

## ภาคผนวก ค

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ใบรับรองผลการวิเคราะห์

## ภาคผนวก ค-1

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คุณภาพอากาศจากแหล่งกำเนิด



## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiri (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421521**

Date Received : Mar 12, 2024

Date Reported : Mar 20, 2024

Report Number: 2918601-1

Page 1 of 1

<b>Sample Number</b>	2421521-1
<b>Sampled Date</b>	Mar 12, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.1/1 (S1)
<b>Date Analysis Commenced</b>	Mar 13, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	1.17	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	50.0	°C	Gas Velocity	17.2	m/s
Type of Fuel	-		Moisture	3.46	%	Flow Rate (Actual O2)	59388	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	02:00 PM - 02:42 PM	mg/m3	-	0.5	<0.5	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiri (Thailand) Co., Ltd.

**Sampled By :** Jaradrawee Sriuksa

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- Analyte(s) marked \* is/are not included in scope of Accreditation ISO/IEC 17025.

**Technical Management**

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9447

**Approved by**

*D. Johnson.*

Dej Changchon  
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421523**

Date Received : Mar 12, 2024

Date Reported : Mar 20, 2024

Report Number: 2918603-1

Page 1 of 1

<b>Sample Number</b>	2421523-1
<b>Sampled Date</b>	Mar 12, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.1/2 (S2)
<b>Date Analysis Commenced</b>	Mar 13, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	1.17	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	49.0	°C	Gas Velocity	14.7	m/s
Type of Fuel	-		Moisture	3.27	%	Flow Rate (Actual O2)	50875	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	01:00 PM - 01:42 PM	mg/m3	-	0.5	1.4	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiriu (Thailand) Co., Ltd.

**Sampled By :** Jittakorn Sriwasa

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**Technical Management**

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**Approved by**

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Dej Changchon  
Senior Manager

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2421524**

Date Received : Mar 12, 2024  
Date Reported : Mar 20, 2024  
Report Number: 2918604-1

Page 1 of 1

**Sample Number** 2421524-1  
**Sampled Date** Mar 12, 2024  
**Sample Description** Emission from Stationary Source  
**Location** Baghouse Stack No.1/3 (S3)  
**Date Analysis Commenced** Mar 13, 2024  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	0.89	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	47.0	°C	Gas Velocity	18.0	m/s
Type of Fuel	-		Moisture	3.30	%	Flow Rate (Actual O2)	36110	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	12:00 PM - 12:42 PM	mg/m3	-	0.5	1.4	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiriu (Thailand) Co., Ltd.

**Sampled By :** Jittakorn Sriwasa

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421525**

Date Received : Mar 12, 2024

Date Reported : Mar 20, 2024

Report Number: 2918605-1

Page 1 of 1

<b>Sample Number</b>	2421525-1
<b>Sampled Date</b>	Mar 12, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.1/4 (S4)
<b>Date Analysis Commenced</b>	Mar 13, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	0.68	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	42.0	°C	Gas Velocity	17.2	m/s
Type of Fuel	-		Moisture	3.22	%	Flow Rate (Actual O2)	20526	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	11:00 AM - 11:42 AM	mg/m3	-	0.5	<0.5	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiriu (Thailand) Co., Ltd.

**Sampled By :** Jittakorn Sriwasa

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421526**

Date Received : Mar 12, 2024

Date Reported : Mar 20, 2024

Report Number: 2918608-1

Page 1 of 1

<b>Sample Number</b>	2421526-1
<b>Sampled Date</b>	Mar 12, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.1/5 (S5)
<b>Date Analysis Commenced</b>	Mar 13, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	0.89	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	34.0	°C	Gas Velocity	15.9	m/s
Type of Fuel	-		Moisture	3.06	%	Flow Rate (Actual O2)	33243	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	10:00 AM - 10:42 AM	mg/m3	-	0.5	0.6	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
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**Sampled By :** Jittakorn Sriwasa

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**Approved by**

*D. Changchon.*

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2421531**

Date Received : Mar 14, 2024  
Date Reported : Mar 22, 2024  
Report Number: 2918618-1

Page 1 of 1

**Sample Number** 2421531-1  
**Sampled Date** Mar 13, 2024  
**Sample Description** Emission from Stationary Source  
**Location** Baghouse Stack No.1/6 (S6)  
**Date Analysis Commenced** Mar 15, 2024  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	756	mmHg	Diameter	1.30	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	55.0	°C	Gas Velocity	16.6	m/s
Type of Fuel	-		Moisture	3.17	%	Flow Rate (Actual O2)	69874	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	11:15 AM - 11:57 AM	mg/m3	-	0.5	<0.5	120	8	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
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**Sampled By :** Jittakorn Sriwasa

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Technical Management

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Approved by

*D. Changchon.*

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

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421532**

Date Received : Mar 14, 2024

Date Reported : Mar 22, 2024

Report Number: 2918620-1

Page 1 of 1

<b>Sample Number</b>	2421532-1
<b>Sampled Date</b>	Mar 13, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.1/7 (S7)
<b>Date Analysis Commenced</b>	Mar 15, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	1.20	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	41.0	°C	Gas Velocity	16.2	m/s
Type of Fuel	-		Moisture	3.23	%	Flow Rate (Actual O2)	60207	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	12:20 PM - 01:02 PM	mg/m3	-	0.5	<0.5	120	8	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiriu (Thailand) Co., Ltd.

**Sampled By :** Jittakorn Sriwasa

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**Technical Management**

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**Approved by**

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Senior Manager

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421533**

Date Received : Mar 18, 2024

Date Reported : Mar 23, 2024

Report Number: 2918621-1

Page 1 of 1

<b>Sample Number</b>	2421533-1
<b>Sampled Date</b>	Mar 14, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.2/1 (S8)
<b>Date Analysis Commenced</b>	Mar 19, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	1.17	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	54.0	°C	Gas Velocity	23.8	m/s
Type of Fuel	-		Moisture	2.76	%	Flow Rate (Actual O2)	80980	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	09:00 AM - 09:48 AM	mg/m3	-	0.5	<0.5	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
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**Sampled By :** Tinnakorn Kulchart

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**Technical Management**

*Thanita K.*

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**Approved by**

*D. Johnson.*

Dej Changchon  
Senior Manager

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2421534**  
Date Received : Mar 18, 2024  
Date Reported : Mar 23, 2024  
Report Number: 2918624-1

Page 1 of 1

**Sample Number** 2421534-1  
**Sampled Date** Mar 14, 2024  
**Sample Description** Emission from Stationary Source  
**Location** Baghouse Stack No.2/2 (S9)  
**Date Analysis Commenced** Mar 19, 2024  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	1.17	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	55.0	°C	Gas Velocity	27.8	m/s
Type of Fuel	-		Moisture	2.53	%	Flow Rate (Actual O2)	95452	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	01:00 PM - 01:42 PM	mg/m3	-	0.5	2.2	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
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**Sampled By :** Tinnakorn Kulchart

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ทะเบียนเลขที่ ว-323-จ-9447

Approved by

*D. Johnson.*

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

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421535**

Date Received : Mar 18, 2024

Date Reported : Mar 23, 2024

Report Number: 2918625-1

Page 1 of 1

<b>Sample Number</b>	2421535-1
<b>Sampled Date</b>	Mar 14, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.2/3 (S10)
<b>Date Analysis Commenced</b>	Mar 19, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	0.89	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	40.0	°C	Gas Velocity	15.2	m/s
Type of Fuel	-		Moisture	2.81	%	Flow Rate (Actual O2)	31105	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	10:10 AM - 10:52 AM	mg/m3	-	0.5	0.7	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiriu (Thailand) Co., Ltd.

**Sampled By :** Tinnakorn Kulchart

Remark :

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- Analyte(s) marked \* is/are not included in scope of Accreditation ISO/IEC 17025.

**Technical Management**

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9447

**Approved by**

*D. Johnson.*

Dej Changchon  
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiri (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2421536**  
Date Received : Mar 18, 2024  
Date Reported : Mar 23, 2024  
Report Number: 2918626-1

Page 1 of 1

**Sample Number** 2421536-1  
**Sampled Date** Mar 14, 2024  
**Sample Description** Emission from Stationary Source  
**Location** Baghouse Stack No.2/4 (S11)  
**Date Analysis Commenced** Mar 19, 2024  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	0.68	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	52.0	°C	Gas Velocity	21.6	m/s
Type of Fuel	-		Moisture	2.67	%	Flow Rate (Actual O2)	25150	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	11:10 AM - 12:02 PM	mg/m3	-	0.5	0.7	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiri (Thailand) Co., Ltd.

**Sampled By :** Tinnakorn Kulchart

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Technical Management

*Thanita K.*

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

Approved by

*D. Johnson.*

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

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421537**

Date Received : Mar 18, 2024

Date Reported : Mar 23, 2024

Report Number: 2918632-1

Page 1 of 1

<b>Sample Number</b>	2421537-1
<b>Sampled Date</b>	Mar 14, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.2/5 (S12)
<b>Date Analysis Commenced</b>	Mar 19, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	0.89	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	52.5	°C	Gas Velocity	16.1	m/s
Type of Fuel	-		Moisture	2.48	%	Flow Rate (Actual O2)	32134	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	12:10 PM - 12:50 PM	mg/m3	-	0.5	1.0	120	16	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiriu (Thailand) Co., Ltd.

**Sampled By :** Tinnakorn Kulchart

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**Technical Management**

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9447

**Approved by**

*D. Johnson.*

Dej Changchon  
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421539**

Date Received : Mar 14, 2024

Date Reported : Mar 22, 2024

Report Number: 2918635-1

Page 1 of 1

<b>Sample Number</b>	2421539-1
<b>Sampled Date</b>	Mar 13, 2024
<b>Sample Description</b>	Emission from Stationary Source
<b>Location</b>	Baghouse Stack No.2/6 (S13)
<b>Date Analysis Commenced</b>	Mar 15, 2024
<b>Condition of Sample</b>	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

### Stack Description

Ambient Pressure	754	mmHg	Diameter	1.20	m	Oxygen	20.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	46.0	°C	Gas Velocity	19.6	m/s
Type of Fuel	-		Moisture	3.38	%	Flow Rate (Actual O2)	71704	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	09:44 AM - 10:38 AM	mg/m3	-	0.5	<0.5	120	15	United States Environmental Protection Agency, EPA Method 5	Rayong

**Guideline :** (1) Notification of the Ministry of Science Technology and Environment dated March 9, B.E. 2544 (2001), published in the Royal Government Gazette, Vol. 118 Special Part 37 dated May 8, B.E.2544 (2001)  
(2) Environmental Impact Assessment Report of Kiriu (Thailand) Co., Ltd.

**Sampled By :** Jittakorn Sriwasa

**Remark :**

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**Technical Management**

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9447

**Approved by**

*D. Johnson.*

Dej Changchon  
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## ภาคผนวก ค-2

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คุณภาพอากาศในบรรยากาศ





## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2421545**

Date Received : Mar 18, 2024  
Date Reported : Mar 22, 2024  
Report Number: 2918644-1

Page 1 of 1

<b>Sample Description</b>	Air Quality			
<b>Location</b>	วัดจอมพลเจ้าพระยา (A1)			
<b>Date Analysis Commenced</b>	Mar 19, 2024			
<b>Condition of Sample</b>	Drawn into one glass filter paper (8x10 inch) placed in plastic bag			
Sample Number	Sampled Date	Total Suspended Particulate (mg/m <sup>3</sup> )	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2421545-1	Mar 10 - Mar 11, 2024	0.069	758	32
2421545-2	Mar 11 - Mar 12, 2024	0.065	758	31
2421545-3	Mar 12 - Mar 13, 2024	0.051	758	31
2421545-4	Mar 13 - Mar 14, 2024	0.048	758	30
2421545-5	Mar 14 - Mar 15, 2024	0.113	758	31
2421545-6	Mar 15 - Mar 16, 2024	0.061	758	30
2421545-7	Mar 16 - Mar 17, 2024	0.041	758	30
<b>Guideline</b>		0.33	-	-

### Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

**Guideline :** Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By :** Siriwit Ruangsom

### Remark :

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

Approved by

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2421545**  
Date Received : Mar 18, 2024  
Date Reported : Mar 22, 2024  
Report Number: 2918644-2

Page 1 of 1

**Sample Description** Air Quality  
**Location** วัดคลองกรำ (A2)  
**Date Analysis Commenced** Mar 19, 2024  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m <sup>3</sup> )	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2421545-8	Mar 10 - Mar 11, 2024	0.059	758	32
2421545-9	Mar 11 - Mar 12, 2024	0.073	758	31
2421545-10	Mar 12 - Mar 13, 2024	0.064	758	31
2421545-11	Mar 13 - Mar 14, 2024	0.062	758	30
2421545-12	Mar 14 - Mar 15, 2024	0.053	758	31
2421545-13	Mar 15 - Mar 16, 2024	0.054	758	30
2421545-14	Mar 16 - Mar 17, 2024	0.043	758	30
<b>Guideline</b>		0.33	-	-

### Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

**Guideline :** Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By :** Siriwit Ruangsom

### Remark :

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

Approved by

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2421545**  
Date Received : Mar 18, 2024  
Date Reported : Mar 22, 2024  
Report Number: 2918644-3

Page 1 of 1

**Sample Description** Air Quality  
**Location** วัดราษฎร์ศุภคาราม (A3)  
**Date Analysis Commenced** Mar 19, 2024  
**Condition of Sample** Drawn into one glass filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2421545-15	Mar 10 - Mar 11, 2024	0.107	758	32
2421545-16	Mar 11 - Mar 12, 2024	0.125	758	31
2421545-17	Mar 12 - Mar 13, 2024	0.119	758	31
2421545-18	Mar 13 - Mar 14, 2024	0.098	758	30
2421545-19	Mar 14 - Mar 15, 2024	0.092	758	31
2421545-20	Mar 15 - Mar 16, 2024	0.086	758	30
2421545-21	Mar 16 - Mar 17, 2024	0.102	758	30
<b>Guideline</b>		0.33	-	-

### Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

**Guideline :** Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

**Sampled By :** Siriwit Ruangsom

### Remark :

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

Approved by

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

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## Analysis / Test Report

**Client** : Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**Lot ID:** 2421546

Date Received :Mar 18, 2024

Date Reported :Mar 25, 2024

Report Number :2946857-1

**P/O** : PO231210109

**Project Name** : Monitoring

**Project Location** :

Page 1 of 2

**Sample Number** : 2421546-1 to 7  
**Parameter** : Wind Speed / Wind Direction  
**Location** : วัดราษฎร์อิสตาราม (A3)  
**Sampling Date** : Mar 10 - Mar 17, 2024  
**Sampling by** : Siriwit Ruangsom

Time	Mar 10 - Mar 11, 2024			Mar 11 - Mar 12, 2024			Mar 12 - Mar 13, 2024			Mar 13 - Mar 14, 2024			Mar 14 - Mar 15, 2024			Mar 15 - Mar 16, 2024			Mar 16 - Mar 17, 2024		
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
10:00 AM - 11:00 AM	0.5	165.0	SSE	0.0	-	-	0.3	216.0	SW	0.0	-	-	0.3	209.0	SSW	0.5	156.0	SSE	0.7	122.0	ESE
11:00 AM - 12:00 PM	0.0	-	-	0.3	159.0	SSE	0.0	-	-	0.0	-	-	0.2	-	-	0.0	-	-	0.5	211.0	SSW
12:00 PM - 01:00 PM	1.2	152.0	SSE	0.0	-	-	0.5	222.0	SW	0.4	144.0	SE	0.0	-	-	0.0	-	-	0.5	210.0	SSW
01:00 PM - 02:00 PM	0.0	-	-	1.1	166.0	SSE	0.4	194.0	SSW	0.0	-	-	0.0	-	-	0.0	-	-	0.2	-	-
02:00 PM - 03:00 PM	0.0	-	-	0.0	-	-	0.2	-	-	0.0	-	-	0.6	210.0	SSW	0.6	222.0	SW	1.1	237.0	WSW
03:00 PM - 04:00 PM	0.3	134.0	SE	1.2	166.0	SSE	0.0	-	-	0.5	153.0	SSE	0.5	211.0	SSW	0.8	194.0	SSW	1.5	235.0	SW
04:00 PM - 05:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	0.5	147.0	SSE	0.0	-	-	0.9	204.0	SSW	1.6	242.0	WSW
05:00 PM - 06:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	2.3	204.0	SSW	0.0	-	-	1.1	207.0	SSW	0.0	-	-
06:00 PM - 07:00 PM	0.3	196.0	SSW	1.5	246.0	WSW	0.0	-	-	0.0	-	-	0.2	-	-	1.5	207.0	SSW	0.0	-	-
07:00 PM - 08:00 PM	0.3	182.0	S	1.4	236.0	SW	0.0	-	-	2.2	185.0	S	0.2	-	-	1.4	194.0	SSW	0.8	130.0	SE
08:00 PM - 09:00 PM	0.7	196.0	SSW	0.2	-	-	1.8	237.0	WSW	1.7	216.0	SW	1.2	203.0	SSW	1.8	206.0	SSW	0.5	134.0	SE
09:00 PM - 10:00 PM	0.9	221.0	SW	0.2	-	-	1.2	216.0	SW	1.7	152.0	SSE	1.1	203.0	SSW	0.0	-	-	0.9	135.0	SE
10:00 PM - 11:00 PM	0.4	107.0	ESE	2.3	178.0	S	1.7	188.0	S	2.1	146.0	SE	1.3	210.0	SSW	0.0	-	-	0.4	150.0	SSE
11:00 PM - 12:00 AM	2.3	162.0	SSE	0.8	132.0	SE	1.5	213.0	SSW	2.5	172.0	S	2.4	25.0	NNE	0.0	-	-	1.2	155.0	SSE
12:00 AM - 01:00 AM	1.6	151.0	SSE	0.6	357.0	N	1.7	183.0	S	1.4	90.0	E	2.3	250.0	WSW	0.6	188.0	S	1.6	206.0	SSW
01:00 AM - 02:00 AM	1.0	218.0	SW	1.0	0.0	N	1.0	211.0	SSW	2.0	91.0	E	0.6	211.0	SSW	0.9	213.0	SSW	1.5	207.0	SSW
02:00 AM - 03:00 AM	1.1	150.0	SSE	0.4	181.0	S	1.4	146.0	SE	2.6	163.0	SSE	0.8	202.0	SSW	2.2	183.0	S	0.0	-	-
03:00 AM - 04:00 AM	1.2	151.0	SSE	0.3	204.0	SSW	2.4	125.0	SE	1.5	161.0	SSE	0.8	203.0	SSW	2.3	211.0	SSW	0.0	-	-
04:00 AM - 05:00 AM	1.8	148.0	SSE	1.3	157.0	SSE	0.0	-	-	0.6	157.0	SSE	0.0	-	-	0.0	-	-	0.6	248.0	WSW
05:00 AM - 06:00 AM	0.5	159.0	SSE	0.8	185.0	S	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
06:00 AM - 07:00 AM	1.0	146.0	SE	1.0	154.0	SSE	0.0	-	-	2.2	141.0	SE	0.0	-	-	0.0	-	-	0.0	-	-
07:00 AM - 08:00 AM	1.2	125.0	SE	0.5	170.0	S	0.5	158.0	SSE	0.0	-	-	0.6	188.0	S	0.0	-	-	0.0	-	-
08:00 AM - 09:00 AM	0.0	-	-	0.6	133.0	SE	0.0	-	-	0.0	-	-	0.8	186.0	S	0.6	135.0	SE	0.3	177.0	S
09:00 AM - 10:00 AM	0.0	-	-	0.8	159.0	SSE	0.0	-	-	2.2	151.0	SSE	0.5	155.0	SSE	0.8	134.0	SE	0.2	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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

Sarayuth Jittrantont  
Assistant General Manager



## Analysis / Test Report

**Client** : Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231210109

**Project Name** : Monitoring

**Project Location** :

**Lot ID:** 2421546

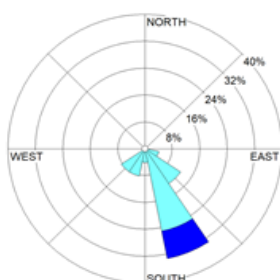
Date Received :Mar 18, 2024

Date Reported :Mar 25, 2024

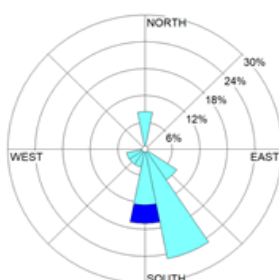
Report Number :2946857-1

Page 2 of 2

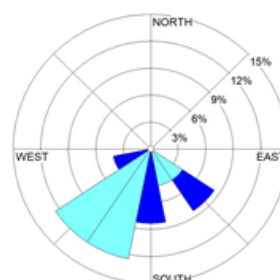
### Wind Rose



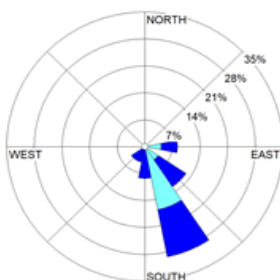
Date : Mar 10-11, 2024



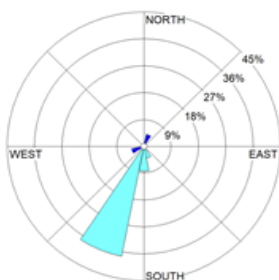
Date : Mar 11-12, 2024



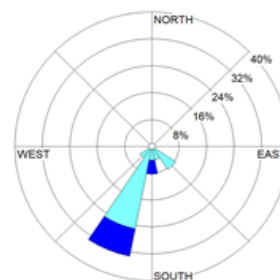
Date : Mar 12-13, 2024



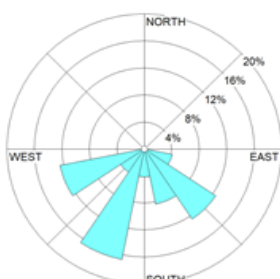
Date : Mar 13-14, 2024



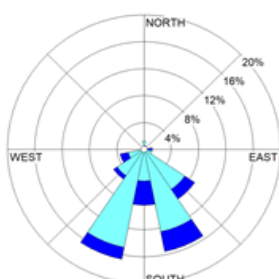
Date : Mar 14-15, 2024



Date : Mar 15-16, 2024



Date : Mar 16-17, 2024



Date : Mar 10-17, 2024

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	13.10
0.3-1.7	49.41
Calms	37.50

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

Sarayuth Jitranont  
Assistant General Manager

## ภาคผนวก ค-3

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ระดับเสียงโดยทั่วไป



## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938306-1

Page 1 of 1

**Sample Number** 2421547-1  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศเหนือ  
**Measurement Date** Mar 11 - Mar 12, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	55.7	80.5	52.6
11:00 AM - 12:00 PM	55.4	71.6	52.9
12:00 PM - 01:00 PM	54.0	73.4	51.9
01:00 PM - 02:00 PM	54.4	74.0	52.2
02:00 PM - 03:00 PM	54.6	83.7	52.2
03:00 PM - 04:00 PM	56.5	82.0	53.2
04:00 PM - 05:00 PM	55.8	78.7	53.6
05:00 PM - 06:00 PM	54.7	71.6	52.5
06:00 PM - 07:00 PM	58.7	95.0	51.5
07:00 PM - 08:00 PM	54.2	73.6	51.9
08:00 PM - 09:00 PM	55.8	78.7	52.7
09:00 PM - 10:00 PM	55.0	68.5	53.1
10:00 PM - 11:00 PM	54.9	78.0	52.9
11:00 PM - 12:00 AM	54.8	72.3	53.1
12:00 AM - 01:00 AM	55.8	78.2	53.0
01:00 AM - 02:00 AM	54.6	66.8	53.5
02:00 AM - 03:00 AM	54.5	66.8	53.5
03:00 AM - 04:00 AM	53.9	65.8	53.0
04:00 AM - 05:00 AM	54.0	69.0	52.8
05:00 AM - 06:00 AM	54.1	68.6	52.9
06:00 AM - 07:00 AM	54.7	66.1	53.2
07:00 AM - 08:00 AM	55.5	69.8	53.3
08:00 AM - 09:00 AM	57.1	77.7	54.0
09:00 AM - 10:00 AM	55.9	74.6	54.0

Leq Average 24 hrs. (dB(A)) 55.3  
Lmax (dB(A)) 95.0  
L90 (dB(A)) 52.9  
Ldn (dB(A)) 61.2  
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



## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938307-1

Page 1 of 1

**Sample Number** 2421547-2  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศเหนือ  
**Measurement Date** Mar 12 - Mar 13, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	55.4	72.6	53.0
11:00 AM - 12:00 PM	54.7	67.2	53.0
12:00 PM - 01:00 PM	55.1	75.0	52.9
01:00 PM - 02:00 PM	55.0	69.2	53.3
02:00 PM - 03:00 PM	54.7	74.1	52.9
03:00 PM - 04:00 PM	54.2	72.9	52.4
04:00 PM - 05:00 PM	54.6	70.4	52.9
05:00 PM - 06:00 PM	54.2	68.6	52.4
06:00 PM - 07:00 PM	55.7	79.6	52.2
07:00 PM - 08:00 PM	53.4	66.1	52.3
08:00 PM - 09:00 PM	55.8	78.4	52.7
09:00 PM - 10:00 PM	54.2	73.6	52.1
10:00 PM - 11:00 PM	55.7	81.1	52.4
11:00 PM - 12:00 AM	54.1	77.2	52.1
12:00 AM - 01:00 AM	52.9	68.2	51.2
01:00 AM - 02:00 AM	53.4	72.6	52.3
02:00 AM - 03:00 AM	53.2	65.5	52.2
03:00 AM - 04:00 AM	53.0	68.5	51.8
04:00 AM - 05:00 AM	52.0	69.4	51.2
05:00 AM - 06:00 AM	53.6	79.3	51.8
06:00 AM - 07:00 AM	55.6	79.8	53.2
07:00 AM - 08:00 AM	55.7	83.6	53.2
08:00 AM - 09:00 AM	57.6	78.1	54.7
09:00 AM - 10:00 AM	57.1	80.9	54.0

Leq Average 24 hrs. (dB(A)) 54.8  
Lmax (dB(A)) 83.6  
L90 (dB(A)) 52.4  
Ldn (dB(A)) 60.5  
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





## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938308-1

Page 1 of 1

**Sample Number** 2421547-3  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศเหนือ  
**Measurement Date** Mar 13 - Mar 14, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734223

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	56.0	80.5	53.0
11:00 AM - 12:00 PM	58.8	78.4	52.8
12:00 PM - 01:00 PM	55.6	71.7	52.5
01:00 PM - 02:00 PM	57.6	73.9	54.3
02:00 PM - 03:00 PM	56.5	70.6	54.1
03:00 PM - 04:00 PM	54.7	67.7	52.9
04:00 PM - 05:00 PM	58.1	77.7	53.0
05:00 PM - 06:00 PM	54.8	73.2	52.9
06:00 PM - 07:00 PM	54.9	81.6	51.8
07:00 PM - 08:00 PM	54.2	68.7	52.5
08:00 PM - 09:00 PM	54.8	67.2	53.0
09:00 PM - 10:00 PM	55.3	82.3	53.5
10:00 PM - 11:00 PM	55.2	75.5	53.0
11:00 PM - 12:00 AM	54.9	84.5	52.7
12:00 AM - 01:00 AM	54.4	68.5	52.9
01:00 AM - 02:00 AM	55.1	67.8	53.7
02:00 AM - 03:00 AM	54.4	64.4	53.5
03:00 AM - 04:00 AM	54.8	70.5	53.3
04:00 AM - 05:00 AM	55.1	85.3	53.2
05:00 AM - 06:00 AM	54.1	67.4	53.1
06:00 AM - 07:00 AM	54.9	69.8	53.6
07:00 AM - 08:00 AM	58.0	86.3	53.5
08:00 AM - 09:00 AM	57.4	77.5	54.8
09:00 AM - 10:00 AM	56.4	70.2	54.3

Leq Average 24 hrs. (dB(A)) 55.9  
Lmax (dB(A)) 86.3  
L90 (dB(A)) 53.0  
Ldn (dB(A)) 61.5  
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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Life Sciences

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938309-1

Page 1 of 1

**Sample Number** 2421547-4  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศใต้  
**Measurement Date** Mar 11 - Mar 12, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	60.1	80.0	55.9
11:00 AM - 12:00 PM	58.1	77.3	55.7
12:00 PM - 01:00 PM	56.3	72.1	54.6
01:00 PM - 02:00 PM	56.7	75.3	54.9
02:00 PM - 03:00 PM	58.2	75.2	56.2
03:00 PM - 04:00 PM	61.6	80.8	55.8
04:00 PM - 05:00 PM	60.4	79.0	56.0
05:00 PM - 06:00 PM	57.3	73.5	55.3
06:00 PM - 07:00 PM	57.5	73.5	54.6
07:00 PM - 08:00 PM	59.8	79.4	56.8
08:00 PM - 09:00 PM	55.5	71.0	53.6
09:00 PM - 10:00 PM	55.6	72.6	50.1
10:00 PM - 11:00 PM	54.9	71.7	49.4
11:00 PM - 12:00 AM	54.8	76.8	49.8
12:00 AM - 01:00 AM	55.7	77.3	50.5
01:00 AM - 02:00 AM	54.6	83.0	48.7
02:00 AM - 03:00 AM	52.7	71.5	49.5
03:00 AM - 04:00 AM	54.2	73.3	50.0
04:00 AM - 05:00 AM	54.0	74.2	50.4
05:00 AM - 06:00 AM	57.6	70.7	48.9
06:00 AM - 07:00 AM	60.2	77.9	52.9
07:00 AM - 08:00 AM	55.7	73.9	50.8
08:00 AM - 09:00 AM	56.8	69.6	53.6
09:00 AM - 10:00 AM	59.8	74.4	56.4

Leq Average 24 hrs. (dB(A)) 57.6  
Lmax (dB(A)) 83.0  
L90 (dB(A)) 53.6  
Ldn (dB(A)) 62.9  
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป  
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน 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 : Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

P/O : PO231210109

Project Name : Monitoring

Project Location :

Lot ID: 2421547

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938310-1

Page 1 of 1

Sample Number : 2421547-5  
Parameter : Noise (Leq 24 hrs.)  
Location : ร่มรั้วโครงการ ทิศใต้  
Measurement Date : Mar 12 - Mar 13, 2024  
Measurement by : Samart Roongan  
Sound Level meter : Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	58.4	78.5	54.0
11:00 AM - 12:00 PM	57.4	79.0	53.0
12:00 PM - 01:00 PM	56.7	73.2	53.6
01:00 PM - 02:00 PM	58.3	80.9	54.0
02:00 PM - 03:00 PM	57.9	77.9	54.5
03:00 PM - 04:00 PM	57.2	72.6	54.2
04:00 PM - 05:00 PM	59.3	81.0	53.2
05:00 PM - 06:00 PM	56.9	77.3	53.0
06:00 PM - 07:00 PM	58.2	76.1	53.5
07:00 PM - 08:00 PM	59.1	73.1	55.7
08:00 PM - 09:00 PM	55.8	73.3	54.1
09:00 PM - 10:00 PM	58.0	75.0	55.0
10:00 PM - 11:00 PM	61.6	88.4	56.0
11:00 PM - 12:00 AM	57.8	75.9	55.0
12:00 AM - 01:00 AM	55.8	73.9	53.9
01:00 AM - 02:00 AM	55.9	73.6	53.9
02:00 AM - 03:00 AM	56.4	76.5	54.3
03:00 AM - 04:00 AM	56.2	72.3	54.5
04:00 AM - 05:00 AM	55.5	72.3	53.9
05:00 AM - 06:00 AM	58.9	70.6	53.9
06:00 AM - 07:00 AM	60.4	77.4	55.5
07:00 AM - 08:00 AM	57.6	76.1	55.0
08:00 AM - 09:00 AM	56.9	72.0	54.4
09:00 AM - 10:00 AM	59.4	81.4	55.3

Leq Average 24 hrs. (dB(A)) : 58.0  
Lmax (dB(A)) : 88.4  
L90 (dB(A)) : 54.1  
Ldn (dB(A)) : 64.5  
Standard (dB(A)) : 70

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



## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938311-1

Page 1 of 1

**Sample Number** 2421547-6  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศใต้  
**Measurement Date** Mar 13 - Mar 14, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.9	75.9	54.7
11:00 AM - 12:00 PM	59.6	77.6	54.8
12:00 PM - 01:00 PM	56.1	71.5	54.0
01:00 PM - 02:00 PM	59.7	79.3	54.7
02:00 PM - 03:00 PM	60.5	77.9	55.3
03:00 PM - 04:00 PM	57.5	79.9	54.8
04:00 PM - 05:00 PM	57.7	71.8	55.2
05:00 PM - 06:00 PM	59.6	79.1	54.9
06:00 PM - 07:00 PM	57.3	78.5	54.8
07:00 PM - 08:00 PM	59.5	79.2	56.4
08:00 PM - 09:00 PM	54.4	73.4	52.2
09:00 PM - 10:00 PM	54.7	76.5	50.8
10:00 PM - 11:00 PM	56.3	76.3	50.8
11:00 PM - 12:00 AM	55.7	78.5	50.2
12:00 AM - 01:00 AM	53.0	71.8	49.2
01:00 AM - 02:00 AM	53.6	71.5	48.3
02:00 AM - 03:00 AM	53.8	72.4	48.7
03:00 AM - 04:00 AM	54.3	76.8	49.2
04:00 AM - 05:00 AM	54.0	70.3	49.4
05:00 AM - 06:00 AM	56.2	70.9	49.1
06:00 AM - 07:00 AM	58.9	78.3	52.7
07:00 AM - 08:00 AM	55.4	78.1	50.1
08:00 AM - 09:00 AM	57.7	85.9	51.8
09:00 AM - 10:00 AM	57.5	77.1	53.6

Leq Average 24 hrs. (dB(A)) 57.2  
Lmax (dB(A)) 85.9  
L90 (dB(A)) 52.2  
Ldn (dB(A)) 62.4  
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

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Approved by

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiri (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938312-1

Page 1 of 1

**Sample Number** 2421547-7  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศตะวันออก  
**Measurement Date** Mar 11 - Mar 12, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	66.9	76.9	65.9
11:00 AM - 12:00 PM	64.5	68.5	63.8
12:00 PM - 01:00 PM	63.0	66.7	62.3
01:00 PM - 02:00 PM	63.4	68.0	62.6
02:00 PM - 03:00 PM	64.0	66.8	62.9
03:00 PM - 04:00 PM	66.3	78.6	65.6
04:00 PM - 05:00 PM	66.5	74.3	65.9
05:00 PM - 06:00 PM	65.7	67.9	64.9
06:00 PM - 07:00 PM	66.1	70.5	65.4
07:00 PM - 08:00 PM	66.2	68.7	65.6
08:00 PM - 09:00 PM	63.4	68.0	62.6
09:00 PM - 10:00 PM	52.2	67.1	51.5
10:00 PM - 11:00 PM	51.4	54.3	51.1
11:00 PM - 12:00 AM	51.5	59.4	51.2
12:00 AM - 01:00 AM	51.5	59.3	51.1
01:00 AM - 02:00 AM	52.0	71.7	51.0
02:00 AM - 03:00 AM	52.2	68.2	51.5
03:00 AM - 04:00 AM	53.3	73.2	52.1
04:00 AM - 05:00 AM	55.9	73.0	54.6
05:00 AM - 06:00 AM	58.3	67.8	58.0
06:00 AM - 07:00 AM	59.1	64.8	58.8
07:00 AM - 08:00 AM	59.0	67.7	58.6
08:00 AM - 09:00 AM	63.4	80.9	62.7
09:00 AM - 10:00 AM	65.2	70.8	64.6

Leq Average 24 hrs. (dB(A)) 62.9  
Lmax (dB(A)) 80.9  
L90 (dB(A)) 62.3  
Ldn (dB(A)) 64.8  
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

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## Analysis / Test Report



TESTING  
No.0042

**Client :** Kiri (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938313-1

Page 1 of 1

**Sample Number** 2421547-8  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศตะวันออก  
**Measurement Date** Mar 12 - Mar 13, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	65.5	70.1	64.8
11:00 AM - 12:00 PM	64.2	66.8	63.5
12:00 PM - 01:00 PM	64.7	67.9	63.9
01:00 PM - 02:00 PM	64.2	82.2	62.9
02:00 PM - 03:00 PM	64.1	72.9	62.9
03:00 PM - 04:00 PM	63.7	69.9	62.5
04:00 PM - 05:00 PM	64.3	70.4	63.3
05:00 PM - 06:00 PM	65.1	69.5	64.2
06:00 PM - 07:00 PM	70.7	79.1	65.2
07:00 PM - 08:00 PM	70.7	79.9	66.0
08:00 PM - 09:00 PM	66.5	69.8	66.0
09:00 PM - 10:00 PM	66.5	69.1	65.9
10:00 PM - 11:00 PM	66.7	68.8	66.2
11:00 PM - 12:00 AM	66.6	79.4	66.1
12:00 AM - 01:00 AM	66.5	68.8	66.2
01:00 AM - 02:00 AM	66.6	68.9	66.3
02:00 AM - 03:00 AM	66.5	68.0	66.2
03:00 AM - 04:00 AM	66.9	69.0	66.6
04:00 AM - 05:00 AM	67.0	68.7	66.7
05:00 AM - 06:00 AM	66.7	69.7	66.3
06:00 AM - 07:00 AM	67.1	74.2	66.7
07:00 AM - 08:00 AM	67.1	70.3	66.8
08:00 AM - 09:00 AM	66.7	77.2	66.0
09:00 AM - 10:00 AM	65.6	71.1	64.7

Leq Average 24 hrs. (dB(A)) 66.6  
Lmax (dB(A)) 82.2  
L90 (dB(A)) 66.0  
Ldn (dB(A)) 73.1  
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

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiri (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938314-1

Page 1 of 1

**Sample Number** 2421547-9  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศตะวันออก  
**Measurement Date** Mar 13 - Mar 14, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	65.0	70.7	63.9
11:00 AM - 12:00 PM	64.3	70.3	63.0
12:00 PM - 01:00 PM	63.2	66.8	62.1
01:00 PM - 02:00 PM	63.7	67.7	62.6
02:00 PM - 03:00 PM	64.6	76.1	63.2
03:00 PM - 04:00 PM	64.0	68.3	62.9
04:00 PM - 05:00 PM	64.6	70.5	63.5
05:00 PM - 06:00 PM	64.5	67.1	63.3
06:00 PM - 07:00 PM	65.3	67.9	64.3
07:00 PM - 08:00 PM	65.8	68.5	65.0
08:00 PM - 09:00 PM	60.4	68.5	59.6
09:00 PM - 10:00 PM	60.6	63.1	59.9
10:00 PM - 11:00 PM	61.1	62.8	60.5
11:00 PM - 12:00 AM	57.0	86.8	54.3
12:00 AM - 01:00 AM	52.7	70.3	50.5
01:00 AM - 02:00 AM	50.9	68.3	50.4
02:00 AM - 03:00 AM	50.5	55.6	50.3
03:00 AM - 04:00 AM	50.7	58.6	50.4
04:00 AM - 05:00 AM	57.0	60.1	56.5
05:00 AM - 06:00 AM	58.3	68.8	58.0
06:00 AM - 07:00 AM	59.8	78.8	59.0
07:00 AM - 08:00 AM	59.1	69.2	58.7
08:00 AM - 09:00 AM	63.9	68.2	63.3
09:00 AM - 10:00 AM	65.7	80.1	64.9

Leq Average 24 hrs. (dB(A)) 62.5  
Lmax (dB(A)) 86.8  
L90 (dB(A)) 60.5  
Ldn (dB(A)) 65.4  
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

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Section Head

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## Analysis / Test Report



TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938315-1

Page 1 of 1

**Sample Number** 2421547-10  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศตะวันตก  
**Measurement Date** Mar 11 - Mar 12, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 472126

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	64.5	80.0	63.0
11:00 AM - 12:00 PM	64.4	83.4	62.3
12:00 PM - 01:00 PM	63.2	76.8	62.0
01:00 PM - 02:00 PM	63.7	76.8	62.4
02:00 PM - 03:00 PM	65.0	85.6	62.8
03:00 PM - 04:00 PM	65.2	81.6	63.8
04:00 PM - 05:00 PM	65.5	82.1	63.8
05:00 PM - 06:00 PM	64.7	77.3	63.3
06:00 PM - 07:00 PM	64.4	76.8	63.4
07:00 PM - 08:00 PM	64.5	75.7	63.6
08:00 PM - 09:00 PM	64.9	79.8	63.4
09:00 PM - 10:00 PM	64.3	77.0	63.3
10:00 PM - 11:00 PM	64.4	77.3	63.5
11:00 PM - 12:00 AM	65.1	76.8	63.7
12:00 AM - 01:00 AM	64.4	79.0	63.6
01:00 AM - 02:00 AM	64.9	83.4	63.7
02:00 AM - 03:00 AM	64.7	79.8	63.6
03:00 AM - 04:00 AM	64.4	78.6	63.6
04:00 AM - 05:00 AM	64.7	78.6	63.6
05:00 AM - 06:00 AM	64.5	77.2	63.7
06:00 AM - 07:00 AM	64.8	79.1	63.9
07:00 AM - 08:00 AM	65.7	79.4	63.9
08:00 AM - 09:00 AM	65.4	86.3	63.8
09:00 AM - 10:00 AM	64.4	75.6	63.3

Leq Average 24 hrs. (dB(A)) 64.7  
Lmax (dB(A)) 86.3  
L90 (dB(A)) 63.6  
Ldn (dB(A)) 71.1

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

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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938316-1

Page 1 of 1

**Sample Number** 2421547-11  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศตะวันตก  
**Measurement Date** Mar 12 - Mar 13, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 472126

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	64.7	81.6	62.9
11:00 AM - 12:00 PM	64.0	77.3	62.9
12:00 PM - 01:00 PM	63.6	77.8	62.7
01:00 PM - 02:00 PM	64.4	79.9	62.8
02:00 PM - 03:00 PM	64.4	76.7	62.9
03:00 PM - 04:00 PM	64.1	77.2	62.9
04:00 PM - 05:00 PM	64.5	78.9	63.1
05:00 PM - 06:00 PM	65.3	82.8	63.3
06:00 PM - 07:00 PM	64.3	77.0	63.4
07:00 PM - 08:00 PM	64.5	72.0	63.7
08:00 PM - 09:00 PM	64.1	75.0	63.0
09:00 PM - 10:00 PM	63.0	78.1	61.8
10:00 PM - 11:00 PM	62.8	71.6	61.8
11:00 PM - 12:00 AM	63.1	76.9	61.8
12:00 AM - 01:00 AM	62.5	76.0	61.7
01:00 AM - 02:00 AM	62.3	72.3	61.5
02:00 AM - 03:00 AM	63.0	76.5	61.8
03:00 AM - 04:00 AM	62.6	75.2	61.7
04:00 AM - 05:00 AM	63.0	77.7	61.9
05:00 AM - 06:00 AM	62.7	68.6	61.8
06:00 AM - 07:00 AM	64.9	78.3	63.8
07:00 AM - 08:00 AM	65.6	77.9	64.2
08:00 AM - 09:00 AM	65.4	78.4	64.1
09:00 AM - 10:00 AM	65.0	78.4	63.9

Leq Average 24 hrs. (dB(A)) 64.0  
Lmax (dB(A)) 82.8  
L90 (dB(A)) 62.9  
Ldn (dB(A)) 69.7  
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

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

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

Technical Management

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Supot Salamteh  
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## Analysis / Test Report

TESTING  
No.0042

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2421547**

Date Received : Mar 14, 2024

Date Reported : Mar 19, 2024

Report Number: 2938317-1

Page 1 of 1

**Sample Number** 2421547-12  
**Parameter** Noise (Leq 24 hrs.)  
**Location** ร่มรั้วโครงการ ทิศตะวันตก  
**Measurement Date** Mar 13 - Mar 14, 2024  
**Measurement by** Samart Roongan  
**Sound Level meter** Serial No. 472126

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	64.8	77.4	63.4
11:00 AM - 12:00 PM	64.4	76.0	63.0
12:00 PM - 01:00 PM	63.7	77.6	62.5
01:00 PM - 02:00 PM	64.9	76.8	63.1
02:00 PM - 03:00 PM	65.1	79.1	63.5
03:00 PM - 04:00 PM	64.2	76.8	63.1
04:00 PM - 05:00 PM	65.2	78.5	63.5
05:00 PM - 06:00 PM	65.2	81.2	63.5
06:00 PM - 07:00 PM	64.8	77.2	63.6
07:00 PM - 08:00 PM	64.6	77.2	63.7
08:00 PM - 09:00 PM	64.3	75.8	63.2
09:00 PM - 10:00 PM	64.5	76.8	63.2
10:00 PM - 11:00 PM	64.8	78.1	63.4
11:00 PM - 12:00 AM	64.7	80.8	63.5
12:00 AM - 01:00 AM	64.4	77.8	63.5
01:00 AM - 02:00 AM	64.4	78.1	63.5
02:00 AM - 03:00 AM	64.6	79.4	63.5
03:00 AM - 04:00 AM	64.4	80.7	63.4
04:00 AM - 05:00 AM	64.8	80.3	63.6
05:00 AM - 06:00 AM	64.6	80.2	63.6
06:00 AM - 07:00 AM	64.7	78.9	63.5
07:00 AM - 08:00 AM	65.8	80.2	63.8
08:00 AM - 09:00 AM	65.2	86.4	63.6
09:00 AM - 10:00 AM	65.0	84.8	63.0

Leq Average 24 hrs. (dB(A)) 64.7  
Lmax (dB(A)) 86.4  
L90 (dB(A)) 63.5  
Ldn (dB(A)) 71.0  
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

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คุณภาพน้ำทิ้ง



## Analysis / Test Report

TESTING

No.0042

**Lot ID: 23147810**

Date Received : Jan 05, 2024

Date Reported : Jan 12, 2024

Report Number : 2873587-1

**Client** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	23147810-1						
<b>Sampled Date</b>	Jan 05, 2024 10:15 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Effluent (เก็บตัวอย่างพร้อมการนิคม)						
<b>Date Analysis Commenced</b>	Jan 05, 2024						
<b>Condition of Sample</b>	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
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	77.0	≤500	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	285	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	104	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	103	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C		-	-	8.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	460	≤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	113	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

**Guideline** : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

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

Remark :

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** : Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O** : PO231110507  
**Project Name** : Monitoring  
**Project Location** :

**TESTING**  
**No.0042**  
**Lot ID: 23147810**  
Date Received : Jan 05, 2024  
Date Reported : Jan 12, 2024  
Report Number : 2873587-1

Page 2 of 2

- 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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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 247103**

Date Received : Feb 07, 2024

Date Reported : Feb 14, 2024

Report Number : 2889795-1

**Client** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	247103-1						
<b>Sampled Date</b>	Feb 07, 2024 3:15 PM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Effluent (เก็บตัวอย่างพร้อมการนิคม)						
<b>Date Analysis Commenced</b>	Feb 07, 2024						
<b>Condition of Sample</b>	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
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	76.8	≤500	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	210	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	103	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	102	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	356	≤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	56	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

**Guideline** : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

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

Remark :

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** : Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O** : PO231110507  
**Project Name** : Monitoring  
**Project Location** :

**TESTING**  
**No.0042**  
**Lot ID: 247103**  
Date Received : Feb 07, 2024  
Date Reported : Feb 14, 2024  
Report Number : 2889795-1

Page 2 of 2

- 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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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2417369**

Date Received : Mar 07, 2024

Date Reported : Mar 14, 2024

Report Number : 2910721-1

**Client** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	2417369-1						
<b>Sampled Date</b>	Mar 07, 2024 11:16 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Effluent (เก็บตัวอย่างพร้อมการนิคม)						
<b>Date Analysis Commenced</b>	Mar 07, 2024						
<b>Condition of Sample</b>	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
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	126	≤500	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	273	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	86	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	83	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	4	≤10	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
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	356	≤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	63	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

**Guideline** : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

**Sampling By** : Surawit Narapong ทะเบียนเลขที่ ว-323-จ-0011

Remark :

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** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

**TESTING**

**No.0042**

**Lot ID: 2417369**

Date Received : Mar 07, 2024

Date Reported : Mar 14, 2024

Report Number : 2910721-1

Page 2 of 2

- LOD : Limit of Detection
- "<" : 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. 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: 2429646**

Date Received : Apr 05, 2024

Date Reported : Apr 12, 2024

Report Number : 2937935-1

**Client** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	2429646-1						
<b>Sampled Date</b>	Apr 05, 2024 10:40 AM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Effluent (เก็บตัวอย่างพร้อมการนิคม)						
<b>Date Analysis Commenced</b>	Apr 05, 2024						
<b>Condition of Sample</b>	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
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	56.2	≤500	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	175	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	63	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	63	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	7	≤10	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
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	348	≤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	38	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

**Guideline** : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

**Sampling By** : Narunat thammasaro ทะเบียนเลขที่ ว-323-จ-9477

Remark :

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

**Client** : Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O** : PO231110507  
**Project Name** : Monitoring  
**Project Location** :

**TESTING**  
**No.0042**  
**Lot ID: 2429646**  
Date Received : Apr 05, 2024  
Date Reported : Apr 12, 2024  
Report Number : 2937935-1

Page 2 of 2

- 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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## Analysis / Test Report

TESTING

No.0042

**Lot ID: 2445639**

Date Received : May 06, 2024

Date Reported : May 13, 2024

Report Number : 2973289-1

**Client** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	2445639-1
<b>Sampled Date</b>	May 06, 2024 10:05 AM
<b>Sample Description</b>	Wastewater
<b>Location</b>	Effluent (เก็บตัวอย่างพร้อมการนิคม)
<b>Date Analysis Commenced</b>	May 06, 2024
<b>Condition of Sample</b>	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
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	68.4	≤500	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	210	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	138	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	135	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	6	≤10	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
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	384	≤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	41	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

**Guideline** : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

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

Remark :

Technical Management

Photchana S.

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9446

Approved by

D. Chamon.

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

**Client** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

**TESTING**

**No.0042**

**Lot ID: 2445639**

Date Received : May 06, 2024

Date Reported : May 13, 2024

Report Number : 2973289-1

Page 2 of 2

- 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**

**Photchana S.**

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9446

**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: 2450385**

Date Received : Jun 07, 2024

Date Reported : Jun 13, 2024

Report Number : 2983049-1

**Client** : Kiriu (Thailand) Co., Ltd.

300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O** : PO231110507

**Project Name** : Monitoring

**Project Location** :

Page 1 of 2

<b>Sample Number</b>	2450385-1						
<b>Sampled Date</b>	Jun 07, 2024 3:15 PM						
<b>Sample Description</b>	Wastewater						
<b>Location</b>	Effluent (เก็บตัวอย่างพร้อมการนิคม)						
<b>Date Analysis Commenced</b>	Jun 07, 2024						
<b>Condition of Sample</b>	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
<b>Water Testing</b>							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	134	≤500	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	270	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	133	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	130	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	296	≤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	66	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

**Guideline** : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

**Sampling By** : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-9448

Remark :

Technical Management

Chontichak

Chonticha Subongkoch

Scientist (3)

ทะเบียนเลขที่ ว-323-จ-9449

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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## Analysis / Test Report

**Client** : Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O** : PO231110507  
**Project Name** : Monitoring  
**Project Location** :

**TESTING**  
**No.0042**  
**Lot ID: 2450385**  
Date Received : Jun 07, 2024  
Date Reported : Jun 13, 2024  
Report Number : 2983049-1

Page 2 of 2

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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

Chontichak

Chonticha Subongkoch  
Scientist (3)  
ทะเบียนเลขที่ ว-323-จ-9449

Approved by

D. Changchon

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

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## ภาคผนวก ค-5

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ระดับความร้อนในสถานที่ทำงาน





## Analysis / Test Report

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2420176**

Date Received : Feb 22, 2024

Date Reported : Feb 23, 2024

Report Number: 2916434-1

Page 1 of 4

**Sample Number** 2420176-1  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Norranon Tathongkham  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : แผนก : )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่เดาหลอม รง.1 (H 3)	120	29.5	26.7	36.0	35.8
Average (WBGT)		29.5			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

  
Supot Salamteh  
Section Head

**Approved by**

  
Wichan Choonharat  
Assistant Manager

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**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2420176**

Date Received : Feb 22, 2024

Date Reported : Feb 23, 2024

Report Number: 2916434-1

Page 2 of 4

**Sample Number** 2420176-2  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Norranon Tathongkham  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : แผนก : )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่เดาหลอม รง.2 (H 4)	120	30.4	27.7	36.6	36.5
Average (WBGT)		30.4			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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)
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**Technical Management**

  
Supot Salamteh  
Section Head

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300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2420176**

Date Received : Feb 22, 2024

Date Reported : Feb 23, 2024

Report Number: 2916434-1

Page 3 of 4

**Sample Number** 2420176-3  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Norranon Tathongkham  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : แผนก : )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่ทำไสแบบ Shell Core รง. 1 (H1)	120	30.3	27.5	36.8	36.7
Average (WBGT)		30.3			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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)
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**Technical Management**

  
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**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2420176**

Date Received : Feb 22, 2024

Date Reported : Feb 23, 2024

Report Number: 2916434-1

Page 4 of 4

**Sample Number** 2420176-4  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Norranon Tathongkham  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : แผนก : )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่ทำไสแบบ Shell Core รง. 2 (H2)	120	31.1	28.1	38.0	37.9
Average (WBGT)		31.1			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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)
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**Technical Management**

  
Supot Salamteh  
Section Head

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**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452586**

Date Received : May 17, 2024

Date Reported : May 21, 2024

Report Number: 2988738-1

Page 1 of 4

**Sample Number** 2452586-1  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่เดาหลอม โรงงาน 1 (H3)	100	28.9	27.4	32.4	32.2
Average (WBGT)		28.9			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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)
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**Technical Management**

  
Supot Salamteh  
Section Head

**Approved by**

  
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Assistant Manager

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## Analysis / Test Report

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452586**

Date Received : May 17, 2024

Date Reported : May 21, 2024

Report Number: 2988738-1

Page 2 of 4

**Sample Number** 2452586-2  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่เดาหลอม โรงงาน 2 (H4)	100	29.7	28.0	33.6	33.4
Average (WBGT)		29.7			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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)
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**Technical Management**

  
Supot Salamteh  
Section Head

**Approved by**

  
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## Analysis / Test Report

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300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452586**

Date Received : May 17, 2024

Date Reported : May 21, 2024

Report Number: 2988738-1

Page 3 of 4

**Sample Number** 2452586-3  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่ทำไสแบบ Shell Core โรงงาน 1 (H1)	120	31.4	29.6	35.6	35.4
Average (WBGT)		31.4			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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)
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**Technical Management**

  
Supot Salamteh  
Section Head

**Approved by**

  
Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

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300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452586**

Date Received : May 17, 2024

Date Reported : May 21, 2024

Report Number: 2988738-1

Page 4 of 4

**Sample Number** 2452586-4  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
พื้นที่ทำไสแบบ Shell Core โรงงาน 2 (H2)	120	32.5	29.9	38.6	38.4
Average (WBGT)		32.5			
Guideline WBGT (°C)		32.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

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)
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**Technical Management**

  
Supot Salamteh  
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**Approved by**

  
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## ภาคผนวก ค-6

---

คุณภาพอากาศในสถานประกอบการ

## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 1 (D1)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:10-12:10 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044542  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 1 (D1) T24AK193-0001
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 1 (D1)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:12-12:12 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044544  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 1 (D1) (คุณภุษาดา ศรีดาสอน) T24AK193-0002
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
 RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
 LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 2 (D2)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:15-12:15 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044545  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 2 (D2) T24AK193-0003
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 2 (D2)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:17-12:17 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044546  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 2 (D2) (คุณเฉลิมพล พงสุตทา) T24AK193-0004
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 1 (D5)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:19-12:19 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044547  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 1 (D5) T24AK193-0005
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 1 (D5)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:20-12:20 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044548  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 1 (D5) (จุดประทีป ทองสุกใส) <b>T24AK193-0006</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 2 (D6)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:22-12:22 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044549  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 2 (D6) <b>T24AK193-0007</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn* ✓

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LABORATORY SUPERVISOR





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 2 (D6)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:23-12:23 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044550  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 2 (D6) (คนรัศพล เดิมบาง) T24AK193-0008
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

Budsakorn ✓

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LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ BARINDER NO.3  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:30-17:30 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044551  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ BARINDER NO.3 T24AK193-0009
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ BARINDER NO.3  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:31-17:31 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044552  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ BARINDER NO.3 (คุณแรงศฤห์ สำราญใจ) T24AK193-0010
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
 RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
 LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เคาะแบบชิ้นงานโรงงาน 2 (D4)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:25-12:25 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044553  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เคาะแบบชิ้นงานโรงงาน 2 (D4) T24AK193-0011
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เคาะแบบขึ้นงานโรงงาน 2 (D4)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:26-12:26 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044554  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เคาะแบบขึ้นงานโรงงาน 2 (D4) (คุณจักรพันธ์ การกล้า) <b>T24AK193-0012</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ GRINDING (D7)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:33-17:33 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044555  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ GRINDING (D7) T24AK193-0013
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn* ✓

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ GRINDING (D7)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:34-17:34 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044556  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ GRINDING (D7) (คุณเสด็จชัย แก้วโหนด) <b>T24AK193-0014</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ DRUMBLAST NO.1 (D8)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:42-17:42 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044557  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ DRUMBLAST NO.1 (D8) T24AK193-0015
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

Budsakorn ✓

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ DRUMBLAST NO.1 (D8)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:43-17:43 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044558  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ DRUMBLAST NO.1 (D8) (คุณการณ์ นฤสิทธิ์) T24AK193-0016
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
<b>SAMPLE CONDITION</b>			COMPLETE

REMARK  
 RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
 LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:36-17:36 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044559  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9) T24AK193-0017
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
 RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

  
 (MISS BUDSAKORN LERDPANUMAS)  
 LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:37-17:37 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044560  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9) (คุณสุวิทย์ มั่นตะ) T24AK193-0018
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 1 (D10)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:39-17:39 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044561  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0019

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 1 (D10) T24AK193-0019
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 1 (D10)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 13:40-17:40 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044562  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0020

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 1 (D10) (คุณสุวิทย์ ไกยสิทธิ์) T24AK193-0020
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 2 (D11)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:28-12:28 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044563  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0021

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 2 (D11) T24AK193-0021
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*  
.....  
(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 2 (D11)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : 08:29-12:29 HOUR  
**SAMPLING BY** : MR BOONYARIT KONSIN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-17, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U044564  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AK193-0022

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 2 (D11) (จุดอนุษิต ทองเรือง) T24AK193-0022
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 1 (D1)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:32-12:32 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016733  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 1 (D1) T24AD311-0001
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 1 (D1)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:30-12:30 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016734  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 1 (D1) (คุณแสนพล ราชสินธุ์) <b>T24AD311-0002</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 2 (D2)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:31-12:31 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016735  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 2 (D2) T24AD311-0003
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เดาหลอมโรงงาน 2 (D2)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:33-12:33 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016736  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เดาหลอมโรงงาน 2 (D2) (คุณยุทธศักดิ์ วิเศษบุญ) <b>T24AD311-0004</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 1 (D5)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:35-12:35 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016737  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 1 (D5) <b>T24AD311-0005</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 1 (D5)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:37-12:37 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016738  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 1 (D5) (คุณเฉลิมชาติ จิตรมา) <b>T24AD311-0006</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

Budsakorn ✓

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 2 (D6)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:36-12:36 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016739  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 2 (D6) <b>T24AD311-0007</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
<b>SAMPLE CONDITION</b>			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เตรียมแบบทรายโรงงาน 2 (D6)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:38-12:38 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016740  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เตรียมแบบทรายโรงงาน 2 (D6) (คุณเรฐพล เต็มบาง) <b>T24AD311-0008</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : NEW DRUMBLAST NO.2  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:15-17:15 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016741  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			NEW DRUMBLAST NO.2 T24AD311-0009
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

**REMARK**

**RESULT** : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : NEW DRUMBLAST NO.2  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:17-17:17 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016742  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			NEW DRUMBLAST NO.2 (คุณเห็นกร อรรถศรีวาร) T24AD311-0010
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เคาะแบบชิ้นงานโรงงาน 2 (D4)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:40-12:40 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016743  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เคาะแบบชิ้นงานโรงงาน 2 (D4) <b>T24AD311-0011</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



**ANALYSIS REPORT**

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่เคาะแบบชิ้นงานโรงงาน 2 (D4)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:42-12:42 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPIBAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT  
**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016744  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่เคาะแบบชิ้นงานโรงงาน 2 (D4) (คุณจักรพันธ์ การกล้า) <b>T24AD311-0012</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK  
RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ GRINDING (D7) (BARINDER NO.3)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:20-17:20 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016745  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ GRINDING (D7) (BARINDER NO.3) T24AD311-0013
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ GRINDING (D7) (BARINDER NO.3)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:23-17:23 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016746  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ GRINDING (D7) (BARINDER NO.3) (คุณอดิศักดิ์ อ่างมณี) <b>T24AD311-0014</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
<b>SAMPLE CONDITION</b>			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ DRUMBLAST NO.1 (D8)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:25-17:25 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016747  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ DRUMBLAST NO.1 (D8) T24AD311-0015
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.



(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ DRUMBLAST NO.1 (D8)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:28-17:28 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016748  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ DRUMBLAST NO.1 (D8) (คุณอรทัย คำสะอั้ง) T24AD311-0016
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

**REMARK**

**RESULT** : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:30-17:30 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016749  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9) T24AD311-0017
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024





## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:33-17:33 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016750  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ SHOT BLAST NO.1&2 (D9) (จุดเฝ้าพล ส่วนสม) <b>T24AD311-0018</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 1 (D10)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:35-17:35 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016751  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0019

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 1 (D10) T24AD311-0019
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 1 (D10)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 13:38-17:38 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016752  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0020

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 1 (D10) (จุดทองพูล โคกสูงไฮโม) <b>T24AD311-0020</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
<b>SAMPLE CONDITION</b>			COMPLETE

**REMARK**

**RESULT** : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 2 (D11)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:41-12:41 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016753  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0021

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 2 (D11) T24AD311-0021
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
SAMPLE CONDITION			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ANALYSIS REPORT

**CUSTOMER NAME** : KIRIU (THAILAND) CO.,LTD  
**ADDRESS** : 300/37 TA SIT PLUAK DAENG RAYONG 21140  
**CONTACT INFORMATION** : TEL : 08 5024 0558 e-mail : k-supapan@kiriuthailand.com  
**SAMPLING SOURCE** : พื้นที่บริเวณ APRON FINSHING 2 (D11)  
**SAMPLE TYPE** : WORKPLACE  
**SAMPLING DATE** : FEBRUARY 16, 2024  
**SAMPLING TIME** : 08:43-12:43 HOUR  
**SAMPLING BY** : MISS PATJIRA KADEEPISAN  
**ANALYZED BY** : MISS JETJARIN TUMSA-AT

**RECEIVED DATE** : FEBRUARY 16, 2024  
**ANALYTICAL DATE** : FEBRUARY 16-23, 2024  
**ISSUE DATE** : FEBRUARY 29, 2024  
**REPORT NO.** : 2024-U016754  
**WORK NO.** : 2023-010094  
**ANALYSIS NO.** : T24AD311-0022

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			พื้นที่บริเวณ APRON FINSHING 2 (D11) (จุดเข็น สะพาน) <b>T24AD311-0022</b>
SILICA (QUARTZ)	mg/m <sup>3</sup>	VISIBLE ABSORPTION SPECTROPHOTOMETRIC METHOD (NIOSH METHOD 7601)	< 0.01
<b>SAMPLE CONDITION</b>			COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.

*Budsakorn ✓*

(MISS BUDSAKORN LERDPANUMAS)  
LABORATORY SUPERVISOR

FEBRUARY 29, 2024



## ภาคผนวก ค-7

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ระดับเสียงในสถานที่ทำงาน





## Analysis / Test Report

**Client :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2418218**

Date Received : Feb 22, 2024

Date Reported : Feb 28, 2024

Report Number: 2919529-1

Page 1 of 1

**Sample Number** 2418218-1  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เดาหลอม รง.1 (N3)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Saknarin Jaraskay

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:12 AM - 10:12 AM	83.5	104.1	78.0
10:12 AM - 11:12 AM	84.8	103.5	80.2
11:12 AM - 12:12 PM	81.5	102.7	76.1
12:12 PM - 01:12 PM	81.8	97.9	76.4
01:12 PM - 02:12 PM	83.8	103.6	77.0
02:12 PM - 03:12 PM	81.3	99.9	77.3
03:12 PM - 04:12 PM	83.0	96.8	76.6
04:12 PM - 05:12 PM	83.4	103.7	75.8

Leq Average 8 hrs. (dB(A))

83.0

Lmax (dB(A))

104.1

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 :** Kiri (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140

**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2418218**

Date Received : Feb 22, 2024

Date Reported : Feb 28, 2024

Report Number: 2919530-1

Page 1 of 1

**Sample Number** 2418218-2  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เดาหลอม รง.2 (N4)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Saknarin Jaraskay

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:12 AM - 10:12 AM	87.6	109.0	81.5
10:12 AM - 11:12 AM	88.4	107.8	79.6
11:12 AM - 12:12 PM	87.6	107.2	80.7
12:12 PM - 01:12 PM	86.7	101.1	79.4
01:12 PM - 02:12 PM	89.0	108.3	80.3
02:12 PM - 03:12 PM	86.2	106.3	81.2
03:12 PM - 04:12 PM	88.6	107.1	79.5
04:12 PM - 05:12 PM	89.8	109.7	81.4

Leq Average 8 hrs. (dB(A))

88.1

Lmax (dB(A))

109.7

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 :** Kiriu (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2418218**

Date Received : Feb 22, 2024  
Date Reported : Feb 28, 2024  
Report Number: 2919531-1

Page 1 of 1

**Sample Number** 2418218-3  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่ผสมทราย รง.1 (N1)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Saknarin Jaraskay

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:28 AM - 10:28 AM	83.7	98.1	80.5
10:28 AM - 11:28 AM	83.4	91.3	79.8
11:28 AM - 12:28 PM	82.6	93.0	79.5
12:28 PM - 01:28 PM	82.8	90.2	79.6
01:28 PM - 02:28 PM	82.7	91.3	79.4
02:28 PM - 03:28 PM	83.3	90.2	80.9
03:28 PM - 04:28 PM	82.1	91.5	78.7
04:28 PM - 05:28 PM	83.3	90.0	79.9

Leq Average 8 hrs. (dB(A))

83.0

Lmax (dB(A))

98.1

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 :** Kiri (Thailand) Co., Ltd.  
300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2418218**

Date Received : Feb 22, 2024  
Date Reported : Feb 28, 2024  
Report Number: 2919532-1

Page 1 of 1

**Sample Number** 2418218-4  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่ผสมทราย รง.2 (N2)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Saknarin Jaraskay

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:25 AM - 10:25 AM	84.4	97.1	81.8
10:25 AM - 11:25 AM	83.2	92.9	81.3
11:25 AM - 12:25 PM	83.0	91.6	81.3
12:25 PM - 01:25 PM	83.2	92.3	81.5
01:25 PM - 02:25 PM	83.1	89.2	81.5
02:25 PM - 03:25 PM	83.4	91.3	81.8
03:25 PM - 04:25 PM	83.1	93.0	81.6
04:25 PM - 05:25 PM	83.2	92.2	81.3

Leq Average 8 hrs. (dB(A))

83.3

Lmax (dB(A))

97.1

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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300/37 Moo 1, T.Thasit, A.Pluakdaeng, Rayong Thailand 21140  
**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2418218**

Date Received : Feb 22, 2024  
Date Reported : Feb 28, 2024  
Report Number: 2919533-1

Page 1 of 1

**Sample Number** 2418218-5  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เคาะแบบขึ้นงาน รง.1 (N5)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Saknarin Jaraskay

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:18 AM - 10:18 AM	90.8	104.5	80.5
10:18 AM - 11:18 AM	91.2	102.8	88.4
11:18 AM - 12:18 PM	90.2	103.0	81.8
12:18 PM - 01:18 PM	90.3	104.9	89.4
01:18 PM - 02:18 PM	91.4	101.5	89.3
02:18 PM - 03:18 PM	90.7	106.1	81.8
03:18 PM - 04:18 PM	90.4	102.8	87.2
04:18 PM - 05:18 PM	90.3	104.9	89.8

Leq Average 8 hrs. (dB(A))

90.7

Lmax (dB(A))

106.1

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2418218**

Date Received : Feb 22, 2024

Date Reported : Feb 28, 2024

Report Number: 2919534-1

Page 1 of 1

**Sample Number** 2418218-6  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เคาะแบบขึ้นงาน รง.2 (N6)  
**Measurement Date** Feb 21, 2024  
**Measurement by** Saknarin Jaraskay

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:40 AM - 10:40 AM	86.8	100.4	84.1
10:40 AM - 11:40 AM	87.9	113.8	83.3
11:40 AM - 12:40 PM	85.9	97.8	83.9
12:40 PM - 01:40 PM	87.1	98.0	84.6
01:40 PM - 02:40 PM	88.1	107.4	84.1
02:40 PM - 03:40 PM	86.1	98.3	83.8
03:40 PM - 04:40 PM	86.4	99.9	83.6
04:40 PM - 05:40 PM	86.1	99.2	84.5

Leq Average 8 hrs. (dB(A))

86.9

Lmax (dB(A))

113.8

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2452588**

Date Received : May 17, 2024

Date Reported : May 24, 2024

Report Number: 3002486-1

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**Sample Number** 2452588-1  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เดาหลอม รง.1 (N3)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:05 AM - 10:05 AM	88.9	111.7	79.7
10:05 AM - 11:05 AM	87.6	107.2	79.4
11:05 AM - 12:05 PM	85.1	106.2	77.5
12:05 PM - 01:05 PM	86.5	106.5	74.8
01:05 PM - 02:05 PM	89.4	109.8	75.4
02:05 PM - 03:05 PM	85.6	105.5	78.5
03:05 PM - 04:05 PM	88.0	108.0	79.2
04:05 PM - 05:05 PM	88.2	108.2	79.4

Leq Average 8 hrs. (dB(A))

87.6

Lmax (dB(A))

111.7

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452588**

Date Received : May 17, 2024  
Date Reported : May 24, 2024  
Report Number: 3002487-1

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**Sample Number** 2452588-2  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เดาหลอม รง.2 (N4)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:10 AM - 10:10 AM	86.5	104.9	81.0
10:10 AM - 11:10 AM	86.5	99.9	82.1
11:10 AM - 12:10 PM	88.3	108.0	81.4
12:10 PM - 01:10 PM	84.1	99.9	80.1
01:10 PM - 02:10 PM	86.1	107.1	74.1
02:10 PM - 03:10 PM	88.7	108.6	82.9
03:10 PM - 04:10 PM	86.2	103.5	82.0
04:10 PM - 05:10 PM	86.3	107.3	74.3

Leq Average 8 hrs. (dB(A)) 86.8  
Lmax (dB(A)) 108.6  
Standard (dB(A)) 90  
Reference Method : ISO1996-1 and 1996-2  
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452588**

Date Received : May 17, 2024  
Date Reported : May 24, 2024  
Report Number: 3002488-1

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**Sample Number** 2452588-3  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่ผสมทราย รง.1 (N1)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:20 AM - 10:20 AM	83.8	91.4	81.7
10:20 AM - 11:20 AM	83.7	93.4	81.0
11:20 AM - 12:20 PM	83.5	90.0	80.6
12:20 PM - 01:20 PM	83.8	89.2	81.8
01:20 PM - 02:20 PM	82.9	93.7	77.7
02:20 PM - 03:20 PM	84.5	93.6	81.7
03:20 PM - 04:20 PM	83.5	89.4	81.1
04:20 PM - 05:20 PM	83.3	94.1	78.1

Leq Average 8 hrs. (dB(A)) 83.6  
Lmax (dB(A)) 94.1  
Standard (dB(A)) 90  
Reference Method : ISO1996-1 and 1996-2  
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452588**

Date Received : May 17, 2024  
Date Reported : May 24, 2024  
Report Number: 3002489-1

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**Sample Number** 2452588-4  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่ผสมทราย รง.2 (N2)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:25 AM - 10:25 AM	83.2	95.0	80.8
10:25 AM - 11:25 AM	83.0	95.9	80.9
11:25 AM - 12:25 PM	83.0	92.5	81.1
12:25 PM - 01:25 PM	82.9	94.2	80.9
01:25 PM - 02:25 PM	82.2	91.6	75.2
02:25 PM - 03:25 PM	83.0	92.2	80.9
03:25 PM - 04:25 PM	83.1	93.4	81.0
04:25 PM - 05:25 PM	83.3	94.6	81.3

Leq Average 8 hrs. (dB(A)) 83.0  
Lmax (dB(A)) 95.9  
Standard (dB(A)) 90  
Reference Method : ISO1996-1 and 1996-2  
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**P/O :** PO231210109

**Project Name :** Monitoring

**Project Location :**

**Lot ID: 2452588**

Date Received : May 17, 2024

Date Reported : May 24, 2024

Report Number: 3002490-1

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**Sample Number** 2452588-5  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เคาะแบบขึ้นงาน รง.1 (N5)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:30 AM - 10:30 AM	89.7	103.6	86.0
10:30 AM - 11:30 AM	87.2	99.0	82.5
11:30 AM - 12:30 PM	86.0	95.1	82.6
12:30 PM - 01:30 PM	88.7	102.9	86.6
01:30 PM - 02:30 PM	88.3	102.5	77.1
02:30 PM - 03:30 PM	88.7	101.0	82.8
03:30 PM - 04:30 PM	89.6	102.9	87.9
04:30 PM - 05:30 PM	88.5	102.7	77.3

Leq Average 8 hrs. (dB(A))

88.5

Lmax (dB(A))

103.6

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**P/O :** PO231210109  
**Project Name :** Monitoring  
**Project Location :**

**Lot ID: 2452588**

Date Received : May 17, 2024  
Date Reported : May 24, 2024  
Report Number: 3002491-1

Page 1 of 1

**Sample Number** 2452588-6  
**Parameter** Noise (Leq 8 hrs.)  
**Location** พื้นที่เคาะแบบขึ้นงาน รง.2 (N6)  
**Measurement Date** May 16, 2024  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:35 AM - 10:35 AM	83.6	101.4	81.4
10:35 AM - 11:35 AM	84.4	112.1	81.7
11:35 AM - 12:35 PM	86.2	107.4	81.6
12:35 PM - 01:35 PM	86.8	114.3	81.4
01:35 PM - 02:35 PM	84.4	101.6	74.1
02:35 PM - 03:35 PM	84.1	101.8	81.0
03:35 PM - 04:35 PM	85.4	102.8	82.2
04:35 PM - 05:35 PM	84.3	102.0	81.2

Leq Average 8 hrs. (dB(A)) 85.0  
Lmax (dB(A)) 114.3  
Standard (dB(A)) 90  
Reference Method : ISO1996-1 and 1996-2  
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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