

ภาคผนวก ค

ใบรับรองผลการวิเคราะห์

ภาคผนวก ค-1

คุณภาพอากาศจากปล่องระบาย



Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487973

Date Received : Aug 22, 2024

Date Reported : Sep 18, 2024

Report Number: 3070731-1 Rev. No.1

Page 1 of 2

Sample Number	2487973-1
Sampled Date	Aug 22, 2024
Sample Description	Emission from Stationary Source
Location	Melting&Holding 1 (1-4MF; 1SWF)
Date Analysis Commenced	Aug 23, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.50	m	Oxygen	17.0	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	2.2	%
Type of Process	Combustion		Stack Temperature	139	°C	Gas Velocity	14.1	m/s
Type of Fuel	Natural Gas		Moisture	10.38	%	Flow Rate (Actual O2)	57099	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	10:20 AM - 10:30 AM	ppm	-	1.0	488	No Standard	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	10:10 AM - 10:20 AM	ppm	-	1.06	15.3	95	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	10:00 AM - 11:00 AM	mg/m3	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 5	Rayong



Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487973

Date Received : Aug 22, 2024

Date Reported : Sep 18, 2024

Report Number: 3070731-1 Rev. No.1

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Date Analysis Commenced	Aug 23, 2024
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Stack Description

Ambient Pressure	748	mmHg	Diameter	1.50	m	Oxygen	17.0	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	2.2	%
Type of Process	Combustion		Stack Temperature	139	°C	Gas Velocity	14.1	m/s
Type of Fuel	Natural Gas		Moisture	10.38	%	Flow Rate (Actual O2)	57099	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	10:20 AM - 10:30 AM	g/s	-	-	2.470	No Standard	Calculated	Rayong
Oxides of Nitrogen *	10:10 AM - 10:20 AM	g/s	-	-	0.127	2.502	Calculated	Rayong
Total Suspended Particulate *	10:00 AM - 11:00 AM	g/s	-	-	<0.008	0.350	Calculated	Rayong

Guideline : Environmental Impact Assessment Report of UACJ (Thailand) Co., Ltd.

Note: This Analysis test report is reissued to supersede report No.3070731-1, Date Reported : Aug 29, 2024 due to revise guideline/specification

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ๖-323-๖-0018

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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9044-21/ EMAILCASH

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487997

Date Received : Aug 23, 2024

Date Reported : Sep 18, 2024

Report Number: 3111717-1

Page 1 of 2

Sample Number	2487997-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	Melting&Holding 2 (SMF, 2-3SWF)
Date Analysis Commenced	Aug 24, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.30	m	Oxygen	12.0	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	5.1	%
Type of Process	Combustion (Open System)		Stack Temperature	180	°C	Gas Velocity	7.0	m/s
Type of Fuel	Natural Gas		Moisture	46.71	%	Flow Rate (Actual O2)	36147	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	11:10 AM - 11:20 AM	ppm	-	1.0	89.5	No Standard	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	11:00 AM - 11:10 AM	ppm	-	1.06	69.2	100	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	01:20 PM - 02:08 PM	mg/m3	-	0.5	1.2	25	United States Environmental Protection Agency, EPA Method 5	Rayong

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487997

Date Received : Aug 23, 2024

Date Reported : Sep 18, 2024

Report Number: 3111717-1

Page 2 of 2

Sample Number	2487997-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	Melting&Holding 2 (SMF, 2-3SWF)
Date Analysis Commenced	Aug 24, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.30	m	Oxygen	12.0	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	5.1	%
Type of Process	Combustion (Open System)		Stack Temperature	180	°C	Gas Velocity	7.0	m/s
Type of Fuel	Natural Gas		Moisture	46.71	%	Flow Rate (Actual O2)	36147	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	11:10 AM - 11:20 AM	g/s	-	-	1.029	No Standard	Calculated	Rayong
Oxides of Nitrogen *	11:00 AM - 11:10 AM	g/s	-	-	1.307	2.634	Calculated	Rayong
Total Suspended Particulate *	01:20 PM - 02:08 PM	g/s	-	-	0.01	0.350	Calculated	Rayong

Guideline : Environmental Impact Assessment Report of UACJ (Thailand) Co., Ltd.

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ว-323-จ-0037 , Naratip Thueakchaikam ทะเบียนเลขที่ ว-204-จ-0003

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng,
Rayong Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487997

Date Received : Aug 23, 2024

Date Reported : Sep 27, 2024

Report Number : 3111718-1

Page 1 of 3

Sample Number 2487997-2
Sample Description Emission from Stationary Source
Location Melting&Holding 2 (SMF, 2-3SWF)
Condition of Sample Extracted into one trap dioxin, refrigerated
Sampled Date Aug 23, 2024
Date Analysis Commenced Aug 24, 2024

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.30	m	Oxygen	12.0	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	5.1	%
Type of Process	Combustion (Open System)		Stack Temperature	180	°C	Gas Velocity	6.6	m/s
Type of Fuel	Natural Gas		Moisture	20.90	%	Flow Rate (Actual O2)	50668	Nm3/hr

Analyte	Unit	LOD	Result		I-TEF	Result I-TEQ		Standard (I-TEQ)
			Actual O2	7% O2		Actual O2	7% O2	
2,3,7,8-TCDD	ng/Nm3	0.0019	<0.0039	<0.0039	1.0	<0.0039	<0.0039	-
1,2,3,7,8-PeCDD	ng/Nm3	0.0025	<0.005	<0.005	0.5	<0.0025	<0.0025	-
1,2,3,4,7,8-HxCDD	ng/Nm3	0.0034	<0.0068	<0.0068	0.1	<0.0007	<0.0007	-
1,2,3,6,7,8-HxCDD	ng/Nm3	0.0034	<0.0068	<0.0068	0.1	<0.0007	<0.0007	-
1,2,3,7,8,9-HxCDD	ng/Nm3	0.0034	<0.0068	<0.0068	0.1	<0.0007	<0.0007	-
1,2,3,4,6,7,8-HpCDD	ng/Nm3	0.0082	<0.0161	<0.0161	0.01	<0.00016	<0.00016	-
OCDD	ng/Nm3	0.0057	<0.0111	<0.0111	0.001	<0.00001	<0.00001	-
2,3,7,8-TCDF	ng/Nm3	0.0018	<0.0036	<0.0036	0.1	<0.0004	<0.0004	-

Technical Management

Saranya C.

Saranya Chalermthamrong
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-0011

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-ก-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng,
Rayong Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487997

Date Received : Aug 23, 2024

Date Reported : Sep 27, 2024

Report Number : 3111718-1

Page 2 of 3

Sample Number 2487997-2
Sample Description Emission from Stationary Source
Location Melting&Holding 2 (SMF, 2-3SWF)
Condition of Sample Extracted into one trap dioxin, refrigerated
Sampled Date Aug 23, 2024
Date Analysis Commenced Aug 24, 2024

Analyte	Unit	LOD	Result		I-TEF	Result I-TEQ		Standard (I-TEQ)
			Actual O2	7% O2		Actual O2	7% O2	
1,2,3,7,8-PeCDF	ng/Nm3	0.0025	<0.005	<0.005	0.05	<0.0002	<0.0002	-
2,3,4,7,8-PeCDF	ng/Nm3	0.0025	<0.005	<0.005	0.5	<0.0025	<0.0025	-
1,2,3,4,7,8-HxCDF	ng/Nm3	0.0029	<0.0057	<0.0057	0.1	<0.0006	<0.0006	-
1,2,3,6,7,8-HxCDF	ng/Nm3	0.0029	<0.0057	<0.0057	0.1	<0.0006	<0.0006	-
1,2,3,7,8,9-HxCDF	ng/Nm3	0.0029	<0.0057	<0.0057	0.1	<0.0006	<0.0006	-
2,3,4,6,7,8-HxCDF	ng/Nm3	0.0029	<0.0057	<0.0057	0.1	<0.0006	<0.0006	-
1,2,3,4,6,7,8-HpCDF	ng/Nm3	0.0082	<0.0168	<0.0168	0.01	<0.0002	<0.0002	-
1,2,3,4,7,8,9-HpCDF	ng/Nm3	0.0082	<0.0168	<0.0168	0.01	<0.0002	<0.0002	-
OCDF	ng/Nm3	0.04	<0.0821	<0.0821	0.001	<0.00008	<0.00008	-
Dioxin and Furan	ng/Nm3	-	ND	ND	-	ND	ND	-
Dioxins (Emission rate)	g/s	-	<0.0000000008	<0.0000000008	-	<0.0000000008	<0.0000000008	0.00000000785

Technical Management

Saranya C.

Saranya Chalermthamrong
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-0011

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-ก-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng,
Rayong Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487997

Date Received : Aug 23, 2024

Date Reported : Sep 27, 2024

Report Number : 3111718-1

Page 3 of 3

Sample Number 2487997-2
Sample Description Emission from Stationary Source
Location Melting&Holding 2 (SMF, 2-3SWF)
Condition of Sample Extracted into one trap dioxin, refrigerated
Sampled Date Aug 23, 2024
Date Analysis Commenced Aug 24, 2024

Analyte	Unit	LOD	Result		I-TEF	Result I-TEQ		Standard (I-TEQ)
			Actual O2	7% O2		Actual O2	7% O2	
Furans (Emission rate)	g/s	-	<0.000000002	<0.000000002	-	<0.000000001	<0.000000001	0.000000000195
Sum of Dioxins	ng/Nm3	-	0.056390	0.0563897	-	<0.00863	<0.00863	0.5
Sum of Furans	ng/Nm3	-	0.152038	0.1520379	-	<0.0058	<0.0058	0.003
Hepta-Dioxins	ng/Nm3	-	<0.0161	<0.0161	-	-	-	-
Hexa-Dioxins	ng/Nm3	-	<0.0339	<0.0339	-	-	-	-
Hexa-Furans	ng/Nm3	-	<0.0464	<0.0464	-	-	-	-
Hepta-Furans	ng/Nm3	-	<0.0428	<0.0428	-	-	-	-

Guideline : Environmental Impact Assessment Report of UACJ (Thailand) Co., Ltd.

Remark :

- Reference Method: US EPA Method 23, Analysis by ALS Czech Republic
- TEF according to NATO.
- LOD : Limit of Detection
- Results marked "ND." are lower than the Limit of Detection.
- The concentration of emission air is based on the reference condition at temperature of 25 °C, pressure of 1 atm or 760 mm.Hg, dry basis

Sampled By : Sutdamrong Chokpitinan , Naratip Thueakchaikam

Technical Management

Saranya C.

Saranya Chalerthamrong
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-0011

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-ก-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING

No.0042

Lot ID: 2487991

Date Received : Aug 20, 2024

Date Reported : Aug 28, 2024

Report Number: 3070842-1

Page 1 of 1

Sample Number 2487991-1
Sampled Date Aug 20, 2024
Sample Description Emission from Stationary Source
Location Bag Filter 1 (1-SMF) [Gate]
Date Analysis Commenced Aug 21, 2024
Condition of Sample Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.50	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	46.5	°C	Gas Velocity	4.3	m/s
Type of Fuel	-		Moisture	3.10	%	Flow Rate (Actual O2)	66962	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	02:35 PM - 02:45 PM	ppm	-	1.0	5.2	870	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	02:40 PM - 02:50 PM	ppm	-	1.06	1.98	No Standard	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	02:30 PM - 03:18 PM	mg/m3	-	0.5	<0.5	300	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pissaipan ทะเบียนเลขที่ ว-323-จ-0018

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ก-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487992

Date Received : Aug 22, 2024

Date Reported : Aug 29, 2024

Report Number: 3070844-1

Page 1 of 1

Sample Number	2487992-1
Sampled Date	Aug 22, 2024
Sample Description	Emission from Stationary Source
Location	Bag Filter 2 (1SWF)
Date Analysis Commenced	Aug 23, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.80	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	79.5	°C	Gas Velocity	6.3	m/s
Type of Fuel	-		Moisture	3.27	%	Flow Rate (Actual O2)	46669	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	11:45 AM - 11:55 AM	ppm	-	1.0	<1.0	870	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	11:45 AM - 11:55 AM	ppm	-	1.06	<1.06	No Standard	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	11:40 AM - 12:28 PM	mg/m3	-	0.5	<0.5	300	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pissaijan ทะเบียนเลขที่ ว-323-จ-0018

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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9044-21/ EMAILCASH

S:\Reports_Air Stack_GL.rpt (2:44PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487993

Date Received : Aug 22, 2024

Date Reported : Aug 29, 2024

Report Number: 3070845-1

Page 1 of 1

Sample Number	2487993-1
Sampled Date	Aug 22, 2024
Sample Description	Emission from Stationary Source
Location	Bag Filter 3 (MRM)
Date Analysis Commenced	Aug 23, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.80	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Combustion (Open System)		Stack Temperature	50.8	°C	Gas Velocity	4.0	m/s
Type of Fuel	Natural Gas		Moisture	3.32	%	Flow Rate (Actual O2)	31870	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	01:20 PM - 01:30 PM	ppm	-	1.0	<1.0	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	01:05 PM - 01:15 PM	ppm	-	1.06	14.2	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	01:00 PM - 01:48 PM	mg/m3	-	0.5	<0.5	240	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pissaijan ทะเบียนเลขที่ ว-323-จ-0018

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O : 4500046578

Project Name : Monitoring

Project Location :

Lot ID: 24113927

Date Received : Oct 02, 2024

Date Reported : Oct 10, 2024

Report Number: 3126650-1

Page 1 of 1

Sample Number	24113927-1
Sampled Date	Oct 02, 2024
Sample Description	Emission from Stationary Source
Location	2SWF (Bag Filter no.4)
Date Analysis Commenced	Oct 03, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	747	mmHg	Diameter	1.50	m	Oxygen	20.9	%
Ambient Temperature	33.2	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Combustion (Open System)		Stack Temperature	84.0	°C	Gas Velocity	8.6	m/s
Type of Fuel	Natural Gas		Moisture	3.31	%	Flow Rate (Actual O2)	43313	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Total Suspended Particulate	01:40 PM - 02:28 PM	mg/m3	-	0.5	2.0	240	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ๖-323-จ-0037

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Technical Management

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Scientist (4)
ทะเบียนเลขที่ ๖-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ๖-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487995

Date Received : Aug 23, 2024

Date Reported : Aug 31, 2024

Report Number: 3070848-1

Page 1 of 1

Sample Number	2487995-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	3SWF (Bag Filter no.5)
Date Analysis Commenced	Aug 24, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.80	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Combustion (Open System)		Stack Temperature	63.0	°C	Gas Velocity	9.7	m/s
Type of Fuel	Natural Gas		Moisture	5.25	%	Flow Rate (Actual O2)	73235	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	02:40 PM - 02:50 PM	ppm	-	1.0	1.6	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	02:30 PM - 02:40 PM	ppm	-	1.06	1.89	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	02:30 PM - 03:12 PM	mg/m3	-	0.5	<0.5	240	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ๖-323-จ-0037

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ๖-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ๖-323-จ-0001

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S:\Reports_Air Stack_GL_rpt (11:27AM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O : 4500044795

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2495475

Date Received : Aug 23, 2024

Date Reported : Aug 31, 2024

Report Number: 3087065-1

Page 1 of 1

Sample Number	2495475-1
Sampled Date	Aug 22, 2024
Sample Description	Emission from Stationary Source
Location	Bag Filter no.6 (4SWF)
Date Analysis Commenced	Aug 24, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.00	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Combustion (Open System)		Stack Temperature	104	°C	Gas Velocity	10.3	m/s
Type of Fuel	Natural Gas		Moisture	5.42	%	Flow Rate (Actual O2)	85546	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	03:50 PM - 04:00 PM	ppm	-	1.0	31.4	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	03:30 PM - 03:40 PM	ppm	-	1.06	2.46	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	03:30 PM - 04:12 PM	mg/m3	-	0.5	<0.5	240	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ว-323-จ-0037

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487975

Date Received : Aug 23, 2024

Date Reported : Aug 31, 2024

Report Number: 3070814-1

Page 1 of 1

Sample Number	2487975-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	Boiler 1 (1CPL)
Date Analysis Commenced	Aug 24, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.06	m	Oxygen	6.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	7.9	%
Type of Process	Combustion		Stack Temperature	74.2	°C	Gas Velocity	2.9	m/s
Type of Fuel	Natural Gas		Moisture	11.87	%	Flow Rate (Actual O2)	6916	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	11:10 AM - 11:20 AM	ppm	-	1.0	638	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	11:05 AM - 11:15 AM	ppm	-	1.06	10.7	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	11:00 AM - 12:00 PM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ว-323-จ-0018

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487976

Date Received : Aug 19, 2024

Date Reported : Aug 24, 2024

Report Number: 3070817-1

Page 1 of 1

Sample Number	2487976-1
Sampled Date	Aug 19, 2024
Sample Description	Emission from Stationary Source
Location	Boiler 2 (Hot Rolling)
Date Analysis Commenced	Aug 20, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.60	m	Oxygen	5.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	8.6	%
Type of Process	Combustion		Stack Temperature	121	°C	Gas Velocity	6.4	m/s
Type of Fuel	Natural Gas		Moisture	8.42	%	Flow Rate (Actual O2)	4463	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	11:10 AM - 11:20 AM	ppm	-	1.0	5.0	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	11:00 AM - 11:10 AM	ppm	-	1.06	12.6	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	11:00 AM - 11:54 AM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ 7-323-จ-0037

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ 7-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 7-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487977

Date Received : Aug 26, 2024

Date Reported : Jan 16, 2025

Report Number: 3070818-1 Rev. No.1

Page 1 of 1

Sample Number	2487977-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Boiler 3 (1FCL)
Date Analysis Commenced	Aug 27, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.60	m	Oxygen	13.0	%
Ambient Temperature	34.7	°C	Shape	Circle		Carbon Dioxide	4.5	%
Type of Process	Combustion		Stack Temperature	80.0	°C	Gas Velocity	2.4	m/s
Type of Fuel	Natural Gas		Moisture	10.29	%	Flow Rate (Actual O2)	1829	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	10:25 AM - 10:35 AM	ppm	-	1.0	5.6	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Total Suspended Particulate	10:10 AM - 10:58 AM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Note: This Analysis test report is issued to supersede report No.3070818-1, Date Reported : Aug 31, 2024 due to revise analytical information.

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ 7-323-จ-0037

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ 7-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 7-323-จ-0001

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S:\Reports_Air Stack_GL.rpt (9:53AM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O : 4500046578

Project Name : Monitoring

Project Location :

Lot ID: 24113933

Date Received : Oct 28, 2024

Date Reported : Nov 05, 2024

Report Number: 3126668-1

Page 1 of 1

Sample Number 24113933-1
Sampled Date Oct 28, 2024
Sample Description Emission from Stationary Source
Location Boiler 3 (1FCL)
Date Analysis Commenced Oct 30, 2024
Condition of Sample Extracted into two 2-L collection flasks

Stack Description

Ambient Pressure	757	mmHg	Diameter	0.60	m	Oxygen	8.0	%
Ambient Temperature	30.1	°C	Shape	Circle		Carbon Dioxide	7.4	%
Type of Process	Combustion		Stack Temperature	85.0	°C	Gas Velocity	2.4	m/s
Type of Fuel	Natural Gas		Moisture	4.08	%	Flow Rate (Actual O2)	1922	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Oxides of Nitrogen	01:30 PM - 01:40 PM	ppm	-	1.06	17.8	200	United States Environmental Protection Agency, EPA Method 7	Rayong

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

Sampling By : Jittakorn Sriwasa ทะเบียนเลขที่ ว-323-จ-0007

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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9044-21/ EMAILCASH

S:\Reports_Air Stack_GL.rpt (4:16PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487978

Date Received : Aug 23, 2024

Date Reported : Aug 31, 2024

Report Number: 3070819-1

Page 1 of 1

Sample Number 2487978-1
Sampled Date Aug 23, 2024
Sample Description Emission from Stationary Source
Location Boiler no.4 (2CPCL)
Date Analysis Commenced Aug 24, 2024
Condition of Sample Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.06	m	Oxygen	4.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	9.1	%
Type of Process	Combustion		Stack Temperature	59.0	°C	Gas Velocity	2.3	m/s
Type of Fuel	Natural Gas		Moisture	10.94	%	Flow Rate (Actual O2)	5815	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	12:10 PM - 12:20 PM	ppm	-	1.0	19.2	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	12:15 PM - 12:25 PM	ppm	-	1.06	10.9	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	12:10 PM - 12:58 PM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pissaipan ทะเบียนเลขที่ ว-323-จ-0018

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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S:\Reports_Air Stack_GL.rpt (11:21AM)



TESTING
No.0042



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488030

Date Received : Aug 20, 2024

Date Reported : Aug 29, 2024

Report Number: 3070858-1

Page 1 of 1

Sample Number	2488030-1
Sampled Date	Aug 20, 2024
Sample Description	Emission from Stationary Source
Location	Scalper 1 (1SCLP)
Date Analysis Commenced	Aug 21, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.80	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	65.0	°C	Gas Velocity	18.1	m/s
Type of Fuel	-		Moisture	3.18	%	Flow Rate (Actual O2)	138867	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Total Suspended Particulate	12:00 PM - 01:00 PM	mg/m3	-	0.5	8.0	400	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ว-323-จ-0037 , Naratip Thueakchaikam ทะเบียนเลขที่ ว-204-จ-0003

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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S:\Reports_Air Stack_GL.rpt (3:48PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488030

Date Received : Aug 20, 2024

Date Reported : Aug 30, 2024

Report Number: 3070858-2

Page 1 of 1

Sample Number	2488030-1
Sampled Date	Aug 20, 2024
Sample Description	Emission from Stationary Source
Location	Scalper 1 (1SCLP)
Date Analysis Commenced	Aug 26, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.80	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	65.0	°C	Gas Velocity	18.1	m/s
Type of Fuel	-		Moisture	3.18	%	Flow Rate (Actual O2)	138867	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Metals Testing							
Aluminium	12:00 PM - 01:00 PM	mg/m3	-	1.00	<1.00	United States Environmental Protection Agency, EPA Method 29	Bangkok

Sampling By : Sutdamrong Chokpitinan , Naratip Thueakchaikam

Remark :

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488036

Date Received : Aug 20, 2024

Date Reported : Aug 29, 2024

Report Number: 3070859-1

Page 1 of 1

Sample Number	2488036-1
Sampled Date	Aug 20, 2024
Sample Description	Emission from Stationary Source
Location	Scalper 2 (2SCLP)
Date Analysis Commenced	Aug 21, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.80	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	70.0	°C	Gas Velocity	7.3	m/s
Type of Fuel	-		Moisture	3.34	%	Flow Rate (Actual O2)	55006	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
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Air Testing

Total Suspended Particulate	10:30 AM - 11:24 AM	mg/m3	-	0.5	0.9	400	United States Environmental Protection Agency, EPA Method 5	Rayong
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Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ว-323-จ-0037 , Naratip Thueakchaikam ทะเบียนเลขที่ ว-204-จ-0003

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488036

Date Received : Aug 20, 2024

Date Reported : Aug 30, 2024

Report Number :3070859-2

Page 1 of 1

Sample Number	2488036-1
Sampled Date	Aug 20, 2024
Sample Description	Emission from Stationary Source
Location	Scalper 2 (2SCLP)
Date Analysis Commenced	Aug 26, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
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Metals Testing

Aluminium	mg/m3	-	1.00	<1.00	United States Environmental Protection Agency, EPA Method 29	Bangkok
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Sampling By : Sutdamrong Chokpitinan , Naratip Thueakchaikam

Remark :

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Approved by

Chanatt L.

Chanattagarn Imchom
Section Head

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487979

Date Received : Aug 21, 2024

Date Reported : Aug 28, 2024

Report Number: 3070821-1

Page 1 of 1

Sample Number	2487979-1						
Sampled Date	Aug 21, 2024						
Sample Description	Emission from Stationary Source						
Location	Pusher Furnace (1PF) 1-1						
Date Analysis Commenced	Aug 22, 2024						
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag						

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.20	m	Oxygen	5.6	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	8.7	%
Type of Process	Combustion (Open System)		Stack Temperature	180	°C	Gas Velocity	9.2	m/s
Type of Fuel	Natural Gas		Moisture	10.48	%	Flow Rate (Actual O2)	21790	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	12:40 PM - 12:50 PM	ppm	-	1.0	59.4	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	12:30 PM - 12:40 PM	ppm	-	1.06	45.3	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	12:30 PM - 01:12 PM	mg/m3	-	0.5	0.6	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ 7-323-จ-0037

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ 7-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ 7-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487980

Date Received : Aug 21, 2024

Date Reported : Aug 29, 2024

Report Number: 3070823-1

Page 1 of 1

Sample Number	2487980-1						
Sampled Date	Aug 21, 2024						
Sample Description	Emission from Stationary Source						
Location	Pusher Furnace (1PF) 1-2						
Date Analysis Commenced	Aug 22, 2024						
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag						

Stack Description

Ambient Pressure	748	mmHg	Diameter	3.20 x 0.80	m	Oxygen	9.7	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	6.4	%
Type of Process	Combustion (Open System)		Stack Temperature	188	°C	Gas Velocity	8.5	m/s
Type of Fuel	Natural Gas		Moisture	9.61	%	Flow Rate (Actual O2)	44799	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	11:40 AM - 11:50 AM	ppm	-	1.0	161	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	11:30 AM - 11:40 AM	ppm	-	1.06	35.0	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	11:30 AM - 12:18 PM	mg/m3	-	0.5	1.2	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ 7-323-จ-0037

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ 7-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ 7-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487981

Date Received : Aug 21, 2024

Date Reported : Aug 29, 2024

Report Number: 3070824-1

Page 1 of 1

Sample Number	2487981-1
Sampled Date	Aug 21, 2024
Sample Description	Emission from Stationary Source
Location	Pusher Furnace (2PF)
Date Analysis Commenced	Aug 22, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.95 x 0.60	m	Oxygen	8.0	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	7.4	%
Type of Process	Combustion (Open System)		Stack Temperature	420	°C	Gas Velocity	8.4	m/s
Type of Fuel	Natural Gas		Moisture	9.30	%	Flow Rate (Actual O2)	20397	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	10:30 AM - 10:40 AM	ppm	-	1.0	40.4	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	10:20 AM - 10:30 AM	ppm	-	1.06	71.2	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	10:20 AM - 11:20 AM	mg/m3	-	0.5	4.9	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Jaradrawee Sriuksa ทะเบียนเลขที่ ว-323-จ-0058

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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S:\Reports_Air Stack_GL.rpt (8:41AM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487982

Date Received : Aug 19, 2024

Date Reported : Aug 24, 2024

Report Number: 3070827-1

Page 1 of 1

Sample Number	2487982-1
Sampled Date	Aug 19, 2024
Sample Description	Emission from Stationary Source
Location	Pusher Furnace (3PF) 3-1
Date Analysis Commenced	Aug 20, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	3.20 x 0.70	m	Oxygen	19.4	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	0.9	%
Type of Process	Combustion (Open System)		Stack Temperature	213	°C	Gas Velocity	3.5	m/s
Type of Fuel	Natural Gas		Moisture	9.66	%	Flow Rate (Actual O2)	15285	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	02:40 PM - 02:50 PM	ppm	-	1.0	2.9	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	02:30 PM - 02:40 PM	ppm	-	1.06	10.5	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	02:40 PM - 03:22 PM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ว-323-จ-0037

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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9044-21/ EMAILCASH

S:\Reports_Air Stack_GL.rpt (3:06PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487983

Date Received : Aug 19, 2024

Date Reported : Aug 24, 2024

Report Number: 3070829-1

Page 1 of 1

Sample Number	2487983-1
Sampled Date	Aug 19, 2024
Sample Description	Emission from Stationary Source
Location	Pusher Furnace (3PF) 3-2
Date Analysis Commenced	Aug 20, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	3.20 x 0.70	m	Oxygen	12.1	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	5.0	%
Type of Process	Combustion (Open System)		Stack Temperature	270	°C	Gas Velocity	2.1	m/s
Type of Fuel	Natural Gas		Moisture	9.41	%	Flow Rate (Actual O2)	8318	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	04:10 PM - 04:20 PM	ppm	-	1.0	135	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	04:00 PM - 04:10 PM	ppm	-	1.06	40.6	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	04:00 PM - 04:48 PM	mg/m3	-	0.5	8.2	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ว-323-จ-0037

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487984

Date Received : Aug 20, 2024

Date Reported : Aug 28, 2024

Report Number: 3070831-1

Page 1 of 1

Sample Number	2487984-1
Sampled Date	Aug 20, 2024
Sample Description	Emission from Stationary Source
Location	Homogenizing Furnace 1
Date Analysis Commenced	Aug 21, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.77	m	Oxygen	15.5	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	3.1	%
Type of Process	Combustion (Open System)		Stack Temperature	88.2	°C	Gas Velocity	18.8	m/s
Type of Fuel	Natural Gas		Moisture	7.12	%	Flow Rate (Actual O2)	23805	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	10:50 AM - 11:00 AM	ppm	-	1.0	367	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	11:03 AM - 11:13 AM	ppm	-	1.06	4.43	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	10:45 AM - 11:33 AM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ว-323-จ-0018

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487985

Date Received : Aug 20, 2024

Date Reported : Aug 28, 2024

Report Number: 3070832-1

Page 1 of 1

Sample Number	2487985-1
Sampled Date	Aug 20, 2024
Sample Description	Emission from Stationary Source
Location	Homogenizing Furnace 2
Date Analysis Commenced	Aug 21, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.77	m	Oxygen	15.4	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	3.1	%
Type of Process	Combustion (Open System)		Stack Temperature	112	°C	Gas Velocity	6.8	m/s
Type of Fuel	Natural Gas		Moisture	6.90	%	Flow Rate (Actual O2)	8029	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	12:10 PM - 12:20 PM	ppm	-	1.0	20.1	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	12:00 PM - 12:10 PM	ppm	-	1.06	6.84	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	11:50 AM - 12:38 PM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pissaipan ทะเบียนเลขที่ ว-323-จ-0018

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2487986

Date Received : Aug 26, 2024

Date Reported : Aug 31, 2024

Report Number: 3070834-1

Page 1 of 1

Sample Number	2487986-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Coil Annealing Furnace 1(1CAAF)
Date Analysis Commenced	Aug 26, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.62	m	Oxygen	7.2	%
Ambient Temperature	34.7	°C	Shape	Circle		Carbon Dioxide	7.7	%
Type of Process	Combustion		Stack Temperature	466	°C	Gas Velocity	13.0	m/s
Type of Fuel	Natural Gas		Moisture	10.01	%	Flow Rate (Actual O2)	5042	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	02:50 PM - 03:00 PM	ppm	-	1.0	290	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	02:45 PM - 02:55 PM	ppm	-	1.06	79.6	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	02:40 PM - 03:28 PM	mg/m3	-	0.5	9.2	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pissaipan ทะเบียนเลขที่ ว-323-จ-0018

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O : 4500046578

Project Name : Monitoring

Project Location :

Lot ID: 24113929

Date Received : Oct 28, 2024

Date Reported : Nov 05, 2024

Report Number: 3126655-1

Page 1 of 1

Sample Number	24113929-1		
Sampled Date	Oct 28, 2024		
Sample Description	Emission from Stationary Source Coil		
Location	Annealing Furnace 2 (2CAAF)		
Date Analysis Commenced	Oct 29, 2024		
Condition of Sample	Extracted into one 10-L air sampling bag, one filter paper placed in plastic petri dish and one plastic bottle		

Stack Description

Ambient Pressure	757	mmHg	Diameter	0.62	m	Oxygen	15.6	%
Ambient Temperature	30.1	°C	Shape	Circle		Carbon Dioxide	3.1	%
Type of Process	Combustion		Stack Temperature	414	°C	Gas Velocity	9.2	m/s
Type of Fuel	Natural Gas		Moisture	11.19	%	Flow Rate (Actual O2)	3833	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	09:40 AM - 09:50 AM	ppm	-	1.0	12.0	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Total Suspended Particulate	09:30 AM - 10:18 AM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Jittakorn Sriwasa ทะเบียนเลขที่ ว-323-จ-0007

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487988

Date Received : Aug 19, 2024

Date Reported : Aug 24, 2024

Report Number: 3070837-1

Page 1 of 1

Sample Number	2487988-1		
Sampled Date	Aug 19, 2024		
Sample Description	Emission from Stationary Source		
Location	Coil Annealing Furnace 3 (3CAAF)		
Date Analysis Commenced	Aug 20, 2024		
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag		

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.62	m	Oxygen	7.7	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	7.5	%
Type of Process	Combustion		Stack Temperature	182	°C	Gas Velocity	2.7	m/s
Type of Fuel	Natural Gas		Moisture	10.73	%	Flow Rate (Actual O2)	1706	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	13:15 PM - 12:25 PM	ppm	-	1.0	133	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	12:15 PM - 12:25 PM	ppm	-	1.06	43.4	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	12:10 PM - 12:58 PM	mg/m3	-	0.5	2.6	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ว-323-จ-0018

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487989

Date Received : Aug 19, 2024

Date Reported : Aug 24, 2024

Report Number: 3070839-1

Page 1 of 1

Sample Number	2487989-1
Sampled Date	Aug 19, 2024
Sample Description	Emission from Stationary Source
Location	Coil Annealing Furnace 4 (4CAAF)
Date Analysis Commenced	Aug 20, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.62	m	Oxygen	9.3	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	6.6	%
Type of Process	Combustion		Stack Temperature	156	°C	Gas Velocity	7.9	m/s
Type of Fuel	Natural Gas		Moisture	10.88	%	Flow Rate (Actual O2)	5195	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	02:10 PM - 02:20 PM	ppm	-	1.0	40.3	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	02:10 PM - 02:20 PM	ppm	-	1.06	43.7	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	02:00 PM - 02:48 PM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ร-323-จ-0018

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ร-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ร-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487990

Date Received : Aug 19, 2024

Date Reported : Aug 24, 2024

Report Number: 3070840-1

Page 1 of 1

Sample Number	2487990-1
Sampled Date	Aug 19, 2024
Sample Description	Emission from Stationary Source
Location	Coil Annealing Furnace 5 (SCAAF)
Date Analysis Commenced	Aug 20, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle and one 10-L air sampling bag

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.62	m	Oxygen	11.3	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	5.5	%
Type of Process	Combustion		Stack Temperature	160	°C	Gas Velocity	4.2	m/s
Type of Fuel	Natural Gas		Moisture	10.14	%	Flow Rate (Actual O2)	2790	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	11:00 AM - 11:10 AM	ppm	-	1.0	253	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	11:10 AM - 11:20 AM	ppm	-	1.06	31.9	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	11:00 PM - 11:48 PM	mg/m3	-	0.5	7.8	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ร-323-จ-0018

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ร-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ร-323-จ-0001

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488039

Date Received : Aug 21, 2024

Date Reported : Aug 31, 2024

Report Number: 3070862-1

Page 1 of 1

Sample Number	2488039-1
Sampled Date	Aug 21, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (ITL)
Date Analysis Commenced	Aug 22, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish, one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.40 x 0.35	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	48.8	°C	Gas Velocity	8.6	m/s
Type of Fuel	-		Moisture	3.02	%	Flow Rate (Actual O2)	3839	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Total Suspended Particulate	12:00 PM - 12:45 PM	mg/m3	-	0.5	<0.5	400	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ว-323-จ-0018 , Naratip Thueakchaikam ทะเบียนเลขที่ ว-204-จ-0003

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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9044-21/ EMAILCASH

S:\Reports_Air Stack_GL_rpt (11:33AM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488039

Date Received : Aug 21, 2024

Date Reported : Sep 02, 2024

Report Number: 3070862-2

Page 1 of 1

Sample Number	2488039-1
Sampled Date	Aug 21, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (ITL)
Date Analysis Commenced	Aug 22, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish, one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.40 x 0.35	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	48.8	°C	Gas Velocity	8.6	m/s
Type of Fuel	-		Moisture	3.02	%	Flow Rate (Actual O2)	3839	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Decane	12:05 PM - 12:20 PM	ppm	-	0.2	0.51	United States Environmental Protection Agency, EPA Method 18	Bangkok

Sampling By : Suphanut Pisaipan , Naratip Thueakchaikam

Remark :

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S:\Reports_Air Stack_NGL_rpt (9:28AM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488041

Date Received : Aug 23, 2024

Date Reported : Sep 03, 2024

Report Number: 3070864-1

Page 1 of 1

Sample Number	2488041-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (1CPL)
Date Analysis Commenced	Aug 24, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish, one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.35 x 0.40	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	49.2	°C	Gas Velocity	13.8	m/s
Type of Fuel	-		Moisture	3.03	%	Flow Rate (Actual O2)	6154	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
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Air Testing

Total Suspended Particulate	01:45 PM - 02:27 PM	mg/m3	-	0.5	2.8	400	United States Environmental Protection Agency, EPA Method 5	Rayong
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Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ว-323-จ-0018 , Naratip Thueakchaikam ทะเบียนเลขที่ ว-204-จ-0003

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488041

Date Received : Aug 23, 2024

Date Reported : Sep 04, 2024

Report Number: 3070864-2

Page 1 of 1

Sample Number	2488041-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (1CPL)
Date Analysis Commenced	Aug 27, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish, one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.35 x 0.40	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	49.2	°C	Gas Velocity	13.8	m/s
Type of Fuel	-		Moisture	3.03	%	Flow Rate (Actual O2)	6154	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
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Air Testing

n-Decane	01:50 PM - 02:05 PM	ppm	-	0.2	<0.20	United States Environmental Protection Agency, EPA Method 18	Bangkok
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Sampling By : Suphanut Pisaipan , Naratip Thueakchaikam

Remark :

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

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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S:\Reports_Air Stack_NGL.rpt (12:28PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488042

Date Received : Aug 23, 2024

Date Reported : Sep 03, 2024

Report Number: 3070867-1

Page 1 of 1

Sample Number	2488042-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (ITRL)
Date Analysis Commenced	Aug 24, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish, one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.50	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	38.0	°C	Gas Velocity	11.7	m/s
Type of Fuel	-		Moisture	3.14	%	Flow Rate (Actual O2)	7575	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Total Suspended Particulate	02:50 PM - 03:38 PM	mg/m3	-	0.5	<0.5	400	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ ร-323-จ-0018 , Naratip Thueakchaikam ทะเบียนเลขที่ ร-204-จ-0003

Remark :

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Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ ร-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ร-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488042

Date Received : Aug 23, 2024

Date Reported : Sep 04, 2024

Report Number: 3070867-2

Page 1 of 1

Sample Number	2488042-1
Sampled Date	Aug 23, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (ITRL)
Date Analysis Commenced	Aug 27, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish, one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.50	m	Oxygen	20.9	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	38.0	°C	Gas Velocity	11.7	m/s
Type of Fuel	-		Moisture	3.14	%	Flow Rate (Actual O2)	7575	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Decane	02:55 PM - 03:10 PM	ppm	-	0.2	0.50	United States Environmental Protection Agency, EPA Method 18	Bangkok

Sampling By : Suphanut Pisaipan , Naratip Thueakchaikam

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Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488043

Date Received : Aug 26, 2024

Date Reported : Sep 04, 2024

Report Number: 3070874-1

Page 1 of 1

Sample Number	2488043-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (2CPCL)
Date Analysis Commenced	Aug 27, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.30 x 0.40	m	Oxygen	20.9	%
Ambient Temperature	34.7	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	53.0	°C	Gas Velocity	13.4	m/s
Type of Fuel	-		Moisture	3.19	%	Flow Rate (Actual O2)	5036	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Total Suspended Particulate	01:30 PM - 02:12 PM	mg/m3	-	0.5	<0.5	400	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Sutdamrong Chokpitinan ทะเบียนเลขที่ ๖-323-จ-0037

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ ๖-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-จ-0001

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Analysis / Test Report

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Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488043

Date Received : Aug 26, 2024

Date Reported : Sep 04, 2024

Report Number: 3070874-2

Page 1 of 1

Sample Number	2488043-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Solvent Recycle (2CPCL)
Date Analysis Commenced	Aug 27, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish and one plastic bottle and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	0.30 x 0.40	m	Oxygen	20.9	%
Ambient Temperature	34.7	°C	Shape	Rectangular		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	53.0	°C	Gas Velocity	13.4	m/s
Type of Fuel	-		Moisture	3.19	%	Flow Rate (Actual O2)	5036	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Decane	01:30 PM - 01:45 PM	ppm	-	0.2	<0.20	United States Environmental Protection Agency, EPA Method 18	Bangkok

Sampling By : Sutdamrong Chokpitinan

Remark :

- LOD : Limit of Detection
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Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488019

Date Received : Aug 21, 2024

Date Reported : Aug 31, 2024

Report Number: 3070877-1

Page 1 of 1

Sample Number	2488019-1
Sampled Date	Aug 21, 2024
Sample Description	Emission from Stationary Source
Location	Fume Incinerator (1CCL)
Date Analysis Commenced	Aug 22, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle, one 10-L air sampling bag and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.00	m	Oxygen	18.2	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	1.6	%
Type of Process	Combustion (Open System)		Stack Temperature	233	°C	Gas Velocity	7.6	m/s
Type of Fuel	Natural Gas		Moisture	7.76	%	Flow Rate (Actual O2)	46143	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	02:50 PM - 03:00 PM	ppm	-	1.0	49.7	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	02:45 PM - 02:55 PM	ppm	-	1.06	12.5	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	02:40 PM - 03:28 PM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ 7-323-จ-0018 , Naratip Thueakchaikam ทะเบียนเลขที่ 7-204-จ-0003

Remark :

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Technical Management

Thanitak.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ 7-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 7-323-จ-0001

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9044-21/ EMAILCASH

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488019

Date Received : Aug 21, 2024

Date Reported : Sep 02, 2024

Report Number: 3070877-2

Page 1 of 1

Sample Number	2488019-1
Sampled Date	Aug 21, 2024
Sample Description	Emission from Stationary Source
Location	Fume Incinerator (1CCL)
Date Analysis Commenced	Aug 22, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle, one 10-L air sampling bag and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.00	m	Oxygen	18.2	%
Ambient Temperature	35.9	°C	Shape	Circle		Carbon Dioxide	1.6	%
Type of Process	Combustion (Open System)		Stack Temperature	233	°C	Gas Velocity	7.6	m/s
Type of Fuel	Natural Gas		Moisture	7.76	%	Flow Rate (Actual O2)	46143	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Decane	02:45 PM - 03:00 PM	ppm	-	0.2	0.63	United States Environmental Protection Agency, EPA Method 18	Bangkok

Sampling By : Suphanut Pisaipan , Naratip Thueakchaikam

Remark :

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

Approved by

Saranya C.

Saranya Chalermthamrong
Scientist (4)

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S:\Reports_Air Stack_NGL_rpt (9:26AM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488026

Date Received : Aug 26, 2024

Date Reported : Sep 04, 2024

Report Number: 3070878-1

Page 1 of 1

Sample Number	2488026-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Fume Incinerator (1FCL)
Date Analysis Commenced	Aug 26, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle, one 10-L air sampling bag and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.00	m	Oxygen	16.2	%
Ambient Temperature	34.7	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion (Open System)		Stack Temperature	105	°C	Gas Velocity	8.7	m/s
Type of Fuel	Natural Gas		Moisture	5.37	%	Flow Rate (Actual O2)	18142	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	10:10 AM - 10:20 AM	ppm	-	1.0	<1.0	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	10:10 AM - 10:20 AM	ppm	-	1.06	2.73	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	10:00 AM - 10:54 AM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ 7-323-จ-0018 , Naratip Thueakchaikam ทะเบียนเลขที่ 7-204-จ-0003

Remark :

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

Technical Management

Thanitak.

Thanita Kulsuriwong
Scientist (4)

ทะเบียนเลขที่ 7-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 7-323-จ-0001

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9044-21/ EMAILCASH

S:\Reports_Air Stack_GL.rpt (4:35PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488026

Date Received : Aug 26, 2024

Date Reported : Sep 04, 2024

Report Number: 3070878-2

Page 1 of 1

Sample Number	2488026-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Fume Incinerator (1FCL)
Date Analysis Commenced	Aug 28, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle, one 10-L air sampling bag and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	1.00	m	Oxygen	16.2	%
Ambient Temperature	34.7	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion (Open System)		Stack Temperature	105	°C	Gas Velocity	8.7	m/s
Type of Fuel	Natural Gas		Moisture	5.37	%	Flow Rate (Actual O2)	18142	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Decane	10:20 AM - 10:35 AM	ppm	-	0.2	<0.20	United States Environmental Protection Agency, EPA Method 18	Bangkok

Sampling By : Suphanut Pisaipan , Naratip Thueakchaikam

Remark :

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

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488027

Date Received : Aug 26, 2024

Date Reported : Sep 04, 2024

Report Number: 3070891-1

Page 1 of 1

Sample Number	2488027-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Fume Incinerator (2CPCL)
Date Analysis Commenced	Aug 26, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle, one 10-L air sampling bag and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.00	m	Oxygen	18.6	%
Ambient Temperature	34.7	°C	Shape	Circle		Carbon Dioxide	1.4	%
Type of Process	Combustion (Open System)		Stack Temperature	327	°C	Gas Velocity	11.8	m/s
Type of Fuel	Natural Gas		Moisture	8.20	%	Flow Rate (Actual O2)	59678	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Carbon Monoxide *	01:00 PM - 01:10 PM	ppm	-	1.0	652	690	United States Environmental Protection Agency, EPA Method 10	Rayong
Oxides of Nitrogen *	01:00 PM - 01:10 PM	ppm	-	1.06	9.88	200	United States Environmental Protection Agency, EPA Method 7	Rayong
Total Suspended Particulate	01:00 PM - 01:42 PM	mg/m3	-	0.5	<0.5	320	United States Environmental Protection Agency, EPA Method 5	Rayong

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

Sampling By : Suphanut Pisaipan ทะเบียนเลขที่ 7-323-จ-0018 , Naratip Thueakchaikam ทะเบียนเลขที่ 7-204-จ-0003

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
ทะเบียนเลขที่ 7-323-จ-0029

Approved by

D. Johnson

Dej Changchon
Senior Manager
ทะเบียนเลขที่ 7-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488027

Date Received : Aug 26, 2024

Date Reported : Sep 04, 2024

Report Number: 3070891-2

Page 1 of 1

Sample Number	2488027-1
Sampled Date	Aug 26, 2024
Sample Description	Emission from Stationary Source
Location	Fume Incinerator (2CPCL)
Date Analysis Commenced	Aug 28, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one plastic bottle, one 10-L air sampling bag and one sorbent tube, refrigerated

Stack Description

Ambient Pressure	748	mmHg	Diameter	2.00	m	Oxygen	18.6	%
Ambient Temperature	34.7	°C	Shape	Circle		Carbon Dioxide	1.4	%
Type of Process	Combustion (Open System)		Stack Temperature	327	°C	Gas Velocity	11.8	m/s
Type of Fuel	Natural Gas		Moisture	8.20	%	Flow Rate (Actual O2)	59678	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Decane	01:10 PM - 01:25 PM	ppm	-	0.2	<0.20	United States Environmental Protection Agency, EPA Method 18	Bangkok

Sampling By : Suphanut Pisaipan , Naratip Thueakchaikam

Remark :

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

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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ภาคผนวก ค-2

คุณภาพอากาศในบรรยากาศโดยทั่วไป



Analysis / Test Report



TESTING
No.0042

Lot ID: 2487962

Date Received : Aug 28, 2024

Date Reported : Sep 03, 2024

Report Number: 3070571-1

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng,
Rayong Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Page 1 of 1

Sample Description	Air Quality				
Location	บ้านพุไทร (Ban Phusai) (GPS 47P 0725767, 1434359)				
Date Analysis Commenced	Aug 29, 2024				
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag				

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2487962-1	Aug 19 - Aug 20, 2024	0.226	0.098	757	33
2487962-2	Aug 20 - Aug 21, 2024	0.170	0.060	757	31
2487962-3	Aug 21 - Aug 22, 2024	0.451	0.171	757	32
2487962-4	Aug 22 - Aug 23, 2024	0.061	0.028	757	31
2487962-5	Aug 23 - Aug 24, 2024	0.139	0.047	757	31
2487962-6	Aug 24 - Aug 25, 2024	0.028	0.019	757	30
2487962-7	Aug 25 - Aug 26, 2024	0.173	0.062	757	32
Guideline		0.33	0.12	-	-

Reference Method

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

Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

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

Sampled By : Santi Chaichana

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

Lot ID: 2487962

Date Received : Aug 28, 2024

Date Reported : Sep 03, 2024

Report Number: 3070571-2

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng,
Rayong Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Page 1 of 1

Sample Description	Air Quality				
Location	บ้านหวายไคหนอ (Ban Huay Kai Nhow) (GPS 47P 0723848, 1430920)				
Date Analysis Commenced	Aug 29, 2024				
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag				

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2487962-8	Aug 19 - Aug 20, 2024	0.040	0.016	757	33
2487962-9	Aug 20 - Aug 21, 2024	0.036	0.015	757	31
2487962-10	Aug 21 - Aug 22, 2024	0.055	0.020	757	32
2487962-11	Aug 22 - Aug 23, 2024	0.036	0.016	757	31
2487962-12	Aug 23 - Aug 24, 2024	0.041	0.021	757	31
2487962-13	Aug 24 - Aug 25, 2024	0.022	0.013	757	30
2487962-14	Aug 25 - Aug 26, 2024	0.029	0.017	757	32
Guideline		0.33	0.12	-	-

Reference Method

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

Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

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

Sampled By : Santi Chaichana

Remark :

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Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report



TESTING
No.0042

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng,
Rayong Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487962
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3070571-3

Page 1 of 1

Sample Description	Air Quality				
Location	บ้านวังตาลพหลวน (Ban Wang Tan Mhon) (GPS 47P 0734200, 1432165)				
Date Analysis Commenced	Aug 29, 2024				
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag				

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2487962-15	Aug 19 - Aug 20, 2024	0.035	0.027	757	33
2487962-16	Aug 20 - Aug 21, 2024	0.038	0.028	757	31
2487962-17	Aug 21 - Aug 22, 2024	0.062	0.043	757	32
2487962-18	Aug 22 - Aug 23, 2024	0.046	0.034	757	31
2487962-19	Aug 23 - Aug 24, 2024	0.037	0.029	757	31
2487962-20	Aug 24 - Aug 25, 2024	0.038	0.028	757	30
2487962-21	Aug 25 - Aug 26, 2024	0.053	0.036	757	32
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Metter (PM-10) : US EPA 40 CFR Part 50 Appendix J

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

Sampled By : Santi Chaichana

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 : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng,
Rayong Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487962
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3070571-4

Page 1 of 1

Sample Description	Air Quality				
Location	บ้านวังตาลพหลวน (Ban Map Yang Porn) (GPS 47P 0731355, 1436975)				
Date Analysis Commenced	Aug 29, 2024				
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag				

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2487962-22	Aug 19 - Aug 20, 2024	0.094	0.034	757	33
2487962-23	Aug 20 - Aug 21, 2024	0.053	0.023	757	31
2487962-24	Aug 21 - Aug 22, 2024	0.064	0.035	757	32
2487962-25	Aug 22 - Aug 23, 2024	0.083	0.043	757	31
2487962-26	Aug 23 - Aug 24, 2024	0.046	0.032	757	31
2487962-27	Aug 24 - Aug 25, 2024	0.056	0.030	757	30
2487962-28	Aug 25 - Aug 26, 2024	0.057	0.029	757	32
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Metter (PM-10) : US EPA 40 CFR Part 50 Appendix J

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

Sampled By : Santi Chaichana

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 : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487673
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3070545-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านพุซาย (Ban Phusai) (GPS 47P 0725767, 1434359)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
	2487673-1 Aug 19, 2024	2487673-2 Aug 20, 2024	2487673-3 Aug 21, 2024	2487673-4 Aug 22, 2024	2487673-5 Aug 23, 2024	2487673-6 Aug 24, 2024	2487673-7 Aug 25, 2024
Time							
10:00 AM - 11:00 AM	0.004	0.003	0.006	0.005	0.008	0.010	0.010
11:00 AM - 12:00 PM	0.004	0.006	0.007	0.005	0.010	0.008	0.009
12:00 PM - 01:00 PM	0.004	0.008	0.004	0.004	0.010	0.005	0.009
01:00 PM - 02:00 PM	0.007	0.004	0.004	0.004	0.016	0.005	0.007
02:00 PM - 03:00 PM	0.006	0.003	0.005	0.003	0.011	0.005	0.006
03:00 PM - 04:00 PM	0.004	0.004	0.004	0.006	0.012	0.005	0.007
04:00 PM - 05:00 PM	0.004	0.012	0.005	0.003	0.018	0.005	0.006
05:00 PM - 06:00 PM	0.003	0.007	0.005	0.005	0.019	0.003	0.008
06:00 PM - 07:00 PM	0.004	0.004	0.007	0.007	0.015	0.004	0.007
07:00 PM - 08:00 PM	0.003	0.004	0.008	0.008	0.020	0.006	0.009
08:00 PM - 09:00 PM	0.004	0.003	0.011	0.011	0.016	0.008	0.014
09:00 PM - 10:00 PM	0.004	0.004	0.010	0.007	0.014	0.007	0.011
10:00 PM - 11:00 PM	0.009	0.004	0.009	0.008	0.012	0.007	0.010
11:00 PM - 12:00 AM	0.009	0.005	0.008	0.007	0.015	0.006	0.009
12:00 AM - 01:00 AM	0.007	0.006	0.008	0.006	0.014	0.006	0.009
01:00 AM - 02:00 AM	0.005	0.005	0.007	0.006	0.010	0.005	0.005
02:00 AM - 03:00 AM	0.004	0.004	0.006	0.006	0.008	0.004	0.005
03:00 AM - 04:00 AM	0.003	0.002	0.007	0.005	0.006	0.004	0.003
04:00 AM - 05:00 AM	0.003	0.003	0.007	0.004	0.006	0.003	0.003
05:00 AM - 06:00 AM	0.003	0.003	0.008	0.003	0.005	0.003	0.003
06:00 AM - 07:00 AM	0.002	0.003	0.009	0.004	0.004	0.003	0.003
07:00 AM - 08:00 AM	0.004	0.006	0.008	0.003	0.004	0.004	0.006
08:00 AM - 09:00 AM	0.007	0.011	0.011	0.007	0.006	0.008	0.008
09:00 AM - 10:00 AM	0.009	0.008	0.009	0.008	0.010	0.009	0.006
Average	0.005	0.005	0.007	0.006	0.011	0.006	0.007
1hr - Maximum	0.009	0.012	0.011	0.011	0.020	0.010	0.014
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487673
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3100115-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านห้วยไคหนอ (Ban Huay Kai Nhow) (GPS 47P 0723848, 1430920)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
	2487673-8 Aug 19, 2024	2487673-9 Aug 20, 2024	2487673-10 Aug 21, 2024	2487673-11 Aug 22, 2024	2487673-12 Aug 23, 2024	2487673-13 Aug 24, 2024	2487673-14 Aug 25, 2024
Time							
09:00 AM - 10:00 AM	0.002	0.001	0.002	0.001	0.002	0.005	0.003
10:00 AM - 11:00 AM	0.004	0.001	0.003	0.001	0.002	0.002	0.002
11:00 AM - 12:00 PM	0.003	<0.001	0.001	0.015	0.001	0.001	0.001
12:00 PM - 01:00 PM	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001
01:00 PM - 02:00 PM	0.001	<0.001	<0.001	0.001	0.003	<0.001	0.001
02:00 PM - 03:00 PM	<0.001	0.001	<0.001	0.001	0.006	0.002	<0.001
03:00 PM - 04:00 PM	0.001	0.001	<0.001	0.002	0.006	0.002	<0.001
04:00 PM - 05:00 PM	0.001	<0.001	<0.001	0.002	0.002	<0.001	<0.001
05:00 PM - 06:00 PM	0.001	<0.001	0.001	0.002	0.002	<0.001	0.001
06:00 PM - 07:00 PM	0.001	<0.001	<0.001	0.004	0.002	0.001	0.001
07:00 PM - 08:00 PM	0.001	0.001	0.001	0.002	0.002	0.002	0.001
08:00 PM - 09:00 PM	0.002	0.003	0.002	0.002	0.003	0.004	0.001
09:00 PM - 10:00 PM	0.003	0.001	0.001	0.004	0.007	0.002	0.002
10:00 PM - 11:00 PM	0.002	0.003	0.003	0.003	0.003	0.011	0.002
11:00 PM - 12:00 AM	0.001	0.003	0.004	0.002	0.002	0.007	0.004
12:00 AM - 01:00 AM	0.002	0.005	0.005	0.005	0.002	0.001	0.002
01:00 AM - 02:00 AM	0.002	0.001	0.004	0.006	0.003	<0.001	0.002
02:00 AM - 03:00 AM	<0.001	<0.001	0.005	0.007	0.005	<0.001	0.004
03:00 AM - 04:00 AM	0.001	0.001	0.006	0.007	0.007	0.001	0.004
04:00 AM - 05:00 AM	0.001	0.002	0.006	0.009	0.004	0.001	0.007
05:00 AM - 06:00 AM	0.002	0.002	0.004	0.010	0.008	0.001	0.007
06:00 AM - 07:00 AM	0.006	0.011	0.006	0.011	0.012	0.004	0.005
07:00 AM - 08:00 AM	0.007	0.009	0.006	0.013	0.011	0.005	0.005
08:00 AM - 09:00 AM	0.003	0.004	0.003	0.003	0.007	0.006	0.003
Average	0.002	0.002	0.003	0.005	0.004	0.003	0.003
1hr - Maximum	0.007	0.011	0.006	0.015	0.012	0.011	0.007
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487673
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3100126-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านวังตาพ่อน (Ban Wang Tan Mhon) (GPS 47P 0734200, 1432165)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
	2487673-15	2487673-16	2487673-17	2487673-18	2487673-19	2487673-20	2487673-21
Time	Aug 19, 2024	Aug 20, 2024	Aug 21, 2024	Aug 22, 2024	Aug 23, 2024	Aug 24, 2024	Aug 25, 2024
12:00 PM - 01:00 PM	0.031	0.015	0.014	0.015	0.024	0.016	0.011
01:00 PM - 02:00 PM	0.026	0.012	0.013	0.017	0.020	0.012	0.010
02:00 PM - 03:00 PM	0.023	0.017	0.014	0.015	0.025	0.017	0.009
03:00 PM - 04:00 PM	0.023	0.021	0.019	0.017	0.031	0.015	0.008
04:00 PM - 05:00 PM	0.007	0.028	0.019	0.021	0.021	0.017	0.010
05:00 PM - 06:00 PM	0.011	0.019	0.019	0.021	0.021	0.018	0.011
06:00 PM - 07:00 PM	0.017	0.018	0.022	0.036	0.026	0.021	0.014
07:00 PM - 08:00 PM	0.013	0.022	0.026	0.041	0.028	0.024	0.018
08:00 PM - 09:00 PM	0.012	0.029	0.029	0.027	0.028	0.030	0.024
09:00 PM - 10:00 PM	0.013	0.032	0.040	0.035	0.032	0.034	0.027
10:00 PM - 11:00 PM	0.012	0.025	0.038	0.038	0.026	0.032	0.028
11:00 PM - 12:00 AM	0.012	0.028	0.026	0.037	0.024	0.029	0.027
12:00 AM - 01:00 AM	0.013	0.024	0.027	0.030	0.024	0.030	0.029
01:00 AM - 02:00 AM	0.015	0.024	0.029	0.029	0.025	0.028	0.031
02:00 AM - 03:00 AM	0.012	0.018	0.030	0.027	0.026	0.025	0.030
03:00 AM - 04:00 AM	0.012	0.021	0.029	0.027	0.025	0.026	0.031
04:00 AM - 05:00 AM	0.015	0.022	0.028	0.026	0.026	0.026	0.029
05:00 AM - 06:00 AM	0.017	0.021	0.029	0.025	0.031	0.026	0.032
06:00 AM - 07:00 AM	0.020	0.025	0.037	0.036	0.030	0.029	0.045
07:00 AM - 08:00 AM	0.025	0.029	0.035	0.044	0.035	0.033	0.038
08:00 AM - 09:00 AM	0.025	0.031	0.030	0.029	0.028	0.025	0.032
09:00 AM - 10:00 AM	0.021	0.022	0.026	0.020	0.028	0.024	0.025
10:00 AM - 11:00 AM	0.016	0.017	0.024	0.015	0.021	0.020	0.016
11:00 AM - 12:00 PM	0.016	0.015	0.020	0.014	0.018	0.014	0.014
Average	0.017	0.022	0.026	0.027	0.026	0.024	0.023
1hr - Maximum	0.031	0.032	0.040	0.044	0.035	0.034	0.045
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

Approved by

Orawan R.
Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487673
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3100129-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านวังตาพ่อน (Ban Map Yang Porn) (GPS 47P 0731355, 1436975)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
	2487673-22	2487673-23	2487673-24	2487673-25	2487673-26	2487673-27	2487673-28
Time	Aug 19, 2024	Aug 20, 2024	Aug 21, 2024	Aug 22, 2024	Aug 23, 2024	Aug 24, 2024	Aug 25, 2024
11:00 AM - 12:00 PM	0.002	0.003	0.004	0.002	0.003	0.002	0.004
12:00 PM - 01:00 PM	0.005	0.003	0.003	0.018	0.010	0.002	0.003
01:00 PM - 02:00 PM	0.008	0.003	0.002	0.004	0.018	0.003	0.002
02:00 PM - 03:00 PM	0.001	0.016	0.002	0.004	0.022	0.005	0.003
03:00 PM - 04:00 PM	0.003	0.007	0.002	0.011	0.010	0.004	0.002
04:00 PM - 05:00 PM	0.005	0.007	0.020	0.006	0.014	0.003	0.004
05:00 PM - 06:00 PM	0.008	0.005	0.002	0.011	0.017	0.005	0.002
06:00 PM - 07:00 PM	0.012	0.005	0.002	0.014	0.017	0.014	0.003
07:00 PM - 08:00 PM	0.008	0.004	0.002	0.020	0.010	0.007	0.002
08:00 PM - 09:00 PM	0.007	0.010	0.006	0.017	0.016	0.016	0.003
09:00 PM - 10:00 PM	0.007	0.010	0.012	0.015	0.030	0.031	0.006
10:00 PM - 11:00 PM	0.003	0.005	0.008	0.020	0.004	0.024	0.005
11:00 PM - 12:00 AM	0.002	0.003	0.005	0.012	0.006	0.014	0.009
12:00 AM - 01:00 AM	0.002	0.003	0.003	0.006	0.003	0.008	0.006
01:00 AM - 02:00 AM	0.003	0.003	0.003	0.004	0.008	0.006	0.004
02:00 AM - 03:00 AM	0.004	0.004	0.005	0.021	0.006	0.004	0.007
03:00 AM - 04:00 AM	0.004	0.008	0.004	0.032	0.025	0.008	0.005
04:00 AM - 05:00 AM	0.003	0.011	0.004	0.036	0.017	0.008	0.015
05:00 AM - 06:00 AM	0.015	0.018	0.012	0.041	0.053	0.005	0.020
06:00 AM - 07:00 AM	0.049	0.028	0.035	0.072	0.067	0.010	0.020
07:00 AM - 08:00 AM	0.031	0.028	0.013	0.023	0.043	0.008	0.010
08:00 AM - 09:00 AM	0.017	0.012	0.008	0.009	0.015	0.007	0.007
09:00 AM - 10:00 AM	0.012	0.008	0.004	0.005	0.006	0.006	0.005
10:00 AM - 11:00 AM	0.004	0.005	0.003	0.004	0.004	0.005	0.006
Average	0.009	0.009	0.007	0.017	0.018	0.009	0.006
1hr - Maximum	0.049	0.028	0.035	0.072	0.067	0.031	0.020
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : US EPA Method Part 50 App. F (Chemiluminescence)

Approved by

Orawan R.
Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487961
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3070564-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านกล้วย (Ban Phusai) (GPS 47P 0725767, 1434359)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
Time	2487961-1 Aug 19, 2024	2487961-2 Aug 20, 2024	2487961-3 Aug 21, 2024	2487961-4 Aug 22, 2024	2487961-5 Aug 23, 2024	2487961-6 Aug 24, 2024	2487961-7 Aug 25, 2024
10:00 AM - 11:00 AM	0.011	0.009	0.010	0.010	0.010	0.011	0.010
11:00 AM - 12:00 PM	0.010	0.009	0.010	0.010	0.010	0.011	0.010
12:00 PM - 01:00 PM	0.010	0.009	0.010	0.010	0.010	0.011	0.010
01:00 PM - 02:00 PM	0.010	0.009	0.010	0.010	0.010	0.011	0.010
02:00 PM - 03:00 PM	0.009	0.009	0.010	0.010	0.010	0.011	0.010
03:00 PM - 04:00 PM	0.010	0.009	0.010	0.010	0.010	0.011	0.011
04:00 PM - 05:00 PM	0.010	0.010	0.010	0.010	0.010	0.011	0.010
05:00 PM - 06:00 PM	0.010	0.009	0.010	0.010	0.010	0.011	0.010
06:00 PM - 07:00 PM	0.010	0.009	0.010	0.010	0.010	0.011	0.011
07:00 PM - 08:00 PM	0.009	0.009	0.010	0.010	0.010	0.011	0.010
08:00 PM - 09:00 PM	0.009	0.009	0.010	0.010	0.010	0.011	0.010
09:00 PM - 10:00 PM	0.009	0.009	0.010	0.010	0.010	0.011	0.010
10:00 PM - 11:00 PM	0.009	0.009	0.010	0.010	0.010	0.010	0.010
11:00 PM - 12:00 AM	0.009	0.009	0.010	0.010	0.011	0.011	0.010
12:00 AM - 01:00 AM	0.009	0.009	0.010	0.010	0.011	0.010	0.011
01:00 AM - 02:00 AM	0.009	0.009	0.010	0.010	0.011	0.010	0.011
02:00 AM - 03:00 AM	0.009	0.009	0.010	0.010	0.011	0.010	0.011
03:00 AM - 04:00 AM	0.009	0.009	0.010	0.010	0.011	0.010	0.011
04:00 AM - 05:00 AM	0.009	0.009	0.010	0.010	0.011	0.010	0.011
05:00 AM - 06:00 AM	0.009	0.009	0.010	0.010	0.011	0.010	0.011
06:00 AM - 07:00 AM	0.009	0.009	0.010	0.010	0.011	0.010	0.010
07:00 AM - 08:00 AM	0.009	0.010	0.010	0.010	0.011	0.011	0.011
08:00 AM - 09:00 AM	0.009	0.010	0.010	0.010	0.011	0.011	0.011
09:00 AM - 10:00 AM	0.009	0.010	0.010	0.010	0.011	0.010	0.011
Average	0.009	0.009	0.010	0.010	0.011	0.011	0.011
1hr - Maximum	0.011	0.010	0.010	0.010	0.011	0.011	0.011
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

Approved by

Orawan R.
Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487961
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3100132-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านกล้วย (Ban Huay Kai Nhow) (GPS 47P 0723848, 1430920)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
Time	2487961-8 Aug 19, 2024	2487961-9 Aug 20, 2024	2487961-10 Aug 21, 2024	2487961-11 Aug 22, 2024	2487961-12 Aug 23, 2024	2487961-13 Aug 24, 2024	2487961-14 Aug 25, 2024
09:00 AM - 10:00 AM	0.004	0.004	0.004	0.003	0.003	0.003	0.004
10:00 AM - 11:00 AM	0.004	0.004	0.004	0.003	0.003	0.003	0.004
11:00 AM - 12:00 PM	0.003	0.004	0.004	0.003	0.003	0.003	0.003
12:00 PM - 01:00 PM	0.004	0.004	0.004	0.003	0.003	0.003	0.003
01:00 PM - 02:00 PM	0.005	0.004	0.004	0.003	0.003	0.003	0.003
02:00 PM - 03:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
03:00 PM - 04:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
04:00 PM - 05:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
05:00 PM - 06:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
06:00 PM - 07:00 PM	0.005	0.004	0.003	0.003	0.003	0.003	0.003
07:00 PM - 08:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
08:00 PM - 09:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
09:00 PM - 10:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
10:00 PM - 11:00 PM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
11:00 PM - 12:00 AM	0.004	0.004	0.004	0.003	0.003	0.003	0.003
12:00 AM - 01:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
01:00 AM - 02:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
02:00 AM - 03:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
03:00 AM - 04:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
04:00 AM - 05:00 AM	0.004	0.003	0.003	0.003	0.003	0.003	0.003
05:00 AM - 06:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
06:00 AM - 07:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
07:00 AM - 08:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
08:00 AM - 09:00 AM	0.004	0.004	0.003	0.003	0.003	0.003	0.003
Average	0.004	0.004	0.003	0.003	0.003	0.003	0.003
1hr - Maximum	0.005	0.004	0.004	0.003	0.003	0.003	0.004
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

Approved by

Orawan R.
Orawan Rakyong
Scientist (3)

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S:\Reports_Air SOxNOx.rpt (2:37PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487961
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3100133-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านวังตาพ่อน (Ban Wang Tan Mhon) (GPS 47P 0734200, 1432165)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
Time	2487961-15 Aug 19, 2024	2487961-16 Aug 20, 2024	2487961-17 Aug 21, 2024	2487961-18 Aug 22, 2024	2487961-19 Aug 23, 2024	2487961-20 Aug 24, 2024	2487961-21 Aug 25, 2024
12:00 PM - 01:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
01:00 PM - 02:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
02:00 PM - 03:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
03:00 PM - 04:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
04:00 PM - 05:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
05:00 PM - 06:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
06:00 PM - 07:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
07:00 PM - 08:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
08:00 PM - 09:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
09:00 PM - 10:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
10:00 PM - 11:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
11:00 PM - 12:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
12:00 AM - 01:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
01:00 AM - 02:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
02:00 AM - 03:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
03:00 AM - 04:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
04:00 AM - 05:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
05:00 AM - 06:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
06:00 AM - 07:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
07:00 AM - 08:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
08:00 AM - 09:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
09:00 AM - 10:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
10:00 AM - 11:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
11:00 AM - 12:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Average	0.002	0.002	0.002	0.002	0.002	0.002	0.002
1hr - Maximum	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 2487961
Date Received : Aug 28, 2024
Date Reported : Sep 03, 2024
Report Number: 3100134-1

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านวังตาพ่อน (Ban Map Yang Porn) (GPS 47P 0731355, 1436975)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Aug 19, 2024 - Aug 26, 2024						
Measurement by	Santi Chaichana						
Time	2487961-22 Aug 19, 2024	2487961-23 Aug 20, 2024	2487961-24 Aug 21, 2024	2487961-25 Aug 22, 2024	2487961-26 Aug 23, 2024	2487961-27 Aug 24, 2024	2487961-28 Aug 25, 2024
11:00 AM - 12:00 PM	0.004	0.002	0.002	0.001	0.002	0.002	0.001
12:00 PM - 01:00 PM	0.004	0.002	0.002	0.001	0.002	0.001	0.001
01:00 PM - 02:00 PM	0.004	0.002	0.002	0.001	0.002	0.001	0.001
02:00 PM - 03:00 PM	0.004	0.002	0.002	0.002	0.002	0.002	0.002
03:00 PM - 04:00 PM	0.003	0.002	0.002	0.001	0.001	0.002	0.002
04:00 PM - 05:00 PM	0.003	0.002	0.001	0.002	0.002	0.002	0.002
05:00 PM - 06:00 PM	0.003	0.002	0.001	0.001	0.002	0.001	0.002
06:00 PM - 07:00 PM	0.003	0.002	0.001	0.001	0.001	0.002	0.001
07:00 PM - 08:00 PM	0.003	0.002	0.002	0.001	0.001	0.002	0.002
08:00 PM - 09:00 PM	0.003	0.002	0.002	0.001	0.002	0.002	0.002
09:00 PM - 10:00 PM	0.002	0.002	0.001	0.002	0.001	0.002	0.002
10:00 PM - 11:00 PM	0.002	0.002	0.002	0.001	0.002	0.002	0.002
11:00 PM - 12:00 AM	0.002	0.002	0.001	0.001	0.002	0.002	0.002
12:00 AM - 01:00 AM	0.002	0.001	0.001	0.001	0.002	0.002	0.002
01:00 AM - 02:00 AM	0.002	0.002	0.001	0.001	0.001	0.002	0.002
02:00 AM - 03:00 AM	0.002	0.002	0.001	0.001	0.002	0.002	0.002
03:00 AM - 04:00 AM	0.002	0.002	0.001	0.002	0.001	0.002	0.002
04:00 AM - 05:00 AM	0.002	0.002	0.001	0.002	0.002	0.002	0.002
05:00 AM - 06:00 AM	0.002	0.002	0.001	0.002	0.002	0.002	0.002
06:00 AM - 07:00 AM	0.002	0.002	0.001	0.002	0.002	0.002	0.002
07:00 AM - 08:00 AM	0.002	0.002	0.001	0.001	0.001	0.002	0.002
08:00 AM - 09:00 AM	0.002	0.002	0.001	0.002	0.001	0.002	0.002
09:00 AM - 10:00 AM	0.002	0.002	0.001	0.002	0.001	0.002	0.002
10:00 AM - 11:00 AM	0.002	0.002	0.001	0.001	0.002	0.002	0.002
Average	0.003	0.002	0.001	0.001	0.001	0.002	0.002
1hr - Maximum	0.004	0.002	0.002	0.002	0.002	0.002	0.002
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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S:\Reports_Air SOxNOx.rpt (2:38PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2487966

Date Received :Aug 28, 2024

Date Reported :Sep 02, 2024

Report Number :3070577-1

Page 1 of 2

Sample Number 2487966-1 to 7
Parameter Wind Speed / Wind Direction
Location บ้านภูไทร (Ban Phusai) (GPS 47P 0725767, 1434359)
Sampling Date Aug 19 - Aug 26, 2024
Sampling by Santi Chaichana

Time	Aug 19 - Aug 20, 2024			Aug 20 - Aug 21, 2024			Aug 21 - Aug 22, 2024			Aug 22 - Aug 23, 2024			Aug 23 - Aug 24, 2024			Aug 24 - Aug 25, 2024			Aug 25 - Aug 26, 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	1.1	226.0	SW	0.2	-	-	1.8	286.0	WNW	2.4	199.0	SSW	0.4	34.0	NE	2.6	192.0	SSW	0.9	262.0	W
11:00 AM - 12:00 PM	2.0	168.0	SSE	0.3	246.0	WSW	0.4	272.0	W	0.4	59.0	ENE	2.0	232.0	SW	1.0	320.0	NW	1.9	283.0	WNW
12:00 PM - 01:00 PM	1.3	210.0	SSW	1.4	318.0	NW	1.2	304.0	NW	0.1	-	-	0.8	52.0	NE	0.9	339.0	NNW	1.4	345.0	NNW
01:00 PM - 02:00 PM	1.2	209.0	SSW	1.8	164.0	SSE	0.6	268.0	W	0.2	-	-	1.2	13.0	NNE	1.2	336.0	NNW	0.4	303.0	WNW
02:00 PM - 03:00 PM	4.7	162.0	SSE	3.3	58.0	ENE	0.0	-	-	1.0	338.0	NNW	1.0	213.0	SSW	1.0	247.0	WSW	1.1	319.0	NW
03:00 PM - 04:00 PM	2.3	207.0	SSW	0.7	343.0	NNW	1.2	318.0	NW	0.7	213.0	SSW	0.6	202.0	SSW	1.0	193.0	SSW	0.4	281.0	W
04:00 PM - 05:00 PM	2.3	154.0	SSE	0.6	110.0	ESE	1.0	190.0	S	1.2	350.0	N	0.7	35.0	NE	1.2	152.0	SSE	0.3	272.0	W
05:00 PM - 06:00 PM	2.4	206.0	SSW	1.6	216.0	SW	0.1	-	-	0.5	341.0	NNW	1.2	120.0	ESE	1.0	208.0	SSW	0.0	-	-
06:00 PM - 07:00 PM	2.0	174.0	S	0.4	186.0	S	0.6	226.0	SW	0.8	113.0	ESE	0.5	300.0	WNW	0.5	212.0	SSW	0.0	-	-
07:00 PM - 08:00 PM	0.8	227.0	SW	0.5	154.0	SSE	0.5	227.0	SW	0.3	246.0	WSW	0.8	313.0	NW	0.9	259.0	W	0.0	-	-
08:00 PM - 09:00 PM	0.6	150.0	SSE	0.6	158.0	SSE	0.1	-	-	0.5	233.0	SW	0.4	0.0	N	0.4	259.0	W	0.3	121.0	ESE
09:00 PM - 10:00 PM	1.3	181.0	S	0.1	-	-	0.3	301.0	WNW	0.6	262.0	W	0.6	213.0	SSW	0.2	-	-	0.3	354.0	N
10:00 PM - 11:00 PM	1.0	211.0	SSW	0.5	249.0	WSW	0.4	300.0	WNW	0.4	229.0	SW	0.5	302.0	WNW	1.2	333.0	NNW	0.5	342.0	NNW
11:00 PM - 12:00 AM	0.0	-	-	0.3	259.0	W	0.1	-	-	0.3	244.0	WSW	0.3	242.0	WSW	0.3	-	-	0.2	-	-
12:00 AM - 01:00 AM	1.2	232.0	SW	0.0	-	-	0.2	-	-	0.8	278.0	W	0.0	-	-	0.6	303.0	WNW	0.6	0.0	N
01:00 AM - 02:00 AM	3.0	252.0	WSW	0.8	222.0	SW	0.8	234.0	SW	0.1	-	-	0.4	311.0	NW	0.4	337.0	NNW	0.4	359.0	N
02:00 AM - 03:00 AM	5.0	35.0	NE	0.2	-	-	0.1	-	-	0.2	-	-	0.2	-	-	0.3	-	-	0.8	12.0	NNE
03:00 AM - 04:00 AM	2.0	216.0	SW	0.6	266.0	W	0.2	-	-	0.5	325.0	NW	0.6	301.0	WNW	0.2	-	-	0.2	-	-
04:00 AM - 05:00 AM	1.0	325.0	NW	0.4	40.0	NE	0.6	277.0	W	0.4	326.0	NW	0.4	302.0	WNW	0.4	235.0	SW	0.1	-	-
05:00 AM - 06:00 AM	4.0	303.0	WNW	0.2	-	-	0.4	298.0	WNW	0.3	-	-	0.8	306.0	NW	0.1	-	-	1.9	350.0	N
06:00 AM - 07:00 AM	3.2	278.0	W	0.3	223.0	SW	0.8	306.0	NW	0.6	318.0	NW	0.5	345.0	NNW	0.6	261.0	W	0.4	187.0	S
07:00 AM - 08:00 AM	0.8	42.0	NE	0.1	-	-	0.5	146.0	SE	0.4	234.0	SW	0.5	69.0	ENE	0.0	-	-	0.5	225.0	SW
08:00 AM - 09:00 AM	1.0	43.0	NE	0.6	226.0	SW	2.3	170.0	S	0.2	-	-	0.7	114.0	ESE	0.5	341.0	NNW	2.0	316.0	NW
09:00 AM - 10:00 AM	1.1	347.0	NNW	0.9	240.0	WSW	0.0	-	-	0.7	334.0	NNW	1.3	229.0	SW	0.0	-	-	1.0	331.0	NNW

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jittranoit
Assistant General Manager

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7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

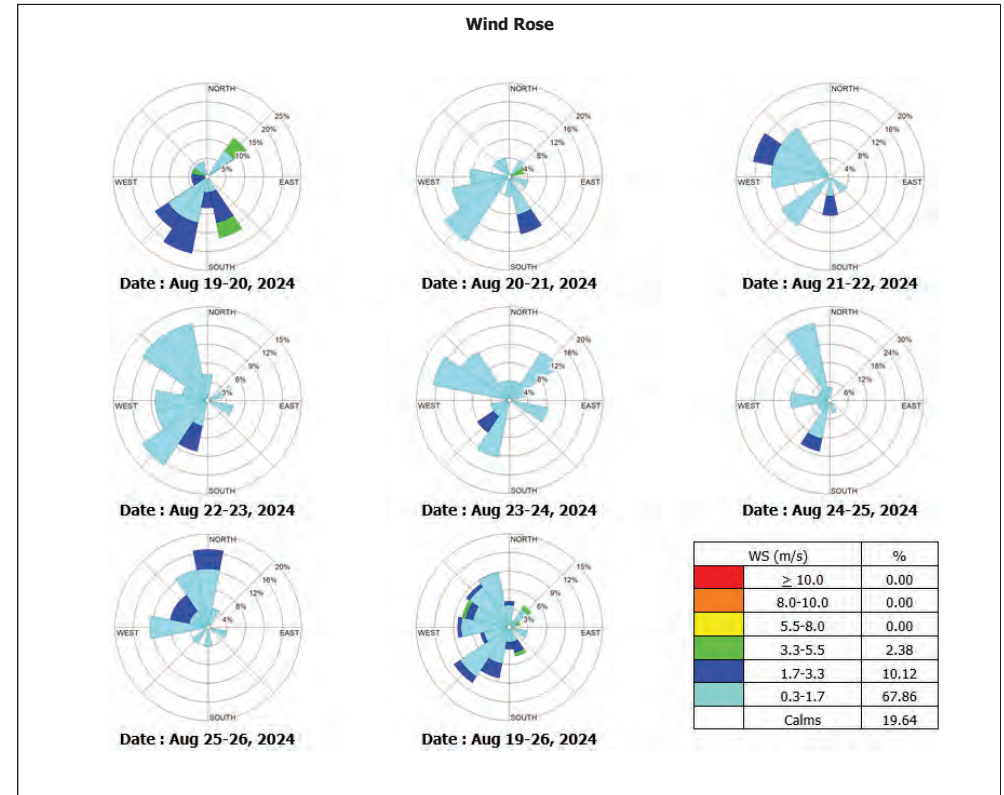
Lot ID: 2487966

Date Received :Aug 28, 2024

Date Reported :Sep 02, 2024

Report Number :3070577-1

Page 2 of 2



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Sarayuth Jittranoit
Assistant General Manager

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ภาคผนวก ค-3

คุณภาพน้ำทิ้ง



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2475228

Date Received : Jul 16, 2024

Date Reported : Jul 24, 2024

Report Number : 3041036-1

Page 1 of 1

Sample Number	2475228-1						
Sampled Date	Jul 16, 2024 1:05 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Jul 16, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	45.0	≤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	200	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	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	1650	≤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	11	≤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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

ทะเบียนเลขที่ ว-323-จ-9449

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-9442

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S:\Reports\All_GL\ rpt (6:27PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 2475228

Date Received : Jul 16, 2024

Date Reported : Jul 24, 2024

Report Number : 3041036-2

Page 1 of 1

Sample Number	2475228-1						
Sampled Date	Jul 16, 2024 1:05 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Jul 17, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok

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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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S:\Reports\All_GL\ rpt (6:49PM)



Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2475228

Date Received : Jul 16, 2024

Date Reported : Jul 24, 2024

Report Number : 3041036-3

Page 1 of 1

Sample Number	2475228-1						
Sampled Date	Jul 16, 2024 1:05 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Jul 16, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.002	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.4	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (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 : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

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

Approved by

Chonticha Subongkoch

Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488260

Date Received : Aug 06, 2024

Date Reported : Aug 14, 2024

Report Number : 3070988-1

Page 1 of 1

Sample Number	2488260-1						
Sampled Date	Aug 06, 2024 1:00 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Aug 06, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	17.9	≤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	79	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	6.7	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	1190	≤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	14	≤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 : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :

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Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9446

Approved by

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 2488260

Date Received : Aug 06, 2024

Date Reported : Aug 14, 2024

Report Number : 3070988-2

Page 1 of 1

Sample Number	2488260-1						
Sampled Date	Aug 06, 2024 1:00 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Aug 07, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok

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 : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Kardbundi Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :

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

Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Client : UACJ (Thailand) Co., Ltd.

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Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488260

Date Received : Aug 06, 2024

Date Reported : Aug 14, 2024

Report Number : 3070988-3

Page 1 of 1

Sample Number	2488260-1						
Sampled Date	Aug 06, 2024 1:00 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Aug 06, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.003	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.6	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (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 : Tanasit Wongsachai , Kardbundi Kitisupavanit

Remark :

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Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 24100707

Date Received : Sep 17, 2024

Date Reported : Sep 24, 2024

Report Number : 3097294-1

Page 1 of 1

Sample Number	24100707-1						
Sampled Date	Sep 17, 2024 1:17 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Sep 17, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	6.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	274	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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 : Phongthep Siththiloh ทะเบียนเลขที่ ว-323-จ-0023 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

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Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 24100707

Date Received : Sep 17, 2024

Date Reported : Sep 24, 2024

Report Number : 3097294-2

Page 1 of 1

Sample Number	24100707-1						
Sampled Date	Sep 17, 2024 1:17 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Sep 18, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok

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 : Phongthep Siththiloh ทะเบียนเลขที่ ว-323-จ-0023 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

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Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 24100707

Date Received : Sep 17, 2024

Date Reported : Sep 24, 2024

Report Number : 3097294-3

Page 1 of 1

Sample Number	24100707-1						
Sampled Date	Sep 17, 2024 1:17 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Sep 17, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.002	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-F (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 : Phongthep Sitthiloh , Pattarapol Sawangjaitam

Remark :

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

Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING

No.0042

Lot ID: 24113234

Date Received : Oct 15, 2024

Date Reported : Oct 21, 2024

Report Number : 3125320-1

Page 1 of 1

Sample Number	24113234-1						
Sampled Date	Oct 15, 2024 2:00 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Oct 15, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	29.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	86	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	608	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	32	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

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Technical Management

Chonticha S.

Chonticha Subongkoch
Scientist (3)

ทะเบียนเลขที่ ว-323-จ-0031

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 24113234

Date Received : Oct 15, 2024

Date Reported : Oct 22, 2024

Report Number : 3125320-2

Page 1 of 1

Sample Number	24113234-1						
Sampled Date	Oct 15, 2024 2:00 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Oct 16, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok

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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 24113234

Date Received : Oct 15, 2024

Date Reported : Oct 21, 2024

Report Number : 3125320-3

Page 1 of 1

Sample Number	24113234-1						
Sampled Date	Oct 15, 2024 2:00 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Oct 15, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.002	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.4	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-F (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 : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

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

Approved by

Chonticha

Chonticha Subongkoch
Scientist (3)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 24125850

Date Received : Nov 05, 2024

Date Reported : Nov 12, 2024

Report Number : 3153726-1

Page 1 of 1

Sample Number	24125850-1						
Sampled Date	Nov 05, 2024 1:08 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Nov 05, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	16.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	49	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	500	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 24125850

Date Received : Nov 05, 2024

Date Reported : Nov 12, 2024

Report Number : 3153726-2

Page 1 of 1

Sample Number	24125850-1						
Sampled Date	Nov 05, 2024 1:08 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Nov 06, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok

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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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

Technical Management

Savitree N.

Savitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 24125850

Date Received : Nov 05, 2024

Date Reported : Nov 12, 2024

Report Number : 3153726-3

Page 1 of 1

Sample Number	24125850-1						
Sampled Date	Nov 05, 2024 1:08 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Nov 05, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.003	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.6	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-F (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 : Wasan Kinunti , Samart Khumphlee

Remark :

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

Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 24136160

Date Received : Dec 17, 2024

Date Reported : Dec 24, 2024

Report Number : 3180500-1

Page 1 of 1

Sample Number	24136160-1						
Sampled Date	Dec 17, 2024 1:05 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Dec 17, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	12.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	53	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	300	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	32	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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 : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020

Remark :

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Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 24136160

Date Received : Dec 17, 2024

Date Reported : Dec 24, 2024

Report Number : 3180500-2

Page 1 of 1

Sample Number	24136160-1						
Sampled Date	Dec 17, 2024 1:05 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Dec 19, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok

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 : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020

Remark :

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Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 24136160

Date Received : Dec 17, 2024

Date Reported : Dec 24, 2024

Report Number : 3180500-3

Page 1 of 1

Sample Number	24136160-1						
Sampled Date	Dec 17, 2024 1:05 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit)						
Date Analysis Commenced	Dec 17, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.002	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.2	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-F (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 : Warunyoo Chimphalee

Remark :

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

Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2475230

Date Received : Jul 02, 2024

Date Reported : Jul 09, 2024

Report Number : 3041034-1

Page 1 of 1

Sample Number	2475230-1						
Sampled Date	Jul 02, 2024 1:17 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Jul 02, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤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	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	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	948	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤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 : Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Kardbundi Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :

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Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-9446

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 2475230

Date Received : Jul 02, 2024

Date Reported : Jul 09, 2024

Report Number : 3041034-2

Page 1 of 1

Sample Number	2475230-1						
Sampled Date	Jul 02, 2024 1:17 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Jul 04, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok

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 : Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Kardbundi Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :

- 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

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2475230

Date Received : Jul 02, 2024

Date Reported : Jul 09, 2024

Report Number : 3041034-3

Page 1 of 1

Sample Number	2475230-1						
Sampled Date	Jul 02, 2024 1:17 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Jul 02, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.001	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.4	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (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 : Nattawut Athomprommarat , Kardbundit Kitisupavanit

Remark :

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

Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 2488263

Date Received : Aug 06, 2024

Date Reported : Aug 14, 2024

Report Number : 3070997-1

Page 1 of 1

Sample Number	2488263-1						
Sampled Date	Aug 06, 2024 1:15 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Aug 06, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤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	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	6.7	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	326	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤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 : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Kardbundit Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :

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- 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

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-9442

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 2488263

Date Received : Aug 06, 2024

Date Reported : Aug 14, 2024

Report Number : 3070997-2

Page 1 of 1

Sample Number	2488263-1						
Sampled Date	Aug 06, 2024 1:15 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Aug 07, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok

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 : Tanasit Wongsachai ทะเบียนเลขที่ ว-323-จ-9460 , Kardbundi Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

Remark :

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

Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 2488263

Date Received : Aug 06, 2024

Date Reported : Aug 14, 2024

Report Number : 3070997-3

Page 1 of 1

Sample Number	2488263-1						
Sampled Date	Aug 06, 2024 1:15 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Aug 06, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.001	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.4	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (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 : Tanasit Wongsachai , Kardbundi Kitisupavanit

Remark :

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Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 24100708

Date Received : Sep 03, 2024

Date Reported : Sep 10, 2024

Report Number : 3097297-1

Page 1 of 1

Sample Number	24100708-1						
Sampled Date	Sep 03, 2024 1:18 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Sep 03, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤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	37	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	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 (on site) *		-	-	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	656	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤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 : Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Kardbundi Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

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Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 24100708

Date Received : Sep 03, 2024

Date Reported : Sep 10, 2024

Report Number : 3097297-2

Page 1 of 1

Sample Number	24100708-1						
Sampled Date	Sep 03, 2024 1:18 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Sep 04, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok

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 : Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Kardbundi Kitisupavanit ทะเบียนเลขที่ ว-204-จ-0001

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Technical Management

Chanatt L.

Chanattagarn Imchom
Section Head

ทะเบียนเลขที่ ว-204-จ-0008

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

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Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 24100708

Date Received : Sep 03, 2024

Date Reported : Sep 10, 2024

Report Number : 3097297-3

Page 1 of 1

Sample Number	24100708-1						
Sampled Date	Sep 03, 2024 1:18 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Sep 03, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.002	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (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 : Nattawut Athomprommarat , Kardbudit Kitisupavanit

Remark :

- LOD : Limit of Detection
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Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 24113235

Date Received : Oct 01, 2024

Date Reported : Oct 07, 2024

Report Number : 3125322-1

Page 1 of 1

Sample Number	24113235-1						
Sampled Date	Oct 01, 2024 1:20 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Oct 01, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	692	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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 : Nattawut Athomprommarat ทะเบียนเลขที่ ๖-323-๖-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

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Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 24113235

Date Received : Oct 01, 2024

Date Reported : Oct 08, 2024

Report Number : 3125322-2

Page 1 of 1

Sample Number	24113235-1						
Sampled Date	Oct 01, 2024 1:20 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Oct 03, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok

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 : Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Chanatt L.

Chanattagarn Imchom

Section Head

ทะเบียนเลขที่ ว-204-จ-0008

Approved by

Kanokkorn Anek

Kanokkorn Anek

Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 24113235

Date Received : Oct 01, 2024

Date Reported : Oct 07, 2024

Report Number : 3125322-3

Page 1 of 1

Sample Number	24113235-1						
Sampled Date	Oct 01, 2024 1:20 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Oct 01, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.0005	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	<0.2	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-F (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 : Nattawut Athomprommarat , Pattarapol Sawangjaitam

Remark :

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

Approved by

Photchana S.

Photchana Seeda

Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 24125852

Date Received : Nov 05, 2024

Date Reported : Nov 12, 2024

Report Number : 3153729-1

Page 1 of 1

Sample Number	24125852-1						
Sampled Date	Nov 05, 2024 1:20 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Nov 05, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	600	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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

Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0009

Lot ID: 24125852

Date Received : Nov 05, 2024

Date Reported : Nov 12, 2024

Report Number : 3153729-2

Page 1 of 1

Sample Number	24125852-1						
Sampled Date	Nov 05, 2024 1:20 PM						
Sample Description	Wastewater						
Location	บ่อกักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Nov 06, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok

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 : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :

Lot ID: 24125852

Date Received : Nov 05, 2024

Date Reported : Nov 12, 2024

Report Number : 3153729-3

Page 1 of 1

Sample Number	24125852-1						
Sampled Date	Nov 05, 2024 1:20 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Nov 05, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.0002	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	<0.2	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-F (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 : Wasan Kinunti , Samart Khumphlee

Remark :

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

Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.

7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring

Project Location :



TESTING
No.0042

Lot ID: 24136163

Date Received : Dec 03, 2024

Date Reported : Dec 11, 2024

Report Number : 3180502-1

Page 1 of 1

Sample Number	24136163-1						
Sampled Date	Dec 03, 2024 1:27 PM						
Sample Description	Wastewater						
Location	บ่อพักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Dec 03, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA/USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	36	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	692	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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 : Nattawut Athomprommarat ทะเบียนเลขที่ ๖-323-๖-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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Technical Management

Photchana S.

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Approved by

Dej Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :



TESTING
No. 0009
Lot ID: 24136163
Date Received : Dec 03, 2024
Date Reported : Dec 11, 2024
Report Number : 3180502-2

Page 1 of 1

Sample Number	24136163-1						
Sampled Date	Dec 03, 2024 1:27 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Dec 04, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA/USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok

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 : Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : UACJ (Thailand) Co., Ltd.
7/352 Moo 6, Amata City Industrial Estate, T. Mabyangporn, A. Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring
Project Location :

Lot ID: 24136163

Date Received : Dec 03, 2024

Date Reported : Dec 11, 2024

Report Number : 3180502-3

Page 1 of 1

Sample Number	24136163-1						
Sampled Date	Dec 03, 2024 1:27 PM						
Sample Description	Wastewater						
Location	บ่อฟักน้ำทิ้งของโครงการ (Sum Pit 2)						
Date Analysis Commenced	Dec 03, 2024						
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA/USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Flow rate	m3/s	-	-	0.0005	No Standard	Flow meter	Rayong
Fluoride as F	mg/L	0.06	0.2	0.2	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-F (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 : Nattawut Athomprommarat , Pattarapol Sawangjaitam

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Approved by

Photchana S.

Photchana Seeda
Scientist (4)

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