

3.8.3 Environmental Air Quality Monitoring (Ambient Air Quality)

An environmental air quality monitoring was conducted by Y Laboratory Sdn. Bhd. from 24th December 2009 until 30th December 2009, which was located at selected factory areas.

Objective

The objective of this monitoring was to determine the ambient air characteristics within the vicinity of the proposed site location in order to fulfill conditions imposed under the EIA approval by DOE (Appendix 17).

Parameters and Instruments

The parameters monitored and instruments used in this study were in Table 3.35;

Table 3.35: List of Parameters and Instruments

No	Parameters monitored	Instruments used
1	PM ₁₀	Gravimetry
2	TSP	Gravimetry
3	Nitrogen Dioxides (NO ₂)	Ion Chromatography
4	Sulphur Dioxides (SO ₂)	Ion Chromatography
5	Carbon Monoxide (CO)	Gas Analyzer
6	VOC	GC-MS

(Source: Company' Environmental Air Quality Monitoring Report, Appendix 17)

Methods References (Detail in Appendix 17)

The parameters and Methods References in this study were shown in Table 3.36;

Table 3.36: List of Parameters and Methods References

No	Parameters	Methods References
1	PM ₁₀	USEPA 40 PART 50, Appendix B
2	TSP	ISC 501
3	Sulphur Dioxides (SO ₂)	ISC 704A
4	Nitrogen Dioxides (NO ₂)	ISC 408
5	Carbon Monoxide (CO)	APHA 42101-07-74T

(Source: Company' Environmental Air Quality Monitoring Report, Appendix 17)

Point Locations (Environmental Air Quality Monitoring Station)

Six point locations were chosen and labeled as A1, A2, A3, A4, A5, and A6



Figure 3.1: Point A1 (Secomex 1)



24th -25th December 2009

Figure 3.2: Point A2 (Secomex 2)

25th -26th December 2009



Figure 3.3: Point A3 (Jetty)



27th -28th December 2009

Figure 3.4: Point A4 (Energy Compact 1)

29th -30th December 2009



Figure 3.5: Point A5 (Secomex 3)



26th -27th December 2009

Figure 3.6: Point A6 (Energy Compact 2)

28th -29th December 2009

Result

Table 3.37: Environmental Air Quality Monitoring Analysis Result

Sampling Point	TSP µg/m³	PM₁₀ µg/m³	NO₂ µg/m³	SO₂ µg/m³	CO ppm	VOC µg/m³
A1	72	63	21	15	3.9	25
A2	96	92	30	22	4.8	30
A3	65	34	15	8	4.3	24
A4	41	69	12	ND (<5)	3.4	20
A5	88	76	25	18	4.6	34
A6	147	58	27	23	4.7	36
MALAYSIAN GUIDELINES	260	150	320	105	9	N/A

(Source: Company' Environmental Air Quality Monitoring Report, Appendix 17)

Conclusion

The results were found for ambient air qualities monitored at point locations A1, A2, A3, A4, A5, and A6 on 24th December 2009- 30th December 2009 to be **within** the Malaysian Recommended Air Quality Guidelines.

In preventing and controlling the exposure of air pollution, the Company has taken aggressive approaches by (1) Air Emission Control; (a) TSP (TSP and PM Sampling) (b) Dust (Isokinetic Stack and Air Emission Monitoring) (2) Air Quality (Ambient Air Quality Monitoring) (3) Stack and Chimney Monitoring

3.8.4 Environmental Noise Level Monitoring

An environmental noise level monitoring was conducted by Y Laboratory Sdn. Bhd. from 24th December 2009- 30th December 2009, which located at selected factory areas. At the primary location, A-weighted noise levels (LA) were measured (Appendix 18).

Objective

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

Scope of Measurement

Noise characteristic survey was carried out for parameters as required in DOE Limit.

- 1) Equivalent Continuous Sound Level (L_{Aeq})
- 2) Statistical Indices (L_{A10} , L_{A50} and L_{A90})
- 3) Maximum Noise Level (L_{Amax})
- 4) Minimum Noise Level (L_{Amin})

Methodology

Table 3.38: Methodology and Methods References

No	Methodology	Methods References
1	Methods References-	Part 1; Basic quantities and procedures; international
	ISO 1996/1;	Organization for Standardization (ISO), 1982
2	Noise Level	Bruel and Kjaer Precision Integrating Sound Level Meter
	Monitoring	Type 2238 and complete with Type 4188 microphone and
	Equipment	tripod/ outdoor gear
3	Noise Level	a) Attach the Bruel and Kjaer Sound Level Meter to the tripod
	Monitoring	b) Switch the meter on
		c) Set up the sound level meter
		d) Start the noise level monitoring
4	Noise level Data	Using Noise Explorer Type 7815 software running Microsoft
	Processing	windows

(Source: Company' Environmental Noise Level Monitoring Report, Appendix 18)

Results (Environmental Noise Level Monitoring)

Table 3.39: Environmental Noise Level Monitoring Result

Point Location	L_{Aeq} [dB]	L_{Amax} [dB]	L_{Amin} [dB]	Recommended Limit L_{Aeq} [dB (A)]
N1 24 th – 25 th Dec 2009	72.8	87.4	67.6	70.0 dB (A) for Daytime
	73.7	82.8	70.8	60.0 dB (A) for Night time
N2 25 th – 26 th Dec 2009	53.3	85.4	45.7	70.0 dB (A) for Daytime
	51.2	69.7	48.4	60.0 dB (A) for Night time
N3 27 th – 28 th Dec 2009	59.6	98.3	50.3	70.0 dB (A) for Daytime
	56.9	83.7	50.3	60.0 dB (A) for Night time
N4 29 th – 30 th Dec 2009	64.1	85.9	56.4	70.0 dB (A) for Daytime
	63.0	81.9	53.4	60.0 dB (A) for Night time
N5 26 th – 27 th Dec 2009	56.5	98.1	39.5	70.0 dB (A) for Daytime
	58.6	86.7	42.2	60.0 dB (A) for Night time
N6 28 th – 29 th Dec 2009	57.7	87.7	47.6	70.0 dB (A) for Daytime
	58.6	82.7	43.8	60.0 dB (A) for Night time

(Source: Company' Environmental Noise Level Monitoring Report, Appendix 18)

Summary

The Equivalent Continuous Sound Level (L_{Aeq}) was found to be **exceeding** the Malaysian Recommended Limit of 70.0 dB (A) for Daytime and 60.0 dB (A) for Night time at Point N1 and N4.

However, the noise created by conduction and vibration through air from plant machinery, were reduced and controlled by making alterations and modification in engineering design, limiting the time of exposure (administration control) or using personal protective devices. In-plant and environment noise level need to control, to the standards specified by the Government Regulatory requirements and possible to comply with community acceptance standards.