

ภาคผนวก ค

ใบรับรองผลการตรวจวิเคราะห์คุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

คุณภาพอากาศจากแหล่งกำเนิด



Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2338161
Date Received : Apr 06, 2023
Date Reported : Apr 12, 2023
Report Number: 2613570-1

Page 1 of 1

Sample Number 2338161-1
Sampled Date Apr 06, 2023
Sample Description Emission from Stationary Source
Location ปล่อง Reformer Furnace
Date Analysis Commenced Apr 07, 2023
Condition of Sample Extracted into two 2-L collection flasks

Stack Description

Ambient Pressure	757	mmHg	Diameter	0.55	m	Oxygen	1.7	%
Ambient Temperature	33.0	°C	Shape	Circle		Carbon Dioxide	11.3	%
Type of Process	Combustion		Stack Temperature	164	°C	Gas Velocity	4.4	m/s
Type of Fuel	Natural Gas		Moisture	7.73	%	Flow Rate (Actual O2)	2360	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Oxides of Nitrogen	09:10 AM - 09:20 AM	ppm	-	1.06	58.5	200	United States Environmental Protection Agency, EPA Method 7	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampled By : Jittakorn Sriwasa

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-9447

Approved by

D. Chongchon

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2338163

Date Received : Apr 06, 2023
Date Reported : Apr 12, 2023
Report Number: 2613571-1

Page 1 of 1

Sample Number 2338163-1
Sampled Date Apr 06, 2023
Sample Description Emission from Stationary Source
Location ปล่อง Boiler
Date Analysis Commenced Apr 07, 2023
Condition of Sample Extracted into two 2-L collection flasks

Stack Description

Ambient Pressure	757	mmHg	Diameter	0.48	m	Oxygen	4.9	%
Ambient Temperature	33.0	°C	Shape	Circle		Carbon Dioxide	9.1	%
Type of Process	Combustion		Stack Temperature	130	°C	Gas Velocity	5.6	m/s
Type of Fuel	Natural Gas		Moisture	8.51	%	Flow Rate (Actual O2)	2459	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Oxides of Nitrogen	09:35 AM - 09:45 AM	ppm	-	1.06	27.9	200	United States Environmental Protection Agency, EPA Method 7	Rayong

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampled By : Jittakorn Sriwasa

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9447

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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ภาคผนวก ค-2

คุณภาพน้ำ



Analysis / Test Report

TESTING

No.0042

Lot ID: 234216

Date Received : Jan 13, 2023

Date Reported : Jan 20, 2023

Report Number : 2541660-1

Client : Linde HyCO Limited

10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Environmental Monitoring

Project Location :

Page 1 of 1

Sample Number	234216-1
Sampled Date	Jan 13, 2023 9:40 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	27.6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	242	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

TESTING

No.0042

Lot ID: 234277

Date Received : Feb 13, 2023

Date Reported : Feb 20, 2023

Report Number : 2541663-1

Client : Linde HyCO Limited

10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Environmental Monitoring

Project Location :

Page 1 of 1

Sample Number	234277-1						
Sampled Date	Feb 13, 2023 9:30 AM						
Sample Description	Wastewater						
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)						
Date Analysis Commenced	Feb 13, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	28.8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	272	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Chainusorn Lertnanthakunchai ทะเบียนเลขที่ ว-323-จ-9461

Remark :

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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2323744

Date Received : Mar 13, 2023

Date Reported : Mar 20, 2023

Report Number : 2582186-1

Client : Linde HyCO Limited

10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Environmental Monitoring

Project Location :

Page 1 of 1

Sample Number	2323744-1
Sampled Date	Mar 13, 2023 10:10 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	Mar 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	12.4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	45	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	388	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Narunat thammassaro ทะเบียนเลขที่ ว-323-จ-9477

Remark :

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Technical Management

N. Banchongkit

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2337012

Date Received : Apr 11, 2023

Date Reported : Apr 20, 2023

Report Number : 2611122-1

Client : Linde HyCO Limited

10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Environmental Monitoring

Project Location :

Page 1 of 1

Sample Number	2337012-1
Sampled Date	Apr 11, 2023 10:53 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	Apr 11, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	39	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	34.6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	640	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-จ-9476

Remark :

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Technical Management

N. Banongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2352182

Date Received : May 12, 2023

Date Reported : May 19, 2023

Report Number : 2645159-1

Client : Linde HyCO Limited

10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Environmental Monitoring

Project Location :

Page 1 of 1

Sample Number	2352182-1
Sampled Date	May 12, 2023 9:50 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	May 12, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	28	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	688	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-9457

Remark :

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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banongkit

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2366447

Date Received : Jun 15, 2023

Date Reported : Jun 22, 2023

Report Number : 2676861-1

Client : Linde HyCO Limited

10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Environmental Monitoring

Project Location :

Page 1 of 1

Sample Number	2366447-1
Sampled Date	Jun 15, 2023 10:45 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	Jun 15, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	288	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banchongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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ภาคผนวก ค-3

ระดับเสียงโดยทั่วไป



Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624280-1

Page 1 of 1

Sample Number 2338192-1
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Apr 05 - Apr 06, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 472130

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.7	75.7	62.0
10:00 AM - 11:00 AM	63.7	70.0	62.3
11:00 AM - 12:00 PM	64.2	72.8	62.7
12:00 PM - 01:00 PM	64.0	71.9	62.6
01:00 PM - 02:00 PM	64.5	80.3	62.3
02:00 PM - 03:00 PM	72.2	76.8	66.7
03:00 PM - 04:00 PM	63.0	81.4	59.5
04:00 PM - 05:00 PM	58.6	72.0	57.3
05:00 PM - 06:00 PM	60.5	78.4	58.4
06:00 PM - 07:00 PM	58.9	68.3	57.9
07:00 PM - 08:00 PM	58.4	65.6	57.7
08:00 PM - 09:00 PM	58.9	79.7	57.5
09:00 PM - 10:00 PM	58.2	64.2	57.6
10:00 PM - 11:00 PM	58.6	61.9	58.0
11:00 PM - 12:00 AM	58.6	76.4	57.0
12:00 AM - 01:00 AM	57.9	62.1	57.2
01:00 AM - 02:00 AM	57.6	62.8	57.2
02:00 AM - 03:00 AM	57.6	61.1	57.1
03:00 AM - 04:00 AM	57.7	61.7	57.2
04:00 AM - 05:00 AM	57.7	61.1	57.1
05:00 AM - 06:00 AM	58.8	63.6	57.6
06:00 AM - 07:00 AM	58.9	76.5	57.6
07:00 AM - 08:00 AM	58.1	73.5	57.2
08:00 AM - 09:00 AM	57.7	67.8	57.0

Leq Average 24 hrs. (dB(A)) 62.5
Lmax (dB(A)) 81.4
L90 (dB(A)) 57.6
Ldn (dB(A)) 66.0
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624281-1

Page 1 of 1

Sample Number 2338192-2
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Apr 06 - Apr 07, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 472130

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	57.7	72.8	56.9
10:00 AM - 11:00 AM	57.2	66.3	56.4
11:00 AM - 12:00 PM	57.1	66.4	56.2
12:00 PM - 01:00 PM	57.0	69.3	56.3
01:00 PM - 02:00 PM	62.0	82.8	56.7
02:00 PM - 03:00 PM	60.0	79.2	56.9
03:00 PM - 04:00 PM	57.5	75.0	56.5
04:00 PM - 05:00 PM	58.1	70.4	57.1
05:00 PM - 06:00 PM	59.1	75.7	57.7
06:00 PM - 07:00 PM	59.8	73.1	57.6
07:00 PM - 08:00 PM	58.1	66.8	57.4
08:00 PM - 09:00 PM	61.4	80.5	57.1
09:00 PM - 10:00 PM	58.2	75.8	57.2
10:00 PM - 11:00 PM	57.8	69.3	57.0
11:00 PM - 12:00 AM	75.7	83.9	58.6
12:00 AM - 01:00 AM	61.8	83.3	56.8
01:00 AM - 02:00 AM	57.2	64.4	56.7
02:00 AM - 03:00 AM	57.4	62.7	56.9
03:00 AM - 04:00 AM	57.7	61.7	57.1
04:00 AM - 05:00 AM	57.6	62.4	57.0
05:00 AM - 06:00 AM	59.5	67.4	57.3
06:00 AM - 07:00 AM	58.3	69.5	57.6
07:00 AM - 08:00 AM	66.8	75.7	57.7
08:00 AM - 09:00 AM	69.0	81.3	56.8

Leq Average 24 hrs. (dB(A)) 64.4
Lmax (dB(A)) 83.9
L90 (dB(A)) 57.0
Ldn (dB(A)) 72.8
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Air Testing

Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023

Date Reported : Apr 19, 2023

Report Number: 2624282-1

Page 1 of 1

Sample Number 2338192-3
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Apr 07 - Apr 08, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 472130

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	78.7	95.2	60.4
10:00 AM - 11:00 AM	69.7	84.2	58.9
11:00 AM - 12:00 PM	69.3	81.8	58.0
12:00 PM - 01:00 PM	58.8	72.4	57.5
01:00 PM - 02:00 PM	58.8	71.6	57.4
02:00 PM - 03:00 PM	58.8	77.4	56.8
03:00 PM - 04:00 PM	57.8	73.5	56.9
04:00 PM - 05:00 PM	58.0	68.2	57.1
05:00 PM - 06:00 PM	59.5	77.0	57.7
06:00 PM - 07:00 PM	58.2	67.6	57.4
07:00 PM - 08:00 PM	58.4	76.8	57.3
08:00 PM - 09:00 PM	58.9	81.5	57.2
09:00 PM - 10:00 PM	58.1	74.3	57.5
10:00 PM - 11:00 PM	58.6	61.8	57.6
11:00 PM - 12:00 AM	58.0	63.1	57.4
12:00 AM - 01:00 AM	57.9	61.9	57.4
01:00 AM - 02:00 AM	58.7	73.8	57.5
02:00 AM - 03:00 AM	74.2	83.6	63.4
03:00 AM - 04:00 AM	62.5	86.6	60.4
04:00 AM - 05:00 AM	62.7	73.5	60.9
05:00 AM - 06:00 AM	68.9	82.9	64.1
06:00 AM - 07:00 AM	60.3	81.9	57.0
07:00 AM - 08:00 AM	57.8	69.7	57.0
08:00 AM - 09:00 AM	59.1	80.3	56.8

Leq Average 24 hrs. (dB(A)) 67.7
Lmax (dB(A)) 95.2
L90 (dB(A)) 57.4
Ldn (dB(A)) 73.3
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624283-1

Page 1 of 1

Sample Number 2338192-4
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Apr 08 - Apr 09, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 472130

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	57.4	67.7	56.7
10:00 AM - 11:00 AM	57.2	66.9	56.4
11:00 AM - 12:00 PM	57.4	69.7	56.6
12:00 PM - 01:00 PM	57.1	68.2	56.4
01:00 PM - 02:00 PM	58.0	79.9	56.6
02:00 PM - 03:00 PM	57.6	69.4	56.6
03:00 PM - 04:00 PM	58.7	80.0	57.0
04:00 PM - 05:00 PM	58.0	75.6	57.3
05:00 PM - 06:00 PM	59.3	70.3	57.5
06:00 PM - 07:00 PM	58.3	67.3	57.5
07:00 PM - 08:00 PM	58.6	68.4	57.8
08:00 PM - 09:00 PM	58.6	61.7	57.9
09:00 PM - 10:00 PM	58.9	68.0	57.5
10:00 PM - 11:00 PM	58.9	74.9	57.5
11:00 PM - 12:00 AM	57.8	63.2	57.3
12:00 AM - 01:00 AM	71.7	83.3	57.3
01:00 AM - 02:00 AM	58.7	75.9	57.4
02:00 AM - 03:00 AM	57.7	61.1	57.2
03:00 AM - 04:00 AM	58.0	64.1	57.5
04:00 AM - 05:00 AM	58.7	66.7	57.4
05:00 AM - 06:00 AM	58.9	70.8	57.7
06:00 AM - 07:00 AM	59.0	82.4	57.9
07:00 AM - 08:00 AM	58.5	69.9	57.5
08:00 AM - 09:00 AM	58.1	70.0	57.3

Leq Average 24 hrs. (dB(A)) 61.0
Lmax (dB(A)) 83.3
L90 (dB(A)) 57.3
Ldn (dB(A)) 69.5
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624284-1

Page 1 of 1

Sample Number 2338192-5
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Apr 09 - Apr 10, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 472130

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	59.0	81.1	56.5
10:00 AM - 11:00 AM	58.8	68.9	57.4
11:00 AM - 12:00 PM	58.8	68.1	57.7
12:00 PM - 01:00 PM	59.6	72.8	57.5
01:00 PM - 02:00 PM	57.4	74.6	56.5
02:00 PM - 03:00 PM	58.0	65.3	57.0
03:00 PM - 04:00 PM	58.3	68.7	57.4
04:00 PM - 05:00 PM	58.0	67.6	57.3
05:00 PM - 06:00 PM	61.5	76.2	57.9
06:00 PM - 07:00 PM	57.9	66.5	57.3
07:00 PM - 08:00 PM	58.1	68.4	57.5
08:00 PM - 09:00 PM	58.6	78.1	57.5
09:00 PM - 10:00 PM	58.3	70.7	57.8
10:00 PM - 11:00 PM	59.3	67.4	57.4
11:00 PM - 12:00 AM	57.6	62.2	57.0
12:00 AM - 01:00 AM	58.4	74.1	57.2
01:00 AM - 02:00 AM	71.3	78.5	67.8
02:00 AM - 03:00 AM	62.9	84.4	57.4
03:00 AM - 04:00 AM	57.9	62.3	57.2
04:00 AM - 05:00 AM	58.6	64.2	57.2
05:00 AM - 06:00 AM	58.4	75.5	57.3
06:00 AM - 07:00 AM	58.0	74.0	56.9
07:00 AM - 08:00 AM	57.8	74.0	56.8
08:00 AM - 09:00 AM	59.4	80.9	56.5

Leq Average 24 hrs. (dB(A)) 61.2
Lmax (dB(A)) 84.4
L90 (dB(A)) 57.3
Ldn (dB(A)) 69.5
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624285-1

Page 1 of 1

Sample Number 2338192-6
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Apr 10 - Apr 11, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 472130

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	58.4	74.1	56.9
10:00 AM - 11:00 AM	60.8	83.9	56.7
11:00 AM - 12:00 PM	57.5	67.2	56.6
12:00 PM - 01:00 PM	57.6	67.1	56.8
01:00 PM - 02:00 PM	57.7	69.9	56.7
02:00 PM - 03:00 PM	57.9	77.8	56.6
03:00 PM - 04:00 PM	57.8	69.9	56.9
04:00 PM - 05:00 PM	57.6	65.4	56.9
05:00 PM - 06:00 PM	59.5	70.5	57.0
06:00 PM - 07:00 PM	57.7	71.9	56.9
07:00 PM - 08:00 PM	57.5	64.1	56.9
08:00 PM - 09:00 PM	57.5	68.1	56.8
09:00 PM - 10:00 PM	57.9	61.2	57.4
10:00 PM - 11:00 PM	57.8	71.1	57.1
11:00 PM - 12:00 AM	58.0	65.3	57.3
12:00 AM - 01:00 AM	59.2	62.7	58.1
01:00 AM - 02:00 AM	59.9	65.5	58.4
02:00 AM - 03:00 AM	59.0	62.5	57.8
03:00 AM - 04:00 AM	58.8	61.8	58.1
04:00 AM - 05:00 AM	66.4	82.4	57.5
05:00 AM - 06:00 AM	66.8	86.5	57.9
06:00 AM - 07:00 AM	59.1	81.9	57.6
07:00 AM - 08:00 AM	58.1	75.0	57.1
08:00 AM - 09:00 AM	60.1	77.9	56.9

Leq Average 24 hrs. (dB(A)) 60.2
Lmax (dB(A)) 86.5
L90 (dB(A)) 56.9
Ldn (dB(A)) 68.1
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624286-1

Page 1 of 1

Sample Number 2338192-7
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Apr 11 - Apr 12, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 472130

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	57.9	70.3	57.1
10:00 AM - 11:00 AM	58.4	76.2	56.8
11:00 AM - 12:00 PM	56.9	67.0	56.3
12:00 PM - 01:00 PM	57.0	66.5	56.2
01:00 PM - 02:00 PM	57.5	76.3	56.4
02:00 PM - 03:00 PM	57.2	72.8	56.3
03:00 PM - 04:00 PM	57.6	71.1	56.8
04:00 PM - 05:00 PM	58.0	68.7	57.1
05:00 PM - 06:00 PM	59.4	69.7	57.4
06:00 PM - 07:00 PM	57.8	70.4	57.2
07:00 PM - 08:00 PM	57.9	65.1	57.4
08:00 PM - 09:00 PM	59.6	81.4	57.7
09:00 PM - 10:00 PM	59.1	72.6	57.6
10:00 PM - 11:00 PM	69.9	76.3	58.7
11:00 PM - 12:00 AM	60.0	80.1	57.5
12:00 AM - 01:00 AM	57.6	63.1	57.1
01:00 AM - 02:00 AM	58.6	63.0	57.2
02:00 AM - 03:00 AM	57.7	60.9	57.2
03:00 AM - 04:00 AM	58.1	61.5	57.5
04:00 AM - 05:00 AM	59.5	66.6	57.2
05:00 AM - 06:00 AM	58.3	69.3	57.6
06:00 AM - 07:00 AM	58.6	73.6	57.5
07:00 AM - 08:00 AM	57.8	72.1	57.1
08:00 AM - 09:00 AM	61.9	82.0	57.2

Leq Average 24 hrs. (dB(A)) 60.4
Lmax (dB(A)) 82.0
L90 (dB(A)) 57.2
Ldn (dB(A)) 68.4
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624287-1

Page 1 of 1

Sample Number 2338192-8
Parameter Noise (Leq 24 hrs.)
Location บริเวณเริ่มรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Apr 05 - Apr 06, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 222486

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	67.1	83.1	64.7
10:00 AM - 11:00 AM	67.5	83.5	65.1
11:00 AM - 12:00 PM	67.4	82.0	64.6
12:00 PM - 01:00 PM	67.1	83.1	64.7
01:00 PM - 02:00 PM	66.8	82.3	64.5
02:00 PM - 03:00 PM	67.0	79.8	64.5
03:00 PM - 04:00 PM	67.1	80.5	64.8
04:00 PM - 05:00 PM	77.6	106.5	61.9
05:00 PM - 06:00 PM	64.6	81.9	60.9
06:00 PM - 07:00 PM	66.0	83.4	63.1
07:00 PM - 08:00 PM	65.4	82.2	62.4
08:00 PM - 09:00 PM	64.5	84.0	61.7
09:00 PM - 10:00 PM	63.5	84.6	60.7
10:00 PM - 11:00 PM	63.2	83.1	60.6
11:00 PM - 12:00 AM	62.8	74.1	60.6
12:00 AM - 01:00 AM	62.6	74.7	60.4
01:00 AM - 02:00 AM	61.8	75.3	59.6
02:00 AM - 03:00 AM	61.7	72.9	59.4
03:00 AM - 04:00 AM	62.0	75.9	59.7
04:00 AM - 05:00 AM	62.2	75.5	60.0
05:00 AM - 06:00 AM	62.0	78.3	59.9
06:00 AM - 07:00 AM	63.7	89.1	60.6
07:00 AM - 08:00 AM	66.1	89.5	61.7
08:00 AM - 09:00 AM	64.4	87.1	60.6

Leq Average 24 hrs. (dB(A)) 67.4
Lmax (dB(A)) 106.5
L90 (dB(A)) 60.9
Ldn (dB(A)) 70.6
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150

P/O : 9103573177

Project Name : Air Testing

Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023

Date Reported : Apr 19, 2023

Report Number: 2624288-1

Page 1 of 1

Sample Number 2338192-9
Parameter Noise (Leq 24 hrs.)
Location บริเวณเริ่มรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Apr 06 - Apr 07, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 222486

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.9	82.6	59.5
10:00 AM - 11:00 AM	62.8	86.1	59.4
11:00 AM - 12:00 PM	62.8	88.9	59.2
12:00 PM - 01:00 PM	62.2	78.5	59.1
01:00 PM - 02:00 PM	64.4	82.2	59.7
02:00 PM - 03:00 PM	62.7	83.8	58.9
03:00 PM - 04:00 PM	63.8	86.8	60.1
04:00 PM - 05:00 PM	63.3	84.7	59.1
05:00 PM - 06:00 PM	63.9	87.3	60.2
06:00 PM - 07:00 PM	63.8	79.5	60.1
07:00 PM - 08:00 PM	64.0	80.7	60.4
08:00 PM - 09:00 PM	65.4	87.0	60.2
09:00 PM - 10:00 PM	64.7	81.1	62.9
10:00 PM - 11:00 PM	64.0	76.0	61.7
11:00 PM - 12:00 AM	63.2	81.7	60.4
12:00 AM - 01:00 AM	62.7	72.6	60.5
01:00 AM - 02:00 AM	62.1	74.0	59.6
02:00 AM - 03:00 AM	61.4	75.7	59.2
03:00 AM - 04:00 AM	62.1	82.8	59.5
04:00 AM - 05:00 AM	62.2	74.5	59.7
05:00 AM - 06:00 AM	62.0	75.6	59.5
06:00 AM - 07:00 AM	63.3	81.3	59.9
07:00 AM - 08:00 AM	65.7	86.1	61.3
08:00 AM - 09:00 AM	65.0	82.6	61.6

Leq Average 24 hrs. (dB(A)) 63.5
Lmax (dB(A)) 88.9
L90 (dB(A)) 59.7
Ldn (dB(A)) 69.2
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624289-1

Page 1 of 1

Sample Number 2338192-10
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Apr 07 - Apr 08, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 222486

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	65.2	80.1	62.0
10:00 AM - 11:00 AM	71.2	96.4	62.6
11:00 AM - 12:00 PM	66.5	80.5	63.9
12:00 PM - 01:00 PM	67.4	84.1	64.0
01:00 PM - 02:00 PM	66.5	89.2	62.3
02:00 PM - 03:00 PM	65.3	81.2	62.2
03:00 PM - 04:00 PM	64.2	78.1	61.2
04:00 PM - 05:00 PM	64.1	78.6	61.0
05:00 PM - 06:00 PM	64.4	81.0	60.8
06:00 PM - 07:00 PM	65.8	88.7	61.8
07:00 PM - 08:00 PM	65.0	85.8	61.6
08:00 PM - 09:00 PM	64.2	85.4	61.3
09:00 PM - 10:00 PM	63.6	82.8	61.1
10:00 PM - 11:00 PM	63.6	83.8	60.9
11:00 PM - 12:00 AM	63.2	74.0	61.0
12:00 AM - 01:00 AM	62.7	72.7	60.9
01:00 AM - 02:00 AM	62.1	74.7	60.4
02:00 AM - 03:00 AM	62.2	74.7	60.6
03:00 AM - 04:00 AM	62.7	80.2	60.7
04:00 AM - 05:00 AM	62.6	86.7	60.6
05:00 AM - 06:00 AM	63.0	86.9	60.8
06:00 AM - 07:00 AM	64.2	80.9	61.1
07:00 AM - 08:00 AM	66.2	89.4	61.7
08:00 AM - 09:00 AM	64.0	82.2	60.1

Leq Average 24 hrs. (dB(A)) 65.2
Lmax (dB(A)) 96.4
L90 (dB(A)) 61.1
Ldn (dB(A)) 70.0
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624290-1

Page 1 of 1

Sample Number 2338192-11
Parameter Noise (Leq 24 hrs.)
Location บริเวณเริ่มรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Apr 08 - Apr 09, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 222486

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.3	83.3	59.4
10:00 AM - 11:00 AM	62.9	83.6	59.3
11:00 AM - 12:00 PM	63.0	81.5	59.3
12:00 PM - 01:00 PM	63.0	83.9	59.0
01:00 PM - 02:00 PM	62.6	83.0	58.5
02:00 PM - 03:00 PM	62.7	83.7	58.4
03:00 PM - 04:00 PM	62.8	80.8	58.9
04:00 PM - 05:00 PM	63.5	74.7	59.6
05:00 PM - 06:00 PM	64.2	83.0	59.8
06:00 PM - 07:00 PM	64.1	85.9	59.8
07:00 PM - 08:00 PM	64.3	87.8	60.0
08:00 PM - 09:00 PM	63.8	83.0	60.4
09:00 PM - 10:00 PM	62.8	74.7	60.2
10:00 PM - 11:00 PM	62.5	83.7	59.8
11:00 PM - 12:00 AM	62.1	71.8	59.7
12:00 AM - 01:00 AM	62.0	75.0	59.4
01:00 AM - 02:00 AM	61.7	76.1	59.6
02:00 AM - 03:00 AM	61.8	77.1	59.7
03:00 AM - 04:00 AM	61.9	74.9	59.7
04:00 AM - 05:00 AM	62.1	75.0	59.6
05:00 AM - 06:00 AM	62.0	76.5	59.8
06:00 AM - 07:00 AM	63.6	80.5	60.2
07:00 AM - 08:00 AM	65.6	84.9	60.7
08:00 AM - 09:00 AM	64.0	85.0	60.1

Leq Average 24 hrs. (dB(A)) 63.1
Lmax (dB(A)) 87.8
L90 (dB(A)) 59.7
Ldn (dB(A)) 68.9
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการ
โรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624291-1

Page 1 of 1

Sample Number 2338192-12
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Apr 09 - Apr 10, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 222486

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.6	78.5	59.5
10:00 AM - 11:00 AM	62.2	76.5	59.4
11:00 AM - 12:00 PM	63.4	82.4	60.1
12:00 PM - 01:00 PM	64.3	81.5	60.7
01:00 PM - 02:00 PM	64.3	81.1	60.8
02:00 PM - 03:00 PM	63.0	87.5	59.5
03:00 PM - 04:00 PM	62.8	83.3	59.1
04:00 PM - 05:00 PM	63.7	82.1	60.1
05:00 PM - 06:00 PM	63.7	77.5	60.1
06:00 PM - 07:00 PM	64.3	85.3	60.6
07:00 PM - 08:00 PM	63.6	86.1	60.2
08:00 PM - 09:00 PM	63.7	87.2	60.1
09:00 PM - 10:00 PM	62.0	82.7	59.7
10:00 PM - 11:00 PM	61.6	76.8	59.2
11:00 PM - 12:00 AM	62.0	82.4	59.4
12:00 AM - 01:00 AM	61.9	83.0	59.5
01:00 AM - 02:00 AM	61.8	75.6	59.6
02:00 AM - 03:00 AM	61.5	78.9	59.5
03:00 AM - 04:00 AM	61.8	73.6	59.7
04:00 AM - 05:00 AM	61.9	76.4	59.7
05:00 AM - 06:00 AM	62.1	74.7	59.9
06:00 AM - 07:00 AM	64.3	84.5	60.9
07:00 AM - 08:00 AM	65.2	79.6	61.5
08:00 AM - 09:00 AM	64.5	81.0	60.5

Leq Average 24 hrs. (dB(A)) 63.1
Lmax (dB(A)) 87.5
L90 (dB(A)) 59.7
Ldn (dB(A)) 68.8
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624292-1

Page 1 of 1

Sample Number 2338192-13
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Apr 10 - Apr 11, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 222486

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.2	77.4	59.3
10:00 AM - 11:00 AM	62.8	79.8	59.1
11:00 AM - 12:00 PM	63.3	81.4	59.2
12:00 PM - 01:00 PM	62.9	78.5	59.5
01:00 PM - 02:00 PM	62.9	85.0	59.0
02:00 PM - 03:00 PM	62.9	77.9	59.3
03:00 PM - 04:00 PM	63.2	86.5	59.1
04:00 PM - 05:00 PM	63.2	77.2	59.1
05:00 PM - 06:00 PM	64.2	77.2	60.2
06:00 PM - 07:00 PM	64.2	83.3	60.3
07:00 PM - 08:00 PM	64.0	82.8	60.1
08:00 PM - 09:00 PM	63.5	86.0	59.9
09:00 PM - 10:00 PM	62.5	83.8	59.2
10:00 PM - 11:00 PM	61.6	78.5	58.6
11:00 PM - 12:00 AM	61.6	78.9	59.0
12:00 AM - 01:00 AM	61.4	78.1	58.7
01:00 AM - 02:00 AM	61.3	78.0	58.6
02:00 AM - 03:00 AM	62.3	74.8	60.7
03:00 AM - 04:00 AM	62.8	80.3	60.8
04:00 AM - 05:00 AM	62.7	86.8	60.7
05:00 AM - 06:00 AM	63.1	87.0	60.9
06:00 AM - 07:00 AM	64.3	81.0	61.2
07:00 AM - 08:00 AM	66.3	89.5	61.8
08:00 AM - 09:00 AM	64.1	82.3	60.2

Leq Average 24 hrs. (dB(A)) 63.2
Lmax (dB(A)) 89.5
L90 (dB(A)) 59.3
Ldn (dB(A)) 69.1
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338192

Date Received : Apr 12, 2023
Date Reported : Apr 19, 2023
Report Number: 2624293-1

Page 1 of 1

Sample Number 2338192-14
Parameter Noise (Leq 24 hrs.)
Location บริเวณเริ่มรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Apr 11 - Apr 12, 2023
Measurement by Jittakorn Sriwasa
Sound Level meter Serial No. 222486

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.4	83.4	59.5
10:00 AM - 11:00 AM	63.0	83.7	59.4
11:00 AM - 12:00 PM	63.1	81.6	59.4
12:00 PM - 01:00 PM	63.1	84.0	59.1
01:00 PM - 02:00 PM	62.7	83.1	58.6
02:00 PM - 03:00 PM	62.8	83.8	58.5
03:00 PM - 04:00 PM	62.9	80.9	59.0
04:00 PM - 05:00 PM	63.6	74.8	59.7
05:00 PM - 06:00 PM	64.3	83.1	59.9
06:00 PM - 07:00 PM	64.2	86.0	59.9
07:00 PM - 08:00 PM	64.4	87.9	60.1
08:00 PM - 09:00 PM	63.9	83.1	60.5
09:00 PM - 10:00 PM	62.9	74.8	60.3
10:00 PM - 11:00 PM	62.6	83.8	59.9
11:00 PM - 12:00 AM	62.2	71.9	59.8
12:00 AM - 01:00 AM	62.1	75.1	59.5
01:00 AM - 02:00 AM	61.8	76.2	59.7
02:00 AM - 03:00 AM	61.9	77.2	59.8
03:00 AM - 04:00 AM	62.0	75.0	59.8
04:00 AM - 05:00 AM	62.2	75.1	59.7
05:00 AM - 06:00 AM	62.1	76.6	59.9
06:00 AM - 07:00 AM	63.7	80.6	60.3
07:00 AM - 08:00 AM	65.7	85.0	60.8
08:00 AM - 09:00 AM	64.1	85.1	60.2

Leq Average 24 hrs. (dB(A)) 63.2
Lmax (dB(A)) 87.9
L90 (dB(A)) 59.8
Ldn (dB(A)) 69.0
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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ภาคผนวก ค-4

ระดับเสี่ยงในบริเวณการทำงาน



Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2338121

Date Received : Apr 07, 2023
Date Reported : Apr 12, 2023
Report Number: 2622137-1

Page 1 of 1

Sample Number 2338121-1
Parameter Noise (Leq 8 hrs.)
Location บริเวณ CO Compressor
Measurement Date Apr 05, 2023
Measurement by Natthapon Jiengwareewong

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	69.5	75.2	69.1
10:00 AM - 11:00 AM	70.3	81.1	69.5
11:00 AM - 12:00 PM	71.9	83.0	71.3
12:00 PM - 01:00 PM	71.5	73.1	70.9
01:00 PM - 02:00 PM	71.3	80.3	70.6
02:00 PM - 03:00 PM	75.9	78.7	72.3
03:00 PM - 04:00 PM	72.0	80.8	70.7
04:00 PM - 05:00 PM	71.5	73.4	71.0

Leq Average 8 hrs. (dB(A))

72.2

Lmax (dB(A))

83.0

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๔๖

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2338121

Date Received : Apr 07, 2023
Date Reported : Apr 12, 2023
Report Number: 2622138-1

Page 1 of 1

Sample Number 2338121-2
Parameter Noise (Leq 8 hrs.)
Location บริเวณ CO2 Compressor
Measurement Date Apr 05, 2023
Measurement by Natthapon Jiengwareewong

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:04 AM - 10:04 AM	72.7	80.3	70.8
10:04 AM - 11:04 AM	74.2	80.3	72.3
11:04 AM - 12:04 PM	76.0	85.1	73.4
12:04 PM - 01:04 PM	75.4	86.6	73.0
01:04 PM - 02:04 PM	74.6	82.2	72.7
02:04 PM - 03:04 PM	77.4	88.3	75.2
03:04 PM - 04:04 PM	73.3	82.2	70.0
04:04 PM - 05:04 PM	69.1	83.1	65.7

Leq Average 8 hrs. (dB(A))

74.6

Lmax (dB(A))

88.3

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2338121

Date Received : Apr 07, 2023
Date Reported : Apr 12, 2023
Report Number: 2622139-1

Page 1 of 1

Sample Number 2338121-3
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Boiler Feed Water Pumps
Measurement Date Apr 05, 2023
Measurement by Natthapon Jiengwareewong

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:10 AM - 10:10 AM	73.4	75.9	72.0
10:10 AM - 11:10 AM	73.5	76.5	72.1
11:10 AM - 12:10 PM	73.4	78.7	72.1
12:10 PM - 01:10 PM	83.1	97.5	72.3
01:10 PM - 02:10 PM	72.4	75.2	70.8
02:10 PM - 03:10 PM	73.2	85.6	71.5
03:10 PM - 04:10 PM	72.4	75.3	70.8
04:10 PM - 05:10 PM	72.6	76.0	71.1

Leq Average 8 hrs. (dB(A))

76.3

Lmax (dB(A))

97.5

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2338121

Date Received : Apr 07, 2023
Date Reported : Apr 12, 2023
Report Number: 2622140-1

Page 1 of 1

Sample Number 2338121-4
Parameter Noise (Leq 8 hrs.)
Location บริเวณ NG Compressor
Measurement Date Apr 05, 2023
Measurement by Natthapon Jiengwareewong

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:01 AM - 10:01 AM	75.4	78.5	74.7
10:01 AM - 11:01 AM	75.6	78.6	74.9
11:01 AM - 12:01 PM	75.8	80.2	75.0
12:01 PM - 01:01 PM	75.8	80.9	74.9
01:01 PM - 02:01 PM	75.6	79.2	74.7
02:01 PM - 03:01 PM	75.6	79.2	74.7
03:01 PM - 04:01 PM	76.9	96.5	74.4
04:01 PM - 05:01 PM	73.3	77.2	69.3

Leq Average 8 hrs. (dB(A))

75.6

Lmax (dB(A))

96.5

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๔๖

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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ภาคผนวก ค-5

การทำงานระดับเสียงเฉลี่ยตลอดเวลาการทำงาน



Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338200

Date Received : Apr 07, 2023
Date Reported : Apr 11, 2023
Report Number : 2613590-1

Page 1 of 4

Sample Number 2338200-1
Sampled Date Apr 05, 2023
Sample Description Noise Dose
Location Field Operation ณ C (Day)
Personal Sampling คุณธนภฤต ศรีมาลัย
Date Analysis Commenced Apr 10, 2023

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:40 AM - 08:40 PM	%	-	-	6.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:40 AM - 08:40 PM	%	-	1	5.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:40 AM - 08:40 PM	dB(A)	-	-	70.8	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:40 AM - 08:40 PM	dB(A)	-	-	72.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Natthapon Jiengwareewong

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338200

Date Received : Apr 07, 2023
Date Reported : Apr 11, 2023
Report Number : 2613590-1

Page 2 of 4

Sample Number 2338200-2
Sampled Date Apr 05, 2023
Sample Description Noise Dose
Location Field Operation ณ D (Night)
Personal Sampling คุณเอื้ออังกูร ประเสริฐศักดิ์
Date Analysis Commenced Apr 10, 2023

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:30 PM - 07:30 AM	%	-	-	3388	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	07:30 PM - 07:30 AM	%	-	1	3162	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	07:30 PM - 07:30 AM	dB(A)	-	-	98.3	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:30 PM - 07:30 AM	dB(A)	-	-	100.0	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Natthapon Jiengwareewong

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338200

Date Received : Apr 07, 2023
Date Reported : Apr 11, 2023
Report Number : 2613590-1

Page 3 of 4

Sample Number 2338200-3
Sampled Date Apr 06, 2023
Sample Description Noise Dose
Location Field Operation ณ A (Day)
Personal Sampling คุณสวัสดิ์ วิชัยคำ
Date Analysis Commenced Apr 10, 2023

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	%	-	-	7.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	6.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 AM - 08:00 PM	dB(A)	-	-	71.6	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	73.3	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Natthapon Jiengwareewong

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103573177
Project Name : Air Testing
Project Location :

Lot ID: 2338200

Date Received : Apr 07, 2023
Date Reported : Apr 11, 2023
Report Number : 2613590-1

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Sample Number 2338200-4
Sampled Date Apr 06, 2023
Sample Description Noise Dose
Location Field Operation ณ D (Night)
Personal Sampling คุณณฤกร ชุพดี
Date Analysis Commenced Apr 10, 2023

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:30 PM - 07:30 AM	%	-	-	<1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	07:30 PM - 07:30 AM	%	-	1	<1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	07:30 PM - 07:30 AM	dB(A)	-	-	47.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:30 PM - 07:30 AM	dB(A)	-	-	48.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 83 dB(A)

Sampled By : Natthapon Jiengwareewong

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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