

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135318

Date Received : Nov 30, 2022
Date Reported : Dec 08, 2022
Report Number: 2484396-1

Page 1 of 1

Sample Number 22135318-1
Sampled Date Nov 30, 2022
Sample Description Emission from Stationary Source
Location ปล่อง Reformer Furnace
Date Analysis Commenced Dec 01, 2022
Condition of Sample Extracted into two 2-L collection flasks

Stack Description

Ambient Pressure	757	mmHg	Diameter	0.55	m	Oxygen	5.4	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.7	%
Type of Process	Combustion		Stack Temperature	168	°C	Gas Velocity	8.8	m/s
Type of Fuel	Natural Gas		Moisture	8.12	%	Flow Rate (Actual O2)	4653	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Oxides of Nitrogen	10:05 AM - 10:15 AM	ppm	-	1.06	52.4	200	US 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 : Apichart Wilars

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. Changchon

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135319

Date Received : Nov 30, 2022
Date Reported : Dec 08, 2022
Report Number: 2484397-1

Page 1 of 1

Sample Number 22135319-1
Sampled Date Nov 30, 2022
Sample Description Emission from Stationary Source
Location ปล่อง Foiler
Date Analysis Commenced Dec 01, 2022
Condition of Sample Extracted into two 2-L collection flasks

Stack Description

Ambient Pressure	757	mmHg	Diameter	0.48	m	Oxygen	4.6	V
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.4	V
Type of Process	Combustion		Stack Temperature	189	°C	%as (elocity	5.6	m/s
Type of Fuel	Natural Gas		Moisture	9.28	V	Glow Rate)Actual O2U	2127	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Oxides of Nitrogen	09:40 AM - 09:50 AM	ppm	-	1.06	12.5	200	BS EPA, Method 7	Rayong

Guideline : Notification of the Ministry of Industry 2006)F.E. 2549UPublished in the Royal Gazette, (ol.123 Special Part 125 D, dated December 4, 2006)F.E. 2549U

Sampled By : Apichart Wilars

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ)Limit of QuantitationU/ LOR)Limit of ReportingU

Technical Management

Thanita K.

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

Approved by

D. Changchon

Dej Changchon
Senior Manager
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ภาคผนวก ค-2

คุณภาพน้ำ



Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103357695
Project Name : Air Testing
Project Location :

TESTING
No.0042
Lot ID: 2280009
Date Received : Jul 14, 2022
Date Reported : Jul 21, 2022
Report Number : 2358972-1

Page 1 of 1

Sample Number	2280009-1
Sampled Date	Jul 14, 2022 11:45 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	Jul 14, 2022
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	2	≤20	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	27	≤120	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	8.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.2	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	428	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤50	APHA (2017), 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).

Sampled By : Wanlop Hunchainaow

Remark :

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- "<" : 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. 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

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103357695
Project Name : Air Testing
Project Location :

TESTING
No.0042
Lot ID: 2286386
J ate ReDeiced : Aug 15, 2022
J ate Reported : Aug 22, 2022
Report v um8er : 2374277-1

Page 1 of 1

Sample Number	22b63b6-1
Sampled Date	Aug 15, 2022 10:40 AM
Sample Description	f asteWater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 vOutlet (ate 2G
Date Analysis Commenced	Aug 15, 2022
Condition of Sample	Contained in one am8er glass 8ottle and three plastiD8ottles, sample Containers Dmply to pretreatment - presercation standards vAPHA,) USPAG

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
EOJ v8 days at 20 J egree CG	mg/L	-	2	B 2	≤20	APHA v2017G 5210 E	Rayong
COJ	mg/L	1.5	5	22	≤120	APHA v2017G 5220 J	Rayong
Oil & (rease	mg/L	-	3	3	≤5	Eased on APHA v2017G 5520 E	Rayong
pH at 25 degree C		-	-	b.3	5.5-9.0	Eased on APHA v2017G 4500-H vEG	Rayong
Temperature <	J egree C	-	-	30.6	≤40	Eased on APHA v2017G 2550 E	Rayong
Total J issolved Uolids J ried at 1b0 degree C	mg/L	-	5	420	≤3000	APHA v2017G 2540 C	Rayong
Total Uuspended Uolids J ried at 103-105 degree C	mg/L	-	5	B 5	≤50	APHA v2017G 2540 J	Rayong

Guideline : SNUent standard Nr Ndtories, industrial estate and industrial par* set 8y v otinDation oNthe Ministry oNvatural ResourDe and Sncironment and eNuent standard Nr Ndtories and industrial par* set 8y v otinDation oNThe Ministry oNIndustry dated kune 07, E.S.2560 v2017G

Sampled By : Paramet Uattaya*un

Remar* :

- LOJ : Limit oN J eteDtion
- "B" : LoWer than LOQ vLimit oNQuantitationG/ LOR vLimit oNReportingG
- Analyte vGmar*ed < is/are not inDuded in sDope oNADReditation IUO/ISC 17025.
- The la8oratory has 8een aDDepted as an aDRedited la8oratory Dmplying Wth the IUO/ISC 17025.

Technical Management

N. Bangmit

varumon EanDhong*it
Uupercisor
ทะเบียนเลขที่ จ-323-จ-9445

Approved by

D. Chumon.

J ej ChangDhon
Uenior Manager
ทะเบียนเลขที่ จ-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 : 9103357695
Project Name : Air Testing
Project Location :

TESTING
No.0042
Lot ID: 22100994
Date Received : Jep 15, 2022
Date Reported : Jep 22, 2022
Report Number : 2406180-1

Page 1 of 1

Sample Number	22100994-1
Sampled Date	Jep 15, 2022 11:10 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	Jep 15, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, UJSPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
EOD (5 days at 20 Degree C)	mg/L	-	2	B2	≤20	APHA (2017), 5210 E	Rayong
COD	mg/L	1.5	5	26	≤120	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	B3	≤5	Eased on APHA (2017), 5520 E	Rayong
pH at 25 degree C		-	-	7.9	5.5-9.0	Eased on APHA (2017), 4500-H (E)	Rayong
Temperature <	Degree C	-	-	29.3	≤40	Eased on APHA (2017), 2550 E	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	314	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	5	≤50	APHA (2017), 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, E.S.2560 (2017).

Sampled By : Narunat thammassaro

Remark :

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- The laboratory has been accepted as an accredited laboratory complying with the IJO/ISC 17025.

Technical Management

N. Eanchong

Narumon Eanchong*it

Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ จ-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 : 9103357695
Project Name : Air Testing
Project Location :

TESTING
No.0042
Lot ID: 22111441
Date ReJeiced : OJt 14, 2022
Date Reported : OJt 21, 2022
Report 8 umNer : 242v444-1

Page 1 ob 1

Sample Number	22111441-1
Sampled Date	OJt 14, 2022 9:25 AM
Sample Description	f asteWater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 vOutlet (ate 2G
Date Analysis Commenced	OJt 14, 2022
Condition of Sample	Contained in one amNer glass Nottle and three plastiJ Nottles, sample Jontainers Jomply to pretreatment - presercation standards vAPHA,) USPAG

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
EOD v6 days at 20 Degree CG	mg/L	-	2	B2	≤20	APHA v2017G 5210 E	Rayong
COD	mg/L	1.5	5	19	≤120	APHA v2017G 5220 D	Rayong
Oil & (rease	mg/L	-	3	B3	≤5	Eased on APHA v2017G 5520 E	Rayong
pH at 25 degree C		-	-	v.0	5.5-9.0	Eased on APHA v2017G 4500-H vEG	Rayong
Temperature <	Degree C	-	-	31.5	≤40	Eased on APHA v2017G 2550 E	Rayong
Total Dissolced Uolids Dried at 1v0 degree C	mg/L	-	5	512	≤3000	APHA v2017G 2540 C	Rayong
Total Uuspended Uolids Dried at 103-105 degree C	mg/L	-	5	B5	≤50	APHA v2017G 2540 D	Rayong

Guideline : Sthuent standard for bactories, industrial estate and industrial par* set Ny 8otibJation obthe Ministry ob8atural ResourJe and Sncironment and effluent standard for bactories and industrial par* set Ny 8otibJation obThe Ministry obIndustry dated kune 07, E.S.2560 v2017G

Sampled By : Tanasit f ongsaJhai

Remar* :

- LOD : Limit obDeteJtion
- "B" : LoWer than LOQ vLimit obQuantitationG/ LOR vLimit obReportingG
- Analyte vGmar*ed < is/are not inJluded in sJope obAJJreditation IUO/ISC 17025.
- The laNorary has Neen aJJepted as an aJJredited laNorary Jomplying Wth the IUO/ISC 17025.

Technical Management

N. Banjhit

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Uupercisor
ทะเบียนเลขที่ จ-323-จ-9445

Approved by

D. Chumon.

Dej ChangJhon
Uenior Manager
ทะเบียนเลขที่ จ-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 : 9103357695
Project Name : Air Testing
Project Location :

TESTING
No.0042
Lot ID: 22123908
Date Received : Nov 28, 2022
Date Reported : Dec 06, 2022
Report Number : 2457614-1

Page 1 of 1

Sample Number	22123908-1
Sampled Date	Nov 28, 2022 9:35 AM
Sample Description	Wastewater
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)
Date Analysis Commenced	Nov 28, 2022
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	3	≤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	5	29	≤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		-	-	7.3	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	-	-	29.3	≤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	888	≤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).

Sampled By : Chainusorn Lertnanthakunchai

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Technical Management

N. Banongkit

Narumon Banhongkit
Supervisor

ทะเบียนเลขที่ จ-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ จ-323-ค-9442

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Analysis / Test Report

TESTING

No.0042

Lot ID: 22136552

Nate Revei8ed : Nev 15, 2022

Nate Reported : Nev 22, 2022

Report c umber : 24D7095-1

Client : Linde HyCO Limited

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

P/O : 9103357695

Project Name : Air Testing

Project Location :

Page 1 of 1

Sample Number	22136552-1						
Sampled Date	Nev 15, 2022 10:13 AM						
Sample Description	Wastewater						
Location	จุดปล่อยน้ำทิ้งของโครงการบริเวณประตู 2 (Outlet Gate 2)						
Date Analysis Commenced	Nev 15, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastiv bottles, sample vontainers vompily to pretreatment - preser8ation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BON (5 days at 20 Negree C)	mg/L	-	2	* 2	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
CON	mg/L	1.5	5	2D	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 N	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.D	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 <	Negree C	-	-	26.9	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Nissol8ed Solids Nried at 1D0 degree C	mg/L	-	5	D12	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Nried 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 N	Rayong

Guideline : Effluent standard for favories, industrial estate and industrial park set by c otification of the Ministry of c atural Resourve and En8ironment and effluent standard for favories and industrial park set by c otification of The Ministry of Industry dated June 07, B.E.2560 (2017).

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

Remark :

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- "*" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been avvepted as an avvredited laboratory vompily with the ISO/IEC 17025.

Technical Management

N. Banhongkit

carumon Banvhongkit

Super8isor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changvorn

Nej Changvorn

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518004-1

Page 1 of 1

Sample Number 22135317-1
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Nov 30 - Dec 01, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.9	80.7	56.2
11:00 AM - 12:00 PM	56.6	67.8	55.7
12:00 PM - 01:00 PM	56.5	69.6	55.5
01:00 PM - 02:00 PM	55.9	67.7	55.1
02:00 PM - 03:00 PM	57.2	78.0	56.0
03:00 PM - 04:00 PM	57.3	67.2	56.4
04:00 PM - 05:00 PM	58.0	80.7	56.6
05:00 PM - 06:00 PM	58.1	79.1	57.0
06:00 PM - 07:00 PM	57.8	71.7	57.0
07:00 PM - 08:00 PM	57.5	78.3	56.7
08:00 PM - 09:00 PM	57.7	70.3	57.0
09:00 PM - 10:00 PM	57.7	75.6	56.5
10:00 PM - 11:00 PM	56.9	70.5	56.4
11:00 PM - 12:00 AM	57.2	65.8	56.4
12:00 AM - 01:00 AM	68.1	84.3	58.7
01:00 AM - 02:00 AM	58.6	64.8	57.4
02:00 AM - 03:00 AM	57.7	61.8	57.2
03:00 AM - 04:00 AM	57.8	62.8	57.3
04:00 AM - 05:00 AM	57.9	62.4	57.2
05:00 AM - 06:00 AM	58.6	63.8	57.8
06:00 AM - 07:00 AM	66.3	84.0	57.9
07:00 AM - 08:00 AM	59.7	76.0	58.7
08:00 AM - 09:00 AM	59.0	71.6	58.0
09:00 AM - 10:00 AM	58.6	71.5	57.6

Leq Average 24 hrs. (dB(A)) 60.0
Lmax (dB(A)) 84.3
L90 (dB(A)) 57.0
Ldn (dB(A)) 68.2
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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518005-1

Page 1 of 1

Sample Number 22135317-2
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Dec 01 - Dec 02, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	64.9	82.6	57.1
11:00 AM - 12:00 PM	60.0	77.0	56.7
12:00 PM - 01:00 PM	57.0	64.9	56.1
01:00 PM - 02:00 PM	56.8	68.0	55.7
02:00 PM - 03:00 PM	56.8	78.2	55.1
03:00 PM - 04:00 PM	56.1	63.1	55.3
04:00 PM - 05:00 PM	56.2	67.5	55.4
05:00 PM - 06:00 PM	56.6	68.1	55.8
06:00 PM - 07:00 PM	57.0	71.9	56.1
07:00 PM - 08:00 PM	56.8	68.1	56.1
08:00 PM - 09:00 PM	57.0	69.5	56.3
09:00 PM - 10:00 PM	57.4	74.0	56.6
10:00 PM - 11:00 PM	57.0	70.0	56.5
11:00 PM - 12:00 AM	57.5	65.8	56.7
12:00 AM - 01:00 AM	58.0	69.1	56.3
01:00 AM - 02:00 AM	57.5	64.8	56.8
02:00 AM - 03:00 AM	57.8	63.9	57.1
03:00 AM - 04:00 AM	57.9	65.6	57.3
04:00 AM - 05:00 AM	57.7	62.9	57.2
05:00 AM - 06:00 AM	58.0	64.1	57.5
06:00 AM - 07:00 AM	58.0	65.5	57.5
07:00 AM - 08:00 AM	61.1	74.5	58.1
08:00 AM - 09:00 AM	58.5	72.4	57.3
09:00 AM - 10:00 AM	57.4	66.6	56.5

Leq Average 24 hrs. (dB(A)) 58.4
Lmax (dB(A)) 82.6
L90 (dB(A)) 56.5
Ldn (dB(A)) 64.3
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518006-1

Page 1 of 1

Sample Number 22135317-3
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Dec 02 - Dec 03, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.4	74.5	56.0
11:00 AM - 12:00 PM	57.2	71.3	55.9
12:00 PM - 01:00 PM	56.6	79.7	55.5
01:00 PM - 02:00 PM	56.7	65.3	55.6
02:00 PM - 03:00 PM	56.7	72.6	55.2
03:00 PM - 04:00 PM	56.0	68.9	55.0
04:00 PM - 05:00 PM	56.0	76.6	54.9
05:00 PM - 06:00 PM	56.8	77.8	55.5
06:00 PM - 07:00 PM	67.7	84.5	56.1
07:00 PM - 08:00 PM	57.6	77.5	56.7
08:00 PM - 09:00 PM	57.6	68.1	56.9
09:00 PM - 10:00 PM	67.5	79.3	57.7
10:00 PM - 11:00 PM	58.2	71.3	57.6
11:00 PM - 12:00 AM	58.4	67.2	57.4
12:00 AM - 01:00 AM	59.3	66.2	57.3
01:00 AM - 02:00 AM	57.9	63.6	57.4
02:00 AM - 03:00 AM	58.0	63.1	57.4
03:00 AM - 04:00 AM	58.1	64.8	57.6
04:00 AM - 05:00 AM	58.3	64.7	57.7
05:00 AM - 06:00 AM	58.4	64.0	57.8
06:00 AM - 07:00 AM	58.6	83.7	57.9
07:00 AM - 08:00 AM	59.0	70.4	58.2
08:00 AM - 09:00 AM	58.9	77.6	57.9
09:00 AM - 10:00 AM	58.6	77.9	57.5

Leq Average 24 hrs. (dB(A)) 60.2
Lmax (dB(A)) 84.5
L90 (dB(A)) 57.3
Ldn (dB(A)) 65.3
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317

Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518007-1

Page 1 of 1

Sample Number 22135317-4
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Dec 03 - Dec 04, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	60.3	79.8	56.8
11:00 AM - 12:00 PM	57.3	72.1	56.4
12:00 PM - 01:00 PM	61.4	68.6	56.5
01:00 PM - 02:00 PM	73.8	85.2	63.4
02:00 PM - 03:00 PM	74.7	81.8	63.6
03:00 PM - 04:00 PM	64.9	83.1	63.1
04:00 PM - 05:00 PM	64.5	70.2	63.6
05:00 PM - 06:00 PM	65.9	74.1	64.2
06:00 PM - 07:00 PM	64.6	74.7	58.2
07:00 PM - 08:00 PM	64.8	79.2	57.2
08:00 PM - 09:00 PM	66.0	82.8	57.6
09:00 PM - 10:00 PM	58.5	79.0	57.5
10:00 PM - 11:00 PM	58.6	75.8	57.6
11:00 PM - 12:00 AM	58.6	73.1	57.7
12:00 AM - 01:00 AM	59.2	69.0	57.6
01:00 AM - 02:00 AM	58.1	62.9	57.5
02:00 AM - 03:00 AM	58.4	65.0	57.8
03:00 AM - 04:00 AM	58.3	62.7	57.7
04:00 AM - 05:00 AM	58.5	83.7	57.9
05:00 AM - 06:00 AM	58.1	62.3	57.6
06:00 AM - 07:00 AM	58.2	66.5	57.7
07:00 AM - 08:00 AM	58.4	70.1	57.6
08:00 AM - 09:00 AM	58.3	77.4	57.1
09:00 AM - 10:00 AM	57.3	76.6	56.2

Leq Average 24 hrs. (dB(A)) 65.5
Lmax (dB(A)) 85.2
L90 (dB(A)) 57.6
Ldn (dB(A)) 67.7
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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317

Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518008-1

Page 1 of 1

Sample Number 22135317-5
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Dec 04 - Dec 05, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	56.9	71.9	56.1
11:00 AM - 12:00 PM	56.7	66.2	56.0
12:00 PM - 01:00 PM	56.6	68.9	55.7
01:00 PM - 02:00 PM	56.1	65.9	55.2
02:00 PM - 03:00 PM	56.4	78.4	55.3
03:00 PM - 04:00 PM	56.1	67.9	55.3
04:00 PM - 05:00 PM	56.7	71.4	55.9
05:00 PM - 06:00 PM	57.1	74.6	56.1
06:00 PM - 07:00 PM	57.0	64.6	56.3
07:00 PM - 08:00 PM	57.2	70.8	56.4
08:00 PM - 09:00 PM	57.6	72.2	56.8
09:00 PM - 10:00 PM	57.9	75.0	57.0
10:00 PM - 11:00 PM	57.8	82.6	56.9
11:00 PM - 12:00 AM	57.9	67.2	57.0
12:00 AM - 01:00 AM	59.0	62.9	57.4
01:00 AM - 02:00 AM	58.0	72.4	57.5
02:00 AM - 03:00 AM	58.1	61.9	57.7
03:00 AM - 04:00 AM	58.1	62.5	57.6
04:00 AM - 05:00 AM	58.0	63.2	57.4
05:00 AM - 06:00 AM	58.3	83.9	57.7
06:00 AM - 07:00 AM	58.5	67.5	57.9
07:00 AM - 08:00 AM	59.0	78.8	57.9
08:00 AM - 09:00 AM	58.1	71.8	57.1
09:00 AM - 10:00 AM	57.2	68.3	56.3

Leq Average 24 hrs. (dB(A)) 57.6
Lmax (dB(A)) 83.9
L90 (dB(A)) 56.8
Ldn (dB(A)) 64.5

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317

Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518009-1

Page 1 of 1

Sample Number 22135317-6
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Dec 05 - Dec 06, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.4	75.4	56.2
11:00 AM - 12:00 PM	59.3	81.7	55.8
12:00 PM - 01:00 PM	56.5	67.2	55.6
01:00 PM - 02:00 PM	56.4	78.0	55.5
02:00 PM - 03:00 PM	56.1	65.6	55.3
03:00 PM - 04:00 PM	56.2	61.1	55.5
04:00 PM - 05:00 PM	56.4	73.0	55.6
05:00 PM - 06:00 PM	56.7	72.8	55.8
06:00 PM - 07:00 PM	57.1	74.1	56.2
07:00 PM - 08:00 PM	57.6	66.8	57.0
08:00 PM - 09:00 PM	57.7	71.2	57.0
09:00 PM - 10:00 PM	57.6	68.8	57.1
10:00 PM - 11:00 PM	57.7	75.9	56.8
11:00 PM - 12:00 AM	58.6	73.8	57.7
12:00 AM - 01:00 AM	59.1	66.4	57.6
01:00 AM - 02:00 AM	57.7	67.2	57.2
02:00 AM - 03:00 AM	57.6	63.0	57.1
03:00 AM - 04:00 AM	57.7	62.5	57.2
04:00 AM - 05:00 AM	57.5	63.6	57.1
05:00 AM - 06:00 AM	57.7	64.3	57.2
06:00 AM - 07:00 AM	57.8	63.0	57.3
07:00 AM - 08:00 AM	58.9	75.4	57.9
08:00 AM - 09:00 AM	58.4	78.3	57.2
09:00 AM - 10:00 AM	57.7	70.8	56.9

Leq Average 24 hrs. (dB(A)) 57.6
Lmax (dB(A)) 81.7
L90 (dB(A)) 57.0
Ldn (dB(A)) 64.3
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518010-1

Page 1 of 1

Sample Number 22135317-7
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงานด้านทิศใต้ (พื้นที่ลานปูน) (GPS 47P 0733650, 1404821)
Measurement Date Dec 06 - Dec 07, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.8	75.0	56.7
11:00 AM - 12:00 PM	57.2	67.9	56.3
12:00 PM - 01:00 PM	56.6	69.3	55.7
01:00 PM - 02:00 PM	56.8	72.2	55.8
02:00 PM - 03:00 PM	56.6	68.6	55.6
03:00 PM - 04:00 PM	56.5	65.6	55.6
04:00 PM - 05:00 PM	59.8	93.7	55.8
05:00 PM - 06:00 PM	57.2	75.2	56.3
06:00 PM - 07:00 PM	57.0	74.3	56.1
07:00 PM - 08:00 PM	57.3	75.0	56.5
08:00 PM - 09:00 PM	57.7	73.5	56.9
09:00 PM - 10:00 PM	57.8	72.6	57.0
10:00 PM - 11:00 PM	57.1	62.7	56.6
11:00 PM - 12:00 AM	57.8	72.4	56.9
12:00 AM - 01:00 AM	58.7	65.1	57.2
01:00 AM - 02:00 AM	57.8	79.6	57.3
02:00 AM - 03:00 AM	58.0	75.6	57.4
03:00 AM - 04:00 AM	57.6	62.9	57.2
04:00 AM - 05:00 AM	57.7	71.0	57.2
05:00 AM - 06:00 AM	57.8	62.6	57.3
06:00 AM - 07:00 AM	58.1	83.6	57.4
07:00 AM - 08:00 AM	58.9	79.3	57.8
08:00 AM - 09:00 AM	58.4	69.2	57.3
09:00 AM - 10:00 AM	58.1	74.7	56.9

Leq Average 24 hrs. (dB(A)) 57.7
Lmax (dB(A)) 93.7
L90 (dB(A)) 56.9
Ldn (dB(A)) 64.2
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518011-1

Page 1 of 1

Sample Number 22135317-8
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Nov 30 - Dec 01, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.3	83.1	59.7
10:00 AM - 11:00 AM	62.9	84.8	58.8
11:00 AM - 12:00 PM	62.2	80.2	58.5
12:00 PM - 01:00 PM	61.7	81.4	57.4
01:00 PM - 02:00 PM	61.2	76.8	56.6
02:00 PM - 03:00 PM	61.3	81.0	56.6
03:00 PM - 04:00 PM	61.4	82.1	57.1
04:00 PM - 05:00 PM	72.8	103.1	58.0
05:00 PM - 06:00 PM	63.7	88.3	58.7
06:00 PM - 07:00 PM	63.0	83.9	58.9
07:00 PM - 08:00 PM	62.8	85.9	59.1
08:00 PM - 09:00 PM	62.3	76.2	59.5
09:00 PM - 10:00 PM	61.0	78.5	58.5
10:00 PM - 11:00 PM	61.3	80.8	58.6
11:00 PM - 12:00 AM	62.1	86.6	59.2
12:00 AM - 01:00 AM	62.6	82.3	61.2
01:00 AM - 02:00 AM	60.8	81.6	59.5
02:00 AM - 03:00 AM	60.9	69.6	59.7
03:00 AM - 04:00 AM	61.6	81.2	59.8
04:00 AM - 05:00 AM	61.6	77.7	60.2
05:00 AM - 06:00 AM	61.9	81.0	59.9
06:00 AM - 07:00 AM	64.1	78.1	60.8
07:00 AM - 08:00 AM	66.2	84.4	62.1
08:00 AM - 09:00 AM	64.7	84.2	60.4

Leq Average 24 hrs. (dB(A)) 64.0
Lmax (dB(A)) 103.1
L90 (dB(A)) 59.1
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 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518012-1

Page 1 of 1

Sample Number 22135317-9
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Dec 01 - Dec 02, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.5	78.7	60.1
10:00 AM - 11:00 AM	62.7	78.5	58.9
11:00 AM - 12:00 PM	63.3	79.1	59.8
12:00 PM - 01:00 PM	63.1	79.9	59.1
01:00 PM - 02:00 PM	62.0	74.8	57.9
02:00 PM - 03:00 PM	61.5	81.9	57.3
03:00 PM - 04:00 PM	61.2	82.6	57.4
04:00 PM - 05:00 PM	62.4	79.7	57.9
05:00 PM - 06:00 PM	62.8	80.6	58.4
06:00 PM - 07:00 PM	62.6	80.4	58.6
07:00 PM - 08:00 PM	62.2	79.7	58.2
08:00 PM - 09:00 PM	61.2	75.8	58.1
09:00 PM - 10:00 PM	61.6	86.4	58.5
10:00 PM - 11:00 PM	60.7	74.9	58.5
11:00 PM - 12:00 AM	61.7	74.4	59.0
12:00 AM - 01:00 AM	60.8	72.1	59.2
01:00 AM - 02:00 AM	61.5	76.4	59.5
02:00 AM - 03:00 AM	60.9	77.3	59.5
03:00 AM - 04:00 AM	61.5	72.7	59.6
04:00 AM - 05:00 AM	63.3	72.1	61.0
05:00 AM - 06:00 AM	62.8	83.2	60.6
06:00 AM - 07:00 AM	65.2	81.3	61.8
07:00 AM - 08:00 AM	66.1	82.2	62.6
08:00 AM - 09:00 AM	65.0	83.8	61.4

Leq Average 24 hrs. (dB(A)) 62.7
Lmax (dB(A)) 86.4
L90 (dB(A)) 59.0
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 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518013-1

Page 1 of 1

Sample Number 22135317-10
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Dec 02 - Dec 03, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.4	79.9	60.3
10:00 AM - 11:00 AM	62.8	74.0	60.1
11:00 AM - 12:00 PM	63.0	80.4	59.7
12:00 PM - 01:00 PM	62.7	82.5	59.5
01:00 PM - 02:00 PM	63.4	81.2	59.6
02:00 PM - 03:00 PM	61.7	76.3	58.3
03:00 PM - 04:00 PM	61.4	80.1	57.7
04:00 PM - 05:00 PM	62.2	82.6	58.3
05:00 PM - 06:00 PM	63.6	80.5	59.5
06:00 PM - 07:00 PM	63.7	84.5	60.5
07:00 PM - 08:00 PM	63.7	83.2	60.6
08:00 PM - 09:00 PM	63.0	80.3	60.3
09:00 PM - 10:00 PM	63.2	87.7	60.3
10:00 PM - 11:00 PM	62.4	75.7	60.0
11:00 PM - 12:00 AM	63.5	72.8	60.6
12:00 AM - 01:00 AM	62.4	78.4	59.8
01:00 AM - 02:00 AM	61.8	74.4	59.5
02:00 AM - 03:00 AM	61.6	74.6	59.6
03:00 AM - 04:00 AM	62.5	79.6	60.1
04:00 AM - 05:00 AM	62.0	69.6	60.0
05:00 AM - 06:00 AM	63.0	79.8	60.5
06:00 AM - 07:00 AM	65.1	78.0	61.7
07:00 AM - 08:00 AM	66.0	86.3	62.2
08:00 AM - 09:00 AM	65.6	92.1	61.0

Leq Average 24 hrs. (dB(A)) 63.2
Lmax (dB(A)) 92.1
L90 (dB(A)) 60.0
Ldn (dB(A)) 69.3
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317

Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518014-1

Page 1 of 1

Sample Number 22135317-11
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Dec 03 - Dec 04, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	63.0	83.3	59.8
10:00 AM - 11:00 AM	62.6	80.4	59.3
11:00 AM - 12:00 PM	62.6	80.1	59.0
12:00 PM - 01:00 PM	62.5	82.3	58.8
01:00 PM - 02:00 PM	62.5	82.2	58.9
02:00 PM - 03:00 PM	62.2	80.3	59.1
03:00 PM - 04:00 PM	62.5	79.4	59.4
04:00 PM - 05:00 PM	63.1	81.7	59.5
05:00 PM - 06:00 PM	62.6	80.1	58.9
06:00 PM - 07:00 PM	62.6	78.0	59.5
07:00 PM - 08:00 PM	62.8	76.9	60.1
08:00 PM - 09:00 PM	62.6	81.0	59.7
09:00 PM - 10:00 PM	62.0	79.1	59.6
10:00 PM - 11:00 PM	61.9	78.0	59.6
11:00 PM - 12:00 AM	62.5	78.0	60.0
12:00 AM - 01:00 AM	61.8	80.3	59.9
01:00 AM - 02:00 AM	61.8	75.5	60.0
02:00 AM - 03:00 AM	61.7	78.4	59.9
03:00 AM - 04:00 AM	62.4	75.3	60.3
04:00 AM - 05:00 AM	62.6	74.7	60.4
05:00 AM - 06:00 AM	61.8	75.6	60.1
06:00 AM - 07:00 AM	64.6	82.5	61.0
07:00 AM - 08:00 AM	65.0	83.0	61.0
08:00 AM - 09:00 AM	63.4	79.7	60.2

Leq Average 24 hrs. (dB(A)) 62.7
Lmax (dB(A)) 83.3
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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317

Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518015-1

Page 1 of 1

Sample Number 22135317-12
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Dec 04 - Dec 05, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.9	81.8	59.8
10:00 AM - 11:00 AM	61.3	74.9	58.8
11:00 AM - 12:00 PM	61.3	78.9	58.3
12:00 PM - 01:00 PM	61.1	74.1	58.1
01:00 PM - 02:00 PM	61.4	77.8	57.9
02:00 PM - 03:00 PM	64.6	104.0	57.4
03:00 PM - 04:00 PM	61.5	78.6	58.1
04:00 PM - 05:00 PM	63.5	84.8	59.1
05:00 PM - 06:00 PM	62.7	76.3	59.1
06:00 PM - 07:00 PM	62.4	80.3	59.3
07:00 PM - 08:00 PM	61.7	78.3	58.4
08:00 PM - 09:00 PM	61.8	79.8	59.0
09:00 PM - 10:00 PM	60.9	76.1	59.3
10:00 PM - 11:00 PM	61.3	75.0	59.4
11:00 PM - 12:00 AM	62.9	78.6	59.7
12:00 AM - 01:00 AM	61.1	74.7	59.5
01:00 AM - 02:00 AM	60.8	80.2	59.5
02:00 AM - 03:00 AM	60.9	71.0	59.6
03:00 AM - 04:00 AM	61.0	72.4	59.7
04:00 AM - 05:00 AM	61.9	77.4	59.9
05:00 AM - 06:00 AM	62.6	71.6	60.2
06:00 AM - 07:00 AM	64.7	81.9	61.4
07:00 AM - 08:00 AM	64.9	80.7	61.2
08:00 AM - 09:00 AM	62.9	79.7	59.4

Leq Average 24 hrs. (dB(A)) 62.4
Lmax (dB(A)) 104.0
L90 (dB(A)) 59.3
Ldn (dB(A)) 68.6

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518016-1

Page 1 of 1

Sample Number 22135317-13
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Dec 05 - Dec 06, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	61.9	85.1	58.1
10:00 AM - 11:00 AM	61.1	74.2	57.9
11:00 AM - 12:00 PM	61.2	79.5	56.9
12:00 PM - 01:00 PM	60.5	83.0	57.0
01:00 PM - 02:00 PM	60.0	76.3	56.8
02:00 PM - 03:00 PM	60.8	77.2	57.8
03:00 PM - 04:00 PM	60.6	82.6	57.0
04:00 PM - 05:00 PM	62.9	84.9	57.6
05:00 PM - 06:00 PM	62.4	82.7	57.9
06:00 PM - 07:00 PM	62.2	78.3	59.2
07:00 PM - 08:00 PM	62.5	77.9	59.4
08:00 PM - 09:00 PM	61.3	75.3	58.9
09:00 PM - 10:00 PM	60.8	77.9	58.7
10:00 PM - 11:00 PM	61.7	83.6	59.3
11:00 PM - 12:00 AM	62.2	71.7	60.1
12:00 AM - 01:00 AM	61.6	75.3	59.5
01:00 AM - 02:00 AM	61.1	75.4	59.4
02:00 AM - 03:00 AM	61.2	71.0	59.4
03:00 AM - 04:00 AM	62.0	74.0	59.3
04:00 AM - 05:00 AM	61.4	74.2	59.3
05:00 AM - 06:00 AM	61.7	78.2	59.6
06:00 AM - 07:00 AM	64.3	84.4	60.5
07:00 AM - 08:00 AM	65.8	90.4	61.4
08:00 AM - 09:00 AM	64.1	81.8	60.2

Leq Average 24 hrs. (dB(A)) 62.1
Lmax (dB(A)) 90.4
L90 (dB(A)) 59.2
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 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135317
Date Received : Dec 07, 2022
Date Reported : Dec 13, 2022
Report Number: 2518017-1

Page 1 of 1

Sample Number 22135317-14
Parameter Noise (Leq 24 hrs.)
Location บริเวณริมรั้วของโรงงาน ด้านทิศตะวันตกเฉียงเหนือ (ป้อมประตู 1) (GPS 47P 0733599, 1405064)
Measurement Date Dec 06 - Dec 07, 2022
Measurement by Nantawat Sarin
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	62.3	74.7	59.2
10:00 AM - 11:00 AM	62.7	84.3	59.0
11:00 AM - 12:00 PM	63.1	89.1	58.3
12:00 PM - 01:00 PM	61.8	82.0	57.9
01:00 PM - 02:00 PM	61.6	79.0	57.8
02:00 PM - 03:00 PM	61.2	82.2	57.2
03:00 PM - 04:00 PM	61.6	82.0	58.1
04:00 PM - 05:00 PM	63.5	81.2	60.2
05:00 PM - 06:00 PM	63.3	79.3	59.7
06:00 PM - 07:00 PM	62.7	82.1	59.7
07:00 PM - 08:00 PM	63.4	81.9	60.3
08:00 PM - 09:00 PM	62.9	78.1	60.0
09:00 PM - 10:00 PM	62.3	77.5	59.8
10:00 PM - 11:00 PM	62.0	76.3	59.7
11:00 PM - 12:00 AM	62.4	78.6	60.0
12:00 AM - 01:00 AM	61.2	71.5	59.6
01:00 AM - 02:00 AM	61.5	77.4	59.8
02:00 AM - 03:00 AM	62.8	76.6	60.0
03:00 AM - 04:00 AM	61.1	77.1	59.3
04:00 AM - 05:00 AM	62.3	70.5	60.4
05:00 AM - 06:00 AM	63.4	81.9	60.7
06:00 AM - 07:00 AM	64.8	89.4	60.4
07:00 AM - 08:00 AM	65.0	82.7	61.7
08:00 AM - 09:00 AM	62.9	77.2	60.6

Leq Average 24 hrs. (dB(A)) 62.7
Lmax (dB(A)) 89.4
L90 (dB(A)) 59.7
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 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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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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135316

Date Received : Nov 30, 2022
Date Reported : Dec 06, 2022
Report Number: 2511373-1

Page 1 of 1

Sample Number 22135316-1
Parameter Noise (Leq 8 hrs.)
Location บริเวณ CO Compressor
Measurement Date Nov 30, 2022
Measurement by Nantawat Sarin

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:20 AM - 10:20 AM	66.2	78.0	65.6
10:20 AM - 11:20 AM	66.4	68.6	66.0
11:20 AM - 12:20 PM	66.2	68.4	65.9
12:20 PM - 01:20 PM	66.1	67.7	65.8
01:20 PM - 02:20 PM	66.2	68.5	65.9
02:20 PM - 03:20 PM	66.3	72.2	65.9
03:20 PM - 04:20 PM	66.5	72.4	66.1
04:20 PM - 05:20 PM	66.3	68.6	66.0

Leq Average 8 hrs. (dB(A))

66.3

Lmax (dB(A))

78.0

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135316

Date Received : Nov 30, 2022
Date Reported : Dec 06, 2022
Report Number: 2511374-1

Page 1 of 1

Sample Number 22135316-2
Parameter Noise (Leq 8 hrs.)
Location บริเวณ CO2 Compressor
Measurement Date Nov 30, 2022
Measurement by Nantawat Sarin

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:19 AM - 10:19 AM	66.0	80.2	62.1
10:19 AM - 11:19 AM	65.3	79.3	61.9
11:19 AM - 12:19 PM	65.6	82.4	62.0
12:19 PM - 01:19 PM	65.6	79.6	62.0
01:19 PM - 02:19 PM	66.1	81.5	62.7
02:19 PM - 03:19 PM	65.8	83.3	62.7
03:19 PM - 04:19 PM	65.9	83.4	62.8
04:19 PM - 05:19 PM	65.8	83.3	62.7

Leq Average 8 hrs. (dB(A))

65.8

Lmax (dB(A))

83.4

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135316

Date Received : Nov 30, 2022
Date Reported : Dec 06, 2022
Report Number: 2511375-1

Page 1 of 1

Sample Number 22135316-3
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Boiler Feed Water Pumps
Measurement Date Nov 30, 2022
Measurement by Nantawat Sarin

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:23 AM - 10:23 AM	71.7	87.7	70.2
10:23 AM - 11:23 AM	70.7	81.3	69.8
11:23 AM - 12:23 PM	70.6	77.7	69.6
12:23 PM - 01:23 PM	70.3	75.3	69.5
01:23 PM - 02:23 PM	71.2	85.9	69.6
02:23 PM - 03:23 PM	70.9	81.0	69.8
03:23 PM - 04:23 PM	70.7	80.8	69.6
04:23 PM - 05:23 PM	71.0	81.1	69.9

Leq Average 8 hrs. (dB(A))

70.9

Lmax (dB(A))

87.7

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 22135316

Date Received : Nov 30, 2022
Date Reported : Dec 06, 2022
Report Number: 2511376-1

Page 1 of 1

Sample Number 22135316-4
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Nw Compressor
Measurement Date Nov 30, 2022
Measurement by NantaS at Barin

Time	Leq (dx(A))	LmaK (dx(A))	L90 (dx(A))
09:09 AM - 10:09 AM	75.8	88.1	75.6
10:09 AM - 11:09 AM	75.4	77.2	75.2
11:09 AM - 12:09 PM	75.4	77.0	75.1
12:09 PM - 01:09 PM	75.6	78.2	75.4
01:09 PM - 02:09 PM	75.7	78.3	75.5
02:09 PM - 03:09 PM	75.6	78.6	75.4
03:09 PM - 04:09 PM	75.7	78.7	75.5
04:09 PM - 05:09 PM	75.6	78.2	75.4

Leq Average 8 hrs. (dx(A))

75.6

LmaK (dx(A))

88.1

Bstandard (dx(A))

90

140

Reference Method : IBO1996-1 and 1996-2

Bstandard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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Technical Management

Thanita K.

Thanita zulsuriS ong
Bcientist (4)

Approved by

Supt S

Bupot Balamteh
Bection 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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 2234476

Date Received : May 27, 2022
Date Reported : Jun 15, 2022
Report Number : 2262219-1 Rev. No.1

Page 1 of 4

Sample Number 2234476-1
Sampled Date May 25, 2022
Sample Description Noise Dose
Personal Sampling [REDACTED]
Date Analysis Commenced May 30, 2022

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 PM - 08:00 AM	%	-	-	60.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 PM - 08:00 AM	%	-	1	56.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 PM - 08:00 AM	dB(A)	-	-	80.8	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 PM - 08:00 AM	dB(A)	-	-	82.5	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)

Note : This Analysis test report is reissued to supersede report No. 2262219-1 Reported : May31,2022 due to revise client information

Sampled By : Supot Salamteh

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Wichan Choonharat
Assistant Manager



Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 2234476

Date Received : May 27, 2022
Date Reported : Jun 15, 2022
Report Number : 2262219-1 Rev. No.1

Page 2 of 4

Sample Number 2234476-2
Sampled Date May 26, 2022
Sample Description Noise Dose
Personal Sampling XXXXXXXXXX
Date Analysis Commenced May 30, 2022

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	%	-	-	22.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	20.9	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)	-	-	76.5	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	78.2	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)

Note : This Analysis test report is reissued to supersede report No. 2262219-1 Reported : May31,2022 due to revise client information

Sampled By : Supot Salamteh

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Wichan Choonharat
Assistant Manager



Analysis / Test Report

Client : Linde HyCO Limited
10/1, I-4 Road, T.Map Ta Phut, A.Muang, Rayong Thailand 21150
P/O : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 2234476

Date Received : May 27, 2022
Date Reported : Jun 15, 2022
Report Number : 2262219-1 Rev. No.1

Page 3 of 4

Sample Number 2234476-3
Sampled Date May 26, 2022
Sample Description Noise Dose
Personal Sampling XXXXXXXXXX
Date Analysis Commenced May 30, 2022

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	%	-	-	39.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 AM - 08:00 PM	%	-	1	38.0	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)	-	-	79.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 AM - 08:00 PM	dB(A)	-	-	80.8	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)

Note : This Analysis test report is reissued to supersede report No. 2262219-1 Reported : May31,2022 due to revise client information

Sampled By : Supot Salamteh

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 : 9103357695
Project Name : Air Testing
Project Location :

Lot ID: 2234476

Date Received : May 27, 2022
Date Reported : Jun 15, 2022
Report Number : 2262219-1 Rev. No.1

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Sample Number 2234476-4
Sampled Date May 26, 2022
Sample Description Noise Dose
Personal Sampling XXXXXXXXXX
Date Analysis Commenced May 30, 2022

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 PM - 08:00 AM	%	-	-	5.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	08:00 PM - 08:00 AM	%	-	1	5.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	08:00 PM - 08:00 AM	dB(A)	-	-	70.4	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	08:00 PM - 08:00 AM	dB(A)	-	-	72.2	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)

Note : This Analysis test report is reissued to supersede report No. 2262219-1 Reported : May31,2022 due to revise client information

Sampled By : Supot Salamteh

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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