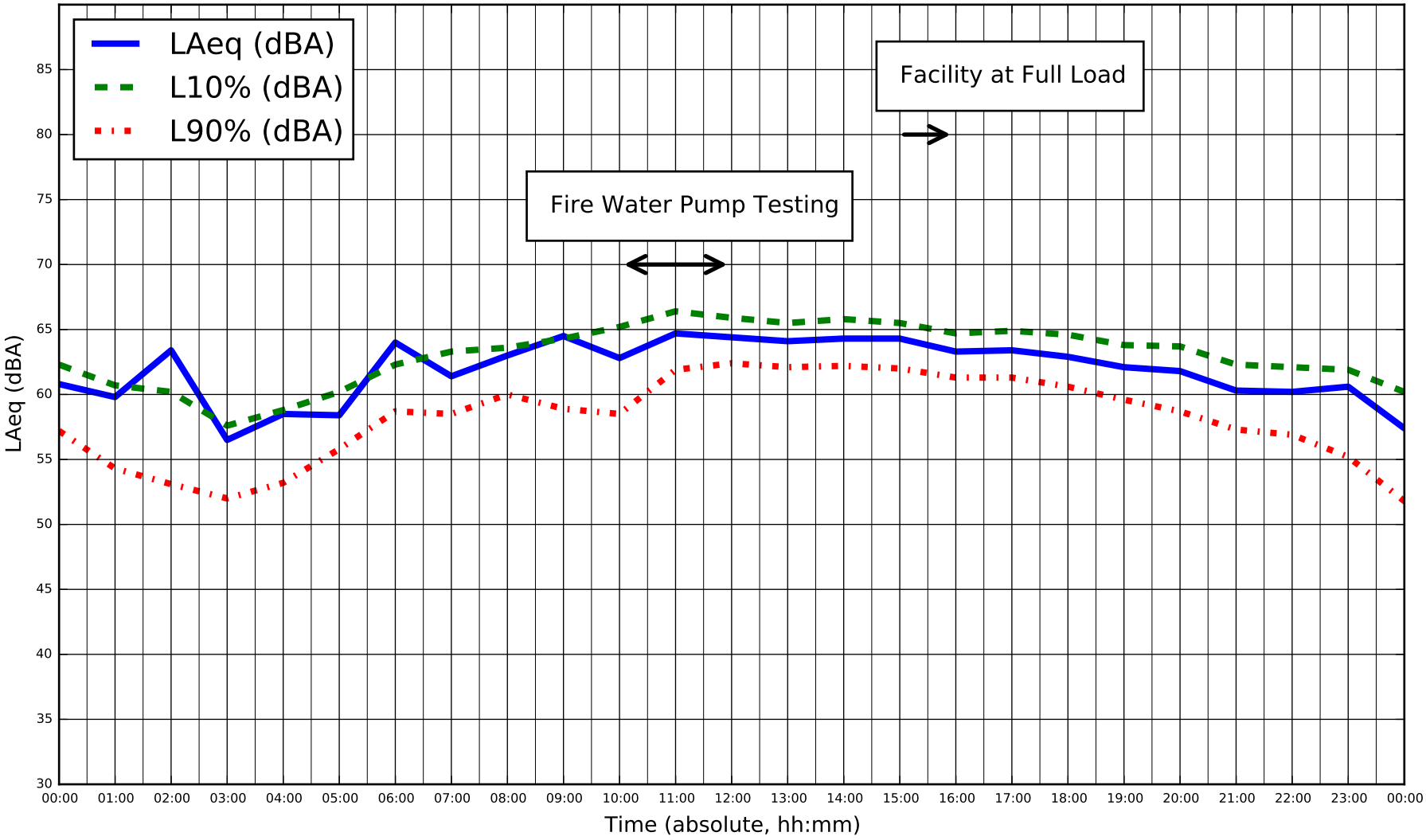

* Sustained winds over 20 km/hr during monitoring, on April 10, 2015

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Friday April 10, 2015	Figure: F-27
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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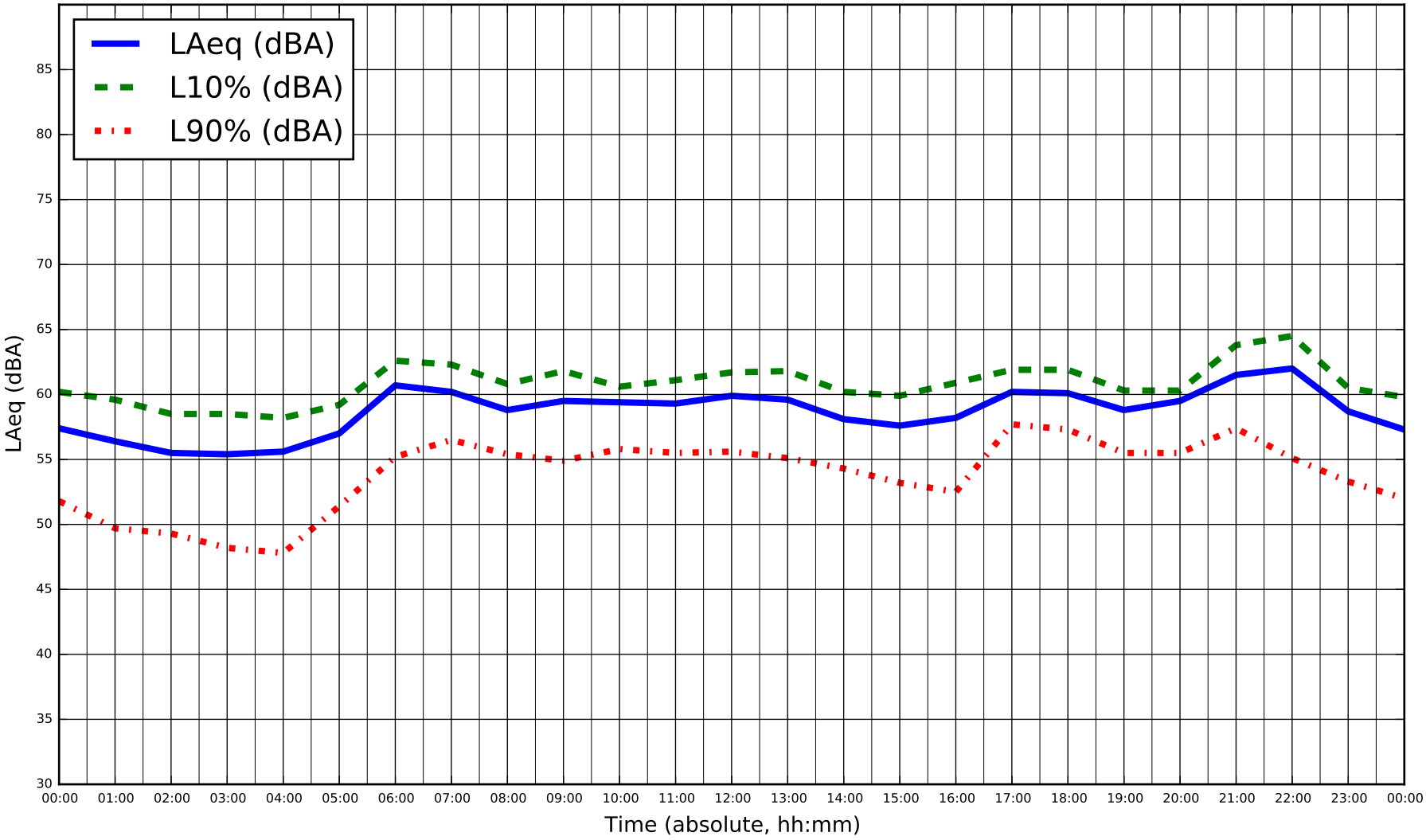

* Sustained winds over 20 km/hr during monitoring on April 11, 2015 (00:00 to 07:00 hrs only)

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Saturday April 11, 2015	Figure: F-28
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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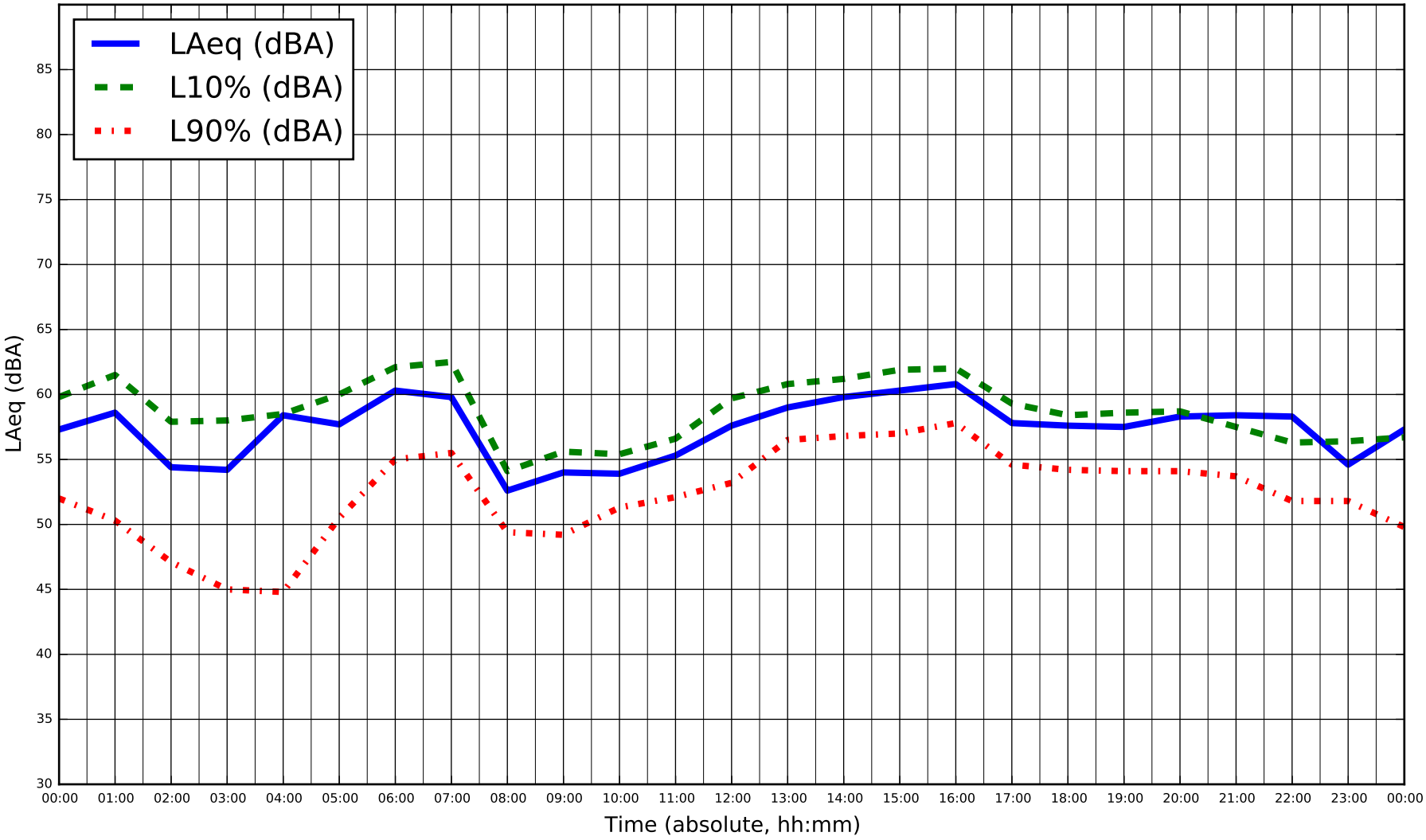

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Sunday April 12, 2015	Figure: F-29
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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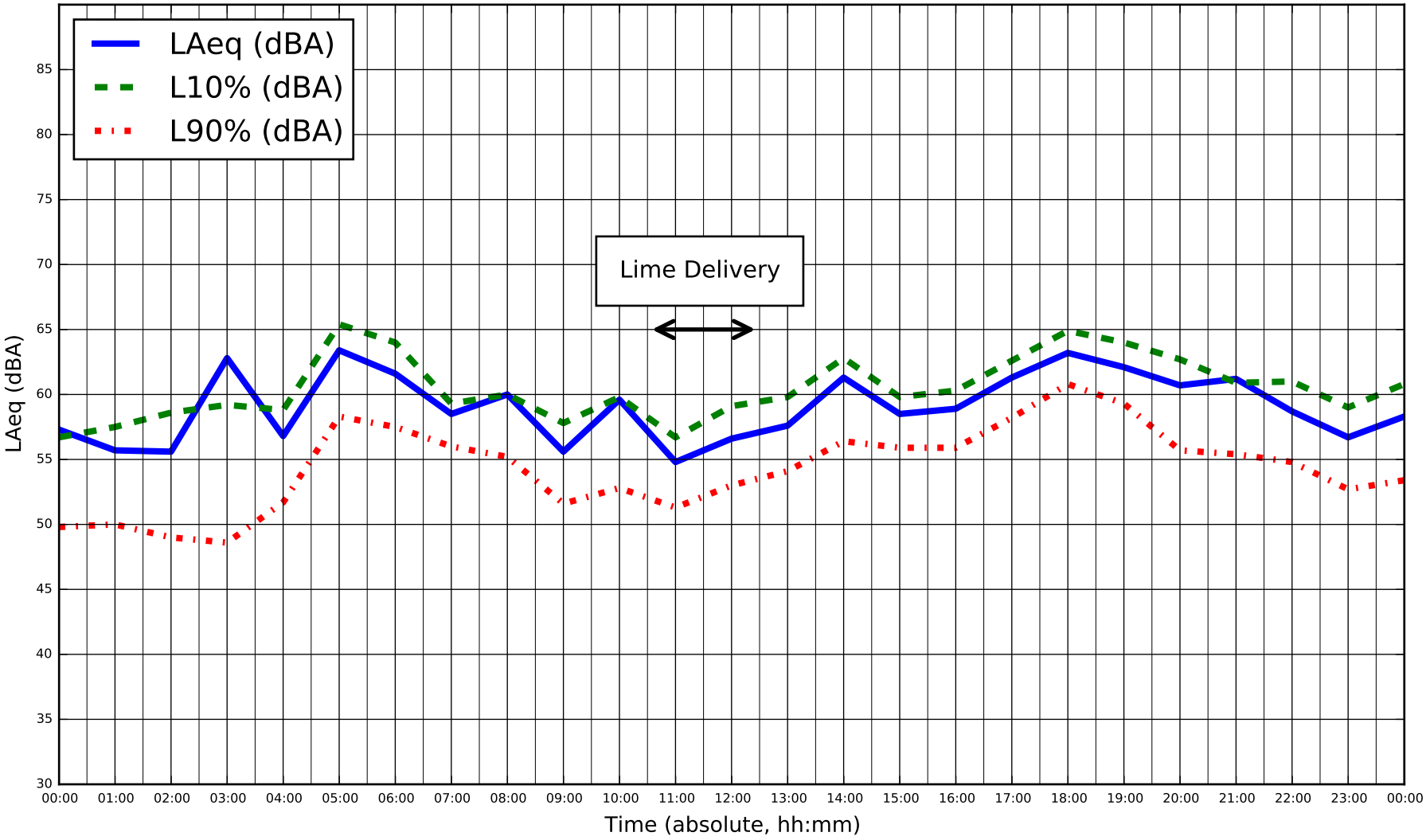

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Monday April 13, 2015	Figure: F-30
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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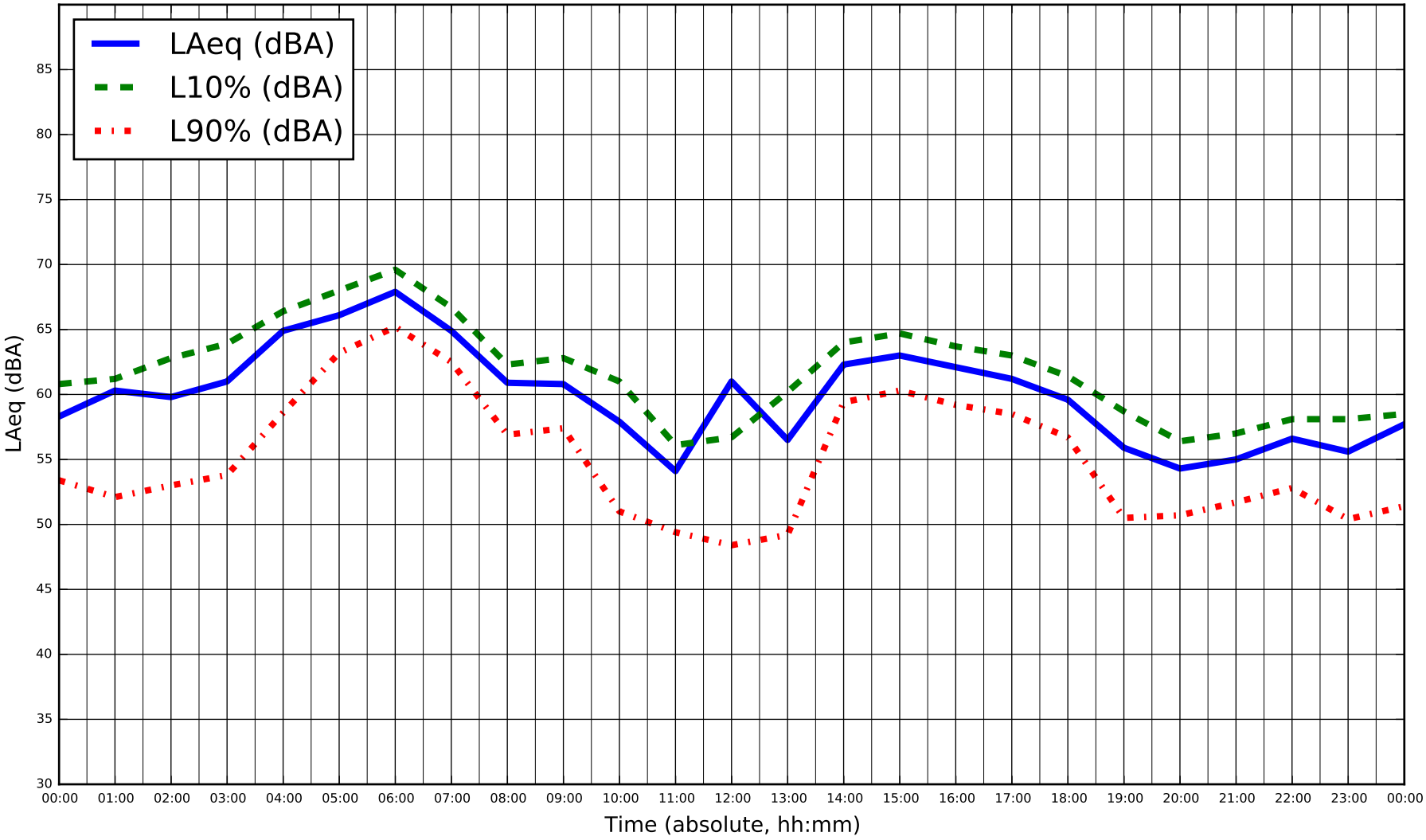

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Tuesday April 14, 2015	Figure: F-31
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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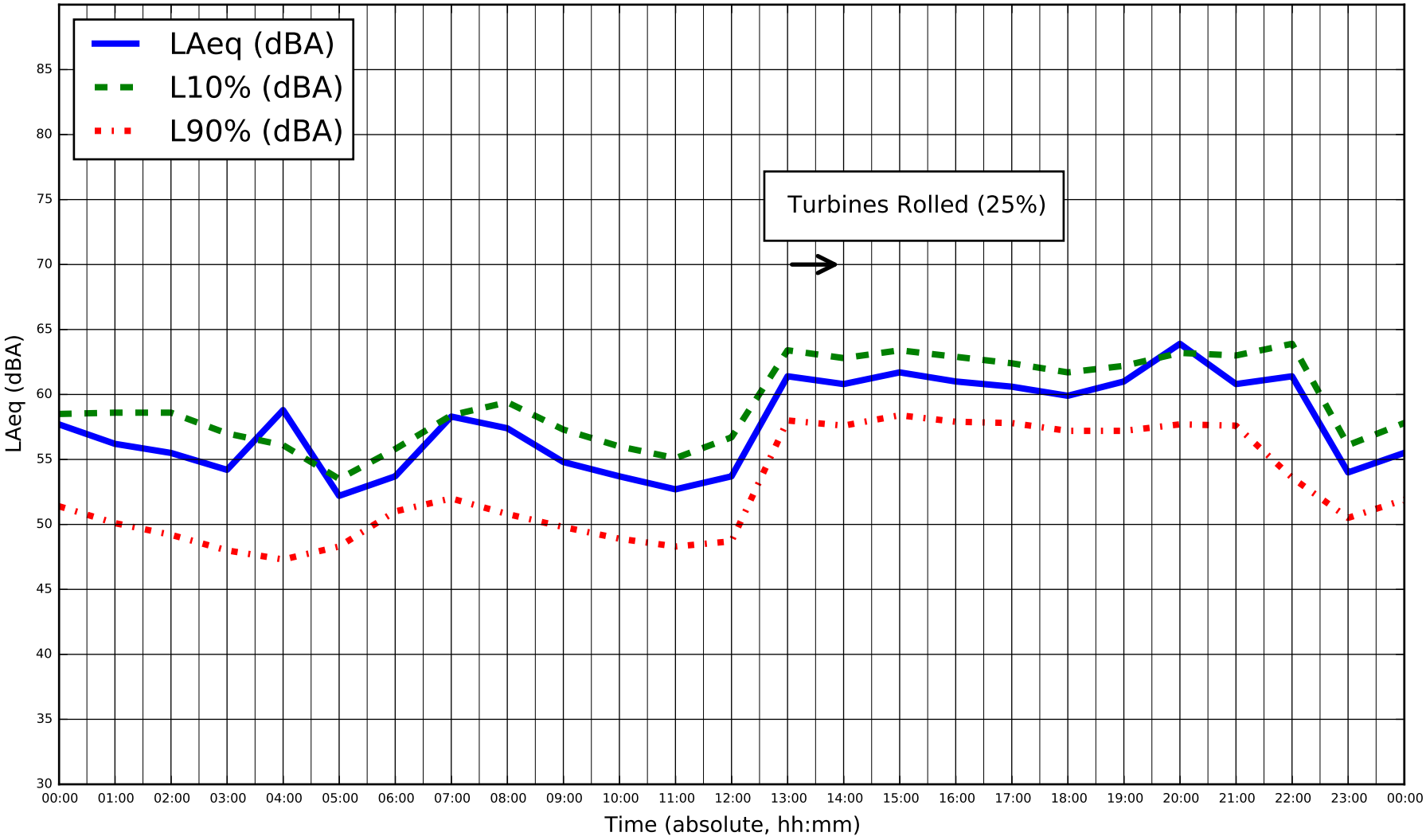

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Wednesday April 15, 2015	Figure: F-32
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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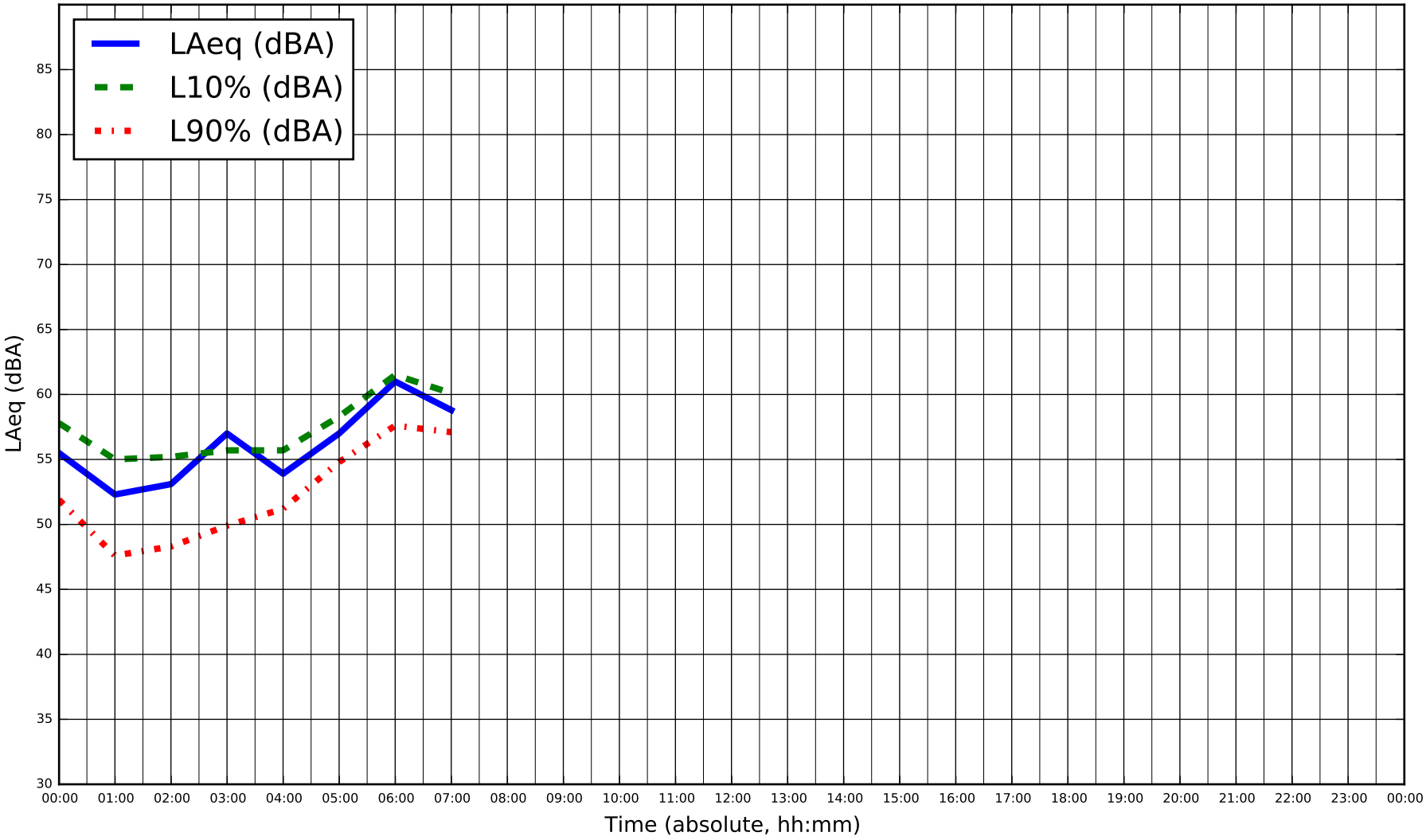

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Thursday April 16, 2015	Figure: F-33
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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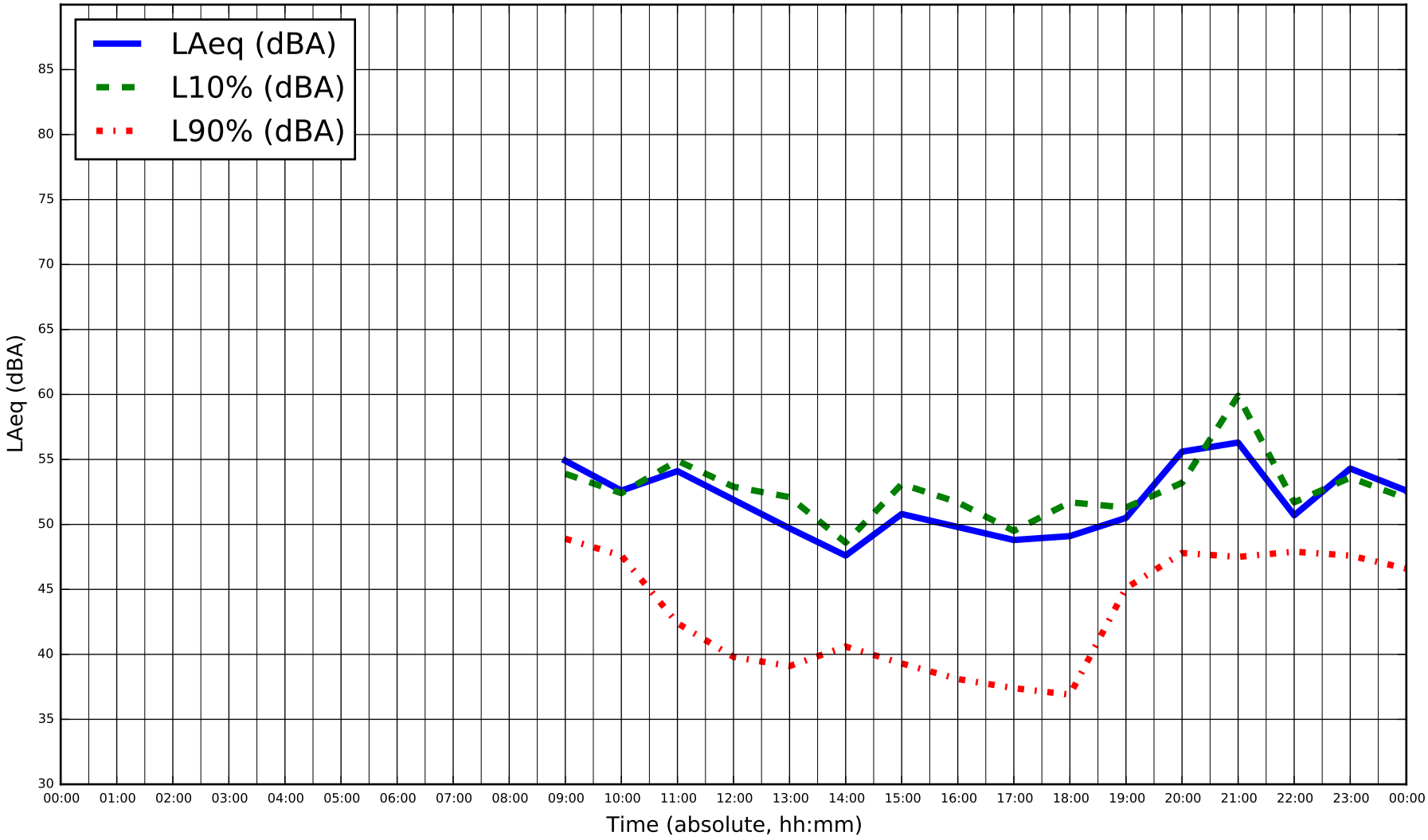
APPENDIX G

OCTOBER 2015 POST-OPERATIONAL SOUND MEASUREMENT RESULTS



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Monday October 5, 2015	Figure: G-1
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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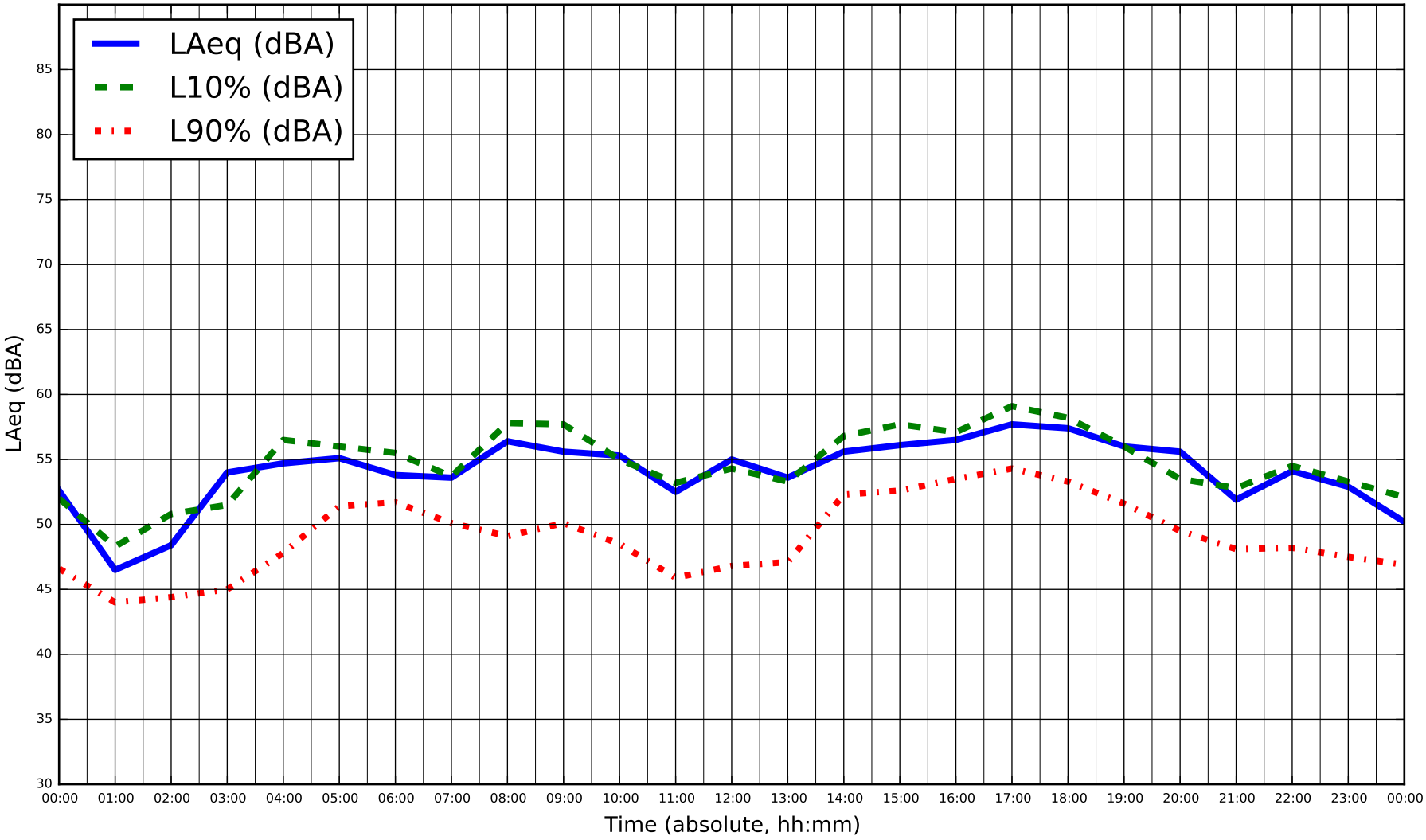
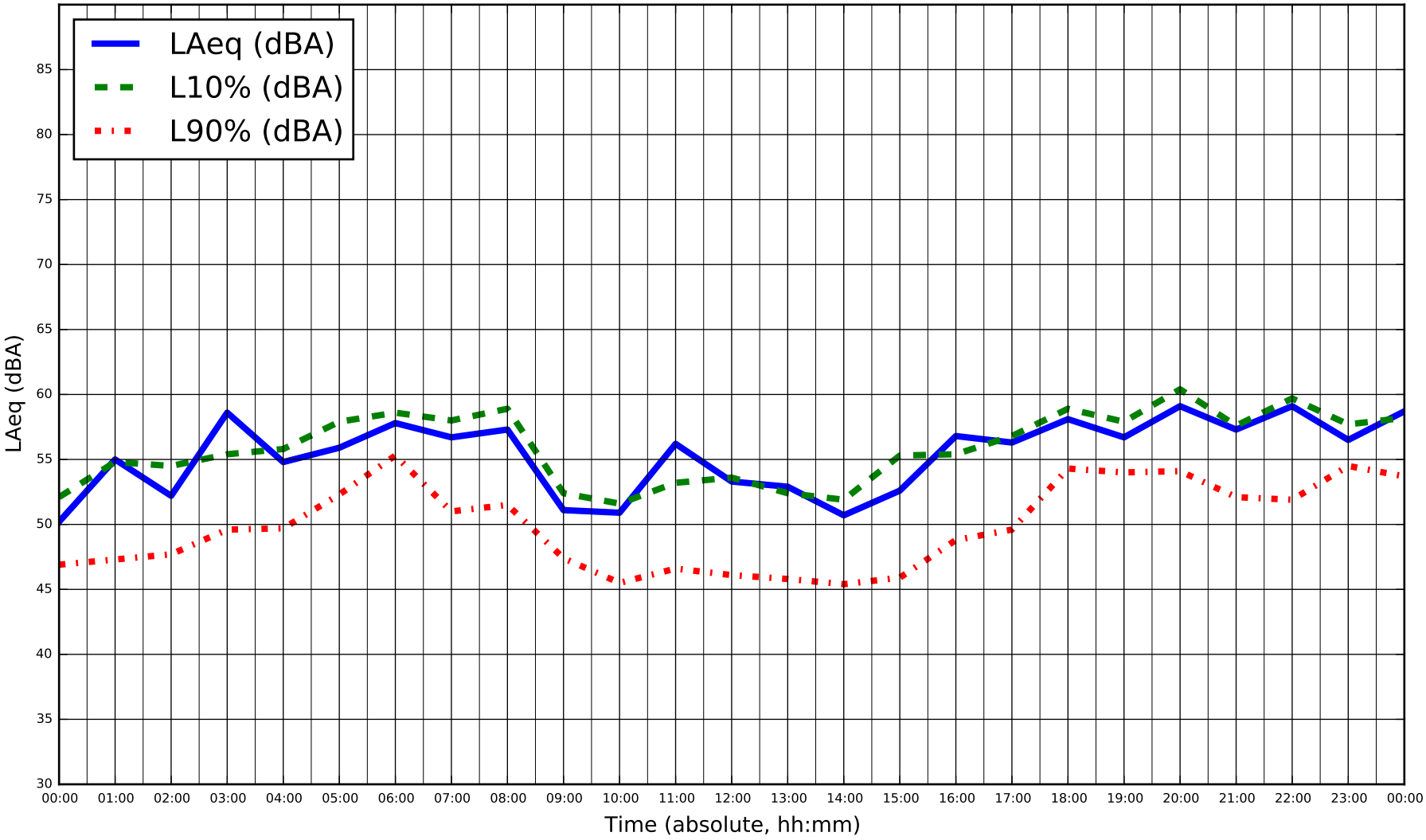


VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Tuesday October 6, 2015	Figure: G-2
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Wednesday October 7, 2015	Figure: G-3
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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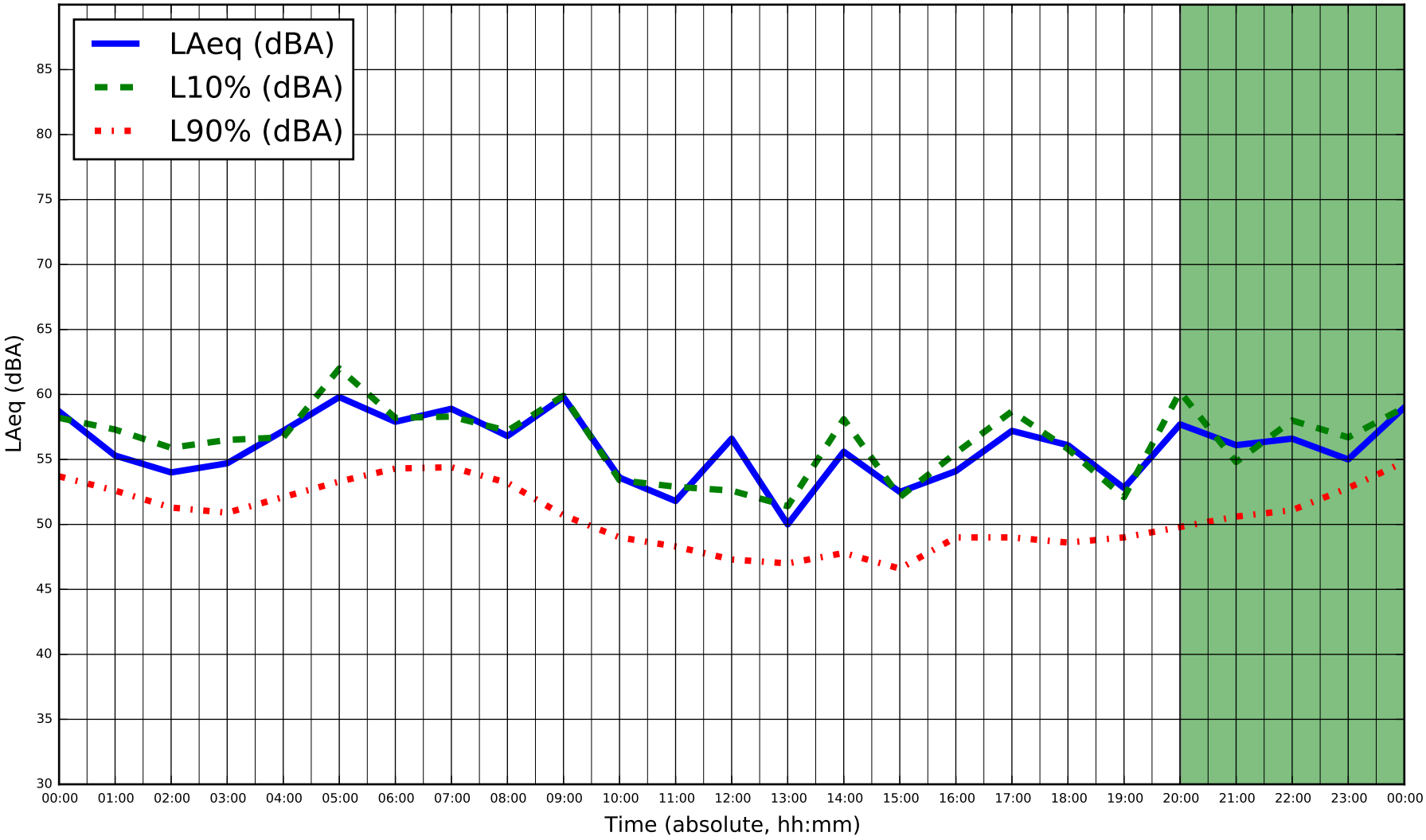

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Thursday October 8, 2015	Figure: G-4
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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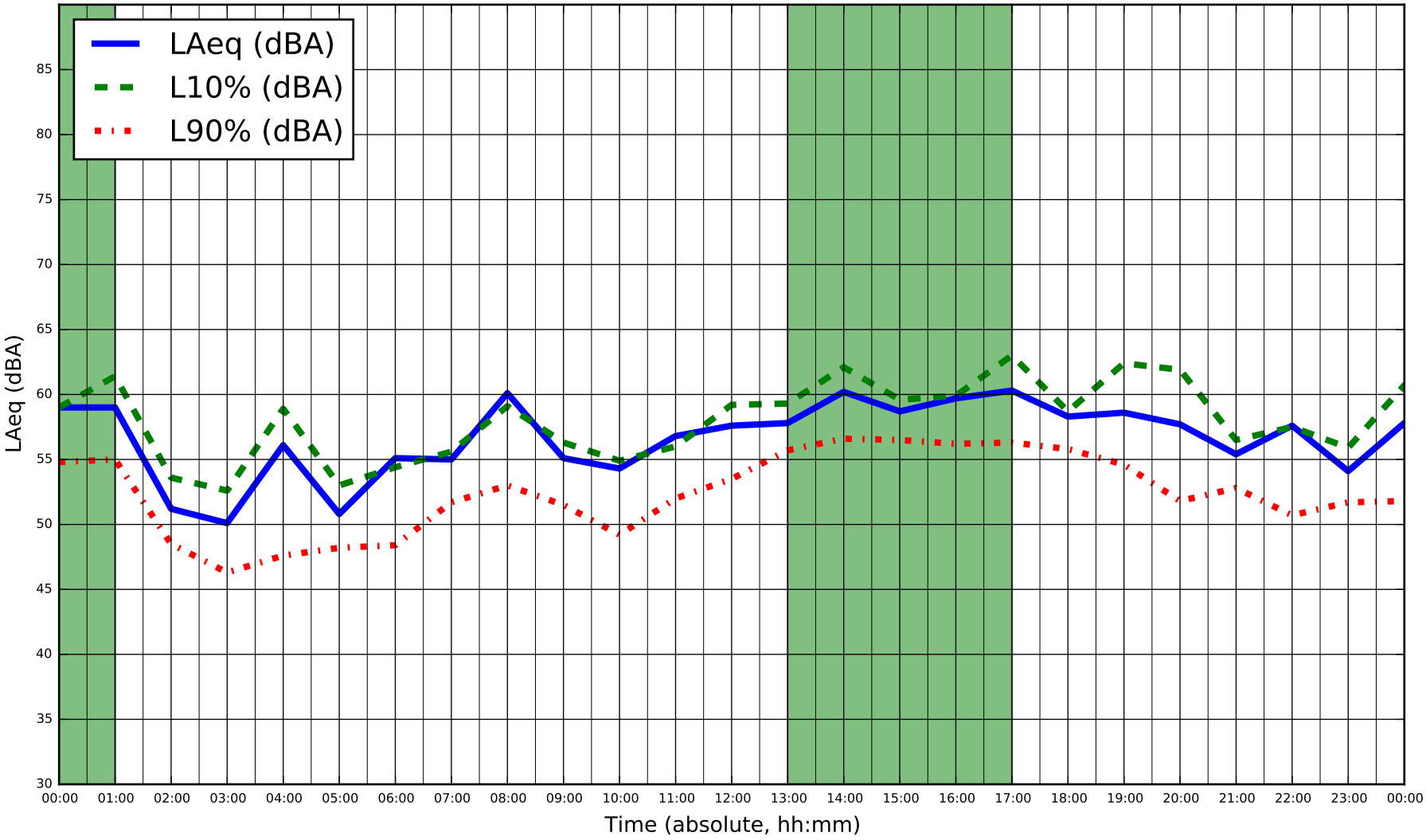

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Friday October 9, 2015	Figure: G-5
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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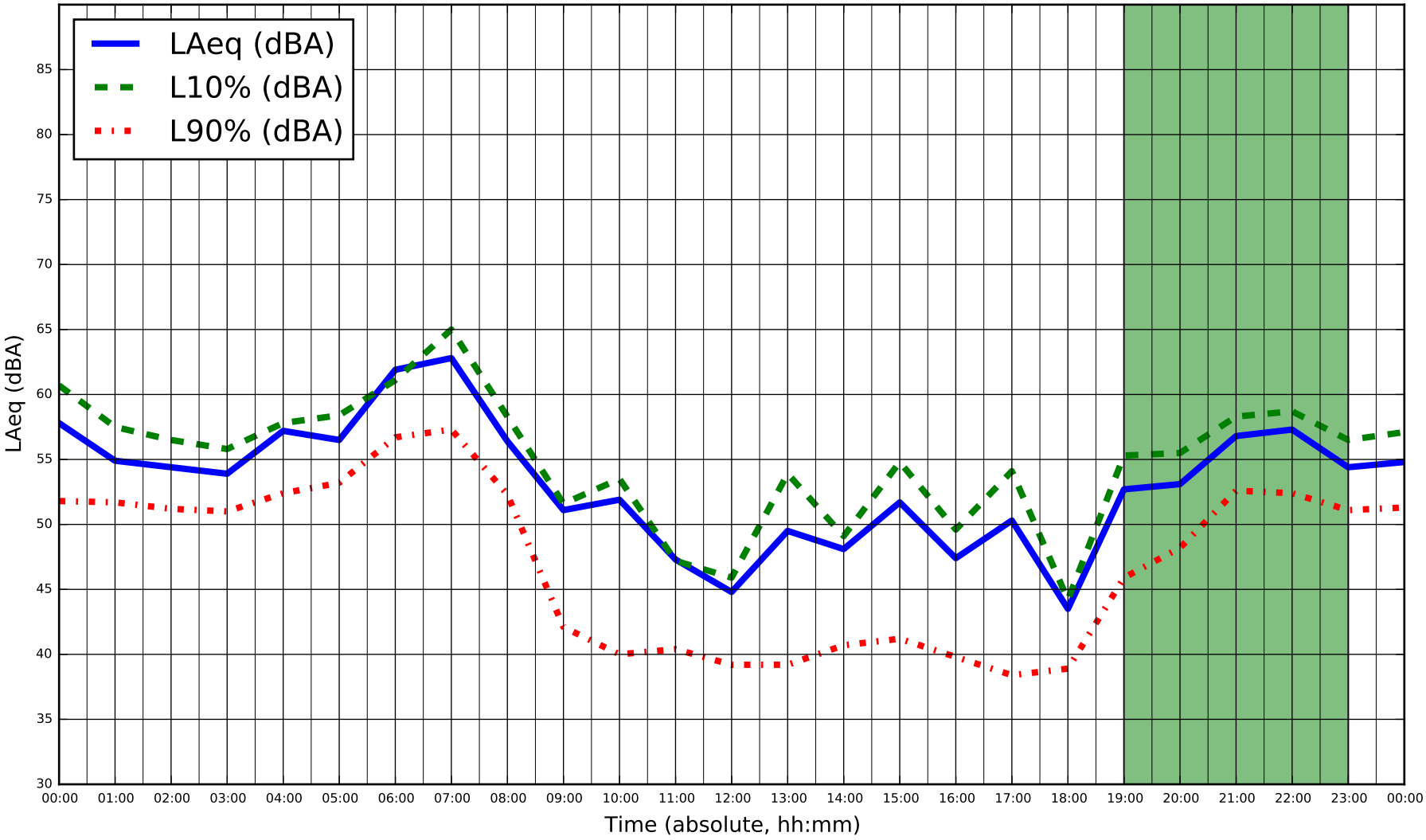

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Saturday October 10, 2015	Figure: G-6
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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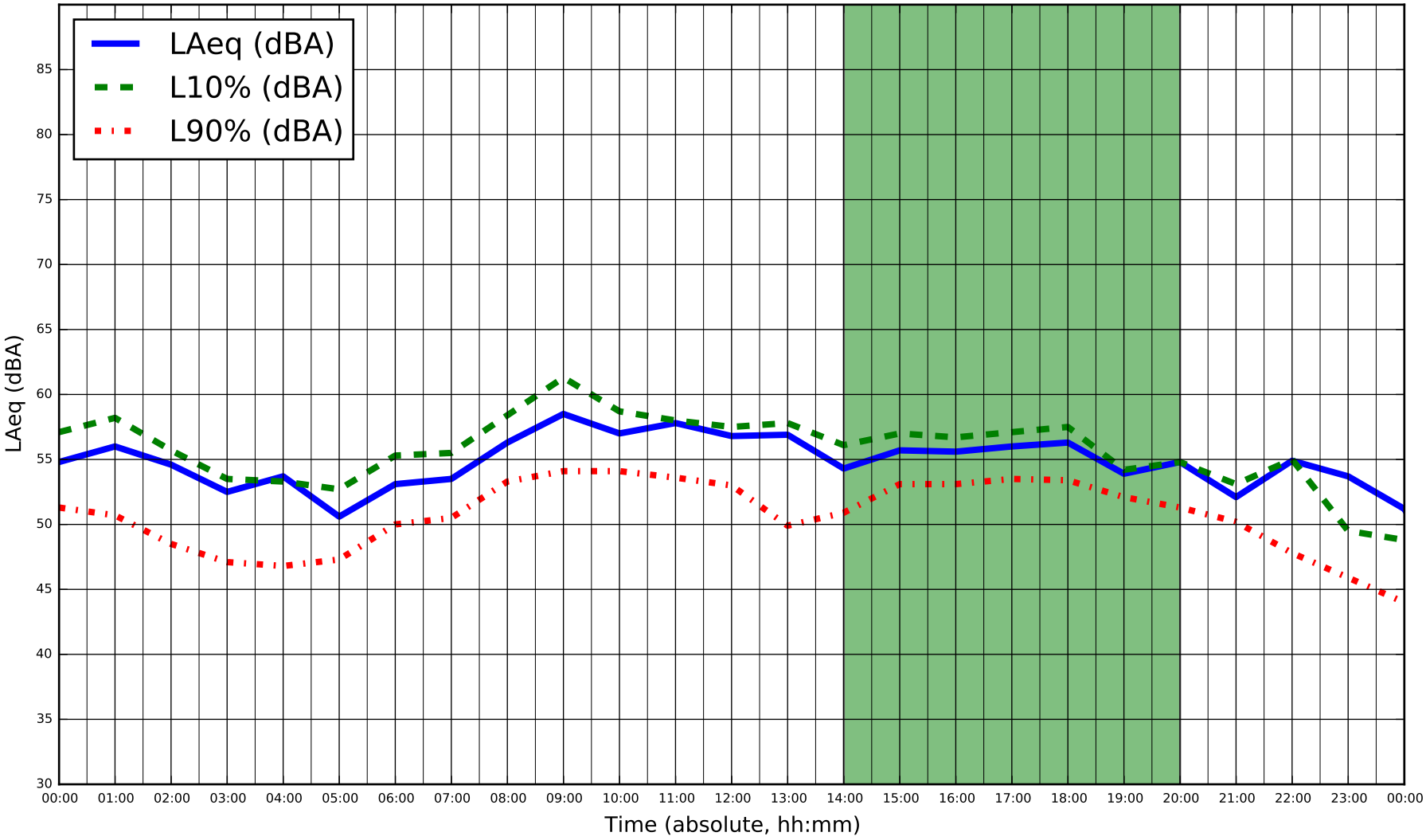

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Sunday October 11, 2015	Figure: G-7
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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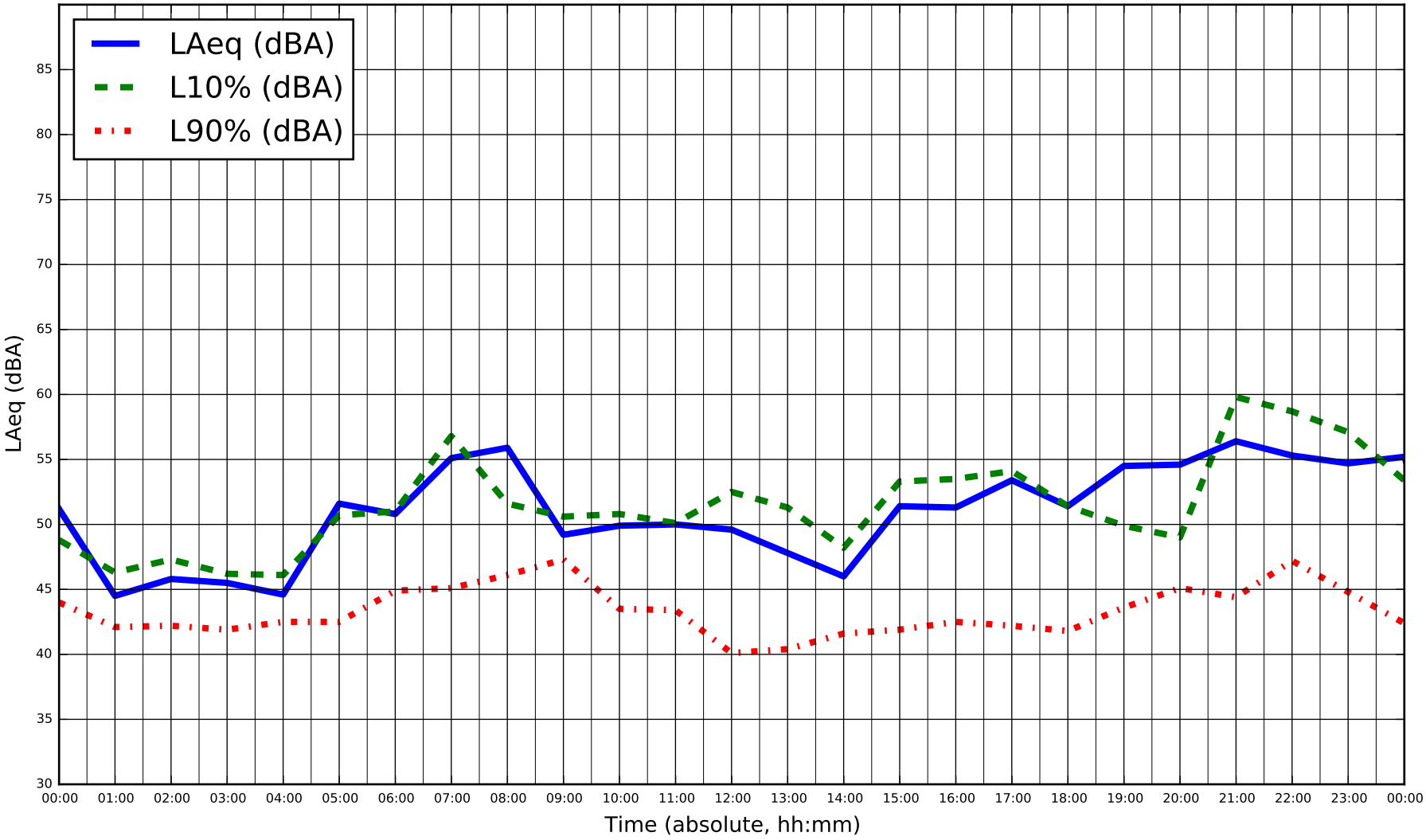

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Monday October 12, 2015	Figure: G-8
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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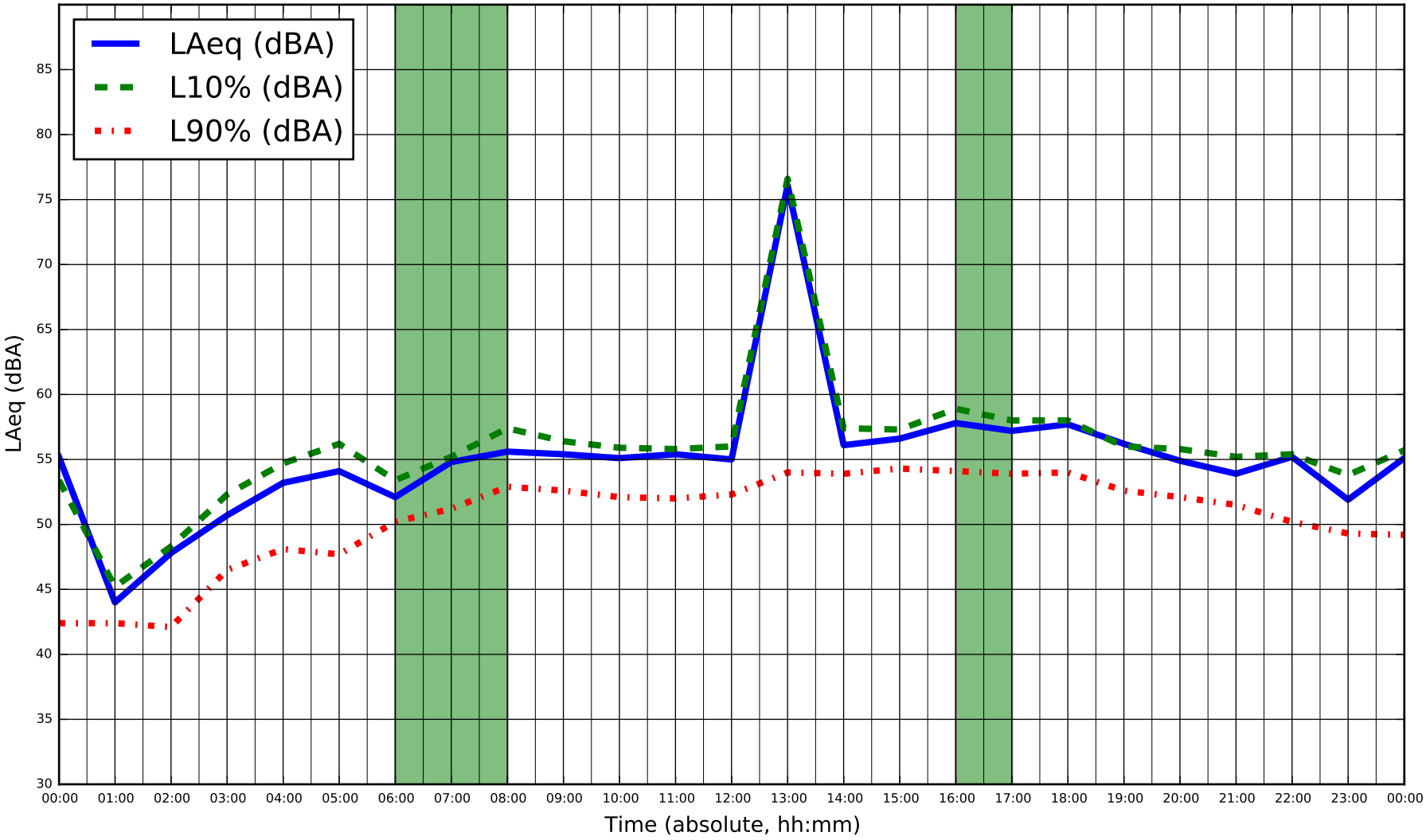

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Tuesday October 13, 2015	Figure: G-9
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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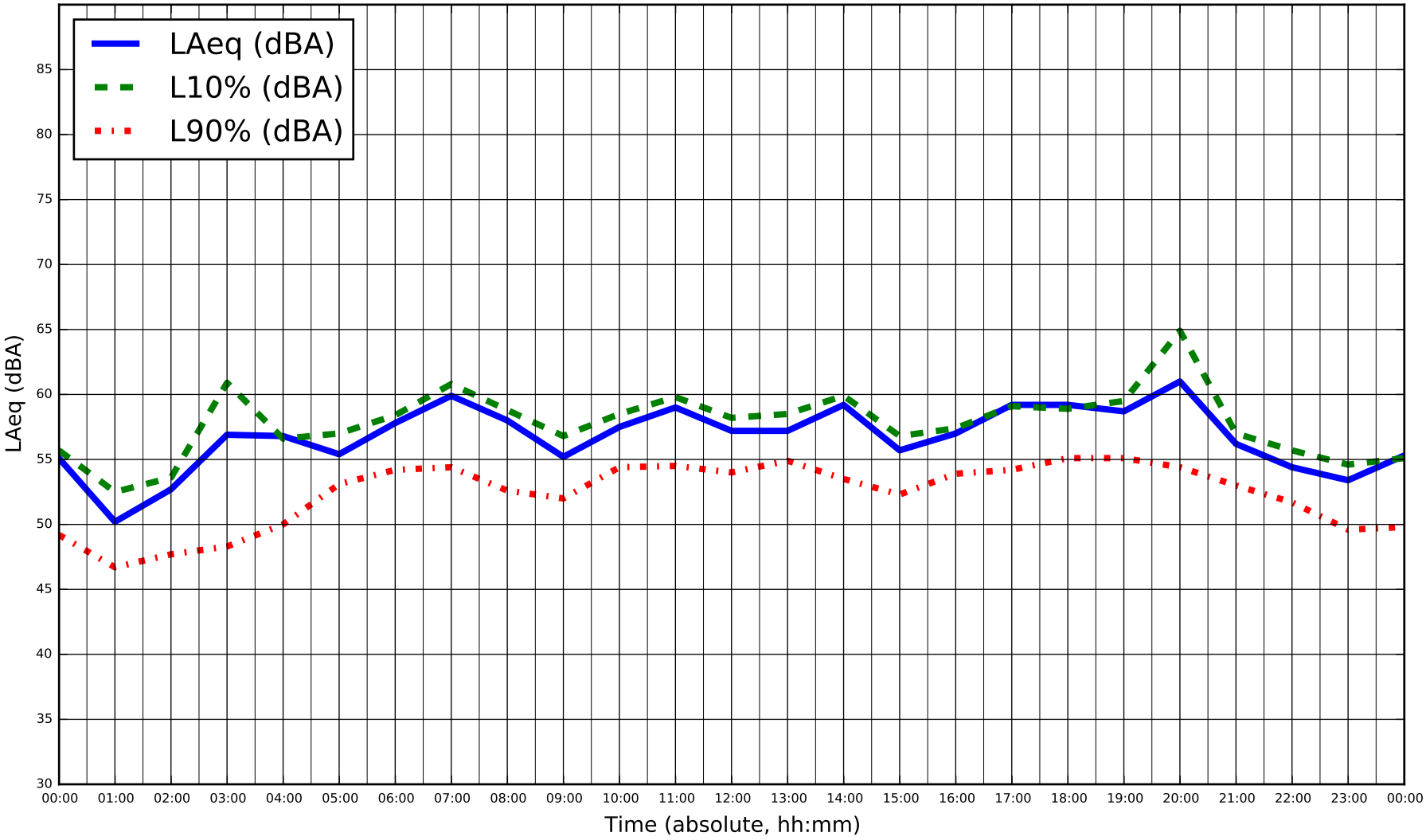

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Wednesday October 14, 2015	Figure: G-10
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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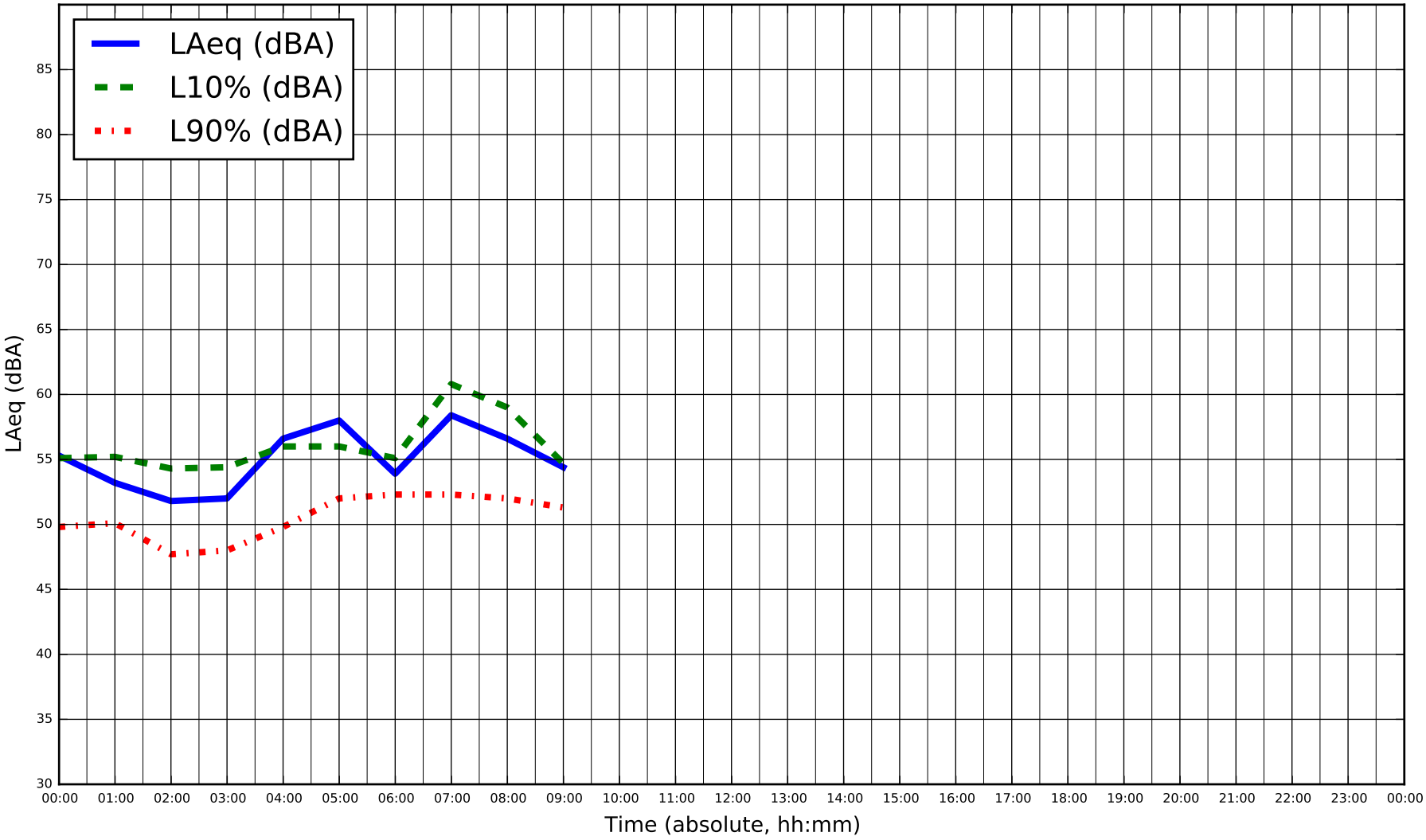

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Thursday October 15, 2015	Figure: G-11
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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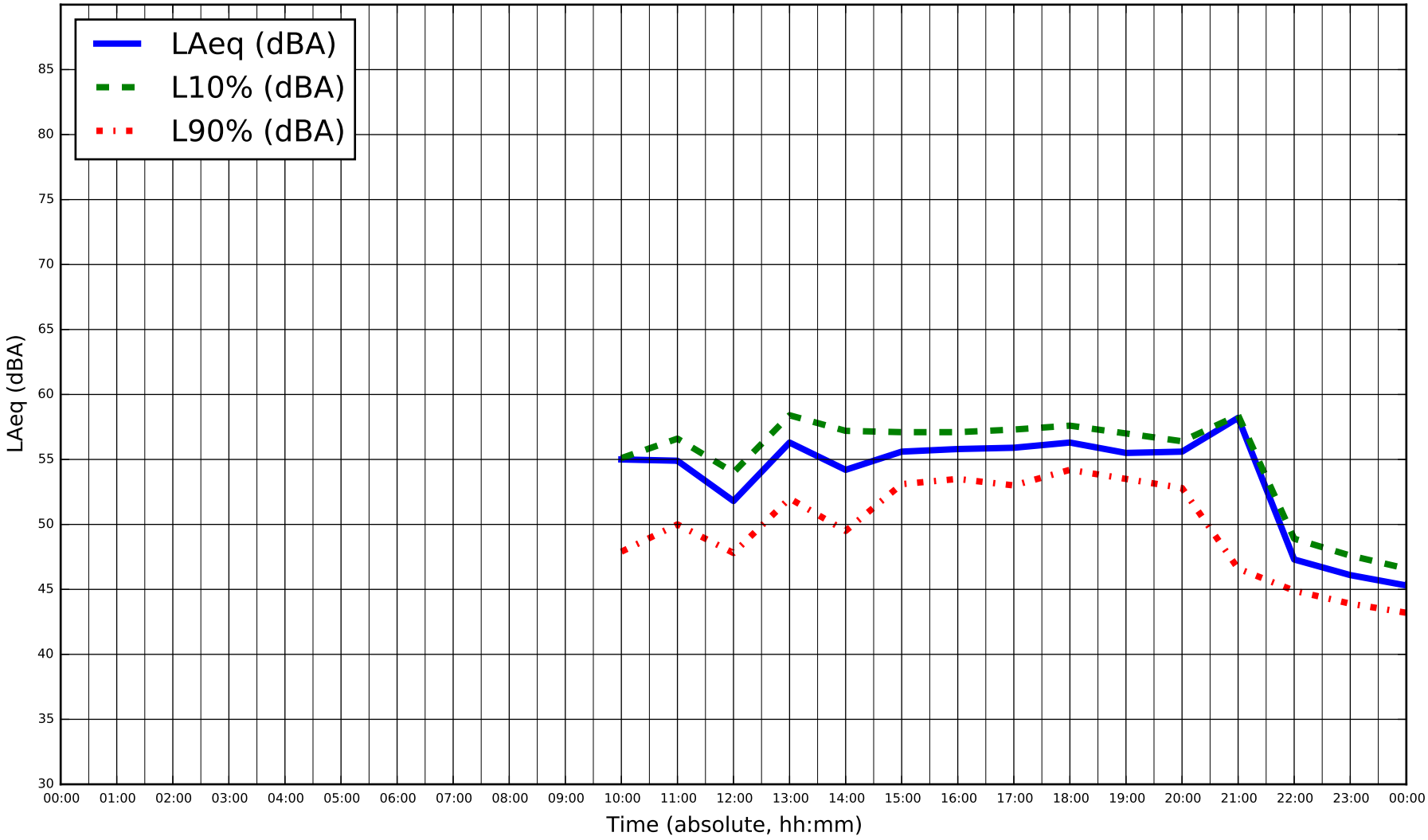

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Monday October 5, 2015	Figure: G-12
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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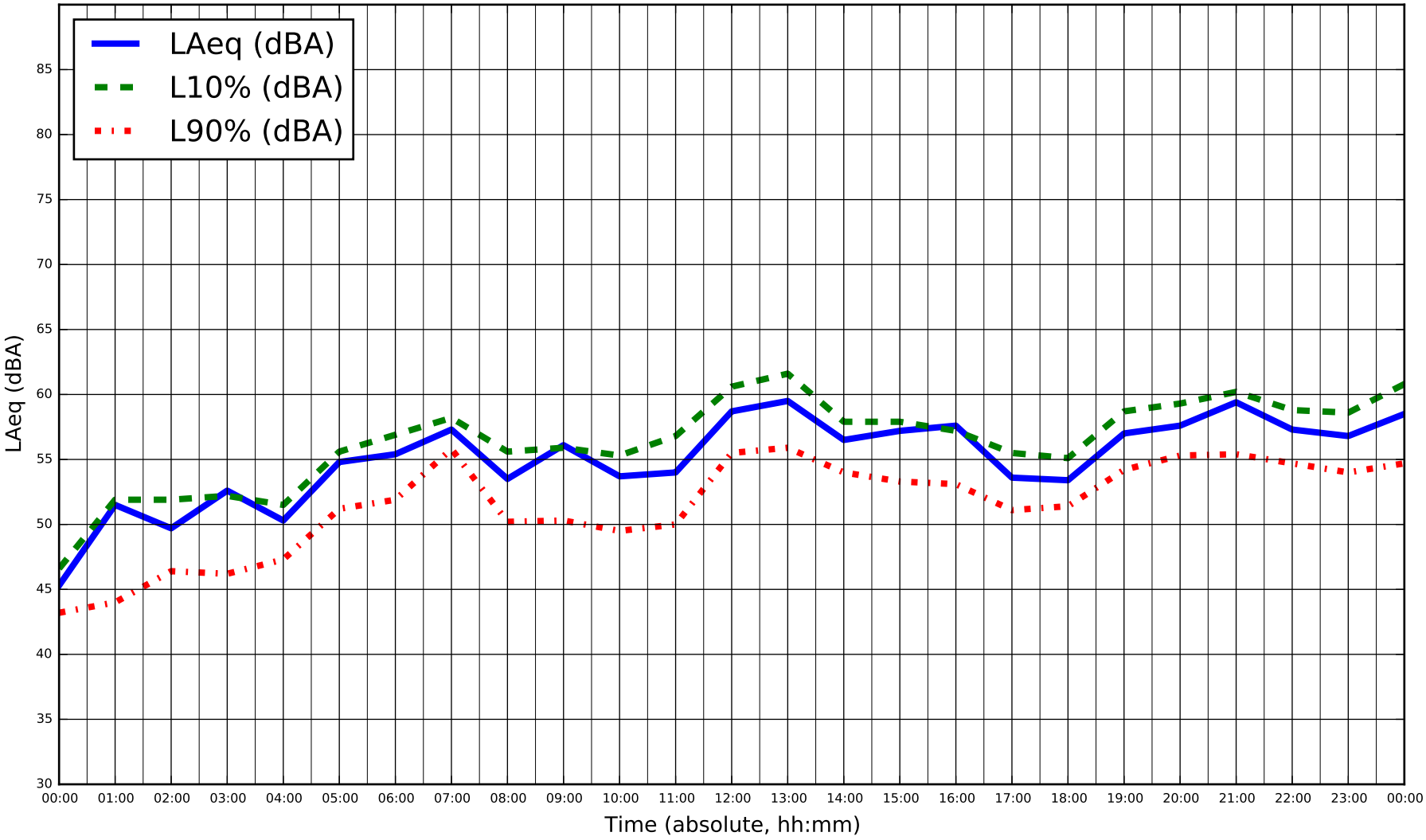
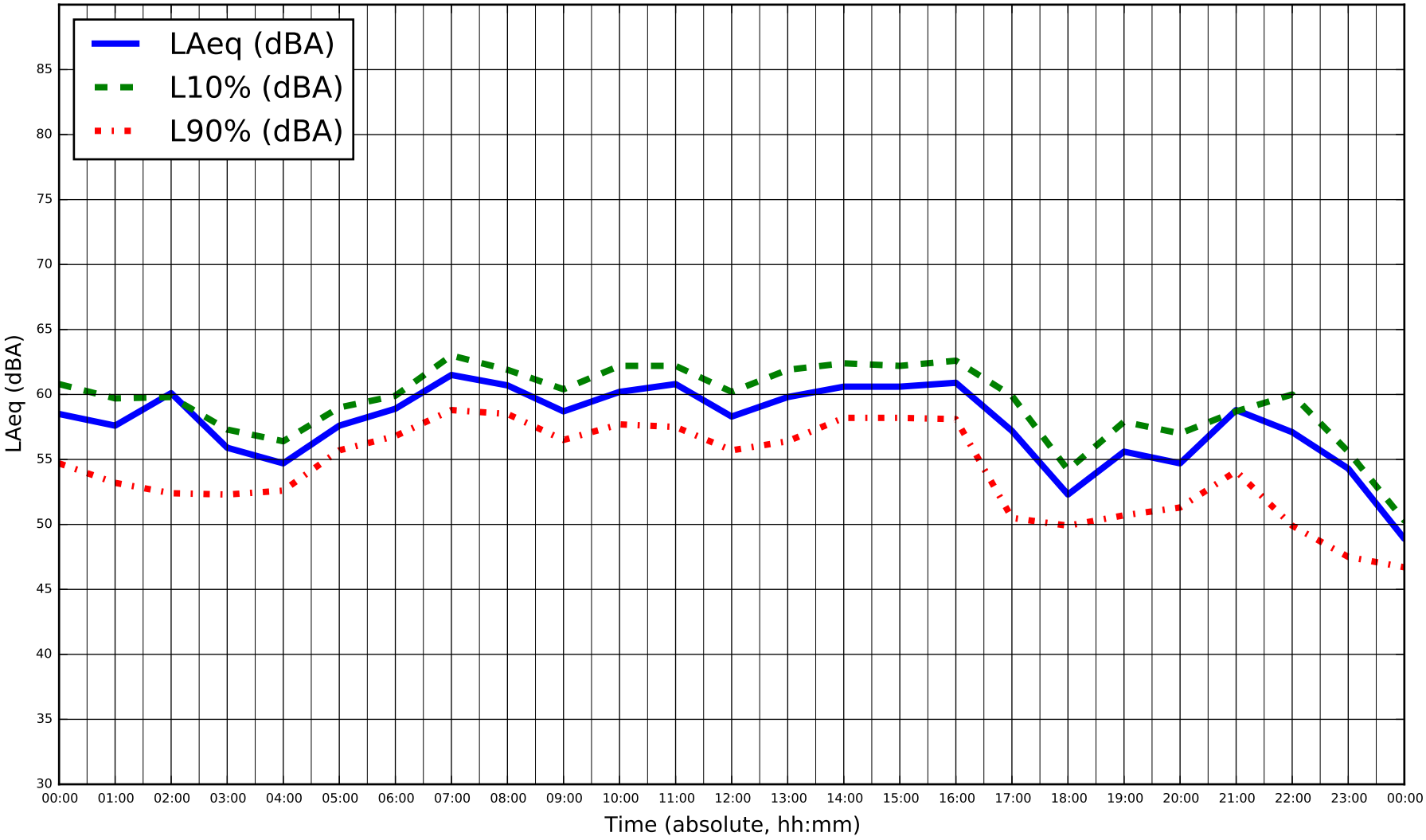


VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Tuesday October 6, 2015	Figure: G-13
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Wednesday October 7, 2015	Figure: G-14
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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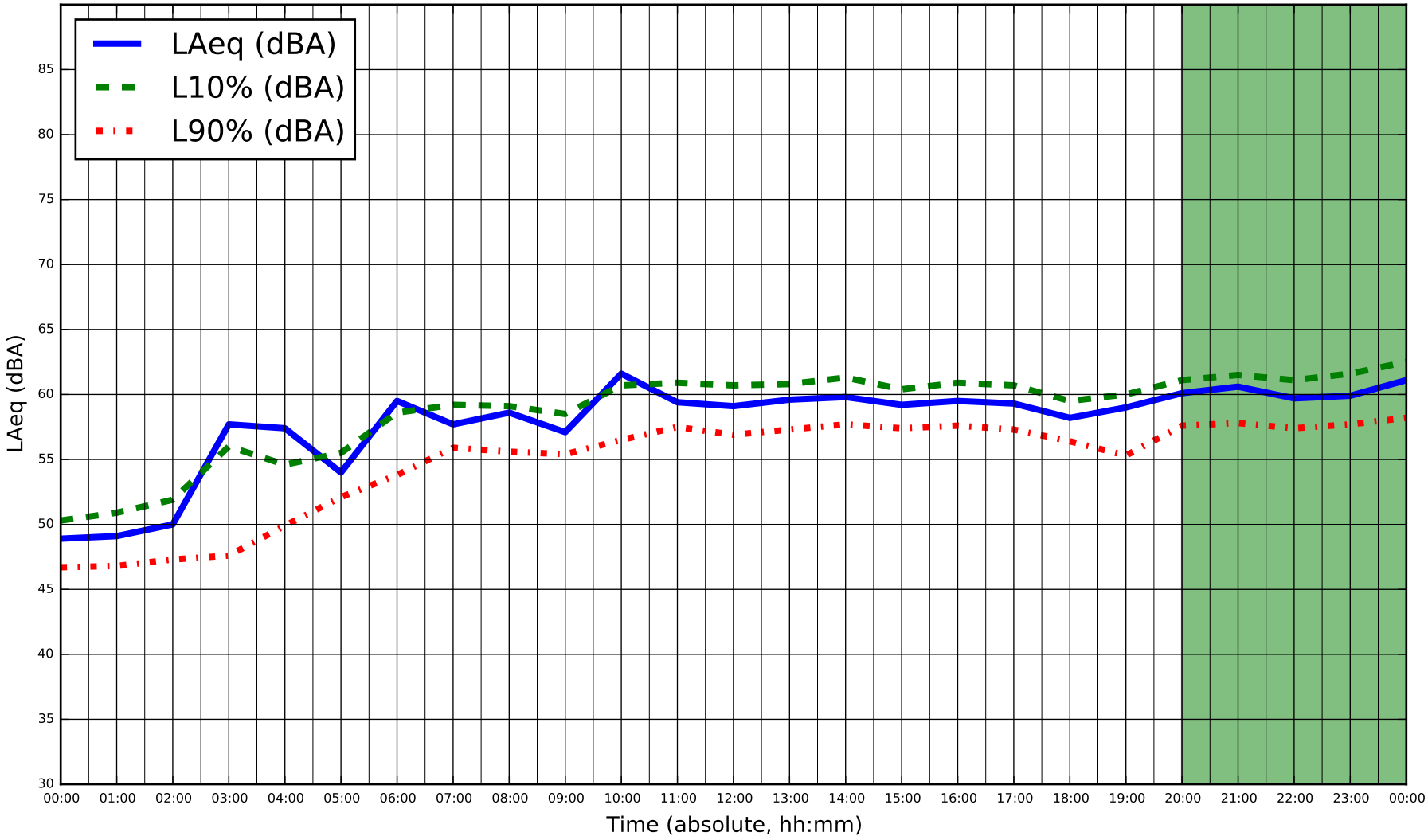

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Thursday October 8, 2015	Figure: G-15
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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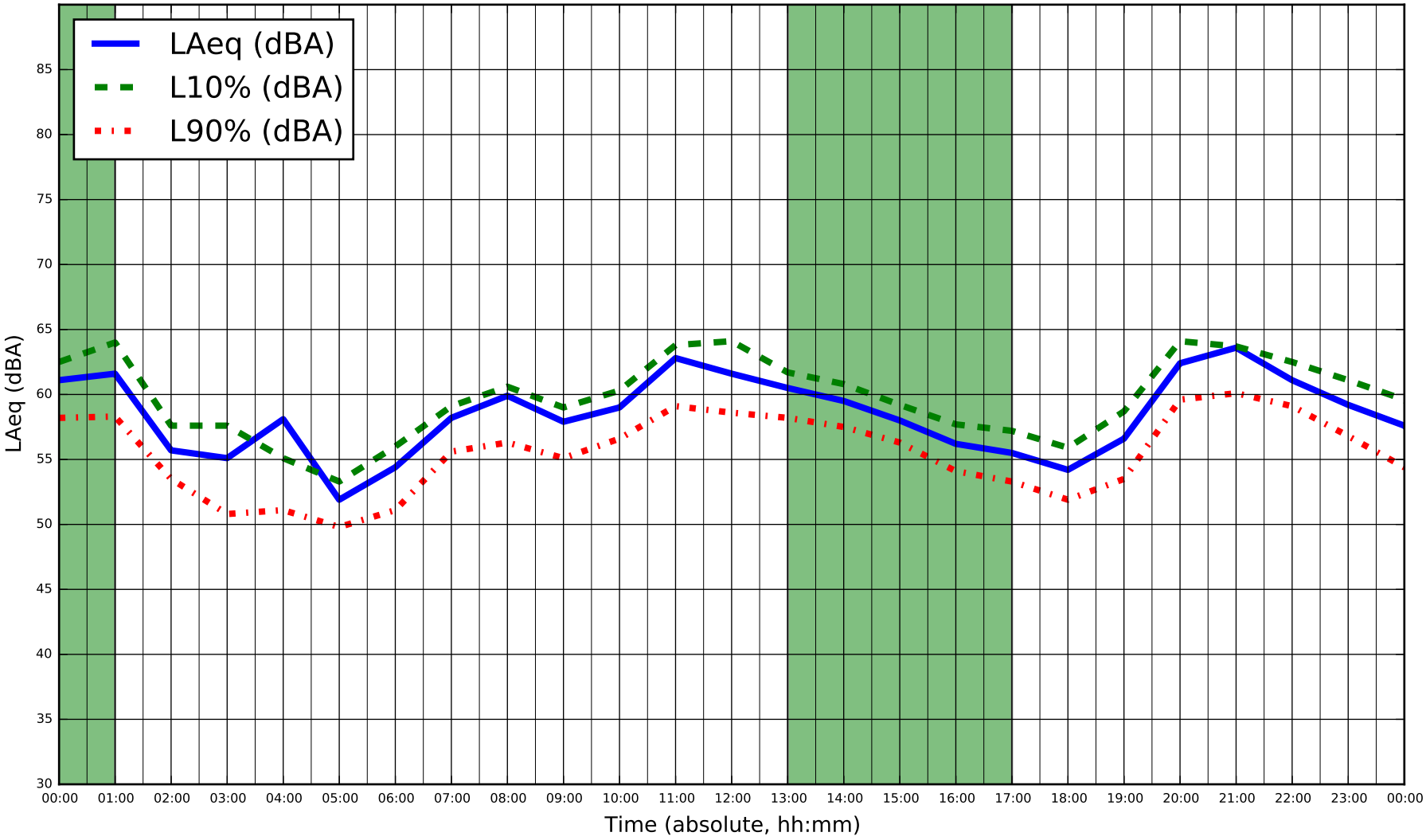

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Friday October 9, 2015	Figure: G-16
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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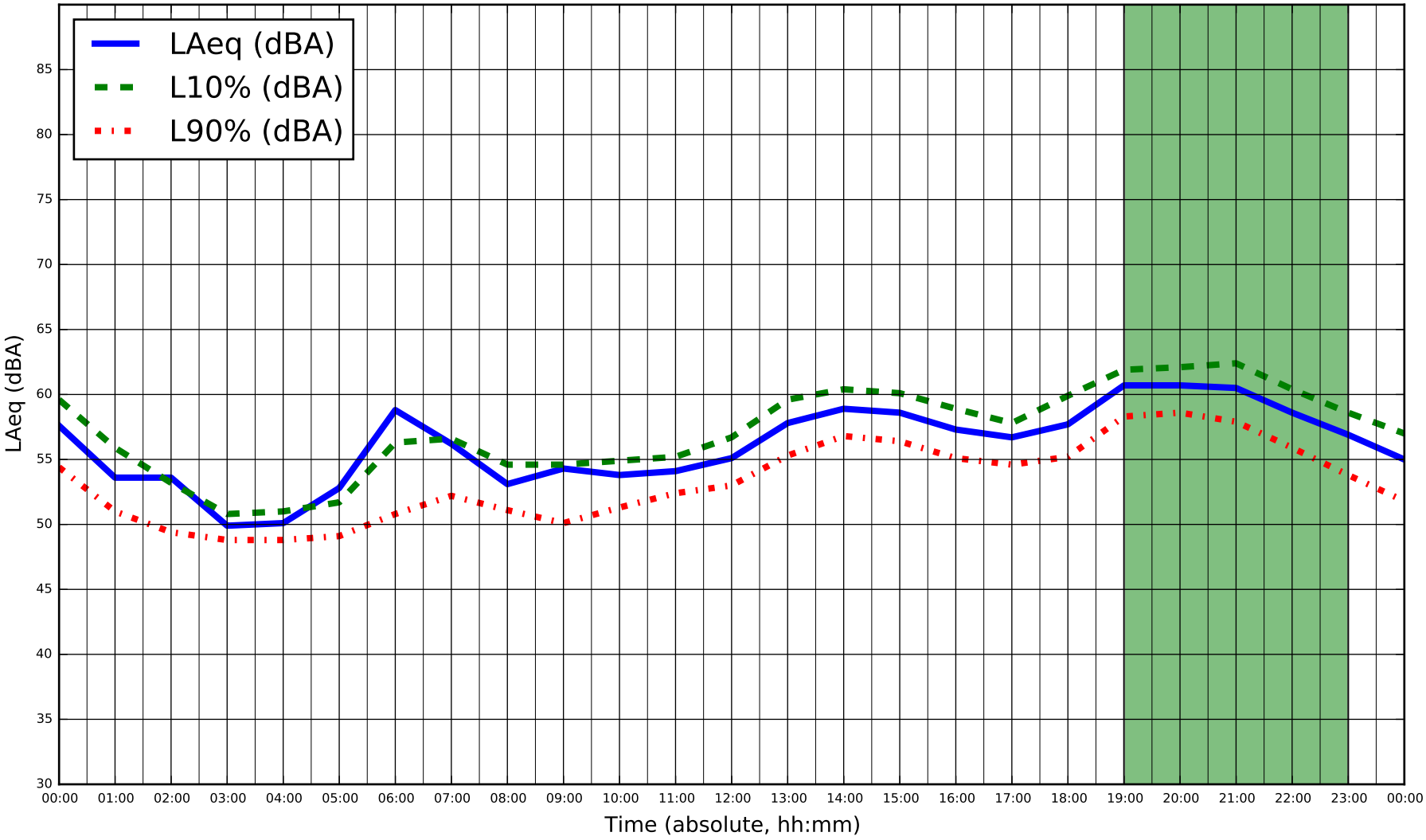
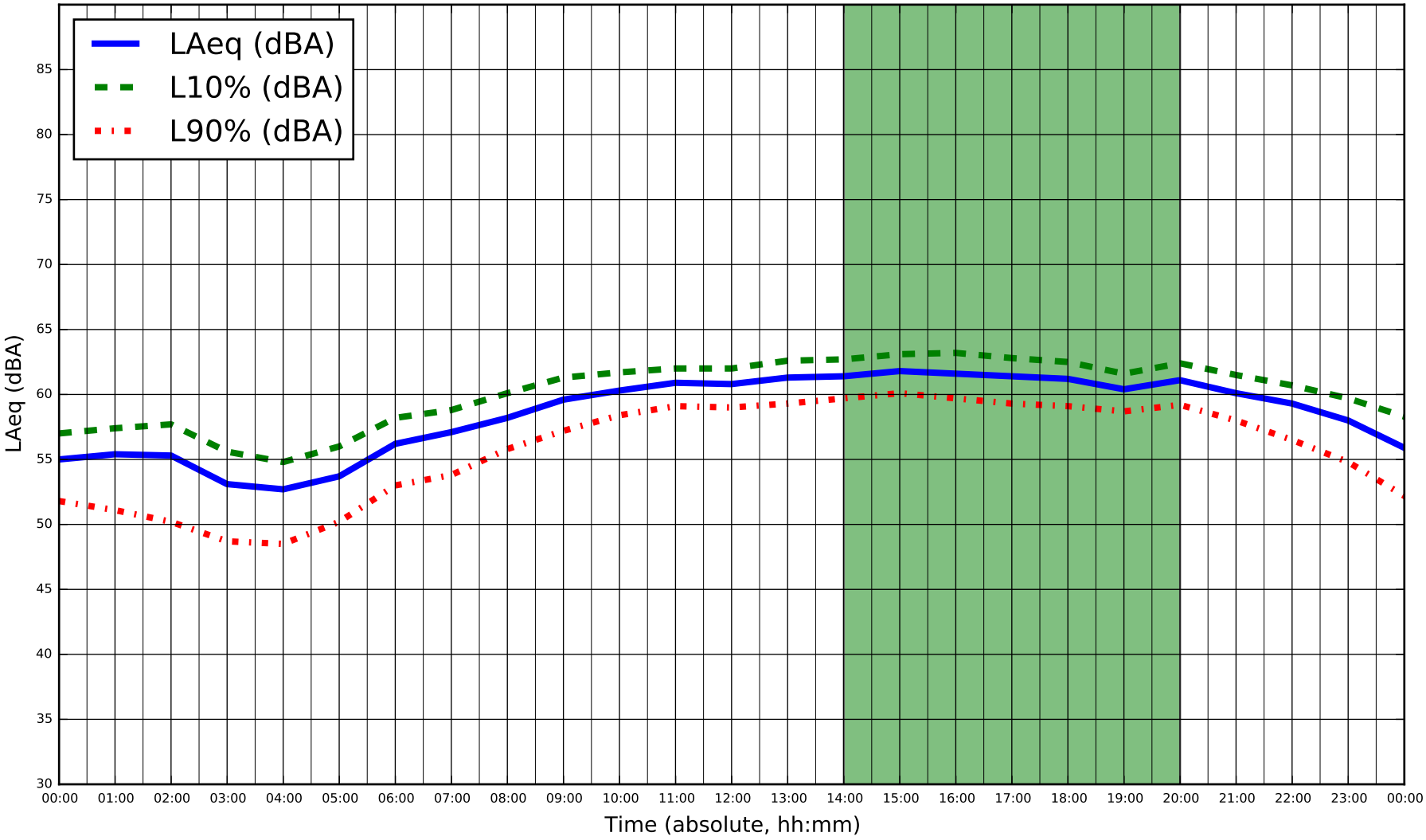


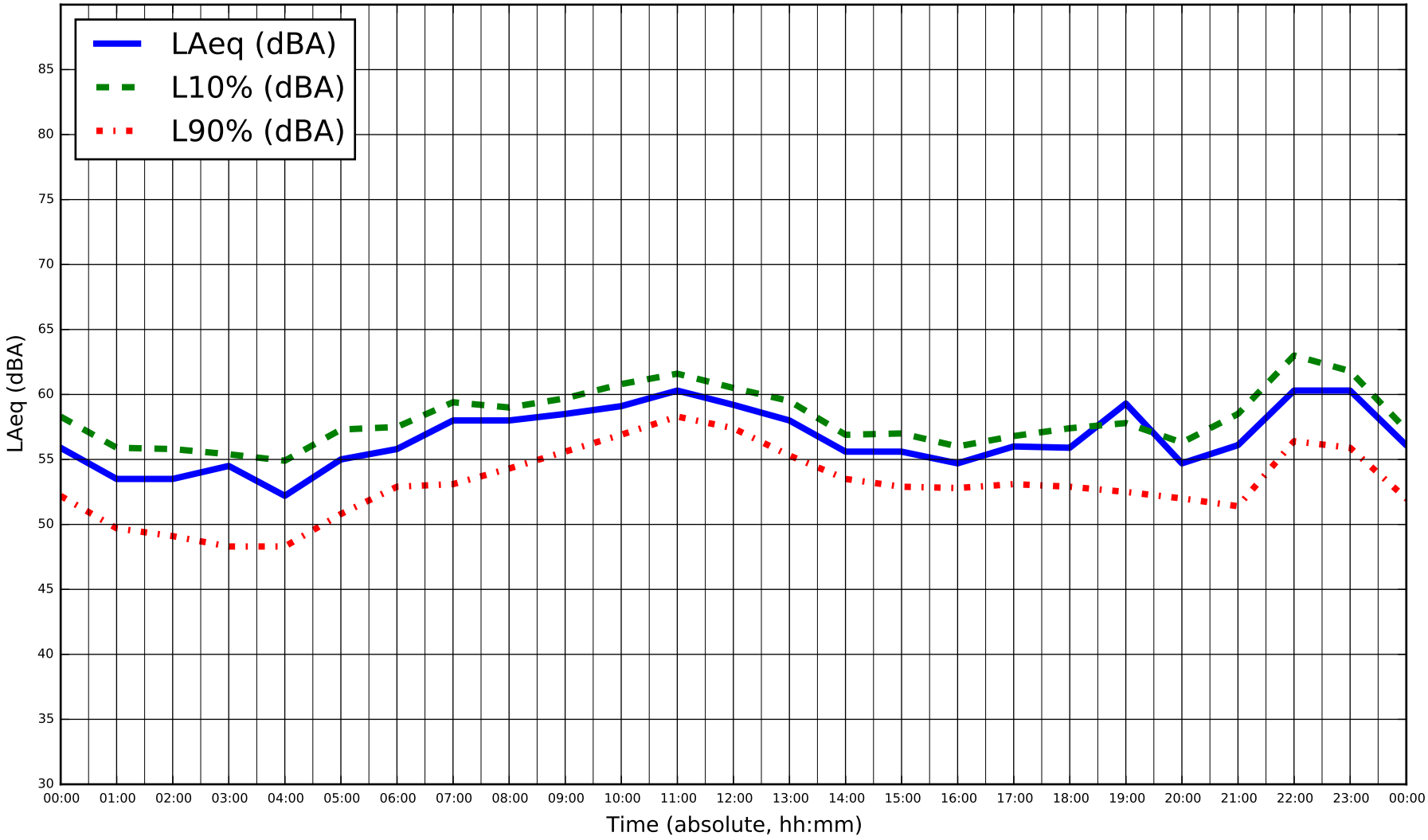
* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Saturday October 10, 2015	Figure: G-17
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Sunday October 11, 2015	Figure: G-18
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Monday October 12, 2015	Figure: G-19
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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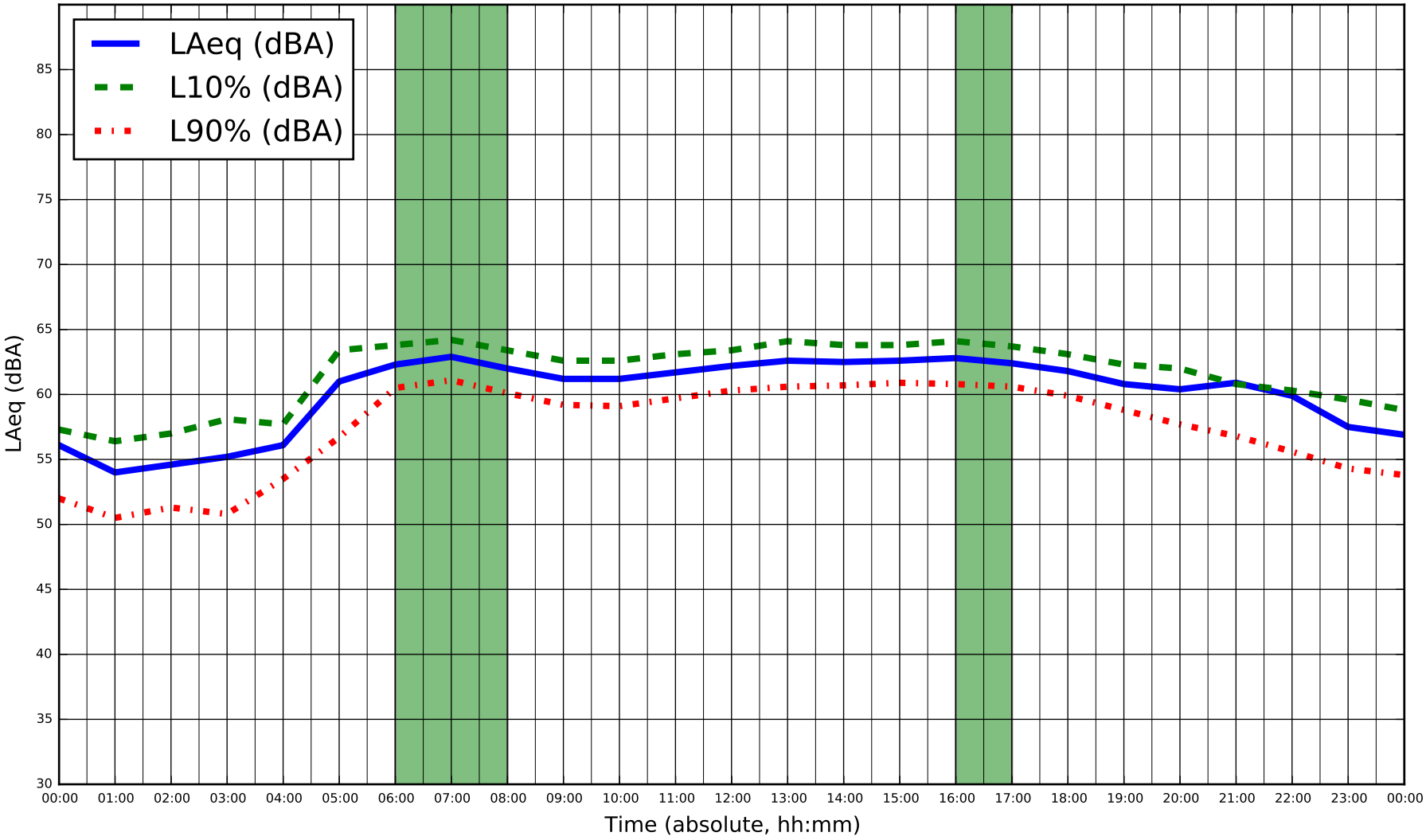

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Tuesday October 13, 2015	Figure: G-20
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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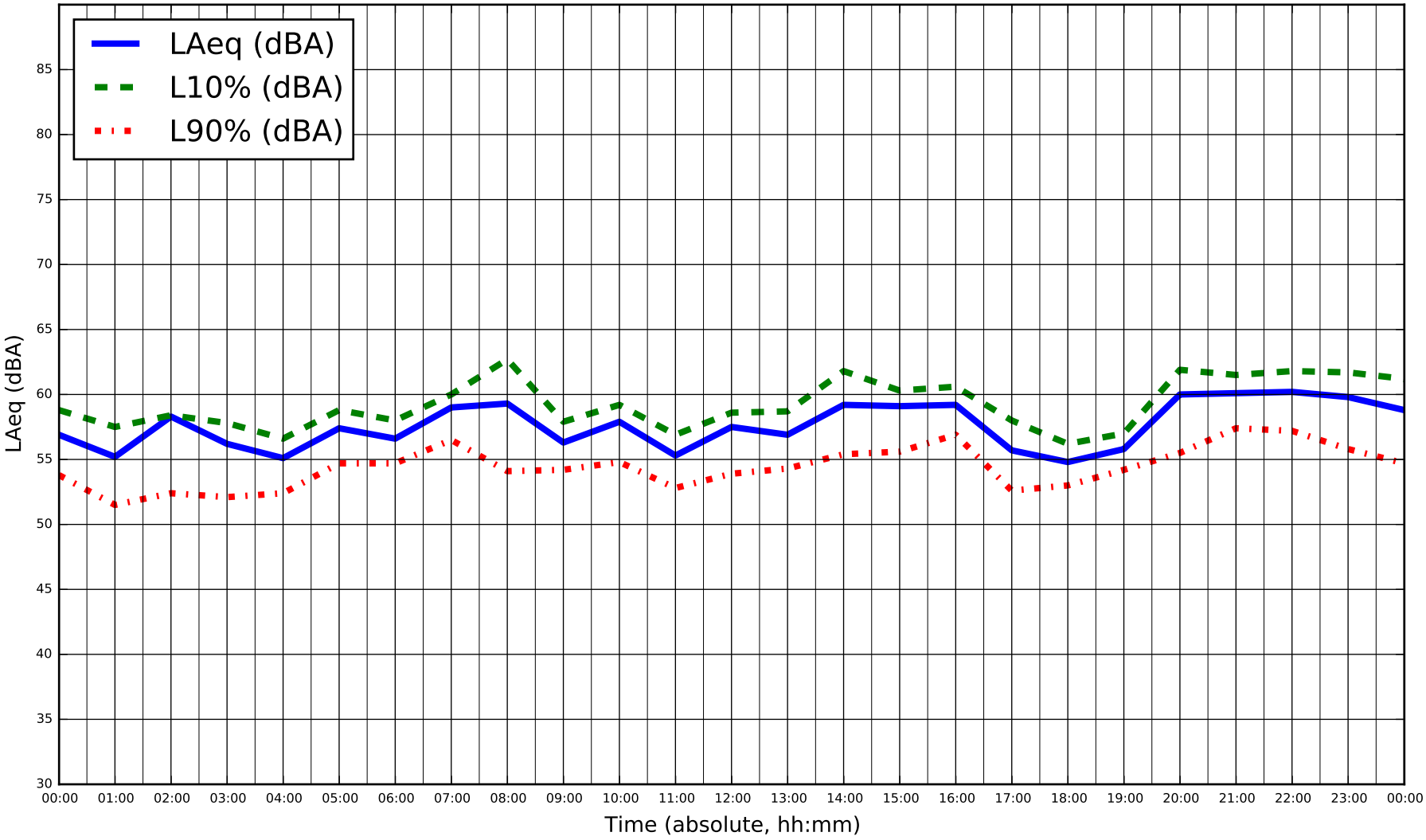

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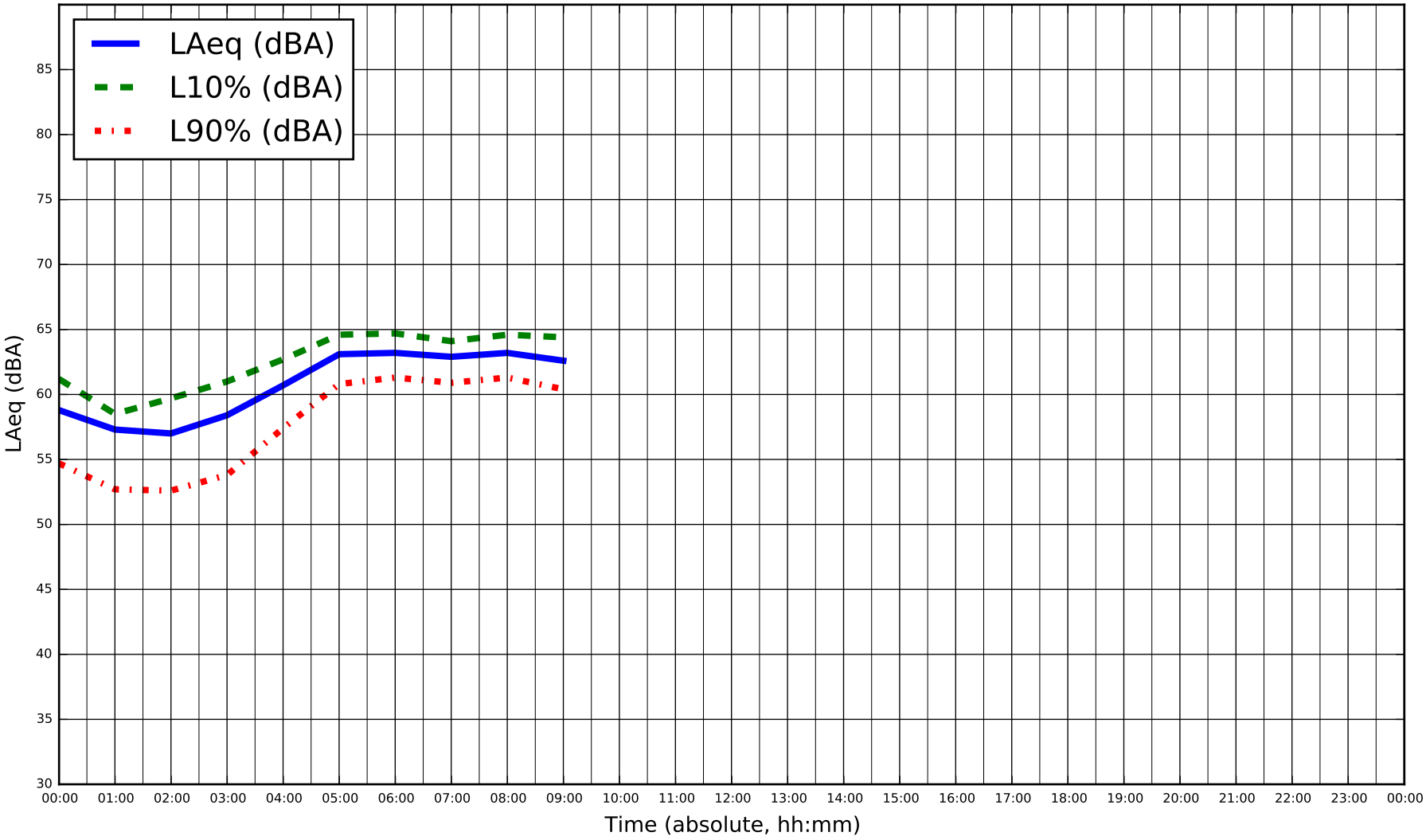

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Thursday October 15, 2015	Figure: G-22
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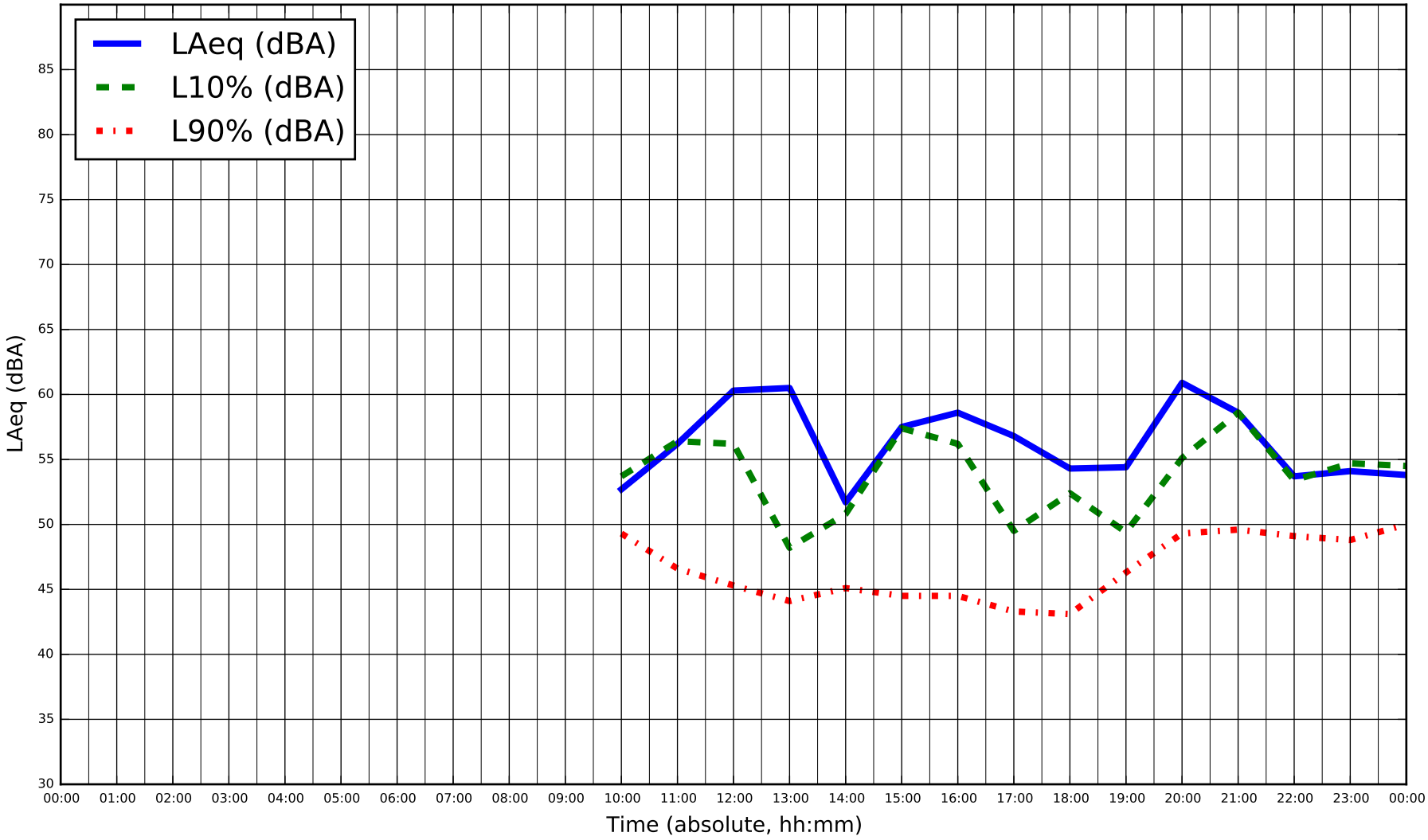

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	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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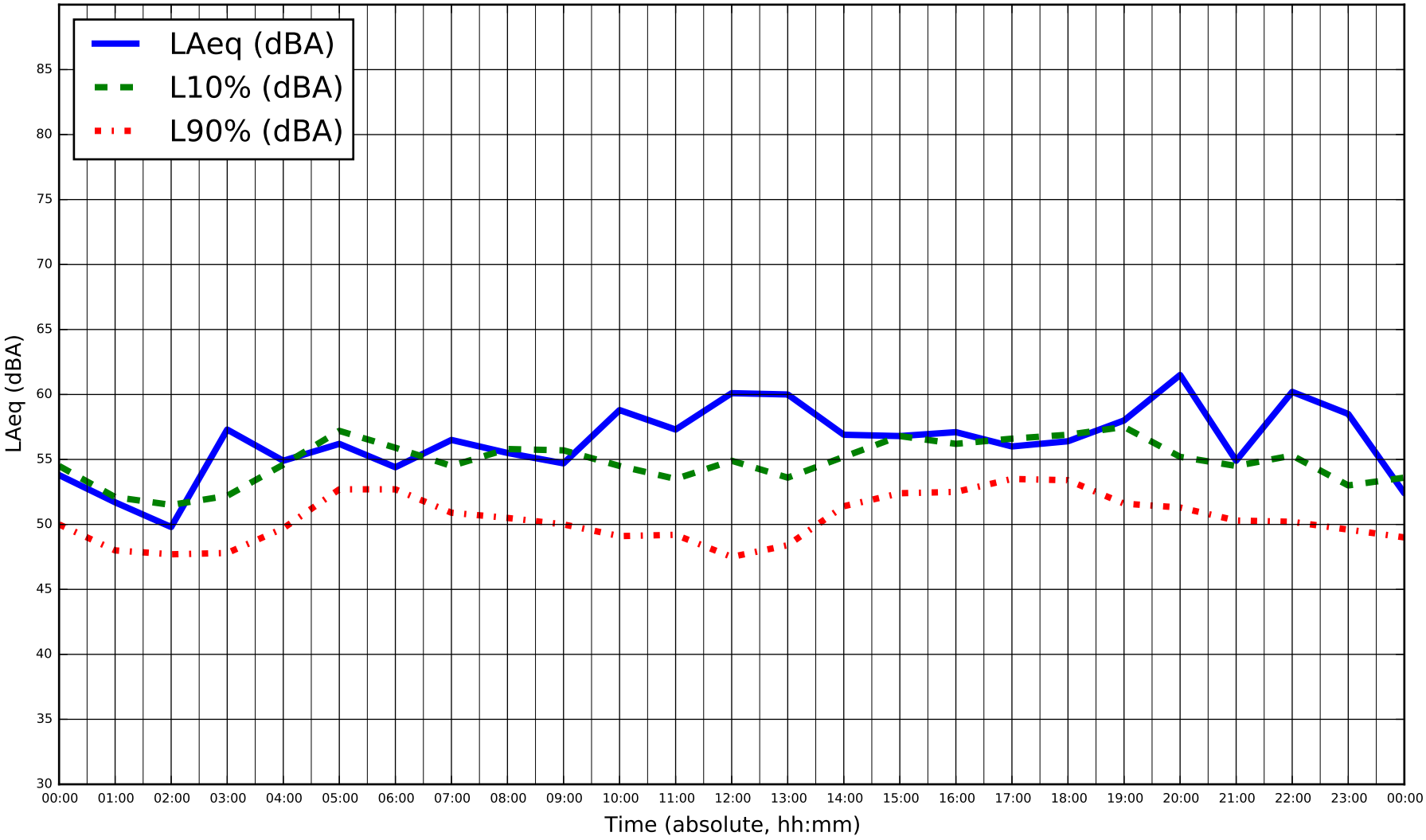

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	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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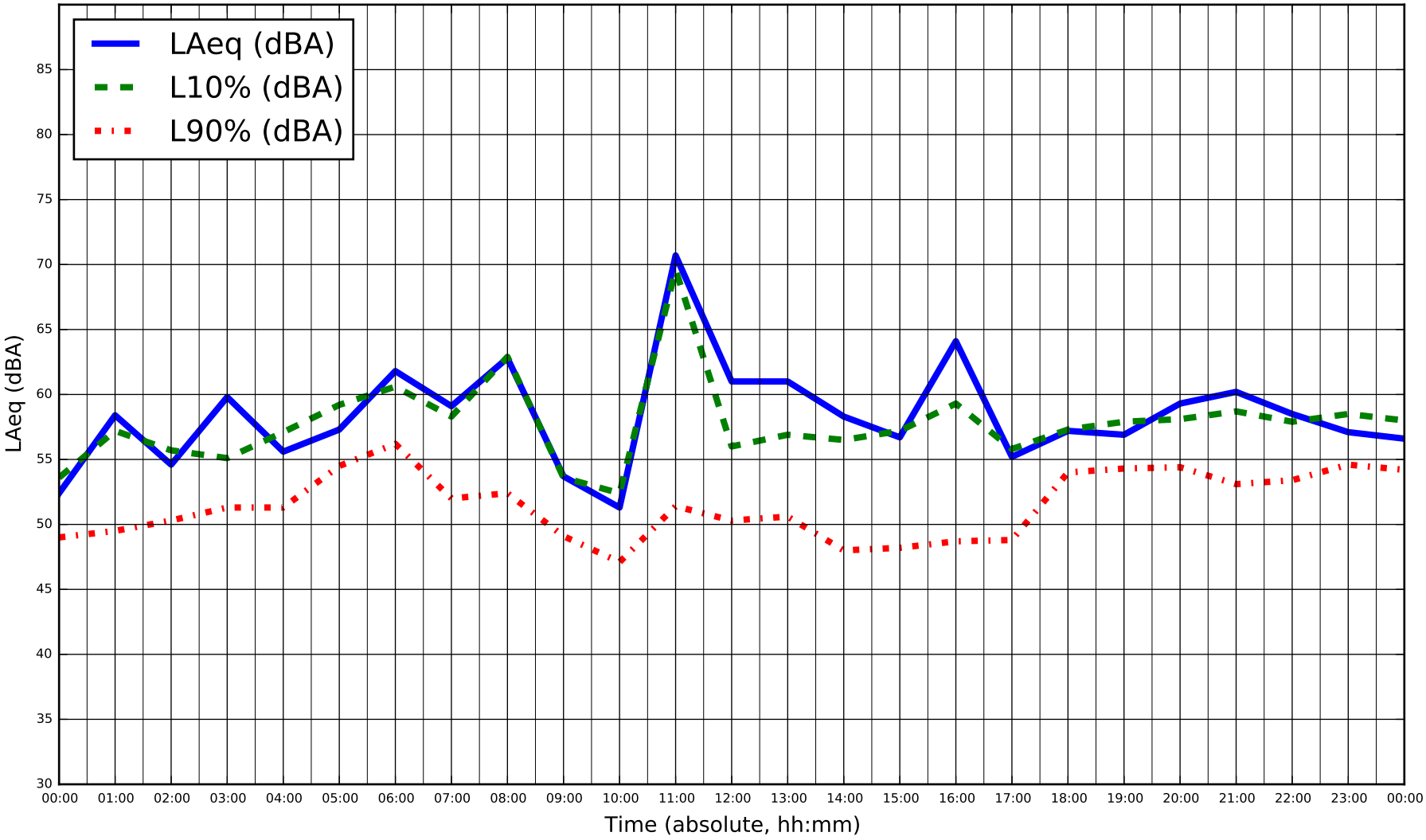

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Wednesday October 7, 2015	Figure: G-25
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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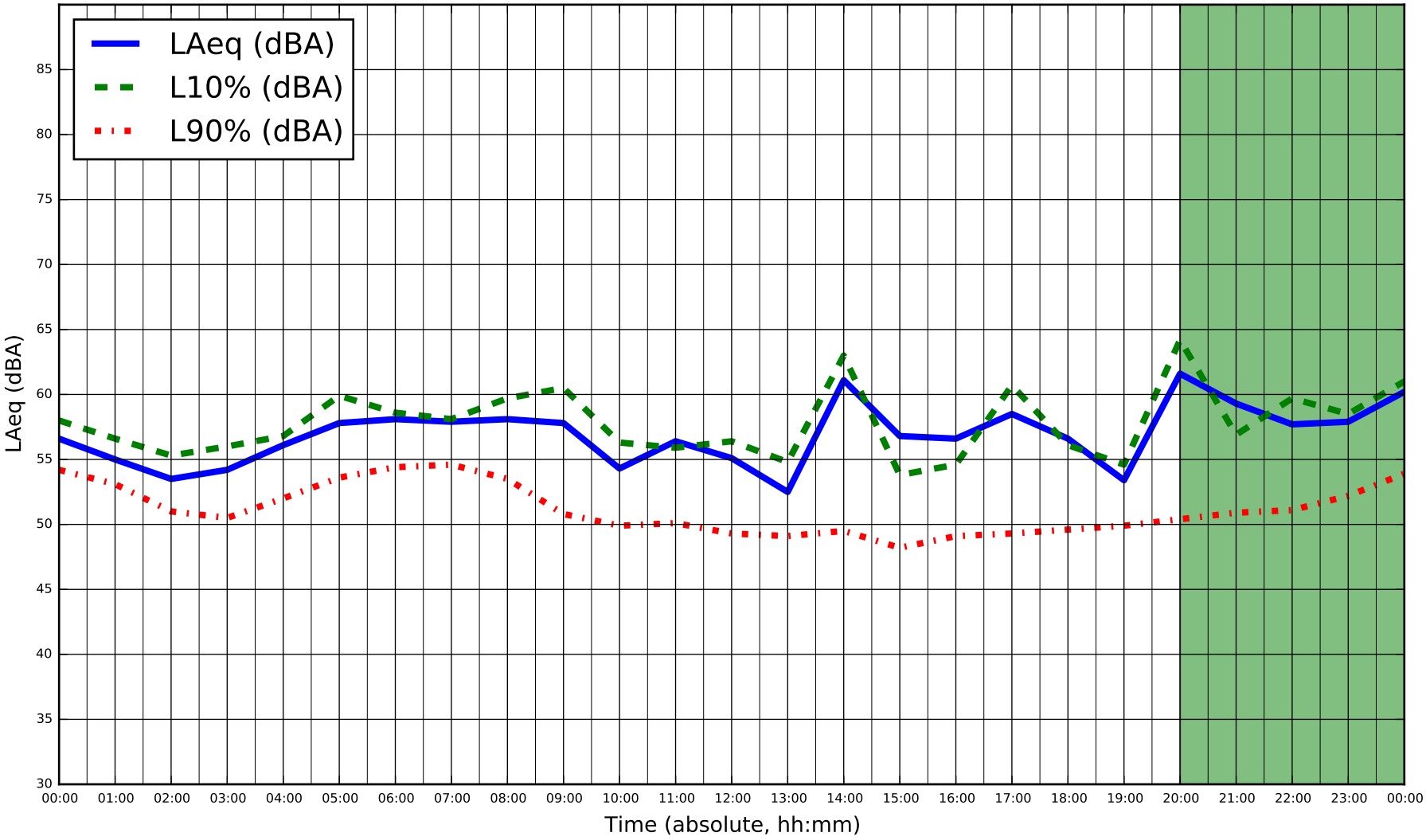

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Thursday October 8, 2015	Figure: G-26
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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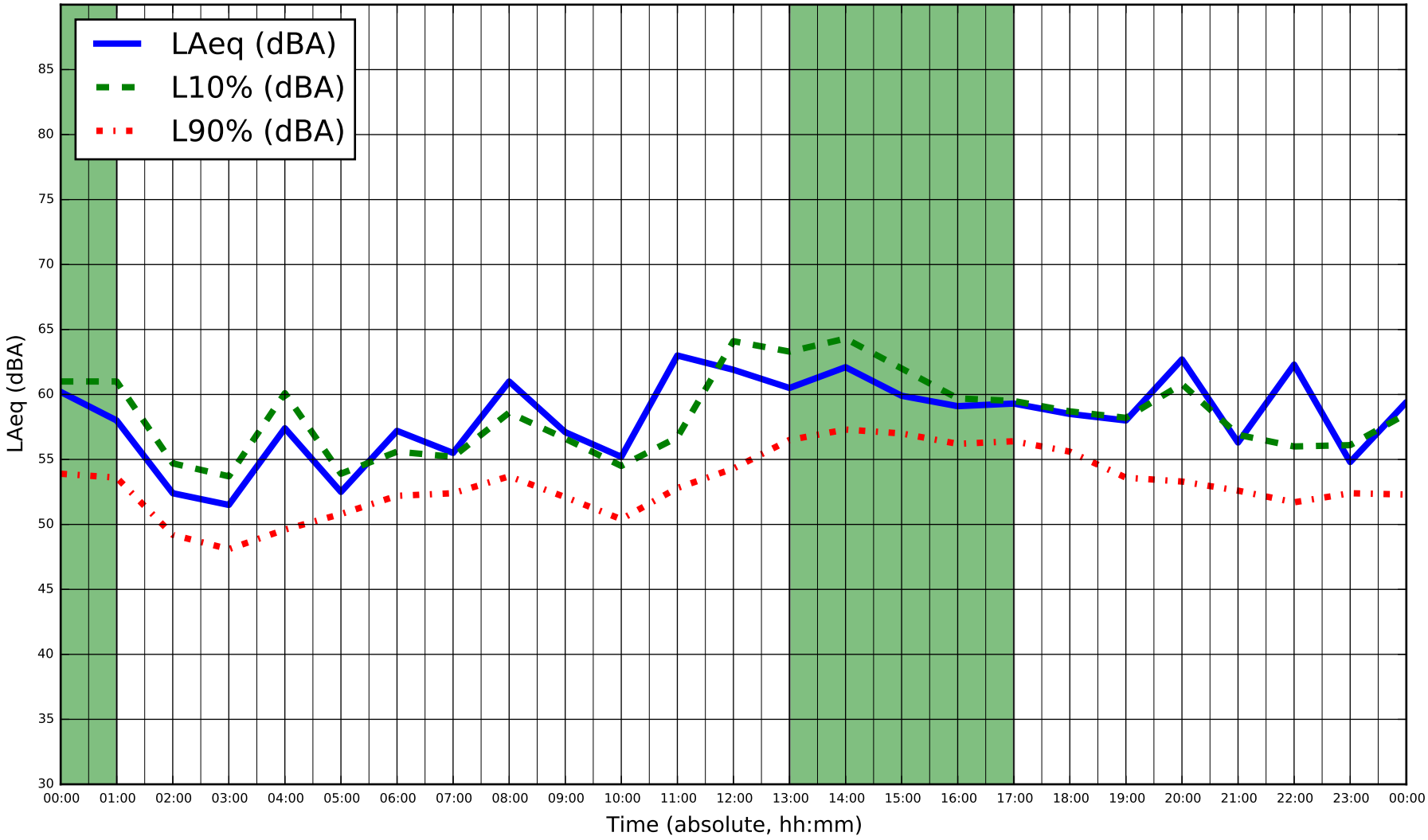

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Friday October 9, 2015	Figure: G-27
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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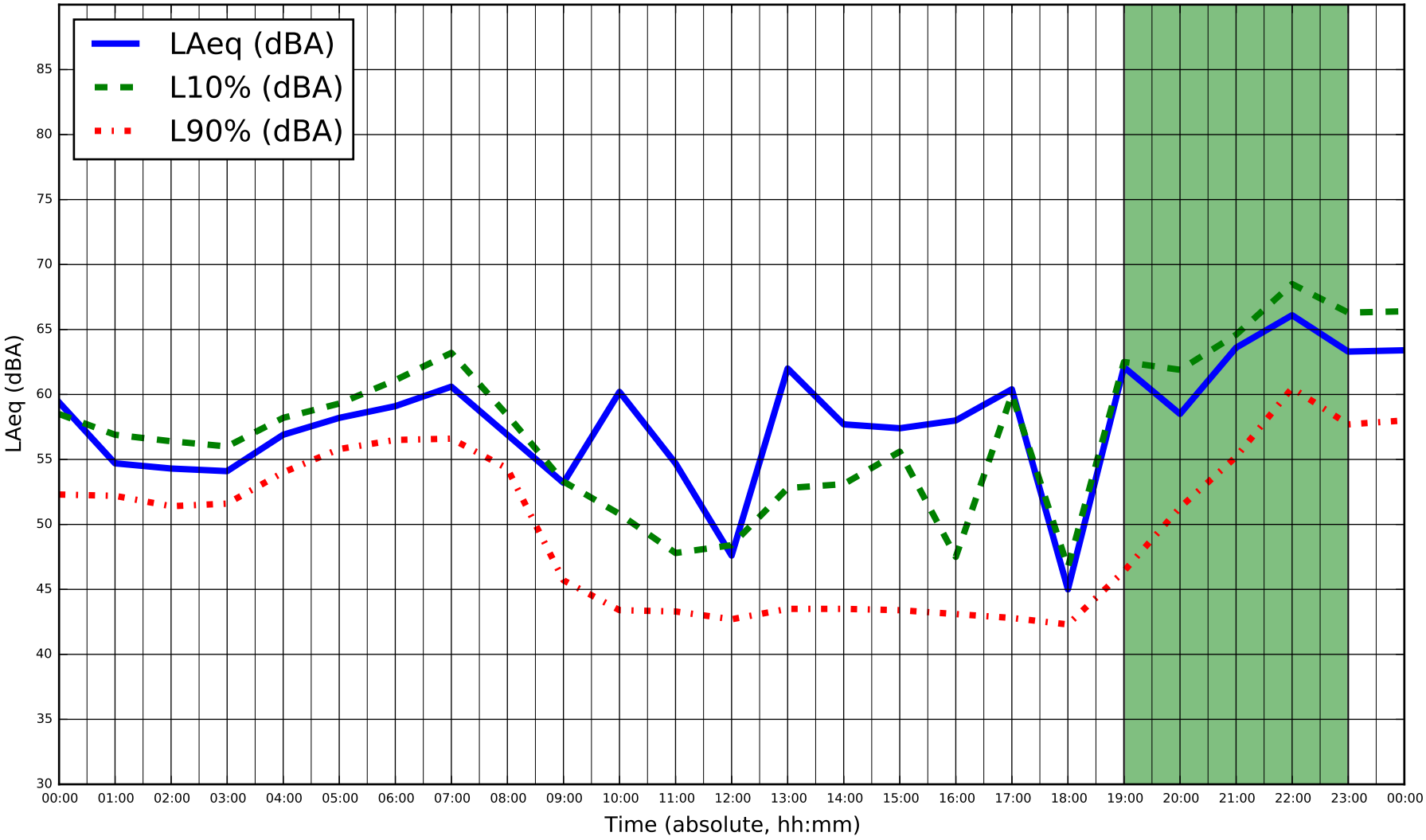

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Saturday October 10, 2015	Figure: G-28
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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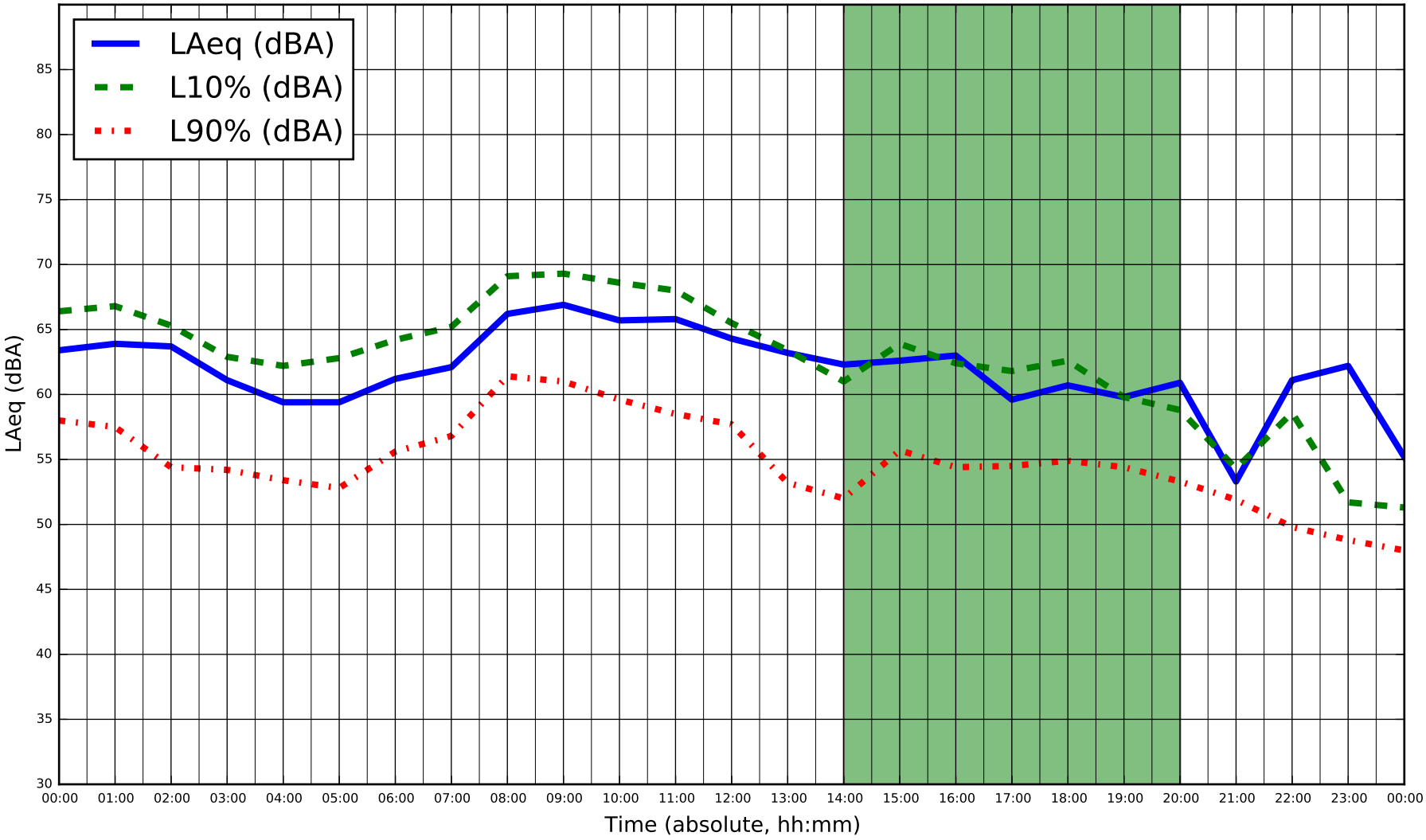

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Sunday October 11, 2015	Figure: G-29
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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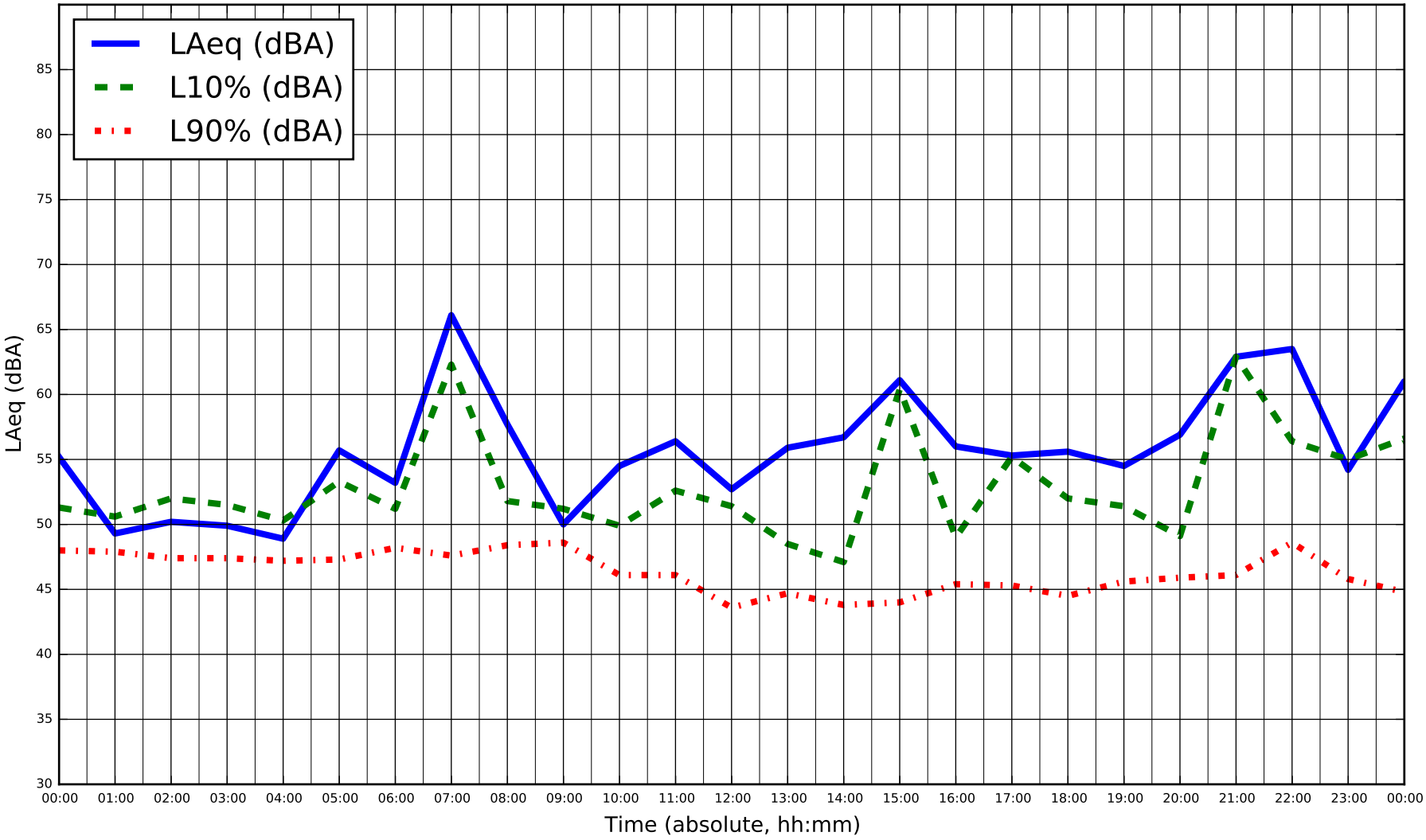

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Monday October 12, 2015	Figure: G-30
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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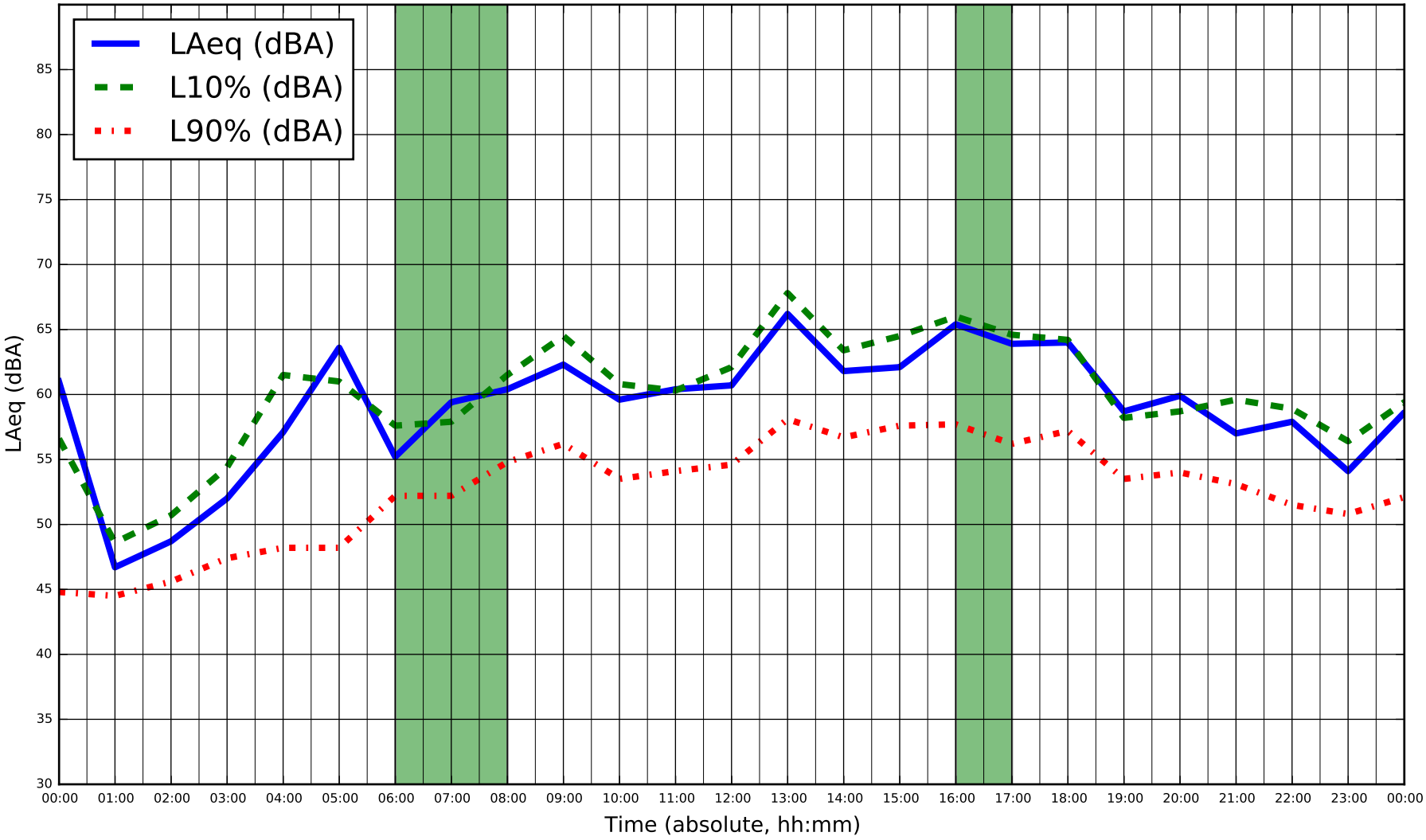

* Highlighted hours indicate sustained winds over 20 km/hr during monitoring

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Tuesday October 13, 2015	Figure: G-31
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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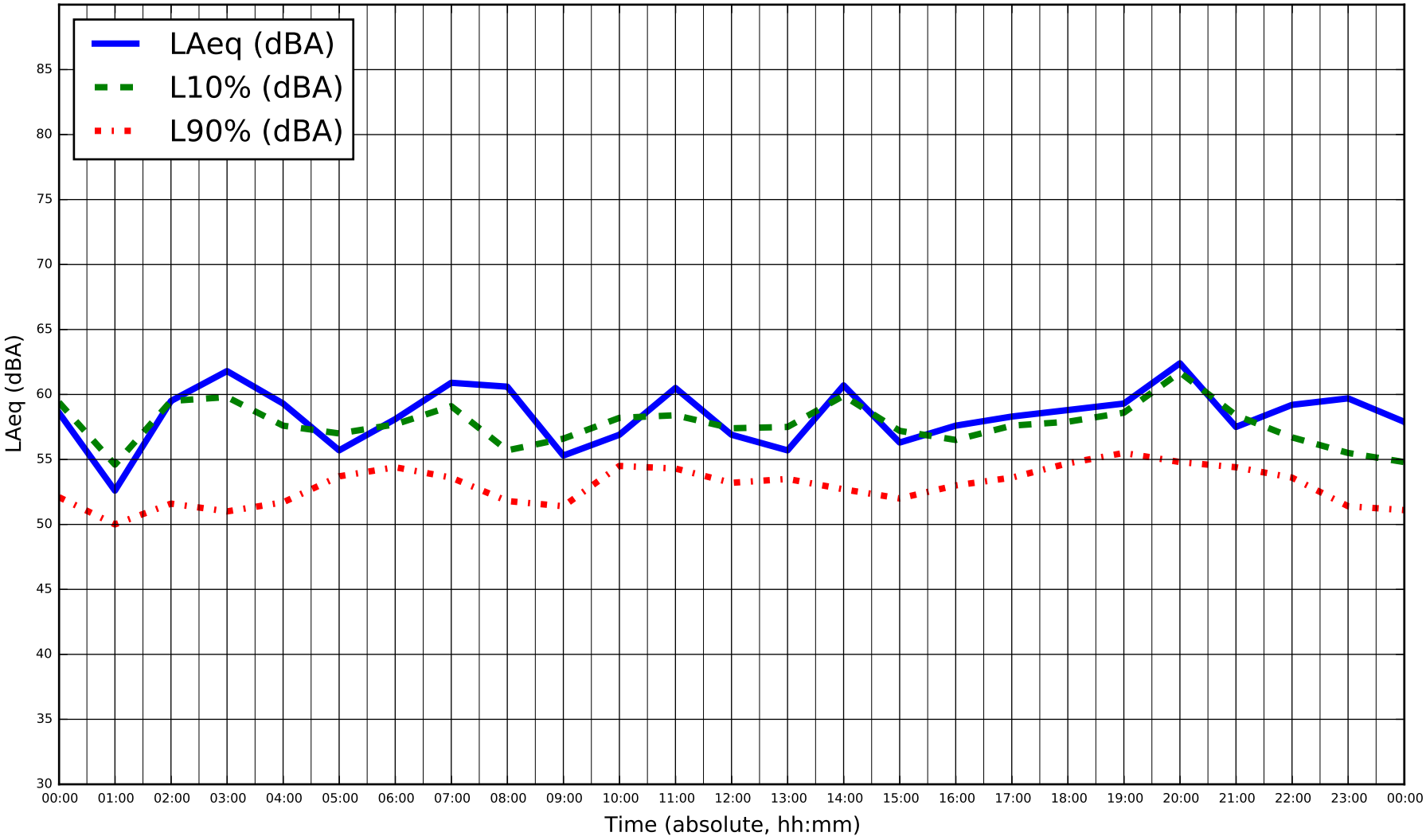

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Wednesday October 14, 2015	Figure: G-32
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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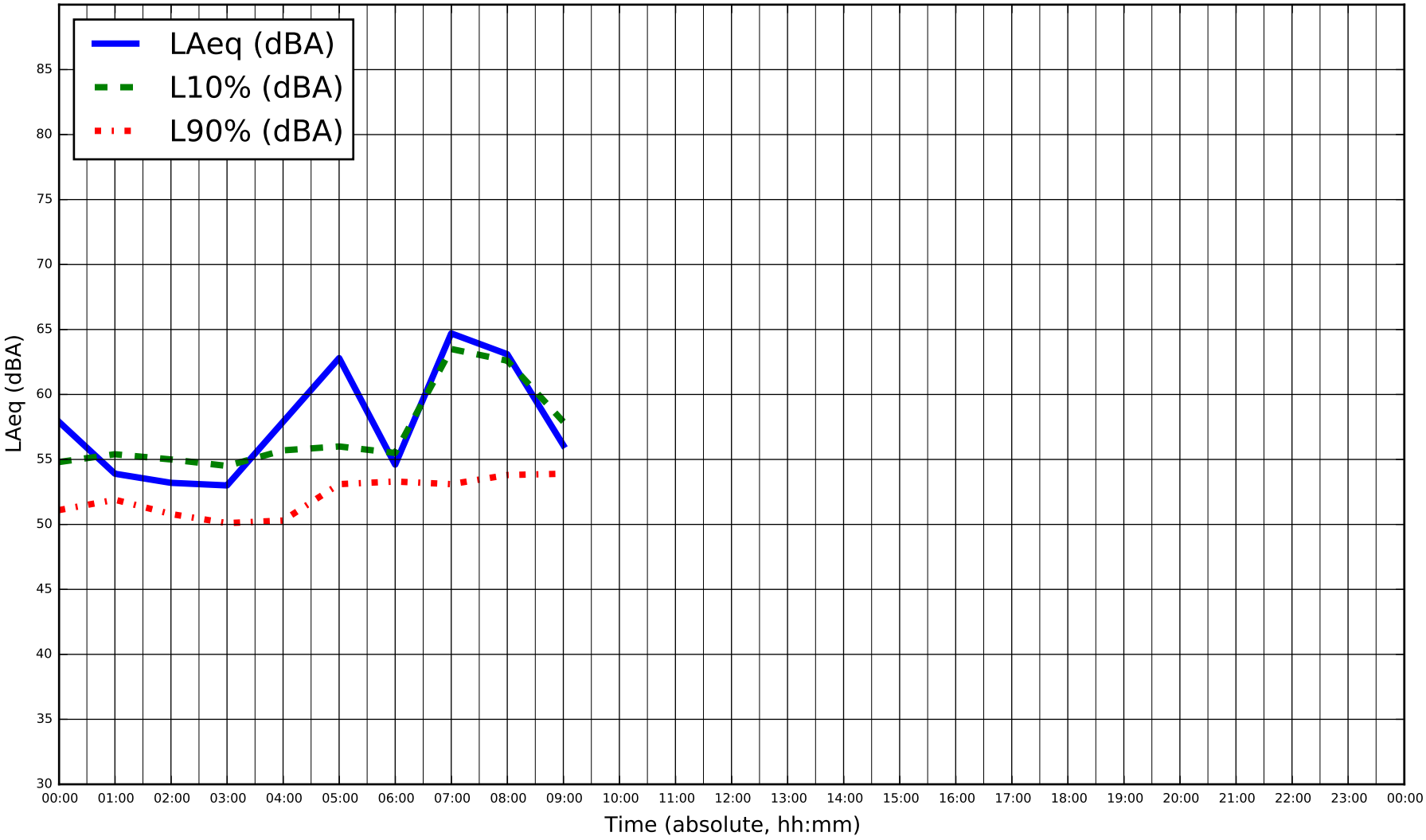

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Thursday October 15, 2015	Figure: G-33
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-100	

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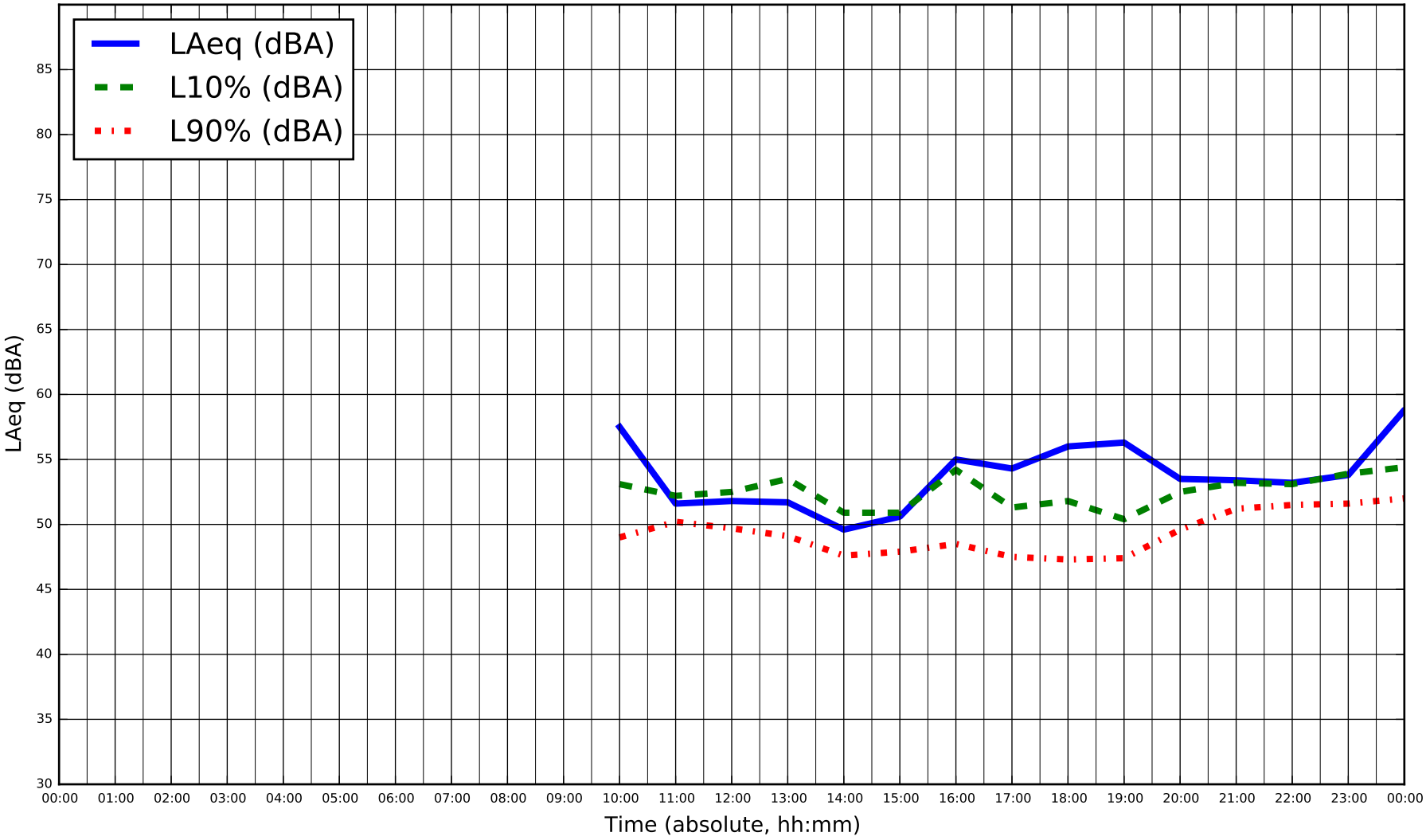
APPENDIX H

SEPTEMBER 2016 POST-OPERATIONAL SOUND MEASUREMENT RESULTS



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Tuesday, Sept 6, 2016	Figure: H-1
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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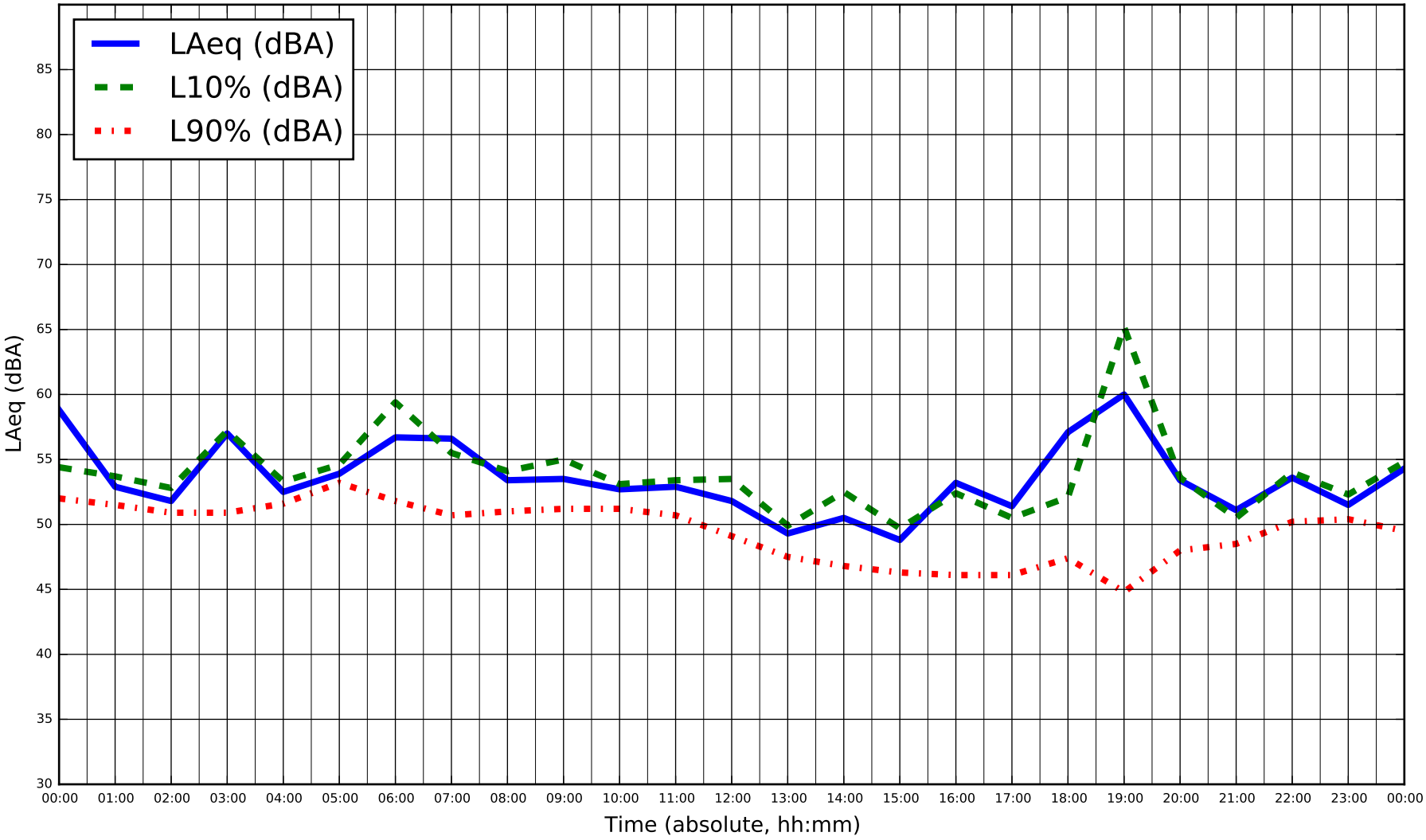

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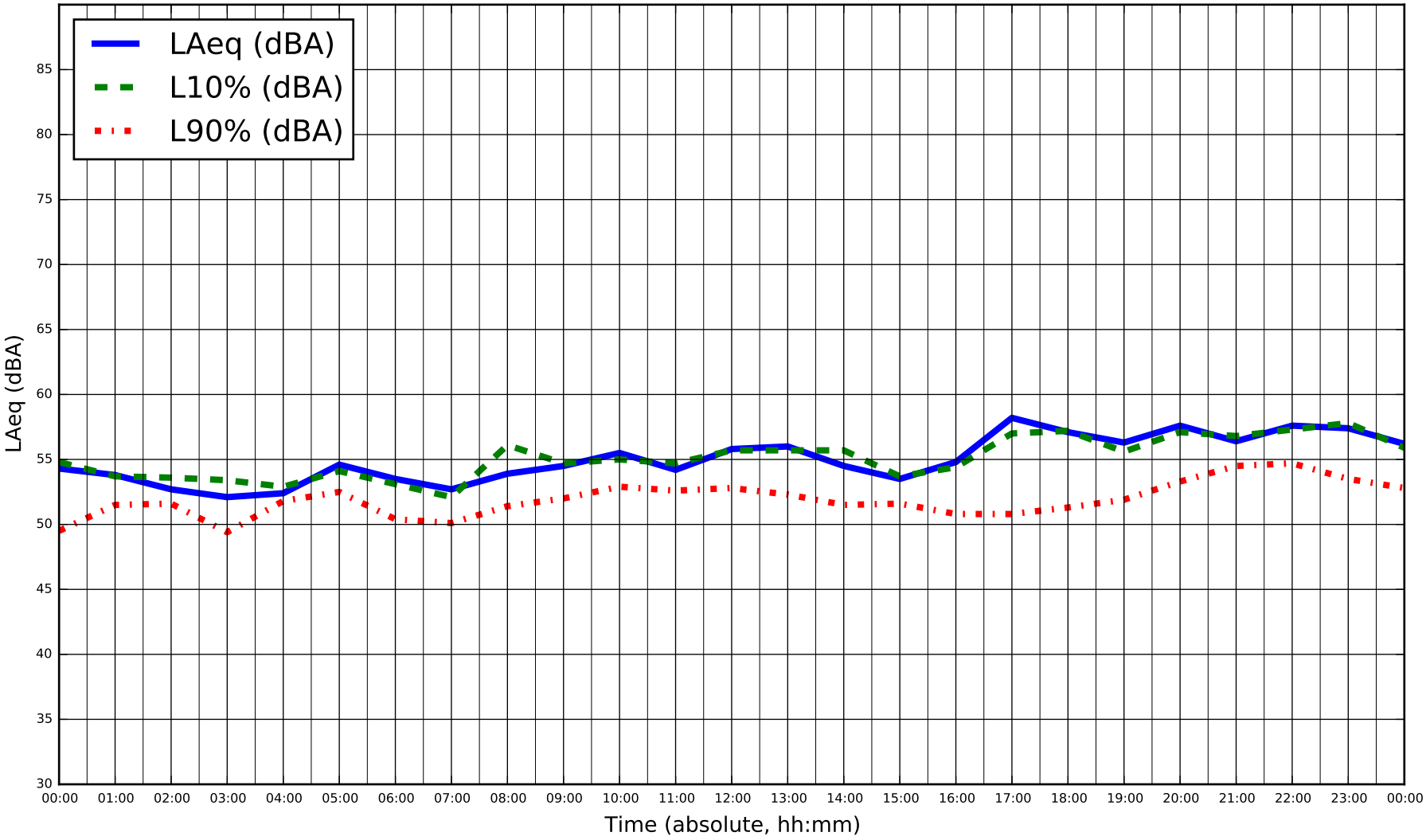
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	



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	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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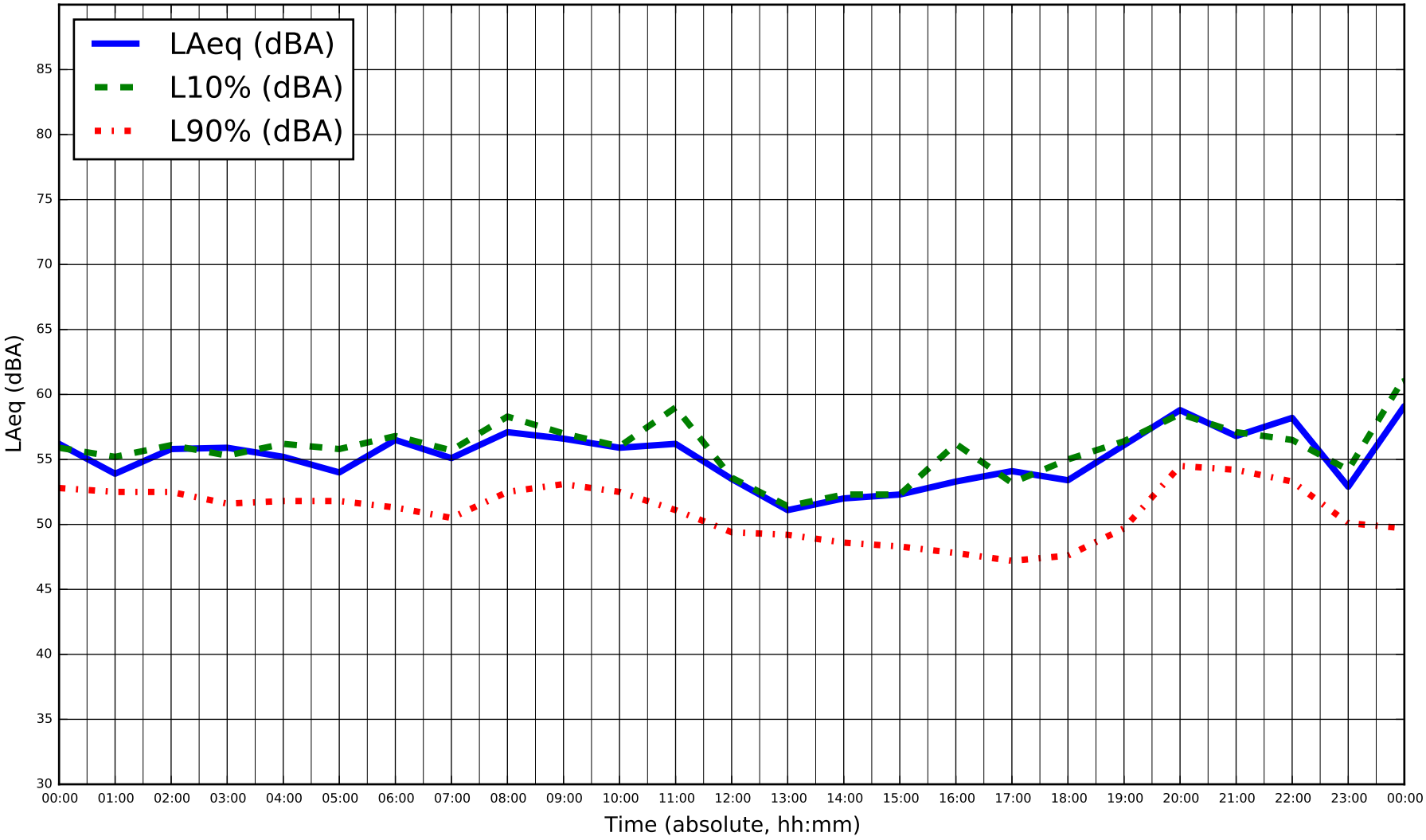

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Friday, Sept 9, 2016	Figure: H-4
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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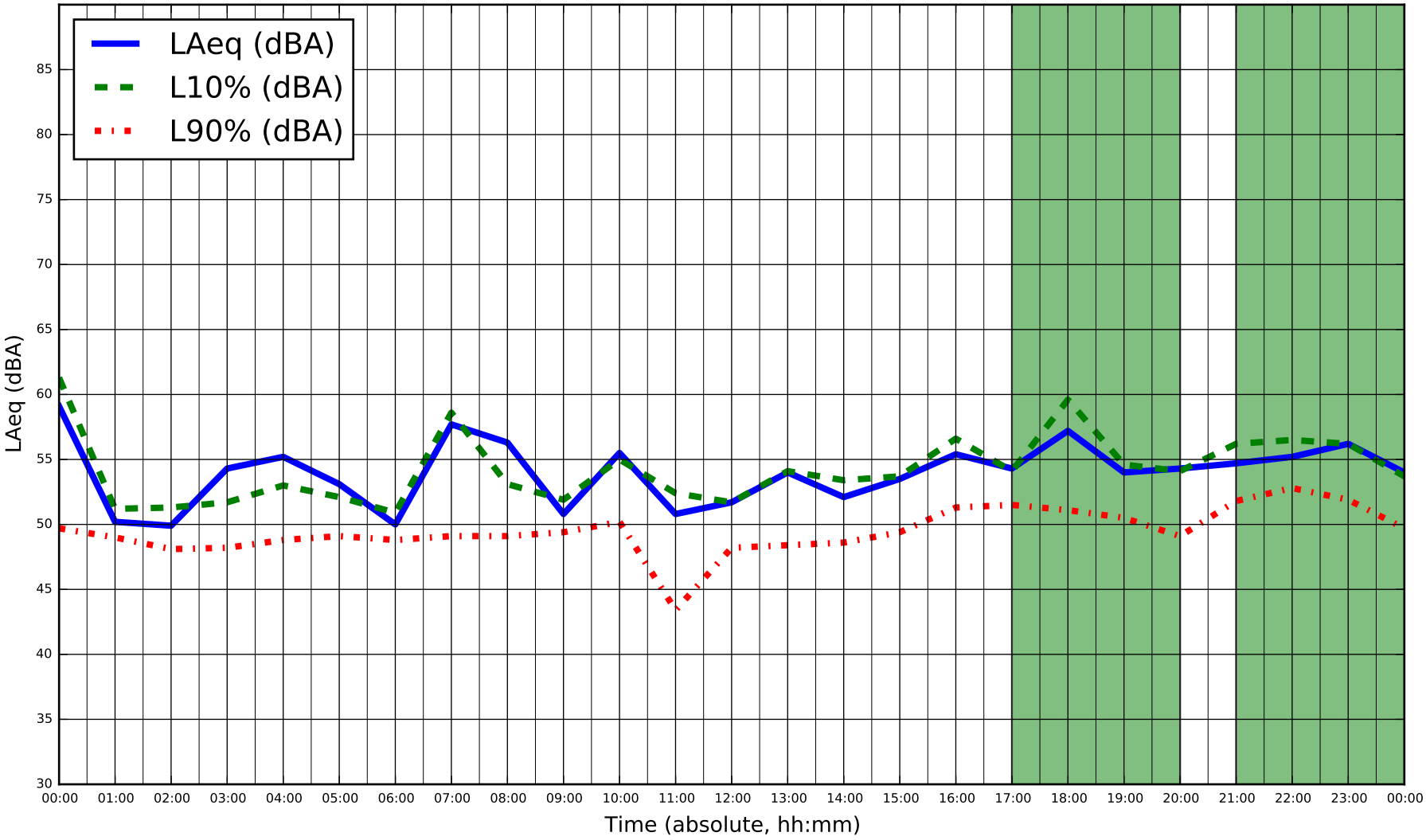

* Sustained winds over 20 km/hr during monitoring, on September 10, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Saturday, Sept 10, 2016	Figure: H-5
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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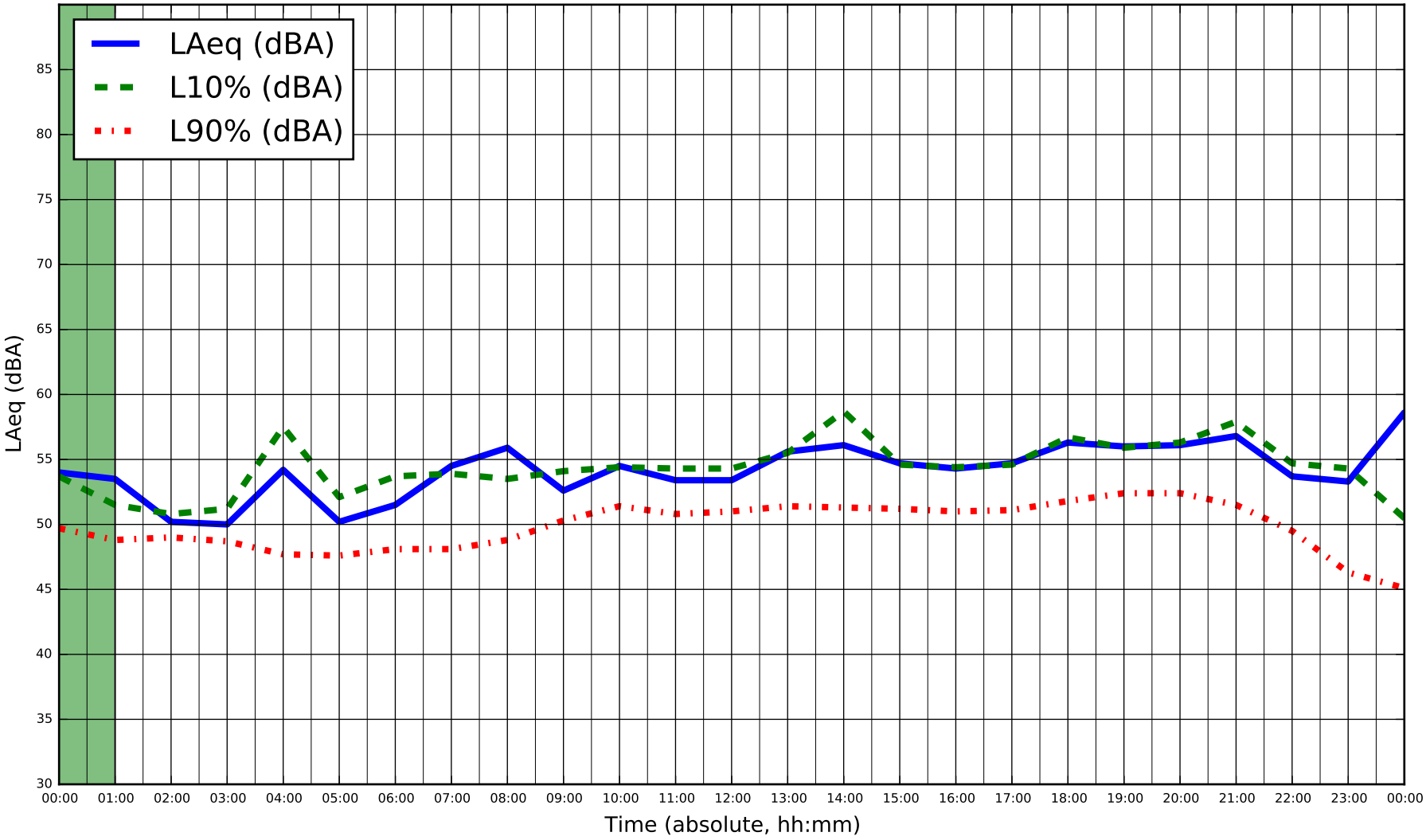

* Sustained winds over 20 km/hr during monitoring on September 11, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Sunday, Sept 11, 2016	Figure: H-6
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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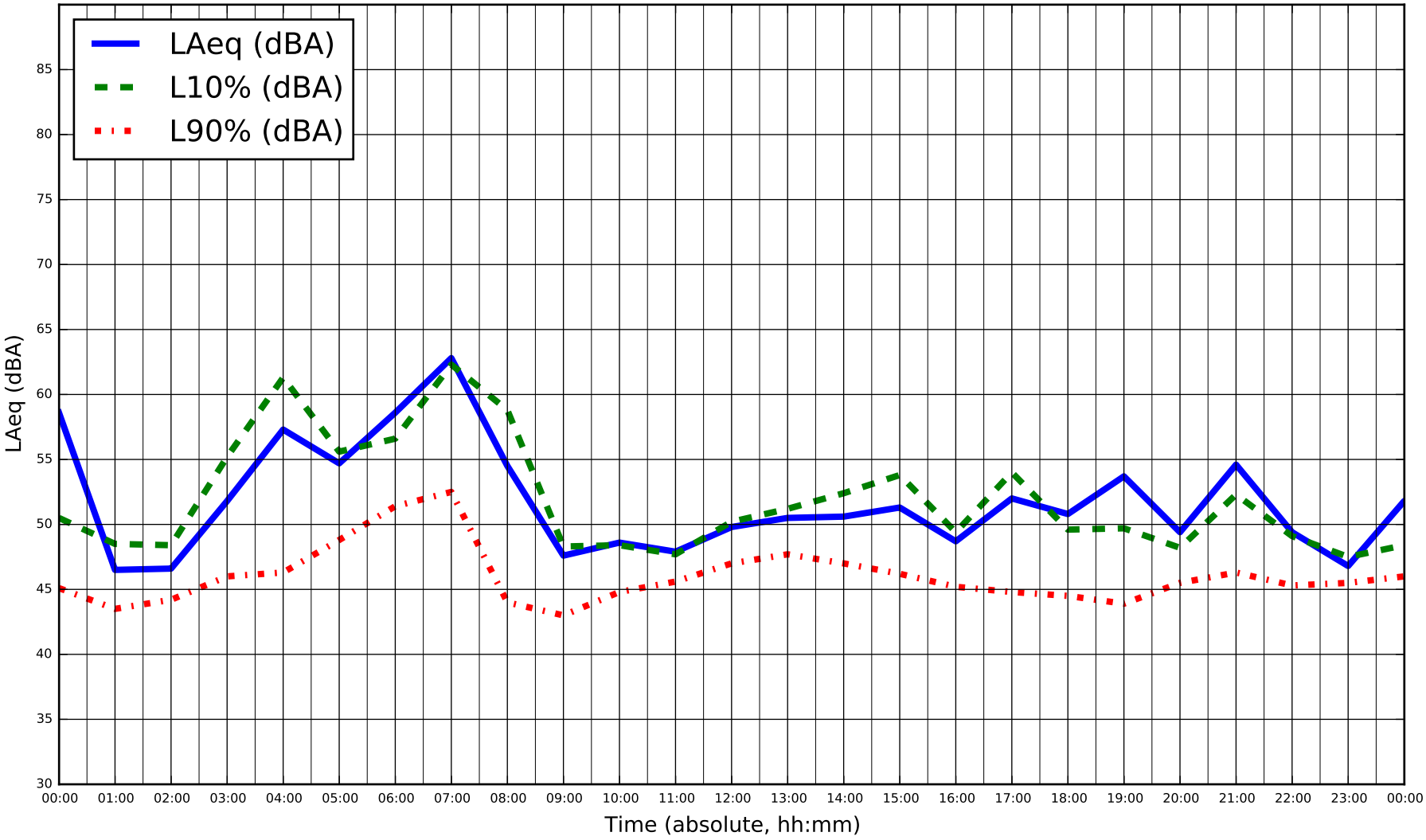

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Monday, Sept 12, 2016	Figure: H-7
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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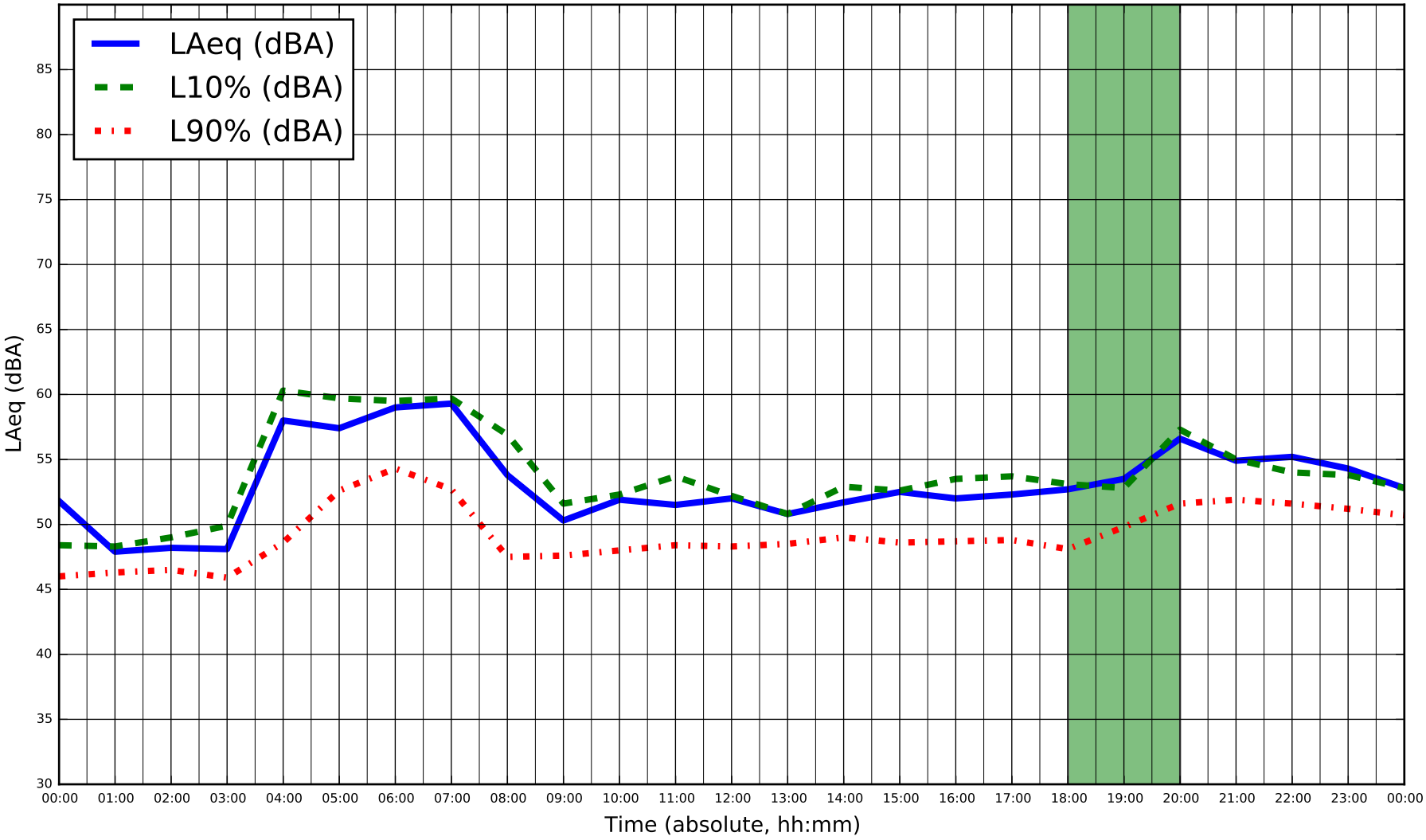

* Sustained winds over 20 km/hr during monitoring on September 13, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Tuesday, Sept 13, 2016	Figure: H-8
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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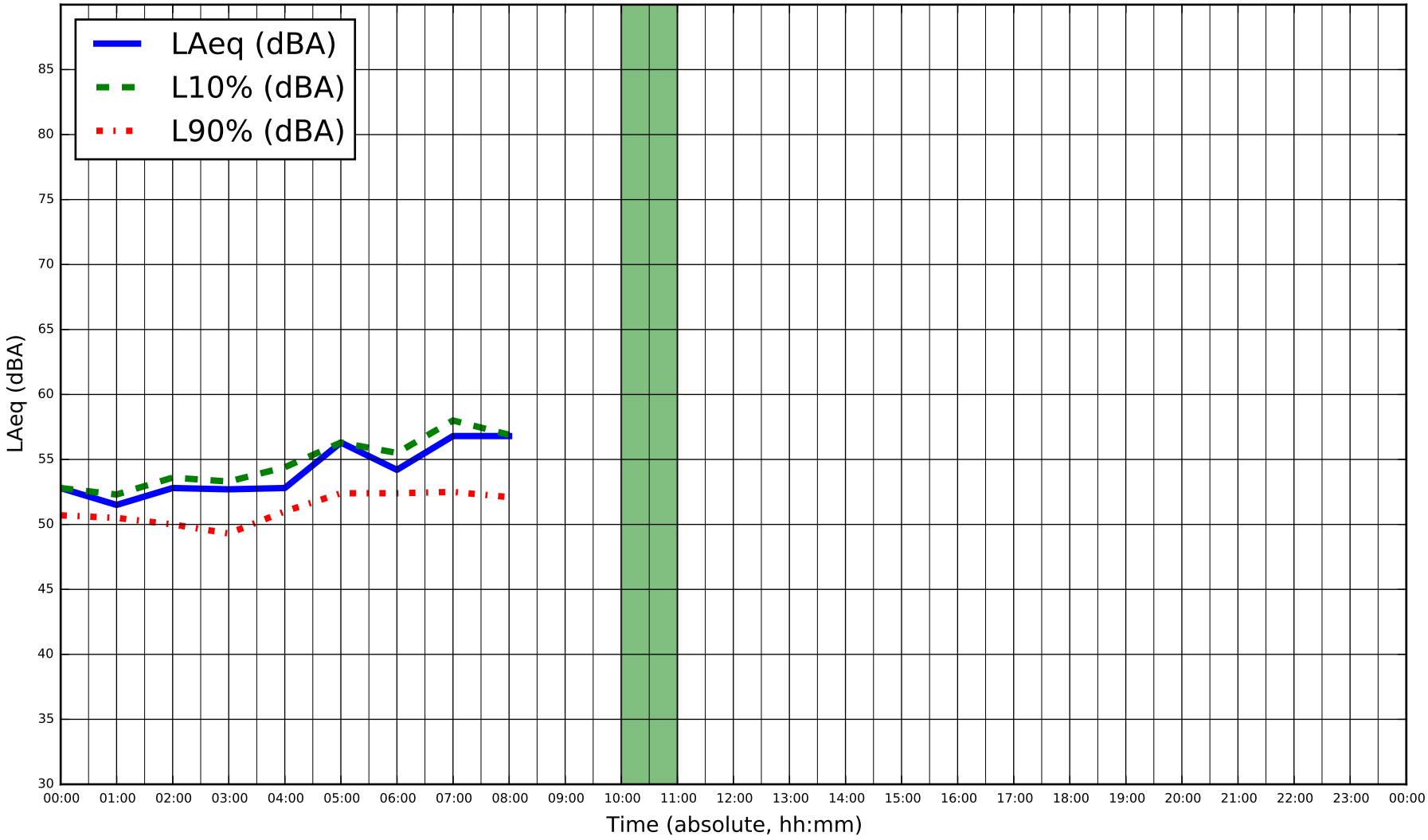
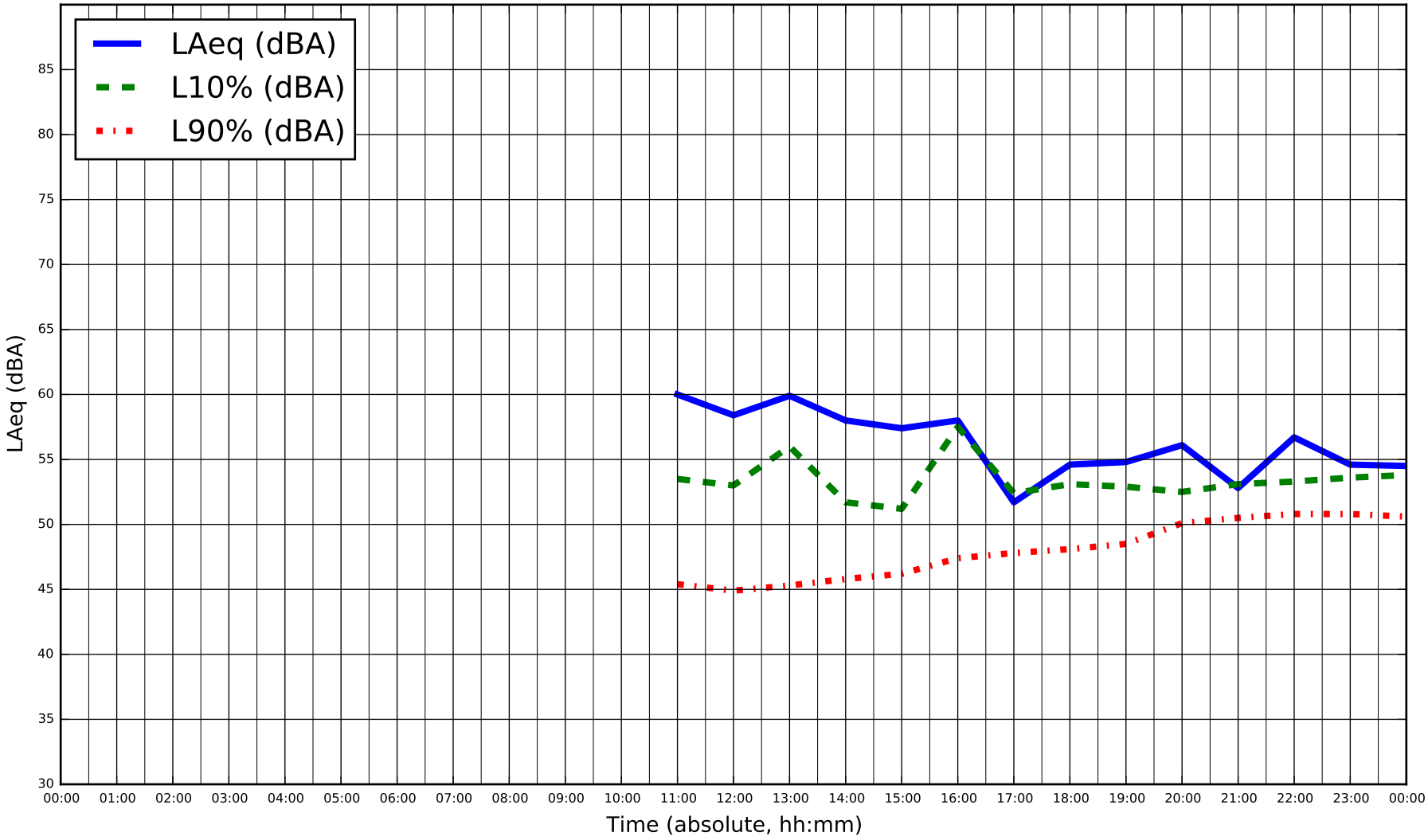


* Sustained winds over 20 km/hr during monitoring on September 14, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M001	Measurement Date: Wednesday, Sept 14, 2016	Figure: H-9
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Tuesday, Sept 6, 2016	Figure: H-10
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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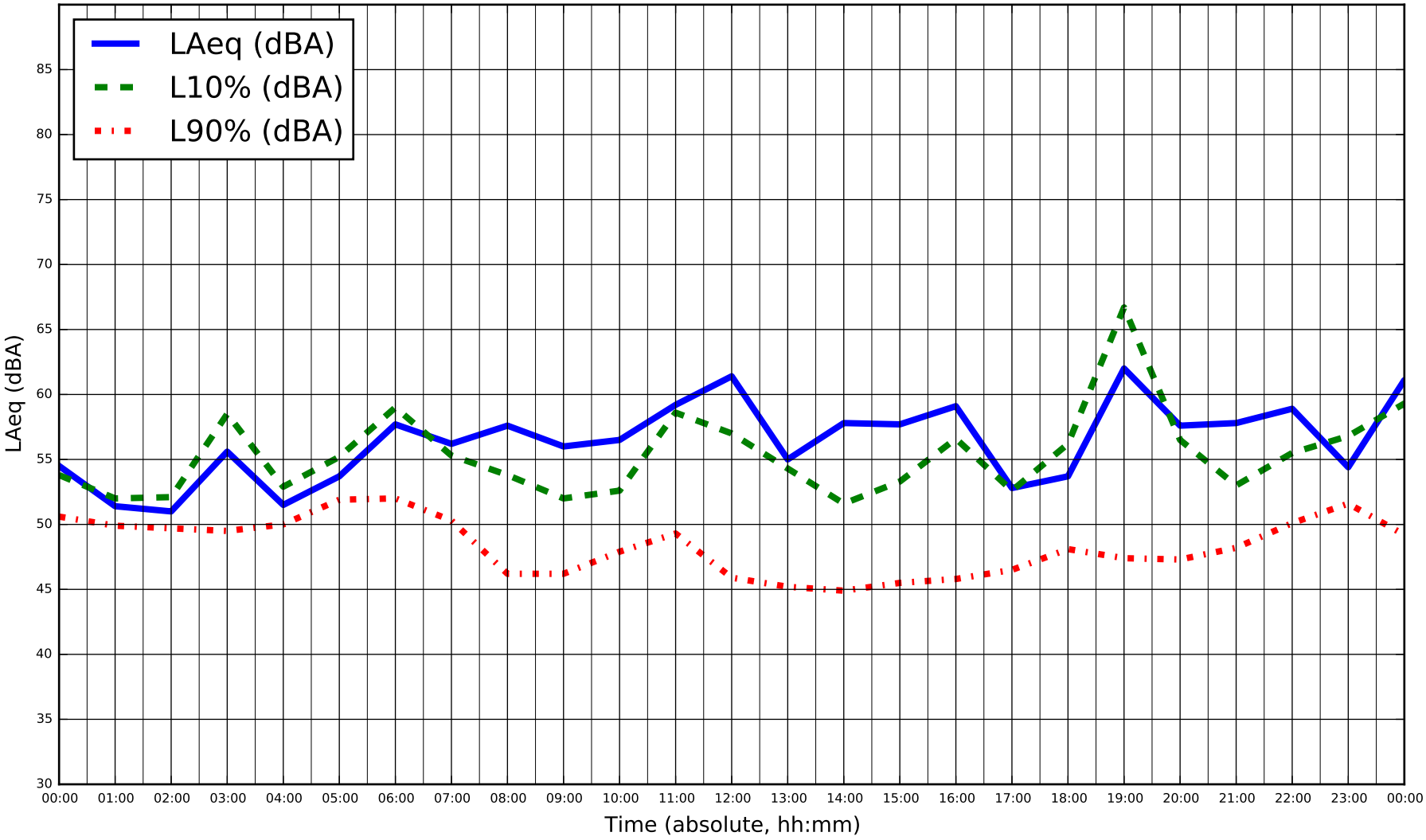

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Wednesday, Sept 7, 2016	Figure: H-11
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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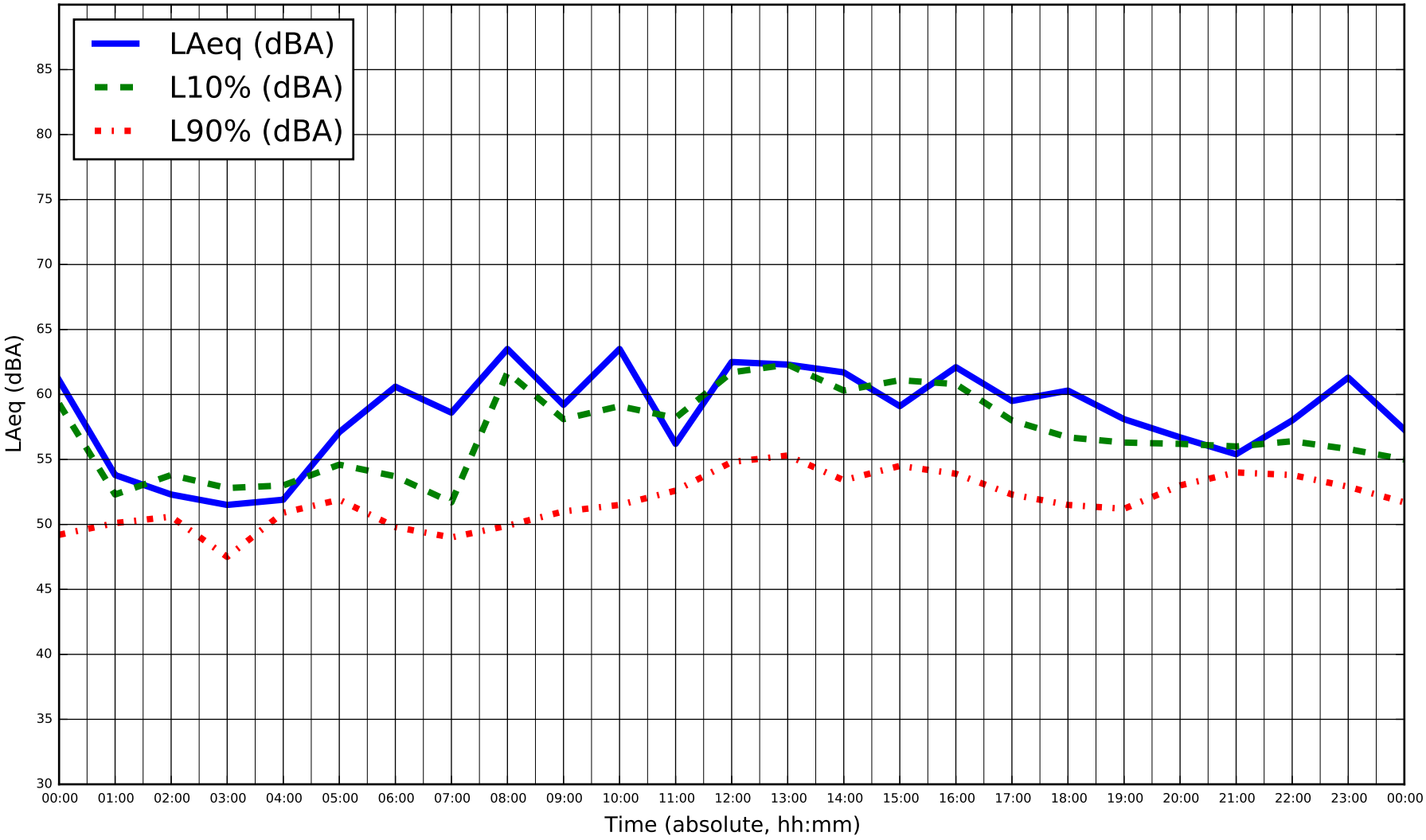

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Thursday, Sept 8, 2016	Figure: H-12
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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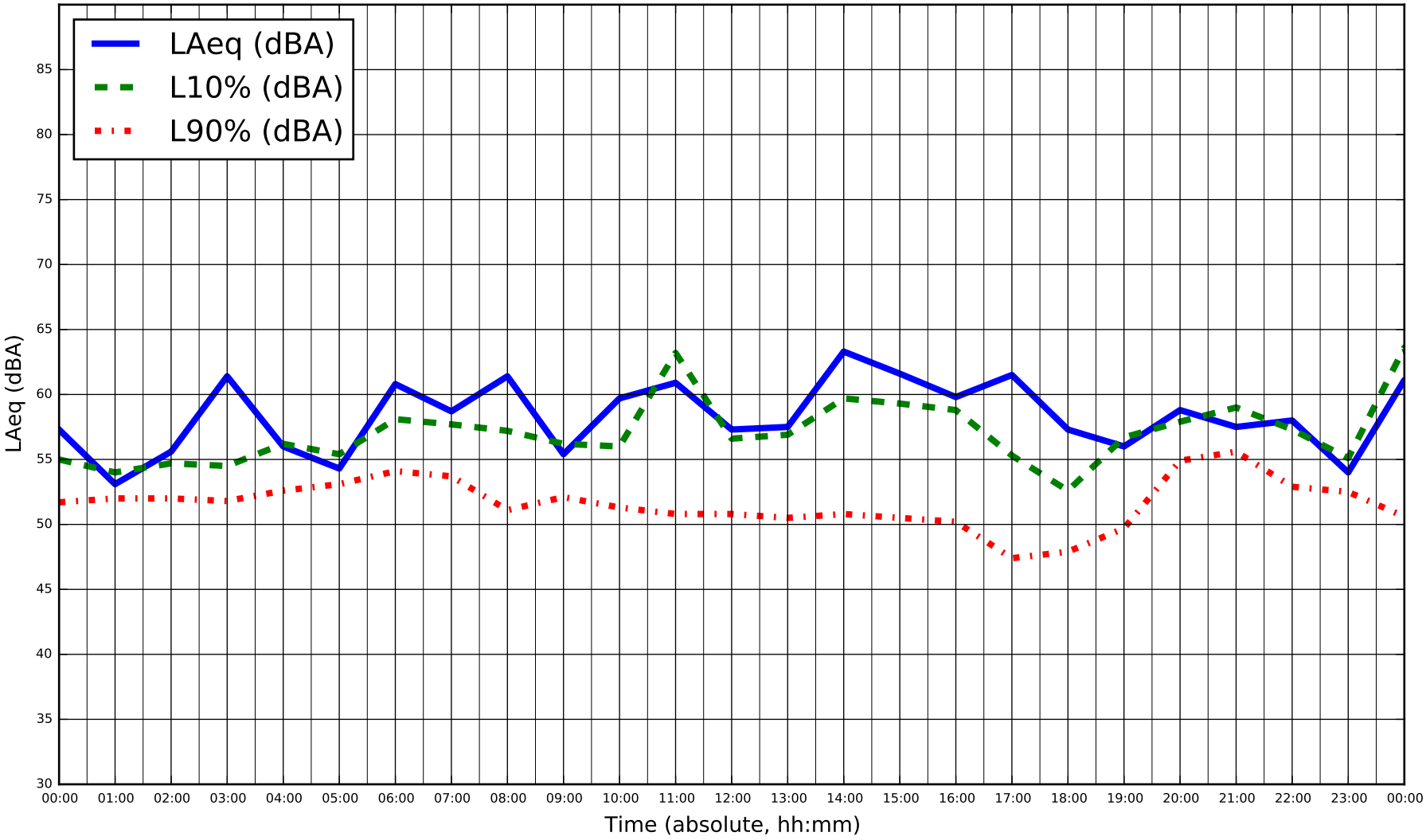

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Friday, Sept 9, 2016	Figure: H-13
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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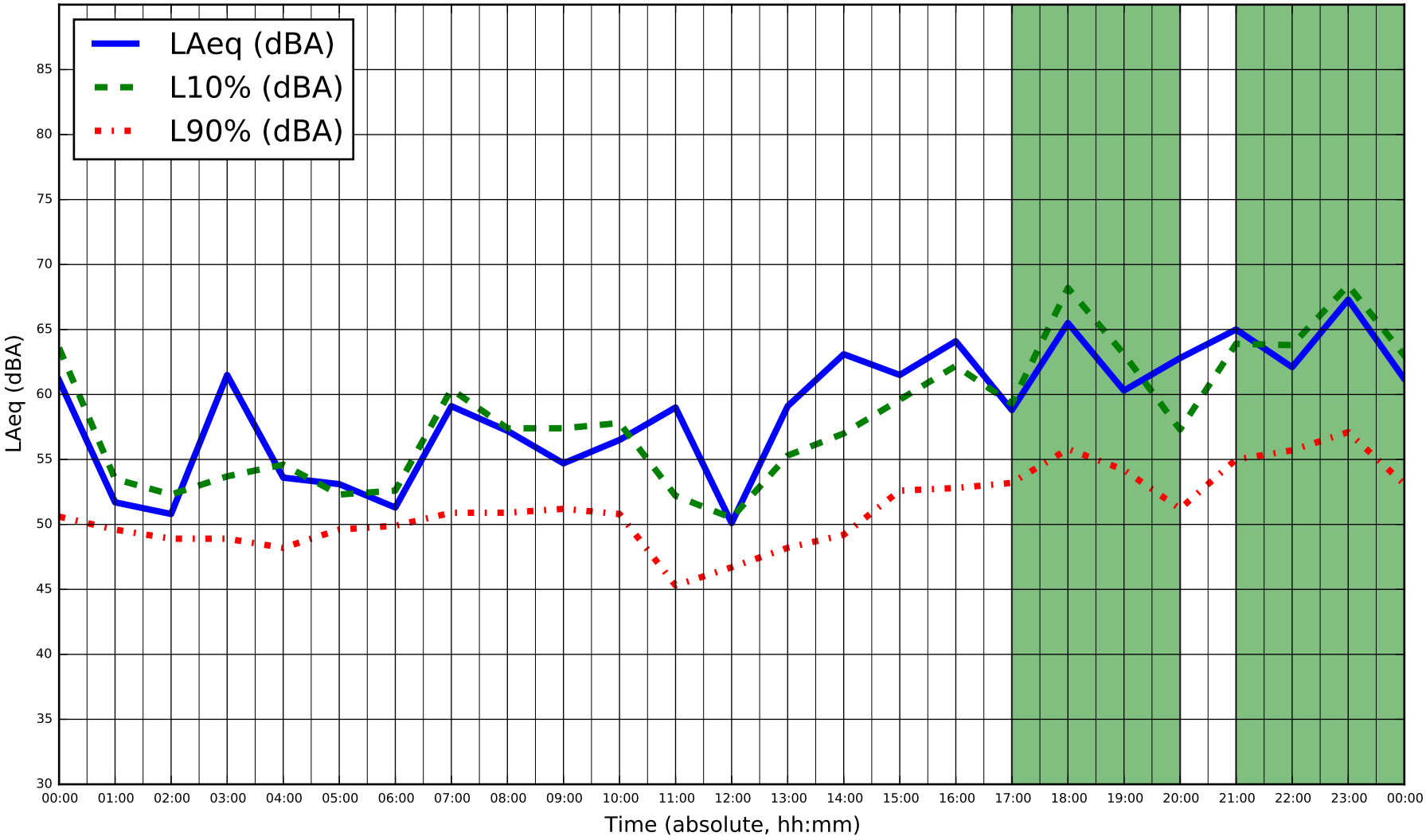

* Sustained winds over 20 km/hr during monitoring, on September 10, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Saturday, Sept 10, 2016	Figure: H-14
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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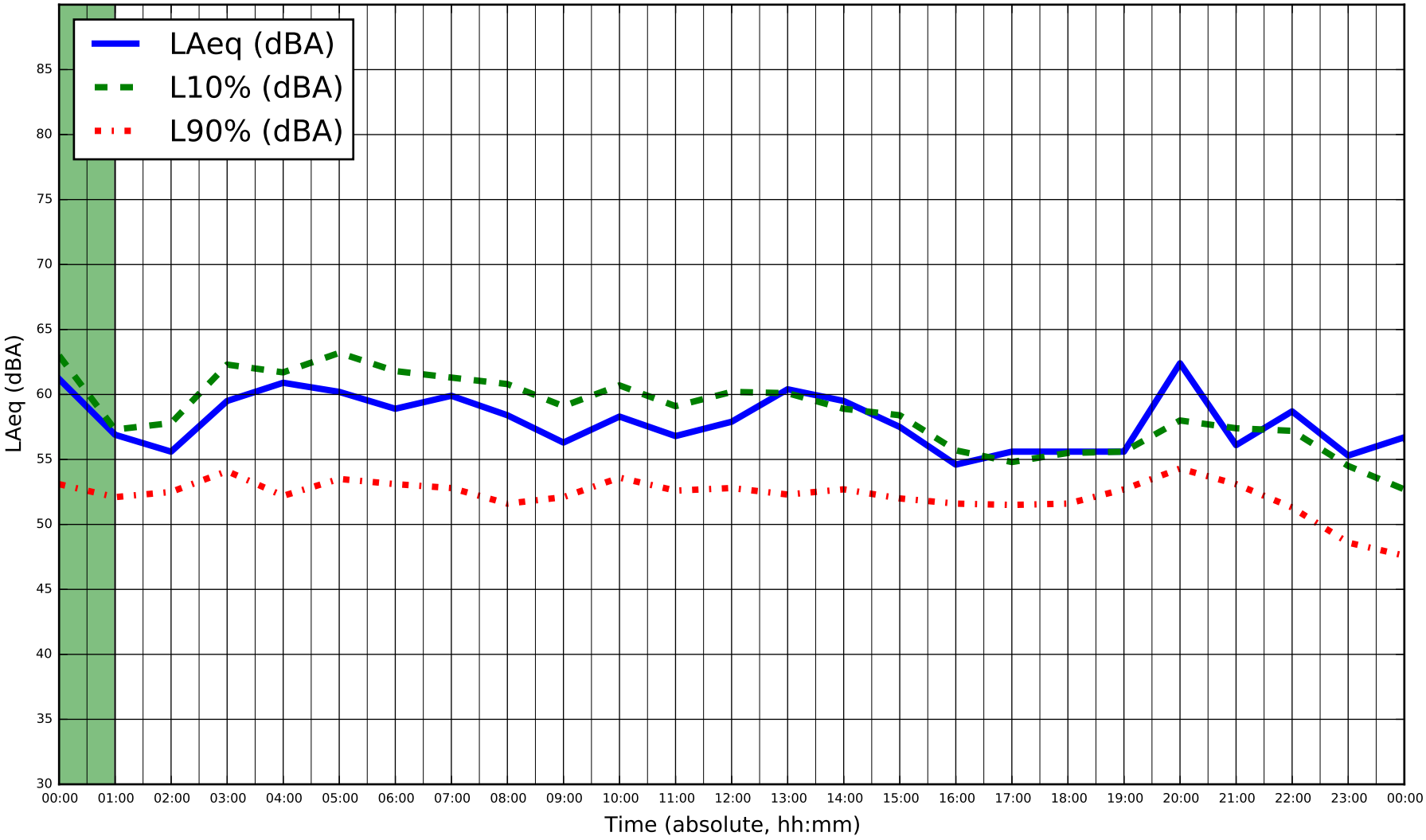
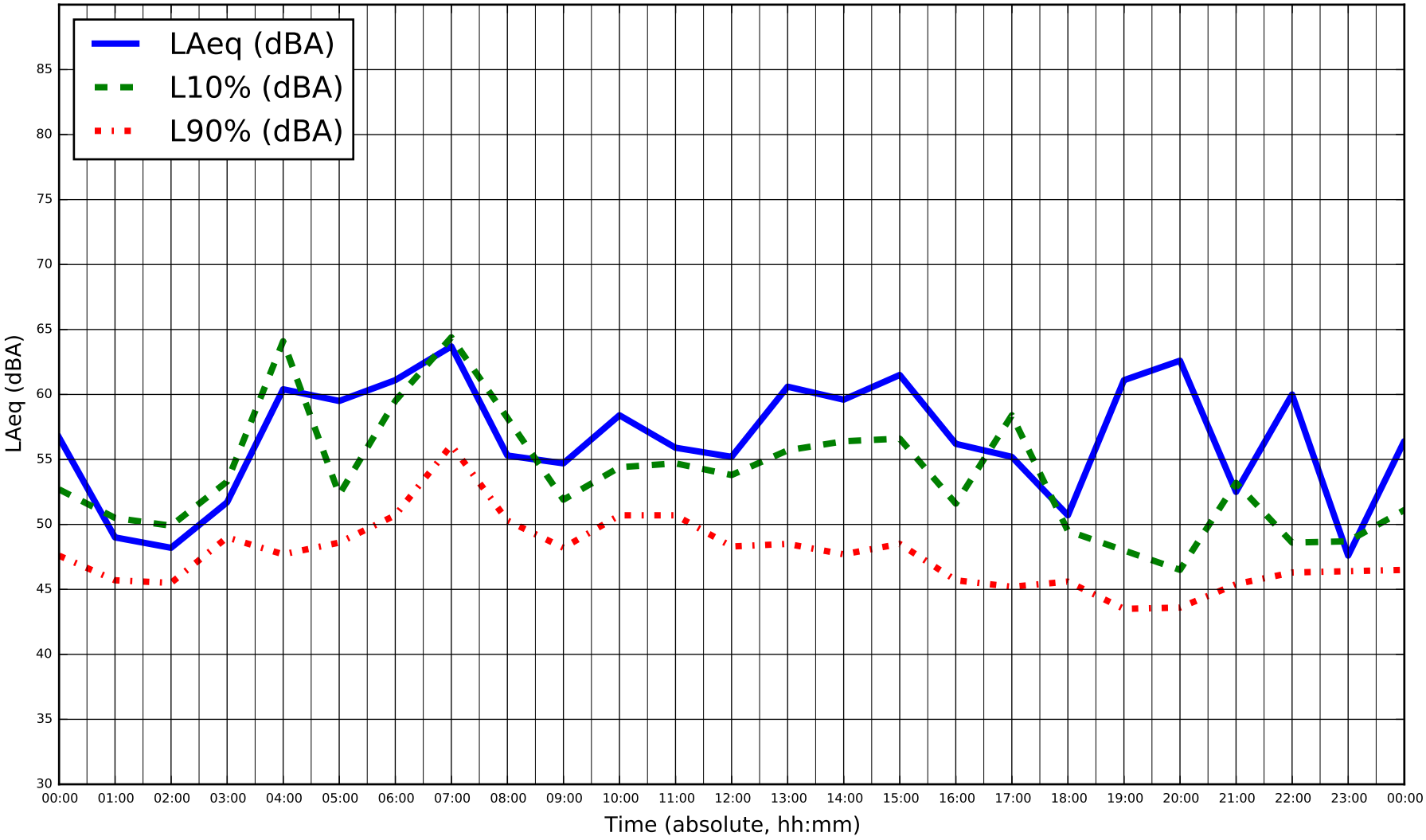


* Sustained winds over 20 km/hr during monitoring on September 11, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Sunday, Sept 11, 2016	Figure: H-15
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Monday, Sept 12, 2016	Figure: H-16
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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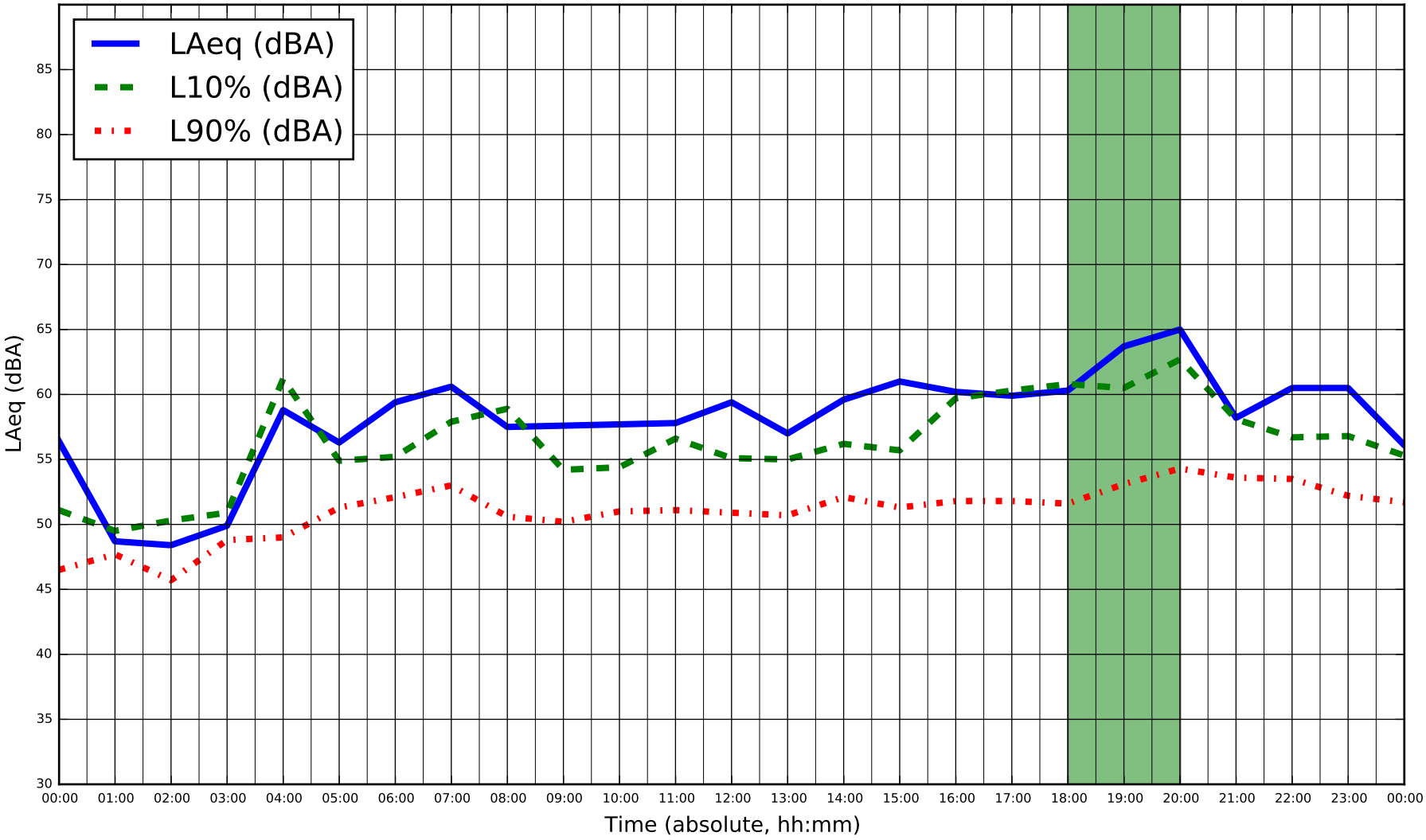

* Sustained winds over 20 km/hr during monitoring on September 13, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Tuesday, Sept 13, 2016	Figure: H-17
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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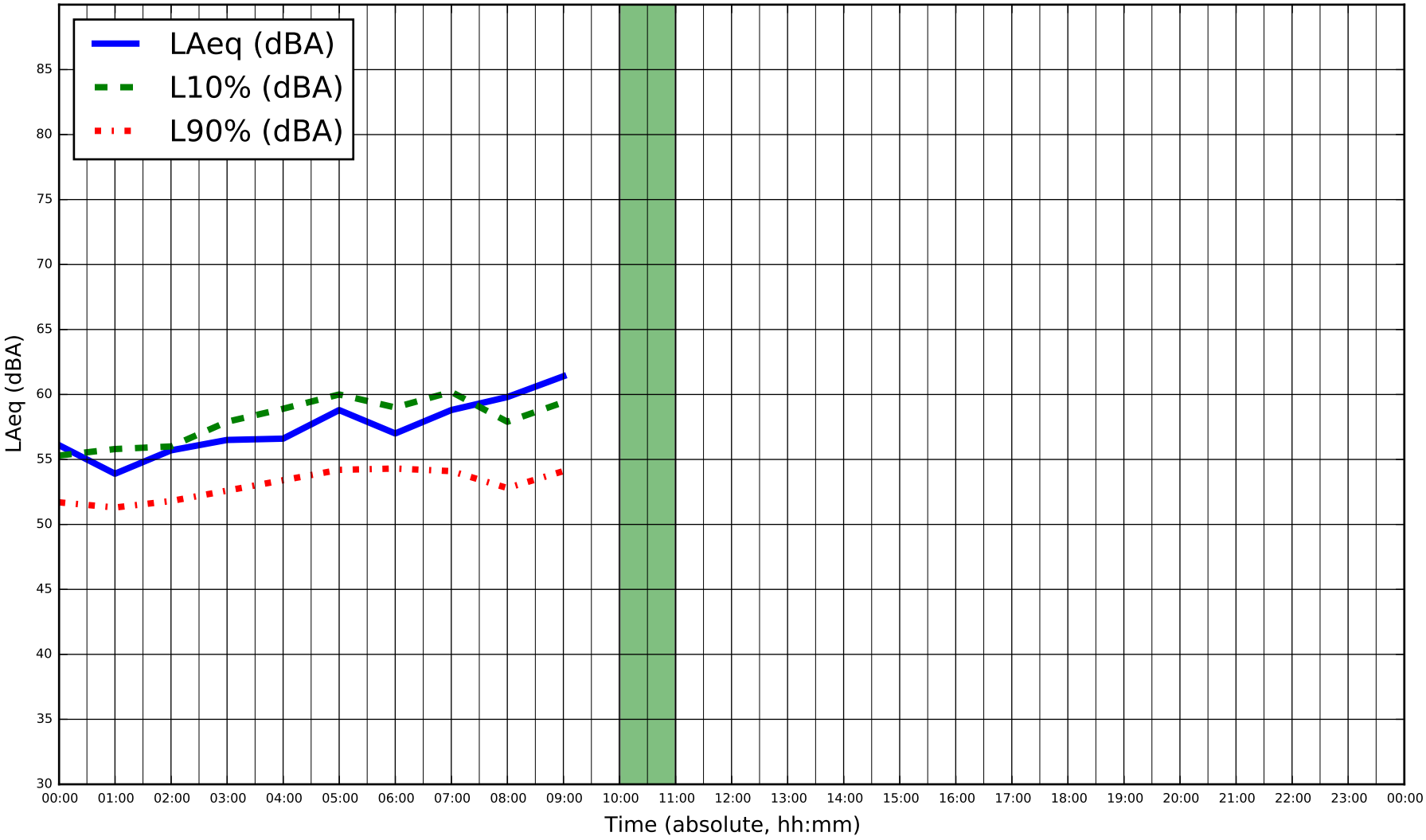
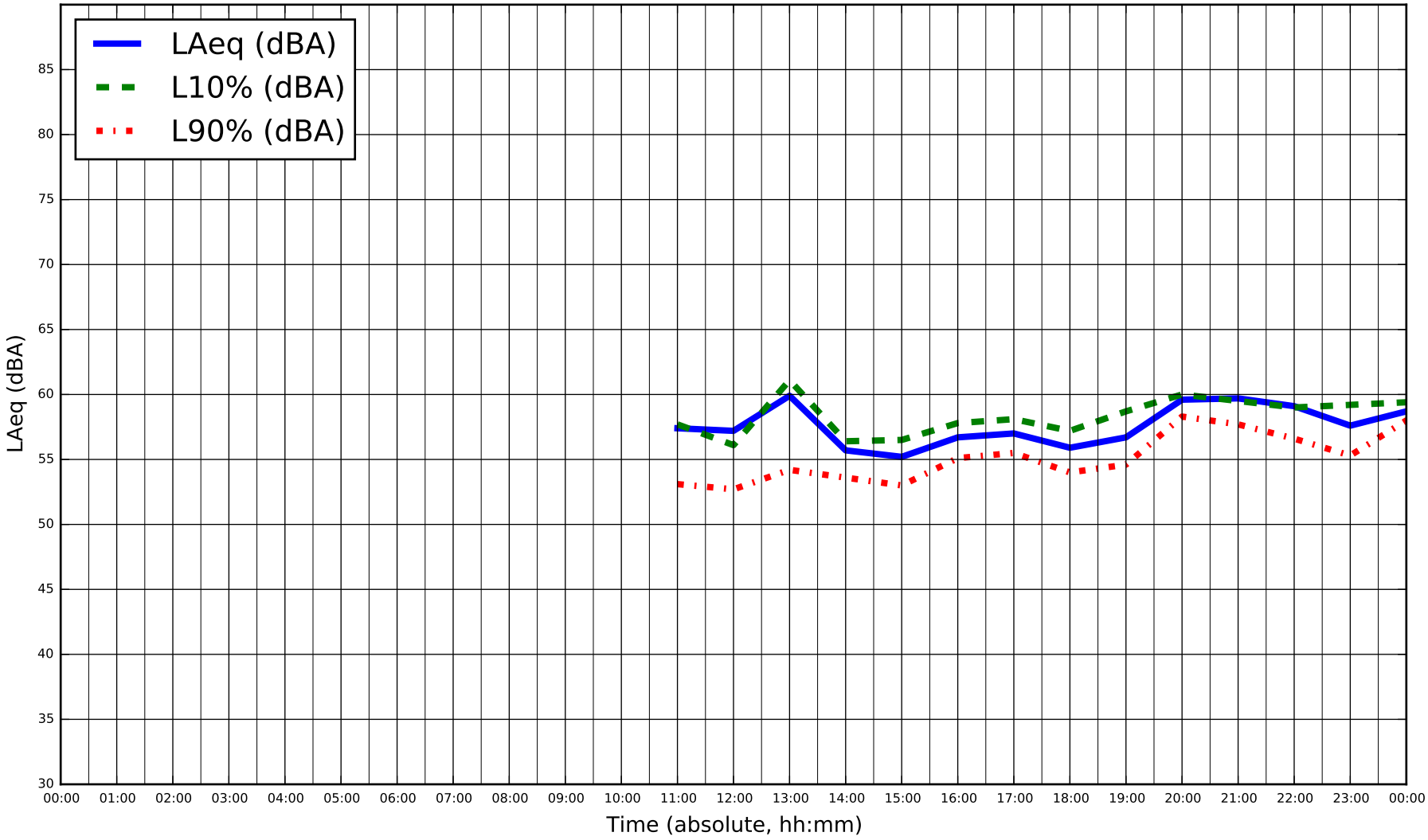


* Sustained winds over 20 km/hr during monitoring on September 14, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M002	Measurement Date: Wednesday, Sept 14, 2016	Figure: H-18
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Tuesday, Sept 6, 2016	Figure: H-19
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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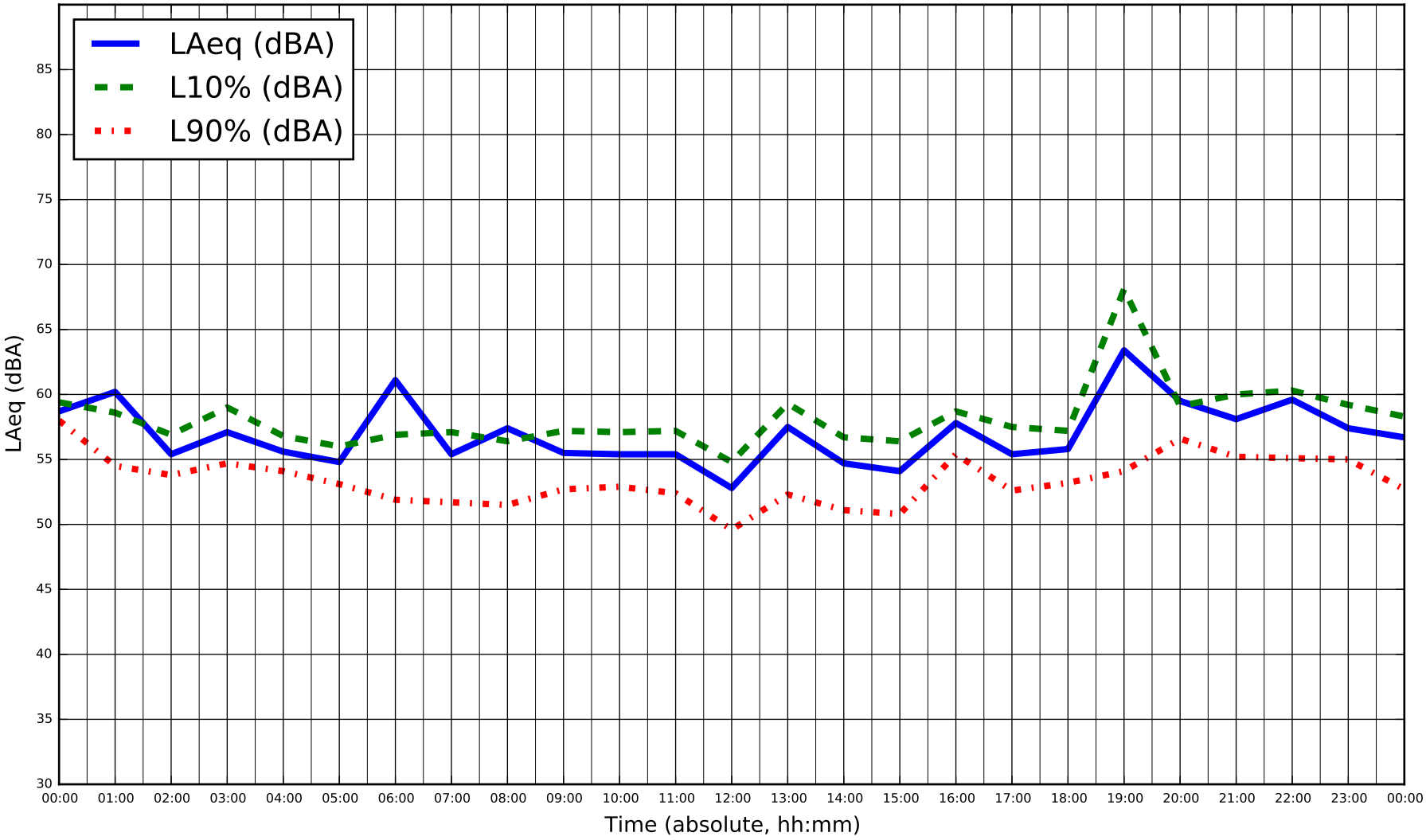

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Wednesday, Sept 7, 2016	Figure: H-20
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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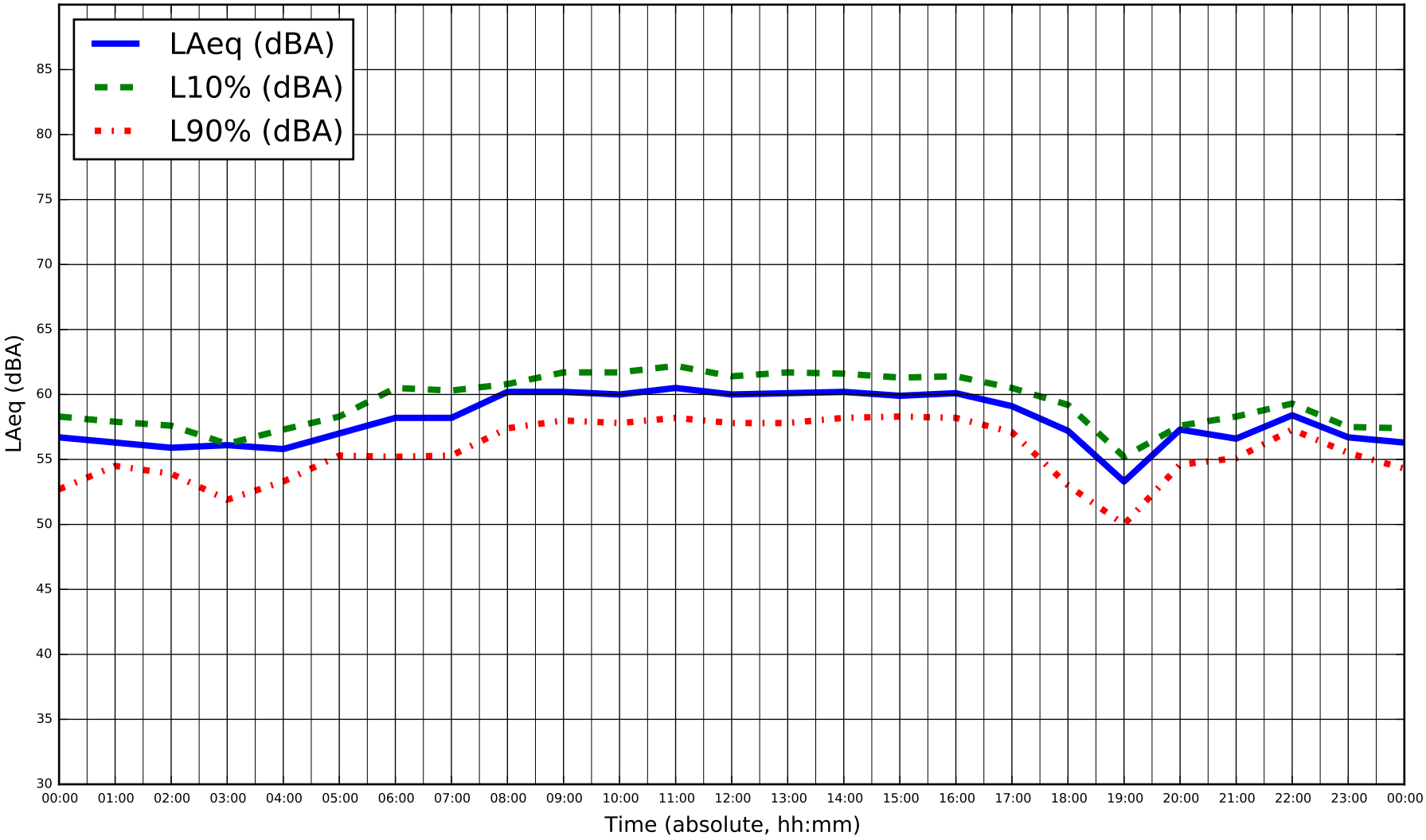

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Thursday, Sept 8, 2016	Figure: H-21
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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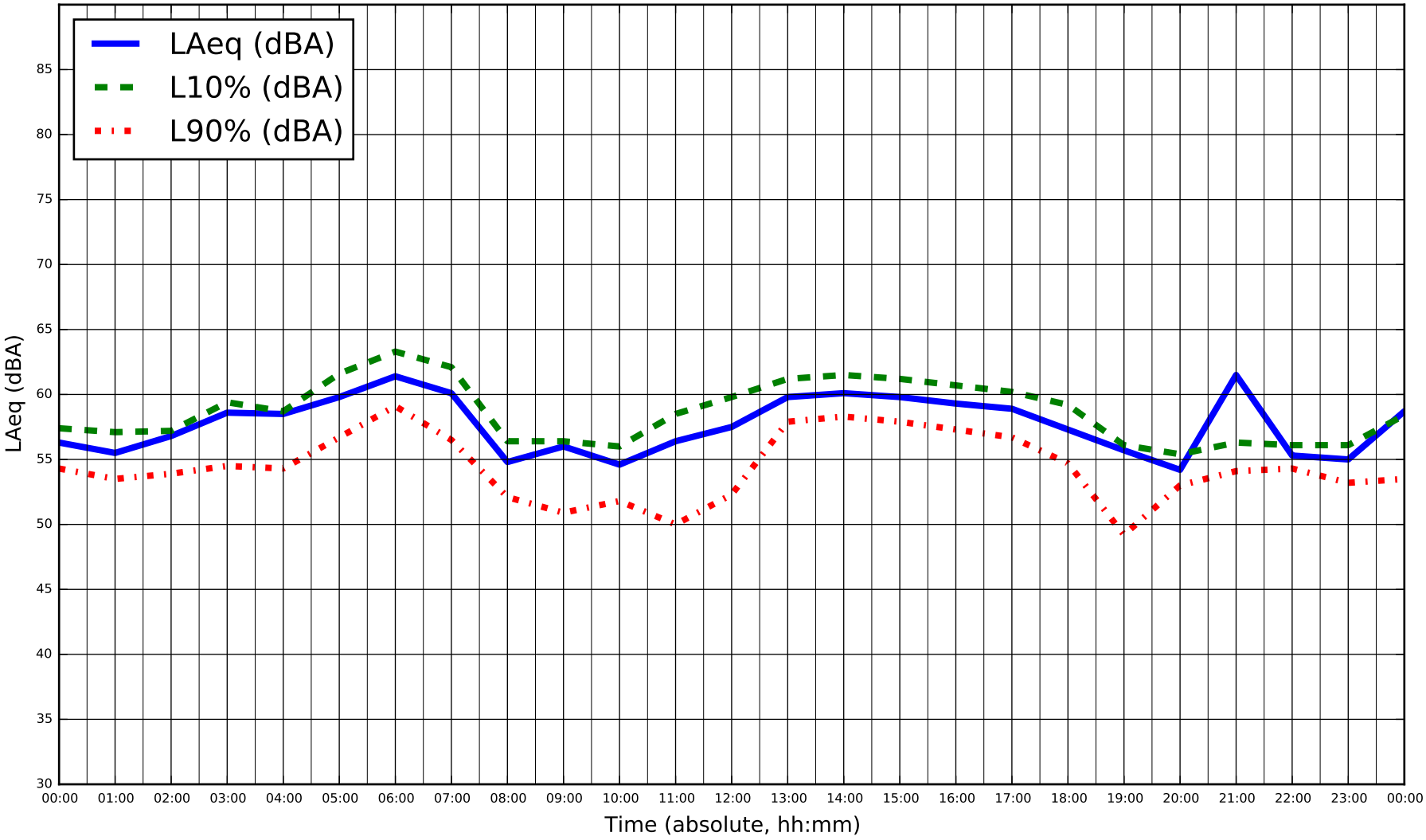

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Friday, Sept 9, 2016	Figure: H-22
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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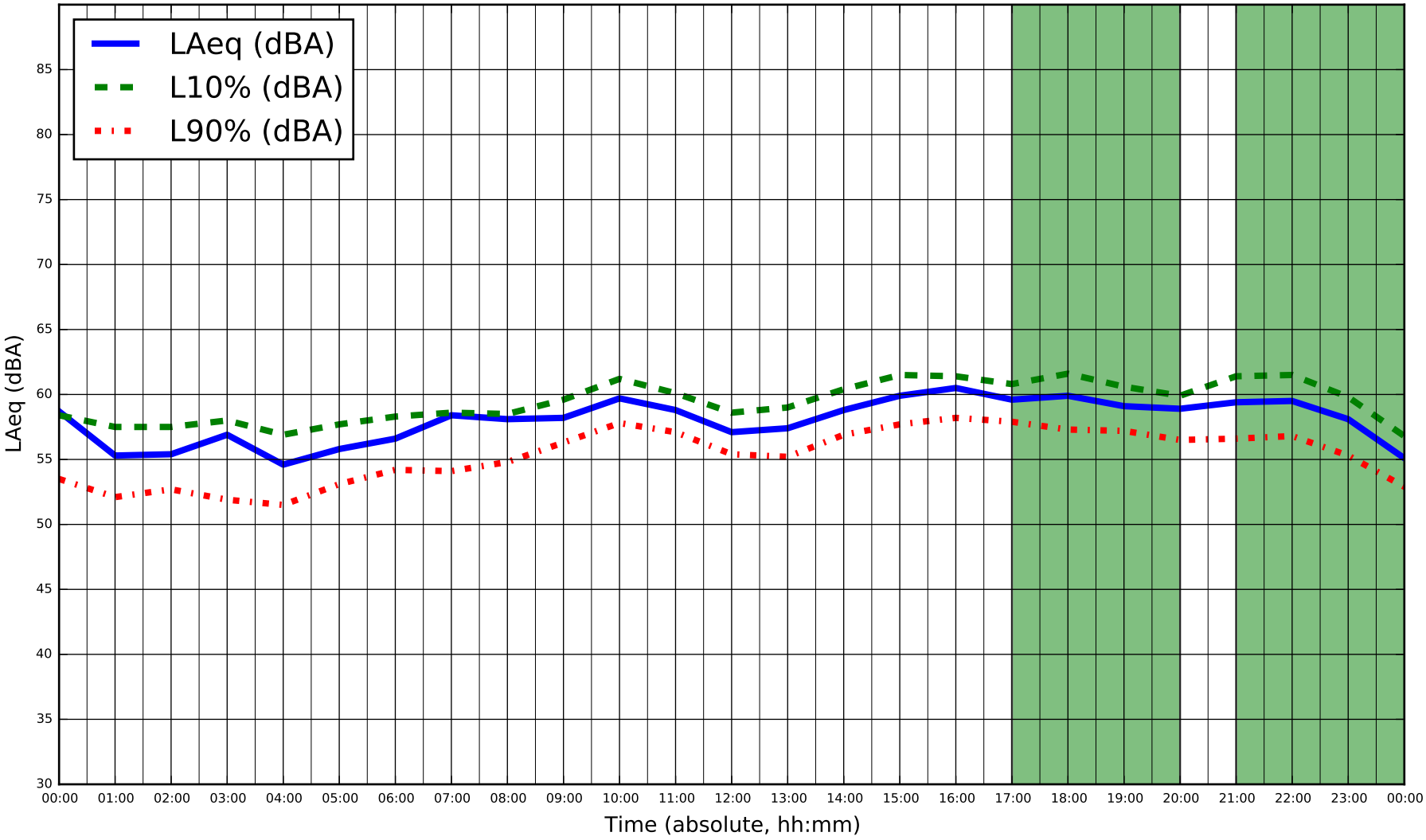

* Sustained winds over 20 km/hr during monitoring, on September 10, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Saturday, Sept 10, 2016	Figure: H-23
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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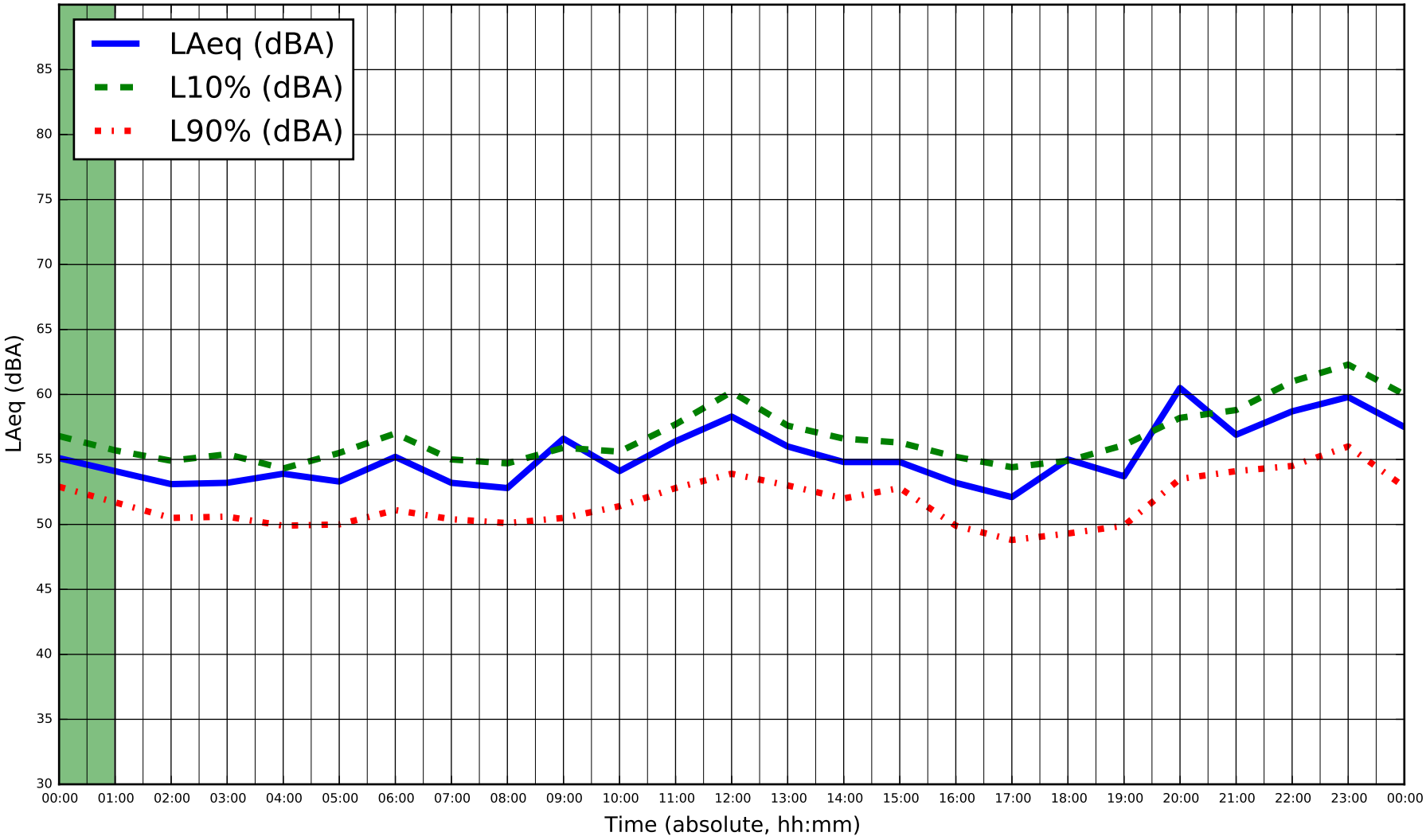
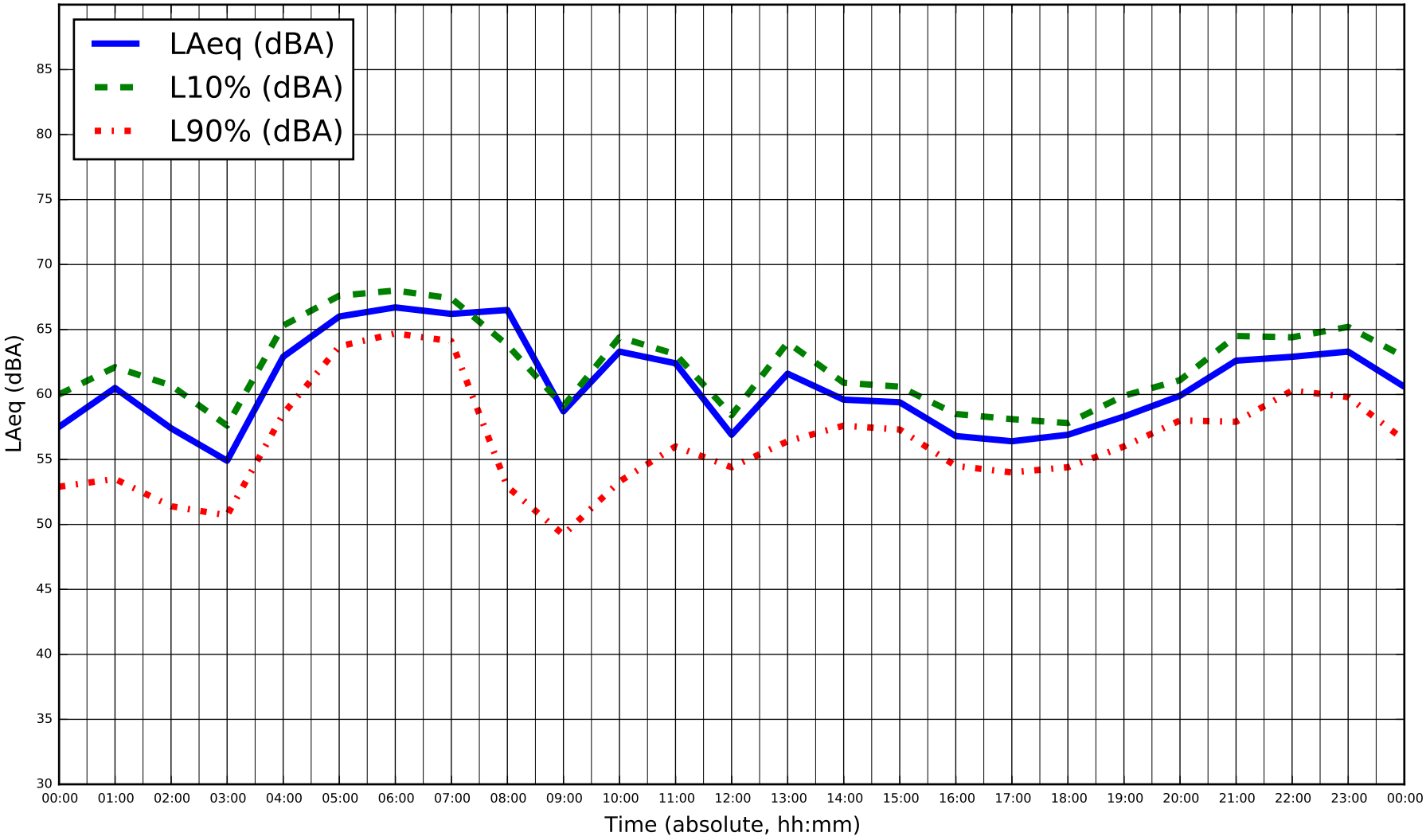


* Sustained winds over 20 km/hr during monitoring on September 11, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Sunday, Sept 11, 2016	Figure: H-24
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	



VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Monday, Sept 12, 2016	Figure: H-25
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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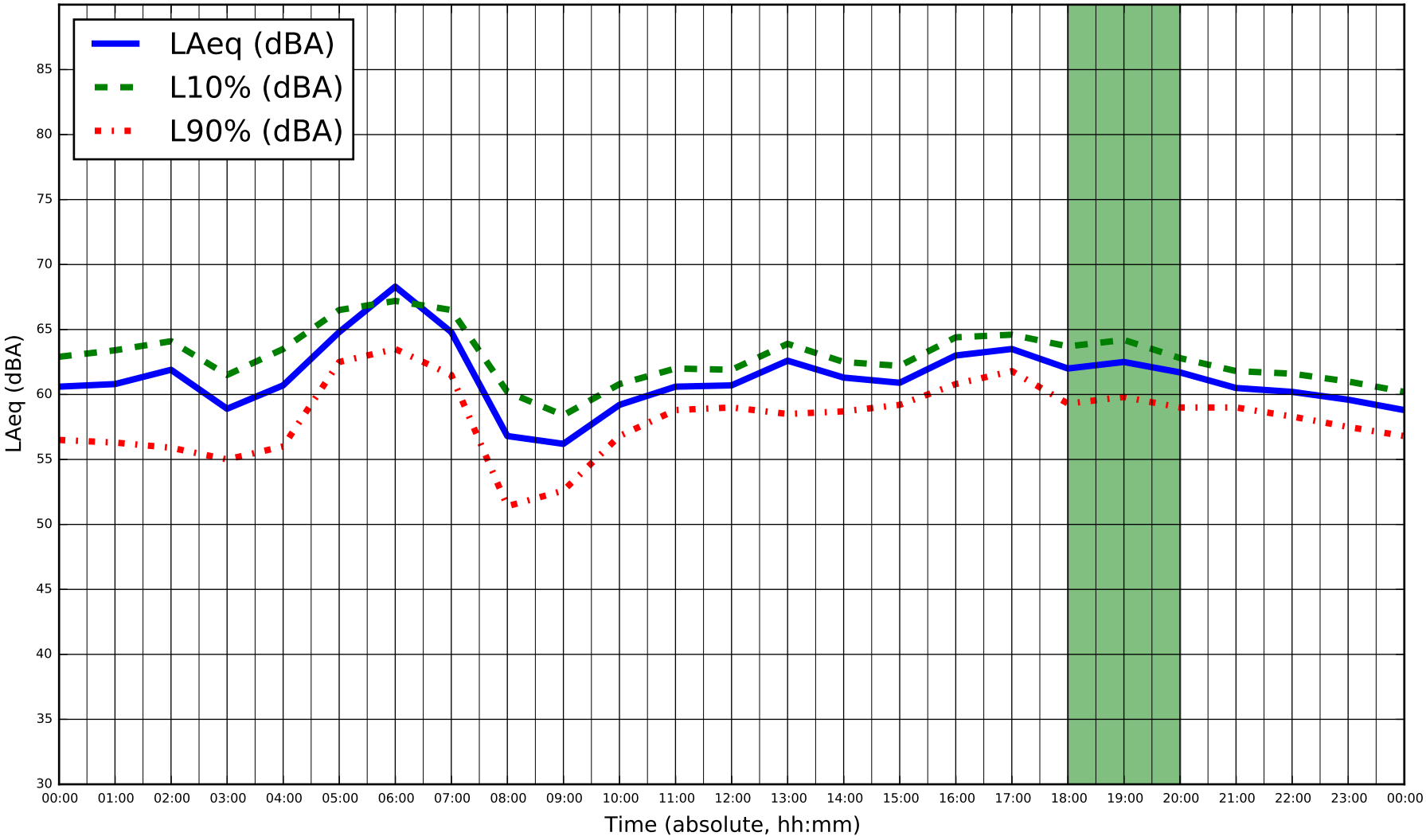
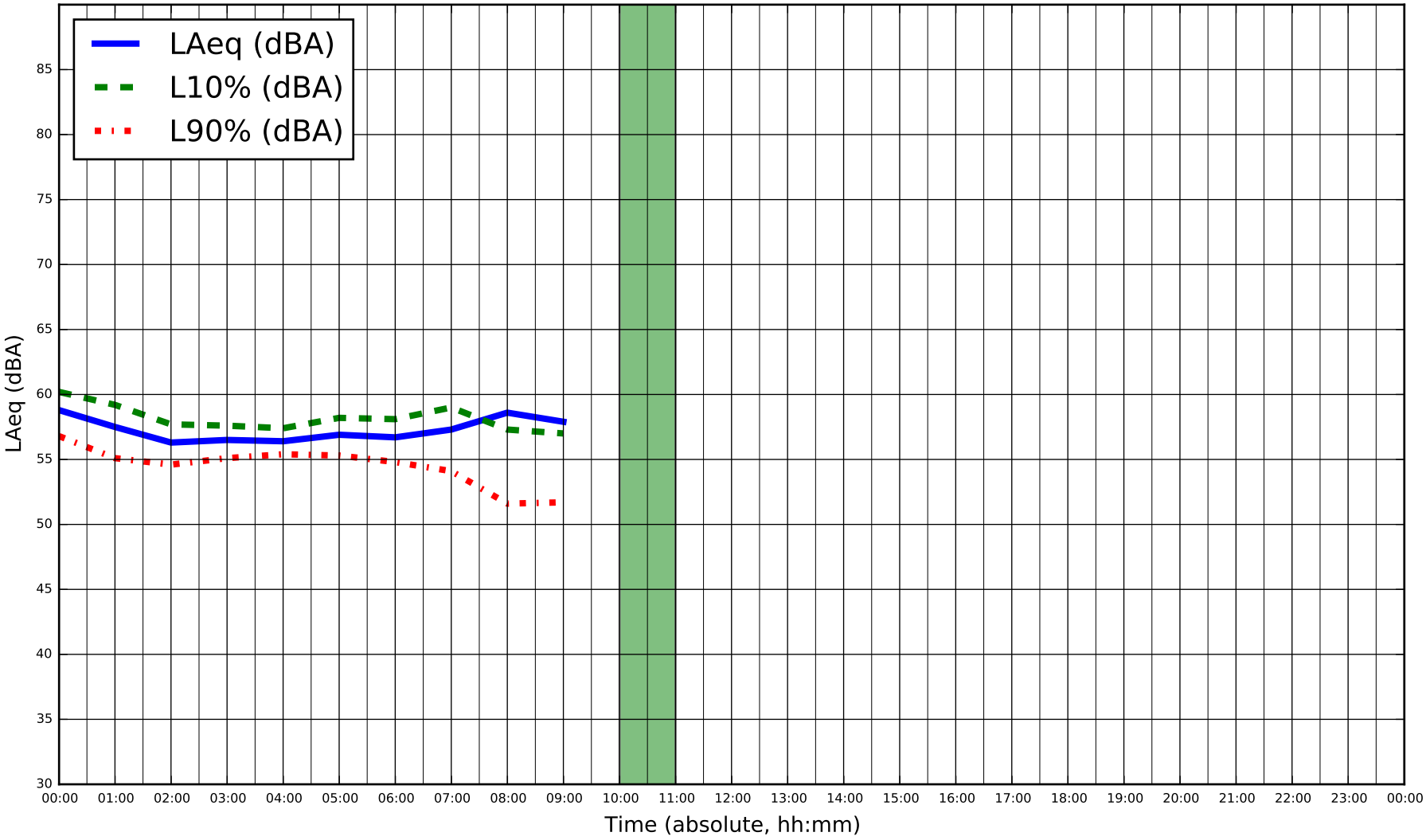


* Sustained winds over 20 km/hr during monitoring on September 13, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Tuesday, Sept 13, 2016	Figure: H-26
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	



* Sustained winds over 20 km/hr during monitoring on September 14, 2016

VALCOUSTICS Canada Ltd.	Title: Sound Measurements - Location M003	Measurement Date: Wednesday, Sept 14, 2016	Figure: H-27
	Project Name: DYEC - Acoustic Audit	Project Num.: 114-318-200	

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