

## ENVIRONMENTAL NOISE QUALITY MONITORING

LAB NO : LN/1216/550  
PROJECT REF : ETD/NOISE/1191/16  
DATE MONITORED : 29<sup>th</sup> DECEMBER 2016 – 02<sup>nd</sup> JANUARY 2017  
DATE REPORTED : 16<sup>th</sup> JANUARY 2017

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## 1.0 INTRODUCTION

Chemvi Laboratory Sdn. Bhd. was engaged to conduct environmental noise monitoring on **29<sup>th</sup> DECEMBER 2016 – 02<sup>nd</sup> JANUARY 2017** located at the following project site:

### **“ENVIRONMENTAL MONITORING AT KLEBANG, MELAKA”**

The objective of the monitoring was to determine noise characteristic surrounding the proposed project site in order to fulfill conditions imposed under EIA approval by the DOE.

At the primary location, A-weighted noise levels (LA) were measured for a period of 24 hours.

Details of the monitoring are as follows:-

#### 1.1 Sampling Personnel

Mr. Ehsan / Mr. Adzwan - Field Technician

#### 1.2 Site Description :

| POINT | GPS LOCATION                   | DATE & TIME OF SAMPLING                        |
|-------|--------------------------------|--|
| N1    | 2°12'42.74"N<br>102°11'16.47"E | 29/12/2016 – 30/12/2016<br>07.00 am – 07.00 am |
| N2    | 2°13'2.90"N<br>102°11'19.27"E  | 30/12/2016 – 31/12/2016<br>07.30 am – 07.30 am |
| N3    | 2°13'13.12"N<br>102°10'50.98"E | 31/12/2016 – 01/01/2017<br>07.00 am – 07.00 am |
| N4    | 2°13'16.68"N<br>102°10'29.73"E | 01/01/2017 - 02/01/2017<br>08.00 am – 08.00 am |

*Note: The weather was clear during the sampling.*

## 2.0 SCOPE OF MEASUREMENT

The Noise characteristic survey was carried out for the parameters as required in DOE Guidelines Limits.

- 1) Equivalent Continuous Sound Level (  $LA_{eq}$  )
- 2) Statistical Indices ( $LA_{10}$ ,  $LA_{50}$  and  $LA_{90}$ )
- 3) Maximum Noise Level (  $LA_{max}$  )
- 4) Minimum Noise Level ( $LA_{min}$ )

## 3.0 METHODOLOGY ( Method Ref. - ISO 1996/1 )

### 3.1 Method Ref. - ISO 1996/1

Description and measurement of environmental noise level (Part 1: Basic quantities and procedures); International Organization for Standardization (ISO), 1982.

### 3.2 Noise Level Monitoring Equipment.

Bruel and Kjaer Precision Integrating Sound Level Meter Type 2238 and complete with Type 4188 microphone and tripod/outdoor gear.

### 3.3 Noise Level Monitoring.

- a) Attach the Bruel and Kjaer sound level meter to the tripod.
- b) Switch the meter on.
- c) Set up the sound level meter.
- d) Start the noise level monitoring.

### 3.4 Noise Level Data Processing

Using Noise Explorer Type 7815 software running Microsoft Windows, noise data are downloaded directly into a data base which is then processed into a report.

#### 4.0 TEST RESULTS & SAMPLING PHOTOGRAPH

##### 4.1 Analysis Results of Noise Level Measurement for Point N1 on 28<sup>th</sup> DECEMBER 2016 – 29<sup>th</sup> DECEMBER 2016.

###### Field Technician Information

Location ID : N1  
Site Name : KLEBANG, MELAKA  
Client : INTEGRATED ENVIROTECH SDN BHD

###### Instrument

Type : B & K  
Measurement range : 30-110 dB

###### Measurement Results

Measurement Period : 29/12/2016 07:00AM TO 30/12/2016 07:00 AM

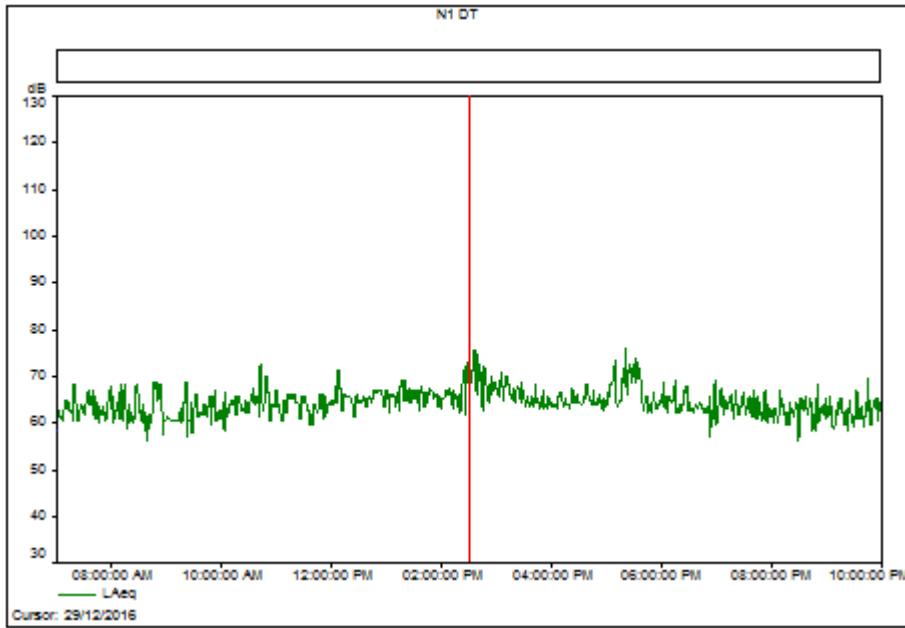
###### Day Time (7.00 am – 10.00 pm)

Total Leq : 62.0 dB  
Max Level : 98.8 dB  
Min Level : 52.2 dB  
L<sub>10</sub> : 64.8 dB  
L<sub>50</sub> : 61.3 dB  
L<sub>90</sub> : 59.2 dB

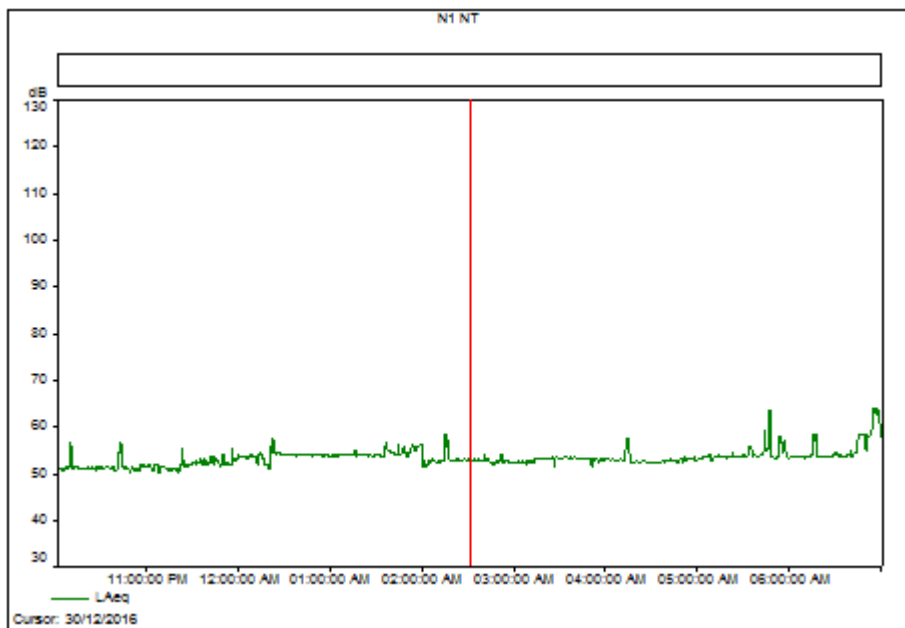
###### Night Time (10.00 pm – 7.00 am)

Total Leq : 51.1 dB  
Max Level : 83.5 dB  
Min Level : 38.7 dB  
L<sub>10</sub> : 56.2 dB  
L<sub>50</sub> : 58.3 dB  
L<sub>90</sub> : 55.3 dB

LAeq Graph for Point N1- Day Time



LAeq Graph for Point N1- Night Time



4.2 Analysis Results of Noise Level Measurement for Point N2 on 30<sup>th</sup> DECEMBER 2016 – 31<sup>st</sup> DECEMBER 2016.

Field Technician Information

Location ID : N2  
Site Name : KLEBANG, MELAKA  
Client : INTEGRATED ENVIROTECH SDN BHD  
Instrument

Type : B & K  
Measurement range : 30-110 dB

Measurement Results

Measurement Period : 30/12/2016 07:00AM TO 31/12/2016 07:00 AM

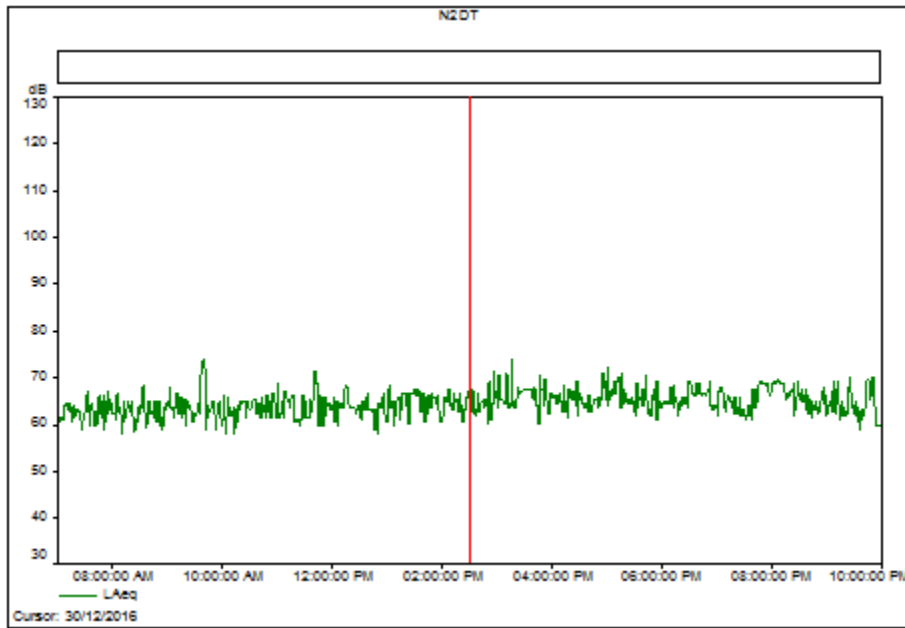
Day Time (7.00 am – 10.00 pm)

Total Leq : 63.9 dB  
Max Level : 96.8 dB  
Min Level : 50.2 dB  
L<sub>10</sub> : 66.5 dB  
L<sub>50</sub> : 60.3 dB  
L<sub>90</sub> : 58.5 dB

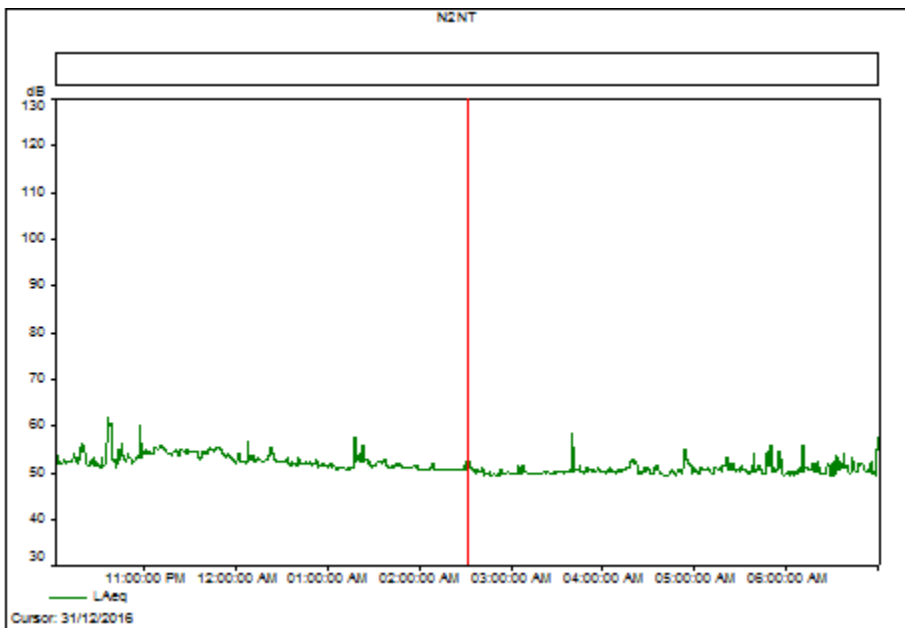
Night Time (10.00 pm – 7.00 am)

Total Leq : 52.3 dB  
Max Level : 83.2 dB  
Min Level : 34.2 dB  
L<sub>10</sub> : 52.8 dB  
L<sub>50</sub> : 52.5 dB  
L<sub>90</sub> : 51.7 dB

### LAeq Graph for Point N2- Day Time



### LAeq Graph for Point N2- Night Time





4.3 Analysis Results of Noise Level Measurement for Point N3 on 31<sup>st</sup> DECEMBER 2016 – 01<sup>st</sup> JANUARY 2017.

Field Technician Information

Location ID : N3  
Site Name : KLEBANG, MELAKA  
Client : INTEGRATED ENVIROTECH SDN BHD  
Instrument

Type : B & K  
Measurement range : 30-110 dB

Measurement Results

Measurement Period : 31/12/2016 07:00AM TO 01/01/2017 07:00 AM

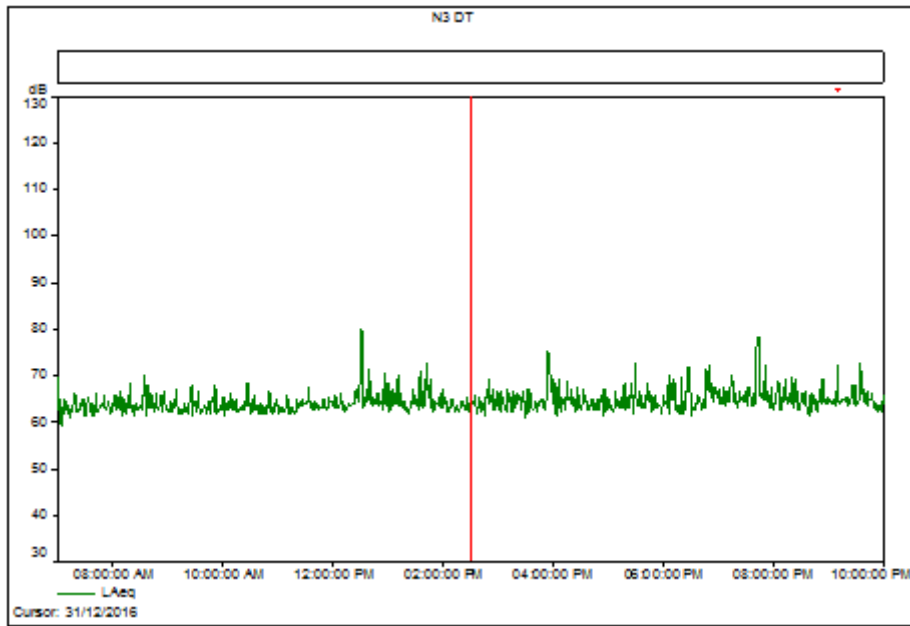
Day Time (7.00 am – 10.00 pm)

Total Leq : 62.5 dB  
Max Level : 96.8 dB  
Min Level : 53.3 dB  
L<sub>10</sub> : 68.6 dB  
L<sub>50</sub> : 59.9 dB  
L<sub>90</sub> : 54.2 dB

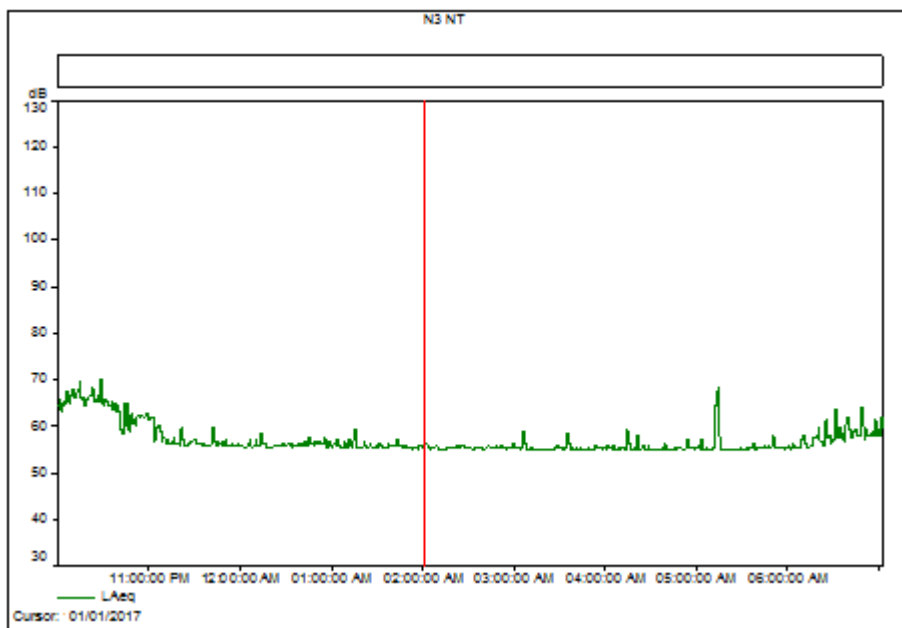
Night Time (10.00 pm – 7.00 am)

Total Leq : 54.0 dB  
Max Level : 90.6 dB  
Min Level : 46.8 dB  
L<sub>10</sub> : 59.6 dB  
L<sub>50</sub> : 55.4 dB  
L<sub>90</sub> : 50.3 dB

**LAeq Graph for Point N3- Day Time**



**LAeq Graph for Point N3- Night Time**



4.4 Analysis Results of Noise Level Measurement for Point N4 on 01<sup>st</sup> JANUARY 2017 – 02<sup>nd</sup> JANUARY 2016.

Field Technician Information

Location ID : N4

Site Name : KLEBANG, MELAKA

Client : INTEGRATED ENVIROTECH SDN BHD

Instrument

Type : B & K

Measurement range : 30-110 dB

Measurement Results

Measurement Period : 01/01/2017 07:00AM TO 02/01/2017 07:00 AM

Day Time (7.00 am – 10.00 pm)

Total Leq : 61.8 dB

Max Level : 93.2 dB

Min Level : 51.6 dB

L<sub>10</sub> : 68.9 dB

L<sub>50</sub> : 61.8 dB

L<sub>90</sub> : 60.3 dB

Night Time (10.00 pm – 7.00 am)

Total Leq : 53.5 dB

Max Level : 88.0 dB

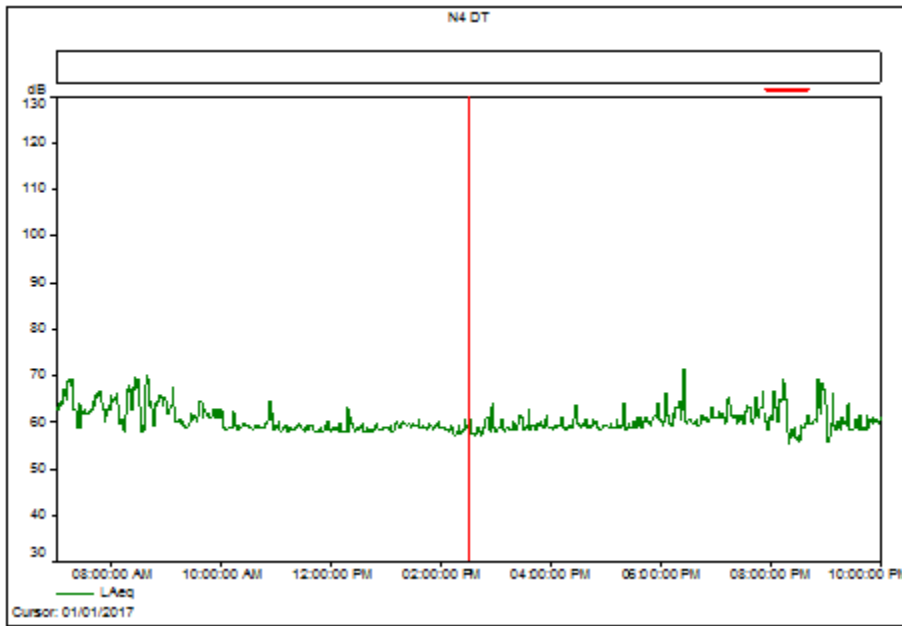
Min Level : 40.2 dB

L<sub>10</sub> : 58.9 dB

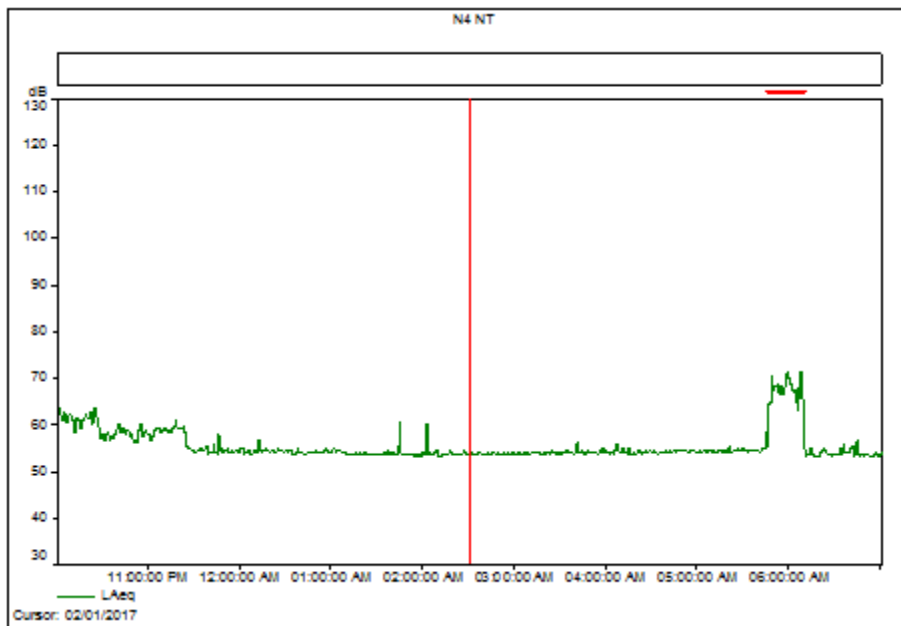
L<sub>50</sub> : 59.8 dB

L<sub>90</sub> : 58.8 dB

LAeq Graph for Point N4- Day Time



LAeq Graph for Point N4- Night Time



**SAMPLING PHOTOGRAPHS**

**POINT N1**



**POINT N2**



**POINT N3**



**POINT N4**



## 5.0 OBSERVATION

The Equivalent Continuous Sound Level, LAeq was found to be **WITHIN** the Recommended Noise Limit of 65.0 dB (A) at Day Time and 55.0 dB (A) at Night Time for **Point N1 - Point N3**.

| Sampling Point | Results LAeq dB(A) | *Recommended Noise Limit     |
|----------------|--------------------|------------------------------|
| N1             | 62.0               | 65.0 dB(A)<br>for Day time   |
|                | 51.1               | 55.0 dB(A)<br>for Night time |
| N2             | 63.9               | 65.0 dB(A)<br>for Day time   |
|                | 52.3               | 55.0 dB(A)<br>for Night time |
| N3             | 62.5               | 65.0 dB(A)<br>for Day time   |
|                | 54.0               | 55.0 dB(A)<br>for Night time |
| N4             | 61.8               | 65.0 dB(A)<br>for Day time   |
|                | 53.5               | 55.0 dB(A)<br>for Night time |

Note:

- 1) \* means Limiting Sound Level (LAeq) for Commercial Business Zones (High Schedule 1; Annex A: Schedule of Permissible Sound Levels; The Planning Guidelines for Environmental Noise Limits & Control, Department of Environment.
  
- 2) **Bold** means Exceeded the limit

## 6.0 CONCLUSION

The environmental noise monitoring level measured for “ENVIRONMENTAL MONITORING AT KLEBANG, MELAKA” at Point N1, Point N2, Point N3 and Point N4 on 29<sup>th</sup> DECEMBER 2016 – 02<sup>nd</sup> JANUARY 2017 has been carried out successfully and the result is as reported.

Reported by,



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