

ภาคผนวก ค

ใบรับรองผลการวิเคราะห์

คุณภาพอากาศในบรรยากาศ



Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332373

Date Received : May 02, 2023
Date Reported : May 09, 2023
Report Number: 2601941-1

Page 1 of 1

Sample Description Air Quality
Location นนทบุรี
Date Analysis Commenced May 03, 2023
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)
2332373-1	Apr 22 - Apr 23, 2023	0.080	0.071	756	33
2332373-2	Apr 23 - Apr 24, 2023	0.067	0.052	756	33
2332373-3	Apr 24 - Apr 25, 2023	0.052	0.044	756	32
2332373-4	Apr 25 - Apr 26, 2023	0.064	0.044	756	33
2332373-5	Apr 26 - Apr 27, 2023	0.058	0.048	756	31
2332373-6	Apr 27 - Apr 28, 2023	0.044	0.034	756	33
2332373-7	Apr 28 - Apr 29, 2023	0.049	0.040	756	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 : Anuwet Tema

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 : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332374

Date Received : May 02, 2023
Date Reported : May 09, 2023
Report Number: 2601940-1

Page 1 of 1

Sample Description	Air Quality
Location	เขตนครมาบตาพุด
Date Analysis Commenced	May 03, 2023
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)
2332374-1	Apr 22 - Apr 23, 2023	0.105	0.062	756	33
2332374-2	Apr 23 - Apr 24, 2023	0.063	0.032	756	33
2332374-3	Apr 24 - Apr 25, 2023	0.099	0.038	756	32
2332374-4	Apr 25 - Apr 26, 2023	0.084	0.028	756	33
2332374-5	Apr 26 - Apr 27, 2023	0.066	0.036	756	31
2332374-6	Apr 27 - Apr 28, 2023	0.059	0.029	756	33
2332374-7	Apr 28 - Apr 29, 2023	0.058	0.027	756	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 : Anuwet Tema

Remark :

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332375

Date Received : May 02, 2023
Date Reported : May 09, 2023
Report Number: 2601939-1

Page 1 of 1

Sample Description	Air Quality
Location	บ้านเนินพยอม
Date Analysis Commenced	May 03, 2023
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)
2332375-1	Apr 22 - Apr 23, 2023	0.063	0.043	756	33
2332375-2	Apr 23 - Apr 24, 2023	0.050	0.035	756	33
2332375-3	Apr 24 - Apr 25, 2023	0.063	0.035	756	32
2332375-4	Apr 25 - Apr 26, 2023	0.077	0.031	756	33
2332375-5	Apr 26 - Apr 27, 2023	0.038	0.024	756	31
2332375-6	Apr 27 - Apr 28, 2023	0.056	0.023	756	33
2332375-7	Apr 28 - Apr 29, 2023	0.054	0.021	756	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 : Anuwet Tema

Remark :

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Analysis / Test Report

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID : 2332355

Date Received : May 02, 2023

Date Reported : May 09, 2023

Report Number : 2601944-1

Page 1 of 2

Sample Number : 2332355-1 to 7
Parameter : Wind Speed / Wind Direction
Location : นนทบุรี
Sampling Date : Apr 22 - Apr 29, 2023
Sampling by : Anuwet Tema

Time	Apr 22 - Apr 23, 2023			Apr 23 - Apr 24, 2023			Apr 24 - Apr 25, 2023			Apr 25 - Apr 26, 2023			Apr 26 - Apr 27, 2023			Apr 27 - Apr 28, 2023			Apr 28 - Apr 29, 2023		
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
10:00 AM - 11:00 AM	0.4	91.0	E	0.9	91.0	E	0.4	128.0	SE	2.9	136.0	SE	0.2	-	-	0.6	243.0	WSW	0.1	-	-
11:00 AM - 12:00 PM	1.0	91.0	E	1.2	75.0	ENE	0.6	156.0	SSE	2.6	109.0	ESE	1.2	4.0	N	1.4	150.0	SSE	0.3	115.0	ESE
12:00 PM - 01:00 PM	1.2	91.0	E	1.6	91.0	E	1.2	216.0	SW	2.0	182.0	S	0.7	14.0	NNE	1.7	120.0	ESE	0.2	-	-
01:00 PM - 02:00 PM	1.3	145.0	SE	1.2	75.0	ENE	0.9	120.0	ESE	0.2	-	-	1.0	28.0	NNE	1.2	100.0	E	0.8	239.0	WSW
02:00 PM - 03:00 PM	1.1	50.0	NE	1.4	91.0	E	1.0	163.0	SSE	1.2	146.0	SE	0.2	-	-	0.9	126.0	SE	0.6	301.0	WNW
03:00 PM - 04:00 PM	0.9	75.0	ENE	0.9	156.0	SSE	0.5	40.0	NE	0.9	230.0	SW	0.6	117.0	ESE	1.4	124.0	SE	1.2	24.0	NNE
04:00 PM - 05:00 PM	0.9	75.0	ENE	0.7	156.0	SSE	1.9	285.0	WNW	0.0	-	-	0.4	65.0	ENE	1.0	131.0	SE	0.1	-	-
05:00 PM - 06:00 PM	0.6	75.0	ENE	1.3	156.0	SSE	1.4	292.0	WNW	1.5	328.0	NNW	0.8	13.0	NNE	0.9	87.0	E	1.0	137.0	SE
06:00 PM - 07:00 PM	0.3	300.0	WNW	0.6	156.0	SSE	0.7	261.0	W	2.1	235.0	SW	0.4	305.0	NW	0.6	174.0	S	1.3	182.0	S
07:00 PM - 08:00 PM	0.5	75.0	ENE	0.4	91.0	E	1.0	115.0	ESE	0.4	60.0	ENE	0.4	30.0	NNE	0.2	-	-	0.7	114.0	ESE
08:00 PM - 09:00 PM	0.2	-	-	0.2	-	-	0.3	49.0	NE	1.1	130.0	SE	0.1	-	-	0.5	46.0	NE	0.4	53.0	NE
09:00 PM - 10:00 PM	0.2	-	-	0.6	50.0	NE	0.4	85.0	E	0.6	106.0	ESE	1.1	301.0	WNW	1.1	103.0	ESE	0.9	111.0	ESE
10:00 PM - 11:00 PM	0.5	22.0	NNE	0.7	75.0	ENE	0.5	74.0	ENE	0.1	-	-	0.8	16.0	NNE	0.9	233.0	SW	0.4	134.0	SE
11:00 PM - 12:00 AM	0.3	50.0	NE	0.6	22.0	NNE	1.0	16.0	NNE	0.3	67.0	ENE	0.9	17.0	NNE	1.0	63.0	ENE	0.3	238.0	WSW
12:00 AM - 01:00 AM	0.6	50.0	NE	0.9	22.0	NNE	0.6	72.0	ENE	1.1	108.0	ESE	0.6	17.0	NNE	0.5	115.0	ESE	0.4	157.0	SSE
01:00 AM - 02:00 AM	0.5	22.0	NNE	1.1	75.0	ENE	0.8	359.0	N	1.6	4.0	N	1.1	147.0	SSE	0.4	162.0	SSE	0.6	117.0	ESE
02:00 AM - 03:00 AM	0.4	50.0	NE	1.4	75.0	ENE	0.9	86.0	E	0.3	292.0	WNW	1.0	346.0	NNW	0.8	210.0	SSW	8.0	192.0	SSW
03:00 AM - 04:00 AM	0.3	50.0	NE	1.2	50.0	NE	0.4	33.0	NNE	1.0	116.0	ESE	0.8	283.0	WNW	1.1	326.0	NW	1.1	170.0	S
04:00 AM - 05:00 AM	0.9	75.0	ENE	1.4	22.0	NNE	0.3	58.0	ENE	1.0	341.0	NNW	0.5	274.0	W	0.2	-	-	0.3	126.0	SE
05:00 AM - 06:00 AM	1.1	50.0	NE	0.7	50.0	NE	0.4	335.0	NNW	0.9	112.0	ESE	0.7	4.0	N	0.9	62.0	ENE	0.7	129.0	SE
06:00 AM - 07:00 AM	1.0	75.0	ENE	1.6	50.0	NE	0.9	339.0	NNW	1.2	78.0	ENE	0.2	-	-	0.4	1.0	N	0.8	110.0	ESE
07:00 AM - 08:00 AM	0.8	50.0	NE	0.4	50.0	NE	0.7	67.0	ENE	0.4	56.0	NE	0.1	-	-	0.6	59.0	ENE	0.6	126.0	SE
08:00 AM - 09:00 AM	1.2	75.0	ENE	1.0	75.0	ENE	1.1	271.0	W	0.7	56.0	NE	0.1	-	-	0.5	221.0	SW	0.5	282.0	WNW
09:00 AM - 10:00 AM	1.0	91.0	E	1.1	75.0	ENE	2.4	208.0	SSW	0.9	104.0	ESE	0.4	213.0	SSW	0.2	-	-	0.2	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittrantont
Assistant General Manager



Analysis / Test Report

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID : 2332355

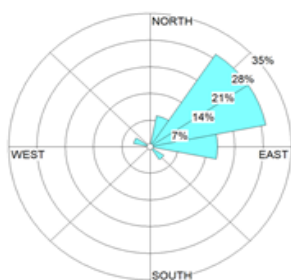
Date Received : May 02, 2023

Date Reported : May 09, 2023

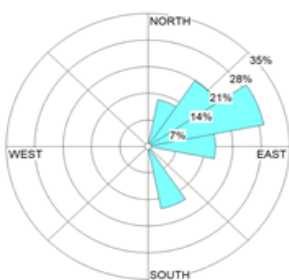
Report Number : 2601944-1

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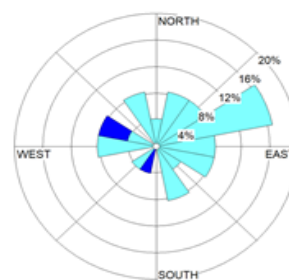
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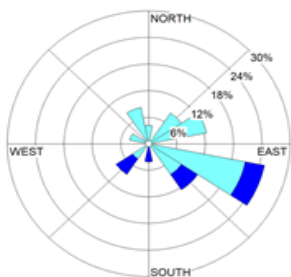
Date : Apr 22-23, 2023



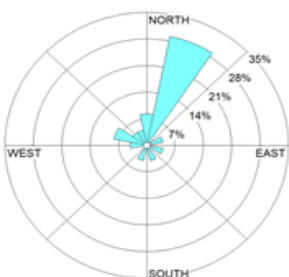
Date : Apr 23-24, 2023



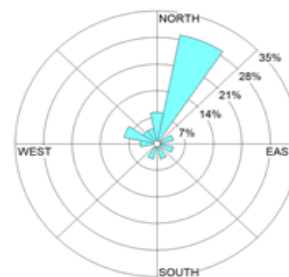
Date : Apr 24-25, 2023



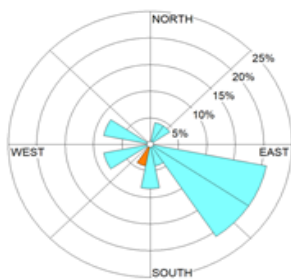
Date : Apr 25-26, 2023



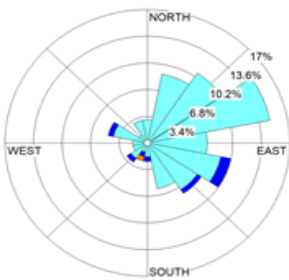
Date : Apr 26-27, 2023



Date : Apr 27-28, 2023



Date : Apr 28-29, 2023



Date : Apr 22-29, 2023

	WS(m/s)	%
	≥ 10.0	0.00
	8.0-10.0	0.60
	5.5-8.0	0.00
	3.3-5.5	0.00
	1.7-3.3	4.16
	0.3-1.7	83.93
	Calms	11.31

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Approved by

Sarayuth Jitranont
Assistant General Manager



Analysis / Test Report

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID : 2332376

Date Received : May 02, 2023

Date Reported : May 09, 2023

Report Number : 2601943-1

Page 1 of 2

Sample Number : 2332376-1 to 7
Parameter : Wind Speed / Wind Direction
Location : บ้านนาหวาย
Sampling Date : Apr 22 - Apr 29, 2023
Sampling by : Anuwet Tema

Time	Apr 22 - Apr 23, 2023			Apr 23 - Apr 24, 2023			Apr 24 - Apr 25, 2023			Apr 25 - Apr 26, 2023			Apr 26 - Apr 27, 2023			Apr 27 - Apr 28, 2023			Apr 28 - Apr 29, 2023		
	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)	
11:00 AM - 12:00 PM	1.6	164.0	SSE	2.2	185.0	S	0.2	-	-	1.1	189.0	S	0.9	98.0	E	0.2	-	-	0.8	243.0	WSW
12:00 PM - 01:00 PM	2.0	176.0	S	1.8	184.0	S	0.4	188.0	S	0.4	193.0	SSW	1.1	0.0	N	1.0	176.0	S	0.4	295.0	WNW
01:00 PM - 02:00 PM	1.3	187.0	S	2.2	174.0	S	0.8	320.0	NW	0.7	249.0	WSW	0.6	51.0	NE	0.6	179.0	S	0.4	253.0	WSW
02:00 PM - 03:00 PM	1.6	173.0	S	1.2	165.0	SSE	0.6	283.0	WNW	0.6	249.0	WSW	0.6	74.0	ENE	0.7	177.0	S	0.1	-	-
03:00 PM - 04:00 PM	1.4	117.0	ESE	2.6	116.0	ESE	0.7	174.0	S	1.1	252.0	WSW	0.7	125.0	SE	0.8	204.0	SSW	0.3	40.0	NE
04:00 PM - 05:00 PM	1.6	169.0	S	1.4	143.0	SE	0.9	87.0	E	1.0	238.0	WSW	1.2	84.0	E	0.4	271.0	W	1.2	208.0	SSW
05:00 PM - 06:00 PM	2.0	168.0	SSE	1.8	168.0	SSE	0.8	48.0	NE	0.9	278.0	W	1.6	35.0	NE	0.7	240.0	WSW	1.1	178.0	S
06:00 PM - 07:00 PM	1.9	153.0	SSE	1.6	170.0	S	1.1	275.0	W	0.3	303.0	WNW	1.3	359.0	N	0.6	261.0	W	0.1	-	-
07:00 PM - 08:00 PM	1.4	206.0	SSW	1.5	189.0	S	0.5	113.0	ESE	0.5	130.0	SE	0.4	10.0	N	1.1	309.0	NW	0.6	174.0	S
08:00 PM - 09:00 PM	2.0	170.0	S	0.9	170.0	S	0.7	111.0	ESE	0.4	174.0	S	0.7	74.0	ENE	1.2	169.0	S	0.4	154.0	SSE
09:00 PM - 10:00 PM	0.2	-	-	1.0	177.0	S	1.0	106.0	ESE	0.7	293.0	WNW	1.1	19.0	NNE	0.8	204.0	SSW	0.8	176.0	S
10:00 PM - 11:00 PM	0.4	179.0	S	1.5	207.0	SSW	1.1	63.0	ENE	0.3	128.0	SE	0.6	0.0	N	0.6	158.0	SSE	0.4	168.0	SSE
11:00 PM - 12:00 AM	1.0	159.0	SSE	1.5	196.0	SSW	0.9	3.0	N	0.8	193.0	SSW	0.7	359.0	N	0.7	152.0	SSE	0.9	202.0	SSW
12:00 AM - 01:00 AM	1.3	193.0	SSW	1.1	246.0	WSW	0.6	350.0	N	1.0	106.0	ESE	0.5	359.0	N	0.4	180.0	S	0.6	227.0	SW
01:00 AM - 02:00 AM	2.2	177.0	S	2.8	259.0	W	0.7	58.0	ENE	0.9	105.0	ESE	0.7	346.0	NNW	0.9	204.0	SSW	0.9	277.0	W
02:00 AM - 03:00 AM	1.5	161.0	SSE	1.0	236.0	SW	1.1	348.0	NNW	1.0	345.0	NNW	0.9	349.0	N	1.0	291.0	WNW	0.5	268.0	W
03:00 AM - 04:00 AM	1.6	142.0	SE	0.2	-	-	1.6	129.0	SE	1.3	85.0	E	1.5	359.0	N	0.6	280.0	W	0.4	255.0	WSW
04:00 AM - 05:00 AM	2.5	208.0	SSW	0.3	86.0	E	1.7	92.0	E	1.4	83.0	E	1.2	358.0	N	0.5	69.0	ENE	1.1	213.0	SSW
05:00 AM - 06:00 AM	0.3	290.0	WNW	0.6	90.0	E	0.5	356.0	N	0.7	68.0	ENE	1.1	50.0	NE	1.0	76.0	ENE	0.4	187.0	S
06:00 AM - 07:00 AM	2.1	255.0	WSW	1.2	49.0	NE	0.6	359.0	N	0.9	58.0	ENE	1.4	357.0	N	1.2	359.0	N	1.1	189.0	S
07:00 AM - 08:00 AM	1.6	276.0	W	1.0	359.0	N	1.6	354.0	N	1.1	68.0	ENE	0.8	45.0	NE	0.7	6.0	N	0.9	343.0	NNW
08:00 AM - 09:00 AM	2.7	185.0	S	0.9	340.0	NNW	0.9	54.0	NE	0.6	97.0	E	0.4	97.0	E	0.6	56.0	NE	0.7	351.0	N
09:00 AM - 10:00 AM	2.8	189.0	S	0.6	301.0	WNW	0.3	262.0	W	0.3	105.0	ESE	0.3	97.0	E	1.2	256.0	WSW	1.2	10.0	N
10:00 AM - 11:00 AM	2.5	211.0	SSW	0.5	225.0	SW	1.3	180.0	S	0.4	151.0	SSE	0.5	53.0	NE	1.4	269.0	W	0.9	18.0	NNE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittrantont
Assistant General Manager



Analysis / Test Report

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID : 2332376

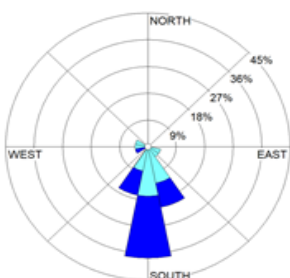
Date Received : May 02, 2023

Date Reported : May 09, 2023

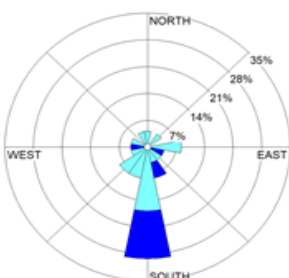
Report Number : 2601943-1

Page 2 of 2

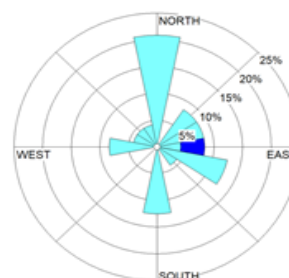
Wind Rose



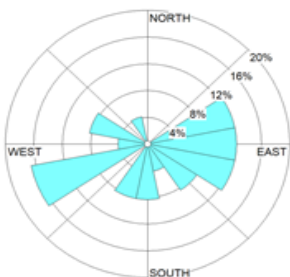
Date : Apr 22-23, 2023



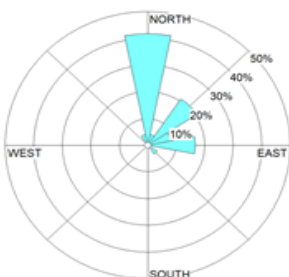
Date : Apr 23-24, 2023



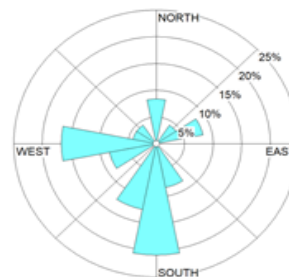
Date : Apr 24-25, 2023



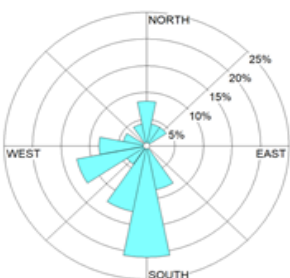
Date : Apr 25-26, 2023



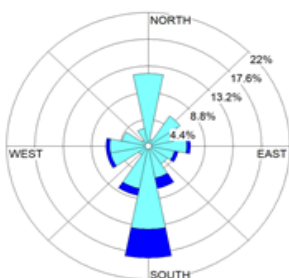
Date : Apr 26-27, 2023



Date : Apr 27-28, 2023



Date : Apr 28-29, 2023



Date : Apr 22-29, 2023

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	10.12
0.3-1.7	86.31
Calms	3.57

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Approved by

Sarayuth Jitranont
Assistant General Manager



Analysis / Test Report

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID : 2332377

Date Received : May 02, 2023

Date Reported : May 09, 2023

Report Number : 2601942-1

Page 1 of 2

Sample Number : 2332377-1 to 7
Parameter : Wind Speed / Wind Direction
Location : บ้านเนินพยอม
Sampling Date : Apr 22 - Apr 29, 2023
Sampling by : Anuwet Tema

Time	Apr 22 - Apr 23, 2023			Apr 23 - Apr 24, 2023			Apr 24 - Apr 25, 2023			Apr 25 - Apr 26, 2023			Apr 26 - Apr 27, 2023			Apr 27 - Apr 28, 2023			Apr 28 - Apr 29, 2023		
	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)	
09:00 AM - 10:00 AM	1.4	180.0	S	2.2	207.0	SSW	2.0	19.0	NNE	0.5	155.0	SSE	2.5	80.0	E	0.3	63.0	ENE	0.2	-	-
10:00 AM - 11:00 AM	1.2	176.0	S	1.0	184.0	S	0.5	56.0	NE	1.0	230.0	SW	1.5	222.0	SW	0.9	219.0	SW	1.2	236.0	SW
11:00 AM - 12:00 PM	1.3	188.0	S	2.1	178.0	S	1.0	221.0	SW	1.2	206.0	SSW	0.9	204.0	SSW	2.0	188.0	S	0.7	157.0	SSE
12:00 PM - 01:00 PM	1.9	195.0	SSW	2.1	229.0	SW	0.8	187.0	S	2.3	255.0	WSW	0.4	73.0	ENE	1.0	161.0	SSE	1.7	199.0	SSW
01:00 PM - 02:00 PM	3.3	217.0	SW	1.8	221.0	SW	0.4	16.0	NNE	1.1	217.0	SW	0.3	39.0	NE	1.5	263.0	W	1.2	150.0	SSE
02:00 PM - 03:00 PM	3.2	207.0	SSW	2.0	208.0	SSW	2.0	235.0	SW	2.8	221.0	SW	0.1	-	-	1.6	237.0	WSW	0.9	23.0	NNE
03:00 PM - 04:00 PM	2.6	201.0	SSW	2.2	185.0	S	0.7	63.0	ENE	1.1	250.0	WSW	0.2	-	-	1.9	225.0	SW	0.4	11.0	N
04:00 PM - 05:00 PM	0.5	204.0	SSW	2.2	187.0	S	1.7	114.0	ESE	2.5	254.0	WSW	0.4	200.0	SSW	1.3	238.0	WSW	0.6	141.0	SE
05:00 PM - 06:00 PM	1.7	210.0	SSW	2.5	226.0	SW	0.1	-	-	0.5	113.0	ESE	0.1	-	-	2.3	168.0	SSE	1.1	214.0	SW
06:00 PM - 07:00 PM	2.1	199.0	SSW	1.7	130.0	SE	0.3	23.0	NNE	2.1	40.0	NE	0.1	-	-	1.4	184.0	S	1.2	125.0	SE
07:00 PM - 08:00 PM	1.7	191.0	S	1.3	188.0	S	0.4	43.0	NE	1.2	197.0	SSW	0.3	24.0	NNE	0.8	222.0	SW	0.9	199.0	SSW
08:00 PM - 09:00 PM	0.9	201.0	SSW	0.3	166.0	SSE	0.6	32.0	NNE	1.3	35.0	NE	1.5	4.0	N	0.8	217.0	SW	0.7	105.0	ESE
09:00 PM - 10:00 PM	0.6	174.0	S	1.6	193.0	SSW	0.2	-	-	0.9	186.0	S	0.6	22.0	NNE	0.2	-	-	1.2	32.0	NNE
10:00 PM - 11:00 PM	0.4	137.0	SE	0.1	-	-	0.2	-	-	0.7	185.0	S	1.1	23.0	NNE	0.1	-	-	1.0	153.0	SSE
11:00 PM - 12:00 AM	0.4	212.0	SSW	1.2	189.0	S	0.4	27.0	NNE	0.8	192.0	SSW	1.9	27.0	NNE	0.3	67.0	ENE	0.9	195.0	SSW
12:00 AM - 01:00 AM	0.7	185.0	S	1.3	189.0	S	0.3	41.0	NE	0.4	178.0	S	1.2	28.0	NNE	0.5	45.0	NE	2.5	236.0	SW
01:00 AM - 02:00 AM	1.0	194.0	SSW	0.2	-	-	0.3	45.0	NE	0.9	45.0	NE	0.1	-	-	0.2	-	-	0.3	164.0	SSE
02:00 AM - 03:00 AM	1.2	199.0	SSW	0.1	-	-	0.1	-	-	1.1	45.0	NE	1.0	31.0	NNE	0.4	192.0	SSW	0.1	-	-
03:00 AM - 04:00 AM	0.3	131.0	SE	0.6	186.0	S	0.3	71.0	ENE	2.7	18.0	NNE	0.9	33.0	NNE	1.1	75.0	ENE	1.0	203.0	SSW
04:00 AM - 05:00 AM	0.2	-	-	0.1	-	-	0.2	-	-	0.5	29.0	NNE	0.4	28.0	NNE	1.0	20.0	NNE	1.2	158.0	SSE
05:00 AM - 06:00 AM	0.2	-	-	0.9	14.0	NNE	0.8	40.0	NE	0.6	97.0	E	0.5	36.0	NE	0.8	67.0	ENE	1.2	190.0	S
06:00 AM - 07:00 AM	0.1	-	-	0.5	21.0	NNE	0.6	41.0	NE	0.4	64.0	ENE	0.3	20.0	NNE	0.7	12.0	NNE	0.5	202.0	SSW
07:00 AM - 08:00 AM	0.4	188.0	S	1.1	21.0	NNE	1.2	31.0	NNE	1.5	37.0	NE	1.3	26.0	NNE	0.3	207.0	SSW	0.7	90.0	E
08:00 AM - 09:00 AM	3.5	191.0	S	0.6	25.0	NNE	1.3	14.0	NNE	1.2	20.0	NNE	1.4	10.0	N	0.6	50.0	NE	0.9	249.0	WSW

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jittrantont
Assistant General Manager



Analysis / Test Report

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID : 2332377

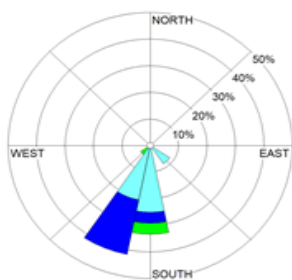
Date Received : May 02, 2023

Date Reported : May 09, 2023

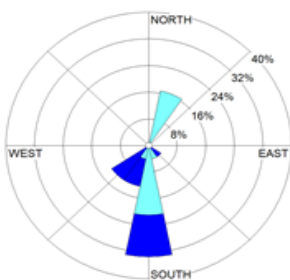
Report Number : 2601942-1

Page 2 of 2

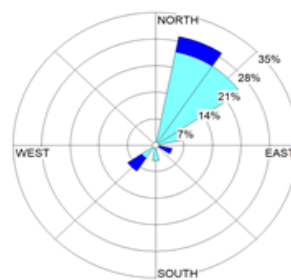
Wind Rose



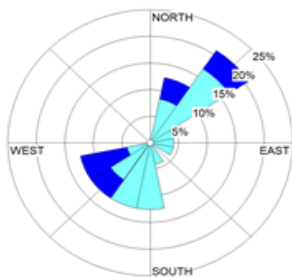
Date : Apr 22-23, 2023



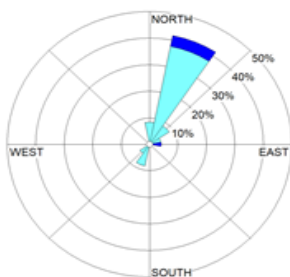
Date : Apr 23-24, 2023



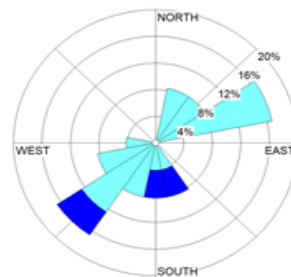
Date : Apr 24-25, 2023



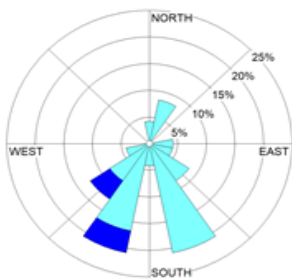
Date : Apr 25-26, 2023



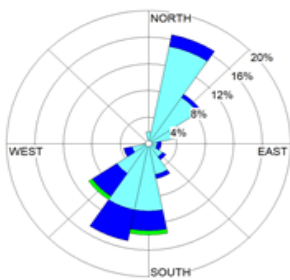
Date : Apr 26-27, 2023



Date : Apr 27-28, 2023



Date : Apr 28-29, 2023



Date : Apr 22-29, 2023

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	1.18
1.7-3.3	17.86
0.3-1.7	67.86
Calms	13.10

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Approved by

Sarayuth Jitranont
Assistant General Manager

คุณภาพอากาศจากปล่องระบายอากาศ



Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332353

Date Received : Apr 27, 2023
Date Reported : May 08, 2023
Report Number: 2601956-1

Page 1 of 2

Sample Number 2332353-1
Sampled Date Apr 27, 2023
Sample Description Emission from Stationary Source
Location Turbulence dust collector
Date Analysis Commenced May 02, 2023
Condition of Sample Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.80	m	Oxygen	20.9	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	35.0	°C	Gas Velocity	9.2	m/s
Type of Fuel	-		Moisture	2.94	%	Flow Rate (Actual O2)	15489	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate	09:30 AM - 10:12 AM	mg/m3	-	0.5	<0.5	400	60	United States Environmental Protection Agency, EPA Method 5	Rayong

Guideline : Guideline(1) : 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)
Guideline(2) : Environmental Impact Assessment Report of THAI MMA Co., Ltd.

Technical Management

Thanita K.

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

Approved by

D. Chamon.

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

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ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332353

Date Received : Apr 27, 2023
Date Reported : May 08, 2023
Report Number: 2601956-1

Page 2 of 2

Sample Number 2332353-1
Sampled Date Apr 27, 2023
Sample Description Emission from Stationary Source
Location Turbulence dust collector
Date Analysis Commenced May 02, 2023
Condition of Sample Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.80	m	Oxygen	20.9	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	35.0	°C	Gas Velocity	9.2	m/s
Type of Fuel	-		Moisture	2.94	%	Flow Rate (Actual O2)	15489	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	09:30 AM - 10:12 AM	g/s	-	-	<0.002	-	0.22	Calculated	Rayong

Guideline : Guideline(1) : 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)
Guideline(2) : Environmental Impact Assessment Report of THAI MMA Co., Ltd.

Sampled By : Sathapron Thakarw

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.

Technical Management

Thanita K.

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

Approved by

D. Changchon

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

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332380

Date Received : Apr 27, 2023
Date Reported : May 08, 2023
Report Number: 2601962-1

Page 1 of 1

Sample Number 2332380-1
Sampled Date Apr 27, 2023
Sample Description Emission from Stationary Source
Location ปล่อง Carbon Absorber
Date Analysis Commenced Apr 28, 2023
Condition of Sample Extracted into one 10-L air sampling bag

Stack Description

Ambient Pressure	755	mmHg	Diameter	0.15	m	Oxygen	20.9	%
Ambient Temperature	35.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	28.0	°C	Gas Velocity	12.3	m/s
Type of Fuel	-		Moisture	6.19	%	Flow Rate (Actual O2)	721	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total VOCs as Propane	09:40 AM - 09:50 AM	ppm	-	1.0	19.2	United States Environmental Protection Agency, EPA Method 25A	Bangkok

Sampled By : Jakkarin Manwicha

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 : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332381

Date Received : Apr 27, 2023
Date Reported : May 16, 2023
Report Number: 2601960-1

Page 1 of 2

Sample Number 2332381-1
Sampled Date Apr 27, 2023
Sample Description Emission from Stationary Source
Location Main Stack
Date Analysis Commenced Apr 28, 2023
Condition of Sample Extracted into two sorbent tubes, refrigerated

Stack Description

Ambient Pressure	755	mmHg	Diameter	1.60 x 1.60	m	Oxygen	20.9	%
Ambient Temperature	35.0	°C	Shape	Square		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	25.0	°C	Gas Velocity	4.4	m/s
Type of Fuel	-		Moisture	7.81	%	Flow Rate (Actual O2)	37283	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Butyl acrylate	10:30 AM - 10:45 AM	mg/m3	-	1.0	<1.0	39	United States Environmental Protection Agency, EPA Method 18	Bangkok
Methyl Methacrylate	10:30 AM - 10:45 AM	mg/m3	-	1.0	<1.0	520	United States Environmental Protection Agency, EPA Method 18	Bangkok

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332381

Date Received : Apr 27, 2023
Date Reported : May 16, 2023
Report Number: 2601960-1

Page 2 of 2

Sample Number 2332381-1
Sampled Date Apr 27, 2023
Sample Description Emission from Stationary Source
Location Main Stack
Date Analysis Commenced Apr 28, 2023
Condition of Sample Extracted into two sorbent tubes, refrigerated

Stack Description

Ambient Pressure	755	mmHg	Diameter	1.60 x 1.60	m	Oxygen	20.9	%
Ambient Temperature	35.0	°C	Shape	Square		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	25.0	°C	Gas Velocity	4.4	m/s
Type of Fuel	-		Moisture	7.81	%	Flow Rate (Actual O2)	37283	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline Limit	Method	Testing Location
Air Testing								
Butyl acrylate	10:30 AM - 10:45 AM	g/s	-	-	<0.016	0.13	Calculated	Bangkok
Methyl Methacrylate	10:30 AM - 10:45 AM	g/s	-	-	<0.01	1.73	Calculated	Bangkok

Guideline : Environmental Impact Assessment Report of THAI MMA Co., Ltd.

Sampled By : Jakkarin Manwicha

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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คุณภาพน้ำ



Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID: 23245

Date Received : Jan 12, 2023

Date Reported : Jan 19, 2023

Report Number : 2534718-1

Page 1 of 1

Sample Number	23245-1
Sampled Date	Jan 12, 2023 1:48 PM
Sample Description	Wastewater
Location	บ่อบำบัดน้ำเสีย Cesspool
Date Analysis Commenced	Jan 12, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	13	≤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 at 25 degree C *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	230	≤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.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

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

Remark :

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

Technical Management

N. Banongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location: CCS Site 7

Lot ID: 23245

Date Received : Jan 12, 2023

Date Reported : Jan 19, 2023

Report Number : 2534718-2

Page 1 of 1

Sample Number	23245-1
Sampled Date	Jan 12, 2023 1:48 PM
Sample Description	Wastewater
Location	บ่อสุดท้าย Cesspool
Date Analysis Commenced	Jan 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfate	mg/L	0.6	2	84.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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

Sampling By :

Remark :

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

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N. Banchongkit

Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2314097

Date Received : Feb 10, 2023

Date Reported : Feb 17, 2023

Report Number : 2561095-1

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Page 1 of 1

Sample Number	2314097-1						
Sampled Date	Feb 10, 2023 1:37 PM						
Sample Description	Wastewater						
Location	บ่อบำบัดน้ำเสีย Cesspool						
Date Analysis Commenced	Feb 10, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	40.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	91	≤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 at 25 degree C *		-	-	7.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	204	≤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.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

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

Remark :

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

N. Banongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location: CCS Site 7

Lot ID: 2314097

Date Received : Feb 10, 2023

Date Reported : Feb 17, 2023

Report Number : 2561095-2

Page 1 of 1

Sample Number	2314097-1						
Sampled Date	Feb 10, 2023 1:37 PM						
Sample Description	Wastewater						
Location	บ่อสุดท้าย Cesspool						
Date Analysis Commenced	Feb 14, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfate	mg/L	0.6	2	71.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

Remark :

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Supervisor

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2323741

Date Received : Mar 10, 2023

Date Reported : Mar 17, 2023

Report Number : 2582175-1

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Page 1 of 1

Sample Number	2323741-1						
Sampled Date	Mar 10, 2023 1:50 PM						
Sample Description	Wastewater						
Location	บ่อสุดท้าย Cesspool						
Date Analysis Commenced	Mar 10, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	38.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	75	≤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 at 25 degree C *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	258	≤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	16	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

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

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

Remark :

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

N. Banongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location: CCS Site 7

Lot ID: 2323741

Date Received : Mar 10, 2023

Date Reported : Mar 17, 2023

Report Number : 2582175-2

Page 1 of 1

Sample Number	2323741-1						
Sampled Date	Mar 10, 2023 1:50 PM						
Sample Description	Wastewater						
Location	บ่อสุดท้าย Cesspool						
Date Analysis Commenced	Mar 13, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfate	mg/L	0.6	2	84.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2336551

Date Received : Apr 25, 2023

Date Reported : May 02, 2023

Report Number : 2610326-1

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Page 1 of 1

Sample Number	2336551-1						
Sampled Date	Apr 25, 2023 1:50 PM						
Sample Description	Wastewater						
Location	บ่อสุดท้าย Cesspool						
Date Analysis Commenced	Apr 25, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	41	≤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 at 25 degree C *		-	-	6.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	34.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	330	≤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	10	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

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

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

Remark :

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

Technical Management

N. Banongkit

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2336551

Date Received : Apr 25, 2023
Date Reported : May 02, 2023
Report Number : 2610326-2

Page 1 of 1

Sample Number	2336551-1						
Sampled Date	Apr 25, 2023 1:50 PM						
Sample Description	Wastewater						
Location	บ่อสุดท้าย Cesspool						
Date Analysis Commenced	Apr 26, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfate	mg/L	0.6	2	99.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

Remark :

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Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2347831

Date Received : May 12, 2023

Date Reported : May 19, 2023

Report Number : 2635602-1

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Page 1 of 1

Sample Number	2347831-1						
Sampled Date	May 12, 2023 1:34 PM						
Sample Description	Wastewater						
Location	บ่อสุดท้าย Cesspool						
Date Analysis Commenced	May 12, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	18.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	56	≤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 at 25 degree C *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	428	≤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	9	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

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

Sampling By : Pathompong Kornawat ทะเบียนเลขที่ ว-323-จ-9468

Remark :

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Technical Management

N. Banchongkit

Narumon Banchongkit

Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-9442

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2347831

Date Received : May 12, 2023
Date Reported : May 19, 2023
Report Number : 2635602-2

Page 1 of 1

Sample Number	2347831-1						
Sampled Date	May 12, 2023 1:34 PM						
Sample Description	Wastewater						
Location	บ่อสุดท้าย Cesspool						
Date Analysis Commenced	May 17, 2023						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfate	mg/L	0.6	2	106	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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

Sampling By : Pathompong Kornawat

Remark :

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Narumon Banchongkit
Supervisor

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Analysis / Test Report

TESTING

No.0042

Lot ID: 2355713

Date Received : Jun 09, 2023

Date Reported : Jun 16, 2023

Report Number : 2652738-1

Client : THAI MMA Co., Ltd.

88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Page 1 of 1

Sample Number	2355713-1
Sampled Date	Jun 09, 2023 1:52 PM
Sample Description	Wastewater
Location	บ่อสุดท้าย Cesspool
Date Analysis Commenced	Jun 09, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	19.7	≤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	58	≤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 at 25 degree C *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	360	≤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.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ๖-323-๖-9457

Remark :

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

Technical Management

N. Banongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ๖-323-๖-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ๖-323-๖-9442

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID: 2355713

Date Received : Jun 09, 2023

Date Reported : Jun 16, 2023

Report Number : 2652738-2

Page 1 of 1

Sample Number	2355713-1
Sampled Date	Jun 09, 2023 1:52 PM
Sample Description	Wastewater
Location	บ่อสุดท้าย Cesspool
Date Analysis Commenced	Jun 13, 2023
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Sulfate	mg/L	0.6	2	96.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

Remark :

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

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Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

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ระดับเสียง



Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332354

Date Received : Apr 28, 2023
Date Reported : May 05, 2023
Report Number: 2641846-1

Page 1 of 1

Sample Number 2332354-1
Parameter Noise (Leq 24 hrs.)
Location บ้านบน
Measurement Date Apr 22 - Apr 23, 2023
Measurement by Anuwet Tema
Sound Level meter Serial No. 597167

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	50.5	77.8	42.8
11:00 AM - 12:00 PM	51.9	70.2	43.3
12:00 PM - 01:00 PM	52.7	76.4	43.7
01:00 PM - 02:00 PM	50.1	69.7	43.8
02:00 PM - 03:00 PM	55.8	74.7	44.5
03:00 PM - 04:00 PM	52.1	76.4	43.1
04:00 PM - 05:00 PM	51.6	72.5	44.7
05:00 PM - 06:00 PM	54.2	74.1	44.0
06:00 PM - 07:00 PM	55.0	70.3	44.0
07:00 PM - 08:00 PM	60.5	68.7	44.9
08:00 PM - 09:00 PM	59.5	65.0	58.0
09:00 PM - 10:00 PM	53.4	66.9	44.2
10:00 PM - 11:00 PM	48.1	67.1	45.5
11:00 PM - 12:00 AM	47.3	66.2	40.7
12:00 AM - 01:00 AM	45.7	68.6	40.8
01:00 AM - 02:00 AM	44.1	62.5	41.3
02:00 AM - 03:00 AM	45.6	65.4	43.7
03:00 AM - 04:00 AM	42.7	58.6	39.5
04:00 AM - 05:00 AM	56.8	81.2	40.4
05:00 AM - 06:00 AM	51.6	82.2	42.2
06:00 AM - 07:00 AM	49.1	73.4	42.7
07:00 AM - 08:00 AM	53.6	68.0	42.9
08:00 AM - 09:00 AM	61.8	77.5	47.4
09:00 AM - 10:00 AM	59.1	75.5	42.8

Leq Average 24 hrs. (dB(A)) 55.0
Lmax (dB(A)) 82.2
L90 (dB(A)) 43.3
Ldn (dB(A)) 58.2
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Suppt S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332354

Date Received : Apr 28, 2023
Date Reported : May 05, 2023
Report Number: 2641847-1

Page 1 of 1

Sample Number 2332354-2
Parameter Noise (Leq 24 hrs.)
Location บ้านบน
Measurement Date Apr 23 - Apr 24, 2023
Measurement by Anuwet Tema
Sound Level meter Serial No. 597167

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	48.4	74.9	42.2
11:00 AM - 12:00 PM	49.0	71.2	41.7
12:00 PM - 01:00 PM	46.8	68.3	41.7
01:00 PM - 02:00 PM	50.3	71.7	42.4
02:00 PM - 03:00 PM	46.7	62.5	41.8
03:00 PM - 04:00 PM	49.7	66.5	42.6
04:00 PM - 05:00 PM	47.8	70.9	43.3
05:00 PM - 06:00 PM	56.6	70.8	43.8
06:00 PM - 07:00 PM	55.3	73.5	43.5
07:00 PM - 08:00 PM	48.3	70.5	43.0
08:00 PM - 09:00 PM	48.4	70.3	42.2
09:00 PM - 10:00 PM	45.8	71.6	41.4
10:00 PM - 11:00 PM	44.4	64.1	39.0
11:00 PM - 12:00 AM	45.5	72.9	38.7
12:00 AM - 01:00 AM	45.4	64.5	41.7
01:00 AM - 02:00 AM	45.5	65.3	40.5
02:00 AM - 03:00 AM	44.4	57.6	40.8
03:00 AM - 04:00 AM	44.9	59.2	40.2
04:00 AM - 05:00 AM	62.0	74.2	45.3
05:00 AM - 06:00 AM	54.4	67.6	47.8
06:00 AM - 07:00 AM	52.0	68.8	47.8
07:00 AM - 08:00 AM	55.5	80.1	47.0
08:00 AM - 09:00 AM	52.0	75.3	44.4
09:00 AM - 10:00 AM	51.3	77.0	45.1

Leq Average 24 hrs. (dB(A)) 52.6
Lmax (dB(A)) 80.1
L90 (dB(A)) 42.2
Ldn (dB(A)) 60.0
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Suppt S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332354

Date Received : Apr 28, 2023
Date Reported : May 05, 2023
Report Number: 2641848-1

Page 1 of 1

Sample Number 2332354-3
Parameter Noise (Leq 24 hrs.)
Location บ้านบน
Measurement Date Apr 24 - Apr 25, 2023
Measurement by Anuwet Tema
Sound Level meter Serial No. 597167

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	49.2	69.6	42.8
11:00 AM - 12:00 PM	53.0	71.4	42.6
12:00 PM - 01:00 PM	54.6	76.3	43.6
01:00 PM - 02:00 PM	48.8	72.6	42.8
02:00 PM - 03:00 PM	50.2	71.6	42.9
03:00 PM - 04:00 PM	54.0	72.5	46.6
04:00 PM - 05:00 PM	53.0	74.9	48.2
05:00 PM - 06:00 PM	54.9	72.2	44.7
06:00 PM - 07:00 PM	65.6	96.6	46.8
07:00 PM - 08:00 PM	49.2	67.1	44.7
08:00 PM - 09:00 PM	50.5	77.5	45.9
09:00 PM - 10:00 PM	48.0	66.1	42.6
10:00 PM - 11:00 PM	47.3	63.8	44.5
11:00 PM - 12:00 AM	49.2	77.4	44.3
12:00 AM - 01:00 AM	48.1	63.4	46.6
01:00 AM - 02:00 AM	48.7	63.3	46.8
02:00 AM - 03:00 AM	49.7	77.6	45.4
03:00 AM - 04:00 AM	48.3	61.5	46.7
04:00 AM - 05:00 AM	63.2	75.5	47.5
05:00 AM - 06:00 AM	53.2	77.1	49.2
06:00 AM - 07:00 AM	51.2	70.3	47.1
07:00 AM - 08:00 AM	53.3	75.7	45.6
08:00 AM - 09:00 AM	52.6	78.3	44.3
09:00 AM - 10:00 AM	52.9	75.3	45.2

Leq Average 24 hrs. (dB(A)) 55.7
Lmax (dB(A)) 96.6
L90 (dB(A)) 45.2
Ldn (dB(A)) 61.6
Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Suppt S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332378

Date Received : Apr 28, 2023
Date Reported : May 05, 2023
Report Number: 2641843-1

Page 1 of 1

Sample Number 2332378-1
Parameter Noise (Leq 24 hrs.)
Location บ้านฉะพลา
Measurement Date Apr 22 - Apr 23, 2023
Measurement by Anuwet Tema
Sound Level meter Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	51.2	79.7	46.5
12:00 PM - 01:00 PM	49.6	71.5	46.1
01:00 PM - 02:00 PM	52.1	80.1	46.1
02:00 PM - 03:00 PM	50.9	78.7	46.0
03:00 PM - 04:00 PM	52.0	73.2	47.5
04:00 PM - 05:00 PM	54.2	81.7	48.1
05:00 PM - 06:00 PM	52.9	70.5	48.0
06:00 PM - 07:00 PM	52.4	81.3	48.4
07:00 PM - 08:00 PM	51.5	80.0	48.6
08:00 PM - 09:00 PM	49.8	66.3	47.4
09:00 PM - 10:00 PM	49.9	69.4	47.1
10:00 PM - 11:00 PM	48.7	61.2	47.1
11:00 PM - 12:00 AM	53.4	82.6	45.7
12:00 AM - 01:00 AM	53.3	85.1	45.7
01:00 AM - 02:00 AM	47.6	63.3	45.9
02:00 AM - 03:00 AM	47.6	67.4	45.3
03:00 AM - 04:00 AM	50.2	80.6	44.9
04:00 AM - 05:00 AM	50.6	70.3	44.7
05:00 AM - 06:00 AM	55.3	76.6	45.7
06:00 AM - 07:00 AM	57.1	83.4	48.1
07:00 AM - 08:00 AM	51.9	67.9	48.1
08:00 AM - 09:00 AM	54.2	89.0	47.2
09:00 AM - 10:00 AM	51.1	72.3	46.9
10:00 AM - 11:00 AM	53.0	83.2	46.9

Leq Average 24 hrs. (dB(A)) 52.3
Lmax (dB(A)) 89.0
L90 (dB(A)) 46.9
Ldn (dB(A)) 59.1

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Suppt S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332378

Date Received : Apr 28, 2023
Date Reported : May 05, 2023
Report Number: 2641844-1

Page 1 of 1

Sample Number 2332378-2
Parameter Noise (Leq 24 hrs.)
Location บ้านนาบยา
Measurement Date Apr 23 - Apr 24, 2023
Measurement by Anuwet Tema
Sound Level meter Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	51.6	69.5	46.6
12:00 PM - 01:00 PM	58.8	67.4	50.4
01:00 PM - 02:00 PM	56.1	75.8	50.7
02:00 PM - 03:00 PM	53.4	68.5	47.6
03:00 PM - 04:00 PM	50.5	73.8	47.6
04:00 PM - 05:00 PM	55.0	78.5	48.9
05:00 PM - 06:00 PM	54.2	84.2	48.3
06:00 PM - 07:00 PM	53.7	83.4	47.9
07:00 PM - 08:00 PM	52.7	82.2	48.1
08:00 PM - 09:00 PM	51.2	82.2	47.6
09:00 PM - 10:00 PM	50.8	81.4	47.1
10:00 PM - 11:00 PM	49.0	65.8	46.9
11:00 PM - 12:00 AM	49.6	66.6	47.5
12:00 AM - 01:00 AM	48.9	64.3	47.1
01:00 AM - 02:00 AM	56.6	85.7	45.7
02:00 AM - 03:00 AM	48.3	81.5	45.7
03:00 AM - 04:00 AM	53.5	83.4	44.5
04:00 AM - 05:00 AM	48.6	71.3	44.2
05:00 AM - 06:00 AM	55.1	75.2	45.3
06:00 AM - 07:00 AM	53.4	74.5	48.0
07:00 AM - 08:00 AM	54.2	76.7	47.9
08:00 AM - 09:00 AM	52.4	71.7	46.4
09:00 AM - 10:00 AM	55.0	77.6	46.7
10:00 AM - 11:00 AM	52.3	73.5	46.1

Leq Average 24 hrs. (dB(A)) 53.5
Lmax (dB(A)) 85.7
L90 (dB(A)) 47.1
Ldn (dB(A)) 59.2

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Suppt S.

Supot Salamteh
Section Head

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2332378
Date Received : Apr 28, 2023
Date Reported : May 05, 2023
Report Number: 2641845-1

Page 1 of 1

Sample Number 2332378-3
Parameter Noise (Leq 24 hrs.)
Location บ้านฉะพลา
Measurement Date Apr 24 - Apr 25, 2023
Measurement by Anuwet Tema
Sound Level meter Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	54.9	80.2	46.7
12:00 PM - 01:00 PM	52.8	74.6	47.9
01:00 PM - 02:00 PM	52.1	71.3	46.5
02:00 PM - 03:00 PM	53.6	75.6	47.2
03:00 PM - 04:00 PM	52.5	83.8	46.5
04:00 PM - 05:00 PM	56.4	81.5	48.2
05:00 PM - 06:00 PM	54.6	79.8	48.7
06:00 PM - 07:00 PM	53.5	79.4	49.2
07:00 PM - 08:00 PM	51.6	73.1	49.1
08:00 PM - 09:00 PM	51.3	65.8	49.3
09:00 PM - 10:00 PM	50.8	64.6	49.0
10:00 PM - 11:00 PM	53.0	83.1	47.3
11:00 PM - 12:00 AM	50.0	72.3	47.6
12:00 AM - 01:00 AM	52.9	83.3	47.6
01:00 AM - 02:00 AM	48.8	58.3	47.1
02:00 AM - 03:00 AM	49.5	65.0	47.7
03:00 AM - 04:00 AM	49.2	63.8	47.2
04:00 AM - 05:00 AM	49.9	70.7	46.2
05:00 AM - 06:00 AM	56.6	78.8	47.5
06:00 AM - 07:00 AM	54.8	75.4	49.1
07:00 AM - 08:00 AM	54.0	70.6	48.3
08:00 AM - 09:00 AM	55.1	83.1	45.7
09:00 AM - 10:00 AM	50.8	75.2	45.8
10:00 AM - 11:00 AM	51.9	68.5	46.2

Leq Average 24 hrs. (dB(A)) 53.1
Lmax (dB(A)) 83.8
L90 (dB(A)) 47.5
Ldn (dB(A)) 59.0
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Suppt S.

Supot Salamteh
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID: 2312303

Date Received : Feb 10, 2023

Date Reported : Feb 16, 2023

Report Number : 2557435-1

Page 1 of 4

Sample Number 2312303-1
Sampled Date Feb 10, 2023
Sample Description Air Quality
Location ไส้กระเบื้องออกจากถังซีลน้ำ (Water Seal)
Date Analysis Commenced Feb 13, 2023
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	10:00 AM - 10:20 AM	ppm	-	0.10	0.5	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Tinnakorn Kulchart

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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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID: 2312303

Date Received : Feb 10, 2023

Date Reported : Feb 16, 2023

Report Number : 2557435-1

Page 2 of 4

Sample Number 2312303-2
Sampled Date Feb 10, 2023
Sample Description Air Quality
Location ไอระเหยที่ออกจากขั้นตอนการนำสารที่ได้จากการทำให้บริสุทธิ์ถ่ายลงถังขนาด 200 ลิตร
Date Analysis Commenced Feb 13, 2023
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	10:00 AM - 10:20 AM	ppm	-	0.10	1.0	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Tinnakorn Kulchart

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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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2312303

Date Received : Feb 10, 2023
Date Reported : Feb 16, 2023
Report Number : 2557435-1

Page 3 of 4

Sample Number 2312303-3
Sampled Date Feb 10, 2023
Sample Description Air Quality
Location ไธโรเหวจากการถ่ายของเสียที่ไม่สามารถนำกลับมาใช้ได้เกิดจากกระบวนการลงสู่ถังขนาด 200 ลิตร
Date Analysis Commenced Feb 13, 2023
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	10:00 AM - 10:20 AM	ppm	-	0.10	0.6	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Tinnakorn Kulchart

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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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID: 2312303

Date Received : Feb 10, 2023

Date Reported : Feb 16, 2023

Report Number : 2557435-1

Page 4 of 4

Sample Number 2312303-4
Sampled Date Feb 10, 2023
Sample Description Air Quality
Location ไธระเหยชาออกจาก Carbon Absorber
Date Analysis Commenced Feb 13, 2023
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	10:00 AM - 10:20 AM	ppm	-	0.10	1.0	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Tinnakorn Kulchart

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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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : CCS Site 7

Lot ID: 2312433

Date Received : Feb 10, 2023

Date Reported : Feb 16, 2023

Report Number : 2557439-1

Page 1 of 1

Sample Number 2312433-1
Sampled Date Feb 10, 2023
Sample Description Air Quality
Location Cutter Zone
Date Analysis Commenced Feb 11, 2023
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 756 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Dust	09:30 AM - 11:30 AM	mg/m3	-	0.15	<0.15	15	Based on NIOSH (1994), 0500	OSHA	Rayong

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Tinnakorn Kulchart

Remark :

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

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2346262

Date Received : May 10, 2023

Date Reported : May 16, 2023

Report Number : 2632532-1

Page 1 of 4

Sample Number : 2346262-1
Sampled Date : May 10, 2023
Sample Description : Air Quality
Location : ไอร์เซลล์ออกจากถังซีลน้ำ (Water Seal)
Date Analysis Commenced : May 11, 2023
Condition of Sample : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	09:30 AM - 09:50 AM	ppm	-	0.10	<0.1	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Prasanmit Kueanpet

Remark :

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

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2346262

Date Received : May 10, 2023

Date Reported : May 16, 2023

Report Number : 2632532-1

Page 2 of 4

Sample Number 2346262-2
Sampled Date May 10, 2023
Sample Description Air Quality
Location ไอร์เรเยห์ที่ออกจากขั้นตอนการนำสารที่ได้จากการทำให้บริสุทธิ์ถ่ายลงถังขนาด 200 ลิตร
Date Analysis Commenced May 11, 2023
Condition of Sample Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	09:30 AM - 09:50 AM	ppm	-	0.10	<0.1	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Prasanmit Kueanpet

Remark :

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

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2346262

Date Received : May 10, 2023

Date Reported : May 16, 2023

Report Number : 2632532-1

Page 3 of 4

Sample Number : 2346262-3
Sampled Date : May 10, 2023
Sample Description : Air Quality
Location : ไอร์เอเชียจากการถ่ายของเสียที่ไม่สามารถนำกลับมาใช้ได้เกิดจากกระบวนการลงสู่ถังขนาด 200 ลิตร
Date Analysis Commenced : May 11, 2023
Condition of Sample : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	09:30 AM - 09:50 AM	ppm	-	0.10	<0.1	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Prasanmit Kueanpet

Remark :

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

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
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P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2346262

Date Received : May 10, 2023

Date Reported : May 16, 2023

Report Number : 2632532-1

Page 4 of 4

Sample Number : 2346262-4
Sampled Date : May 10, 2023
Sample Description : Air Quality
Location : ไธระเหยชาออกจาก Carbon Absorber
Date Analysis Commenced : May 11, 2023
Condition of Sample : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total VOC	09:30 AM - 09:50 AM	ppm	-	0.10	<0.1	500	Total VOC Analyzer	MOI	Bangkok

Guideline :

MOI : ประกาศกระทรวงอุตสาหกรรม เรื่อง กำหนดหลักเกณฑ์ และวิธีการปฏิบัติในการตรวจสอบ และควบคุมการรั่วซึมของสารอินทรีย์ระเหยง่ายจากอุปกรณ์
ในโรงการอุตสาหกรรม พ.ศ. 2555

Sampled By : Prasanmit Kueanpet

Remark :

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

Approved by

Tanyatorn Mongkonjirawut
Supervisor

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2346263

Date Received : May 10, 2023

Date Reported : May 15, 2023

Report Number : 2632534-1

Page 1 of 1

Sample Number : 2346263-1
Sampled Date : May 10, 2023
Sample Description : Air Quality
Location : Cutter Zone
Date Analysis Commenced : May 11, 2023
Condition of Sample : Drawn into one filter paper placed in plastic cassette
Barometric Pressure : 751 mmHg
Atmospheric Temperature : 34.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Dust	09:05 AM - 11:05 AM	mg/m3	-	0.15	<0.15	15	Based on NIOSH (1994), OSHA 0500		Rayong

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Jakkarin Manwicha

Remark :

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

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2346227

Date Received : May 10, 2023
Date Reported : May 15, 2023
Report Number: 2651346-1

Page 1 of 1

Sample Number 2346227-1
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Process 300
Measurement Date May 10, 2023
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	78.7	93.5	77.2
10:00 AM - 11:00 AM	81.7	89.8	80.6
11:00 AM - 12:00 PM	80.4	89.5	77.7
12:00 PM - 01:00 PM	80.8	95.9	77.2
01:00 PM - 02:00 PM	82.0	88.4	81.4
02:00 PM - 03:00 PM	81.6	84.1	80.9
03:00 PM - 04:00 PM	81.7	87.7	80.9
04:00 PM - 05:00 PM	81.3	96.9	80.0

Leq Average 8 hrs. (dB(A))

81.1

Lmax (dB(A))

96.9

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ. ๒๕๔๖

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
88/6, 3191 Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location : CCS Site 7

Lot ID: 2346227

Date Received : May 10, 2023
Date Reported : May 15, 2023
Report Number: 2651347-1

Page 1 of 1

Sample Number 2346227-2
Parameter Noise (Leq 8 hrs.)
Location บริเวณ Packing
Measurement Date May 10, 2023
Measurement by Prasarnmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	71.1	86.9	68.0
10:00 AM - 11:00 AM	69.8	91.7	66.0
11:00 AM - 12:00 PM	71.1	82.6	68.0
12:00 PM - 01:00 PM	68.7	86.7	65.1
01:00 PM - 02:00 PM	70.5	85.4	65.8
02:00 PM - 03:00 PM	69.7	83.8	66.4
03:00 PM - 04:00 PM	71.1	88.7	65.5
04:00 PM - 05:00 PM	69.7	85.8	65.4

Leq Average 8 hrs. (dB(A))

70.3

Lmax (dB(A))

91.7

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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